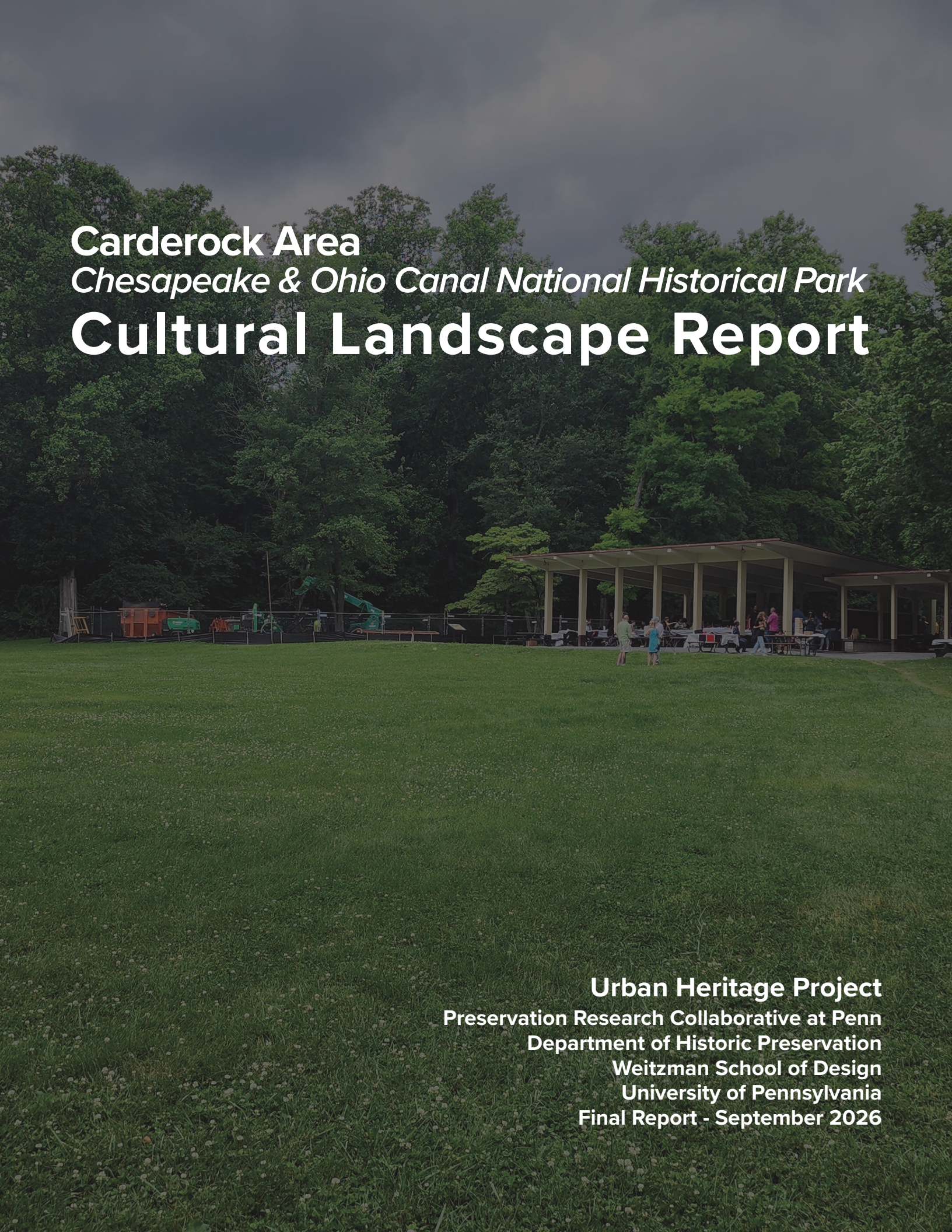


Carderock Area
Chesapeake & Ohio Canal National Historical Park
Cultural Landscape Report

Urban Heritage Project
Preservation Research Collaborative at Penn
Department of Historic Preservation
Weitzman School of Design
University of Pennsylvania

Final Report - September 2026

Prepared by:

University of Pennsylvania - Weitzman School of Design, Urban Heritage Project

Meg Frisbie - Research Associate

Molly Lester - Associate Director

Yuzheng (Rachel) Wu - Research Assistant

Devon Bruzzone - Research Assistant

Zachary Somberg - Research Assistant

Principal Investigator:

University of Pennsylvania - Weitzman School of Design

Randall Mason - Professor, Historic Preservation / City & Regional Planning

Research support and review by:

C&O Canal (CHOH)

Andrew Landsman - Chief of Resources Management

Christopher Stevens - Cultural Resources Program Manager + Historical Landscape Architect

Justin Ebersole - Cultural Resource Specialist + NHPA Coordinator

Katherine Boyle - Historian + Archeologist



Figure 1: The C&O Canal towpath in the Carderock area (Urban Heritage Project 2024).



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EXECUTIVE SUMMARY

Executive Summary

The Carderock area of the Chesapeake and Ohio Canal National Historical Park (C&O Canal; CHOH; C&O Canal NHP) cultural landscape is significant for its association with the history of transportation, engineering, recreation, conservation, and Black labor history in the United States. Managed by the National Park Service (NPS), the CHOH preserves and interprets the 19th-century transportation canal stretching 184.5 miles from Washington, D.C., to Cumberland, Maryland, and its associated scenic, natural, and cultural resources.

The C&O Canal was a massive and ambitious infrastructural project that represents an important phase in transportation development in the United States during the first half of the 19th century. As a section of the well-preserved early American Republic-era canal, the Carderock area cultural landscape of the C&O Canal is located approximately five miles west of the D.C. border. The CLR study area is located between Mile Marker 10.0 and Mile Marker 11.0 of the canal, extending south from the edge of the Clara Barton Parkway to the Potomac River shoreline. The study area includes the canal prism, towpath, several parking areas and a connecting road, the developed Carderock Recreation Area, Section C of the Billy Goat Trail, a rock climbing area, the archeological sites associated with CCC Camps NP-1-MD and NP-2-MD, and large sections of forest.

The entirety of the C&O Canal was administratively listed in the National Register of Historic Places (National Register; NRHP) on October 15, 1966 (NRHP# 66000036), with a complete National Register nomination completed in 1979. The Keeper of the National Register signed an addendum to the Chesapeake and Ohio Canal National Historical Park Historic District National Register nomination in 2015 (NRHP# 14001236). The supplementary listing included a boundary increase, which added additional contributing and non-contributing features to the historic district.

The Carderock area is a component landscape of the larger C&O Canal cultural landscape. The CLR draws on a decades-long relationship between the landscape's history as an industrial resource and its function as an evolving recreational with public amenities; this transition from industrial to recreational use was first made possbile by the conservation and rehabilitation efforts of Black labor crews from the Civilian Conservation Corps.

This CLR defines three periods of significance: 9000 BCE-1500 CE; 1828-1924; 1938-1942; and 1964-1965. The cultural landscape is significant under National Register Criteria A, C, and D, in the areas of: Transportation; Commerce, Economics; Ethnic Heritage – Black; Conservation; Social History; Politics/Government; Entertainment/ Recreation; Tourism; Engineering; Architecture; Archeology, Historic – Nonaboriginal; and Archeology, Prehistoric.

According to both its historic development and its existing condition, this landscape represents multiple uses and values simultaneously; its industrial/transportation history coexists with its significance as a recreational landscape. During the third period of significance, Black laborers from the Civilian Conservation Corps were integral in transforming the landscape from its industrial character to its recreational use as we know it today. The extant cultural landscape reflects its CCC associations and its post-CCC adaptation as a day-use recreational area during the Mission 66-era of NPS development.

This CLR addresses the historic and existing conditions of each landscape characteristic as defined in *A Guide to Cultural Landscape Reports: Contents, Process, and Techniques*, building an understanding of much the landscape today reflects its character and appearance during the periods of significance. In total, the C&O Canal's Carderock area cultural landscape exhibits all 13 of the

landscape characteristics defined by the National Park Service:

- Natural Systems and Features
- Spatial Organization
- Land Use
- Cultural Traditions
- Cluster Arrangement
- Circulation
- Topography
- Vegetation
- Buildings and Structures
- Views and Vistas
- Constructed Water Features
- Small-scale Features
- Archeological Sites

This CLR recommends rehabilitation as the primary treatment for the cultural landscape. The recommended treatment of rehabilitation provides the flexibility needed to preserve the historic resources and enhance the historic character of the canal landscape, while improving site conditions and landscape resilience.

The treatment recommendations address physical interventions based on the appropriate treatment approaches, as well as policy/management-related recommendations. They offer guidelines that apply to the entire landscape, as well as site-specific guidelines to address a subset of distinct character areas in a deeper level of detail. The treatment recommendations emphasize the rehabilitation of key features to address deteriorated conditions and preserve the overall historic character of the canal.

The desired landscape character seek to strengthen the public understanding of the CCC crews' role in maintaining the landscape's integrity and adapting its use during the periods of significance. Based on the treatment recommendations, the cultural landscape would continue to host and support a range of recreational opportunities. The treatment recommendations also call for the reintroduction of water within the canal in the Carderock area (as intended after several recent construction projects), restoring the historic character of the canal as the organizing feature of this landscape.

Glossary of Acronyms

C&O Canal – Chesapeake and Ohio Canal

CCC – Civilian Conservation Corps

CHOH – Chesapeake and Ohio Canal National Historical Park

CFR – Code of Federal Regulations

CLR – Cultural Landscape Report

ECW Act – Emergency Conservation Work Act

GIS – Geographic Information System

GWMP – George Washington Memorial Parkway

HABS – Historic American Buildings Survey

NHP – National Historical Park

NCRO – National Capital Regional Office

NPS – National Park Service

NRHP – National Register of Historic Places or National Register

PATC – Potomac Appalachian Trail Club

PWA – Public Works Administration

USC – United States Code

WPA – Works Progress Administration

INTRODUCTION

Introduction

The purpose of this Cultural Landscape Report (CLR) for the Carderock cultural landscape within the Chesapeake and Ohio Canal National Historical Park (NHP) is to help the National Park Service (NPS) develop an informed and consistent approach to managing change of the cultural landscape located in Potomac, Maryland. This guide builds on previous documentation efforts and offers holistic, coordinated management strategies. The project began with a kickoff and planning meeting in April 2024, and the final report was presented in September 2026.

PURPOSE AND SCOPE OF THIS CULTURAL LANDSCAPE REPORT

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

The CLR goal is to preserve, restore, or rehabilitate the historic character of the historic district, while providing for opportunities to enhance facilities maintenance, resource management, and interpretive opportunities within the historic district. The CLR is the primary planning document for the treatment of the cultural landscape and provides site managers with a comprehensive understanding of the physical evolution of the cultural landscape, its current condition, and guidance for the future landscape management.

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

REPORT METHODOLOGY

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

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

The historical documentation was utilized to compare existing site conditions to historic conditions. Through this analysis, contributing and non-contributing features and characteristics of the cultural landscape were identified. This information was then used as the basis for the treatment recommendations, with the goal of preserving character-defining features and characteristics, restoring character-defining features when important to conveying the historical significance of the cultural landscape, and rehabilitating features to preserve their character-defining qualities to allow for current and future uses within the cultural landscape.

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

RESEARCH

Using primary and secondary sources, the team conducted research to understand the physical history of the Carderock cultural landscape. Key repositories and archives included: the existing documentation (including a National Register of Historic Places nomination and addendum); archeology reports; and other research collections. (Josh Howard, *"Our only Alma Mater": The Civilian Conservation Corps and the C&O Canal,* 2017).

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

DETERMINATION OF PERIODS OF SIGNIFICANCE

Using the physical history and prior documentation as a guide, the periods of significance were determined as 9000 BCE-1500 CE; 1828-1924; 1938-1942; and 1964-1965 (refer to the Statement of Significance for an explanation of these periods).

FIELDWORK AND DATA COLLECTION

The team conducted fieldwork and site visits during the project. An initial site visit with park and regional staff took place in June 2024. Fieldwork to document existing conditions and geolocate extant features took place in June, July, and October of 2024, with additional documentation in March and April of 2025. During this time, researchers collected and recorded GIS data using Eos Arrow equipment. The team identified, photographed, and recorded landscape features within the project area boundaries.

MAPPING

Maps for this CLR were produced following NPS National Capital Regional Office's (NCRO) GIS standards. The team collected data in the field, including small- scale features, circulation features, structures, and vegetation. This data was then edited in ArcGIS Pro.

ANALYSIS AND EVALUATION

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

STAKEHOLDER ENGAGEMENT

In order to gain first-hand perspectives on the uses and perceptions of the Carderock cultural landscape, the project team (virtually) interviewed several C&O Canal NHP staff members in September and December of 2025. Interviewees emphasized that Carderock offers a rich history; diverse plant communities; and a range of recreational opportunities. Themes that emerged during the stakeholder conversations included: recreational user groups; available amenities; social trails; maintenance; fees; and interpretation and signage. These themes guided and informed the treatment recommendations for the cultural landscape.

For a complete list of interviewees, refer to the Treatment Framework in the Part 2.

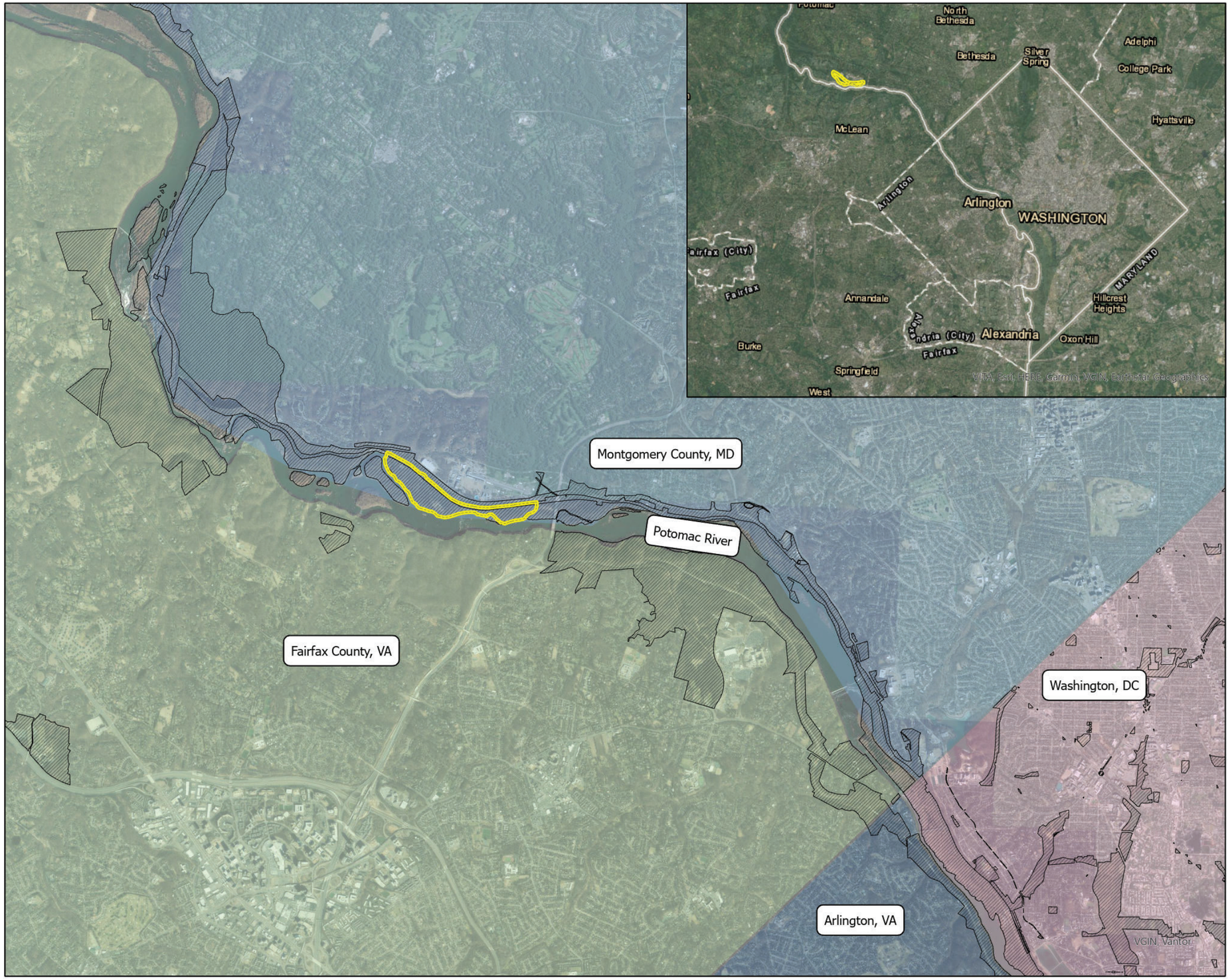
TREATMENT WORKSHOP

The project team convened a (hybrid) treatment workshop for the Carderock cultural landscape in May 2026 at the C&O Canal NHP headquarters in Williamsport, Maryland. Researchers presented the Part 1 findings and preliminary Part 2 treatment recommendations. Workshop attendees included staff from resource management, interpretation, maintenance, fees, and law enforcement.

TREATMENT RECOMMENDATIONS

Based on the Part 1 research, stakeholder engagement interviewees, and the treatment workshop, the project team prepared treatment

recommendations for the cultural landscape, including physical treatment and policies/ partnerships recommendations. The treatment recommendations present a treatment strategy for the long-term preservation and management of Carderock.



Cultural Landscape Report

Carderock

Chesapeake and Ohio Canal NHP
Potomac, MD

Location Map

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

In cooperation with:
National Capital Region, National Park Service

Sources
1. Ortho Imagery, 2025
2. Data collected in July, October 2024, and March, April 2025

Drawn By
Meg Frisbie, ArcGIS Pro 3.2.2, 2025

Legend
- CLR Boundary
- NPS Property
- Washington, DC
- Montgomery County, MD
- Fairfax County, VA
- Arlington County, VA

Notes
1. Projection: NAD 1983 UTM Zone 18N

N
0 2
Miles

Drawing #1

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Cultural Landscape Report

Carderock

Chesapeake and Ohio Canal NHP
Potomac, MD

Site Plan

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

In cooperation with:
National Capital Region, National Park Service

Sources
1. Ortho Imagery, 2025
2. Data collected in July, October 2024, and March, April 2025

Drawn By
Meg Frisbie, ArcGIS Pro 3.2.2, 2025

Legend

- CLR Boundary
- Buildings+Structures
- Small-scale Features
- Circulation
- Buildings+Structures
- Circulation
- C&O Canal

1. C&O Canal towpath
2. Billy Goat Trail Section C
3. Carderock picnic pavilion
4. East comfort station
5. West comfort station
6. Parking Lot 1
7. Parking Lot 2
8. Parking Lot 3
9. Parking Lot 4
10. Connecting road
11. Flagpole
12. Culvert 15
13. Culvert 14 and pier
14. Pivot bridge and abutments
15. Wasteweir

Notes
1. Projection: NAD 1983 UTM Zone 18N

N 0 350 700 1,400 Feet

Drawing #2

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PART 1: HISTORY + EVALUATION

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Statement of Significance

Carderock is a component cultural landscape of the Chesapeake and Ohio Canal National Historical Park (CHOH; C&O Canal; C&O Canal NHP). Managed by the National Park Service (NPS), the CHOH preserves and interprets the 19th-century transportation canal stretching 184.5 miles from Washington, D.C., to Cumberland, Maryland, and its associated scenic, natural, and cultural resources. The canal also provides opportunities for education, outdoor recreation, and limited transportation.

Located approximately five miles west of the western border of Washington, D.C., the Carderock cultural landscape is nestled along the shoreline of the Potomac River in Montgomery County, Maryland. Encompassing approximately 146.72 acres, the cultural landscape is located between Mile Marker 10.0 and Mile Marker 11.0 of the C&O Canal.

Following the canal's transportation use in the 19th century and early 20th century, two Civilian Conservation Corps (CCC) camps were established in the project area. With authorization from the 1930 Capper-Cramton Act (P.L. 71-284), the federal government purchased the C&O Canal in 1938, with the intention of developing it as a work relief project to convert the first 22 miles of the industrial waterway from Georgetown, Washington, D.C., to Seneca, Maryland, into a public recreational landscape. In operation from 1938 through 1942, the CCC companies that occupied the racially segregated camps consisted of Black American enrollees from the greater Washington, D.C., area.

The extant cultural landscape reflects its CCC associations and its post-CCC adaptation as a day-use recreational area during the Mission 66-era of NPS development. Features include the C&O Canal and towpath, a picnic pavilion, public restrooms, parking lots, recreational fields, trails, and forested areas. A two-lane road leads from the Carderock exit of the Clara Barton Parkway, under the C&O Canal, to a park road that accesses the parking and recreational facilities.

The Carderock cultural landscape is eligible for listing in the National Register of Historic Places (National Register), contributing to the C&O Canal NHP Historic District, under Criteria A, C, and D. The cultural landscape is significant under Criterion A at the national level in the areas of Transportation. The cultural landscape is also significant under Criterion A at the state level in the areas of Commerce and Economics; Ethnic Heritage – Black; Conservation; Social History; and Politics/Government, and at the local level in the areas of Entertainment/Recreation and Tourism. The cultural landscape is significant under Criterion C at the national level in the area of Engineering, and at the local level in the area of Architecture. The cultural landscape is also significant under Criterion D at the state and local levels in the areas of Archeology, Historic – Non-aboriginal and Archeology, Prehistoric.

There are four periods of significance associated with the cultural landscape: the first is 9000 BCE-1500 CE, reflecting Paleoindian through Late Woodland archeological resources; the second is 1828-1924, encompassing the years of construction and operation of the C&O Canal; the third period is 1938-1942, encompassing the years of Civilian Conservation Corps operation at the C&O Canal; and the fourth period of significance is 1964-1965, encompassing the Mission 66 initiatives at Carderock. These periods of significance align with the 2015 National Register nomination for the Chesapeake and Ohio Canal National Historical Park Historic District (Boundary Increase and Additional Documentation).

National Register of Historic Places Summary

The National Register provides the basis for documenting and evaluating the historic significance and integrity of the cultural landscape. The entirety of the Chesapeake and Ohio Canal was administratively listed in the National Register on October 15, 1966 (NRHP# 66000036). A completed nomination form was accepted on August 19, 1979, recording the historic district as eligible for listing under Criteria A and C at the national level of significance in the areas of: Architecture; Commerce; Conservation; Engineering; Military; and Transportation. The period of significance was recorded as 1828 through 1924.

The Keeper of the National Register signed an addendum to the Chesapeake and Ohio Canal National Historical Park Historic District National Register nomination on February 3, 2015 (NRHP# 14001236). The supplementary listing included a boundary increase, which introduced additional contributing and non-contributing features to the historic district. The 2015 National Register addendum records the district as eligible at the local, state, and national levels of significance under Criteria A, C, and D, in the areas of: Transportation (national; local); Engineering (national); Ethnic Heritage – Black (state); Commerce (state); Military (state); Archeology (prehistoric) (state); Conservation (state); Architecture (state; local); Entertainment/ Recreation (state; local); Archeology (Historic – non-aboriginal) (state/local); Agriculture (local); Industry and Commerce (local); and Community Planning and Development (local).

The addendum records the periods of significance as 9000 BCE-1500 CE (Pre-contact history); 1828-1924 (C&O Canal construction and operation); 1938-1942 (new National Park Service initiatives and Civilian Conservation Corps program); and 1964-1965 (Mission 66 Program). Significant dates include: 1828 (construction of canal begins); 1924 (commercial navigation ceases); 1938 (U.S. government acquisition of C&O Canal and New Deal Era work begins); 1954 (Justice William O. Douglas hike); and 1965 (Mission 66 Program).

The area north of the canal is outside of the project boundaries, but historically was associated with the study area; these sections of George Washington Memorial Parkway north of Arlington Memorial Bridge, including the Clara Barton Parkway north to the Capital Beltway, were listed in the National Register in 1995 as part of a multiple property nomination entitled Parkways of the National Capital Region. At the time of this CLR's production in 2024/2025, an updated National Register nomination is in draft form that combines the previously listed Mount Vernon Memorial Highway and George Washington Memorial Parkway (including the Clara Barton Parkway) into one nomination and reevaluates the areas of significance, periods of significance, criteria, and boundaries for the overall cultural landscape.

In 2022, WSP USA, Inc. completed a report titled *Archeological Identification and Evaluation Study of Two African American CCC Camps at Carderock*. The purpose of the study was to "determine what remains from the occupation of these sites during the CCC period, and to assess whether the remains are eligible for listing in the National Register of Historic Places (NRHP)" (Bedell, Cagney, and Raszick 2022: i). The report determined that Camp NP-2-MD lacks integrity to be eligible for listing on the National Register. The report finds Camp NP-1-MD eligible for listing under Criterion A in association with the establishment of the C&O Canal, the New Deal, the CCC, and Black American history (Bedell, Cagney, and Raszick 2022: i). The Maryland Historical Trust concurred with the determinations of eligibility on March 23, 2023.

Cultural Landscapes Summary

There is no previous cultural landscape documentation for Carderock.

Outside of the project boundaries, a Cultural Landscape Inventory (CLI) for the Clara Barton Parkway was completed in 2015. The study area boundaries for the Clara Barton Parkway CLI do not include the Carderock cultural landscape's project boundaries, but address the broader development history of the area. The Historic Preservation Officer (HPO) for the District of Columbia and the State

Historic Preservation Officer (SHPO) of Maryland concurred with the findings of Clara Barton Parkway CLI in accordance with Section 110 of the National Historic Preservation Act. Maryland SHPO concurred with the findings of the CLI on April 29, 2016, and the Washington, D.C., HPO concurred with the findings of the CLI on October 9, 2015. The cultural landscape was assessed as in Good condition in 2015.

CLR Boundary Summary

Encompassing approximate 146.72 acres, the Carderock cultural landscape includes the C&O Canal towpath and canal, four parking lots, trails, buildings and structures, forested areas, and other features. The boundary is defined by the canal and by natural waterways in the area. The northern boundary of the cultural landscape runs along the northern edge of the canal. Rock Run, a tributary stream of the Potomac River, constitutes the eastern boundary of the cultural landscape; where Rock Run meets the Potomac River, the banks of the Potomac River create the southern boundary. The boundary travels west along the Potomac River until the river passes along the northeast side of Vaso Island. The west boundary of the cultural landscape is located just west of the entrance from the towpath to Billy Goat Trail Section C, West End, around Mile Marker 11.0.

Although the Potomac River is outside of the boundaries of the study area, it is an important adjacent resource in the development and history of the cultural landscape and is part of the political, cultural, and physiographic context for the Carderock cultural landscape.

Statement of Significance Summary

The C&O Canal—including the segment in the Carderock area—is among the best-preserved examples of engineered waterways constructed during the boom of canal building that occurred between 1790 and 1860 in the United States. During the late 18th and early 19th centuries, industrialists and businesses sought new methods of transportation to access the interior of the country. In 1825, the Erie Canal was completed in upstate New York between the Hudson River and Lake Erie, connecting the Atlantic Ocean to the Great Lakes. Considered “the Nation’s First Superhighway,” the Erie Canal was the first navigable waterway to travel beyond the Appalachian Mountains, reducing the costs of transporting people and goods inland. Its success contributed to the construction of other industrial waterways, including the C&O Canal.

Financed primarily by federal and state governments, in addition to individual subscriptions by residents, the C&O Canal was originally designed to connect eastern ports with the western territories beyond the Appalachian Mountains, with the goal of facilitating transportation, trade, and industry. Built between 1828 and 1850, the canal stretched through the Potomac River Valley between Rock Creek in Washington, D.C., and Cumberland, Maryland.

Although the canal's construction ended early (establishing a western terminus of Cumberland, Maryland, rather than western Pennsylvania), the 184.5-mile C&O Canal was nevertheless a massive and ambitious industrial project, marking an important phase in transportation development in the United States during the first half of the 19th century. Connecting growers and producers with markets and ports on the eastern seaboard, the construction of the canal played an important role in the economic development of the early republic.

The canal not only served as a major commercial trade route along the Potomac River, transporting agricultural products, commercial goods, and materials, but also increased communication between regions, created military routes to move troops and supplies, and distributed water to local industries.

After the canal ceased to function as a commercial waterway in 1924, and the passage of the Capper-Crampton Act in 1930 authorized the acquisition of D.C.-area lands for federal parkland, the U.S. government purchased the canal in 1938 with the purpose of creating work relief projects to rehabilitate the first 22 miles of canal from Georgetown to Seneca. Two Civilian Conservation Corps (CCC) camps composed of Black enrollees

were established within the project area. Between 1938 and 1942, these CCC enrollees, in addition to contractors who worked on more complex repairs, restored the canal and redeveloped it as a public recreational landscape.

In the mid-1960s, Carderock was developed as a recreational area as part of the NPS National Capital Region's implementation of the service-wide Mission 66 design and development campaign, which aimed to update parks and accommodate a growing number of visitors. While plans were developed as early as summer of 1958, it was not until 1964 that plans for a picnic area were approved. The Carderock picnic pavilion, east comfort station, west comfort station, and associated circulation features were completed in 1965.

The Carderock cultural landscape is eligible for listing under Criteria A, C, and D at the national, state, and local levels of significance of the National Register of Historic Places. The landscape is eligible at the national level under Criterion A in the area of Transportation, and under Criterion C in the area of Engineering. At the state level, the cultural landscape is eligible under Criterion A in the areas of Commerce; Economics; Ethnic Heritage – Black; and Conservation; Social History; and Politics/Government[1]. At the state and local levels, the cultural landscape is eligible under Criterion D in the areas of Archeology, Historic – Non-aboriginal and Archeology, Prehistoric. At the local level, the cultural landscape is eligible under Criterion A in the areas of Entertainment/Recreation; and Tourism; and under Criterion C in the area of Architecture.

The periods of significance associated with the cultural landscape are 9000 BCE-1500 CE, reflecting Paleoindian through Late Woodland archeological resources; 1828-1924, encompassing the years of construction and operation of the C&O Canal; 1938-1942, encompassing the years in which the Civilian Conservation Corps within the project area; and 1964-1965, encompassing the Mission 66 initiatives at Carderock. These periods of significance adhere to the 2015 National Register of Historic Places.

CRITERION A

Areas of significance: Transportation

Level of significance: National

Period of significance: 1828-1924

The Carderock cultural landscape within the C&O Canal NHP is eligible for listing in the National Register at the national level of significance under Criterion A in the area of Transportation due to its association with the early American republic's canal-building era, which lasted from c. 1790 to 1860.

Leaders of the young nation recognized the need for new transportation systems to reach the "interior" of the country, and the completion and success of the Erie Canal in 1825 spurred a period of intensive canal-building. The Chesapeake and Ohio Canal Company formed in 1823, seeking to establish a flat-water canal to connect eastern port cities with resources from the greater Potomac River Valley, uniting producers with markets. Running along the Potomac River, the canal consisted of the canal; a towpath created for mules to tow canal boats; and a system of lift locks, aqueducts, dams, and wasteweirs to move cargo along the canal.

The C&O Canal, built between 1828 and 1850, represents a pivotal phase in the first half of America's 19th century transportation revolution in which engineered waterways played a crucial role in the economic development of the young nation. The canal is one of the best-preserved of those built in the United States during the great boom of canal construction from 1820 to 1840. The canal and towpath, lift locks, aqueducts and lockhouses all reflect the primary and basic elements of 19th century flat-water canals, while structures associated with its water system—such as dams and wasteweirs—illustrate the height of 19th-century engineering methods used to control the flow and depth of water in the canal.

The cultural landscape is emblematic of the larger patterns associated with canal-based transportation that arose in the 19th century. The engineered

1. Social History and Politics/Government are not included as areas of significance within the 2015 *Chesapeake and Ohio Canal National Historical Park Historic District National Register Nomination.*

waterway is an important example of the evolution of transportation and infrastructure during this time. A portion of the C&O Canal from Seneca, MD (mile marker 22.80), to Cumberland, MD (mile marker 184.5), was established as a national monument in 1961 to preserve the nationally significant transportation resource. One decade later, the Chesapeake and Ohio Canal Development Act (Public Law 91-664) created the Chesapeake and Ohio Canal National Historical Park, encompassing and preserving the entire 184.5 miles of the canal and associated resources. Today, the C&O Canal is one of the best-preserved canals built in the United States during the boom in canal construction in the first half of the 19th century.

CRITERION A

Areas of significance: Commerce, Economics

Level of significance: State

Period of significance: 1828-1924

Engineered waterways played an essential role in the economic development of the early American republic, including within the Potomac River Valley region. The C&O Canal has state significance under Criterion A in the areas of Commerce and Economics, as the waterway helped to spur economic growth during canal operation between 1828 and 1924. Serving as a commercial artery, the C&O Canal drove regional commercial development and economic growth in the Potomac River Valley.

Used for transportation, the artificial waterway provided a means to transport agricultural goods and raw materials between the interior of adjacent states and the eastern seaboard. With operations underway, the canal prompted a trade boom in wheat, flour, corn, lumber, lime, stone, and coal. The canal made it possible for farms and milling operations across the largely rural Potomac River Valley to engage in broader regional trade, which was a major stimulant to area economies.

The canal sustained physical damage from the Civil War, and the canal company repaired the canal and associated features in the ensuing years. Despite dealing with impacts from the Civil War, flooding of the Potomac River, and competition from the Baltimore and Ohio (B&O) Railroad, the C&O Canal's heyday was after the Civil War, between 1870 and 1875. During this time, coal shipments increasingly supplanted agricultural products, becoming a main commodity and an economic lifeline for the canal. During the last quarter of the 19th century, the economy within Montgomery County shifted from predominantly agricultural to include light industry. Stores, a post office, and a brickyard were established around the project area.

Eventually, the railroad came to dominate the coal trade. This shift in industry, coupled with economic depression and impacts from major floods in 1866 and 1877, led to a decline in the canal after 1875. While the C&O Canal Company continued to exist as its own legal entity, the canal was managed for the next several decades by court-appointed trustees who, in turn, had G.L. Nicholson function as the General Manager of the Canal for daily operations.

From the opening of the canal for navigation in 1831 through the end of the commercial canal company era in 1924, the towns, communities, and surrounding regions in the Potomac River Valley were transformed by the C&O Canal's trade route. The canal created a commercial artery connecting inland growers and producers to markets and ports on the eastern seaboard.

CRITERION A

Areas of significance: Ethnic Heritage - Black; Conservation; Social History; Politics/ Government[2]

Level of significance: State

Period of significance: 1938-1942; 1964-1965

Under Criterion A, New Deal-era initiatives at Carderock are significant at the state level in the areas of Ethnic Heritage - Black; Conservation; Social History; and Politics/Government, as related to the efforts of Black CCC laborers. Nine years after the C&O Canal ceased operations in 1924, Congress passed the Emergency Conservation Work Act (ECW) as part of President Roosevelt's New Deal program. The ECW effectively created the CCC, which was a conservation, social reform, and relief program that sought to employ millions of out-of-work young men through civic conservation projects. As a significant part of President Roosevelt's administration, the CCC program provided labor for conservation projects throughout the country, including along the C&O Canal. In 1938, President Franklin D. Roosevelt approved the $2 million purchase of the canal title, with the intention that it would become a work relief project for the CCC.

In October 1938, the New Deal's Public Work Administration (PWA) made a $500,000 allotment for the "development and improvement of the old C&O Canal" (Howard 2017: 56). Work along the canal was completed by CCC enrollees in Companies 333 and 325, based at two camps within the project area. Camp NP-1-MD near Cabin John, Maryland, housed CCC Company 325 between June 18, 1938, and April 1, 1942. One-half mile away near Carderock, Maryland, where the present-day Carderock picnic pavilion now stands, Camp NP-2-MD housed CCC Company 333 from October 5, 1938, through November 15, 1941. These locations placed the camps between the canal and the river, closest to the densest concentration of locks and lockhouses along the canal.

Of the 324 total CCC companies in the National Capital Region, Companies 333 and 325 comprised two of the three Black CCC companies. (The third company, Camp NA-1-DC/NP-11-DC, was based at the National Arboretum.) Although racial segregation was not the official policy of the CCC, the agency nevertheless operated on a segregated basis in both its hiring practices and its company structures. While Congress specified that "no person shall be excluded on account of race, color, or creed," the CCC operated under a policy of racial quotas, limiting Black recruits to no more than 10 percent of enrollees (HABS No. DC-858: 3). Under this policy, the CCC in July 1935 reported that only 10 percent of its workers would be Black and that they would reside alongside white workers but in separate (and supposedly equal) facilities. However, after local residents filed complaints about this degree of integration, the CCC became fully segregated, with all-Black camps supervised by white managers. This racial segregation policy remained for the duration of the C&O Canal project.

Over the full tenure of the CCC program, the proportion of Black enrollees was disproportionately low compared to the overall population of Black residents in Washington, D.C., at the time. Moreover, the CCC policies did not account for higher rates of unemployment among Black Americans during the Great Depression (Muth 2020). Thus, Black men were under-represented in the Civilian Conservation Corps—adding to the significance of their presence and responsibilities at Carderock.

The two Carderock camps housed about 200 workers each. Many of the men who worked for the CCC at the C&O Canal were experienced conservationists by the time they arrived at Carderock; a little under half of all CCC men at the canal had labored previously at Wilderness, Virginia, part of the Fredericksburg-Spotsylvania National Military Park, restoring the battlefield to its wartime appearance. Before Wilderness, a few had participated in conservation and recreational work in Wolf Gap, Virginia, a project administered by the U.S. Department of Agriculture's U.S. Forest Service. Beyond daily conservation activities, academic and vocational training programs at the CCC camps taught skills to enrollees to increase

2. Social History and Politics/Government are not included as areas of significance within the 2015 *Chesapeake and Ohio Canal National Historical Park Historic District National Register Nomination.*

their future employment prospects. In this way, the program was not only a significant driver for environmental initiatives, but also for economic recovery and individual advancement.

Between 1938 and 1942, CCC enrollees developed and restored the canal between Georgetown and Seneca Lock (mile marker 22.80), ensuring the post-industrial future of the canal as a sustainable cultural landscape. CCC laborers desilted 22 miles of the canal and restored the towpath; other CCC activities included stocking fish, mosquito control, and snow removal—all of which were designed to encourage tourists to visit more often and stay longer within the recreational canal landscape. These CCC enrollees were also key to the canal's early living history programs, operating the locks along the canal during boat rides and guiding the mules for the mule-drawn tourist boats.

According to documentation prepared by the Historic American Buildings Survey, the CCC legacy along the C&O Canal "is best understood as baseline efforts in the canal landscape's transformation from commercial waterway to recreational amenity" (HABS No. DC-858: 91). While the C&O Canal struggled throughout its tenure to remain solvent as a transportation route in the 19th and early 20th centuries, the canal's success as a recreational destination for the public was ultimately made possible by the conservation work of CCC Companies 325 and 333. These efforts expanded and formalized earlier recreational trends within the landscape. Even as CCC segregationist policies dictated their role within the landscape, these companies transformed the character and use of the canal, creating the recreational landscape that still exists today.

CRITERION A

Areas of significance: Entertainment/Recreation; Tourism

Level of significance: Local

Period of significance: 1828-1924; 1938-1942; 1964-1965

The Carderock cultural landscape has significance under Criterion A at the local level in the areas of Entertainment/Recreation and Tourism in association with the development of recreational leisure tourism along the C&O Canal. The canal played a role in the early development of water-related private tourism in the Potomac River Valley, as the engineered waterway was also a route for steamer packet boats offering meals and entertainment to tourists along the canal. Beginning in the spring of 1831, when commercial and industrial use of the canal also began, private tour operators conducted excursion boats from various locations in Georgetown to points further north and west along the canal, including as far as Harpers Ferry, West Virginia, passing through the project area. Advertisements and newspaper articles from the period suggest that excursion boat trips were geared towards upper-class, primarily white, customers. Even after the C&O Canal declined as a transportation route, private excursion boats continued to operate on the canal. These tourist activities ceased when the canal navigation operations ended in 1924.

Beyond the canal, Carderock was a notable local destination for outdoor recreation. The rocky cliffs at Carderock were used for rock climbing beginning in the 1920s, and remain a popular climbing spot to this day. During the 1930s, the Potomac Appalachian Trail Club (PATC) laid out, cleared, and blazed the Billy Goat Trail that connects with the canal towpath and travels along the Potomac River through the project area. Since its inception, the trail has been used by individuals and recreational groups for organized outings (Stanton 2006: 22-23, 26).

While tourism long existed in and around the C&O Canal, the recreational use of the waterway (beyond boating) was reinforced when the federal government purchased the canal in 1938. The federal government recognized the canal as a public recreational amenity with scenic and historical value for nearby urban populations. Soon after the waterway was acquired, CCC crews made improvements within the landscape, shifting any remaining industrial land use to recreational use for leisure activities such as walking, rock climbing, cycling, and bird watching. Beginning in July of 1941, visitors to what was then called the Chesapeake and Ohio Canal Recreational Waterway could once again experience the canal by tourist boat.

Work was barely completed in restoring the canal when the NPS launched its first public boat rides in 1941. The *Canal Clipper* was the first government-sponsored public boat on the canal; the modified work scow measured approximately 30 feet long and had a carrying capacity of 66 people. It was propelled by one or two mules walking along the canal towpath. Trips on the *Canal Clipper* ran once per week on Sundays and were four hours in length, beginning at 2pm, traveling between Chain Bridge (mile marker 4.17) and Carderock (approximately mile marker 10.4) during July and August. During August and September, boat tours traveled between Carderock (approximately mile marker 10.4) and Great Falls (approximately mile marker 14.3), and during September and October boat tours ran between and Great Falls (approximately mile marker 14.3) and Rushville (mile marker 22.12) (at Lock 23 and Inlet Lock 2, adjacent to Dam 2 and the Seneca Falls). Civilian Conservation Corps enrollees acted as boatmen on the *Canal Clipper*.

Although visitation steadily increased at national parks after World War II, most NPS landscapes had not seen steady investment in their infrastructure since the 1930s, and needed repair and/or were inadequate to accommodate the increasing number of visitors. In an effort to address the backlog of deferred maintenance and to modernize these facilities, Congress approved funding in 1956 for the NPS Mission 66 program. This 10-year building and design campaign sought to expand visitor services and recreational opportunities in time for the 50th anniversary of the NPS in 1966.

Mission 66 funding resulted in major alterations to the appearance and use of Carderock, with development initiatives aimed at providing recreational opportunities to the growing urban population nearby. At this time, Carderock was managed by George Washington Memorial Parkway (GWMP), and a recreation area at Carderock was planned as early as 1958 as part of parkway development.

The original planned development included five parking lots that could host a total of 420 cars; two picnic areas that included four picnic shelter/comfort station structures; and two other picnic shelters. To reach the picnic areas, an interchange and access road were planned from the adjacent George Washington Memorial Parkway (today's Clara Barton Parkway) beginning in 1959. Delays in road construction extended the project into 1963.

Perhaps due to these delays, plans for a picnic shelter/fireplace structure in "Picnic Area A" were not approved until May 5, 1964; this structure was the most substantial feature in the 1958 general development plan that shaped the area. The NPS awarded the construction contract in May 1964 to William F. Klingensmith of Germantown, Maryland. Now known as Carderock Pavilion, it was completed in 1965.

By the time the recreation area was completed in 1965, it included one picnic pavilion, recreational fields, two comfort stations, and four parking lots. Today, the Carderock area largely reflects this period of construction and its associated recreational use. The picnic area reflects the Mission 66 program's goal of creating day-use areas for tourism and recreation featuring picnic facilities, comfort stations, and adequate parking. The rest of the recreational area continues to be used for walking and biking along the canal towpath, hiking on Section C of the Billy Goat Trail, and rock climbing on the nearby cliffs. These activities, among others, demonstrate the canal's ongoing recreational land use, which remains principal to the experience and character of the landscape.

Public Law 91-664 established the Chesapeake and Ohio Canal National Historical Park on January 8, 1971, "to preserve and interpret the historic and scenic features of the Chesapeake and Ohio Canal, and to develop the potential of the canal for public recreation." Upon establishment, the canal was divided into administrative sections, with the lower 22 miles from Seneca, MD, to Georgetown, Washington, D.C., designated as the C&O Canal Recreational Waterway, further emphasizing the public recreational purpose and use of the canal (Mackintosh 1991: 38-39).

CRITERION C

Areas of Significance: Engineering

Level of Significance: National

Period of significance: 1828-1924

The C&O Canal and its associated features are important examples of 19th-century canal-building technology and engineering. The C&O Canal exists among the best-preserved canals of the era. The Carderock cultural landscape has national significance under Criterion C in the area of Engineering in association with canal design in the 19th century.

The Chesapeake and Ohio Canal Company was chartered in 1825, part of the boom in canal construction that occurred in the United States between 1790 to 1860. Company President Charles Fenton Mercer and Chief Engineer Benjamin Wright, in addition to other proponents, envisioned a flat-water canal system that ultimately included the canal, towpath, and a system of 74 lift locks, 11 aqueducts, seven dams, and wasteweirs.

The Carderock section, and the entirety of the 184.5-mile-long C&O Canal, is among the best-preserved and -maintained examples of canal engineering dating to the early American republic. Construction on the Carderock portion of the canal began in 1828 and concluded in 1831, when the canal was watered from Rock Creek Basin (mile marker 0.0) to Seneca Lock (mile marker 22.80). Construction of the canal concluded in 1850, with the terminus of the waterway at Cumberland, Maryland. The canal and towpath within the project area, and the greater flat-water C&O Canal, are an engineering feat, representative of 19th century canal building technologies.

CRITERION C

Areas of Significance: Architecture

Level of Significance: Local

Period of significance: 1964-1965

The cultural landscape is locally significant under Criterion C in the area of Architecture based on its association with Mission 66 planning and design within the National Capital Region. With an increase in tourism to national park units after World War II, park facilities across the country had a backlog that reflected years of deferred maintenance and outdated facilities. In an effort to modernize facilities and meet visitor needs, Congress allocated funding in 1956 for a new NPS initiative called Mission 66. This design and construction campaign sought to expand visitor services and recreational opportunities by 1966, the 50th anniversary of the NPS. The Mission 66 program introduced new, consistent architectural styles to national parks, favoring the International Style and Modernism.

Modernism in the national parks was characterized by low, horizontal massing; flat or low- sloped roofs; unorthodox fenestration (including ribbon windows and window walls); the use of mass-produced building materials, including concrete masonry units (CMU); the integration of outdoor and indoor spaces; a designed harmony between the building and its setting; and site plans that sought to blend buildings with their surroundings. This design approach allowed the NPS to use cost- effective, standardized materials, plans, and construction methods developed in the postwar building boom.

The Carderock area features several representative examples of the National Capital Region's implementation of the NPS's Mission 66 program, including the picnic pavilion and two comfort stations. The materials, layout, and design of the structures reflect the Mission 66 program's emphasis on Modernist design and low-maintenance construction. Emphasizing day-use visitation by automobile, the design of the roadway that connects to today's Clara Barton Parkway represents efforts to integrate circulation patterns within the surrounding urban area for local residents.

Following construction delays of Mission 66-era plans, the design for a recreation area at Carderock was ultimately approved in May 1964. As built, the recreation area consists of four separate parking lots, meeting the goal of increasing day-use visitation, within the forested surroundings. NPS designers provided standardized plans for Mission 66 structures, including picnic facilities and comfort stations, which were used at Carderock. The most substantial structure is a picnic pavilion, completed in 1965. The picnic pavilion reflects

Mission 66 Modernist design and consists of a large shelter and adjoining smaller covered area with a fireplace. Vertical laminated wood columns support a shed roof over the structure, with the roof slightly higher over the larger portion of the pavilion. The fireplace, faced with corrugated steel, is located in the split-block end wall of the smaller area, which includes block concrete seating. A painted plywood panel and wood bench border the north end of the shelter area. The materials and construction methods reflect Mission 66 design and construction methods within the National Capital Region. Today, the pavilion remains substantially as it was completed in 1965.

As the Mission 66 program sought to modernize park facilities, one of the key components of that strategy included new restrooms with updated sanitation systems. Constructed in 1965, the east and west comfort stations at Carderock are typical of Mission 66 designs within the National Capital Region. Constructed of concrete masonry units (CMU) in an atypical stacked-bond pattern, the comfort stations have ribbon or banked windows at the top of the walls, and low-pitched gable roofs with pronounced overhanging eaves that give the buildings a horizontal emphasis. The Mission 66 resources at Carderock stand as important local examples of Modernist design that the NPS adopted during the Mission 66 era.

CRITERION D

Areas of Significance: Archeology, Historic – Non-aboriginal

Level of Significance: State; local

Period of significance: 9000 BCE – 1500 CE; 1938-1942

Under Criterion D, the cultural landscape is significant at the state and local levels in the areas of Archeology, Prehistoric and Archeology, Historic – Non-aboriginal. As a significant site of settlement and subsistence for many Indigenous cultural groups, the greater Potomac River Valley in which the C&O Canal was established has been inhabited for thousands of years. Prehistoric resources within the overall C&O Canal landscape reflect resources from the Paleo-Indian Period through Woodland Period, from approximately 9000 BCE through 1500 CE, with 20 prehistoric archeological sites eligible under Criterion D at the state/regional level within the national historical park. The archeological record within the cultural landscape has potential to yield information on human use and occupation.

In the area of Archeology, Historic – Non-aboriginal, the cultural landscape is significant as a property that has yielded, or may be likely to yield, information related to 20th-century occupation and use of the area. WSP USA, Inc. completed an Archeological Inventory and Evaluation Study for Camps NP-1-MD and NP-2-MD, the locations of CCC-era camps for Black American laborers at Carderock. The goal of the study was to determine what remains from the occupation of these sites during the CCC period.

The report concluded that Camp NP-1-MD, located within a wooded area, should be considered eligible for listing in the NRHP under Criterion A, because of the site's association with the establishment of canal, the New Deal, the CCC, and Black American history. While no artifacts were found that can be dated with certainty to the CCC period, many shovel tests at this camp encountered layers of gravel or asphalt that are clearly remnants of the camp.

The archeological investigations concluded that although Camp NP-2-MD lacks the integrity to be eligible for listing in the National Register, part of the site nevertheless retains integrity based on three concrete features and fill deposits that possibly date to the CCC-period and are located between the picnic pavilion and the east comfort station. This CLR therefore considers this area to be a contributing feature (as an archeological site) to the cultural landscape, based on its potential to yield significant information about this period of use.

Conclusion

The Carderock cultural landscape, like the greater C&O Canal of which it is a key part, is a well-preserved example of an Early Republic-era canal that is emblematic of trends in 19th-century flat-water canal construction and engineering that enabled transportation to extend past the

Potomac's Fall Line. The cultural landscape also reflects the rise in early 19th-century American canal transportation and industry, and the communities they shaped, before it declined in the early-20th century.

When the canal ceased to function as an industrial and commercial waterway, the U.S. government purchased the canal for work relief projects, deploying the Civilian Conservation Corps between 1938 and 1942 to reintroduce a recreational use along the first 22 miles of the waterway. In the mid-1960s, the Mission 66 program had significant impacts at Carderock, reinforcing the recreational use of the area by introducing new Modernist park features. The resources associated with the recreational area contribute to the integrity of the cultural landscape.

Today, the Carderock area of the C&O Canal serves as a popular recreation destination for pedestrians, cyclists, bird-watchers, rock-climbers, and hikers in the Washington, D.C. area, expressing nearly two centuries of significance in the history of American industry, engineering, and recreation.

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Chronology

START YEAR	END YEAR	ACTION	DESCRIPTION
15,000 BCE	7500 BCE	Inhabited	Paleo-Indian Period. Paleo-Indian hunter-gatherers inhabited the areas around what are now called the Potomac and Anacostia Rivers. From approximately 12,000 to 7500 BCE, Paleo-Indian peoples formed social groups that hunted elk, caribou, and deer; gathered plants; and fished in coastal plains along the Potomac and Anacostia Rivers (Donaldson 2009: 32; Virginia Department of Historic Resources 2018; Louis Berger 2016: 6).
7500 BCE	1000 BCE	Inhabited	Archaic Period. Hunter-gatherer groups began to establish more semi-permanent and permanent settlements, camping along the Potomac and Anacostia Rivers beginning c. 2200 BCE. Archaic-Indian peoples, whose subsistence was based on hunting, fishing, and gathering plants, developed new tools for hunting, fishing, and processing materials (Donaldson 2009: 32; Virginia Department of Historic Resources 2018).
1000 BCE	1600 CE	Inhabited	Woodland Period. Native Americans, including the Nacotchtank people, established organized villages and trade networks along the Anacostia and Potomac Rivers. Indigenous groups began farming and cultivating crops, such as corns, bean, and squash (Donaldson 2009: 32; Louis Berger Group 2009: 31; Hanna 2001, 4; NPS, Native Peoples of Washington, DC, 2018).
1607 CE	1608 CE	Colonized	Captain John Smith was the first English colonizer to explore and map the Potomac River. Smith explored the lower Potomac River and likely traveled above the Falls. Smith recorded and mapped the villages of Namoraughquend, north of present-day Alexandria, Virginia, and Nacotchtank, at present-day Anacostia (Berger 2016: 24; Hanna 2001: 4). No additional villages are depicted north of Nacotchtank, suggesting that Smith did not encounter the existing settlement of Tohogae (also spelled Tohoga), an Anacostan village at the future location of Georgetown, approximately ten miles southeast of the project area (Elder and Weldon 2018: 38.)

START YEAR	END YEAR	ACTION	DESCRIPTION
1608 CE	1608 CE	Farmed/ Harvested	By 1608, the Nacotchanks, Piscataways, Pamaunkeys, Nanjemoys, Potapacos, and Yaocomacos hunted, foraged, practiced slash-and-burn agriculture, and cultivated crops such as beans, corn, gourds, and pumpkins in the greater Washington, D.C., area. They also produced ceramics known today as Potomac Creekware (Donaldson 2009: 32; Palus 2014: 50-57). The Nacotchtank Tribe consisted of approximately 400 to 500 people and was the largest settlement cluster of riverside villages on the eastern side of the junction of the Anacostia and Potomac Rivers. This location at the confluence of the rivers allowed for the trade of resources with other groups (Donaldson 2009: 33).
1632 CE	1632 CE	Established	Henry Fleete (also spelled Fleet), a furrier, sailed to Tohogae, the Anacostan village on the future site of Georgetown, Washington, D.C. Fleete sought to establish direct fur trade routes with the Massawomeckes and other Indigenous groups who lived upriver (Bedell, Cagney, and Raszick 2022: 12).
1632 CE	1632 CE	Colonized	English colonizers claimed the lands described in Captain Smith's accounts. King Charles I granted the land along the Chesapeake north of the Potomac River that would include today's Montgomery County, Maryland, and surroundings to George Calvert, Lord Baltimore. George Calvert had been negotiating the Maryland charter when he died in 1632, and the charter was subsequently granted to his eldest son, Cecil, the second Lord Baltimore (Riggs 1946/47: 250; King 2012: 55).
c. 1650s CE	Early 1800s CE	Farmed/ Harvested	In the mid-17th century, tobacco became an increasingly important cash crop, and plantations developed in the colonies of Maryland and Virginia. Enslaved Africans were forced to harvest the tobacco (Mann 2019).

START YEAR	END YEAR	ACTION	DESCRIPTION
1700s CE	1850s CE	Established	During the 18th century and the first half of the 19th century, the project area and surrounding lands were agricultural, primarily composed of tobacco plantations worked by enslaved Africans. A c. 1853 cadastral survey depicts the existing 18th century land grants around the project area. Adjacent to the Potomac River was a land grant titled “James Park,” patented to Jas. Offutt in 1727. To the northwest of this land grant was “Hunting Park,” granted to Thomas Swanly in 1738. “Doull’s Discovery,” and “Hay Park”—both of which were granted to Dr. James Doulls in 1749--were located north and west of the aforementioned land grants. East of “James Park” was the “Resurvey on Dyalls Delight,” granted to William Dyalls in 1755. The survey also represented a rectangular tract known as “Resurvey of Youngman’s Folly” and located between “Hunting Park” and “Hay Park”; this tract was given to Thomas Offutt in 1784. Located on the Potomac River at the southeast end of “James Park” was “Ferry Landing,” granted to Robert Peter in 1786 (Bedell, Cagney, and Raszick 2022: 15).
1722 CE	1722 CE	Established	The Haudenosaunee, the Province of New York, the Colony of Virginia, and the Province of Pennsylvania signed the Treaty of Albany. The treaty forced the Haudenosaunee (or Iroquois) to give up ownership claims "to large tracts of land east of the mountains and to concede that their warriors would no longer use the path east of the Blue Ridge" (Quoted in Earley and Weldon, *Camp Misty Mount Cultural Landscape Inventory*: 42). The displacement of the Haudenosaunee opened large areas of western Maryland to European expansion and settlement, enticing colonizers from the Chesapeake region to move farther inland. By 1750, almost all the land along the Potomac River, from the Great Falls to the Monocacy and north to Pennsylvania, had been claimed. While there are few known records of settlement, people likely moved west of the Falls by the late 1720s (Bedell, Cagney, and Raszick 2022: 13).
1732 CE	1737 CE	Established	Light industries developed around the project area, including a mill on Seneca Creek by 1732, and another mill on Watts Branch by 1737 (Bedell, Cagney, and Raszick 2022: 14).
1748 CE	1748 CE	Established	The Ohio Company formed for trade, with the intent to build roads to connect the watersheds within the Ohio River Valley. The company inspired an interest in improving the Potomac River for navigation (Elder and Weldon 2018: 30).
1751 CE	1751 CE	Established	The Maryland Assembly granted a petition to establish a town on the “Potowmack River above the Mouth of the Rock Creek Adjacent to the Inspection House.” The land encompassed 60 acres and was divided into 80 lots. Georgetown, known as “George Towne,” was thus officially incorporated and established as a tobacco port and shipping center (Werner 1993: 8-15).

START YEAR	END YEAR	ACTION	DESCRIPTION
1776 CE	1776 CE	Established	Montgomery County, Maryland, was established (Temkin, Bickel, and Stafford 2004: 19).
1784 CE	1784 CE	Established	George Washington traveled the Potomac River in 1784, inspiring interest in a Potomac Route. The following year, the Virginia Assembly passed an act to incorporate the Patowmack Company. The Maryland Assembly affirmed the charter. The purpose of the company was to open the Potomac River to navigation. Early improvements focused on the Virginia side of the river (Elder and Weldon 2018: 31; Salvatore and Potter 2015: 8-224).
1785 CE	1802 CE	Built	The Patowmack Company constructed five skirting canals around the falls of the Potomac, rather than a continuous constructed waterway, to make the river more navigable (Salvatore and Potter 2015: 8-224). In 1802, the skirting canal system was operational. Commercial goods shipped included whiskey, furs, lumber, produce, and coal (Elder and Weldon 2018: 45). Ultimately, the canal effort was short-lived.
1790 CE	1790 CE	Established	July 16. The Residence Act of 1790 established the District of Columbia (Washington, D.C.) as the nation's capital (Robinson and Associates 2016: 101-102).
1802 CE	1802 CE	Established	Three large inland tracts were combined to compose the "Carderrock" assemblage, creating the 1,705-acre plantation of Robert Peter. Peter was a Scottish immigrant who had made his wealth as a tobacco merchant and acted as Georgetown's first mayor. In 1790, Peter was recorded in the first U.S. census in Montgomery County as the head of a 10-person household; no enslaved persons were listed. By the 1800 census, Peter was recorded in the newly formed Washington, District of Columbia, as the enslaver of six people. Carderrock was likely a seasonal home for the Peter family and was worked by enslaved African men and women; the tobacco they grew was then sold in Georgetown markets (Bedell, Cagney, and Raszick 2022: 14).
1820 CE	1822 CE	Established	Maryland and Virginia considered plans for a canal through the Potomac River Valley. The Virginia Board of Public Works recommended two surveys, completed by topographical engineers Thomas Moore and Isaac Briggs. The surveys recommended constructing an artificial waterway rather than improving and using the Patowmack Co. skirting canals (Elder and Weldon 2018: 31).
1820s CE	1840s CE	Established	Montgomery County, MD, experienced an economic recession. Many landowners sold, mortgaged, or abandoned their properties (Bedell, Cagney, and Raszick 2022: 16).
1823 CE	1823 CE	Established	February 22. The Virginia Assembly passed an act of inscription for the Potomac Company (Elder and Weldon 2018: 31)

START YEAR	END YEAR	ACTION	DESCRIPTION
1824 CE	1826 CE	Established	The Virginia Act of January 27, 1824, incorporated The Chesapeake and Ohio [C&O] Canal Company. The Maryland and Pennsylvania legislatures validated the act on January 31, 1825, and February 9, 1826, respectively. Congress validated the act on March 3, 1825 (Salvatore and Potter 2015: 8-224). The C&O Canal was originally envisioned as connecting the "tidewater in the District of Columbia" with the Ohio River in western Pennsylvania, spanning 365 miles and providing a water link between Potomac and the Ohio Valley (Salvatore and Potter 2015: 7-10; Elder and Weldon 2018: 48).
1828 CE	1828 CE	Built	July 4. President John Quincy Adams inaugurated the construction of the C&O Canal by turning the first piece of earth at Little Falls, MD. On the same day, construction began on the Baltimore & Ohio (B&O) Railroad in nearby Baltimore. As there were no firms large enough to manage the construction of the entirety of the canal, the 184.5-mile route was divided into approximately half-mile sections and awarded to independent contractors (Elder and Weldon 2018: 31).
1828 CE	1828 CE	Planned	The eastern terminus of the canal was not well-defined at first, having been loosely identified as the "tidewater in the District of Columbia." To decide on a terminus, canal company president Charles F. Mercer formed a committee to review the competing interests of Washington, D.C., Georgetown, and Alexandria; the committee included leaders from each city, as well as consulting engineers. By September 17, the committee determined that the canal would end at the confluence of Rock Creek and the Potomac River (Elder and Weldon 2018: 48).
1828 CE	1830 CE	Built	Lock No. 14 (at mile 9.47), the closest lock to the project area, was contracted to Patrick Donnelly on October 25, 1828. In June 1829, Donnelly thereafter leased the contract to Wood and Kendall. Work commenced on the lock that same month and was completed in September of 1830 at a total cost of $9,673.87 (Unrau 2007: 228).
1830 CE	1833 CE	Built	November 1830. Workers completed construction on the first 20 miles of the C&O Canal from Little Falls to Seneca. The following year, the canal opened to navigation between Little Falls and Georgetown. The canal reached Harper's Ferry by 1833 (Salvatore and Potter 2015: 8-163).
1848 CE	1851 CE	Purchased/ Sold	Frederick and Lucinda Metz purchased Young Man's Folly (148.5 acres) in 1848. After Frederick Metz' death c. 1850, Lucinda Metz sold the property to Jacob R. Welsh of Franklin County, Pennsylvania. Around this same time, Lewis Welsh purchased a portion of Carderrock from James Dunlop (Bedell, Cagney, and Raszick 2022: 18).

START YEAR	END YEAR	ACTION	DESCRIPTION
1850 CE	1850 CE	Established	Workers completed the length of the C&O Canal, terminating in Cumberland, Maryland (Elder and Weldon 2018: 32).
1850 CE	1860 CE	Established	By the 1850s, agriculture in Montgomery County had rebounded from the economic recession (Bedell, Cagney, and Raszick 2022: 18).
1853 CE	1853 CE	Established	Dunlop sold another 228 acres (part of Carderrock and Doull's Discovery) to John G. Stone (Bedell, Cagney, and Raszick 2022: 19).
1860 CE	1860 CE	Land transfer	By 1860, Lewis Welsh relocated to Georgetown and sold Young Man's Folly (148.5 acres) and a portion of Carderrock (392.6 acres) to Jacob Welsh (Bedell, Cagney, and Raszick 2022: 18).
1861 CE	1865 CE	Established	The Civil War devastated the agricultural economy of Montgomery County. After four years of war and neglect, the canal was in poor condition (Bedell, Cagney, and Raszick 2022: 19).
1865 CE	1865 CE	Established	The 1865 map produced by Martenet et al. depicted the land along the canal in the project area as vacant. Three lockkeeper houses, associated with Locks 11, 12, and 14, were depicted east of the project area on the north side of the canal. These houses were occupied by M. Sebastian, William Hill, and George Johns, respectively (Bedell, Cagney, and Raszick 2022: 19).
1870 CE	1870 CE	Established	By 1879, the Hopkins map of the region noted that the Carderrock area was owned by Richard Cropley, who was a successful and wealthy flour merchant residing in Georgetown. (The Cropley family was active in grocery and pharmacy businesses in the city) (McMahon 2022: 196-197).
1870 CE	1875 CE	Established	The C&O Canal experienced a prosperous and stable period, with five years of unprecedented financial profits (Salvatore and Potter 2015: 8-190).
1876 CE	1889 CE	Established	Due to competition with the B&O Railroad and a nationwide depression, trade on the C&O Canal began to decline (Elder and Weldon 2018: 33, 76).
1875 CE	1900 CE	Established	In the last quarter of the 19th century, the dominant economic sector in Montgomery County shifted from agriculture to light industry (Bedell, Cagney, and Raszick 2022: 19).
1883 CE	1883 CE	Purchased/ Sold	Arthur Bird Cropley (the younger brother of Richard Cropley) purchased over 500 acres of Carderrock, presumably to support his grocery business (McMahon 2022: 197).
1884 CE	1884 CE	Purchased/ Sold	June 12. Three Black men, Lawton Garner, William Gibbs, and Joseph Toney, purchased a half-acre parcel of land in Cropley, MD, from Robert Stone. These men were trustees of a new schoolhouse for Black children that was subsequently constructed on the lot. The Black enclave was called Brickyard, located south of today's MacArthur Boulevard and north of the canal (Bedell, Cagney, and Raszick 2022: 20).

START YEAR	END YEAR	ACTION	DESCRIPTION
1889 CE	1889 CE	Established	June. A major flood damaged the canal. The Canal Company was unable to fund repairs. With the majority of the canal inoperable, the Canal Company could not reach the levels of revenue necessary to pay off bonds and interest, thus defaulting on the terms of the bonds. Bondholders petitioned the courts to appoint a receiver (or receivers) to take immediate control of the canal while court proceedings commenced to determine the future of the canal. Receivers were appointed to survey the canal to assess the feasibility of making it operational again; the survey concluded that navigation could be restored. The courts thereafter appointed Trustees to continue the operation of the canal. The Trustees appointed G.L. Nicholson as the General Manager. The receivers financed the repairs necessitated by the flood damage on the canal. At this time, coal was the most profitable cargo shipped on the canal (Salvatore and Potter 2015: 8-192).
1894 CE	1894 CE	Established	The 1894 Hopkins map of Washington, D.C. and its environs showed that the Cropley surname was still associated with the Carderrock area, including a group of three houses at the western end of Conduit Road, located to the north of the project area. One of the buildings was labeled as a store and post office. Two structures were depicted within the project area, although there was no information about the buildings. At this time, Arthur Cropley divested 56 acres (part of Young Man's Folly and all of Hunting Park) to the Potomac Brick & Tile Company, a business co-owned by Arthur Cropley and his brother, Richard Cropley (Bedell, Cagney, and Raszick 2022: 20). The Potomac Brick and Tile Company was recorded as the owner of 59 acres on the south side of Conduit Road. The Irma Mining Company (a gold-mining enterprise), the Eagle Mine, Sawyer's Gold Mine, a store, a stamp mill, and a small rail line all existed north of Brickyard (Bedell, Cagney, and Raszick 2022: 19).

START YEAR	END YEAR	ACTION	DESCRIPTION
1900 CE	1910 CE	Established	The 1900 US census of the Potomac District of Montgomery County showed that William Gibbs and Joseph Toney were neighbors in Brickyard with 14 Black households, which were interspersed among several white households. The census also recorded that eight of the Black men living in Cropley that year worked on the Washington Aqueduct, and seven worked on the railroad; none worked in the Potomac Brick & Tile Company (NPS Brickyard, Cropley (Carderock), Maryland 2023). Two US Geological Survey topographic maps from 1900 and 1909 showed approximately seven buildings along the canal, just below the brickyard. These buildings likely represented houses, perhaps of brickyard workers, and may have comprised the core of the Brickyard community. A portion of the land that hosted these seven houses was later developed in the late 1930s as Camp NP-2-MD for the Civilian Conservation Corps and as the David Taylor Model Basin facility (McMahon 2022: 198-99).
1908 CE	1920 CE	Land Transfer	The success of the Potomac Brick & Tile Company under Cropley ownership was short-lived. The property was sold by 1908, and changed hands again in a public auction held on March 4, 1914 (McMahon 2022, 199). A series of six owners held the tract for short periods between March 1914 and June 1920 (Bedell, Cagney, and Raszick 2022: 23).
1917 CE	1917 CE	Established	A real estate atlas of Montgomery County depicted two churches and a school at the intersection of Conduit Road and an unnamed private road. Two Black landowners were depicted on the map in the area north of Conduit Road and east of an unnamed private road: Joseph Toney (who owned 2.5 acres) and C. Frye (who owned five acres) (NPS Brickyard, Cropley (Carderock), Maryland 2023; McMahon 2022: 199).
1920 CE	1920 CE	Land Transfer	June 7. Michael J. Keane, a lawyer and real estate developer from Washington, D.C., purchased 275 acres of the 531-acre Carderrock tract in Montgomery County. Keane platted the land as an upscale residential subdivision that he called “Camp Carderock” (Montgomery County Plat 230, July 1920). While the 1920 plat referenced the original tract of land as “Carderrock,” the name Camp Carderock appeared to be the first evidence of using the updated spelling with a single “r.” Camp Carderock was platted as 74 one- and two-acre lots surrounded by a largely undeveloped landscape between the C&O Canal and the Potomac River. However, Keane sold only one lot—the western half of Lots 54 and 66 (which were adjacent)—to Ethel E. Alicoate of Washington, D.C. (Bedell, Cagney, and Raszick 2022: 23).

START YEAR	END YEAR	ACTION	DESCRIPTION
1920 CE	1929 CE	Established	Carderock was established as a rock-climbing destination in the 1920s, and remains one to this day. Gustave Gambs, Donald Hubbard, and Paul Brad were among the early rock climbers to explore Carderock and establish routes. Using heavy manila ropes, climbers tied into the rope with a single loop around the waist and a bowline knot (Potomac Appalachian Trail Club website – Mountaineering Section, Local climbing history).
1921 CE	c. 1935 CE	Planned	A 1921 plan for a high dam near Chain Bridge (S.J. Res. 192, 67th Congress; Congressional Record 62: 5700) encountered heavy opposition. The proposal ultimately failed in the mid-1930s when Congress approved construction of the Navy's David Taylor Model Basin at Carderock on land that would have been inundated by the dam (Mackintosh 1991: 6).
1924 CE	1924 CE	Damaged	March and May. Flood events impacted the canal, with the May event in particular resulting in severe damage. The C&O Canal receivers sought permission from the courts to suspend canal navigation; the request was approved, ending commercial transportation on the canal on May 14, 1924. The 1924 floods ended the era of canal commerce in the Potomac River Valley. Although the canal's commercial transportation ended, the workers repaired the lower five miles and maintained enough water in the canal in Georgetown to honor existing agreements and fulfill the needs of factory and mill owners who used canal water for a power source. The court required that the canal not be entirely abandoned; under the canal's charter, such abdication would have mandated foreclosure and sale (Elder and Weldon 2018: 33, 86, 90; Salvatore and Potter 2015: 8-193).
1925 CE	1925 CE	Purchased/ Sold	Keane sold the Camp Carderock land to Frank P. Harman, Jr. Purchased just before a real estate bust in 1925, Harman made no further sales. Ethel Alicoate sold her property to Anita E. Phipps of D.C. in August 1926. The deed of title suggests that Alicoate erected structures on the property during her four-year ownership, as the deed states: "western half of lots 54 and 66 in the subdivision known as Camp Carderock…together with the building and improvements thereupon" (Bedell, Cagney, and Raszick 2022: 25).
1927 CE	1928 CE	Land transfer	Harman sold his 275-acre Camp Carderock lot (minus the parcel now owned by Anita Phipps) to the Woodside Homes Corporation (WSP USA 2022, 25). The Woodside Homes Corporation subdivided the land between the canal and Conduit Road (including the brickworks property, which is today the location of the David Taylor Model Basin) in 1928 (McMahon 2022: 200).
1928 CE	1928 CE	Established	The brickworks ceased operation. By this time, the tract comprised just 11 acres (McMahon 2022: 199).

START YEAR	END YEAR	ACTION	DESCRIPTION
1928 CE	1928 CE	Established	The Woodside Homes Corporation published several advertisements for Carderock (no longer using the term "Camp") in the *Washington Post* and the *Evening Star*, encouraging the development of permanent home sites (Bedell, Cagney, and Raszick 2022: 25).
1928 CE	1928 CE	Established	Woodside Homes Corporation sold a title to Roscoe C. and Sue T. Green of Washington, D.C. (for Lot 70, with parts of Lots 69 and 71). Ten covenants were written into the deed of title. The first five covenants addressed limitations for building on the property: no structures could be used for commercial or manufacturing, and every dwelling had to be a detached, single-family home with prescribed setbacks. Covenant 7 was a racial covenant that excluded Black Americans from either owning or renting any property in Carderock (Bedell, Cagney, and Raszick 2022: 25-26). Such racial covenants were legal until 1948, when the U.S. Supreme Court ruled in Shelley v. Kraemer that racially restrictive covenants were unconstitutional and therefore unenforceable.
1929 CE	1939 CE	Established	The Great Depression deeply impacted individuals and institutions across the country as unemployment soared, banking systems collapsed, and industrial production diminished. By the time Franklin D. Roosevelt became President in 1933, one in four Americans was out of work. Roosevelt quickly enacted a series of programs and projects known as the New Deal that aimed to alleviate the impacts of the Great Depression.
1929 CE	1933 CE	Land transfer	Woodside Homes Corporation made no sales in 1929 or 1930. In 1931, parts of Lots 19-20 and abutting 42-43 (equaling 2.5 acres) were sold to Thomas William and Louise Smith, and 1.6 acres were sold to Charles F. and Georgia T. Crane, encompassing Lot 47 and parts of abutting Lots 46 and 48. By 1931, Charles Ward Hopkins and Morgan K. Armstrong, owners of Woodside Homes Corporation (a subsidiary of Woodside Development Corporation), had reduced their 10 covenants to four. The racial covenant remained in place. There were no more advertisements for Carderock after the summer of 1933 (Bedell, Cagney, and Raszick 2022: 26).
1930 CE	1930 CE	Established	The passage of the 1930 Capper Cramton Act (46 Stat. 482) authorized the creation of the George Washington Memorial Parkway (GWMP), which would extend the parkway above Great Falls on both sides of the Potomac River. The act included "the protection and preservation of the natural scenery of the Gorge and the Great Falls of the Potomac and the acquisition of that portion of the Chesapeake and Ohio Canal." Amendments to the bill authorized the federal government to acquire the C&O Canal as far as Point of Rocks, Maryland (Mackintosh 1991: 7).

START YEAR	END YEAR	ACTION	DESCRIPTION
1930 CE	1930 CE	Established	The 1930 US census lists a few Black households on "Conduit towards & to Cropley," including the home of James Harris, John Haley, and Beverly Davis (McMahon 2022: 201).
1930 CE	1939 CE	Established	During the 1930s, the Potomac Appalachian Trail Club (PATC) laid out, cleared, and blue-blazed the Billy Goat Trail (Shosteck 1968: 38). The trail was used by recreational groups for outings.
1933 CE	1933 CE	Established	March 31. As part of President Franklin D. Roosevelt's New Deal program, Congress passed the Emergency Conservation Work Act (ECW), effectively creating the Civilian Conservation Corps (CCC). The CCC sought to provide labor to millions of unemployed young men through civic conservation projects throughout the country (Sirna 2011: 9).
1934 CE	1934 CE	Established	Frederic A. Delano, chairman of the National Capital Park and Planning Commission (and President Roosevelt's uncle), communicated to Harold Ickes the idea of using CCC labor to conserve and restore locks on the C&O Canal and restore canal bridges in an effort to restore the canal for public recreation. Such a restoration project would extend the George Washington Memorial Parkway westward into Maryland, marking a departure from a proposal to convert the canal to a federal highway (Howard 2017: 49).
1935 CE	1935 CE	Established	With encouragement from President Roosevelt, the National Capital Park and Planning Commission (NCPPC) studied the possibilities of preserving the canal and building a parallel parkway. A 1935 report from planner John Nolen, Jr. concluded that: "There was unanimous agreement that the Canal should be preserved as a recreational waterway of great scenic and historical value for the full distance between Washington and the Monocacy and perhaps to Point of Rocks… We further concluded that the restoration of the canal as a scenic waterway was an ideal work relief project of almost boundless proportions" (Quoted in Mackintosh 1991: 12).
1935 CE	1935 CE	Purchased/ Sold	July. The U.S. government purchased the Camp Carderock subdivision from the Woodside Homes Corporation. The initial purchase excluded the parcels owned between 1926 and 1935 by Phipps, the Greens, the Smiths, the Cranes, and others; however, these parcels were purchased in the following months of the same year (Bedell, Cagney, and Raszick 2022: 27).
1937 CE	1938 CE	Established	December 1937- April 1938. Aerial photographs of Montgomery County show evidence of land clearing within the project boundaries (Fairfax County Historical Aerial Viewer).
1938 CE	1938 CE	Planned	April 30. The federal government informed the public of the plans for development along the canal with CCC labor, although details were minimal (Howard 2017: 48).

START YEAR	END YEAR	ACTION	DESCRIPTION
1938 CE	1938 CE	Planned	May 17. The government announced that one CCC camp would open along C&O Canal that summer. A second camp subsequently opened in the fall. These camps were two of the three camps created in the National Capital Region for Black-American laborers. The camps were established over the objections of the Montgomery County Board, which opposed the establishment of a CCC camp of Black enrollees based on racial animus. Federal officials stated that the establishment of the camp would proceed regardless of the board's opposition (*The Daily Mail* 1938).
1938 CE	1938 CE	Established	August 6. The federal government acquired the canal from the court-appointed receivers of the C&O Canal. A contract was signed allowing federal work to begin on the canal (Howard 2017: 48).
1938 CE	1938 CE	Established	September 19. Camp NP-1-MD, housing CCC Company No. 325, was established near Cabin John, Maryland. This camp remained open until April 1, 1942. Camp construction included temporary access roads, a temporary bridge, and portable structures. Camp NP-1-MD required some land clearance, though the oldest and largest trees were retained (Howard 2017: 65).
1938 CE	1938 CE	Land Transfer	September 28. The federal government purchased the C&O Canal for $2,000,000, with the intention to develop it as a work relief project and repurpose the first 22 miles of canal from Georgetown to Seneca for recreational use (Elder and Weldon 2018: 34). Officially known as Federal Project 712, the NPS had several Civilian Conservation Corps (CCC) companies available to complete rehabilitation work on the C&O Canal (Sirna 2011: 33).
1938 CE	1938 CE	Established	October 5. Camp NP-2-MD, located near Carderock, housed Company No. 333 was established and remained open until November 15, 1941. At Camp NP-2-MD, grass was planted, landscaping added around buildings, and gravel roads were created. Both Camp NP-1-MD and Camp NP-2-MD averaged 150-180 CCC enrollees (Howard 2017: 66).
1938 CE	1942 CE	Established	During their tenure from 1938 to 1942, CCC enrollees developed the canal between Seneca Lock (Mile 22.80) and Georgetown for recreational use. CCC laborers cleared the canal prism and restored the towpath, locks, and lockhouses along the first 22 miles. Additional CCC activities included stocking fish, implementing mosquito control, and snow removal (HABS No. DC-858: 3). Overall, the CCC "cleared 200 acres of vegetation from the canal bed. Then they excavated 50,700 cubic yards of earth from the canal prism, and helped restore 22 miles of towpath. They hand-placed 9,835 square yards of stone rip rap for bank protection, dry masonry walls for bypass flumes adjacent to locks, and along the towpath at Widewater" (Salvatore and Potter 2015: 8-204).

START YEAR	END YEAR	ACTION	DESCRIPTION
1938 CE	1938 CE	Planned	November 19. In the closing session of its November meeting, the National Capital Park and Planning Commission approved the restoration of the newly acquired Chesapeake & Ohio Canal from Georgetown to Seneca, Maryland. The restoration was to include repair and filling of the canal, repair of locks and gates and repair and opening of buildings, including the Great Falls Tavern along the waterway. Work began in earnest the following month (*The Evening Star* 1938).
1938 CE	c. 1941 CE	Built	A pivot bridge was constructed by unknown laborers at mile 9.92 to provide vehicular access from the roads on the north side of the C&O Canal to the CCC camps on the south side of the canal (National Park Service 2023: 63).
1939 CE	1939 CE	Built	A new navy modeling facility—named the David Taylor Model Basin—was built in 1939 on the north side of the canal, south of Conduit Road; this facility still exists north of the project area. The facility opened in 1940 and was extensively used during World War II (Allison 1985: 8-3).
1939 CE	1939 CE	Planned	August. The NPS discussed the possibility of expanding the CCC project to areas further west of Seneca. The canal and towpath were already beginning to take shape as a recreational area from Georgetown to Seneca. A few officials within the Naturalist Division of the NPS believed the full 184.5-mile extent of the canal (from Georgetown to Cumberland) should be restored in order to achieve the "full utilization of the inspirational and educational values" (Howard 2017: 63).
1940 CE	1940 CE	Restored	By February 1940, all 23 locks from Georgetown to the inlet at Violettes Lock (Lock 23, Mile 22.12) were operational. On August 9, water began flowing from Seneca to Lock 5 (Salvatore and Potter 2015: 8-203).
1941 CE	1941 CE	Closed	November. Camp NP-2-MD formally closed prior to the attack on Pearl Harbor, and its buildings were repurposed for wartime mobilization efforts. Four barracks from NP-2-MD were transferred to Bolling Field in Washington, D.C., and all buildings were ultimately moved to other sites (Bedell, Cagney, and Raszick 2022: 29).
1941 CE	1941 CE	Established	Civilian Conservation Corps enrollees acted as boatmen on the *Canal Clipper*, the first government-sponsored public boat on the canal. The *Canal Clipper* ran once per week on Sundays. During July and August, the boat ran between Chain Bridge and Carderock; during August and September, the boat traveled between Carderock and Great Falls; during September and October, it traveled between Great Falls and Rushville (at Lock 23 and Inlet Lock 2 adjacent to Dam 2 and the Seneca Falls) (McCarthy 2014: 8).

START YEAR	END YEAR	ACTION	DESCRIPTION
1941 CE	1945 CE	Established	During World War II, the C&O Canal was impacted by the loss of CCC labor and the resulting lack of maintenance on the canal. During the war, U.S. Army troops occupied the vacated CCC barracks at Carderock (previously Camp NP-1-MD) and the Great Falls Tavern (Mile 14.3). From these outposts, the troops guarded the intake works of the Washington Aqueduct, the water supply for Washington, D.C. (Mackintosh 1991: 46-48).
1942 CE	1942 CE	Closed	April. Camp NP-1-MD was converted into NP(D)3 for the development of military infrastructure and the training of enrollees in skills that would aid mobilization, "such as auto mechanics, carpentry, electricity, sheet metal work, welding, and aviation mechanics" (Sirna 2011). This ceased when Congress formerly ended the CCC program in July of 1942.
1942 CE	1942 CE	Damaged	October. Flooding destroyed much of the CCC's work along the C&O Canal. The repair costs from the flooding between Georgetown and Great Falls was estimated at $250,000 (Elder and Weldon 2018: 34).
1945 CE	1945 CE	Rehabilitated	Following World War II, the NPS restored the lower 22 miles of the canal, including resurfacing the towpath from Georgetown to Seneca (Elder and Weldon 2018: 34, 99).
1945 CE	1945 CE	Planned	A 1945 plan titled *Rehabilitation of C&O Canal, Key Bridge to Seneca Falls* depicts early development plans for the Carderock area. The plan depicts a planned softball field, obstacle course, one parking lot, and a picnic area in the location of former Camp NP-1-MD. These plans were never developed. The area where Camp NP-2-MD was located does not depict any planned development, but does depict several existing road traces through the area. To the east of former Camp NP-1-MD, the plan indicates a spring, a quarry, a creek, and a trail. A stone house is depicted on the west side of Rock Run (ETIC 412/11070).
1945 CE	1945 CE	Planned	A c. 1945 use study depicts a proposed children's camp at Camp NP-1-MD that would have included dormitories, an open lawn, softball fields, a council ring, and other elements (ETIC 851/82080). These plans were never realized.
1948 CE	1950 CE	Established	June 10. Congress signed a bill (Public Law 618) in 1948 ordering the NPS and the Bureau of Public Roads to conduct a joint feasibility study for a scenic parkway along the canal route from Great Falls to Cumberland (Salvatore and Potter 2015, 8-205). The report was completed in 1950, issuing a recommendation for the parkway, although it met some resistance (Salvatore and Potter 2015: 8-224).
1949 CE	1949 CE	Altered	A 1949 aerial photograph of the area shows that by this time, the CCC buildings had been removed in both camp locations and that the landscape had reverted to open fields (crossed by dirt roads) and woods (Bedell, Cagney, and Raszick 2022: 29).

START YEAR	END YEAR	ACTION	DESCRIPTION
1951 CE	1951 CE	Developed	A 1951 aerial photograph depicts increasing forest coverage at both former CCC camp locations (Historical Images in Montgomery County, MD).
1953 CE	1953 CE	Built	A 1953 aerial photograph depicts a new towpath trail and a roughly square open space in the location of the former NP-2-MD camp site (Historical Images in Montgomery County, MD).
1954 CE	1954 CE	Advocated	After the *Washington Post* published an editorial supporting the construction of a highway along the canal (which had been proposed at various points since the 1940s), U.S. Supreme Court Justice William O. Douglas objected to the plan and invited the newspaper's editors to hike the canal with him (Mackintosh 1991: 68). They accepted the invitation, and on March 20, 1954, Justice Douglas and more than 20 others began to hike downstream from Lock 72. The trip was well-publicized and ultimately influenced the establishment of the C&O Canal National Historical Park in 1971 (Wheelock 2007: 28; Salvatore and Potter 2015: 8-206).
1955 CE	1956 CE	Altered	A second parkway study, completed in 1955, recorded the potential impacts to the natural setting and suggested improvements to the towpath for hiking and bicycling. In 1956, the NPS abandoned its plan to build a parkway along the canal (Mackintosh 1991: 119; Elder and Weldon 2018: 102).
1956 CE	1966 CE	Established	The decade between 1956 and 1966 was the Mission 66 period in NPS history, named for the service-wide program of repair and expansion that compensated for years of reduced budgets during World War II (Robinson and Associates, Inc., 2021: E-1, E-2).
1956 CE	1956 CE	Planned	President Eisenhower included $7,209,000 for flood control, navigation and shore protection projects in Maryland in his budget recommendations. To meet the needs and increasing demand on parks, the president also recommended $2,218,800 for maintenance and construction of National Park Service parkways in Maryland as far as Carderock (*The Evening Sun* 1956: 6).
1957 CE	1965 CE	Altered	A 1957 aerial photograph shows the Carderock landscape as densely forested, with the exception of a large area cleared for the development of the Carderock Recreation Area (WSP USA 2022: 29). At this time, Carderock was managed as part of the George Washington Memorial Parkway (GWMP) and was one of three recreation areas (along with Turkey Run Park and Fort Hunt Park) built along the parkway in the 1960s as part of the NPS Mission 66 program and the extension of the parkway to the Capital Beltway. The NCP Design and Construction Office intended to develop the "old CCC Camp" across from Carderock as an integral part of the parkway (Dehmlow, Perry, and Kelsch 2015: 33).

START YEAR	END YEAR	ACTION	DESCRIPTION
1958 CE	1963 CE	Built	The Carderock Recreation Area plans were in the works as early as summer 1958 and included two picnic areas (A and B). The planned development included: five parking lots, for a total of 420 cars; four picnic shelter-comfort station structures; and two other picnic shelters. Picnic Area A was eventually constructed in 1965; Picnic Area B was never built. To reach the picnic area, an interchange and access road were built from the adjacent GWMP beginning in 1959, but delays in constructing the road stretched into 1963 (Robinson and Associates, Inc. 2021: E-33).
1959 CE	1959 CE	Planned	Representative John R. Foley (D-Md) introduced Congressional legislation to designate the C&O Canal as a national historic park (Montgomery County Sentinel 1959: 8).
1960 CE	c. 1962 CE	Built	June 12. The Potomac Interceptor Sewer Line was approved by Congress for construction (Public Law 86-515). The Act authorized Washington, D.C., to construct and operate a sanitary sewer line to connect Dulles to the Potomac Pumping Station in Washington, D.C., traveling through the project area in Montgomery County. Work took place over the following years within the project area.
1961 CE	1961 CE	Designated	Under Presidential Proclamation 3391, the canal landscape between Seneca and Cumberland was designated a national monument (Elder and Weldon 2018: 34).
1962 CE	1962 CE	Built	A 1962 aerial photograph reveals that parking lots were added to the western part of the project area, south of the canal, and a new access road on the north side of the canal connecting to the Clara Barton Parkway was under construction on the eastern side to reach the planned picnic area (Historicaerials.com).
1962 CE	1962 CE	Built	Workers completed the bridges at Carderock/David Taylor Model Basin and Cabin John Gardens exit of George Washington Memorial Parkway (Dehmlow, Perry, and Kelschz 2015: 38).
1963 CE	1964 CE	Built	Fairfax County workers constructed Scotts Run Potomac River Crossing, resulting in open cut excavations and the installation of the concrete siphon chamber/odor control structure near the Carderock Pavilion (ETIC 850/80783). This project connected to the Potomac Interceptor Sewer Line.
1964 CE	1964 CE	Planned	Following delays in construction, plans for the picnic area designed in 1958 were approved in May 1964. NCR awarded a contract to William F. Klingensmith of Germantown, MD, to construct the shelter now known as the Carderock Pavilion (Robinson and Associates, Inc. 2021: E-33).

START YEAR	END YEAR	ACTION	DESCRIPTION
1965 CE	1965 CE	Built	Workers mechanically graded the recreation area and constructed the Carderock picnic pavilion (in Picnic Area A), east comfort station, and west comfort station. The comfort stations were typical of Mission 66-era designs found in the National Capital Region. The road to the recreation area was open by 1965 (Robinson and Associates, Inc. 2021: E-33; Bedell, Cagney, and Raszick 2022: 85).
1971 CE	1971 CE	Designated	Public Law 91-664 established the Chesapeake and Ohio Canal National Historical Park (NHP) on January 8, 1971, "to preserve and interpret the historic and scenic features...and develop the potential of the canal for public recreation." The canal was divided into administrative sections; the newly watered section of the canal between Georgetown and Violettes Lock (Lock 23), near Seneca, Maryland, were desginated as the C&O Canal Recreational Waterway (Mackintosh 1990: 38-39; Elder and Weldon 2018: 34, 111).
1974 CE	1974 CE	Established	July 1. The two administrative portions of the canal were unified under one superintendent, William Failor (Mackintosh 1991: 141). It is likely that management of Carderock shifted from George Washington Memorial Parkway to the C&O Canal at this time.
1976 CE	1976 CE	Established	The Chesapeake and Ohio Canal National Historical Park General Plan of 1976 included a description of Carderock and depicted the area within park lands, suggesting that the Carderock area was under CHOH management by this time (NPS Chesapeake and Ohio National Historical Park General Plan 1976: 42, 44).
1979 CE	1979 CE	Altered	Workers removed and replaced the roofing on the Carderock picnic pavilion (NPS Historic Property Project Documentation 2022).
1984 CE	1984 CE	Damaged	February. Flooding occurred, impacting the entire canal and requiring $580,000 in repairs (Elder and Weldon 2018: 119).
1989 CE	1989 CE	Established	The portion of George Washington Memorial Parkway located north of the project area, stretching from Canal Road in the District of Columbia to MacArthur Boulevard at Carderock Recreation Area, was renamed the Clara Barton Parkway. This change was made in part to avoid confusion with the George Washington Memorial Parkway in Virginia (Dehmlow, Perry, and Kelschz 2015: 25).
1991 CE	1991 CE	Renovated	Workers repainted the ceiling and support columns of the picnic pavilion (NPS Historic Property Project Documentation 2022).
1991 CE	1991 CE	Renovated	Workers repainted the interior and exterior of the east comfort station. Workers removed hardware inside, made necessary repairs and patches, and primed walls and trim (NPS Historic Property Project Documentation 2022).
1992 CE	1992 CE	Renovated	Workers stripped the roof of the pavilion, removing and replacing any rotted material, adding rubber roofing, and repainting the structure (NPS Historic Property Project Documentation 2022).

START YEAR	END YEAR	ACTION	DESCRIPTION
1994 CE	1994 CE	Renovated	Workers repainted the exterior of the picnic pavilion. This same year, excavation took place to facilitate site drainage. Also at this time, the interior of the east comfort station was repainted (NPS Historic Property Project Documentation 2022).
1994 CE	1994 CE	Engineered	The U.S. Department of Transportation and Federal Highway Administration developed plans for project 100A26, "Pavement Reconstruction, Milling and Overlaying, Striping, and Other Work on Clara Barton Parkway from MacArthur Boulevard to the Interstate 495 Interchange." Plans show the reconstruction of the parkway from the Carderock exit to MacArthur Boulevard and repaving from the Beltway exit ramps to the Carderock exit (Dehmlow, Perry, and Kelsch 2015: 43).
1997 CE	1997 CE	Renovated	Workers repainted the interior of the east comfort station (NPS Historic Property Project Documentation 2022).
2012 CE	2012 CE	Renovated	Workers completed repairs on the picnic pavilion, including: the removal and replacement of the EPDM roofing; selective repairs to water-damaged roof decking; selective replacement of deteriorated beams and flashing; replacement of the rain gutter and downspout system; introduction of an underground drainage system to correct for deterioration at the base of a support column; repainting of the entire structure to match its original color; and selective masonry mortar repointing (NPS Historic Property Project Documentation 2022).
2012 CE	2012 CE	Built	While a precise date of installation is unknown, the backstops within the open area east of the picnic pavilion were in place by 2012 (Google imagery 2012).
2020 CE	2020 CE	Built	Workers added new wayside signage to the Carderock Recreation Area (National Park Service 2020).
2020 CE	2021 CE	Established	WSP USA, Inc. completed archeological investigations at the two CCC camps (WSP USA 2022). Investigations included excavations at both Camps NP-1-MD and NP-2-MD, with the main goal to determine what remained from the CCC and evaluate those remains for listing in the National Register of Historic Places (NRHP).
2022 CE	2022 CE	Renovated	Workers replaced a leaking water line leading into both comfort stations (NPS Historic Property Project Documentation 2022).
2024 CE	2024 CE	Rehabilitated	Workers completed a sewer rehabilitation project at Carderock Recreation Area (Fairfax County, Virginia, Department of Public Works and Environmental Services 2020).
2025 CE	2025 CE	Damaged	Both comfort stations in the Carderock area were vandalized.
2026 CE	2026 CE	Rehabilitated	A one-lane alternating traffic pattern was instituted on or about Monday, July 27, 2026, at the Carderock entry road to facilitate repairs to the Carderock Concrete Road Culvert (Mile Marker 10.4) and roadway (NPS PEPC 124412 2024; “Repair of Carderock, Four Locks, & McCoys Ferry Tunnels,” Chesapeake and Ohio Canal National Historical Park).

Physical History

Pre-Colonial History (15,000 BCE – 1607 CE)

Evidence from at least 13,000 years of human history can be found in the Potomac River Valley, a significant site of settlement and subsistence for several Indigenous cultural groups. Central in travel, trade, and warfare, the river has been a significant feature in the cultural and political geography of the mid-Atlantic. Humans arrived in the Middle Atlantic Coastal Plain and Piedmont by 11,000 BCE, during the Paleo-Indian period, which is defined as approximately 15,000 to 8000 BCE (Louis Berger 2016: 6). The region that is now known as the greater Washington, D.C., area was home to Paleo-Indian peoples who formed social groups that hunted deer and elk, gathered plants, and fished in the coastal plains along the resource-rich waterways that are now called the Potomac and Anacostia Rivers (Virginia Department of Historic Resources 2018). (The Anacostia River was historically known as the Eastern Branch of the Potomac River.) Early in the period, coniferous forests of spruce (*Picea* spp.) and pine (*Pinus* spp.) trees were dominant. Deciduous trees such as oak (*Quercus* spp.) and chestnut (*Castanea* sp.) became more prevalent as the climate slowly warmed in the mid-Atlantic.

During the Archaic Period—approximately 8000 through 1200 BCE—subsistence was based on hunting, fishing, and gathering plants. During the late Archaic period, some groups began living in semi-permanent or permanent settlements, and Archaic peoples seasonally camped along the Potomac and Anacostia Rivers. Archaic peoples developed new tools for hunting, fishing, and processing materials. Archeological evidence suggests that squash, sunflower, and *Chenopodium* may have been cultivated during the Late Archaic Period (Moss 2009: 28; Hanna 2001: 4). Hunter-gatherer groups began to establish more semi-permanent and permanent settlements, camping along the Potomac and Anacostia Rivers beginning c. 2200 BCE (Donaldson 2009: 32; Virginia Department of Historic Resources 2018). Dozens of Archaic artifacts have been found along the low terraces and high bluffs of the Potomac River (Bedell, Cagney, and Raszick 2022: 8).

The emergence of ceramic technology marked the beginning of the Early Woodland period. Native Americans, including the Nacotchtank people, established organized villages and trade networks along the Anacostia and Potomac Rivers during the Woodland Period (approximately 1200 BCE through 1600 CE). By this time, the climate had become relatively stable, similar to the conditions we experience today (Gallivan et al. 2022: 25). Native American groups began farming and cultivating crops as knowledge of plant husbandry transferred from Piedmont groups to the middle Chesapeake, including the areas that today constitute Washington, D.C., and its surroundings. Large villages with economies based on maize agriculture were established by the Late Woodland Period; after 1300-1400 CE, stockaded villages, which were often scattered geographically, characterized the upper and middle Potomac (Hanna 2001: 4; National Park Service, Native Peoples of Washington, DC 2018; Elder and Weldon 2018: 36).

By 1300, several settlements were established along the Potomac River at places like Accokeek and Potomac Creeks. The lower river settlements were occupied continuously into the 17th century. At this time, the residents were the Algonquian speakers that comprised the Piscataway and Patawomeck chiefdoms (Gallivan et al. 2022: 41). Prior to 1600, small encampments represented the most common site type. This suggests the

mobility of fishermen, hunters, and travelers across the Potomac Valley. The late Woodland was a period of transition among Native communities, as they shifted to nucleated villages that practiced horticulture and "several archaeological cultural complexes [seemed] to coalesce—or arrive—in the Potomac River valley" (Gallivan et al. 2022: 33).

In the years immediately preceding European colonization and settlement in the 17th century, Algonquian-speaking people inhabited the area around present-day Washington, D.C. Most of the tribes were centered on a single community of villages. The inner coastal plain of the Potomac River attracted a wide range of fish, including herring, shad, salmon, and sturgeon, which sustained local tribes. Subsistence practices also included hunting and foraging and slash-and burn agriculture. Indigenous groups cultivated corn, beans, gourds, pumpkins, and other crops—practices and plantings that continued after European contact (Louis Berger 2016: 24). By 1607, the tribes were coalescing into larger entities led by powerful chiefs—notably, Powhatan, who ruled in southeastern Virginia, and the Piscataway Tayac, or Emperor, who dominated Eastern Maryland (Louis Berger 2016: 24).

Early Colonization, the Tobacco Industry, and the Establishment of Montgomery County, Maryland (1608 – 1776)

By 1608, the Nacotchtanks, Piscataways, Pamaunkeys, Nanjemoys, Potapacos, Yaocomacos, and other groups hunted, foraged, practiced slash-and-burn agriculture, and cultivated crops such as beans, corn, gourds, and pumpkins in the greater Washington, D.C., area. They also produced ceramics now known as Potomac Creekware (Elder and Weldon 2018: 37).

In 1608, English colonizer Captain John Smith explored the Chesapeake region and recorded information related to a village near the mouth of the Eastern Branch/Anacostia River. He called the village Nacotchtank (translated as "at the trading town") or Nacotchtant and referred to the villagers as Necosts. Smith estimated their population at 80 men and a total of 200 to 300 people (Louis Berger 2016: 24). This was the largest settlement cluster of riverside villages on the eastern side of the junction of the Anacostia and Potomac Rivers. Their central Nacotchtank village was situated to take advantage of trade routes and resources along the rivers. Smith also recorded and mapped the villages of Namoraughquend (translated as "fishing place"), north of present-day Alexandria (Louis Berger 2016: 24; Hanna 2001: 4). In 1624, Smith published an account of his travels and maps of his explorations along the Potomac River in his book, *General Historie of Virginia*, in which he documented the land use and designs of the Nacotchtank peoples (Burr 1920: 167).

In 1621, Captain Henry Fleete (also spelled Fleet), a furrier, may have been the first English colonizer to encounter Tohogae, the Anacostan village on the future site of Georgetown, approximately 10 miles southeast of the project area. Fleete was the only surviving member of a crew in search of corn on an expedition from Jamestown to the Potomac River. He was taken hostage by a group of Anacostans and eventually ransomed for his freedom, at which point he returned to England (Elder and Weldon 2018: 38- 39).

In 1632, English colonizers claimed the lands described in Captain Smith's accounts. King Charles I granted the land north of the Potomac River to George Calvert, Lord Baltimore. Calvert had requested 10 million acres to establish a colony, and was negotiating the Maryland charter when he died in 1632; the charter was subsequently granted to his eldest son, Cecil, the second Lord Baltimore. This land was named Maryland and included the future site of the project area and nearby Washington, D.C. (Riggs 1946/47: 250).

By the mid-1600s, trade between the Indigenous peoples of the Potomac and European settlers was well established. As conflicts emerged over access to resources and land, several wars between the Patawomeck, Susquehannock, other Indigenous peoples, and the English colonizers occurred. These conflicts during the last quarter of the 17th century led to the destruction and displacement of multiple Native communities, including the

Patawomeck and Piscataway chiefdoms (Gallivan et al. 2022: 41).

Between 1651 and 1655, English proprietors granted and patented lands from the northwest shore of the Occoquan (a tributary of the Potomac River) to the Falls of the Potomac (Hanna 2001: 10). The first patents for land above the Falls of the Potomac were recorded in 1688 and 1689 for tracts along the banks of Rock Creek in what would become Montgomery County, Maryland. Thereafter, from 1688 to 1730, land was patented from the Falls to Monocacy.

In 1712, Baron von Graffenried, a Swiss nobleman, traveled up the Potomac River scouting for alleged silver mines and a location for a new colony for Swiss-German Anabaptists. On his route, Graffenried traveled to Canavest, a Conoy village likely near today's Kanawha Springs, in the vicinity of Point of Rocks and approximately 40 miles west of the project area if traveling along the Potomac River. Graffenried produced a map that depicts the inland route from Colonel Beall's plantation (marked on the map as "Coll. Bell's"), near the confluence of Potomac River below Great Falls ("La Chute de Potomac") and today's Rock Creek ("R. dore" or Gold Creek) (*see Figure 2*). A structure depicted west of the mouth of the Monocacy is labeled as "Quartier du Martin Chartier," named for a man who had traveled east with the Shawnees. By 1718, Chartier had left the Potomac region and returned to the Susquehanna (Bedell, Cagney, and Raszick 2022: 13). By the 1730s, occupation along the Potomac was common, and by the mid-18th century, most of the land along the Potomac had been patented (Bedell, Cagney, and Raszick 2022: 13).

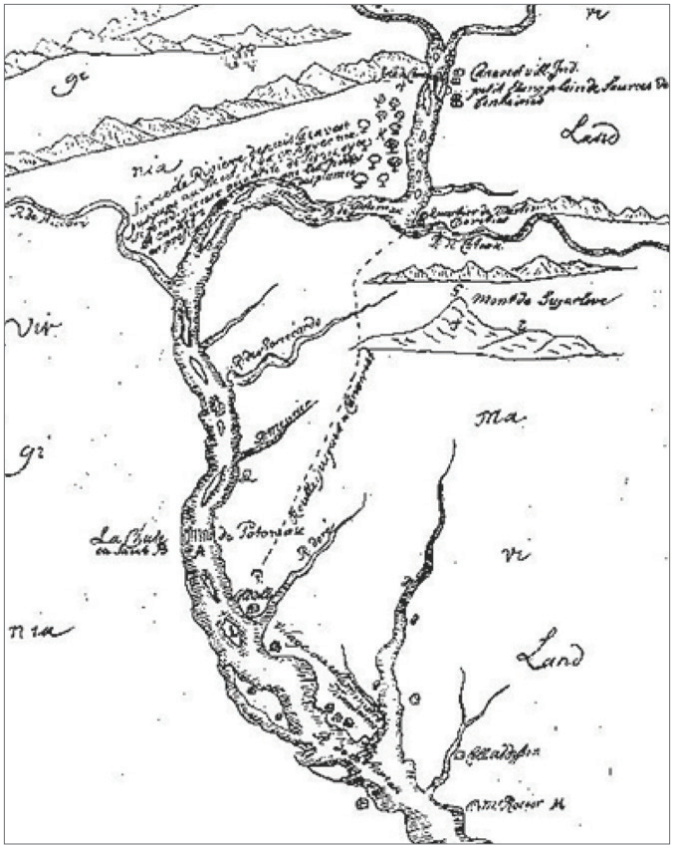


Figure 2: Baron von Graffenried's 1712 map of the Potomac River. The dotted line represents the route from near the confluence of Rock Creek and the Potomac River to the Conoy settlement of Canavest, near Point of Rocks, Maryland (Source: Bedell, Cagney, and Raszick 2022: 14).

THE ESTABLISHMENT OF MONTGOMERY COUNTY, MARYLAND

In 1689, the Protestant majority of English colonizers overthrew Maryland's Catholic proprietary government led by Charles Calvert, the 3rd Baron Baltimore, in an event known as Coode's Rebellion. Thereafter, Maryland planters consolidated their grip on political power and expanded their landholdings, which increased their need for laborers. In 1695, Prince George's County, Maryland, was established, encompassing lands



Figure 3: Map of Maryland and Delaware depicting Maryland counties, 1797 (Source: Library of Congress, Control Number 76695379).

within the present-day Montgomery, Frederick, and Prince George's Counties, as well as Washington, D.C. In 1748, the county lands were divided, with the western portion of Prince George's County renamed Frederick County. On September 6, 1776, the Maryland Constitutional Convention passed a bill to divide Frederick County into Washington, Frederick, and Montgomery Counties—the latter of which was named for Revolutionary War General Richard Montgomery (1738-1775) and encompassed the land below a line running northeast from the mouth of the Monocacy (*see Figure 3*).

During the 18th century and the first half of the 19th century, the project area and surrounding lands in Montgomery County were agricultural, primarily composed of tobacco plantations worked by enslaved Africans. Some light industries developed around the study area, including two mills: the first was located on Seneca Creek, approximately 15 miles northeast of the project area, and was in operation by 1732; a second mill was established by 1737 on Watts Branch, less than 10 miles north of the project area (Bedell, Cagney, and Raszick 2022: 14).

On July 16, 1790, the Residence Act established the District of Columbia (Washington, D.C.) as the nation's capital. Andrew Ellicott and others surveyed a 100-square-mile diamond (10 miles by 10 miles) within the states of Maryland and Virginia. In December 1791, the Maryland General Assembly ceded 36 square miles of Montgomery County to form the federal capital; Virginia also ceded land. Pierre L'Enfant created a plan for the District that featured a network of broad diagonal axes superimposed over a grid system of east-west and north-south streets (Robinson and Associates, Inc. 2016: 101-102).

THE CULTIVATION OF TOBACCO

By the 1750s, the lower Potomac River was colonized entirely by white settlers, as most Indigenous communities were driven away and decimated by warfare and disease. Today, the federal government does not recognize any tribes in Maryland; the state recognizes the Piscataway-Conoy Tribe of Maryland, the Piscataway Indian Nation and Tayac Territory, and the Accohannock Indian Tribe.

The first enslaved Africans were brought to St. Mary's City, Maryland, in 1642 to work on plantations (National Park Service Slavery and Emancipation in Sharpsburg, MD 2023). The pace

of human trafficking accelerated quickly in the 17th and 18th centuries: fewer than 1,000 Africans arrived in Maryland between 1619 and the end of the 17th century, but the growth of the tobacco economy prompted a significant shift in the 18th century, prior to the American Revolution. During this period, nearly 100,000 individuals were trafficked from Africa and sold into chattel bondage, forced to harvest and process tobacco, a major cash crop for Europe and the Americas into the early 19th century (Bedell, Cagney, and Raszick 2022: 13). By 1755, approximately one third of Maryland's population came from Africa, primarily from the interior of the continent (Maryland State Archives and the University of Maryland 2007: 4).

Above the Fall Line of the Potomac River, ships were not able to access individual wharves to collect the tobacco harvest and bring shipments to port; thus, roads became increasingly important for the movement of people and goods. However, since tobacco was packed into large 1,000-pound casks, called "hogsheads," the unimproved roads and trails could not handle the heavily loaded wagons. The casks were pulled and rolled to port by oxen or horses on what came to be called "rolling roads." In 1751, the city of "George Town" was established and designated a tobacco inspection station, adapting a former Indigenous trail to serve as a rolling road for the area. Georgetown became the busiest tobacco port on the east coast.

Montgomery and Frederick counties comprised the main tobacco-producing areas within Maryland's Potomac River Valley; the industry—and the region—relied on enslaved labor. In the early 1800s, approximately four out of ten people in Montgomery County, Maryland, were enslaved. Maryland's free Black population also more than quadrupled between 1790 and 1810, making Maryland the state with the largest free Black population in the country at this time (Salvatore and Potter: 8-180).

In 1802, three large tracts of land—Griffiths Park, Dyall's Delight, and Clewerwell Enlarged—were combined to create the "Carderrock" assemblage. Owned by Scottish immigrant Robert Peter, Carderrock was a 1,705-acre plantation, encompassing the entire CLR project area. Peter acted as the first mayor of Georgetown beginning in 1789, and made his wealth as a tobacco merchant. In 1790, the first U.S. Census recorded ten people in his household; no enslaved persons were listed. Ten years later, Peter was recorded in the 1800 census as the enslaver of six people in the newly formed Washington, District of Columbia. It is unknown if these six individuals lived and labored at Carderrock or if these six individuals were in addition to Carderrock laborers. Carderrock was a plantation worked by enslaved African men and women; the tobacco they grew, harvested, and processed was then sold in Georgetown markets (Bedell, Cagney, and Raszick 2022: 14).

A cadastral survey made c. 1855 shows a patchwork of land grants across the landscape around the project area (*see Figure 4*). Adjacent to the Potomac River was a land grant titled "James Park," patented to Jas. Offutt in 1727. To the northwest of this land grant was "Hunting Park," granted to Thomas Swanly in 1738. "Doull's Discovery" and "Hay Park"—both of which were granted to Dr. James Doulls in 1749—were located north and west of the aforementioned land grants. East of "James Park" was the "Resurvey on Dyalls Delight," granted to William Dyalls in 1755. The survey also represented a rectangular tract known as "Resurvey of Youngman's Folly" and located between "Hunting Park" and "Hay Park"; this tract was given to Thomas Offutt in 1784. Located on the Potomac River at the southeast end of "James Park" was "Ferry Landing," granted to Robert Peter in 1786 (Bedell, Cagney, and Raszick 2022: 15). Peter and other early landowners of these plantations in the Potomac River Valley were wealthy tobacco merchants from Georgetown and were often landlords in absentia.

Formation of the Potomac Company (1776 – 1819)

As early as the 1600s, merchants expressed an interest in a water route to connect East Coast ports with land west of the Appalachian Mountains. In 1785, the Virginia Assembly passed an act to incorporate the Patowmack Company (alternatively spelled Potomac, Potowmack, and Potowmac)

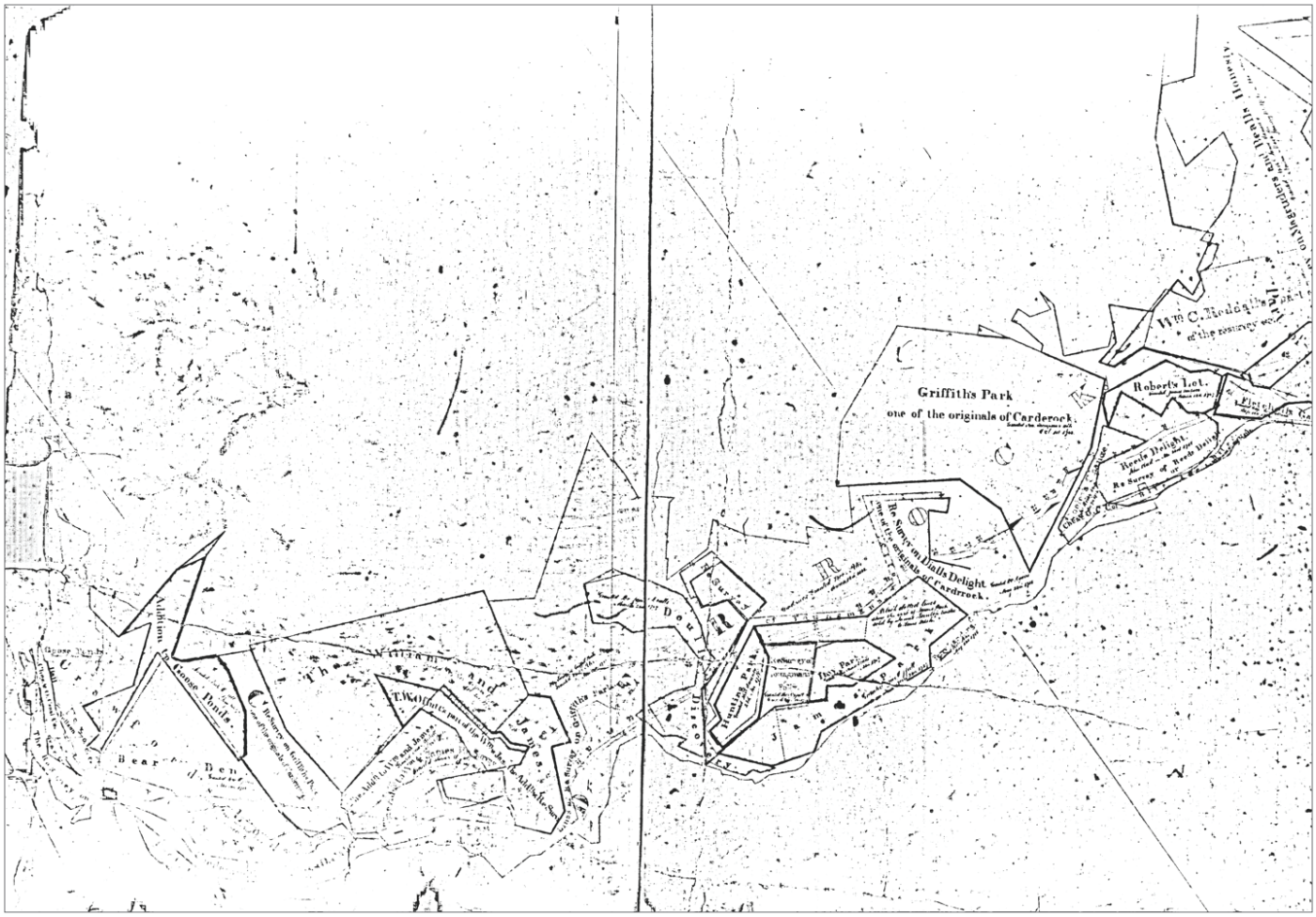


Figure 4: Cadastral survey produced c. 1855, indicating the land grants in the vicinity of the project area (Source: National Park Service ETIC 412/80848).

to improve the Potomac River for navigation and commerce (Elder and Weldon 2018: 30). The Maryland Assembly affirmed the charter.

With the objective of opening the Potomac River to navigation, the company's early improvements focused on the Virginia side of the river (Elder and Weldon 2018: 31; Salvatore and Potter 2015: 8-224). In 1785, the Patowmack Company began using enslaved labor to construct five individual skirting canals to navigate around the major falls of the Potomac River, rather than a continuous constructed waterway (Salvatore and Potter 2015: 8-224). The five canals skirted Little Falls, Great Falls, Seneca Falls (across from Seneca Creek), Payne's Falls of the Shenandoah, and Houses Falls near Harpers Ferry, in present day West Virginia (The Patowmack Canal, Great Falls Park NPS brochure).

Operational in 1802, these skirting canals accessed the Potomac River, and goods including whiskey, furs, lumber, produce, and coal were shipped

downstream along the canal, from river ports to Georgetown, a terminal port for western trade. With the construction of the skirting canals, commercial goods could be shipped from Cumberland, Maryland, to Washington, D.C. (Elder and Weldon 2018: 45). Ultimately, however, the canal effort was short-lived; after 26 years of operation, the company went bankrupt. A new company, the Chesapeake and Ohio Canal Company, acquired the Patowmack Company's charter (Elder and Weldon 2018: 31, 43).

The Chesapeake and Ohio Canal Company (1820 – 1827)

In 1820, Maryland and Virginia considered plans for a new canal through the Potomac River Valley. The success of the Erie Canal in New York—which began construction in 1817—prompted canal mania throughout the United States. While the short-lived Patowmack Company was in operation, the Virginia Board of Public Works recommended two surveys of the land between the Potomac and southern branches of the Ohio River for infrastructure projects. The surveys, completed in 1820 and 1822 by topographical engineers Thomas Moore and Isaac Briggs, recommended the construction of a new artificial waterway rather than improvements to the Patowmack Company's existing skirting canals. On February 22, 1823, the Virginia Assembly passed an act of inscription for the Potomac Company, establishing the Chesapeake and Ohio (C&O) Canal Company (Elder and Weldon 2018: 31). The C&O Canal was originally envisioned as a constructed waterway that would span 365 miles from Washington, D.C., to the Ohio River Valley in western Pennsylvania (Salvatore and Potter 2015: 7-10; Elder and Weldon 2018: 48).

In 1834, the Commonwealth of Virginia officially recognized the new canal company. However, the act of incorporation also required the confirmation of Maryland, and its subscription of $500,000, which Maryland denied; the state likely rejected the confirmation out of fear that the canal would compete with Baltimore's ports (Unrau 2007: 50). Maryland, also seeking access to inland markets, ultimately decided to invest in the Baltimore and Ohio (B&O) Railroad rather than the new canal



Figure 5: C&O Canal Company insignia (Source: C&O Canal Association).

(High 1997: 20). The first Chesapeake and Ohio Canal Convention was held in November 1823, in Washington, D.C., without the support of Maryland. The convention sought to mobilize public interest and petition Congress and surrounding states for assistance with the canal project. Congress ultimately allocated $30,000 for a survey of the proposed route by the United States Board of Engineers (Elder and Weldon 2018: 44).

The Virginia Act of January 27, 1824, incorporated the C&O Canal Company (***see Figure 5***). The following year, Maryland confirmed the act of incorporation; the legislatures of Maryland and Pennsylvania (as the originally planned western extent of the canal) validated the act on January 31, 1825, and February 9, 1826, respectively. On February 14, 1825, United States Board of Engineers reported the results of its survey, which concurred with the 1820 and 1822 Moore and Briggs surveys and suggested the creation of an artificial canal (Unrau 2007: 53- 54). Based on the results of the survey, Congress validated the act of incorporation

on March 3, 1825 (Salvatore and Potter 2015: 8-224).

Beginning Construction of the C&O Canal (1828 – 1830)

On July 4, 1828, President John Quincy Adams inaugurated the construction of the C&O Canal, turning the first piece of earth at Little Falls, Maryland. On the same day, approximately 50 miles away in Baltimore, construction began on the Baltimore & Ohio (B&O) Railroad (Elder and Weldon 2018: 31). As there were no firms large enough to manage a project on the scale of an entire canal, construction of the first 184.5 miles was divided into sections (covering approximately one-half mile each) and awarded to independent contractors. Lock No. 14 (at mile 9.47), the closest lock to the project area, was contracted to Patrick Donnelly on October 25, 1828. In June 1829, Donnelly leased the contract to Wood and Kendall. Wood and Kendall commenced work on the lock that same month; their scope was completed in September of 1830 at a total cost of $9,673.87 (Unrau 2007: 228).

In the early planning stages, the eastern terminus of the canal was only loosely identified as the "tidewater in the District of Columbia." To decide on an end point, canal company president Charles F. Mercer formed a committee to review the competing interests of Washington, D.C., Georgetown, and Alexandria; the committee included leaders from each community, as well as consulting engineers. By September 17, 1828, the committee determined that the canal would end at Rock Creek, with a stipulation that the C&O Canal Company would build a branch canal from the Rock Creek basin to the Tiber Creek in Washington, D.C., and support Alexandria's request for Congressional assistance in building an aqueduct to move cargo from the canal. The choice of Rock Creek as the canal terminus angered merchants from Georgetown, who feared the loss of commercial trade to other markets. John Mason, Francis Scott Key, and Walter Smith, who supported the Georgetown terminus, filed a suit against the canal company (John Mason et. al), but their case was ultimately dismissed by the U.S. Supreme Court (Elder and Weldon 2018: 48).

In November 1830, workers completed construction on the first 20 miles of the C&O Canal from Little Falls to Seneca. The following year, the canal opened to navigation between Little Falls and Georgetown. The canal reached Harper's Ferry by 1833 (Salvatore and Potter 2015: 8-163).

Construction of the entirety of the C&O Canal lasted from 1828 through 1850. Canal construction encountered numerous obstacles and delays, including labor shortages, illness, competition with labor for the construction of the B&O Railroad, land acquisition issues, material shortages, poor weather, inadequate food supply, and dangerous work conditions (Elder and Weldon 2018: 46-48).

LABOR ON THE C&O CANAL

Canal laborers undertook back-breaking efforts, from clearing vegetation and felling timbers to digging out the canal and quarrying and hauling stone. The C&O Canal Company used hired-out enslaved labor for the first year and a half of canal construction. In the summer of 1829, the C&O Canal Company sought to import European workers as indentured servants but continued to rely on enslaved laborers and free Blacks (McMahon 2022: 67). As they lived and worked close to the Potomac River, the remoteness of the canal may have presented hired-out enslaved persons the opportunity to earn wages and claim their own freedom (McMahon 2022: 23).

In addition to the canal laborers, many individuals who were not directly involved in the construction of the waterway were employed by industries that were related to canal construction, such as quarrying, milling, and mining (McMahon 2022: 81). Based on these economic drivers, several small, multi-racial communities emerged along the canal as it was under construction between 1828 and 1850.

Mass sickness in the summer of 1829 led many workers to quit and move to Georgetown and other population centers (Elder and Weldon 2018: 47). Cholera epidemics that recurred between 1832 and 1842 also impacted workers. Resulting labor shortages prompted the placement of recruitment advertisements in newspapers as far away as Dublin, Cork, Belfast, and Holland. Advertisements

seeking indentured servants offered "meat three times a day, plenty of bread and vegetables, 'a reasonable allowance of whiskey', and a wage ranging from $8 to $12 a month" (Kytle 1983: 32).

These obstacles and delays were expensive for the canal company. In addition, some landowners refused the company's original offer to purchase property for the canal rights-of-way. The canal company was forced to go beyond its budget for land acquisition, compounding the spiraling costs caused by scarcity of construction materials and labor shortages. All of these issues resulted in delayed completion of the canal and long-term costs for the canal company.

UNDERGROUND RAILROAD

The Underground Railroad refers to the network of people, places, and efforts that aided enslaved Black individuals seeking freedom from bondage. From the 17th century through the mid-19th century, the network provided shelter, transportation, and food, among other resources.

"The Potomac River and the abutting C&O Canal are intertwined with the region's long history of enslavement and freedom seeking," with both playing roles in the Underground Railroad (McMahon 2022: 21). Freedom seekers could follow the canal towpath to Hancock in western Maryland, where the canal came within three miles of the border with Pennsylvania, a free state. There, established African American border communities welcomed freedom seekers and served as way stations for those continuing north (Salvatore and Potter 2015: 8-180, 181, 182, 183).

Upriver from Georgetown and Falls Church, "the river became shallower, islands appeared, and here and there were places where a man on horseback or a pack train could ford a stream" (The Montgomery County Story 1995: 324). With its proximity to several islands, Carderock may have offered such geographic advantages for those traveling north, though further research is needed to determine the physical history of the Underground Railroad within the immediate Carderock area.

The Early Period of Canal Operations (1831 – 1860)

The C&O Canal played an important role in the economic development of the early republic, connecting growers and producers in the Potomac River Valley with markets and ports on the eastern seaboard. The artificial waterway provided a means to transport agricultural goods and raw materials between the interior of adjacent states and the eastern seaboard. With operations underway, the C&O Canal prompted a trade boom in wheat, flour, corn, lumber, lime, stone, and coal. The canal made it possible for farms and milling operations across the largely rural Potomac River Valley to engage in broader regional trade, which was a major stimulant to area economies. The trade reflected a region of mid-sized farms, the spread of industry within a landscape that remained largely rural, and the region's prominence in manufacturing, farming, and agricultural processing.

During the canal's first full year of operations in 1831, canal trade immediately boomed. Within the first 10 days of watering the canal a few hundred yards above Georgetown, approximately 30,000 barrels of flour and other goods arrived in Georgetown by way of the C&O Canal (Elder and Weldon 2018: 53). In the early years that followed, agricultural products comprised the primary goods shipped along the canal, including flour, wheat, and corn. Other, less common products included lumber, lime, and coal (Werner 1968: 49; Unrau 2007: 437-438).

Beginning in 1831, packet boat services began carrying mail on the canal. These boats also functioned as tourist excursion boats, offering trips from various locations in Georgetown to points further west along the canal, including as far as Harpers Ferry, Virginia (now part of West Virginia) (Elder and Weldon 2018: 64). In keeping with the trends of 19th century leisure and tourism, the tour boats offered passengers entertainment, meals, and comfort as they traveled the canal.

Over the years, several different licensed packet services operated on the canal. On April 27, 1833, the C&O Canal Company accepted a proposal by Captain Easby to construct a sheet-iron packet

traveling between Georgetown and Harpers Ferry. By March 1834, *The President* was in operation; it proved unprofitable, though, and was sold in 1836. The *Charles F. Mercer* was a more successful operation, with tours offered from Georgetown to Great Falls, Seneca, and as far as Harpers Ferry. Passenger excursions aboard the *Charles F. Mercer* included one notable trip in August 1835, in which President Andrew Jackson traveled with 50 guests, with musical accompaniment by the U.S. Marine Band. In the spring of 1836, a group of Congressmen travelled on the same boat from Georgetown to Harpers Ferry (Elder and Weldon 2018: 65). Advertisements and newspaper articles suggest that excursion boat trips were geared towards primarily white upper-class customers.

In 1835, the C&O Canal Company contracted with O. M. Linthicum's Georgetown Canal Packet Company to allow the private service to operate daily tours between Georgetown and Harpers Ferry. The contract stipulated that the service would operate free of tolls for one year, in order to stimulate tourism on the canal. As it proved successful, the packet service was extended to Shepherdstown, West Virginia. However, by 1837, it appears that the Georgetown Canal Packet Company was no longer in operation (Elder and Weldon 2018: 65). Packet tours, operated by various outfits, ran on the C&O Canal until 1924.

While the canal was considered a success in its first year, the following years proved to be more challenging due to flooding, competition with the B&O Railroad, and the complications of low water levels on the canal. Business decreased along the canal between 1832 and 1837, and a major flood in 1836 submerged the towpath around Lock Nos. 5, 7, and 8. Remarkably, the flood damage was not extensive, and canal operators quickly restored navigation from Georgetown to Harpers Ferry, Virginia (now West Virginia).

SHIFTS IN AGRICULTURE AND ENSLAVED LABOR

The intense cultivation of tobacco had exhausted the nutrients in the region's soil by the 1820s. Economically, the value of tobacco fluctuated over the course of the 17th and 18th centuries as demand declined, compelling many plantation owners to shift from tobacco production to grains, including wheat, barley, oats, and rye (McMahon 2022: 134). Grains and corn had shorter sowing and harvesting seasons. They also required less intensive labor, resulting in enslavers manumitting large numbers of their enslaved workers; rather than maintaining a large enslaved labor force, owners found it more economically feasible to hire laborers during harvest time (McMahon 2022: 16; Salvatore and Potter 2015: 8-180). As the tobacco trade and associated need for labor declined in the region in the 1830s, the port in Georgetown became a significant market for the slave trade, trafficking enslaved persons to cotton, sugar, and rice plantations in the South.

The shift to commodity crops did not stem the economic recession that took hold in Montgomery County from the 1820s to the 1840s. Many planters who could not shift cultivation practices were forced to mortgage, sell, or abandon their properties. During the economic recession, large plantations were subdivided. In 1842, George Peter (the grandson of Robert Peter) broke up the Carderrock assemblage and sold it to James Dunlop. Dunlop's household is recorded in the 1840 federal census with three enslaved individuals: a young man aged between 10 and 23 years, a man over 55, and a woman over 55. Dunlop himself was not listed, suggesting that he may have been an absentee landlord, residing elsewhere (Bedell, Cagney, and Raszick 2022: 16).

While the overall population of the Rockville District remained relatively stable between 1810 and 1860 (increasing only 2 percent during that period), the Black population in the county decreased by 16 percent during those same decades. Between 1810 and 1840, the Black population within the district increased, doubling to 3,081 by 1840; only 16 percent of those individuals were free. In the decade that followed, however, the Rockville District's Black population fell to 2,443 individuals by 1850, of which only 12 percent were free. Just before the onset of the Civil War, approximately 15 percent of Black individuals living in Montgomery County were free (McMahon 2022: 17).

The decline in the Black population may be attributed to some individuals moving to nearby Washington, D.C., where enslavement was outlawed as part of the Compromise of 1850, which prohibited the trade of enslaved people but not the ownership of them. Other individuals may have been trafficked across state lines by enslavers. These demographic changes developed as agriculture in Maryland changed from tobacco—an almost year-round intensive commodity that depended on enslaved labor for profit—to cereal crops that only needed a large work force for the harvest.

By the 1850s and into the 1860s, agriculture in Montgomery County had rebounded. Coaxed by the availability of inexpensive land, ethnic German settlers from Pennsylvania arrived in the county with practices of crop rotation, deeper plowing furrows, and fertilization. These practices contributed to the revitalization of the soil and renewed economic prosperity in the county (Montgomery County 1999).

LAND TRANSFERS AT CARDEROCK

In 1848, Frederick and Lucinda Metz purchased a tract called Young Man's Folly (148.5 acres) near Carderrock. Following Frederick Metz's death c. 1850, Lucinda Metz sold the land in 1851 to Jacob R. Welsh (1807-1896), originally from Franklin County, Pennsylvania (MCDB STS 5, Folio 489, September 1, 1851). That same year, James Dunlop sold a portion of Carderrock to Lewis Welsh, also from Pennsylvania (MCDB STS 5, Folio 474, August 28, 1851). While the nature of the relationship between Jacob Welsh and Lewis Welsh is unknown, it is assumed that they were related based on the shared surname and continued transactions over the years.

Lewis Welsh (1812-1874) had settled in Georgetown by 1836, where he married Sarah Ann C. Reads and worked as a clerk for the Federal Public Administration. By 1850, Welsh's real estate holdings were valued at $5,000; they increased to $15,000 by 1860. That year, Lewis Welsh sold Young Man's Folly (148.5 acres) and a portion of Carderrock (392.6 acres) to Jacob Welsh (Bedell, Cagney, and Raszick 2022: 18). In 1870, Lewis Welsh lived in the Rockville electoral district with his wife and son.

Jacob Welsh remained in Franklin County, Pennsylvania, until after the Civil War. By 1870, he had moved to Montgomery County, where he was recorded in the 1870 and 1880 federal censuses as a farmer (Bedell, Cagney, and Raszick 2022: 18).

In 1853, James Dunlop sold another 228 acres (part of Carderrock and Doull's Discovery) to John G. Stone (1806-1884) (MCDB JGH 1, Folio 567, January 3, 1853). Stone was born in New Jersey and later migrated to Williamsport, Maryland, where he worked as a merchant, capitalizing on the city's growth as a result of the C&O Canal trade. Stone left Williamsport by 1870, relocating to Montgomery County, where he was recorded in the 1870 and 1880 federal censuses as a farmer.

According to the 1865 map produced by Martenet et al., Stone was the only landowner near the project area, north of Rock Run, well north of the canal and Conduit Road (today's MacArthur Boulevard) (*see Figure 6*). Conduit Road was constructed to access and maintain the Washington Aqueduct Reservoir, which brought clean drinking water to Washington, D.C., beginning in the late 1850s. Conduit Road became a popular destination for driving in the ensuing decades. According to the 1865 map, the land within the project area was vacant, with the exception of the lockkeepers for Locks 11, 12, and 14, who were M. Sebastian, William Hill, and George Johns, respectively (Bedell, Cagney, and Raszick 2022: 19).

COMPLETION OF THE CANAL

Western Pennsylvania was the original planned western terminus for the C&O Canal. However, financial challenges, delays in construction, and competition from the B&O Railroad truncated the canal extents. Thus, in 1850, the trade hub at Cumberland, Maryland, became the western terminus of the completed canal (NPS, C&O Canal Terminus marker) (*see Figure 7*).

With the waterway entirely open, the C&O Canal Company authorized two steam packet services to operate on the canal free of charge in 1851. Called *Reeside* and *Lynn*, the boats traveled between



Figure 6: Detail of Simon J. Martenet map of Montgomery County, 1865, with approximate CLR boundary in yellow (Source: Library of Congress, Control Number 2002620533).

Georgetown and Harpers Ferry, Virginia (now West Virginia). Additional packet services that were active around this time included: a ship operated by Volney Pursell, which traveled between Georgetown and Harpers Ferry in 1853; and a boat called Fashion that operated in 1854 from Ritter's Wharf in Georgetown and traveled between Great Falls and the Potomac Aqueduct.

The Civil War and the C&O Canal (1861 – 1865)

The Civil War disrupted normal trade operations along the C&O Canal. During the war, the canal was part of the border between the United States and the Confederacy. The waterway functioned as a transport and supply line for the U.S. Army and formed part of the defensive line that protected Washington, D.C. from invasion. The army also used the canal towpath as a military road to move troops (Werner 1968: 43). In 1862, federal troops retreated

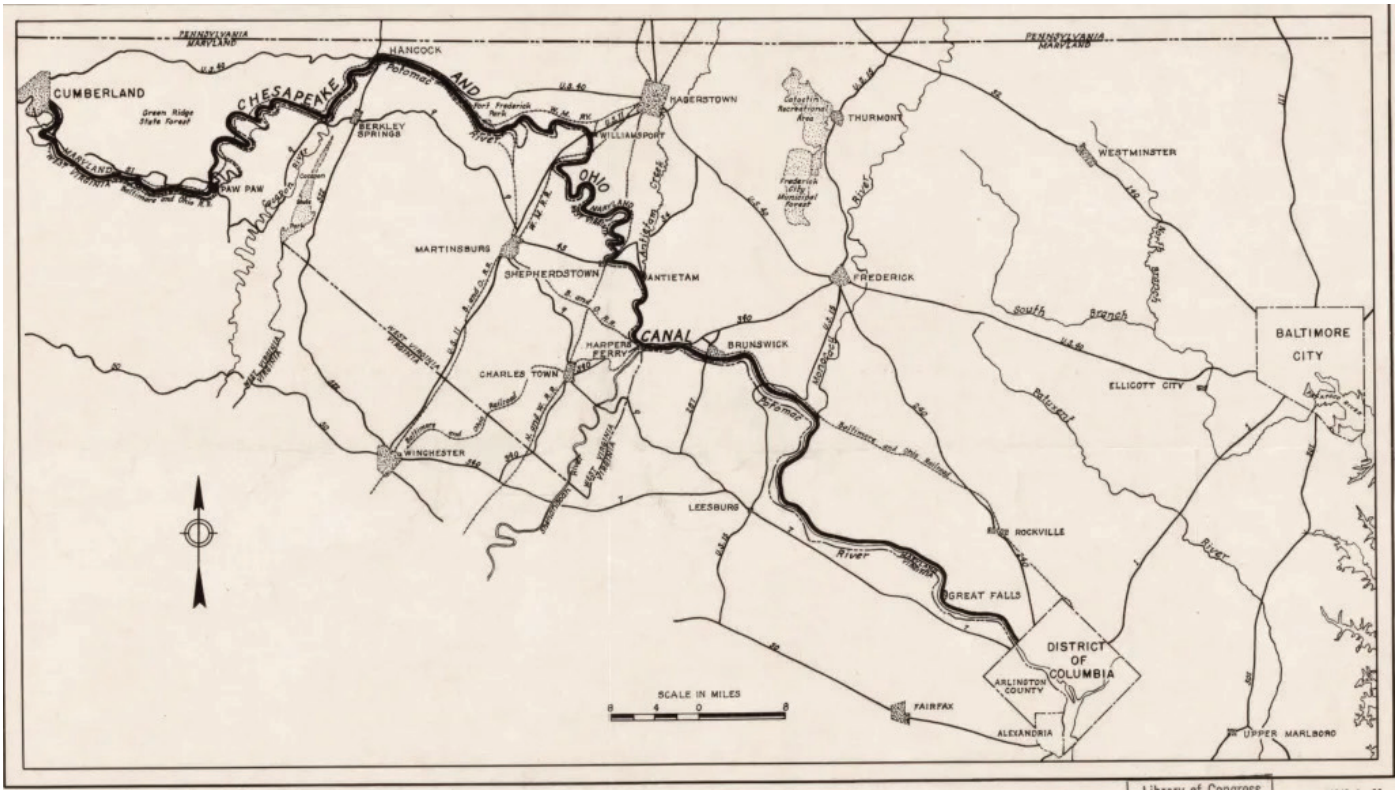


Figure 7: Map of the complete C&O Canal, undated (Source: National Park Service).

across the C&O Canal (outside of the study area) after the First and Second Battles of Manassas. The next year, after their defeats at the battles of Gettysburg and Antietam, Confederate troops retreated over the canal and river.

There were no major battles fought in Montgomery County, though both armies marched across the landscape, and the war devasted the agricultural economy in the region (***see Figure 8***). In September 1862, Robert E. Lee led a Confederate army across the Potomac at White's Ford. In late June 1863, skirmishes occurred at Seneca, Poolesville, Muddy Branch, and Great Falls (McMahon 2022: 30). At one time, there were 18,000 United States troops around Darnestown, approximately 13 miles northwest of the project area, and another 20,000 were concentrated around Poolesville, approximately 20 miles northwest of the project area.

The war posed many challenges to the C&O Canal; among other threats, facilities along the canal were raided and destroyed in the fighting. Millers struggled as the war forced them to delay shipments or shut down operations altogether, stymieing their capacity to pay rent for their water leases and forcing several mills to close. In 1861, when the C&O Canal Company sought to collect advance water lease payments to repair damages to the canal, the millers were unable to pay. While out of operation, coal boats were backed up and could not access Georgetown (Unrau 2007: 741).

Other impacts came from ongoing flood events; at one point during the war, the water rose to its highest level since the April 1852 flood events (Elder and Weldon 2018: 69). Repairs were delayed until United States Army troops were dispatched to protect workers (Unrau 2007: 297).

During the war, the canal was not a reliable transportation route for the government or for private shippers, which resulted in decreased trade. However, the canal company benefited from northern demand for Maryland coal, as Virginia coal was no longer available to the northeastern market. By 1865, coal accounted for more than 90 percent of trade on the waterway.



Figure 8: Detail of map of Montgomery County, Maryland, from the Bureau of Topographical Engineers, United States Coast Survey, 1862, with approximate CLR boundary in red (Source: Library of Congress, Control Number 2014585161).

The net income of the canal company actually increased during the Civil War years. However, these profits were attributed more to deferred maintenance than actual trade; in cutting down on repairs along the canal, the company managed to increase its bottom line. Additionally, the company increased toll rates during the Civil War period, capitalizing on what trade remained in operation (Elder and Weldon 2018: 68).

The Post-Civil War Golden Years (1866 – 1875)

After the Civil War, tourist excursion boats continued to operate on the C&O Canal, with full-length canvas canopies to screen the passengers from the elements. Two of the boats in operation were the *Meigs* and the *Nellie*, the latter of which was a mule-powered boat that departed from a location near the Congress (31st Street NW) Bridge in Georgetown and traveled to Great Falls, passing through the project area (Elder and Weldon 2018: 76).

By the late 1800s, the canal was an important—if not egalitarian—"public space in which people of various social classes, backgrounds, and ethnicities met, interacted, formed relationships, and formulated group identities" (McMahon 2022: 10). While Black patrons could join some tours, they were generally required to board last and restricted to the lower deck of the boat (McMahon 2022: 98, 99). Thus, even as the canal and Potomac River became increasingly public recreational spaces, the rise of leisure tourism also led to increased regulation, segregation, and codification of these spaces.

In the last quarter of the 19th century, light industry eclipsed the dominance of agriculture in southern Montgomery County, although the Carderrock tract retained its agricultural use. In 1873, Richard Cropley (1836-1904) purchased a portion of Young Man's Folly and all of Hunting Park from James H. and Elizabeth C. Ridgeway (MCDB EPB 10, Folio 440, 1873). By 1879, Cropley's land ownership is noted on the Hopkins map along Conduit Road, north of the C&O Canal and project area (*see Figure 9*). There is no development depicted within the project area at this time. By this time, Richard Cropley had established himself as a wealthy flour merchant living in Georgetown, and the Cropley family was active in grocery and pharmacy businesses locally (McMahon 2022: 196-197). Presumably, they invested in agricultural land in Montgomery County in order to supply produce for their grocery stores or wheat for their mills.

In the 1880 census, Cropley's occupation is recorded as a "brick machin[ist]," a shift from his occupation as a flour merchant. Twenty years later, he was recorded in the 1900 census as a clerk in a lime kiln. In 1883, Arthur Bird Cropley (the younger brother of Richard Cropley, also a resident of Georgetown and retail grocer) purchased over 500 acres of the Carderrock tract, presumably to provide for his grocery business (McMahon 2022: 197). As a postal address, Cropley [Maryland] emerged in the 1880s in association with the Cropley family's land.

On June 12, 1884, three Black men—Lawton Garner, William Gibbs, and Joseph Toney—purchased a half-acre parcel of land in Cropley,

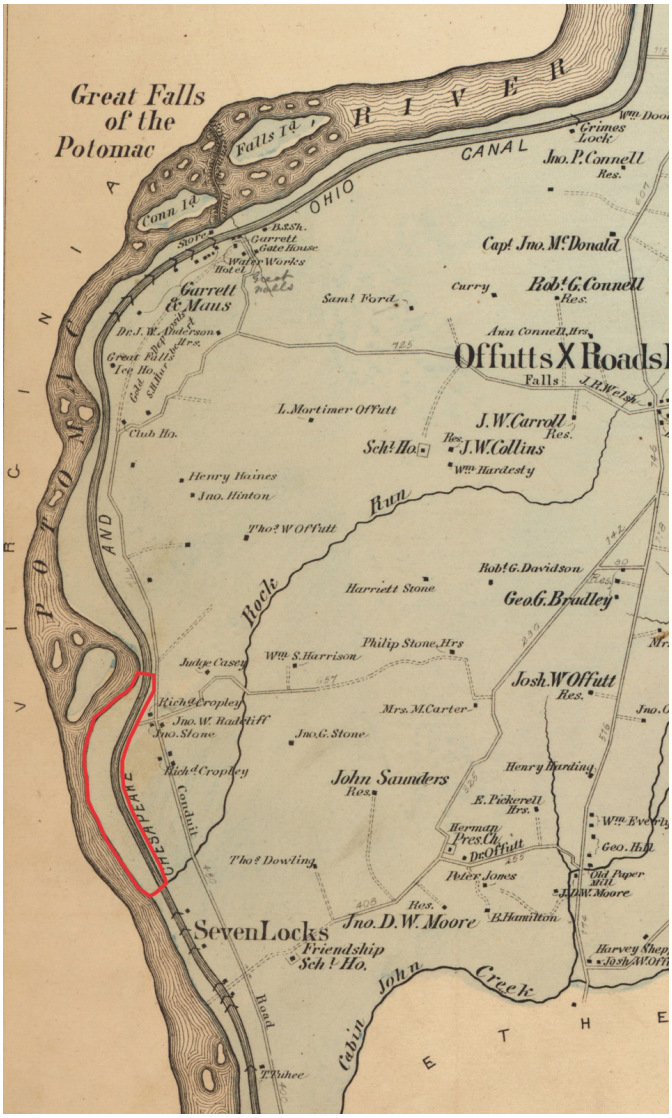


Figure 9: Detail of Hopkins map of 'Atlas of fifteen miles around Washington, including the county of Montgomery, Maryland,' 1879, with approximate CLR boundary in red. The Cropley name is depicted on the map along Conduit Road (Source: Library of Congress, Control Number 87675339).

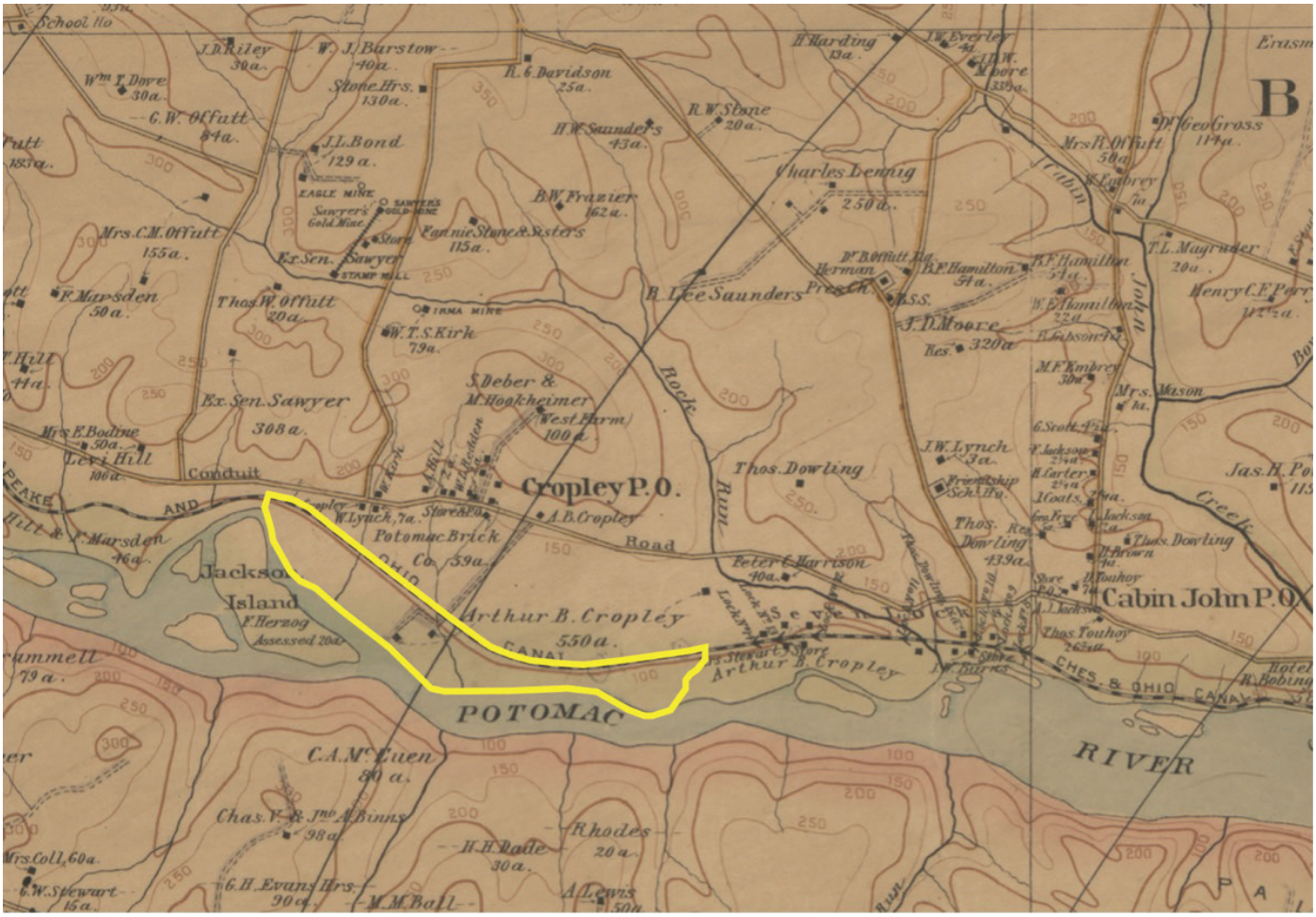


Figure 10: Hopkins 1894 map of Washington, D.C., and vicinity (Source: Library of Congress, Control number 88693364).

MD from Robert Stone. These men were trustees of a new schoolhouse for Black children that was subsequently constructed on the lot. The Black enclave that followed was called Brickyard, located south of today's MacArthur Boulevard and north of the canal (Bedell, Cagney, and Raszick 2022: 20).

The 1894 Hopkins map of Washington, D.C. and its environs depicts property ownership in and around the project area at this time (***see Figure 10***). The Cropley surname continued to dominate the area, with Arthur B. Cropley owning 550 acres north of the canal. West of Cropley's property was the 59-acre Potomac Brick Company. In 1894, Arthur Cropley divested 56 acres (part of Young Man's Folly and all of Hunting Park) of his 550 acres to the Potomac Brick & Tile Company, a business that he co-owned with his brother Richard (Bedell, Cagney, and Raszick 2022: 20). An announcement of the sale in *The Brickmaker*, a trade magazine published in Chicago, noted, "The recently organized Potomac Brick & Tile Co., of Washington, D.C. has purchased a tract of land near Georgetown, Md., for



Figure 11: Conduit Road, c. 1897 (Source: Glen Echo-Cabin John Area History website).

$20,000 and will commence work upon the plant at once" (The Brickmaker 1893: 25).

North of the Potomac Brick Company property, the map represents a cluster of buildings along Conduit Road, one of which is labeled as a store and post office (*see Figure 11*). Arthur Cropley's residence is depicted on the north side of Conduit Road, east of the cluster. Additionally, further north of Conduit Road, the Irma Mining Company (a gold mine), the Eagle Mine, Sawyer's Gold Mine, a store, a stamp mill, and a small rail line all existed on John G. Stone's former lands (Bedell, Cagney, and Raszick 2022: 19).

South of the Potomac Brick Company property—and between the C&O Canal and the Potomac River—the map represents two structures within the project area. There is no labeled information about the buildings, other than an association with Cropley (the map includes arrows drawn from his name to the buildings); they were located off of an unimproved road that connected to Conduit Road by Arthur Cropley's house to the north.

To the east of Arthur B. Cropley's property, Peter C. Harrison owned 40 acres. Rock Run appears to represent the dividing line between the Cropley and Harrison properties. Harrison's residence is depicted on the east side of Rock Run, just south of Conduit Road. South of Harrison's residence, to the west of Rock Run along the C&O Canal, are lockkeeper residences for (traveling west) Locks 11, 12, 13, and 14. On the south side of the canal are two buildings, including "Mrs. Stewart's Store," southeast of Lock 13. The map also represents a store on the south side of the canal, east of Rock Run.

The success of the Potomac Brick & Tile Company under Cropley's ownership was short-lived. The company defaulted on two mortgages made in June 1894 and May 1896, each worth $5,000. In 1896, the Potomac Brick & Tile Company was sold to Appleton P. Clark and others to whom Cropley was indebted (MCDB 53, Folio 381, May 7, 1896). By that time, the records describe the property as containing "kilns, machinery, mould, improvements, tools, and appliances of every kind for making brick and tile in and about the said premises (Bedell, Cagney, and Raszick 2022: 20). Still commonly referred to as "the Cropley Brick Yard Property," the business was later sold to Walter C. Louchheim, who owned it until 1928 (MCDB 462, Folio 77, April 5, 1928).

In 1896, a trolley line was constructed parallel to Conduit Road between Georgetown and the Cabin John Bridge. The trolley operated until 1961.

CARGO AND MILL OPERATIONS ON THE CANAL

Following the Civil War, shipments on the C&O Canal increased. Shipments rose from 265,847 tons[1] in 1863, in the middle of the war, to a record of 723,938 tons of cargo in 1869 (Unrau 2007: 474-75).[2] Tonnage fell somewhat the following year (measuring 661,772 tons), but increased to another record of 968,827 tons in 1871 (Unrau 2007: 479). That same year, the canal company used the resulting revenue to pay off its debts on the repair bonds issued by the Virginia legislature in 1849. The company also appropriated $100,000 for infrastructural improvements on the canal (Elder and Weldon 2018: 72).

William R. Hutton, the Chief Engineer of the C&O Canal Company, articulated these improvements in a comprehensive repair plan developed in July of 1870. Repairs began at the end of the 1870 boating season, and by the winter of 1870-71, completed repairs included desilting of the Georgetown Level; repairs to the aqueducts, locks, dams, and other structures were completed the following year. By 1876, canal company president James C. Clarke declared that the canal was in "excellent" condition, even as dredging of the prism and rebuilding of retaining walls continued into 1877 (Elder and Weldon 2018: 33, 73).

Between 1870 and 1875, the C&O Canal experienced a prosperous and stable period, with half a decade of unprecedented financial profits in what historian Walter S. Sanderlin has called "the Golden Age" of the canal.

Coal was the primary cargo in the 1870s, as trade in gas coal increased in the Potomac River Valley. The C&O Canal Board granted rebates to western Pennsylvania coal companies; in turn, tonnage of gas coal shipped on the canal more than quadrupled in one year, from 3,000 tons in 1872 to approximately 16,000 tons the following year. The next year, the tonnage quadrupled again, to 65,000 tons. In 1875, tonnage decreased to 40,000 tons because the amount of sulfur in West Virginia gas coal surpassed the inspection standards of the District of Columbia (Elder and Weldon 2018: 73).

Decline of the C&O Canal (1876 – 1889)

Due to the combined impacts from competition with the B&O Railroad and a nationwide depression, trade on the C&O Canal began to decline in 1876 (Elder and Weldon 2018: 33, 76). In 1875, the canal shipped 973,805 tons of cargo, earning revenues of $458,534.66. The next year, this decreased to 709,130 tons, and revenues fell to $290,274.39 (Elder and Weldon 2018: 77).

In 1877, recognizing that the canal was not going to turn a profit, the C&O Canal Company reduced toll rates in hopes of sustaining trade at its existing level and competing with the railroad. The reduction in rates threatened the company's ability to pay interest on repair bonds; if the bonds were left unpaid for more than two years, the canal would be closed. Unable to afford basic repairs on the C&O Canal, the company made the choice to sell the bonds. The last repair bond was sold in 1887, leaving no additional resources for the company in the event of an emergency (Elder and Weldon 2018: 33; Salvatore and Potter 2015: 8-191).

The C&O Canal Company made many attempts to increase revenue and stimulate trade along the canal, including installing a telephone line along the waterway in 1879, to improving communication about maintenance issues. This development saved the company $12,000 a year. The company also sought to create a direct connection with the coal fields to reduce dependence on the B&O Railroad and trim the cost of transportation for coal companies. Trade agreements with competitors, including an 1880 agreement with the B&O Railroad and the Pennsylvania Railroad, fixed charges on canal trade at a more profitable level for the canal company. The company also sought to gain control

1. Of the total 1863 tonnage, coal accounted for 229,416 tons, and flour accounted for 8,566 tons. Other goods such as wheat, salt, lumber, and plaster accounted for the final tonnage.
2. In the intervening years, 290,772 tons were shipped in 1864 (coal: 260,368 tons; flour: 5,962 tons; and wheat: 6,168 tons), and 340,736 tons of coal were shipped in 1865.

of freight rates, in order to cut into the profits of other agencies (Elder and Weldon 2018: 77-78).

Even as the company worked to stimulate the canal economy, a major flood in May/June 1889 devastated the canal (Elder and Weldon 2018: 82). The flood resulted in an estimated $300,000 worth of damages to the canal, with additional costs for the repair and replacement of mills, warehouses, and wharf facilities. The C&O Canal Company was unable to fund the repairs of the canal and fulfill its financial obligations to area merchants.

The C&O Canal during the Trusteeship Era and Camp Carderock (1890 – 1932)

On March 3, 1890, the C&O Canal Company went into receivership under the B&O Railroad, which was required to maintain the waterway. If the railroad failed to maintain the canal, it would be sold to repay C&O Canal bondholders, which would result in a bidding war for the canal's right-of-way. If it lost those rights, the B&O Railroad would be forced to keep its rates low to compete with the waterway again, which would reduce revenue for the railroad.

The 2009 Cultural Landscape Inventory (CLI) for the Georgetown area of the C&O Canal suggests that this arrangement resulted in a more complex restructuring than previously understood, with the relationship described as a trusteeship. The CLI notes:

> At the time of United States purchase of the waterway, a memorandum addressed to the United States Assistant Attorney General specifically declares that the B&O Railroad did not own the waterway, but rather exerted a "dominate [sic] influence" over the course of the company [Blair 1936: 4]. Further evidence of a trusteeship is illustrated in the manner in which the title is conveyed in the original deed, with trustees granting ownership to the United States Federal Government. Adding further complication to the situation, the term "receiver" is also used in the document (Elder and Weldon 2018: 87).

The courts thus sought to determine the future of the C&O Canal Company. Trustees were appointed on October 2 and November 1, 1890, by the Washington County Circuit Court and Supreme Court of the District of Columbia, respectively. The Trustees were lawfully vested with the possession, control, and management of the property of the C&O Canal Company (Equity Numbers 4191 and 4198 for Washington County, and Equity No. 12,240 with DC).

With some basic repairs, the canal went back into operation that same year. At this time, coal was the most profitable cargo shipped on the canal (Salvatore and Potter 2015: 8-192).

By September 1891, the full canal rehabilitation was completed. Despite the major repairs, there was no market for sale of new repair bonds. The next several decades were marked by a period of decline of the C&O Canal. The B&O Railroad was required to provide some upkeep to ensure functionality of the canal, but committed minimal financial, material, or labor resources to the canal.

During the era of B&O Railroad authority, the canal continued to be used for tourist excursions. A *Washington Times* article from August 17, 1896, described the "Mule Yacht" as "one of the largest of its kind." The boat, which featured a dance floor, on-deck piano, hammocks, and comfortable sleeping quarters for the tourists, departed from Washington Street (30th Street NW, in Washington, D.C.) and traveled all the way to Cumberland, Maryland (*Washington Times*, August 17, 1896, pg. 5).

During World War I, the Woodrow Wilson administration nationalized the canal and placed its operations under the control of the Inland Waterways Commission. The U.S. government used the canal to carry coal to the Washington Navy Yard. The Waterways Commission contracted the Canal Towage Company (created in 1902 by the B&O Railroad and Consolidation Coal Company) to increase coal delivery to government stations along the Potomac River. Total tonnage and toll revenues declined during the war for several reasons, including:

- Lack of aggressive leadership;
- Obsolescence of the waterway as a

transportation line, of Georgetown as a port, and of the Potomac River as a channel for competitive trade;

- Irregularity of navigation;
- Competition with the Baltimore & Ohio Railroad; and
- Navigational interference by the freshets of 1897, 1902, 1907 and 1914, and by occasional breaches, particularly in the lime sinks of the upper valley (Unrau 2007: 499).

EARLY 20TH CENTURY DEVELOPMENT ALONG THE POTOMAC RIVER

A 1900 map produced by the U.S. Geological Survey shows approximately five buildings between the C&O Canal and Potomac River within the project area, and two more buildings just north of the canal below the brickyard, located off of a dirt road. These buildings likely represent houses, perhaps of brickyard workers, and may comprise the core of the Brickyard community (McMahon 2022: 198-99).

The 1900 US census of the Potomac District of Montgomery County shows that William Gibbs and Joseph Toney, two of the three trustees for the Black schoolhouse established on Conduit Road in June 1884, were neighbors in Brickyard at this time. The surrounding community included 14 other Black households, interspersed among several white households. In addition to the households of Gibbs and Toney, the Black residents included Elizabeth Blair, Lewis Hinkle, Horace Diggs, Jarrett Bowman, Henry Randall, John Robinson, Alsey Toney, Reuben Sims, James M. Davis, Tobias Grey, Edward A. Cooper, and John H. Spriggs. The census recorded that eight of the Black men living in Brickyard (also called Cropley) that year worked on the Washington Aqueduct[3]; seven worked on the railroad; and three worked as laborers in an unspecified park. None of them worked for the Potomac Brick & Tile Company (NPS Brickyard, Cropley (Carderock), Maryland 2023).

By 1904, a cluster of houses and a store lined Conduit Road west of the Cropley Post Office. The two buildings within the project area that were represented in the 1894 map as located off of an unimproved road continue to be depicted (*see Figure 12 and Figure 13*). South of the canal, the three westernmost structures depicted in the 1900 map are no longer depicted in 1904. In 1890, Arthur Cropley owed $25,000 to George W. Cissel, a Georgetown mill owner, based on a mortgage on the acreage he owned exclusive of the brickyard works (MCDB JA 20, Folio 195, August 5, 1890). By 1908, the property belonged to Cissel's only son and heir, Samuel Sewall Cissel; thus, Cropley is believed to have defaulted on the loan. Samuel Sewall Cissel also defaulted on the 1908 mortgage, and the property changed hands again in a public auction held on March 4, 1914 (McMahon 2022: 199). A series of six owners held the tract for short periods between March 1914 and June 1920 (Bedell, Cagney, and Raszick 2022: 23).

By 1917, when two Rockville, Maryland, surveyors created a real-estate atlas for the lower part of Montgomery County, two churches and a school were located at the intersection of Conduit Road and a private, unnamed road; no houses were depicted. Most residences that existed by this time were clustered on land owned by the Atlantic Development Company, between Offutt Road (now Brickyard Road) and a private road. Only two Black families owned land at this time: C. Frye (who owned five acres) and J. and C. Toney (who owned 2.5 acres) (*see Figure 14*). Both properties lie north of Cropley Park and Conduit Road and east of the private road (McMahon 2022: 198-199; NPS Brickyard, Cropley [Carderock], Maryland 2023).

The Brickyard community was associated with the Mount Glory Baptist Church and cemetery between the canal and Conduit Road, built in 1920. The church had an active Black congregation until it was taken by the government in 1962 and razed in 1963 for the construction of the George Washington Memorial Parkway (today's Clara Barton Parkway) at its intersection with Conduit Road (today's MacArthur Boulevard). The graves were disinterred and relocated to Galilean Fisherman's (Lincoln Park) Cemetery in Rockville. The school, church, and property north of Conduit Road that belonged to

3. In 1884, the US Army Corps of Engineers employed 500 workers in the Great Falls and Carderock areas to extend the Washington Aqueduct dam across the Potomac River.

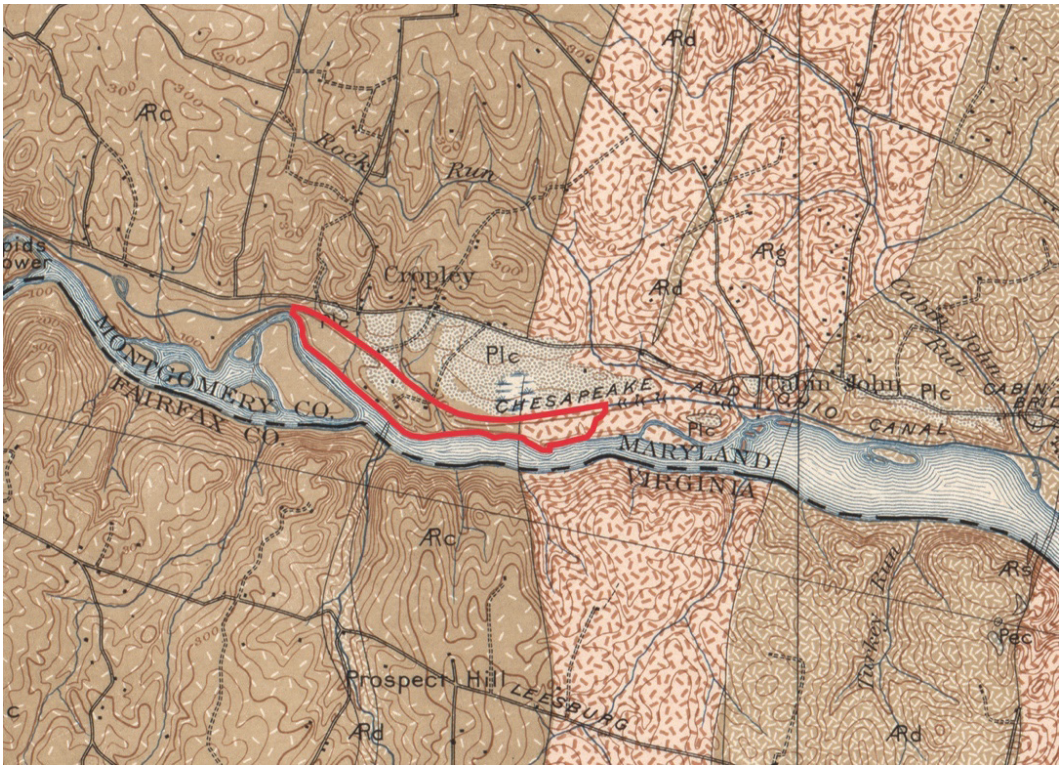


Figure 12: Historical geology sheet, Maryland--District of Columbia--Virginia, Washington quadrangle, U.S. Geological Survey, 1900, with approximate CLR boundary in yellow (Source: Library of Congress, Control Number 87693496).

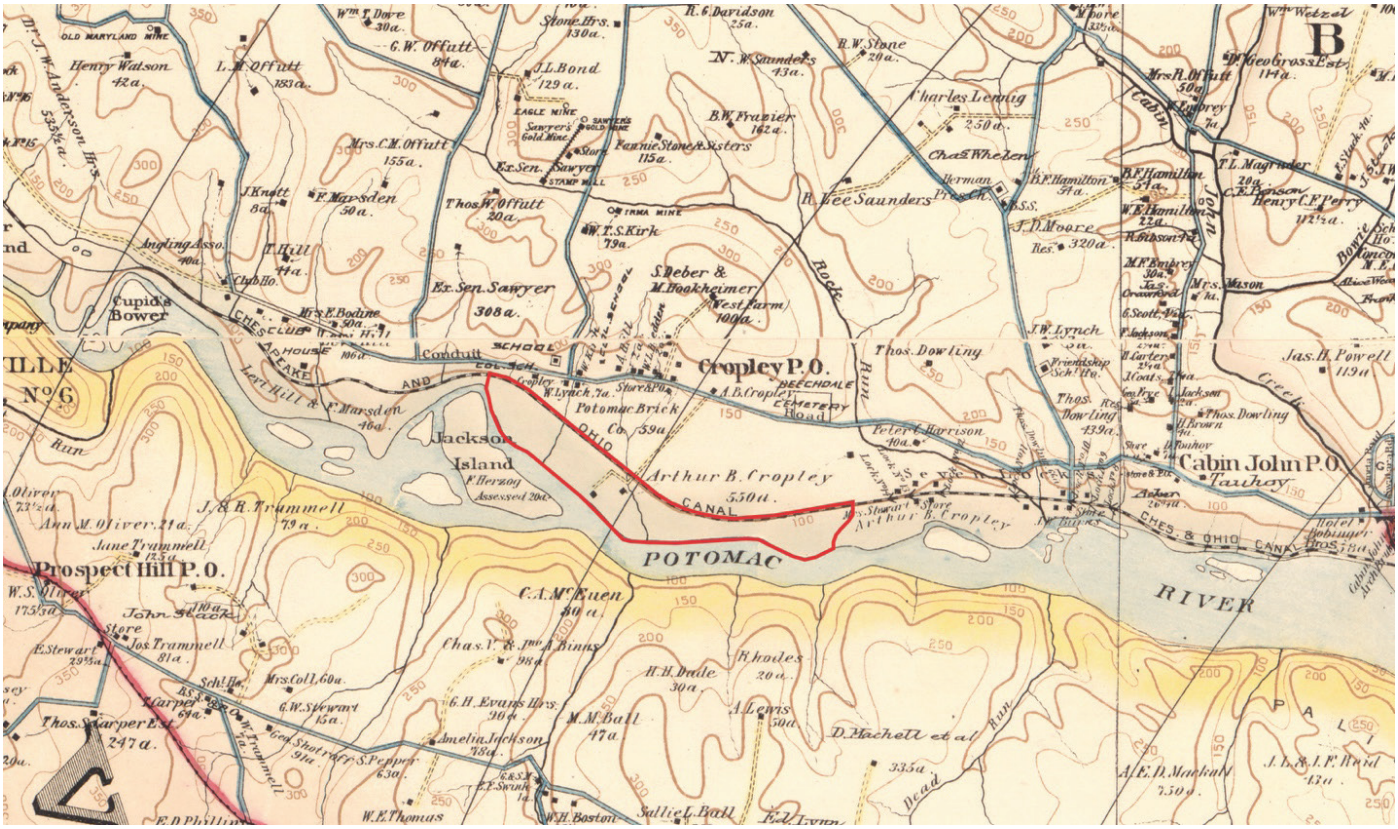


Figure 13: Detail of Baist's Map of Washington, D.C., showing the project area owned by Arthur Cropley, 1904, with approximate CLR boundary in yellow (Source: Library of Congress, Control Number 87691445).

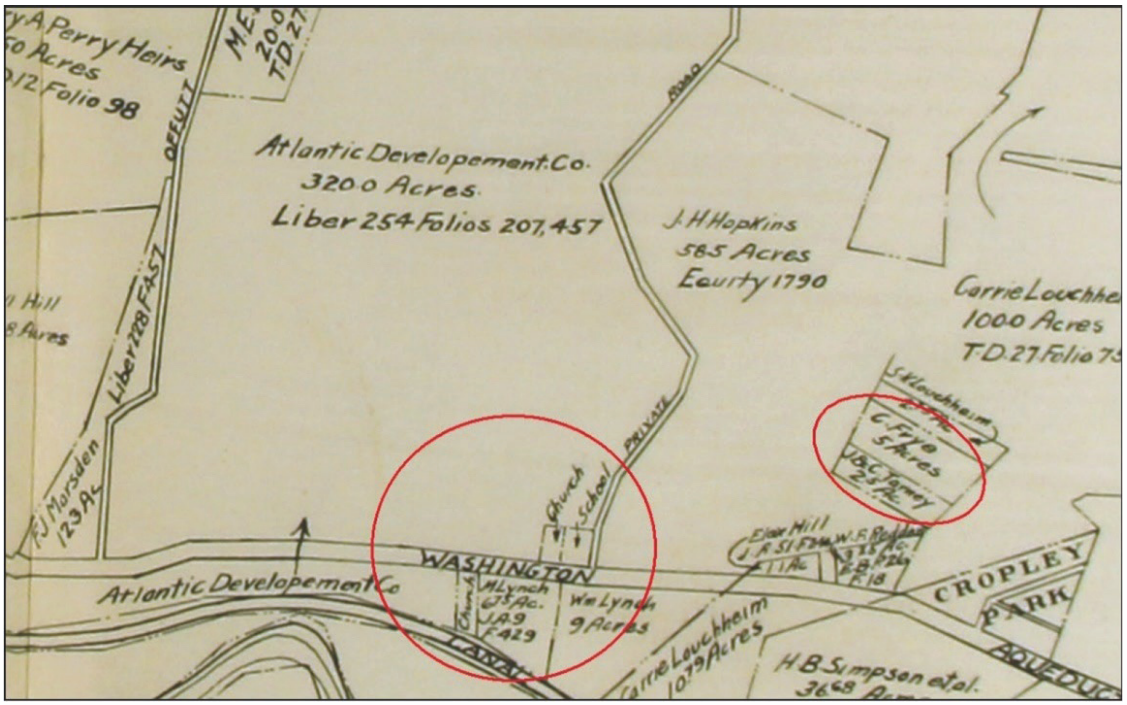


Figure 14: Detail from A Real Estate Atlas of the Part of Montgomery County Adjacent to the District of Columbia, 1917 (Deets and Maddox, plate 10) depicting Black landowners in the Brickyard community (Source: McMahon 2022: 199).

the Fryes and Toneys in 1917 were also demolished in the late 20th century to construct housing developments on Gorman Road and Natelli Woods Lane.

CAMP CARDEROCK

By early June 1920, Michael J. Keane, a lawyer and speculative real estate developer from Washington, D.C., purchased 275 acres of the Carderrock tract in Montgomery County. Keane platted the land as an upscale residential subdivision that he called "Camp Carderock" (Montgomery County Plat 230, July 1920). Although the 1920 plat references the original tract of land as "Carderrock," Camp Carderock appears to be the first evidence of using the updated spelling with a single "r."

Camp Carderock was platted as 74 one- and two-acre lots surrounded by a largely undeveloped landscape, situated between the C&O Canal to the north, Lock No. 14 to the east, the Potomac River to the south, and road now known as Carderock Road to the west (*see Figure 15*). The precise vision for the development is unknown, as Keane only sold one property: the western halves of adjacent Lots 54 and 66, which he sold in August 1922 to Ethel E. Alicoate of D.C. (MCDB 322, Folio 416, November 9, 1922; WPS USA 2022: 23). In 1924, Keane sold the remaining Camp Carderock land to Frank P. Harman, Jr. (MCDB 352, Folio 418, May 23, 1924).

A real estate bust hit in 1925, soon after Harman's purchase. Harman made no further sales, and Camp Carderock's only other property owner, Ethel E. Alicoate, sold her property to Anita E. Phipps (also from D.C.) in August 1926. The deed of title suggests that Alicoate may have developed the property during her four-year ownership, as deed conveyed the "western half of lots 54 and 66 in the subdivision known as Camp Carderock…together with the building and improvements thereupon" (MCDB 404, Folio 451, August 2, 1926; Bedell, Cagney, and Raszick 2022: 25).

In 1927, Harman sold the 275-acre Camp Carderock lot (minus the parcel now owned by Anita Phipps) to the Woodside Homes Corporation (Bedell, Cagney, and Raszick 2022: 25). The Virginia-based development company, formed in 1922 as the Woodside Development Corporation by Charles Ward Hopkins and Morgan K. Armstrong, produced residential developments in Silver Spring, MD[4]; Newport News, VA; New Orleans, LA; Atlanta, GA; and Montgomery, AL. A subsidiary, the Woodside Homes Corporation, was incorporated in Maryland in 1925.

4. Hopkins and Armstrong created the subdivision in Silver Spring called Woodside Park before developing Camp Carderock in 1928 (Oshel 1998).

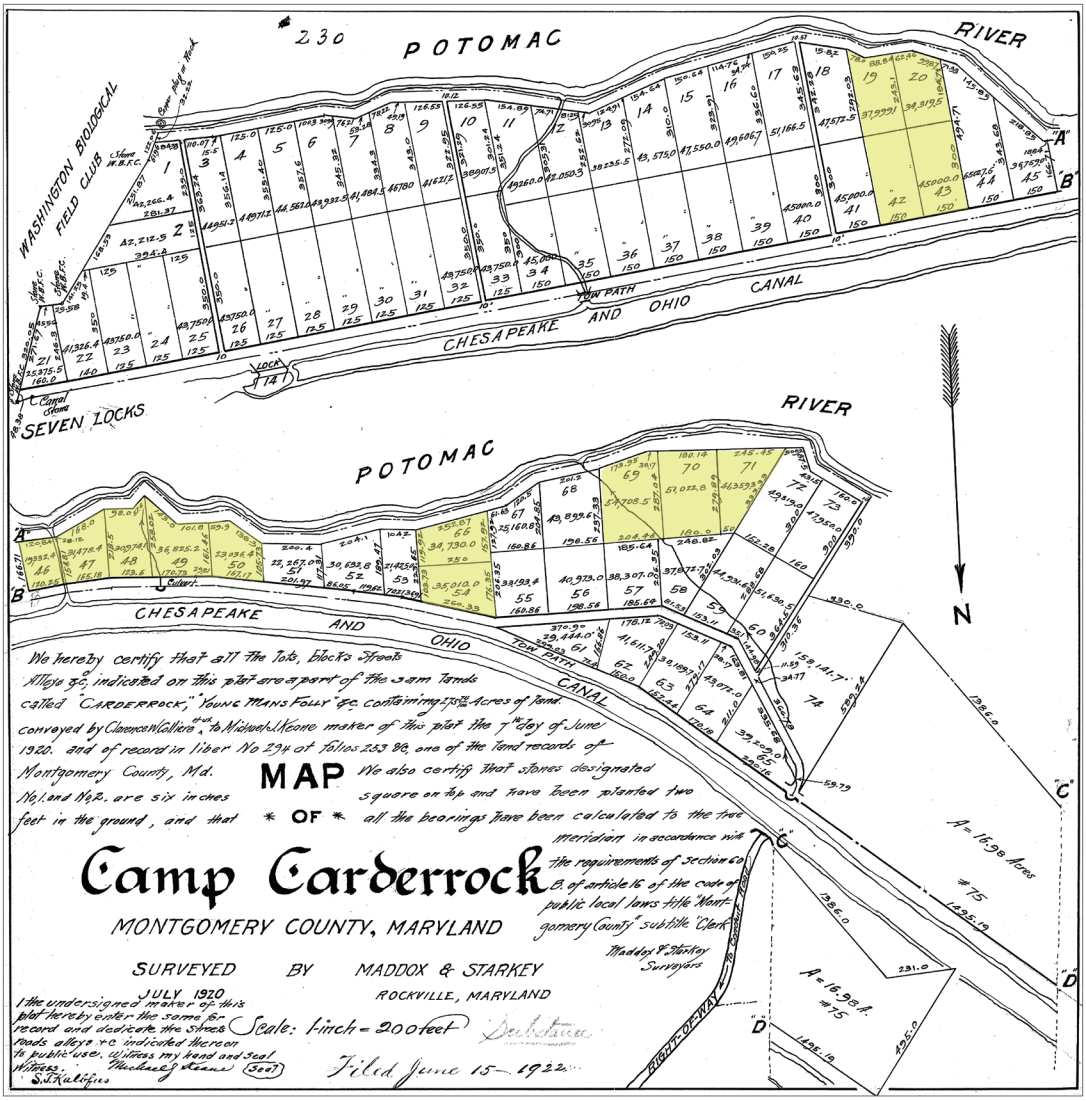
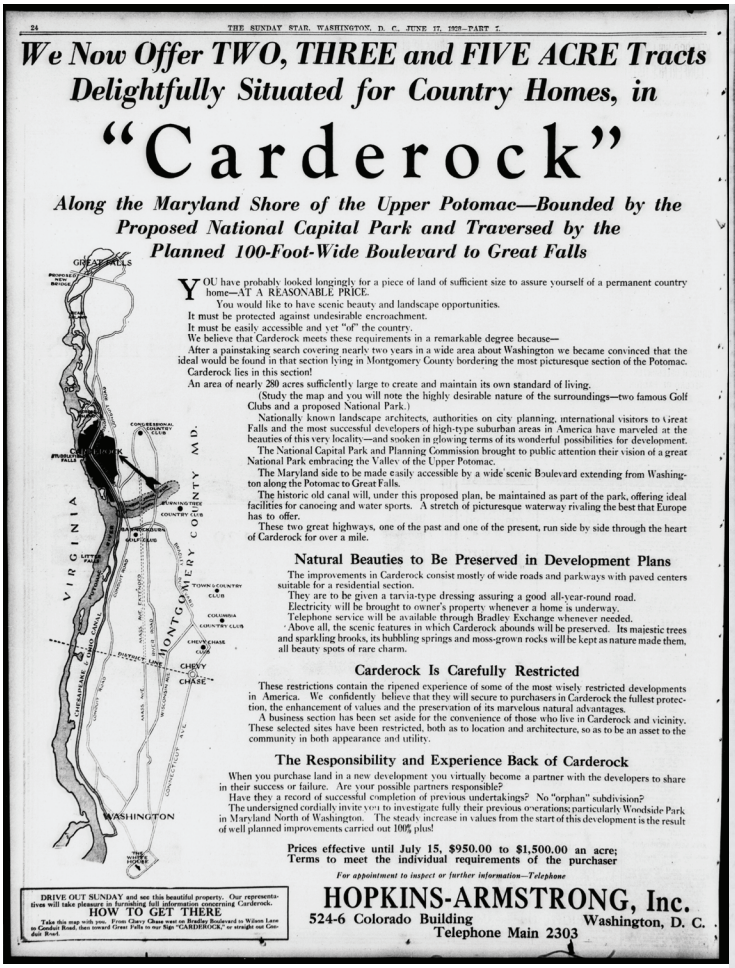


Figure 15: Plat of Camp Carderock parcels sold between 1926 and 1933 highlighted in yellow (Source: Montgomery County Circuit Court, Camp Carderock, Subdivision Plats, Plat 230, 1922 MSA S1249-8042).

At Carderock, the Woodside Homes Corporation subdivided the land between the canal and Conduit Road (including the former brickworks property) in 1928 (McMahon 2022: 200).

THE END OF THE TRUSTEESHIP ERA

Significant flood events continued to impact the C&O Canal in the late 1800s and early 1900s, with serious floods in 1897, 1902, 1907, and 1914. Flood events in March and May of 1924 further damaged the canal, with the May event in particular resulting in severe impacts. As reported by the *Evening Star* on May 13, 1924, "In many places the waters of the Potomac and Chesapeake and Ohio Canal have merged and for miles the canal cannot be seen." The article went on to say that the canal "was likely doomed" (Elder and Weldon 2018: 90).



24 THE SUNDAY STAR, WASHINGTON, D. C., JUNE 17, 1928—PART 7.

We Now Offer TWO, THREE and FIVE ACRE Tracts Delightfully Situated for Country Homes, in

"Carderock"

Along the Maryland Shore of the Upper Potomac—Bounded by the Proposed National Capital Park and Traversed by the Planned 100-Foot-Wide Boulevard to Great Falls

YOU have probably looked longingly for a piece of land of sufficient size to assure yourself of a permanent country home—AT A REASONABLE PRICE.

You would like to have scenic beauty and landscape opportunities.
It must be protected against undesirable encroachment.
It must be easily accessible and yet "of" the country.
We believe that Carderock meets these requirements in a remarkable degree because—

After a painstaking search covering nearly two years in a wide area about Washington we became convinced that the ideal would be found in that section lying in Montgomery County bordering the most picturesque section of the Potomac. Carderock lies in this section!

An area of nearly 280 acres sufficiently large to create and maintain its own standard of living.

(Study the map and you will note the highly desirable nature of the surroundings—two famous Golf Clubs and a proposed National Park.)

Nationally known landscape architects, authorities on city planning, international visitors to Great Falls and the most successful developers of high-type suburban areas in America have marveled at the beauties of this very locality—and spoken in glowing terms of its wonderful possibilities for development.

The National Capital Park and Planning Commission brought to public attention their vision of a great National Park embracing the Valley of the Upper Potomac.

The Maryland side to be made easily accessible by a wide scenic Boulevard extending from Washington along the Potomac to Great Falls.

The historic old canal will, under this proposed plan, be maintained as part of the park, offering ideal facilities for canoeing and water sports. A stretch of picturesque waterway rivaling the best that Europe has to offer.

These two great highways, one of the past and one of the present, run side by side through the heart of Carderock for over a mile.

Natural Beauties to Be Preserved in Development Plans

The improvements in Carderock consist mostly of wide roads and parkways with paved centers suitable for a residential section.

They are to be given a tarvia-type dressing assuring a good all-year-round road.

Electricity will be brought to owner's property whenever a home is underway.

Telephone service will be available through Bradley Exchange whenever needed.

Above all, the scenic features in which Carderock abounds will be preserved. Its majestic trees and sparkling brooks, its bubbling springs and moss-grown rocks will be kept as nature made them, all beauty spots of rare charm.

Carderock Is Carefully Restricted

These restrictions contain the ripened experience of some of the most wisely restricted developments in America. We confidently believe that they will secure to purchasers in Carderock the fullest protection, the enhancement of values and the preservation of its marvelous natural advantages.

A business section has been set aside for the convenience of those who live in Carderock and vicinity. These selected sites have been restricted, both as to location and architecture, so as to be an asset to the community in both appearance and utility.

The Responsibility and Experience Back of Carderock

When you purchase land in a new development you virtually become a partner with the developers to share in their success or failure. Are your possible partners responsible?

Have they a record of successful completion of previous undertakings? No "orphan" subdivision?

The undersigned cordially invite you to investigate fully their previous operations particularly Woodside Park in Maryland North of Washington. The steady increase in values from the start of this development is the result of well planned improvements carried out 100% plus!

Prices effective until July 15, $950.00 to $1,500.00 an acre; Terms to meet the individual requirements of the purchaser

For appointment to inspect or further information—Telephone

DRIVE OUT SUNDAY and see this beautiful property. Our representatives will take pleasure in furnishing full information concerning Carderock.

HOW TO GET THERE

Take this map with you. From Chevy Chase west on Bradley Boulevard to Wilson Lane to Conduit Road, then toward Great Falls to our Sign "CARDEROCK," or straight out Conduit Road.

HOPKINS-ARMSTRONG, Inc.
524-6 Colorado Building Washington, D. C.
Telephone Main 2303

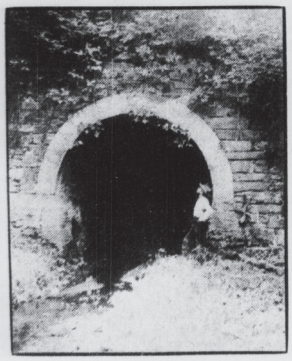
There Has Never Before Been Offered Extensively Developed and Thoroughly Restricted Acreage Actually Bordering the Potomac Above Washington

"Carderock"

Is an Exceptional Opportunity to Secure a Site for a Permanent Home or an Investment in This Beautiful Region

MANY have marveled at the surpassing natural beauties of the Maryland side of the Potomac above Washington. A FEW have dreamed of a permanent home nestling amidst these wonderful surroundings. Yet not until attention was centered on this relatively small area by the publicity given its unusual value as a National Park did the home people of Washington as a whole come to realize what the valley above Washington had to offer for residential purposes.

"Carderock" embraces a very large portion of the available residential area and offers within its own confines a truly remarkable variety of terrain. More than a mile of water front. Many acres of gently rolling, fertile upland. Unrivaled opportunities for landscaping, for sunken gardens or for ivy-covered rock gardens. And, withal, well within the growing country club district and easily accessible to the city.



Ancient and Picturesque Pass Under Old C. & O. Canal, Along Old Ferry Road, "Carderock"

Here are true home sites that appeal to every taste. The landscape features, of which nature has been so prodigal in Carderock, are being preserved under the guidance of John H. Small, 3d, Inc., Landscape Architects.

Carefully devised restrictions—safeguarding but not burdensome—have been selected from the most substantial subdivisions in America and applied to Carderock.

We will gladly furnish transportation and information without obligation.

Offered in One, Two and Three Acre Tracts

For Ideal Country Estates, but Laid Out With Due Consideration for Future Development

Until July 15th, $950 to $1,500 Per Acre

THE WAY TO CARDEROCK! From Wisconsin Avenue west on Bradley Boulevard or River Road to Wilson Lane, thence south to Conduit Road to "Carderock," or out Reservoir Road or Pennsylvania Avenue to Conduit Road, thence west to "Carderock." Drive out Saturday or Sunday.

HOPKINS-ARMSTRONG, Inc.
Phone Main 2303 523-24-25 Colorado Bldg.

Figure 16: 1928 newspaper advertisements for Carderock (Source: Evening Star, June and July 1928)

Following the floods in 1924, the receivers sought permission from the courts to suspend canal navigation. With the court's approval, commercial transportation on the canal effectively ended on May 14, 1924. The era of canal commerce thus concluded in the Potomac River Valley, and along with it, the operation of excursion boats.

Although the canal's commercial transportation ended with the May 1924 flood, the court required that the trustees of the B&O Railroad could not entirely abandon the waterway without spurring foreclosure and sale. The court ordered the company to make the canal navigable in short order. However, the trustees determined that this was not possible without violating the conditions under which the Canal Company was operating. Thus, the trustees, through their agent, General Manager Nicholson, put minimal effort in maintaining the canal. In order to comply with the court requirement, after the flood events, workers repaired the lower five miles of the canal, from Lock No. 5 to Georgetown (Elder and Weldon 2018: 33, 86, 90; Salvatore and Potter 2015: 8-193).

A 1921 plan for a high dam near Chain Bridge (S.J. Res. 192, 67th Congress; Congressional Record 62: 5700) encountered heavy opposition. The



Figure 17: Carderock subdivision map for the area north of George Washington Memorial Parkway (Source: National Park Service ETIC 412/80133).

proposal ultimately failed in the mid-1930s when Congress approved construction of the U.S. Navy's David Taylor Model Basin, which would have been inundated by the dam (Mackintosh 1991: 6).

THE WOODSIDE HOME CORPORATION

In 1928, the brickworks ceased operation, and the Woodside Homes Corporation purchased the land to expand its real estate vision. By this time, the brickyard tract comprised just 11 acres (McMahon 2022: 199). Around this time, the development company stopped using the term "Camp," simply referring to the residential subdivision as Carderock.

That same year, Hopkins and Armstrong of the Woodside Homes Corporation published the first of several advertisements for Camp Carderock in the *Washington Post* and the *Evening Star* newspapers. A July 7, 1928, advertisement in the *Evening Star* promised "unrivaled opportunities for landscaping, for sunken gardens or for ivy-covered rock gardens…within the growing country club district…easily accessible to the city" (***see Figure 16***). Compared to Keane's one and two-acre lots, this subdivision advertised two, three, and five-acre "estates" at $950 to $1,500 per acre. The advertisement continued by stating that the land included "carefully devised restrictions" that they considered "safeguarding but not burdensome" (Bedell, Cagney, and Raszick 2022: 25).

The terms of sale for a transaction completed that same year indicate the regulatory and racially segregated nature of those "carefully devised restrictions." In 1928, the Woodside Homes Corporation sold a title to Roscoe C. and Sue T. Green of Washington, D.C. (for Lot 70, with parts of Lots 69 and 71). Ten covenants were written

into the deed of title; the first five covenants addressed limitations for building on the property: no structures could be used for commercial use or manufacturing, and every dwelling had to be a detached, single-family home with prescribed setbacks. Covenant 7 was a racial covenant that excluded Black Americans from either owning or renting any property in Carderock (Bedell, Cagney, and Raszick 2022: 25-26). As such, Black Americans in the nearby community of Brickyard were not able to purchase property in the new subdivision. Such racial covenants were legal until 1948, when the U.S. Supreme Court ruled in *Shelley v. Kraemer* that racially restrictive covenants were unconstitutional and therefore unenforceable.

The onset of the Great Depression ended Hopkins and Armstrong's dreams for the development of Carderock (*see Figure 17*). No real estate sales were made in Carderock in 1929 or 1930, and only two sales were completed in 1931: Thomas William and Louise Smith purchased parts of Lots 19-20 and abutting 42-43 (a total of 2.5 acres); and Charles F. and Georgia T. Crane of D.C. purchased Lot 47 and parts of Lots 46 and 48 (totaling 1.6 acres) (MCDB 520, Folio 202, April 18, 1931, 520, Folio 321, May 4, 1931). By 1931, Hopkins and Armstrong had reduced their ten covenants to four, but the racial covenant remained in place.

Advertisements for Carderock became less frequent and simpler, without any illustrations. By the summer of 1933, the advertisements ceased altogether. By 1935, three additional sales had been made in the original Camp Carderock tract (between the canal and the river), and five sales were made in the adjacent Carderock subdivision (north of the canal, in the present-day David Taylor Model Basin property) (Oshel 1998).

Outside of the Carderock subdivision, the 1930 US census lists a few Black American households on "Conduit towards & to Cropley," including the home of James Harris, John Haley, and Beverly Davis.

Federal Involvement and New Deal Projects on the C&O Canal (1933 – 1941)

As early as 1901, the federal government expressed interest in the C&O Canal. The waterway was included in the McMillan Commission's recommendations for Washington, D.C, which sought to revive Pierre Charles L'Enfant's plan for a monumental core for the capital. Noting the canal's historic and recreational values, the plan (known as the McMillan Plan) suggested the development of a "Potomac Drive" along the riverfront between Great Falls, Virginia and Washington, D.C. As part of that proposal, the plan recommended that both sides of the Potomac River be converted to a national park. The McMillan Plan's chapter about the Potomac Drive plan noted:

> The canal has a charm of its own, as, half disclosed and half revealed, it winds among the trees; and not the least part of its charm, so desirable to be preserved, is the slow, old-fashioned movement of the boats and of the people on and near this ancient waterway. Already the canal is used, aside from the navigation of commerce, by pleasure seekers in canoes, and by excursion parties in various craft. More and more will the canal thus be used as an attractive route between the populous city and the natural charms of the picturesque region between Cabin John Bridge and Great Falls. The preservation and continuance of the canal in its original character will thus add elements of gayety [sic] and life to a scene much enjoyed by the passers-by on the neighboring and upper roadways. (U.S. Congress 1902: 96)

While the McMillan Plan's vision for a Potomac Drive never came to fruition, the C&O Canal again garnered federal notice several decades later. In 1926, Lt. Col. J. Franklin Bell, Engineer Commissioner of the District of Columbia, urged Congress to authorize acquisition of the canal for a federal highway from the capital city to Cumberland, Maryland (Mackintosh 1991: 6). The proposed highway would be built inland, adjacent to the canal, and would not impact the canal or, presumably, the towpath.

In 1928, this proposal was overshadowed by legislation proposed by Representative Louis C. Cramton of Michigan, which hoped to advance the implementation of the McMillan Commission's Potomac Drive Plan. Cramton's bill would authorize appropriations for the development of the George Washington Memorial Parkway (GWMP), which would extend above Great Falls on both sides of the Potomac River. The act included "the protection and preservation of the natural scenery of the Gorge and the Great Falls of the Potomac and the acquisition of that portion of the Chesapeake and Ohio Canal" (Mackintosh 1991: 7). Amendments to the bill authorized the acquisition of the C&O Canal as far as Point of Rocks, Maryland. The amended bill cleared both houses and received President Herbert C. Hoover's signature on May 29, 1930, becoming known thereafter as the Capper-Cramton Act (Mackintosh 1991: 7).

In 1933, President Franklin D. Roosevelt's National Industrial Recovery Act authorized the acquisition of the C&O Canal as a public works project; it was not, however, until September 28, 1938, that the National Park Service (established in 1933) purchased the C&O Canal (Mackintosh 1991: 6-9). In the interim, on March 31, 1933, Congress passed the Emergency Conservation Work Act (ECW) as part of President Roosevelt's New Deal program. The unemployment crisis of the Great Depression was an opportunity to advance the federal government's involvement in conservation work (Sirna 2011: 13). The ECW effectively created the Civilian Conservation Corps (CCC), which sought to employ millions of out-of-work young men through civic conservation projects around the country (Sirna 2011: 9). Robert Fechner, Director of the ECW, and his staff were responsible for the policy and coordination of programs among the participating agencies. The NPS used the CCC program to accomplish a broad range of conservation and development projects in national parks.

The CCC was administered by the U.S. Army in concert with the departments of Labor, Agriculture, and Interior. The task of mobilizing and running the CCC camps fell to the War Department because of its expertise in mobilizing large companies of men, while the other entities organized and oversaw the project work. Each CCC camp generally included an army officer along with three or four subordinates who controlled the logistics of the camp and coordinated activities with four to ten National Park Service employees (Howard 2017: 4-5).

In 1934, Frederic A. Delano, chairman of the National Capital Park and Planning Commission (NCPPC), suggested to Secretary of the Interior Harold Ickes that CCC labor could be used to conserve and restore locks on the C&O Canal and restore canal bridges. The intention was to extend the George Washington Memorial Parkway westward into Maryland, in a departure from Bell's proposal to convert the canal to a federal highway (Howard 2017: 49).

The following year, with encouragement from President Roosevelt, the NCPPC studied the possibilities of preserving the canal and building a parallel parkway. A 1935 report from planner John Nolen, Jr. concluded that:

> There was unanimous agreement that the Canal should be preserved as a recreational waterway of great scenic and historical value for the full distance between Washington and the Monocacy and perhaps to Point of Rocks [in Frederick County, Maryland]...We further concluded that the restoration of the canal as a scenic waterway was an ideal work relief project of almost boundless proportions. (Quoted in Mackintosh 1991: 12)

In July 1935, the U.S. government purchased the Carderock subdivision from the Woodside Homes Corporation. The initial purchase excluded the parcels owned between 1926 and 1935 by Phipps, the Greens, the Smiths, the Cranes, and others; however, these parcels were purchased later that same year (Bedell, Cagney, and Raszick 2022: 27).

Meanwhile, the canal was damaged by yet another massive flood event in March of 1936, which particularly impacted Cumberland, Hancock, and Williamsport, Maryland. The flooding resulted in silting and breaks in the canal, in addition to the destruction of several bridges. The B&O Railroad was able to make repairs in Georgetown but was unable to finance other necessary repairs (Elder and Weldon 2018: 33).



Figure 18: Trails Below Great Falls and the Cliffs and Ravines, 1918 (Source: Taken from the draft NPS report titled A History of the Billy Goat Trail in Great Falls, MD *[2006]).*

While legal issues over the canal company's title initially delayed the sale of the waterway, the issues were resolved by 1938 in the form of a foreclosure, as the railroad was unable to pay a note of $2,000,000. In turn, on September 28, 1938, the federal government purchased the C&O Canal for $2,000,000, paid to the B&O Railroad as the primary creditor of the canal. The government purchased the canal with the intention to develop it as a work relief project and repurpose the first 22 miles of canal from Georgetown to Seneca for recreational use (Elder and Weldon 2018: 34). Officially known as Federal Project 712, the NPS had several CCC companies available to complete rehabilitation work on the C&O Canal (Sirna 2011: 33; Elder and Weldon 2018: 34). Provisions of the contract stipulated the government would not allow any portion of the canal property to be used for conveying freight or passengers by land without the consent of the B&O Railroad, except for accommodating public visitors. Further, the B&O Railroad agreed to remove all occupants of the property other than existing water lessees before the government accepted title (Mackintosh 1991: 19).

Acting NPS Director A.E. Demaray wrote to Daniel Willard of the B&O Railroad asking the receivers for permission to allow the CCC companies to begin work before the purchase was complete. Demaray wrote: "As partial justification for the proposed purchase of the Chesapeake and Ohio Canal property, it has been stated that the property is ideally adaptable to use for Civilian Conservation Corps purposes. We have in mind such CCC activities as erosion control, landscape and trail development, lock restoration, clean-up operations, etc." (quoted in Sirna 2011: 33).

The Department of the Interior issued a press release on July 29, 1938, announcing the successful canal transaction and the plan to restore the section of canal from Georgetown to Seneca. The press release stated that "determination to conserve the historic water route as a national historic site definitely ends consideration of other proposals for the disposition of the lower end of the canal" (Mackintosh 1991: 19).

THE BILLY GOAT TRAIL

The riverfront was undoubtedly used for fishing and recreation prior to the establishment of the Billy Goat Trail. A 1918 map of "Trails Below Great Falls and Cliffs of Ravines of Washington," depicts a small portion of a trail within the project area, as well as a culvert built c. 1830, which likely offered passage to the river (***see Figure 18***). The culvert still exists today; its wide barrel arch cuts under the canal and towpath at an angle, measuring approximately 152′ long. The outflow wall is of gray sandstone and the inflow of red sandstone.

Although a precise date of establishment is unclear, the extant trail within the study area was apparently created by the Potomac Appalachian Trail Club (PATC) in the 1930s; a map authored by Robert Shosteck in 1939 was the earliest reference to the name "Billy Goat Trail." The *Potomac Trail Book*, compiled by Shosteck in 1968, notes that, "The entire riverside trail from Carderock to Great Falls for a distance of over eight miles has been designated the Billygoat [*sic*] Trail by a group of hikers who, in the 1930's [*sic*], laid out, cleared, and blue-blazed this rugged and picturesque route to the falls" (Shosteck 1968: 38). Before the PATC laid out the trail, the builders obtained permission from the landowners with the condition that they would not cut any trees.

The Billy Goat Trail contains three different sections that total eight miles along the north side of the Potomac River; Section C travels through the project area along the banks of the river.

An article written in 1934 by Frank Schairer (catalogued in the PATC archives) recommends following the river along the "shore line of Bear Island above Cupids Bower Island," passing Cabin John Bridge to Carderock, which remained a residential real estate development at this time, and turning left to the parking lot between the C&O Canal and the river (Stanton 2006: 22).

According to a 1940 *Forest Protection Requirements Report* by Raymond Sydansk, hikers enjoyed the grassy canal towpath. Sydansk describes camping and picnicking as "rather light and well spread out," with the areas around the Billy



Figure 19: Drawing by Robert Latou Dickinson showing recreation along the towpath of the C&O Canal, as viewed from the trolley station above the Potomac River, c. 1910-1920 (Source: Library of Congress, Control Number 2004667946).

Goat Trail between Carderock and Great Falls most heavily utilized by visitors (Stanton 2006: 15).

ROCK CLIMBING AT CARDEROCK

Even before the federal government took a stake in rehabilitating the canal for recreational use, the area was popular for active and passive leisure. Carderock became a rock-climbing destination in the 1920s and remains one to this day (*see Figure 19 and Figure 20*). Gustave Gambs, Donald Hubbard, and Paul Brad were among the early rock climbers to explore Carderock and establish routes. They "used heavy manila ropes, pounded pitons into cracks for protection, and in addition to bottom to top routes, put up traverses to get the maximum length routes on the relative short cliffs" (Hanel 1990: 5).

There were several early 20th century hiking clubs active in and around Washington, D.C., including the Potomac Appalachian Trail Club (which later included the Washington Rock Climbers), Wanderbirds, Ramblers, Wednesday Hikers, Red Triangle Club, Wanderlusters, Capital Hiking Club, and Center Hiking Club. The YMCAs and YWCAs of the area also organized hiking trips around the Potomac River. While these activities were apparently male-dominated, women also joined the clubs in the early 20th century and found ways to participate in spite of contemporary dress norms.

A newsletter called *Up Rope* was founded in 1944 by Herb and Jan Conn to record the achievements of climbers in the area and connect individuals with similar interests. The number of climbers continued to grow over the decades.

A 1946 issue of *Washington Rock Climbers* newsletter includes the following:

> At Carderock the Billygoat Trail climbs to the cliff top through a break in the main cliff. A few yards toward the Potomac from this break the lower part of the cliff is ornamented by a seam which obliques upward to the left … This climb is well named the Spider walk from the spidery leg and arm positions assumed in its ascent. (Quoted in Stanton 2006 [unpublished]: 14)

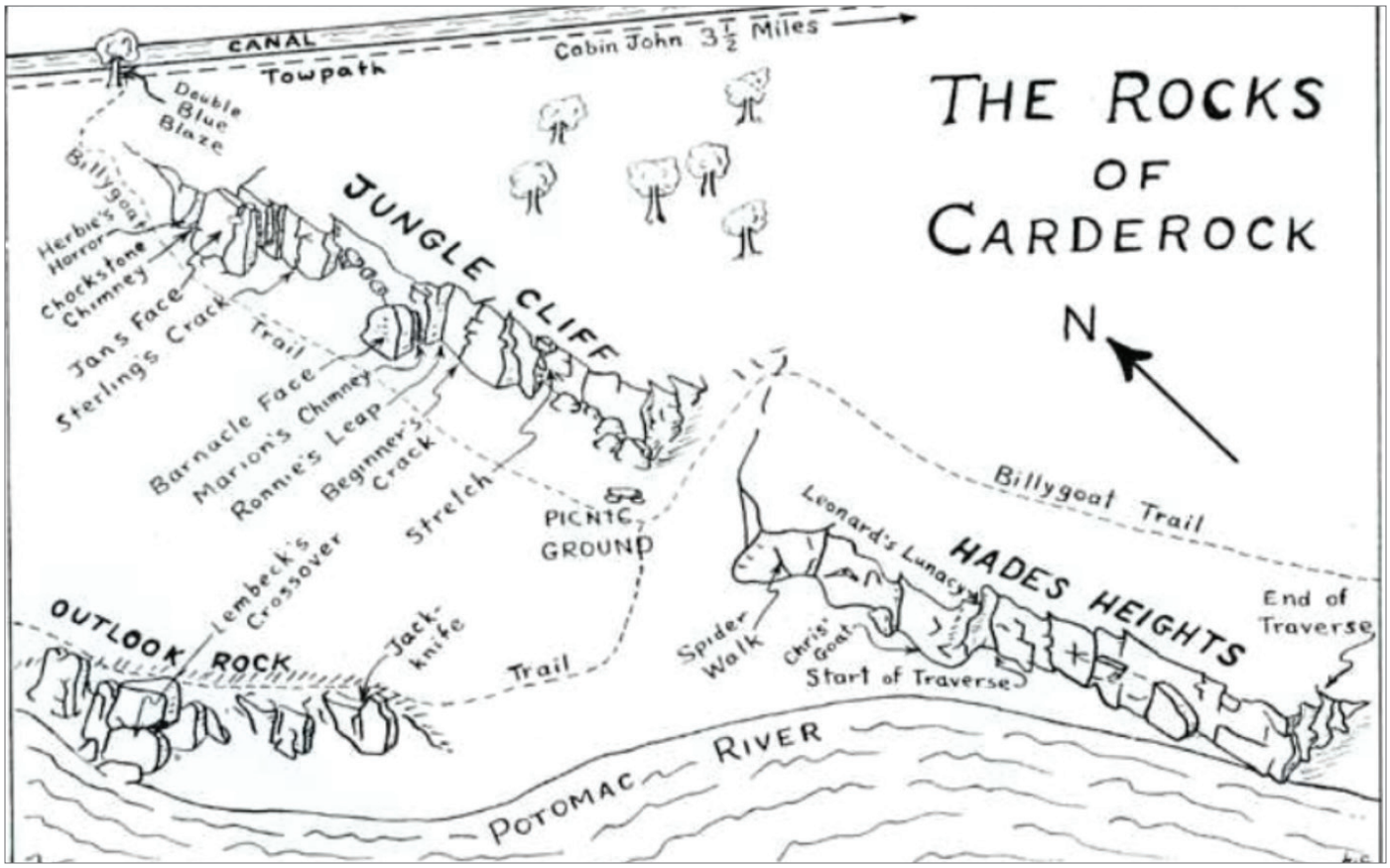


Figure 20: A map of "The Rocks of Carderock" by Herbert Conn, depicting the names of several climbing routes and the Billy Goat Trail, 1944 (Source: Potomac Appalachian Trail Club Bulletin, July 1944, 59–68).

CIVILIAN CONSERVATION CORPS EFFORTS ON THE C&O CANAL

With New Deal money pouring into the C&O Canal by the late 1930s, two CCC camps were established to expand the canal's recreational use. The two camp sites were placed in the Carderock area, which featured the highest concentration of historic locks and lockkeeper's houses along the canal, with six locks in less than a span of one mile due to the relatively steep elevation changes between Great Falls, Maryland, and Washington, D.C. Camp NP-1-MD, sited on the south bank of the canal near Cabin John, Maryland; Camp NP-2-MD was subsequently constructed to the west (*see Figure 21*).

Camp NP-1-MD, housing Company No. 325, was established on September 19, 1938, just days before the official purchase of the canal by the federal government. This camp remained open until April 1, 1942. It was commanded by Edwin T. Arnold, First Lieutenant Cavalry Reserves who had served in the CCC for over a year prior to coming to the canal.

Camp NP-2-MD housed Company No. 333 from October 5, 1938, until November 15, 1941. It was commanded by Captain E.D. Wilberger, who had

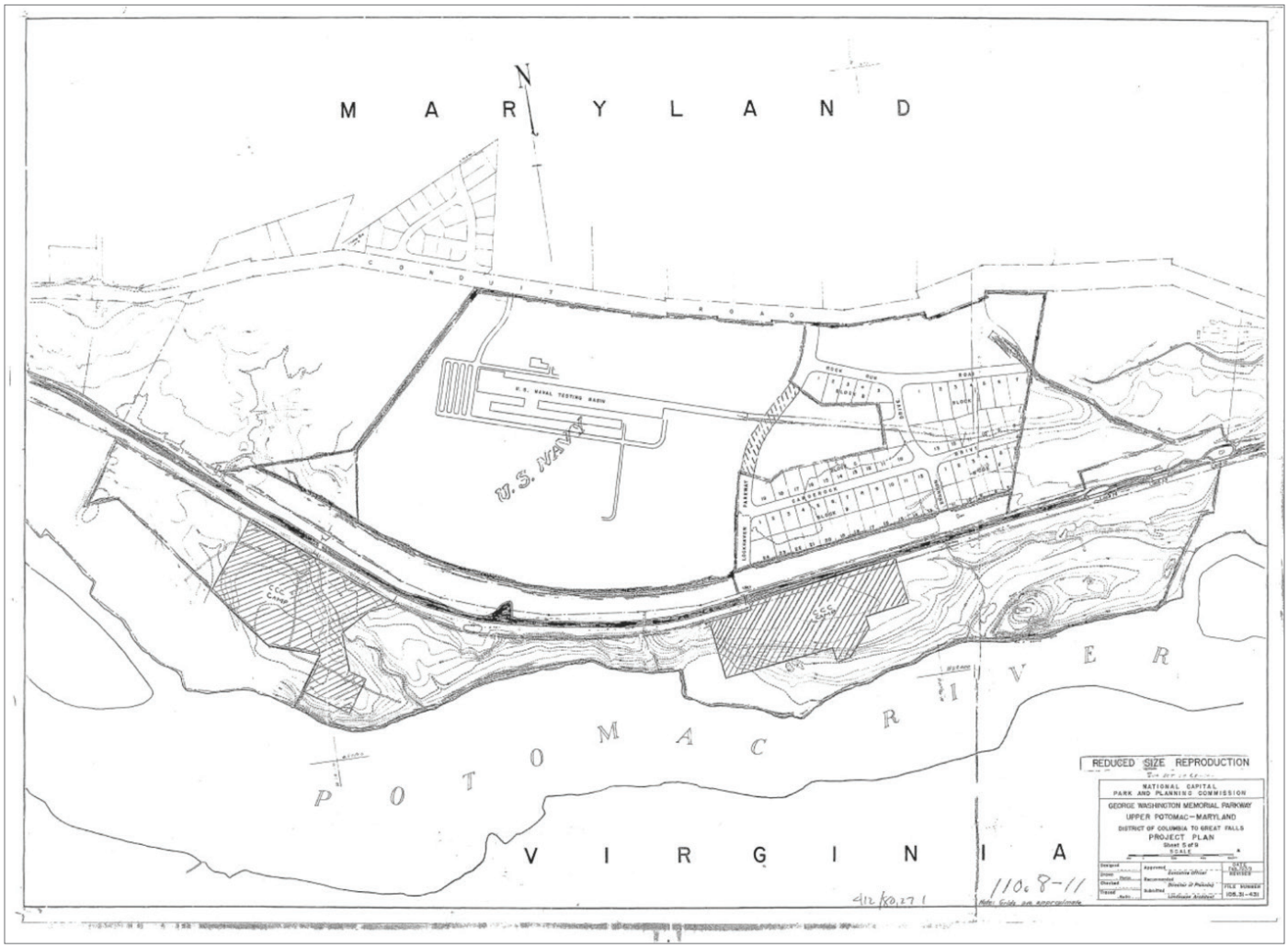


Figure 21: Plan depicting CCC camp development at Carderock in hatched areas, 1939 (Source: National Park Service ETIC 412/80271).

been in CCC service for nearly four years prior to arrival at the canal (Bedell, Cagney, and Raszick 2022: 57). While little is known about the men stationed at either camp, the men in Company No. 333 had previously been stationed at a CCC camp in Wilderness, VA (Fredericksburg-Spotsylvania National Military Park).

Both camps averaged approximately 150-180 CCC enrollees over the course of their tenures (Howard 2017: 64). The two CCC companies consisted of Black enrollees from the greater Washington, D.C., area; of the 324 CCC companies in the National Capital Region, which collectively employed approximately 52,000 men, only one other CCC camp employed Black enrollees. That company, Camp NA-1-DC/NP-11-DC, was stationed at the National Arboretum in Washington, D.C.

The CCC was the only New Deal agency to include a wide-reaching anti-discrimination measure, specifying that “no person shall be excluded on

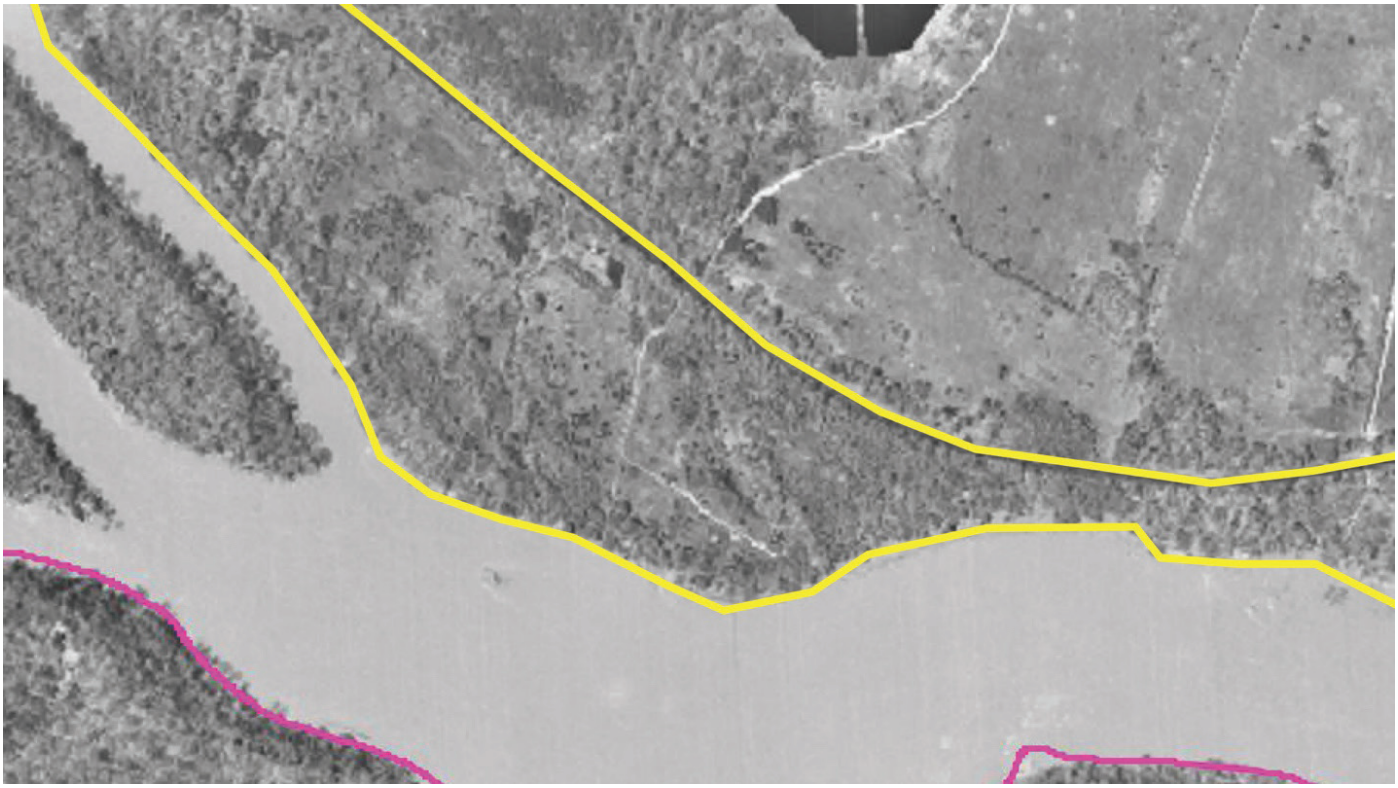
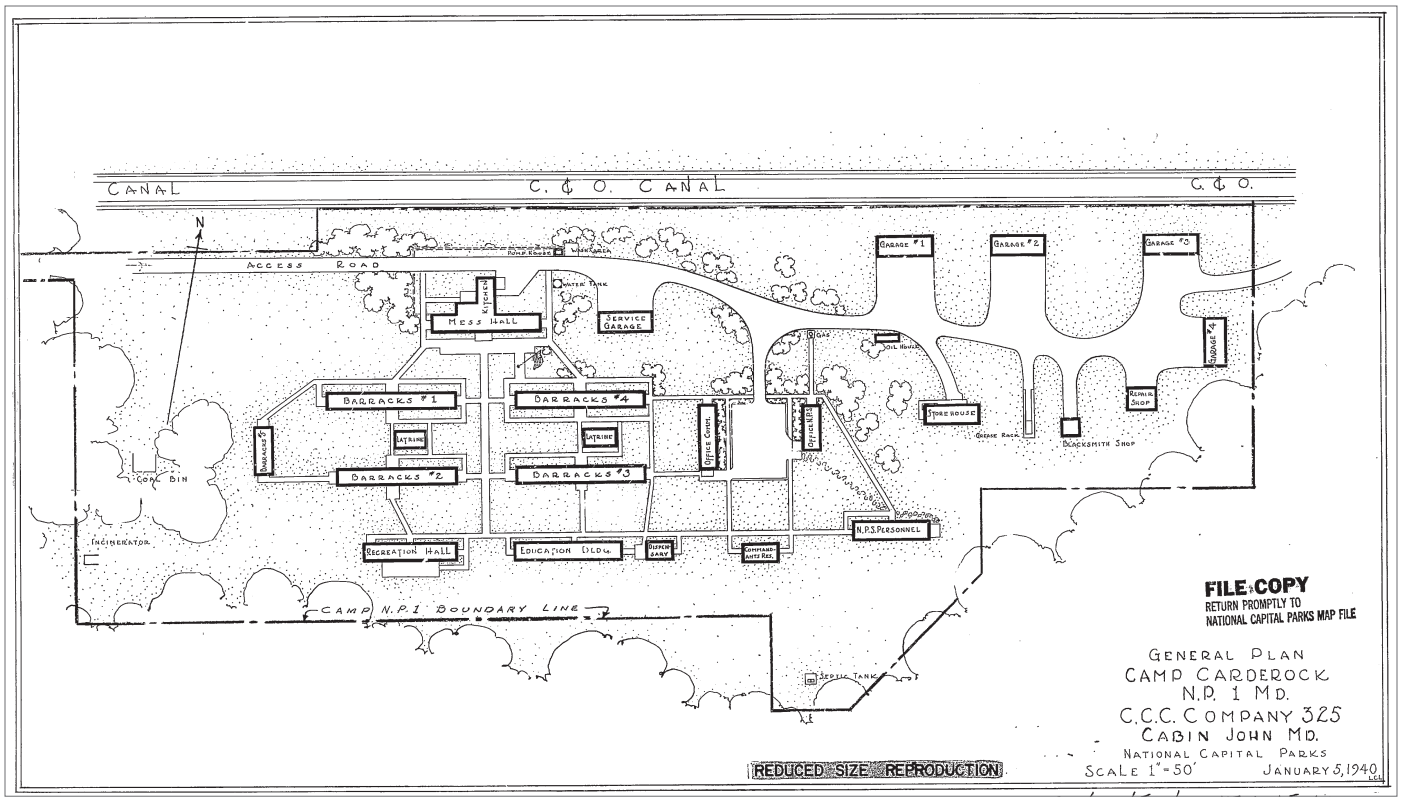
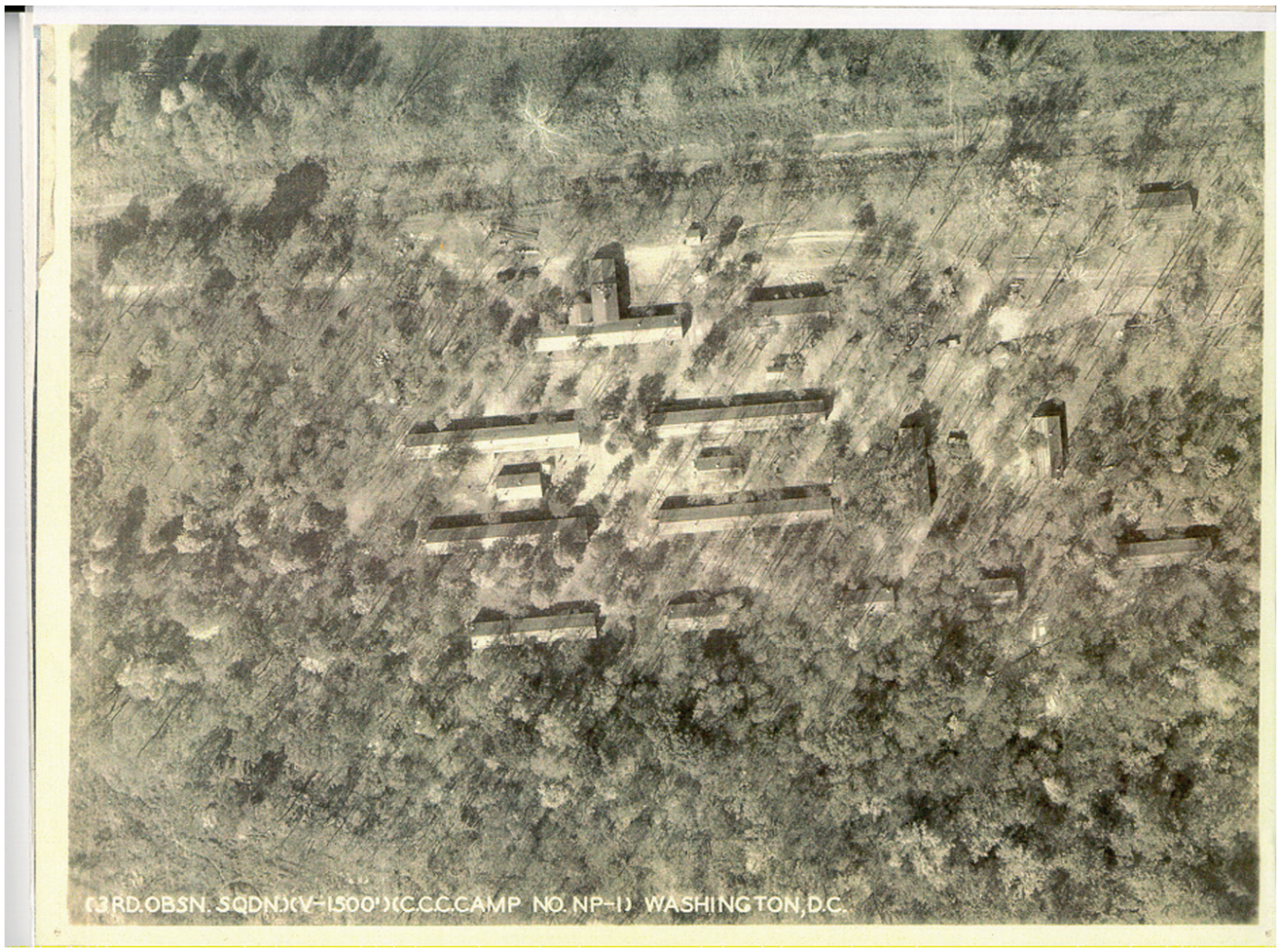


Figure 22: Detail of aerial image of Montgomery County and surroundings, 1937, with CLR study area boundary in yellow (Source: Fairfax County Historical Imagery Viewer).

account of race, color, or creed" (Howard 2017: 18). This language was added as an amendment by Oscar De Priest, an Illinois House Republican and the lone Black Congressman at the time, who sought a "color-blind" CCC in the Civilian Conservation Corps Reforestation Relief Act. Despite the policy of anti-discrimination, ECW director Fechner skirted around the amendment by implementing a racial quota that illegally applied segregation to the CCC nationwide, limiting Black recruits to no more than 10 percent of enrollees (HABS No. DC-858: 3). The CCC thus operated under policies of racial segregation throughout its tenure. By placing Black candidates in lower classifications of economic need, state CCC administrators hired white men first (Howard 2017: 19).

The racial quota resulted in disproportionately low CCC enrollment compared to the overall population of Black residents in Washington, D.C., at the time (Muth 2020). By 1935, another policy restricted Black enrollees to existing Black companies only; the CCC would not create any new Black companies (Bedell, Cagney, and Raszick 2022: 54). These racial segregation policies remained in place for the duration of the C&O Canal project.


CANAL
C. & O. CANAL
C. & O.
ACCESS ROAD
MESS HALL
SERVICE GARAGE
WATER TANK
KITCHEN
GARAGE #1
GARAGE #2
GARAGE #3
GARAGE #4
BARRACKS #1
BARRACKS #4
BARRACKS #2
BARRACKS #3
LATRINE
LATRINE
STOREHOUSE
REPAIR SHOP
BLACKSMITH SHOP
COAL BIN
INCINERATOR
RECREATION HALL
EDUCATION BLDG.
N.P.S. PERSONNEL
CAMP N.P.I BOUNDARY LINE
SEPTIC TANK
FILE COPY
RETURN PROMPTLY TO
NATIONAL CAPITAL PARKS MAP FILE
GENERAL PLAN
CAMP CARDEROCK
N.P. 1 MD.
C.C.C. COMPANY 325
CABIN JOHN MD.
NATIONAL CAPITAL PARKS
SCALE 1"=50'
JANUARY 5, 1940
REDUCED SIZE REPRODUCTION


3RD.OBSN. SQDN.(V-1500')(C.C.C.CAMP NO. NP-1) WASHINGTON, D.C.

W. Frank Persons, the main CCC administrator dealing with selection issues for Black enrollees, questioned several of the CCC's policies. While he was not successful in challenging the racial quota, Persons focused on the education program as an opportunity to make a difference in the lives of CCC enrollees. In May 1935, across the service, 14 Black educational advisors were appointed. The role of educational advisors was to organize classes for CCC enrollees, ranging from basic education to more technical skills. By 1940, all but a few companies had Black Educational Advisors (Sirna 2011: 73).

In spring of 1938, the federal government informed the public of plans for a CCC camp along the C&O Canal, to be built that summer (Howard 2017: 48). The Montgomery County Board opposed the establishment of a CCC camp of Black enrollees based on racial animus. F. Bernard Welsh, county attorney, stated that the establishment of the camp would proceed regardless of the board's opposition (*The Daily Mail* 1938).

Aerial photographs of Montgomery County taken between December 1937 and April 1938 show evidence of tree clearing within the project boundaries (Fairfax County Historical Aerial Viewer) (***see Figure 22***). Construction of the camps included the addition of temporary access roads, a temporary bridge, and several portable structures, such as wooden barracks relocated from other installations.

Figure 23: (opposite, top) Plan of Camp NP-1-MD, 1940 (Printed in Howard 2017: 54; Probable original source: Aerials, Box 1, RG35-GE - Records of the Civilian Conservation Corps, Activities, 1933-40, Still Picture Branch, National Archives).

Figure 24: (opposite, bottom) Aerial photograph of Camp NP-1-MD, c. 1940 (Source: Howard 2017: 53).

Camp NP-1-MD

Camp NP-1-MD, housing CCC Company No. 325, was established on September 19, 1938; the structures were complete by October 25. The camp was constructed in a largely wooded area, with buildings arranged in rows (***see Figure 23 and Figure 24***). The camp did require some land clearance, though the oldest and largest trees were retained (Howard 2017: 65). Grass was planted, landscaping added around buildings, and gravel roads were created. A memorandum from December 1938 described the camp as

> located on a rather heavily wooded bench above the river. Some clearing has been necessary, but the layout of the roads and buildings indicates that the larger trees have been saved and considerable thought was given to holding the clearing to the minimum. A temporary bridge has been thrown across the canal to gain access to the campsite (Davidson and Jacobs 2005: 64).

The camp contained typical CCC buildings, including:

- a cluster of four 20' x 140' barracks;
- 20' x 40' officers' quarters;
- a 20' x 100' recreation hall;
- a T-shaped mess hall/kitchen located at the northwesternmost part of the camp, close to the canal;
- 20' x 80' technical services quarters for NPS personnel;
- an educational building (enlarged from 20' x 60' to 20' x 120' in 1939);
- two latrines for enrollees located between the barracks;
- office structures for the army commander and the technical services supervisor;
- a pump house; three garages; and
- a blacksmith shop.

For utilities, a well pumped water into a tank tower, and the septic system had an outlet to the Potomac River. The camp was connected to the city electrical system (Bedell, Cagney, and Raszick 2022: 57).

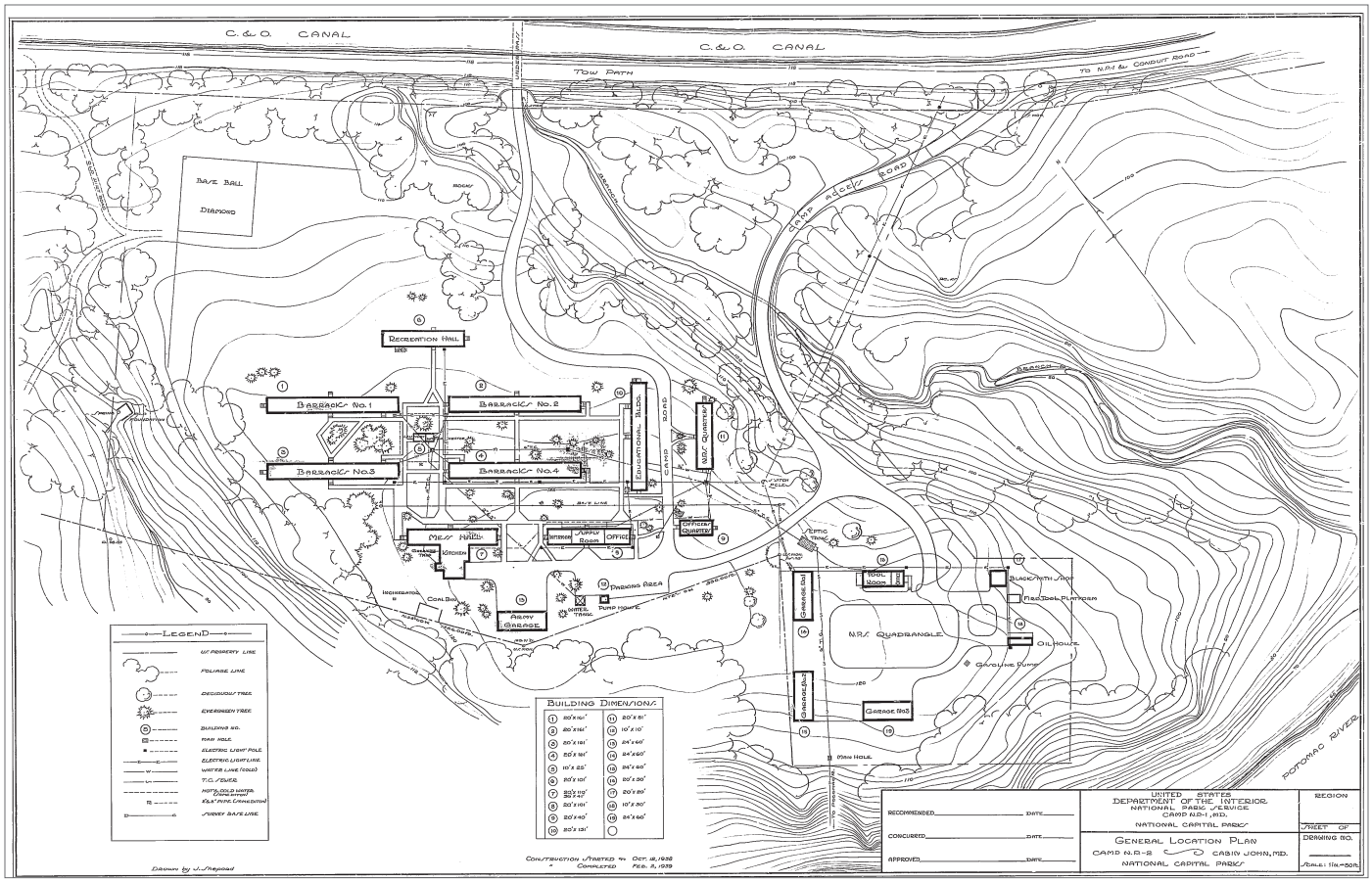


Figure 25: 1938 Plan of Camp NP-2-MD (Source: Howard 2017: 79).

Camp NP-2-MD

On June 14, 1938, ECW Director Fechner approved the establishment of Camp NP-2-MD, housing Company No. 33, with additional funds submitted to the Adjutant General's office in September. The camp was not officially established until October 5 due to high costs and delays. It was completed by February 2, 1939, and remained open until November 15, 1941. Like Camp NP-1-MD, Camp NP-2-MD was laid out in a partially wooded area, with buildings in organized rows (*see Figure 25 and Figure 26*).

Camp NP-2-MD included:

- four 20' x 160' parallel barracks;
- officer's quarters;
- an educational building;
- a mess hall;
- a recreation building;
- a technical service quarters;
- a 20' x 100' structure containing a hospital,

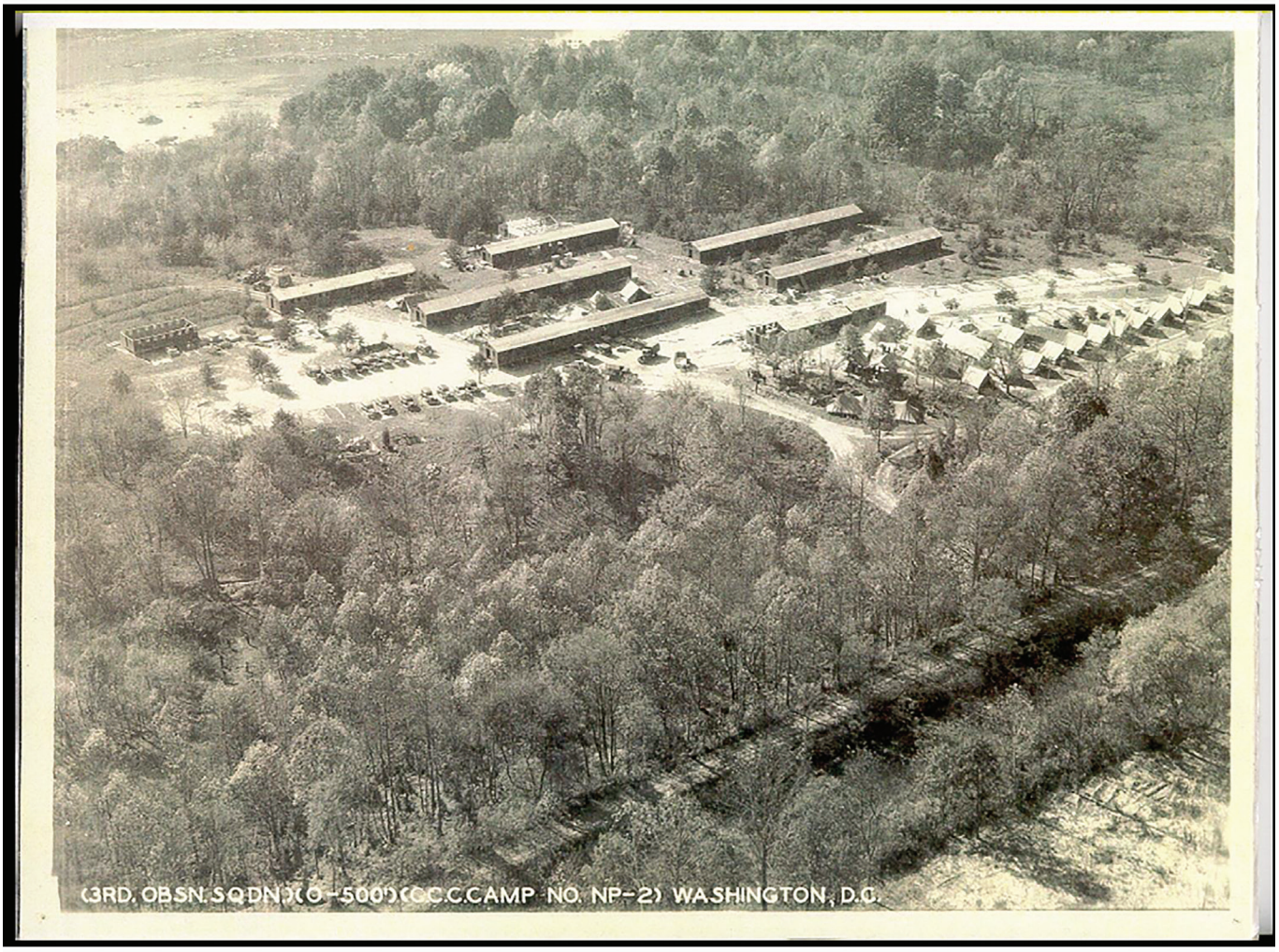


Figure 26: Camp NP-2-MD under construction, 1938 (Source: Sirna 2011: 87).

headquarters' office, and supply room;

- portable garages;
- a blacksmith shop; and
- a pump house.

Support structures, such as a garage and pump house, were all initially made of cloth, but were replaced with "rigid" wooden structures in 1939. Grass was planted, landscaping added around buildings, and gravel roads were created.

Initial access to Camp NP-2-MD was via a private road through an adjacent property, but that property owner closed the private road in early 1939, likely because the U.S. Army deemed an underpass to be unsafe. With the private road closed, enrollees cleared overgrowth, built a temporary bridge across the canal, and graded a portion of land set aside for the George Washington Memorial Parkway in order to construct a new access road to the camp. CCC laborers also brought in gravel from the adjacent

riverbed to stabilize vehicle roads and foot paths in and around the camps.

CCC enrollee James Carey wrote about the improvements made at Camp NP-2-MD since he arrived at the camp:

> In comparison with the growth of a child so has the beauty of the camp grown. Where we once had bare patches of clay we now have grassy lawns. The barracks once rough and unfinished now are painted with attractive colors. The roads around camp were overcrowded with tall grass and baby trees, but now there is no more wilderness around the camp roads. The roads have been leveled and gravel has been spread in the place of the weeds that once grew there. (James Carey, "Camp Improvement," *Tow-Path Journal* 2, June 30, 1939: 1)

CCC Improvements to the Canal

According to documentation prepared by the Historic American Buildings Survey, the CCC legacy along the C&O Canal "is best understood as baseline efforts in the canal landscape's transformation from commercial waterway to recreational amenity" (Davidson and Jacobs 2005: 91). CCC enrollees developed the canal between Georgetown and Seneca Lock (at mile 22.8) for recreational use. They cleared the canal prism and restored the towpath, locks, and lockhouses along the eastern portion of the canal. Additional CCC activities included stocking fish, mosquito control, and snow removal. Overall, the CCC:

> cleared 200 acres of vegetation from the canal bed. Then they excavated 50,700 cubic yards of earth from the canal prism, and helped restore 22 miles of towpath. They hand-placed 9,835 square yards of stone rip rap for bank protection, dry masonry walls for bypass flumes adjacent to locks, and along the towpath at Widewater. (Salvatore and Potter 2015: 8-204)

Both camps expended a sum of 158,700 man-hours from 1938 to 1942, the bulk of which went to the restoration of the canal and towpath, locks, and surviving lockhouses along the first 22 miles of the C&O Canal.

More skilled construction and conservation positions went to the technical personnel in the CCC or Works Progress Administration (WPA) workers. CCC technical personnel included project foremen, carpenters, engineers, mechanics, clerks, plumbers, heavy equipment operators, and landscape architects. The technical personnel helped guide the other CCC enrollees in projects. WPA workers were hired as carpenters, masons, mason's tenders, granite cutters, stonecutters, blacksmiths, truck drivers, auto mechanics, and general laborers. CCC enrollees worked with WPA workers in the building rehabilitation and masonry work along the canal.

The following year, in 1939, the CCC constructed a wasteweir and concrete bridge between Widewater (approximately 2.5 miles west of Carderock) and Lock No. 15, while Lock Nos. 14 through 16 were rehabilitated between 1939 and 1942. Located just below Great Falls, Widewater referred to an ancient river channel area incorporated into the canal design to function as a holding pool.

A progress report prepared in August 1939 recorded that the canal had been re-watered from Georgetown to Lock No. 5 (around Mile Marker 5.0), and the towpath and canal channel had been repaired in a small area directly north of Lock No. 20 at Great Falls (near mile 14.3).

During October 1939, the CCC work focused on the "repair of minor breaks in the towpath, clearing of underbrush, and the removal of deposits in the canal" in the Seven Locks area between Locks No. 8 and No. 14. Much of the remaining work was completed during fiscal year 1940 (Davidson and Jacobs 2005: 66).

Additionally, the CCC workers focused on "landscaping, repair and restoration of historic buildings, lockhouses, lock shanties, lock bridges, etc.," in Great Falls, Carderock, and Georgetown.

By February 1940, all 23 locks from Georgetown to the inlet at Violettes Lock (Lock No. 23 at mile 22.12) were operational. On August 9, water began flowing from Seneca to Lock No. 5 (Salvatore and Potter 2015: 8-203).

During the winter of 1939 to 1940, the Great Falls area (located near Lock No. 19) was the focus of development efforts. The CCC assisted in the rehabilitation of the Great Falls Tavern, which was deemed a priority based on its proximity to a major recreational area and due to its landmark potential (*see Figure 27*). Just east of the tavern, the CCC built three modest buildings in the early 1940s:

- a 1.5 story brick pump house (at mile 14.29) housing machinery that pumps the water supply for this area;
- a boiler house (mile 14.27); and
- a public restroom (mile 14.28, near the historic tavern), a wood-framed building measuring about 15' x 22', and the associated septic and plumbing.

Slightly further afield, the CCC built a frame engineers garage (mile 14.35) with "six stalls, a repair shop, bulk storage, and an office for the U.S. Army Corps of Engineers. This construction also included a 440-square-yard service court and a 16' access road" (Salvatore and Potter 8-203). The garage was repurposed to house mules when the NPS rewatered the canal and resumed recreational canal boat rides in 1967. CCC enrollees also assisted in the rehabilitation of four lockhouses at Lock Nos. 5, 7, 10, and an unknown fourth location; the extent of the rehabilitation of the Lock No. 10 is unknown (Howard 2017: 112; "Work Accomplished by CCC – NCP," Jul. 1, 1940; NPS Central Classified File, 1933-1949, Box 2844, Entry 10, RG 79, National Archives and Records Administration - College Park).

Further, enrollees constructed a well, approximately 800 linear feet of drains, approximately 250 linear feet of pipelines, and about 12,500 square yards of parking lot in the Great Falls area. CCC enrollees also constructed picnic areas at Carderock and at Great Falls (Robinson and Associates, Inc. 2021: E-32). These were all important pieces of the C&O



Figure 27: Great Falls Tavern photographed by John Bostrup, HABS Photographer, August 6, 1936. New Deal workers removed the front porch (Source: Library of Congress, HABS Control number md0739).



Figure 28: CCC enrollees repairing a break in the C&O Canal towpath in the Widewater area, September 10, 1940 (Source: People's Archive, MLK Library. File No. 6.2- 8-0).



Figure 29: CCC enrollees working on a bypass flume at Lock No. 15, c. 1940 (Source: National Park Service, C&O Canal NHP Archives).



Figure 30: CCC enrollees working on the Widewater project area, c. 1940 (Source: NARA College Park, MD, Still Photos, Record Group 35-G, Box 41).



Figure 31: CCC enrollees repairing a segment of the canal between Georgetown and Seneca, c. 1940 (Source: National Park Service C&O Canal NHP Archives).



Figure 32: CCC enrollees working on a lock project, c. 1940 (Source: NARA College Park, MD, Still Photos, Record Group 35-G, Box 41).



Figure 33: CCC enrollees repairing the canal prism, c. 1940 (Source: NARA College Park, MD, Still Photos, Record Group 35-G, Box 41).



Figure 34: (left) David W. Taylor Model Basin, Carderock, MD. General view of the project, showing the shop, office, and laboratory building in the foreground, c. 1938 (Source: Library of Congress, Control Number 2016874345).

Figure 35: (opposite) Portion of original 1941 pivot bridge construction drawing showing details of bridge rail, gears, and bearing plates (Source: National Park Service ETIC 412/80276).

Canal's transition into a recreational amenity (*see Figures 28, 29, 30, 31, 32, and 33*).

Besides the CCC, two other New Deal programs were involved in C&O Canal projects at this time: the Historic American Buildings Survey (HABS) and the Public Works Administration (PWA). Architects in the HABS program researched and documented structures and buildings along the canal, including the Great Falls Tavern. Meanwhile, for more complex projects, CCC enrollees often worked alongside private contractors funded through the PWA. The NPS Branch of Engineering issued specifications for PWA Federal Project (FP) No. 2,000 in July 1939. The project included "the furnishing and placing of earth fills and the construction of concrete retaining walls, spillways, culvert, stone walls, trestle and other work for the restoration of the C&O Canal in the vicinity of Widewater between Cropley, MD and Great Falls, MD" (quoted in Davidson and Jacobs 2005: 67).

On September 8, 1939, the federal government awarded the contract for this project to Corson & Gruman, a Washington, D.C.-based contractor. The following spring, the contractors led the efforts at Locks 15 and 16 (at mile 13.4 and mile 13.6, respectively), though it is likely that CCC enrollees provided support for the project.

In August of 1939, NPS officials discussed the possibility of expanding the CCC project to areas further west of Seneca along the canal. Some individuals within the Naturalist Division of the NPS believed the entirety of the C&O Canal from Georgetown to Cumberland should be restored in order to achieve the "full utilization of the inspirational and educational values." There is no indication that this possibility was seriously considered at this time (Howard 2017: 63).

A new U.S. Navy modeling facility—named the David Taylor Model Basin—was built in 1939 on the north side of the canal, south of Conduit Road; this facility still exists north of the project area (*see Figure 34*). The facility opened in 1940 and was extensively used during World War II (Allison 1985: 8-3).

In the early 1940s, a pivot bridge was constructed at mile 9.92 to connect the roads on the north side of the C&O Canal with the CCC camps on the south of the canal (National Park Service 2023: 63) (*see*

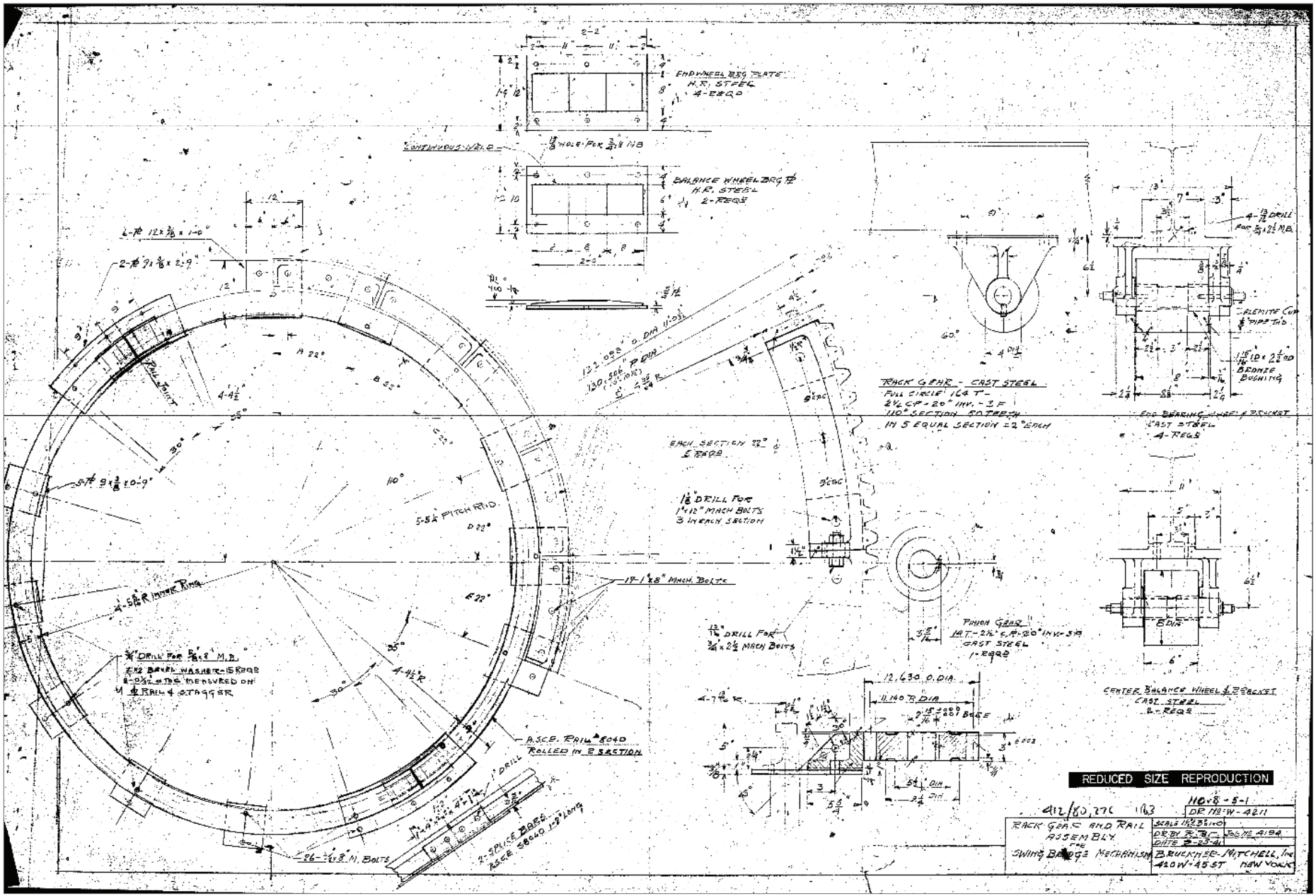

END WHEEL BRG PLATE M.S. STEEL 4-REQD
CONTINUOUS WELD
BALANCE WHEEL BRG PL M.S. STEEL 2-REQD
RACK GEAR - CAST STEEL
FULL CIRCLE 164 T-
2½ C.P. - 20° INV. - 3 F
110° SECTION HARDEN IN 5 EQUAL SECTION = 2° EACH
END BEARING WHEEL & BRACKET CAST STEEL 4-REQD
EACH SECTION 22° 5 REQD
1⅛" DRILL FOR 1"ø B" MACH BOLTS 3 IN EACH SECTION
19-1⅛x8" MACH. BOLTS
PINION GEAR 14 T.- 2½" C.P.-20° INV.-3 F CAST STEEL 1-REQD
CENTER BALANCE WHEEL & BRACKET CAST STEEL 2-REQD
A.S.C.E. RAIL ROAD ROLLED IN 2 SECTION
86-1⅛x8" N. BOLTS
REDUCED SIZE REPRODUCTION
RACK GEAR AND RAIL ASSEMBLY FOR SWING BRIDGE MECHANISM
B. BUCKNER-MITCHELL, INC 420 W. 45 ST NEW YORK



Figure 36: CCC enrollees in Camp NP-1-MD, engaged in woodworking, c. 1942. (Source: NARA College Park, MD, Still Photos, Record Group 35-G, Box 41).



Figure 37: CCC enrollees from Camp NP-1-MD at an auto mechanics class training class near Rockville, February 8, 1942. Photo by W.J. Mead (Source: NARA College Park, MD, Still Photos, Record Group 35-G, Box 41).



Figure 38: The Canal Clipper entering Lock 5, summer 1941. (Source: Canal Clipper entering Lock 5, summer 1941. National Archives at College Park).

Figure 35). Design documents date to 1941; it is unknown who completed the labor for the project. The pivot bridge was constructed with a center pier that supported the bridge gears and rack assembly, which controlled the operation of the bridge in a counterclockwise direction and allowed boats navigating the canal to pass. The bridge superstructure is no longer extant, but the central pier remains in place.

Life at Camps NP-1-MD and NP-2-MD

When the Corpsmen were not laboring along the canal, educational programming was a central feature of their life at camp (*see Figures 36, 37, and 38*). The camp library at Camp NP-1-MD held over 700 books, and an extension had to be added to the building in 1939 (Sirna 2011: 74). Camp NP-1-MD offered classes in English, penmanship, athletics, music, carpentry, First Aid, handcrafts, civics, journalism, history, science, sign painting, painting, leaders' training, typewriting, building and estimating, blasting and dynamite, masonry and concrete, auto mechanics, surveying, landscaping, camp administration, health education, safety, current events, and camp discipline (Sirna 2011: 74-75).

Just up the canal, Educational Advisor Charles Rushton Long oversaw the educational programming at Camp NP-2-MD. Long was the only Black administrator in the camp, and not only oversaw the coursework but also acted as a social leader in the camp. He organized sporting events and connected the young men with members of Washington, D.C.'s Black communities, offering mentorship and helping individuals pursue post-CCC employment.

Camp NP-2-MD also had a library that boasted over 700 books and magazines. Classes offered at Camp NP-2-MD included reading and writing, current events, history, hygiene, penmanship, practical English, practical mathematics, world affairs, typing, commercial art, carpentry, journalism, trail canal excavating, canal drainage, truck driving, cooking, dramatics, music, model making, social courtesy, First Aid, safety, health, teacher training, foreman training, and leader training. For academic classes, Long either taught these himself or hired teachers, usually women from the area who had recently graduated from college. Average daily attendance for educational programs was 34 out of 172 enrollees.

Besides educational courses, CCC enrollees could participate in a variety of recreational activities. During the first spring at Camp NP-2-MD, Long convinced other CCC administrators of the need for a baseball diamond. Enrollees thus cleared out a field and constructed a baseball diamond on the northwest corner of the camp, approximately 50′ south of the towpath. Barracks residents formed teams to play against each other (Sirna 2011: 77).

Men from the Carderock camps traveled to play basketball against other Black CCC camp teams. An inspection report for Camp NP-1-MD recorded that enrollees also utilized the Twelfth Street YMCA, a segregated facility in the Shaw neighborhood of Washington, D.C. Beyond these opportunities to



Figure 39: Canal Clipper I with mule and CCC workers on towpath, summer 1941 (Source: National Park Service C&O Canal NHP Archives).



Figure 40: Canal barge trip with CCC enrollee leading a mule on the towpath, summer of 1941 (Source: People's Archive, MLK Library, National Capital Parks Photograph Collection, 3.1-1C).

play sports, enrollees also participated in physical combat sports, musical performances, and dramatic arts.

RECREATIONAL BOAT TOURS

Canal restoration work was barely complete when the NPS launched its first public boat rides in July 1941; visitors to what was then called the Chesapeake and Ohio Canal Recreational Waterway could once again experience the canal by tourist boat. The *Canal Clipper* was the first government-sponsored public boat on the canal; the modified work scow measured approximately 30′ long and had a carrying capacity of 66 people (McCarthy 2014: 8). It was propelled by one or two mules walking along the canal towpath; CCC enrollees helped to lead the boat mules, man the bow, and operate the canal locks (Howard 2017: 95) (*see Figures 39, 40, 41, and 42*).

The *Canal Clipper* was operated by the Welfare and Recreational Association, an early concessionaire, as one of the first "living history" programs in the NPS system (Mackintosh 1991: 41, 181). During July and early August, trips on the *Canal Clipper* ran once per week on Sundays and were four hours in length; beginning at 2pm, they traveled



Figure 41: CCC workers open a gate at Lock 5 while another worker clears debris from the pocket to allow the NPS excursion boat Canal Clipper to pass, summer 1941 (Source: Howard 2017: 100).

between Chain Bridge (mile 4.17) and Carderock (approximately mile 10.4). During late August and early September, boat tours traveled between Carderock (approximately mile 10.4) and Great Falls (approximately mile 14.3), and during late September and October, boat tours ran between Great Falls (approximately mile 14.3) and Rushville (mile 22.12, at Lock 23 and Inlet Lock 2 adjacent to Dam 2 and the Seneca Falls) (McCarthy 2014: 8).

From 1941 through 2011, excursion boats operated continuously on the C&O Canal for tourism and recreation.

In October 1941, members of the Advisory Board on National Parks, Historic Sites, Buildings, and Monuments met in Washington, D.C. to discuss naming the C&O Canal as a National Historic Landmark. Although the board favorably considered the designation of the C&O Canal, there was no forward movement following President Roosevelt's moratorium on the designation of National Historic Landmarks for the duration of the World War II.

World War II on the Canal (1942 – 1945)

During World War II, the C&O Canal was impacted by the loss of CCC labor (as enrollees were drafted into the war effort) and the resulting lack of maintenance. By the time the United States got directly involved in World War II at the end of 1941, nearly all of the $500,000 appropriated for the restoration of the canal had been exhausted.

Camp NP-2-MD closed in November of 1941, prior to the attack on Pearl Harbor. In April of 1942, CCC Camp NP-1-MD was converted into a defense camp, known as NP(D)3. The camp shifted from conservation work to the development of military infrastructure and the training of enrollees in skills that would aid mobilization, "such as auto mechanics, carpentry, electricity, sheet metal work, welding, and aviation mechanics" (Sirna 2011: 81). The defense camp only operated for a short period, as Congress formally ended the CCC program in July of 1942. The buildings from Camp NP-2-MD were thereafter repurposed and relocated for wartime mobilization efforts; four barracks were transferred to Bolling Field in Washington, D.C., and all buildings were ultimately moved to other sites (Bedell, Cagney, and Raszick 2022: 29). In 1942,

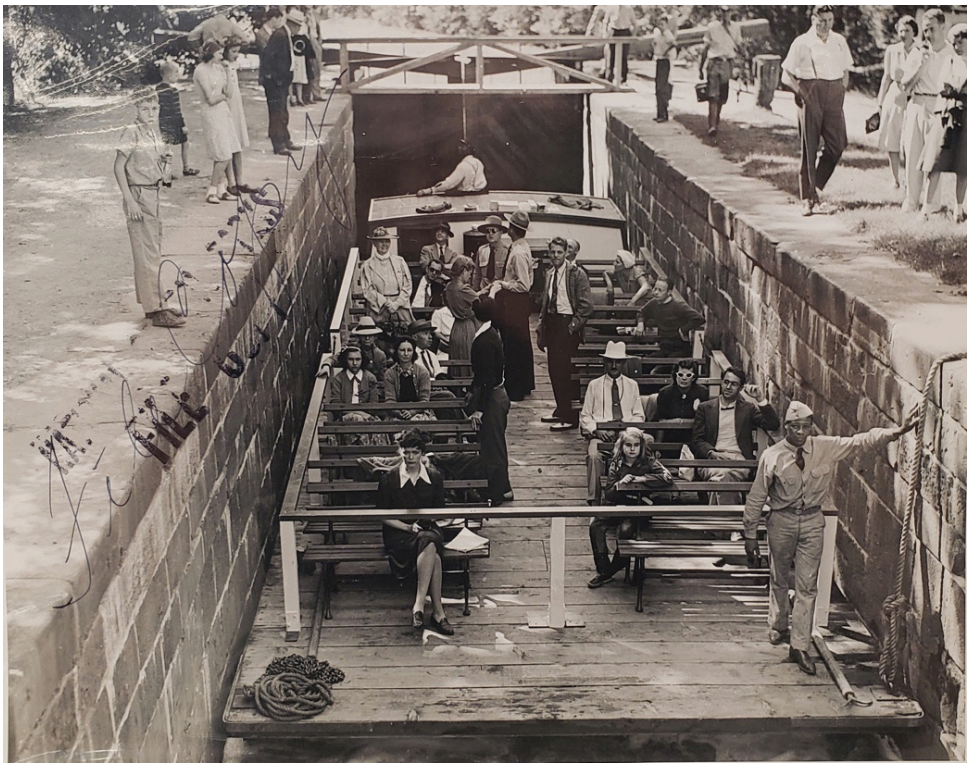


Figure 42: Canal barge trip with CCC enrollee at front right, summer of 1941 (Source: People's Archive, MLK Library, National Capital Parks Photograph Collection, 3.1-1C).

Conduit Road was renamed MacArthur Boulevard in honor of General Douglas MacArthur.

Meanwhile, U.S. Army troops occupied the nearby Great Falls Tavern (mile 14.3) during the war. From this outpost, the troops guarded the intake works of the Washington Aqueduct, which was the water supply for Washington, D.C. (Mackintosh 1991: 46-48).

In October of 1942, floods destroyed much of the CCC's work from Seneca to Georgetown (Elder and Weldon 2018: 34). Public boat rides ceased in 1942, after the flood, although they resumed by October 1943, with civilians manning the *Canal Clipper* (McCarthy 2014: 9). Following the flooding, the U.S. Army fenced off a portion of the canal to the public between Widewater (mile 12.9) and Swains Lock (Lock No. 21, mile 16.7). As a result of flood damage, including a break at Lock No. 7 and other breaks below Lock No. 5, there was no water in the canal further down river, including in Georgetown, leaving the mills without any water access for power. Additionally, the towpath embankment at the lower end of Widewater was destroyed in the flood. The repair cost from the flooding between Georgetown and Great Falls was estimated at $250,000.

The NPS once again restored the lower 22 miles of the canal to the conditions established and maintained by the CCC, including resurfacing the towpath from Georgetown to Seneca (Elder and Weldon 2018: 34, 99). Contractors Corson & Gruman, who had previously worked on the canal, repaired a damaged feeder dam at Little Falls (mile 5.7) and completed other maintenance work on the canal to restore water by that fall. By early October 1943, the canal was restored (Mackintosh 1991: 46-48).

In the repair of the canal, the NPS attempted to make it more flood-resistant, using a clay and cement mixture for parts of the towpath. The towpath embankment was also rip-rapped to prevent erosion. Additionally, the NPS developed a flood plan that would go into effect when a gauge of the Potomac River located at Wisconsin Avenue NW in Georgetown reached a height of 12.6 feet or higher (Elder and Weldon 2018: 98-99). Under those circumstances, the NPS would install planks in the stop lock above Widewater, about 2.5 miles west of Carderock. Residents living along the canal would also be informed about the rising water (Shaffer 1997: 77).

During World War II, visitors could access Carderock via the trolley line running parallel to MacArthur Boulevard from Georgetown to Cabin John, and then a four-mile walk along the C&O Canal to the cliffs for recreational activities, including rock climbing (Hanel 1990: 5). When gasoline was rationed during the war, Great Falls saw fewer visitors, while Carderock saw an increase in visitation, as it was closer to the population centers.

Some areas further upriver from Carderock were restricted to rock climbers during the war and reopened to the public a few days after gas rationing days ended in August of 1945. Carderock remained popular in these years, even after other areas became accessible again. During the war years, a group from the Army Quartermaster Corps joined local climbers in their efforts to develop climbing and mountaineering equipment for the U.S. Army. At Carderock, "the Bureau of Standards made what was probably one of the first tests of the holding power of pitons" and new equipment was tested (Hanel 1990: 7). By 1946, the Capitol Transit Bus System ran closer to Carderock (Hanel 1990: 5).

In 1945, after the end of World War II, the NPS resurfaced the towpath from Georgetown to Seneca; workers presumably used a clay and cement mixture, though also likely dirt and stone. The NPS also repaired breaches at Lock Nos. 7 and 8 and constructed a small wasteweir at Lock No. 7 (Elder and Weldon 2018: 99).

A c. 1944 architectural drawing titled Use Study Camp Carderock shows that Camp NP-1-MD was under consideration for conversion into a children's camp (*see Figure 43*). The core buildings from the c. 1944 study line up with locations of the CCC camp buildings and structures, suggesting that the buildings and structures were still present at this time. There are no known aerial photographs from this time to confirm whether the CCC buildings and structures were extant. The design included four dormitories, two for boys and two for girls, separated by latrines. It also featured an open lawn, softball fields, a basketball court, archery, swings, a

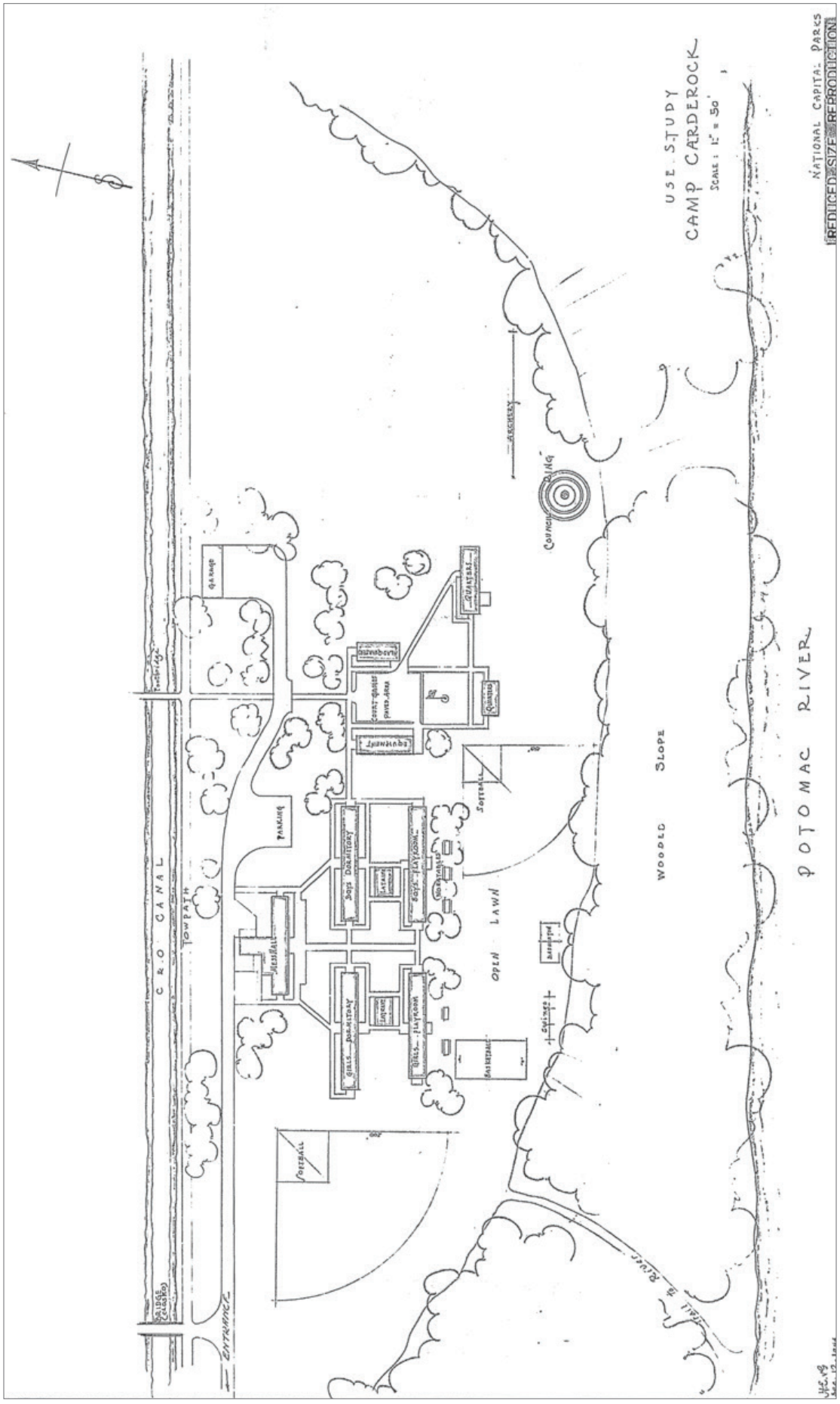


Figure 43: Use Study Camp Carderock, c. 1944 (Source: Bedell, Cagney, and Raszick 2022: 34).

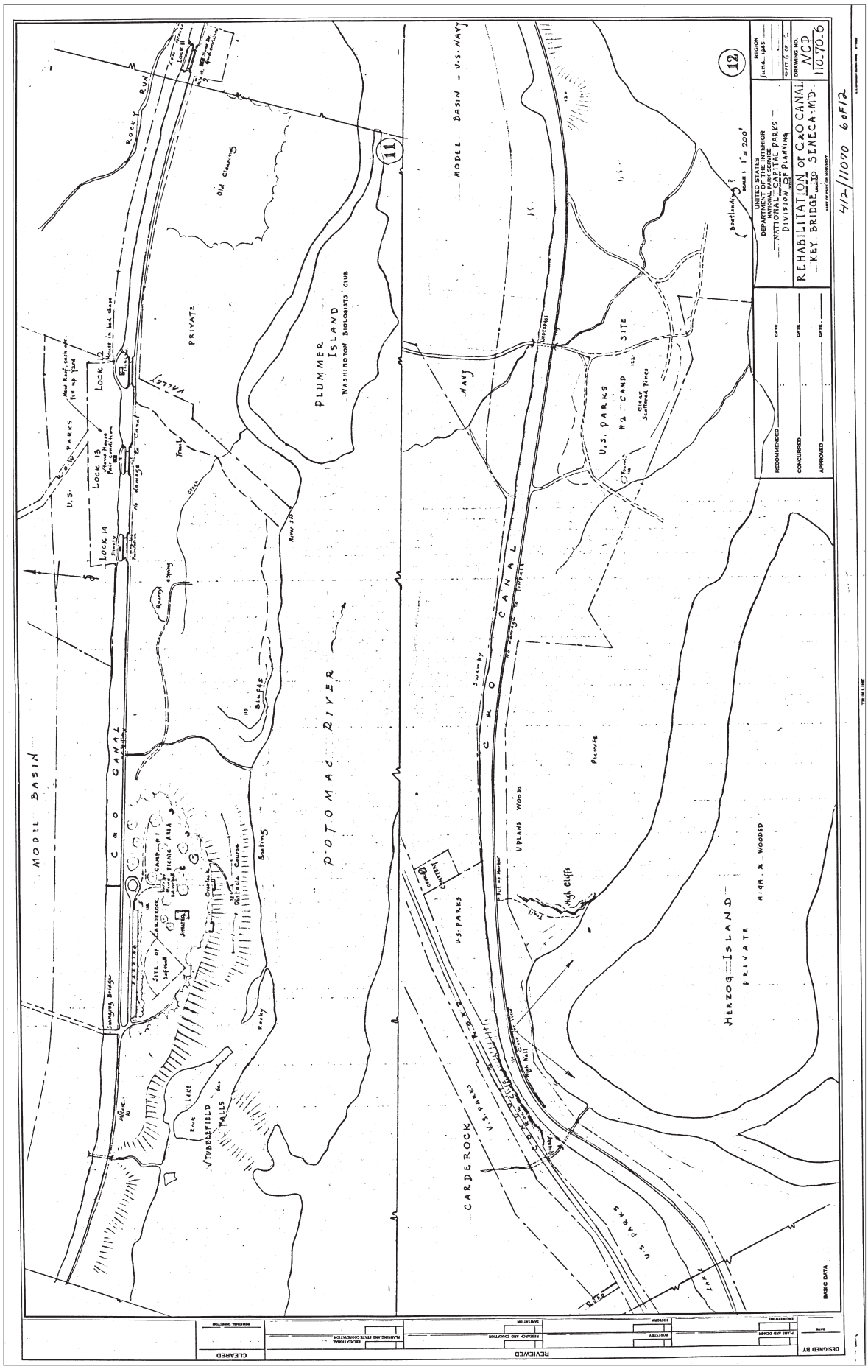
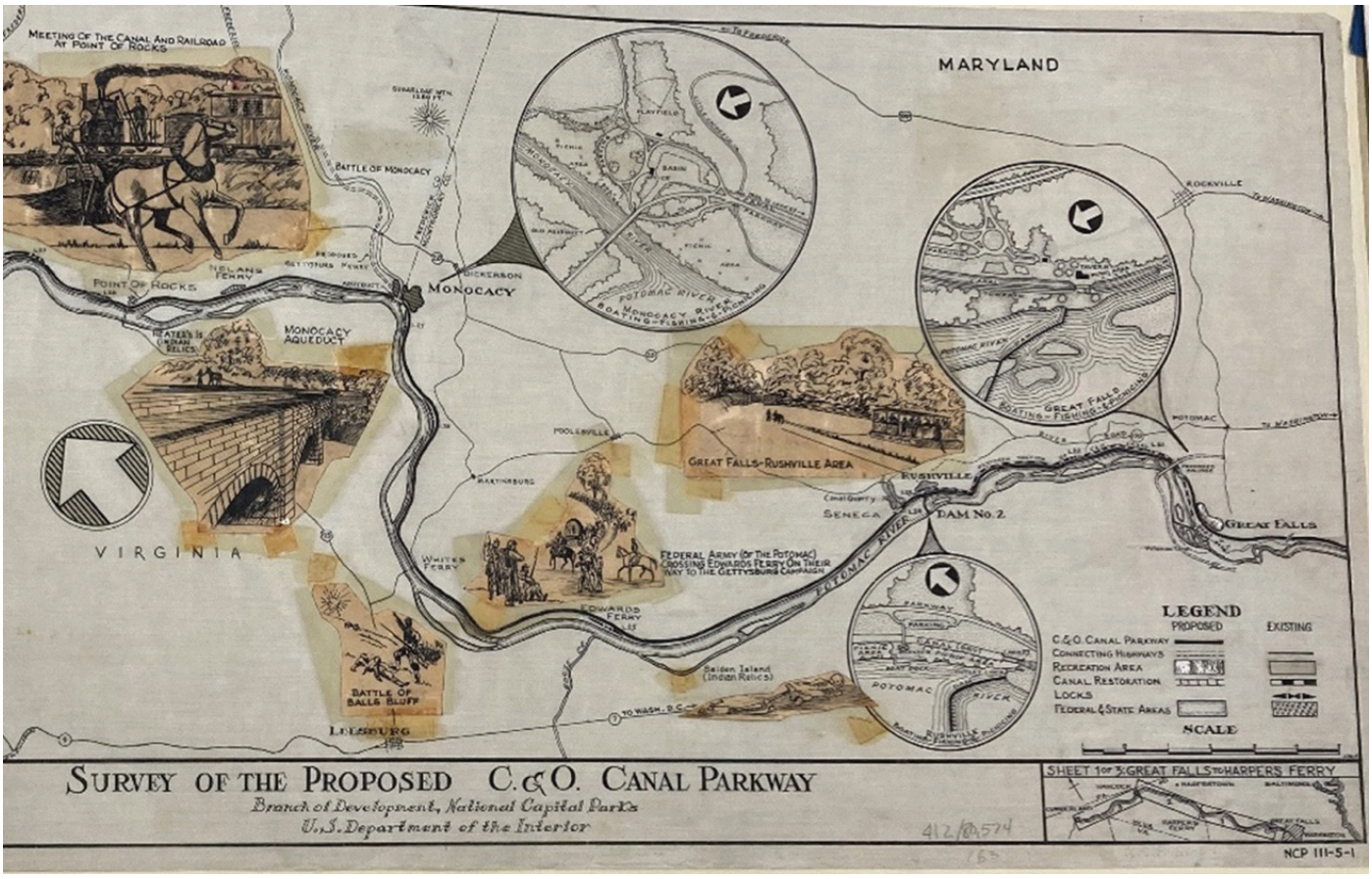

MODEL BASIN
C & O CANAL
POTOMAC RIVER
PLUMMER ISLAND
WASHINGTON BIOLOGISTS' CLUB
PRIVATE
Rocky Run
Lock 13
Lock 14
Lock 12
U.S. PARKS
Old Clearing
Quarry Spring
Bluffs
Rocky
Landing Bridge
Site of Carderock Inn
Camp-Picnic Area
Obstacle Course
Rubblefield
Rock Lake
Falls
CARDEROCK
U.S. PARKS
Towpath
Trail
Swamp
Pivots
Upland Woods
High Cliffs
Rock Wall
HERZOG ISLAND
PRIVATE
High & Wooded
MODEL BASIN - U.S. NAVY
U.S. PARKS
Site #2 Camp
Clear Selected Pines
Boathouse
SCALE 1" = 200'
11
12
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
NATIONAL CAPITAL PARKS
DIVISION OF PLANNING
REHABILITATION of C&O CANAL
KEY BRIDGE to SENECA-MD
DRAWING NO. NCP 110-70-6
SHEET 5 OF
REGION
June 1965
RECOMMENDED
CONCURRED
APPROVED
DATE
4/2/11070 6 of 12
CLEARED
REVIEWED
DESIGNED BY
BASIC DATA

Figure 44: (opposite) Rehabilitation of C&O Canal, Key Bridge to Seneca Falls, Carderock, 1945 (Source: National Park Service ETIC 412/11070).

council ring, a trail to the river and other elements within the partially wooded setting. These plans were never realized. A 1949 aerial photograph of the area shows that the buildings and structures in both CCC camps had been razed.

A 1945 plan titled *Rehabilitation of C&O Canal, Key Bridge to Seneca Falls* depicts postwar development plans for the C&O Canal. The page depicting Carderock shows a planned softball field, obstacle course, shelter, overlooks, parking lot, and picnic area in the location of former Camp NP-1-MD (***see Figure 44***). These plans were never developed. To the east of the proposed development at the former Camp NP-1-MD are an existing spring, creek, quarry, and trail leading to the quarry. A stone house is depicted on the west side of Rock Run near Mile Marker 9.0. The former Camp NP-2-MD site does not depict any planned development, but does note several existing road traces through the area. This area is described on the map with the words “Clear” and “Scattered Pines.” A foundation is also depicted.

Figure 45: (below) Survey of the Proposed C&O Canal Parkway, c. 1950 (Source: NARA College Park, MD, Cartographic Room, Record Group 79, Folder 412/80,205).



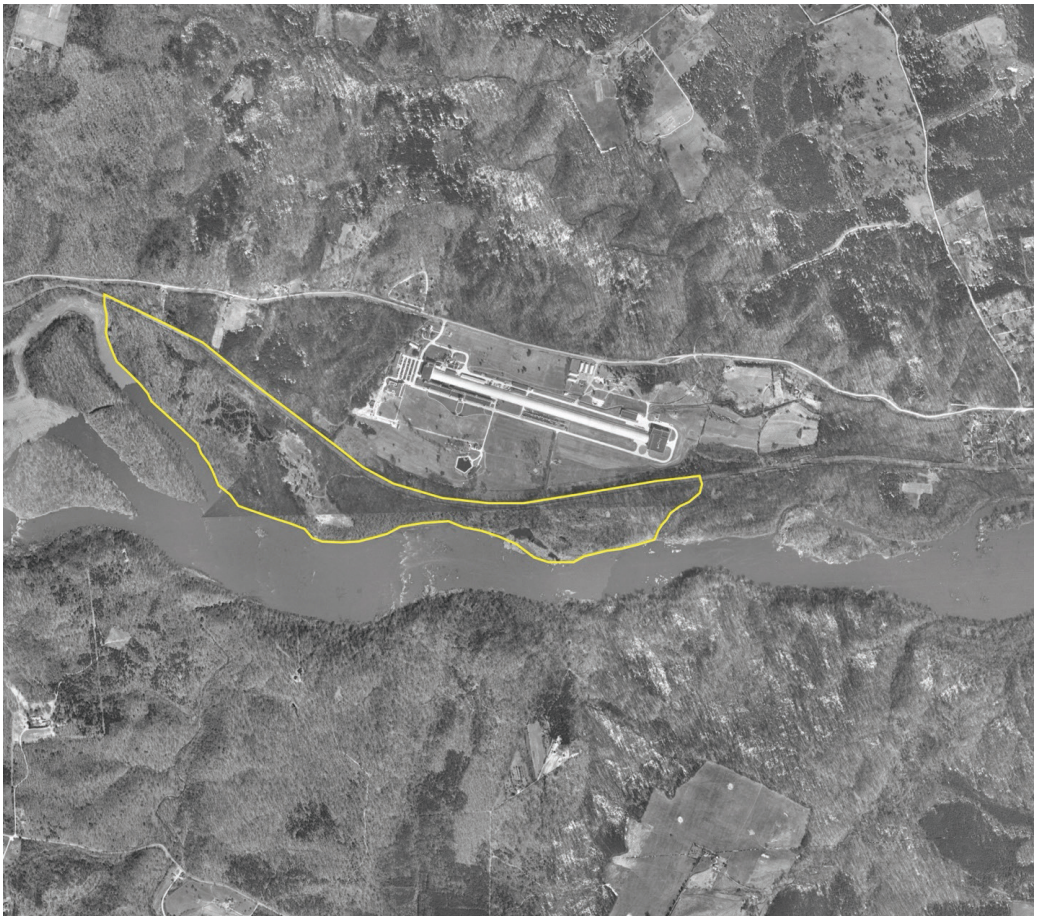
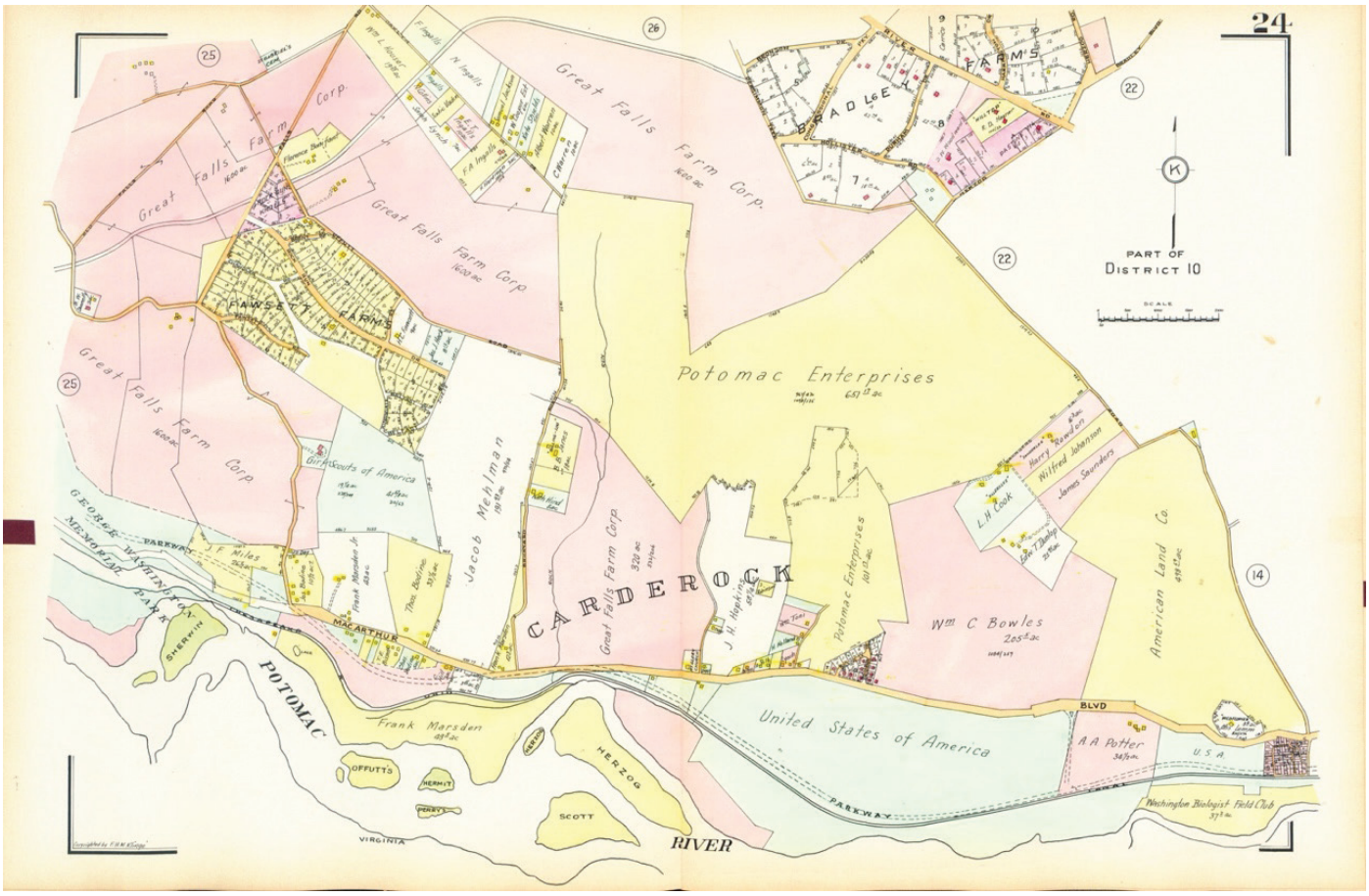


Figure 46: (left) 1949 aerial of Carderock and surroundings with CLR boundary in yellow (Source: Historicaerials.com).

Figure 47: (below) Klinge Real Estate Atlas of Montgomery County, 1949 (Source: Montgomery History).



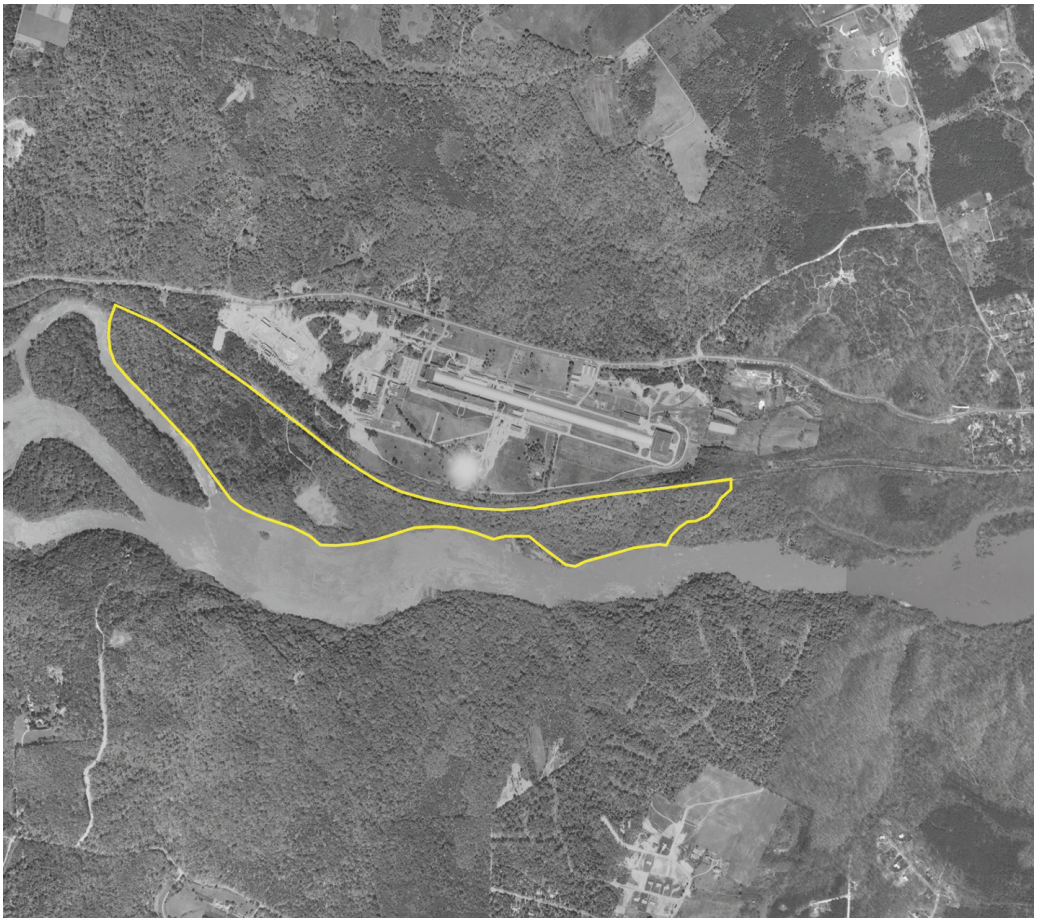


Figure 48: 1951 aerial of Carderock and surroundings with CLR boundary in yellow (Source: Historical Images in Montgomery County, MD).

Mid-Century Development of the Canal (1946 – 1957)

While the lower 22 miles of the canal were rehabilitated after the massive flood in 1942, the future of the remaining 162 miles of canal had yet to be addressed. At this time, the western portion of the canal was considered unsuitable for public recreation due to a narrow right-of-way around the canal and encroachment from private land. The western end of the canal did not have any surrounding protected lands, and in some instances, farmers had run fences across the dry canal bed for their livestock to access the river (Mackintosh 1991: 49). These conditions revived some interest in the Potomac River Drive plan (Mackintosh 1991: 49-52).

On June 10, 1948, Maryland Congressman J. Glenn Beall introduced legislation (Public Law 618), proposing the completion of a feasibility study to determine the possibility of constructing a scenic parkway along the canal route from Great Falls to Cumberland (Salvatore and Potter 2015: 8-205). Congress allocated $40,000 for a feasibility study, to be completed by the National Park Service and the Bureau of Public Roads (BPR). The two agencies completed the report in 1950, recommending the construction of a parkway at cost of $17,107,700 (Salvatore and Potter 2015: 8-224; Elder and Weldon 2018: 100) (*see Figure 45*).

A 1949 aerial photograph of the Carderock area shows that by this time, the CCC buildings had been removed in both camp locations and the landscape had reverted to open fields (transected by dirt roads) and woods (Bedell, Cagney, and Raszick 2022: 29) (*see Figure 46*). A 1949 real estate atlas shows no development in the project area south of the canal (*see Figure 47*). A 1951 aerial photograph depicts increasing forest coverage at both former CCC camp locations (Historical Images in Montgomery County, MD) (*see Figure 48*).

On September 22, 1950, Congress passed a bill to increase the canal's right-of-way. The bill authorized the donation of land "sufficient to increase the present parkway width to an average of one hundred acres per mile for the entire length of



Figure 49: Culmination of the Douglas walk in Georgetown, Washington, D.C., 1954 (Source: National Park Service, C&O Canal NHP Archives).

the parkway" (Mackintosh 1991: 59). Furthermore, Public Law 184, established on August 1, 1953, gave the Secretary of the Interior authority to grant easements for rights-of-way through, over, and under the C&O Canal (Salvatore and Potter 2015: 8-224).

Meanwhile, the parkway proposal met with some resistance as it progressed. The State of Maryland expressed concern that the parkway might interfere with the state's plan to develop forests, parks, wildlife habitats, and recreational areas along the banks of the Potomac (Mackintosh 1991: 58-61).

Among the more headline-grabbing opponents of the plan, Supreme Court Justice William O. Douglas—a frequent hiker along the canal—vocally opposed the parkway. After the *Washington Post* published an editorial supporting the construction of a scenic canal parkway, Justice Douglas objected to the plan in a response letter published in the *Washington Post* on January 19, 1954. Douglas wrote,

> I wish the man who wrote your editorial of January 3, 1954, approving the parkway would take time off and come with me. We would go with packs on our backs and walk the 185 miles to Cumberland. I feel that if your editor did, he would return a new man and use the power of your great editorial page to help keep this sanctuary untouched. (National Park Service 2018)

Douglas invited the newspaper's editors to hike the canal with him, hoping to demonstrate that the canal was "a refuge, a place of retreat, a long stretch of quiet and peace at the Capital's back door…a place not yet marred by the roar of wheels and the sound of horns…a sanctuary that would be utterly destroyed by a fine two lane highway" (Mackintosh 1991: 68-69). Douglas' recommendations included restoring and rewatering the canal for recreational activities, establishing campsites every 10 miles, and adding new and improved access roads (Mackintosh 1991: 68-72).

The *Washington Post* editors accepted the invitation, and on March 20, 1954, Justice Douglas and more than 50 others began to hike downstream along the canal, beginning at Lock No. 72. They arrived at Lock No. 5 on March 27, and boarded the *Canal Clipper* for the final stretch into Georgetown (Mackintosh 1991: 71) (*see Figure 49*). The walk generated a significant amount of publicity, as network radio, television news broadcasts, Time and Life magazines, and

even movie newsreels covered the event. The trip ultimately influenced the establishment of the C&O National Historical Park in 1971 (Salvatore and Potter 2015: 8-206).

While the *Washington Post* editors continued to support the creation of a scenic parkway even after the Douglas walk, they did shift their narrative to propose substantial changes to the parkway in support of many of Douglas' goals. The proposed changes stipulated that the parkway should follow "existing state, county, and federal aid roads where practicable, perhaps at places parallel to, but not on the canal proper...[and that] the canal property should be developed as a recreational area" (Mackintosh 1991: 72).

A second parkway study, completed in January 1955, recorded the potential impacts to the natural setting from roadway construction. The study suggested towpath improvements for hiking and bicycling, and recommended that the canal be rewatered as much as possible. In 1956, the NPS officially abandoned its plan to build a parkway along the canal, deciding instead to secure National Historical Park designation for the C&O Canal north of Great Falls to Cumberland, Maryland (Mackintosh 1991: 119; Elder and Weldon 2018: 102).

Mission 66 Development at Carderock and the Establishment of the National Monument (1958 – 1969)

In the mid-1960s, the National Capital Region of the National Park Service redeveloped Carderock as a recreational area, as part of the service-wide Mission 66 design and development campaign, which aimed to update parks and accommodate a growing number of visitors. Although visitation steadily increased at national parks after World War II, most NPS landscapes had not seen steady investment in their infrastructure since the 1930s; existing facilities needed repair, and many parks needed new facilities in the face of increased visitation. To address the backlog of deferred maintenance and to modernize these facilities, Congress approved funding in 1956 for the NPS Mission 66 program. This 10-year building and design campaign sought to expand visitor services and recreational opportunities in time for the 50th anniversary of the NPS in 1966, and to compensate for years of reduced budgets during World War II (Robinson and Associates, Inc. 2021: E-1, 2). Mission 66's scope was nationwide, and its development vision was vast, seeking to create new campgrounds, visitor centers, and other public amenities such as comfort stations, roadside interpretive facilities, gas stations, restaurants, and gift shops.

Rather than submitting a yearly budget, the NPS asked Congress for an entire decade's worth of funding for the repair and building of roads, the hiring of additional employees, and the design and construction of new public use facilities. President Eisenhower approved the Mission 66 plan in January 1956, and on July 1, 1956, the NPS was allocated $786,545,600 for the program (the costs would ultimately amount to more than $1 billion). Although the initiative was funded by Congress in 1956, planning for Mission 66 efforts began the year prior.

Departing from the traditional Rustic Style of the New Deal era, Mission 66 introduced new architectural styles to the park system, favoring the International Style and Modernism. These styles allowed the NPS to use cost-effective and standardized materials, plans, and construction methods developed in the postwar building boom, as designers sought to blend the buildings with the park's surroundings by adopting clean lines, horizontality, and simplicity. Modernism in the national parks was characterized by low, horizontal massing; flat or low-sloped roofs; mass-produced building materials, including CMU; the integration of outdoor and indoor spaces; a designed harmony between the building and its setting; and site plans that sought to blend buildings with their surroundings.

In order to provide recreational opportunities for the growing urban population nearby, National Capital Parks also sought to increase the number of day-use picnic facilities along George Washington Memorial Parkway and elsewhere. This focus was part of a larger Mission 66 trend: during the

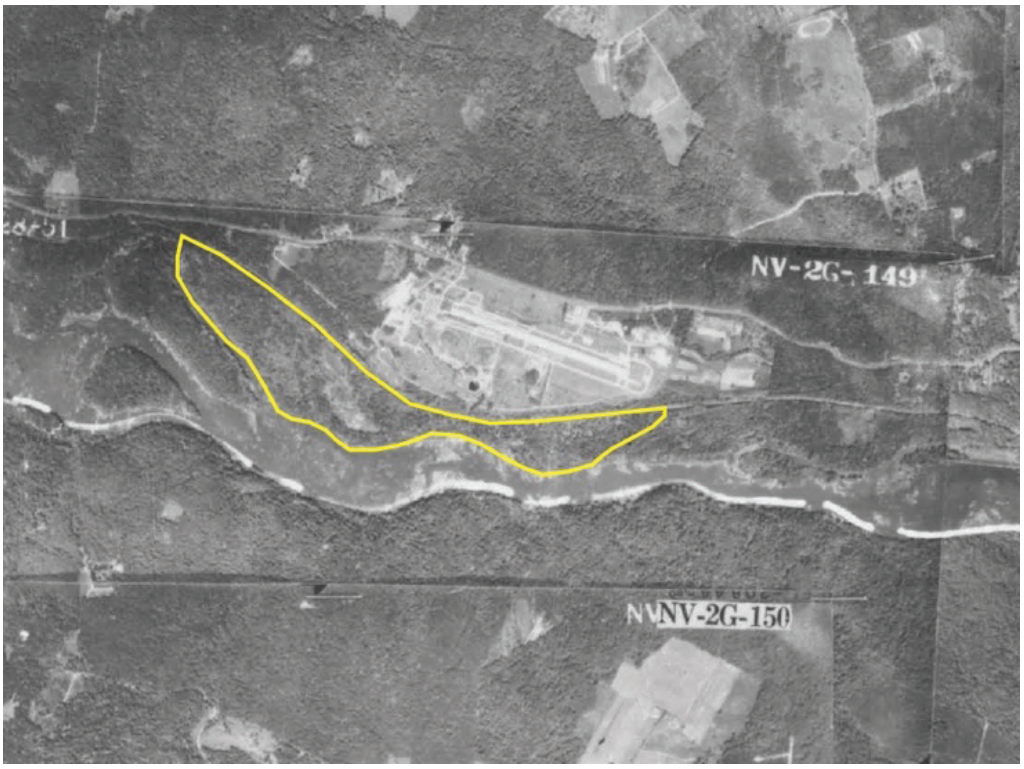


Figure 50: 1957 aerial of Carderock and surroundings with CLR boundary in yellow (Source: Historicaerials.com).

program's 10-year implementation period, the number of picnic areas at NPS sites increased from 742 in 1956 to 12,293 a decade later.

In describing the Mission 66 picnic area property type, the 2021 National Register nomination titled *Mission 66-Era Visitor Centers, Administration Buildings, and Public Use Areas in the Maryland, Virginia, West Virginia and the District of Columbia Parks of the National Capital Region of the National Park Service* notes:

> Mission 66 day-use areas typically were lower density and higher capacity than earlier picnic areas, and they therefore covered larger areas. Access road and parking geometries were also generous in order to accommodate the larger vehicles and trailers typical of the era. Where possible, views and shade were exploited. Where necessary, original designs were provided for shade structures, which were sometimes conceived as integral units with picnic tables. A nearby fire pit was also often provided. Construction of these features was typically of concrete, concrete block, metal, or other construction, rather than stone. As with campgrounds, larger day-use areas featured new comfort stations (Robinson and Associates, Inc. 2021: F-70).

Mission 66 funding resulted in major alterations to the appearance and use of Carderock. At this time, Carderock was managed by George Washington Memorial Parkway (GWMP) and was chosen as one of three recreation areas along the GWMP—together with Turkey Run Park and Fort Hunt Park—to be developed as part of the Mission 66 program and the extension of the parkway to the Capital Beltway. GWMP intended to develop the "old CCC Camp" across from Carderock, considered an ideal setting for development due to its access to miles of hiking, the Potomac River, the C&O Canal, and scenic motoring along the George Washington Memorial Parkway (Dehmlow, Perry, and Kelsch 2015: 33; Robinson and Associates, Inc. 2021: E-32, 33).

A 1957 aerial photograph shows the Carderock landscape as densely forested, with the exception of a large area cleared for pending development (Bedell, Cagney, and Raszick 2022: 29) (***see Figure 50***).

The National Capital Park Design and Construction Office prepared plans for Carderock as early as summer 1958. These plans included two picnic areas (A and B); five parking lots, with a capacity of 420 cars; four picnic shelter/comfort station structures; two other picnic shelters; and camping

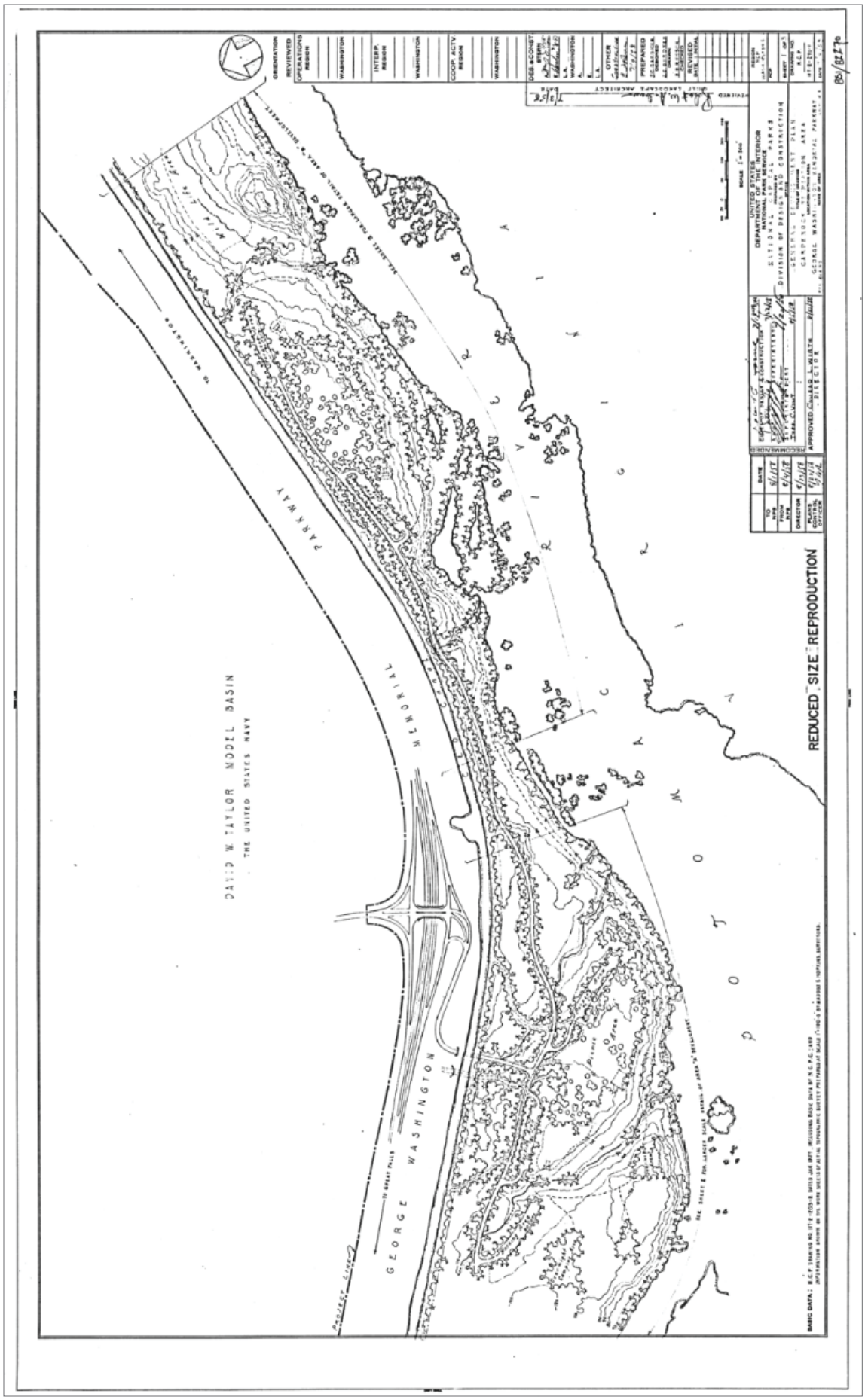


Figure 51: 1958 General Development Plan, Carderock Recreation Area, George Washington Memorial Parkway, page 1. Note: CLR authors were not able to locate a higher-resolution version (Source: National Park Service ETIC 851/82270).



Figure 52: 1958 General Development Plan, Carderock Recreation Area, George Washington Memorial Parkway, page 2. Note: CLR authors were not able to locate a higher-resolution version (Source: National Park Service ETIC 851/82270).

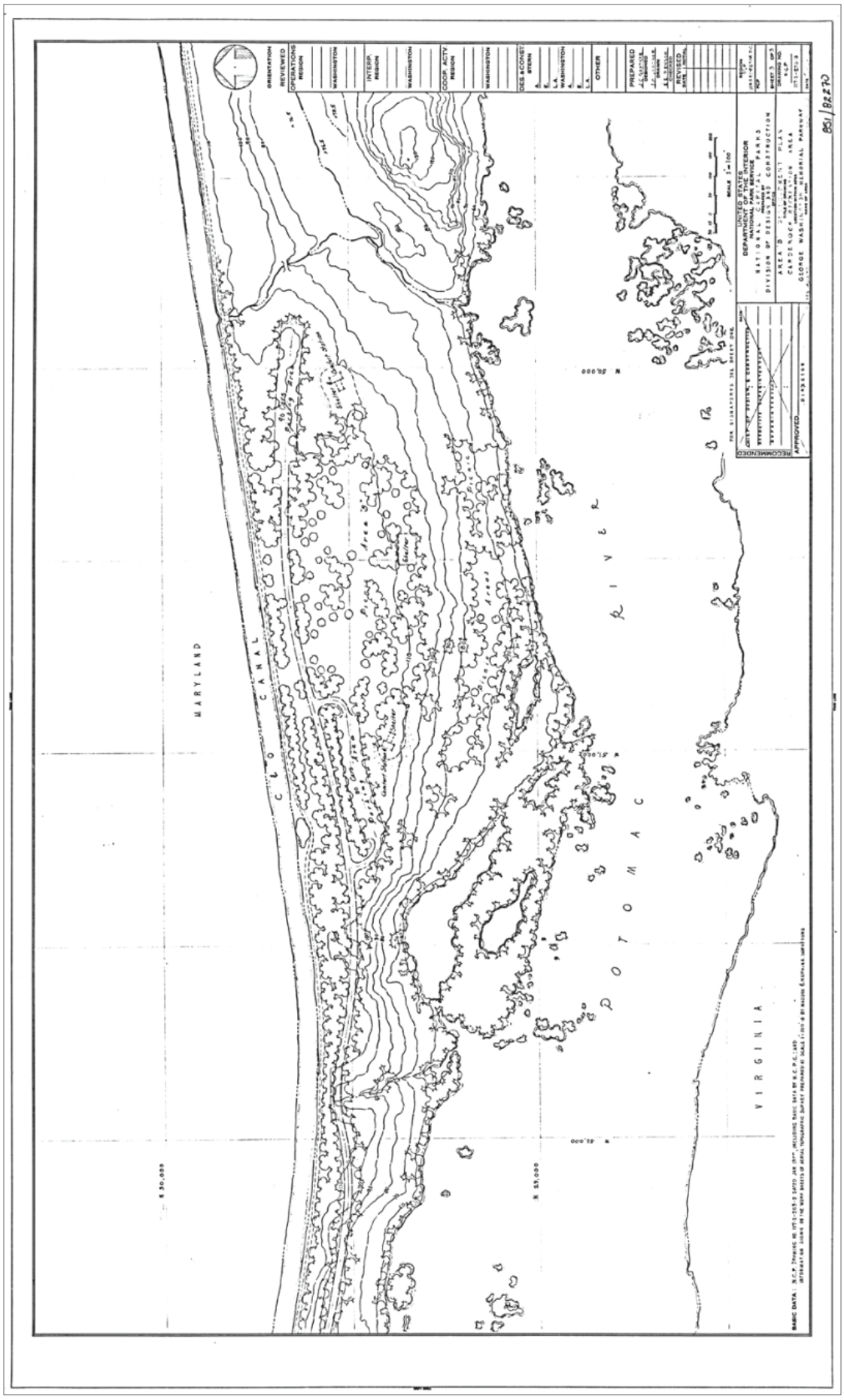


Figure 53: 1958 General Development Plan, Carderock Recreation Area, George Washington Memorial Parkway, page 3. Note: CLR authors were not able to locate a higher-resolution version (Source: National Park Service ETIC 851/82270).



Figure 54: 1962 aerial image of Carderock and surroundings with CLR boundary in yellow (Source: Historicaerials.com).

areas. A new interchange and access road were constructed to link the development with the George Washington Memorial Parkway (***see Figures 51, 52, and 53***). While road construction began in 1959, delays extended the project (Robinson and Associates, Inc. 2021: E-33). Ultimately, in 1963, workers completed the access road and bridges at Carderock/David Taylor Model Basin and Cabin John Gardens off of George Washington Memorial Parkway (Dehmlow, Perry, and Kelschz 2015: 38). It was during this construction effort that the Brickyard community's Mount Glory Baptist Church and its associated cemetery were razed.

Development outside of the Mission 66 program included Congressional approval of the Potomac Interceptor Sewer Line on June 12, 1960 (Public Law 86-515). The Act authorized Washington, D.C., to construct and operate a sanitary sewer line to connect the Dulles area to the Potomac Pumping Station in Washington, D.C., traveling through the project area in Montgomery County. Work took place over the following years. From 1963 through 1964, Fairfax County workers constructed Scotts Run Potomac River Crossing, resulting in open cut excavations and the installation of the concrete siphon chamber/odor control structure near the Carderock Pavilion (ETIC 850/80783). This project connected to the Potomac Interceptor Sewer Line.

Meanwhile, the *Canal Clipper* boat continued to serve tourists on the canal into the early 1960s, when it was replaced by a new boat. In the spring of 1961, the *Canal Clipper* was replaced by the mule-drawn *Canal Clipper II*, which was 70′ long and 11′ wide. Operated by Government Services Inc., the boat could carry 125 passengers, traveling between Lock No. 3 and Lock No. 5 for a boating season that lasted from May to October (Mackintosh 1991: 22, 41-43, 181). The trip covered 10 miles of the canal, lasting four hours. Tourists could purchase refreshments from a snack bar on board, and they were accompanied by a National Park Service historian or naturalist (Mackintosh 1991: 181).

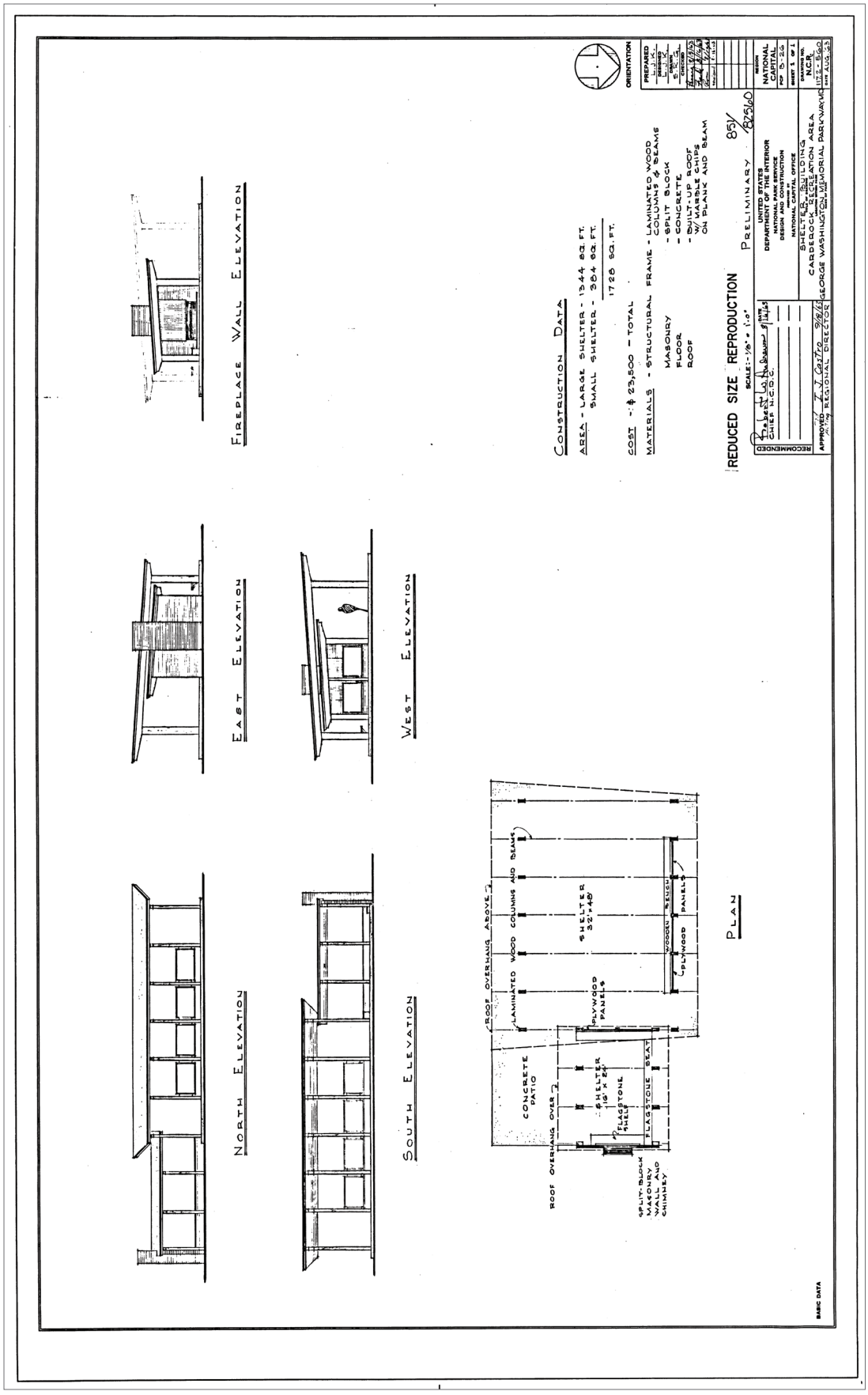


Figure 55: Carderock Picnic Pavilion plans (Source: National Park Service ETIC 851/82577).

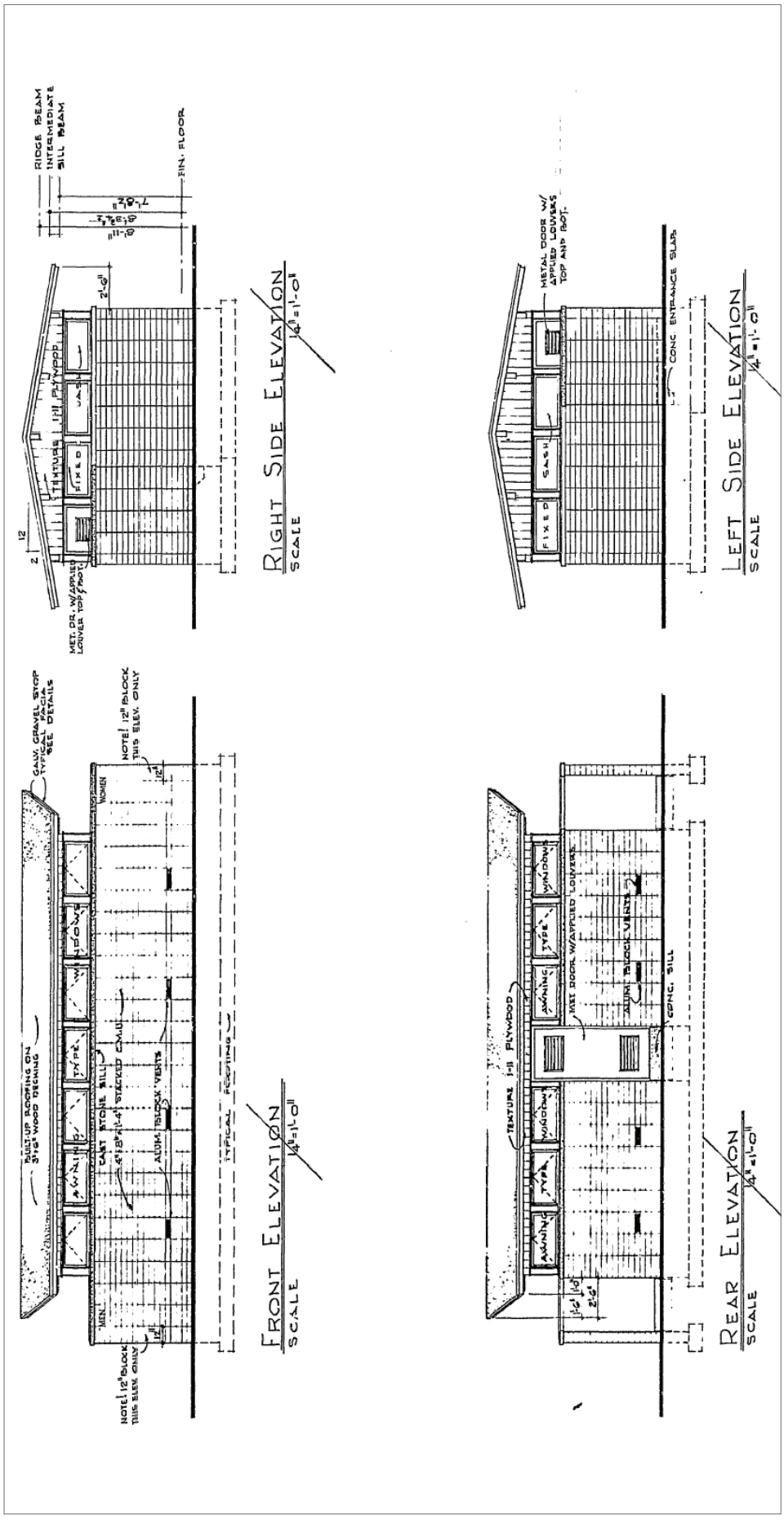


Figure 56: Typical comfort station designs, undated (Source: Carderock Historic Property Project Documentation Workbook).

A 1962 aerial photograph reveals that parking lots were constructed in the western part of the project area, south of the canal (*see Figure 54*). In the eastern part of the project study area, a new access road on the north side of the canal was under construction at this time to connect George Washington Parkway with the planned picnic area (Historicaerials.com). East of the project area, the photograph also depicts the construction of Interstate 495, the Capital Beltway; the highway was completed in 1964.

Plans for the picnic area were not approved until 1964 (*see Figure 55*). In May of that year, the NPS awarded a contract to William F. Klingensmith of Germantown, Maryland, to mechanically grade the recreation area and construct a picnic shelter building. Completed in 1965, the Carderock Pavilion is the most substantial feature from the 1958 plan that was constructed within the recreation area. "Picnic Area B" was never developed, and the Carderock Pavilion is the only picnic shelter currently standing in this area.

In addition to the picnic pavilion, two comfort stations were constructed. These buildings were typical of Mission 66-era designs found in the National Capital Region, although they were relatively utilitarian in design and materials (Robinson and Associates, Inc. 2021: E-33; Bedell, Cagney, and Raszick 2022: 85) (*see Figure 56*). Constructed in 1965, the east and west comfort stations at Carderock are constructed of concrete masonry units (CMU) in an atypical stacked-bond pattern. The comfort stations have ribbon or banked windows at the top of the walls, and low-pitched gable roofs with pronounced overhanging eaves that give the buildings a horizontal emphasis.

Aerial images suggest that the specimen trees near the east comfort station, primarily oak trees (*Quercus* spp.) and tulip poplar (*Liriodendron tulipifera*), were planted by this time.

When the recreation area was completed in 1965, it included one picnic pavilion, two comfort stations, and four parking lots connected by a road, and limited open areas for recreational fields—all situated within a forest setting. The picnic area reflects the Mission 66 program's goal of creating day-use areas for tourism and recreation featuring picnic facilities, comfort stations, and adequate parking. With the Mission 66 improvements in place, the area was used for walking and biking along the canal towpath, hiking on Section C of the Billy Goat Trail, and other activities that supported the canal's recreational land use as principal to the experience and character of the landscape.

Today, the Carderock area largely reflects this Mission 66 period of construction and its associated recreational use.

ESTABLISHMENT OF A NATIONAL MONUMENT

From 1957 to 1971, Congress considered various bills regarding the establishment of a National Historical Park along the C&O Canal. In 1959, Representative John R. Foley (D-Md) introduced Congressional legislation to designate the C&O Canal as a national historic park (*Montgomery County Sentinel* 1959: 8). Finally, in 1961, Presidential Proclamation 3391 established the lands between Seneca, Maryland (Mile Marker 23.0), and Cumberland, Maryland (Mile Marker 184.5) as a national monument, giving this portion of the canal formal status as a unit of the National Park System (Elder and Weldon 2018: 34).

Establishment of the C&O Canal National Historical Park (1970 – 1979)

The Chesapeake and Ohio Canal Development Act (H.R. 19342) was presented to the U.S. House of Representatives on October 1, 1970. This bill proposed the establishment of the Chesapeake and Ohio (C&O) Canal National Historical Park (NHP). The bill passed the House on October 5, 1970, and passed in the Senate two months later, on December 22, 1970. On January 8, 1971, Public Law 91-664 established the Chesapeake and Ohio Canal NHP "to preserve and interpret the historic and scenic features…and to develop the potential of the canal for public recreation." The bill appropriated $20.4 million for land acquisition, and an additional $17 million for development of the park. The canal was divided into administrative sections; Carderock was part of the single administrative section that

comprised the lower 22 miles between Seneca, Maryland, and Georgetown, Washington, D.C. (Elder and Weldon 2018: 34).

Overall, the NHP initially comprised 5,250 acres, with the intention to expand the canal's right-of-way using scenic easements and long-term retention rights. The boundaries of the park were set to follow a map prepared by National Park Service planner John M. Kauffmann. State-owned lands would be included if donated or managed under a cooperative agreement, and a 19-member Chesapeake and Ohio Canal National Historical Park Commission was established (Elder and Weldon 2018: 110).

In June 1972, Hurricane Agnes caused substantial flooding on the canal, with thousands of trees uprooted and significant impacts to access roads, picnic areas, and parking lots. Sixty-six miles of towpath eroded along the canal (it is unclear where exactly this took place), and several bridges washed away. Congress appropriated a total of $34 million for canal repairs, and restoration took place over the next several years. The *Canal Clipper II* was seriously damaged in the storm; it was replaced by *Canal Clipper III* in 1976. The canal was fully repaired by that year (Elder and Weldon 2018: 34, 112, 116).

On July 1, 1974, the two administrative portions of the canal were unified under one superintendent, William Failor (Mackintosh 1991: 141). It is likely that the management of Carderock passed from George Washington Memorial Parkway to C&O Canal NHP as this time; the NHP maintains the Carderock site today.

In July of 1975, the NPS completed a General Plan for the C&O Canal National Historical Park. It defined the park's purpose according to its opportunities to:

- Understand the canal's reason for being, its construction, its role in transportation, economic development and westward expansion, the way of life which evolved upon it, and the history of the region through which it passes;
- Gain an insight into the era of canal building in the country;
- Appreciate the setting in which it lies and the natural and human history can be studied along its way; and
- Enjoy the recreational use of the canal, the parklands and the adjacent Potomac River (National Park Service, General Plan 1976: 1).

In October 1976, another flood struck the entire canal, resulting in damages of $70,000. The most extensive damage was documented at Catoctin Creek, approximately 50 miles northwest of the study area, where a footbridge (in an unknown location) washed away (Elder and Weldon 2018: 113).

By the end of 1977, the park consisted of 13,804 acres owned in fee simple, and 1,164 acres held in scenic easements. Over the years, the NPS acquired additional properties, and by 1990, the park encompassed 19,237 acres (Mackintosh 1991: 103- 118; National Park Service, General Plan 1976: 13).

In 1979, workers removed the roofing on the Carderock picnic pavilion and replaced it in-kind (NPS Historic Property Project Documentation 2022).

Late 20th Century Developments on the C&O Canal (1980 – 1999)

In February of 1984, flooding on the canal impacted the entire resource, requiring $580,000 in repairs (Elder and Weldon 2018: 119).

In 1989, the portion of George Washington Memorial Parkway located north of the project area, stretching from Canal Road in the District of Columbia to MacArthur Boulevard at Carderock, was renamed the Clara Barton Parkway. This change was made in part to avoid confusion with the George Washington Memorial Parkway in Virginia (Dehmlow, Perry, and Kelschz 2015: 25).

While Carderock has not been substantially altered since its Mission 66 redevelopment, there have been smaller rehabilitation campaigns in more recent decades. In 1991, workers repainted the ceiling and support columns of the picnic pavilion. In the same year, workers repainted the interior and exterior of the east comfort station. Workers



Figure 57: Wayside about the CCC added to the Carderock landscape in 2020 (Source: National Park Service C&O Canal NHP).

removed interior hardware, made necessary repairs and patches, and primed walls and trim. The following year, workers stripped the roof of the picnic pavilion, removing and replacing any rotted material, adding rubber roofing, and repainting the structure (NPS Historic Property Project Documentation 2022).

In 1994, the U.S. Department of Transportation and the Federal Highway Administration developed and executed plans for project 100A26, "Pavement Reconstruction, Milling and Overlaying, Striping, and Other Work on Clara Barton Parkway from MacArthur Boulevard to the Interstate 495 Interchange." Plans show the reconstruction of the parkway from the Carderock exit to MacArthur Boulevard and repaving from the Beltway exit ramps to the Carderock exit (Dehmlow, Perry, and Kelsch 2015: 43). That same year, workers repainted the exterior of the picnic pavilion. Also at this time, excavation took place to facilitate site drainage, and the interior of the east comfort station was repainted. Workers again repainted the interior of the east comfort station in 1997 (NPS Historic Property Project Documentation 2022).

Recent Changes to Carderock (2000 – 2025)

NPS workers completed repairs on the picnic pavilion in 2012, including: the removal and replacement of the EPDM roofing; selective repairs to water-damaged roof decking; selective replacement of deteriorated beams and flashing; replacement of the rain gutter and downspout system; introduction of an underground drainage system to correct for deterioration at the base of a support column; repainting of the entire structure to match its original color; and selective masonry mortar repointing (NPS Historic Property Project Documentation 2022).

Around this time, the extant metal chain-link backstops were installed within the open area east of the picnic pavilion; while the precise date of installation is unknown, they were in place by 2012 (Google imagery 2012).

In 2020, workers added new wayside signage at Carderock that addressed the CCC history of the area (National Park Service 2020) (*see Figure 57*). Between 2020 and 2021, WSP USA, Inc. completed archeological investigations both Camps NP-1-MD and NP-2-MD, with the main goal to determine what remained from the CCC camps and to evaluate those remains for listing in the National Register of Historic Places (National Register) (Bedell, Cagney, and Raszick 2022). The report determined that Camp NP-2-MD lacks integrity to be eligible for listing on the National Register. (The report did not specify whether this evaluation applied to individual listing, or to listing as a contributing resource within the Chesapeake & Ohio Canal NHP Historic District). The report finds Camp NP-1-MD eligible for listing under Criterion A in association with the establishment of the C&O Canal, the New Deal, the CCC, and Black American history (WSP USA, Inc. 2022, i). The Maryland Historical Trust concurred with the determinations of eligibility on March 23, 2023.

The entirety of the Clara Barton Parkway (Chain Bridge to Macarthur Boulevard at Carderock, Md.) was repaved between late July 2020 and early 2021 (National Park Service Clara Barton Parkway Repaving 2021).

In 2022, workers replaced a leaking water line leading into both comfort stations (NPS Historic Property Project Documentation 2022).

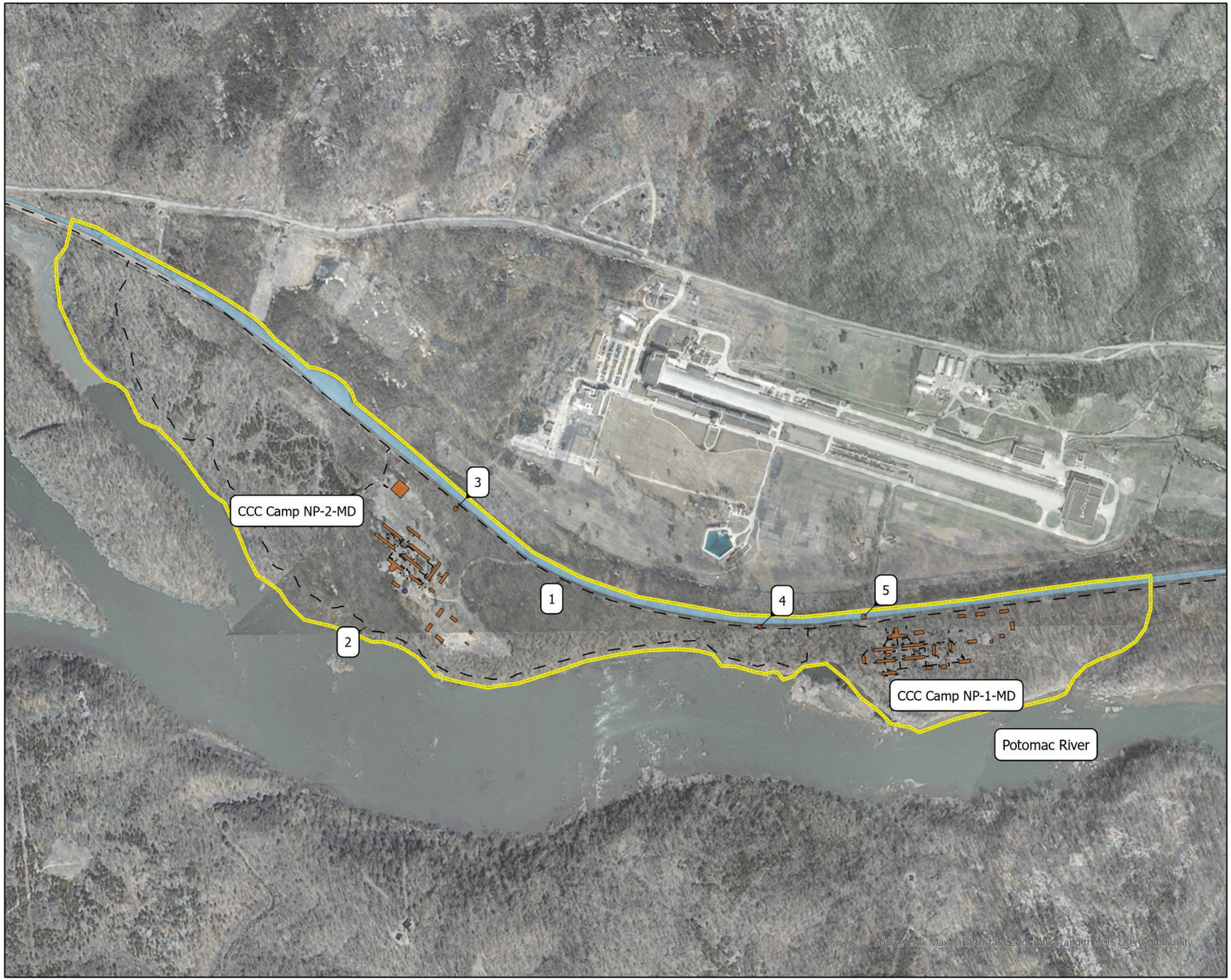
During the time of survey in 2024, a project was underway with Fairfax County, Virginia, to install odor control equipment near an existing sewer's passive air vent in the Carderock picnic area. The sewer rehabilitation project at Carderock was ongoing into 2025 (Fairfax County, Virginia, Department of Public Works and Environmental Services 2020). Proposed repairs in 2024 for a project included addressing concrete spalling/ cracking at the Carderock Concrete Road Culvert (mile 10.42); repointing the masonry veneer of the culvert's wingwalls; replacing the old traffic signs; placing a new asphalt road surface; vegetation removal along the culvert walls; cleaning of storm drains; and adding raised pavement markers to the road surface (NPS PEPC 124412 2024). Additionally, a report titled *Research to Support Climbing Management Planning at Carderock Recreation Area and Great Falls Park* was completed in 2025 to inform the NPS's management of the climbing area at Carderock.

In December 2024, a wooden bridge collapsed on the Billy Goat Trail Section C, east of the recreation field.

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Period Plans

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Cultural Landscape Report

Carderock

Chesapeake and Ohio Canal NHP
Potomac, MD

Period Plan Overview 1940
CCC Camps NP-1-MD and NP-2-MD

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

In cooperation with:
National Capital Region, National Park Service

Sources
1. 1939 Camp NP-2 General Location Plan
2. 1940 Camp NP-1 General Plan
3. 1949 aerial (Historicaerials.com)
4. Data collected in July, October 2024, and March, April 2025

Drawn By
Meg Frisbie, ArcGIS Pro 3.2.2, 2025

Legend
- CLR Boundary
- Buildings+Structures
- Small-scale Features
- Circulation
- Buildings+Structures
- C&O Canal

1. C&O Canal Towpath
2. Billy Goat Trail Section C
3. Culvert 15
4. Culvert 14 and pier
5. Pivot bridge and abutments
6. Wasteweir

Notes
1. Projection: NAD 1983 UTM Zone 18N
2. Alignment of the Billy Goat Trail is approximate
3. Individual CCC buildings, circulation features, and small-scale features are on detailed period plans

N 0 350 700 1400 Feet

Drawing #3

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Cultural Landscape Report

Carderock

Chesapeake and Ohio Canal NHP
Potomac, MD

Period Plan 1939
CCC Camp NP-2-MD

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

In cooperation with:
National Capital Region, National Park Service

Sources
1. 1939 Camp NP-2 General Location Plan
2. 1949 aerial (Historicaerials.com)
3. Data collected in July, October 2024, and March, April 2025

Drawn By
Meg Frisbie, ArcGIS Pro 3.2.2, 2025

Legend

- CLR Boundary
- Small-scale Features
- Circulation
- Buildings+Structures
- Circulation
- Vegetation
- C&O Canal

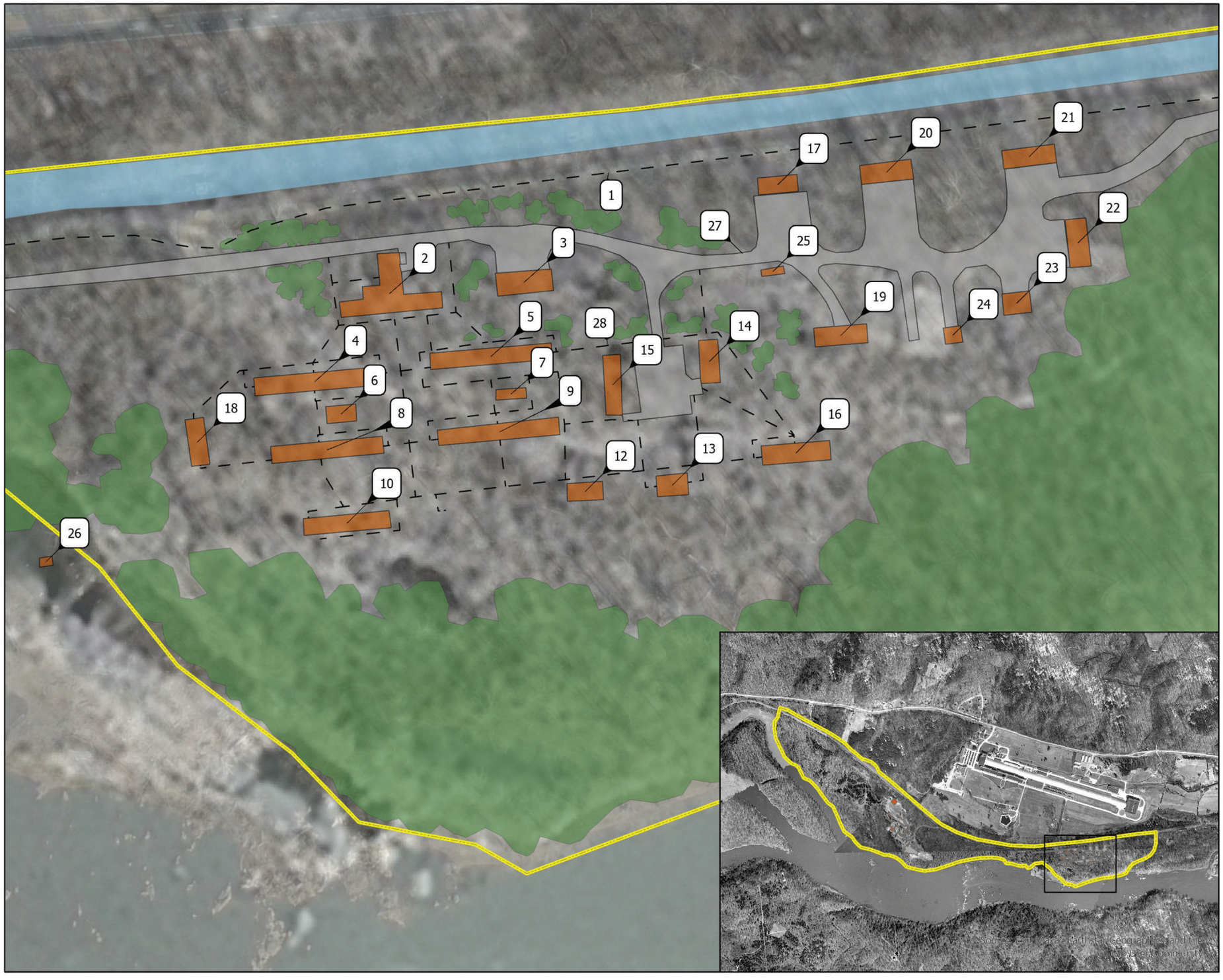
1. C&O Canal Towpath
2. Billy Goat Trail Sec. C
3. Army Garage
4. Officer's Quarters
5. Mess Hall/Kitchen
6. Infirmary/Supply Room/Office
7. Garage #1
8. Garage #2
9. Garage #3
10. Tool Room
11. Blacksmith Shop
12. Oil House
13. NPS Quarters
14. Education Bldg.
15. Barracks #1
16. Barracks #2
17. Barracks #3
18. Barracks #4
19. Recreation Hall
20. Laundry
21. Incinerator
22. Vehicular Circ.
23. Pedestrian Circ.
24. Baseball Diamond
25. "Old Dirt Road"
26. Flagpole

Notes
1. Projection: NAD 1983 UTM Zone 18N.
2. Alignment of the Billy Goat Trail Sec. C is approximate.
3. Vegetation is approximate based on the 1939 plan. Tree canopy near the buildings is traced from the 1939 plan. Tree canopy beyond the buildings is not represented in the plan and thus hypothesized.

N 0 87.5 175 350 Feet

Drawing #4

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Cultural Landscape Report

Carderock

Chesapeake and Ohio Canal NHP
Potomac, MD

Period Plan 1940
CCC Camp NP-1-MD

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

In cooperation with:
National Capital Region, National Park Service

Sources
1. 1940 Camp NP-1 General Plan
2. 1949 aerial (Historicaerials.com)
3. Data collected in July, October 2024, and March, April 2025

Drawn By
Meg Frisbie, ArcGIS Pro 3.2.2, 2025

Legend

- CLR Boundary
- Circulation
- Buildings+Structures
- Circulation
- Vegetation
- C&O Canal

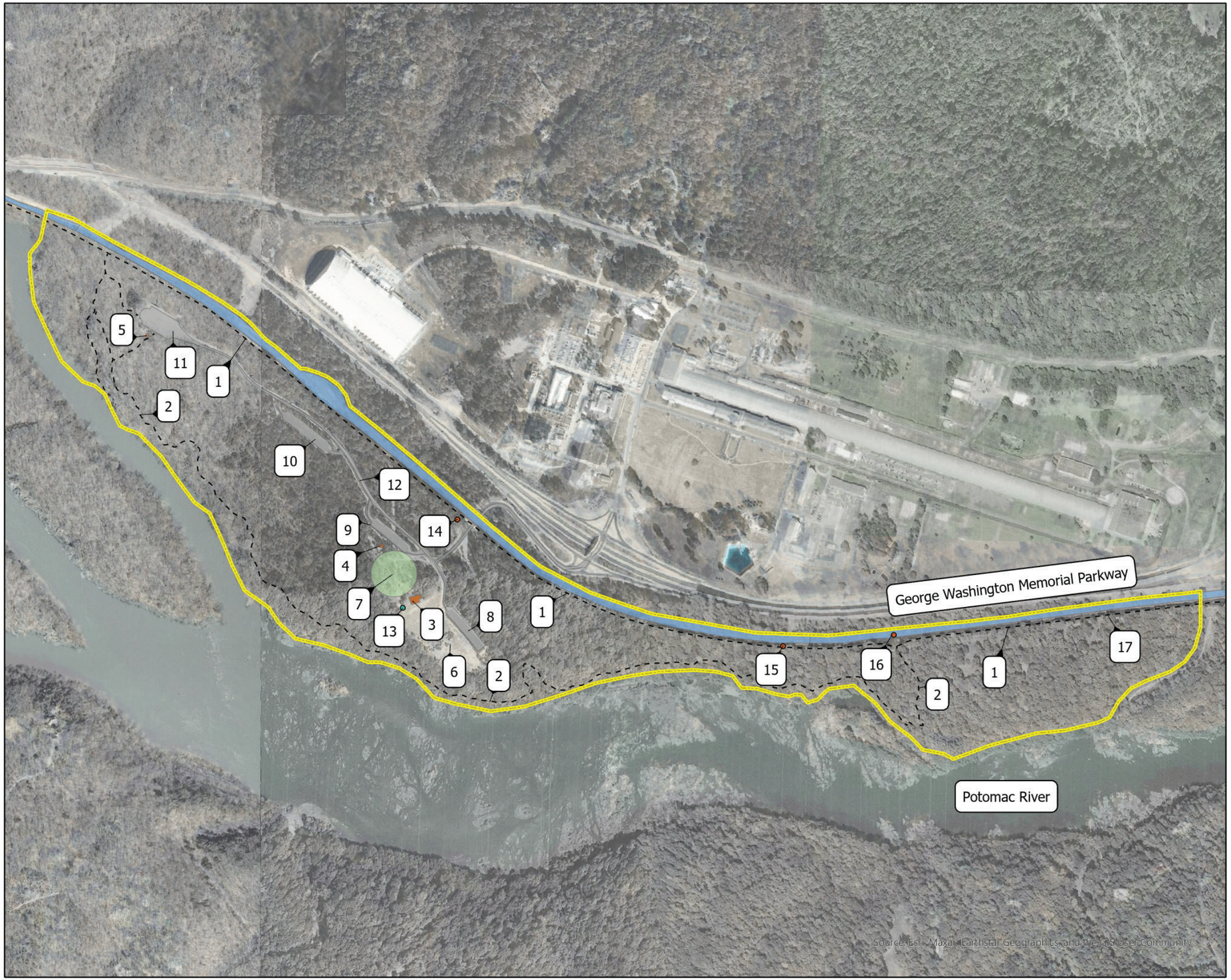
1. C&O Canal Towpath
2. Mess Hall/Kitchen
3. Service Garage
4. Barracks #1
5. Barracks #2
6. Latrine
7. Latrine
8. Barracks #3
9. Barracks #4
10. Recreation Hall
11. Education Buildings
12. Dispensary
13. Commandant's Res.
14. Office NPS
15. Office Comm.
16. NPS Personnel
17. Garage #1
18. Barracks #5
19. Store House
20. Garage #2
21. Garage #3
22. Garage #4
23. Repair Shop
24. Blacksmith Shop
25. Oil House
26. Incinerator
27. Vehicular Circ.
28. Pedestrian Circ.

Notes
1. Projection: NAD 1983 UTM Zone 18N.
2. Alignment of the Billy Goat Trail Section C in this location is unknown and not depicted.
3. Vegetation is approximate based on the 1940 General Plan. Tree canopy near the buildings is traced from the 1940 plan. Tree canopy beyond the buildings is not represented in the plan and thus hypothesized.

N 0 60 120 240 Feet

Drawing #5

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Cultural Landscape Report

Carderock

Chesapeake and Ohio Canal NHP
Potomac, MD

Period Plan 1965

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

In cooperation with:
National Capital Region, National Park Service

Sources
1. 1964 aerial (Historicaerials.com)
2. Data collected in July, October 2024, and March, April 2025

Drawn By
Meg Frisbie, ArcGIS Pro 3.2.2, 2025

Legend

- CLR Boundary
- Buildings+Structures
- Small-scale Features
- Circulation
- Buildings+Structures
- Circulation
- C&O Canal
- Vegetation

1. C&O Canal towpath
2. Billy Goat Trail
3. Carderock picnic pavilion
4. East comfort station
5. West comfort station
6. Recreation field
7. Picnic area and grove
8. Parking Lot 1
9. Parking Lot 2
10. Parking Lot 3
11. Parking Lot 4
12. Connecting road
13. Flagpole
14. Culvert 15
15. Culvert 14 and pier
16. Pivot bridge and abutments
17. Wasteweir

Notes
1. Projection: NAD 1983 UTM Zone 18N

N 0 325 650 1,300 Feet

Drawing #6

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Analysis + Evaluation

Summary of Integrity

Periods of Significance: 9000 BCE-1500 CE; 1828-1924; 1938-1942; and 1964-1965

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

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

There are four periods of significance associated with the cultural landscape: the first is 9000 BCE-1500 CE, reflecting Paleo-Indian through Late Woodland archeological resources; the second is 1828-1924, encompassing the years of construction and operation of the C&O Canal as an industrial waterway; the third period is 1938-1942, encompassing the years of Civilian Conservation Corps operation at the C&O Canal and CCC-era archeological resources; and the fourth is 1964-1965, encompassing the Mission 66 initiatives at Carderock. The cultural landscape maintains integrity in location, setting, design, workmanship, materials, feeling, and association with respect to the periods of significance.

LOCATION

Location is the place where the historic property was constructed or the place where the historic event occurred. The majority of extant resources related to the Carderock cultural landscape remain in their original locations on the north bank of the Potomac River in Potomac, Maryland. While the CCC camp resources associated with the third period of significance (1938-1942) were removed, other resources added during the final period of significance (1964-1965) remain in their original locations. The C&O Canal, towpath, Billy Goat Trail, Mission 66-era buildings and structures, and wooded areas are within their original locations. While individual small-scale features such as picnic tables have likely changed locations since the final period of significance, this does not impact the integrity of location or detract from the overall character of the Carderock cultural landscape. The Carderock cultural landscape maintains overall integrity of location from each of its periods of significance.

SETTING

Setting is the physical environment of a cultural landscape or historic property. Located on the north bank of the Potomac River, the canal landscape's woods, cliffs, rocky outcrops, and slopes at Carderock all contribute to the setting of the cultural landscape. While the setting has changed during each of the cultural landscape's periods of significance—shifting most dramatically from a residential, maintenance, and administrative center for the CCC to a public recreation area with parking and other amenities—the overall physical environment remains dominated by the Potomac River and adjacent forests, and the setting thus retains integrity across all periods of significance.

DESIGN

Design is the combination of elements that create the form, plan, space, structure, and style of a cultural landscape or historic property. The cultural landscape saw formal design interventions during each of its second (1828-1924), third (1938-1942), and fourth (1964-1965) periods of significance, based on (respectively) the creation of the canal and towpath, the creation of the CCC camps, and the introduction of new design features according to the Mission 66 design program adopted by the National Park Service, which favored Modernist building designs with standardized materials, plans, and construction methods developed in the postwar building boom. The cultural landscape retains integrity of design from multiple periods, as the canal and towpath reflect the engineered design introduced during the second period of significance, and the recreation area's built features represent the fourth period of significance.

While the most significant formal plan for the Carderock Recreation Area, developed c. 1958, was never fully realized, a scaled-down design was constructed by 1965, in accordance with Mission 66 standards. While there is no longer evidence of design associated with the CCC period, the cultural landscape retains integrity of design based on contributing features that were designed during these other periods of significance.

MATERIALS

Materials are the physical elements of a particular period, including construction materials, paving, plants, and other landscape features. The C&O Canal and unpaved towpath are evidence of materials that date to the second period of significance (1828-1924). Few materials are present in the cultural landscape from the CCC period, other than archeological sites. During the fourth period of significance (1964-1965), the NPS adhered to the Modern style and used cost-effective and standardized materials, including concrete masonry units (CMUs), steel, concrete, split-block, and vertical laminated wood columns. The cultural landscape retains integrity of materials to the second and fourth periods of significance.

WORKMANSHIP

Workmanship includes the physical evidence of the crafts of a particular period. While the buildings and structures from the CCC era have been removed, workmanship related to Mission 66 development remains evident in the extant buildings and structures within the Carderock cultural landscape. Workmanship related to the CCC remains evident in archeological resources, including some above-ground remnants of structures and small-scale features. The canal and towpath continue to reflect the workmanship of the second and third periods of significance (1828-1924; 1938-1942), when canal rehabilitation took place. In addition, the picnic pavilion and comfort stations are consistent with the workmanship of the fourth period of significance (1964-1965). The cultural landscape therefore retains integrity of workmanship.

FEELING

Feeling is a property's expression of the aesthetic or historic sense of a particular period. The cultural landscape does not retain integrity of feeling with the CCC period. However, the Carderock landscape does maintain the feeling associated with other periods of significance, as expressed by contributing natural systems and features; land uses; circulation systems (including trails); views and vistas; buildings and structures; vegetation; the canal waterway; and small-scale features, which collectively convey the feeling of a canal landscape and a day-use recreation area. The Carderock cultural landscape retains integrity of feeling.

ASSOCIATION

Association is the direct link between an important historic event or person and a historic property. As both a canal landscape and a day-use picnic area with access to trails, the Carderock cultural landscape retains integrity of association as a recreational area near the national capital. While there is minimal association with the CCC period specifically, the cultural landscape retains overall integrity of association.

Analysis + Evaluation of Landscape Characteristics

The documentation of existing conditions, combined with an analysis and evaluation of natural and human-made historic resources, is critical in the development of a strategy for those resources' management and treatment. This chapter presents an evaluation of the historic significance of the Carderock cultural landscape within the Chesapeake and Ohio Canal National Historical Park (CHOH; C&O Canal; C&O Canal NHP) and a comparative analysis of historic and existing landscape conditions. The objective of this analysis is to identify the specific features associated with the period(s) of significance and assess to what degree they continue to convey their historic significance.

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

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

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

While most sites contain several of the 13 characteristics, not all are necessarily present in one landscape. In total, the Carderock cultural landscape exhibits all 13 landscape characteristics.

The comparative analysis explores the similarities and differences between historic and existing

landscape conditions. Through this comparison, the CLR builds an understanding of how much the historic site today reflects its character and appearance during the periods of significance (9000 BCE-1500 CE; 1828-1924, 1938-1942, and 1964-1965). To aid in this assessment, landscape features are categorized based on their contribution to the historic character of the landscape during the period(s) of significance. These categories are:

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

Contributing landscape features survive from the period(s) of significance and continue to reflect their historic appearance and function. Resources that originated after the period(s) of significance and do not relate to the site's significant historic contexts are identified as "non-contributing." **Non-contributing** landscape features include those added to the site since the period(s) of significance, or those that no longer retain enough physical integrity to convey their historic appearance or function. **Non-contributing but compatible** resources originated after the period(s) of significance but relate to the site's significant historic contexts. **Undetermined** features include those whose age cannot be determined or whose contribution to the historic landscape is unknown.

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

SUMMARY OF LANDSCAPE CHARACTERISTICS

- **Natural Systems and Features**: The natural systems and features of the Carderock area, including its geomorphology, soils, regional climate, floodplain forest, rocky cliffs, and particularly its hydrology, have been fundamental in shaping its physical development. The natural systems and features retain integrity.
- **Land Use**: The conservation and recreational land uses at Carderock retain integrity and are contributing features. Land use associated with interpretation post-dates the periods of significance and is thus non-contributing, but compatible. Overall, the Carderock cultural landscape retains integrity of land use.
- **Topography**: The topography of the Carderock cultural landscape has not significantly changed since the periods of significance and retains integrity.
- **Spatial Organization**: All features associated with the spatial organization of the Carderock cultural landscape date to the periods of significance. The spatial organization of the Carderock cultural landscape retains integrity.
- **Cluster Arrangement**: The cluster arrangement that includes the picnic pavilion, east comfort station, and picnic area retains integrity to the periods of significance and is a contributing feature.
- **Cultural Tradditions**: The Carderock area has been a rock-climbing destination for a century, originating during the second period of significance and continuing to the present day. This landscape characteristic contributes to the significance of the cultural landscape.
- **Views and Vistas**: The views and vistas within the cultural landscape all date to the periods of significance and are contributing. The landscape retains integrity of this landscape characteristic.
- **Constructed Water Features**: The C&O Canal is the only constructed water feature in the cultural landscape. It retains integrity to the periods of significance. This landscape characteristic retains integrity.
- **Buildings and Structures**: All buildings and structures within the Carderock cultural landscape are either contributing or non-contributing but compatible. Overall, the landscape retains integrity for this landscape characteristic.
- **Circulation**: With the exception of the social

trails, all circulation features within the Carderock cultural landscape date to the periods of significance and are contributing features. Social trails, which are constantly evolving, post-date the periods of significance and are considered non-contributing. Overall, Carderock retains integrity of circulation.

- **Vegetation**: Today, vegetation within the cultural landscape includes the open recreation field, individual trees in the picnic area, and vegetation growing within the canal. While the vegetation changed during the periods of significance and continues to change, vegetation is a contributing landscape characteristic to the cultural landscape.
- **Small-Scale Features**: Most small-scale features in the Carderock cultural landscape post-date the periods of significance and are thus either non-contributing, or non-contributing but compatible. Only two flagpoles date to the periods of significance and are considered contributing. Overall, the small-scale features do not retain integrity to the periods of significance.
- **Archeological Sites**: Archeological resources associated with CCC Camp NP-1-MD, CCC Camp NP-2-MD, the CCC-era road trace, and building foundation are contributing features. The contributing statuses of several features are undetermined.

Natural Systems + Features

Natural systems and features are the natural aspects that have influenced the development and physical form of a landscape. The natural systems and features of the Carderock cultural landscape include its soils, hydrology, geomorphology, floodplain forest, rocky cliffs, and regional climate.

Soils

Located on the north bank of the Potomac River, the dominant soil types in the Carderock area are derived from the weathering of underlying bedrock (***see Figure 58***). A large portion of the landscape is composed of the Rock Outcrop-Blocktown complex, with shallow soil overlying some sections of rock. Other portions of the landscape contain Elk silt loam, a fertile soil type formed from the decay of bedrock, with 0 to 3 percent slopes, and Travilah silt loam, with 3 to 8 percent slopes. Smaller sections of the landscape contain Lindside silt loam, with 0 to 3 percent slopes, and Watchung silty clay loam, with 0 to 3 percent slopes. Where the slope is more gradual, the soil is well-drained and fertile. The soils within the Carderock cultural landscape retain integrity and are a contributing feature.

Hydrology

Although it is located immediately outside the study area boundary and is not managed by the NPS, the Potomac River is an important hydrological system to the south of the Carderock cultural landscape. The Potomac River runs parallel to the C&O Canal and serves as the primary water source for the canal, enabling boats to travel along the constructed waterway (***see Figure 59***). One of the largest river systems in the eastern United States, the Potomac River (including the main stem, the North Branch, and the South Branch) is approximately 405 miles in length, flowing from the Potomac Highlands into the Chesapeake Bay. The Potomac watershed includes portions of Maryland, Pennsylvania, Virginia, West Virginia, and Washington, D.C. The C&O Canal National Historical Park (NHP) encompasses approximately half of the Potomac River's length; the Carderock cultural landscape is located approximately 11.6 miles northwest of the Potomac River's confluence with the Anacostia River. Throughout its history, flooding of the Potomac River has impacted the canal's infrastructure, requiring ongoing repairs.

Rock Run, a tributary of the Potomac River, is the eastern boundary of the project area. The headwaters of Rock Run are within the community of Potomac, Maryland. The stream then flows southeast to the Potomac River for just over five miles.

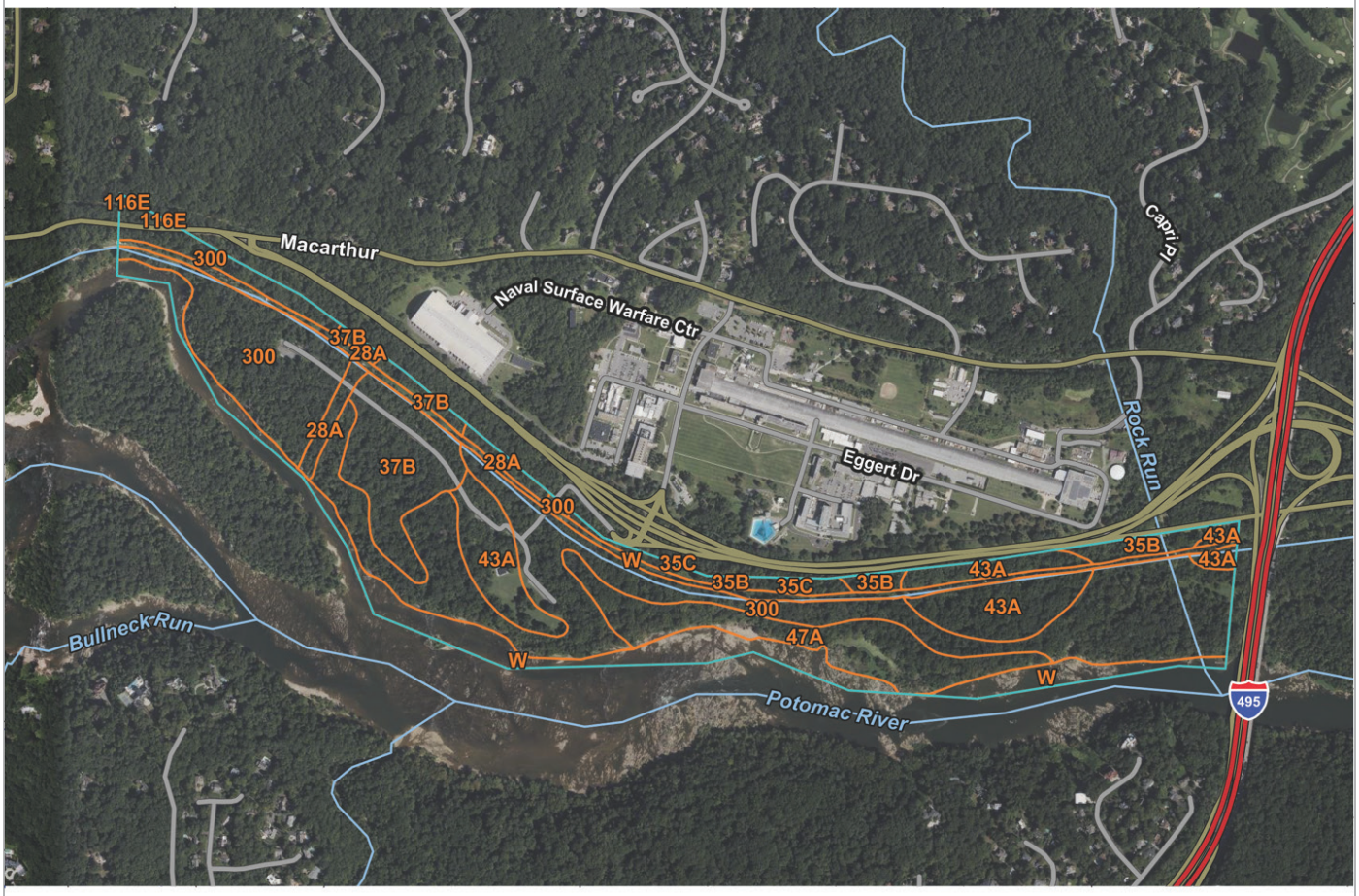
Based on the presence of the Potomac River and Rock Run, the hydrology of the cultural landscape retains integrity.

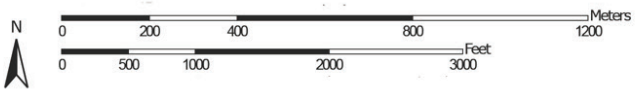
Geomorphology (Piedmont Region)

The contiguous United States are divided into physiographic provinces according to their geomorphologies, which refer to the physical features and processes of landforms, and their

Figure 58: (opposite) Soil map of Carderock cultural landscape (Natural Resources Conservation Service, United States Department of Agriculture, Web Soil Survey, accessed July 22, 2025).

Carderock Soil Map





Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
28A	Watchung silty clay loam, 0 to 3 percent slopes	4.7	2.1%
35B	Chrome and Conowingo soils, 3 to 8 percent slopes	5.4	2.5%
35C	Chrome silt loam, 8 to 15 percent slopes	3.9	1.8%
37B	Travilah silt loam, 3 to 8 percent slopes	20.6	9.4%
43A	Elk silt loam, 0 to 3 percent slopes, occasionally flooded	27.0	12.3%
47A	Lindside silt loam, 0 to 3 percent slopes, occasionally flooded	21.7	9.8%
116E	Blocktown channery silt loam, 25 to 45 percent slopes, very rocky	0.2	0.1%
300	Rock outcrop-Blocktown complex	98.6	44.8%
W	Census water	38.0	17.3%
Totals for Area of Interest		**220.1**	**100.0%**



Figure 59: The Potomac River, with Vaso Island visible from a high point within the western portion of the Carderock cultural landscape (Urban Heritage Project 2024).

relation to geologic structures. The Potomac River watershed traverses five geological provinces: the Appalachian Plateau, the Ridge and Valley, Blue Ridge, Piedmont, and Coastal Plain. The project area is located southeast of the Fall Line (or Fall Zone) of the Potomac River, which constitutes the boundary of two major geological provinces: the Piedmont and the Coastal Plain. The northwestern area of Washington, D.C. (not associated with the city's four quadrants) is part of the Piedmont Plateau province, while the southeastern area of the city is part of the Coastal Plain province.

The Piedmont Plateau province lies to the west of the Coastal Plain, encompassing the area west of the Fall Line to the Blue Ridge Mountains. Here, the sedimentary rock of the Atlantic Coastal Plain intersects with the harder, more durable metamorphic rocks to the west, forming an area of ridges, waterfalls, and rapids (Withington and Coulter 1964: 12-14).

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

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

reddish color. The geomorphology of the Carderock cultural landscape is a contributing feature and retains integrity.

Floodplain forest

The Carderock cultural landscape is a largely wooded landscape characterized by a mix of oak and hickory species, along with other common eastern hardwoods. The Carderock area is a Mid-Atlantic Mesic Mixed Hardwood forest. The Maryland Department of Natural Resources describes as this area as

> characterized by diverse forests throughout Maryland with moist, well-drained soils regimes often supporting lush vegetation. A variety of groups comprise this class which range from northern hardwoods at higher elevations in the mountains to basic mesic forests of the coastal plain (Maryland Department of Natural Resources 2016: 10).

A floodplain is the area of land adjacent to a river that experiences repeated flooding events; floodplain covers approximately 85 percent of C&O Canal NHP parkland. Due to flood events, floodplains exhibit unique soils and vegetation that are distinct from the surrounding "upland" habitats. Floodplain forests are dominated by mature, deciduous hardwood trees growing on alluvial, mineral soils. Dominant trees within the Mid-Atlantic Mesic Mixed Hardwood Forest found within the cultural landscape include white oak (*Quercus alba*), northern red oak (*Quercus rubra*), willow oak (*Quercus phellos*), box elder (*Acer negundo*), tulip poplar (*Liriodendron tulipifera*), American sycamore (*Platanus occidentalis*), pin oak (*Quercus palustris*), black cherry (*Prunus serotina*), white ash (*Fraxinus americana*), hackberry (*Celtis occidentalis*), black walnut (*Juglans nigra*), and paw paw (*Asimina triloba*). Shrub layer includes wineberry (*Rubus phoenicolasius*), spicebush (*Lindera benzoin*), multiflora rose (*Rosa multiflora*), and honeysuckle (*Lonicera* sp.) (***see Figure 60 and Figure 61***). (See Appendix A for further information on the forest conditions and recommendations).

Wineberry (*Rubus phoenicolasius*) is a widespread non-native and invasive shrub in Maryland that crowds out native plants by forming dense,



Figure 60: Vegetation within the cultural landscape along the Billy Goat Trail (Urban Heritage Project 2024).



Figure 61: Vegetation within the cultural landscape (Urban Heritage Project 2024).



Figure 62: View from the rocky cliffs within the western portion of the Carderock cultural landscape towards the Potomac River and nearby Vaso Island (Urban Heritage Project 2024).



Figure 63: Rocky cliffs within the western portion of the Carderock cultural landscape (Urban Heritage Project 2024).

prickly thickets. *Rosa multiflora* is an aggressive invasive shrub from East Asia that forms dense, impenetrable thickets and crowds out native plants. While Maryland has three native species of honeysuckle, the invasive exotic honeysuckles are more common.

Within the Carderock cultural landscape, there are: 43 state-listed rare, threatened, or endangered plant species; 5 species listed as globally vulnerable; and 3 globally rare vegetation communities. The floodplain forest of the Carderock cultural landscape is a contributing feature and retains integrity.

Rocky cliffs

Rising above the Potomac River, the rocky cliffs within the Carderock cultural landscape are made of Wissahickon mica-schist (***see Figure 62 and Figure 63***). The cliffs are predominantly located in the western portion of the cultural landscape and are popular for rock climbing. The cliffs range from approximately 25′ to 60′ in height, with several rock outcrops of varying size visible throughout the western portion of the landscape. The Wissahickon consists of resistant metamorphic rocks including schists, gneisses, metagraywackes and metaconglomerates. The steep slopes of Carderock are classified as the Blocktown-Rock Outcrop complex (Bedell, Cagney, and Raszick 2022: 04).

The rocky cliffs retain integrity and are a contributing feature to the Carderock cultural landscape.

Regional climate

The study area is located in the humid subtropical climate zone, according to the Koppen climate classification system. Annual precipitation in the Washington, D.C., area averages approximately 43.7″ per year, with almost half of the rain falling in the summer months.

According to the D.C. Department of Energy and Environment, the Washington, D.C., area has experienced extreme weather in recent years, including heat waves and snowstorms, and higher

tides caused by rising sea level, heavy rains and flooding, warmer average temperatures, and two to three times as many dangerously hot days. As these changes continue and intensify, the cultural landscape will likely experience rising temperatures, heatwaves, and dangerously hot days; more intense and unpredictable storms; and sea level rise and storm surges (D.C. Department of Energy and Environment 2021).

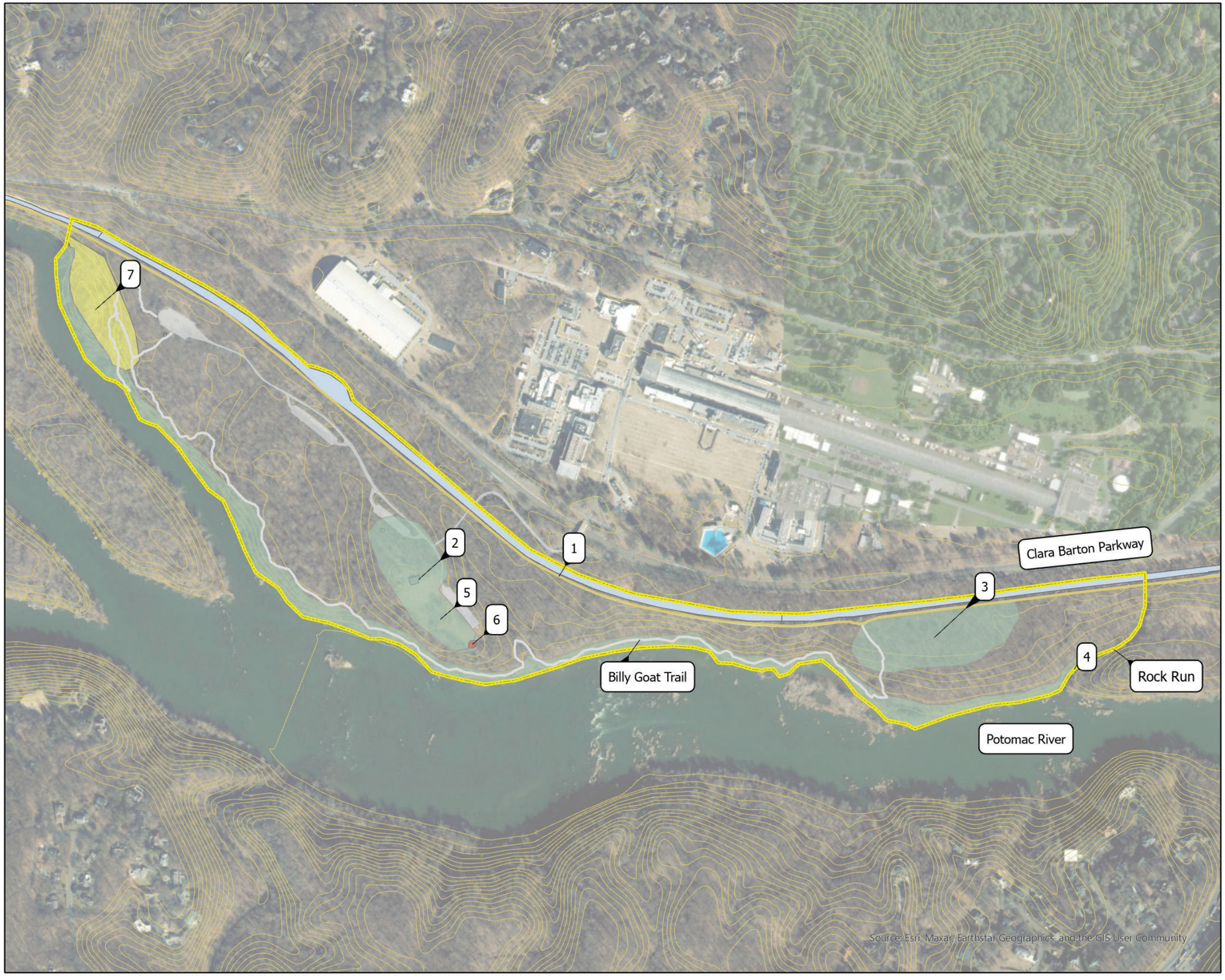
The regional climate is a contributing feature of the cultural landscape.

EVALUATION

The natural systems and features of the Carderock area, including its soils, geomorphology, lowland/floodplain forest, rocky cliffs, regional climate, and particularly its hydrology, are all contributing elements of the park's natural systems and features and have been fundamental in shaping its physical development. The natural systems and features retain integrity.

Natural Systems + Features: Character-Defining Features

Feature Description	*9000 BCE - 1500 CE (Paleo-Indian through Late Woodland)*	*1828 - 1924 (Canal operations)*	*1938 - 1942 (CCC)*	*1964 - 1965 (Mission 66)*	*Contributing Status*
Soils	X	X	X	X	Contributing
Hydrology (Potomac River and Rock Run)	X	X	X	X	Contributing
Geomorphology (Piedmont Region)	X	X	X	X	Contributing
Floodplain forest	X	X	X	X	Contributing
Rocky cliffs	X	X	X	X	Contributing
Regional climate	X	X	X	X	Contributing



Cultural Landscape Report

Carderock

Chesapeake and Ohio Canal NHP
Potomac, MD

Natural Systems and Features and Topography

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

In cooperation with:
National Capital Region, National Park Service

Sources
1. Ortho Imagery, 2025
2. Data collected in July, October 2024, and March, April 2025

Drawn By
Meg Frisbie, ArcGIS Pro 3.2.2, 2025

Legend
- CLR Boundary
- Contour lines (2 foot intervals)
- Topography, Contributing
- Natural Systems, Contributing
- Topography, Contributing
- Topography, Non-Contributing, Compatible
- Buildings+Structures
- Circulation
- C&O Canal

1. Flat topography of the C&O Canal towpath
2. Gradual slope of former Camp NP-2-MD site
3. Gradual slope of former Camp NP-1-MD site
4. Slopes to the Potomac River
5. Generally flat topography of recreation field
6. Discrete rises within recreation field
7. Carderock cliffs

Notes
1. Projection: NAD 1983 UTM Zone 18N

N 0 350 700 1,400 Feet

Drawing #7

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Land Use

Early habitation and land use within the greater Washington, D.C., area included occupation and subsistence farming by Indigenous groups during the Paleo-Indian, Archaic, and Woodland periods. As human habitation of the region evolved into semi-permanent settlements during the Archaic period, these peoples camped along the Potomac River (as it is known today), using the land for hunting, fishing, and gathering plants. During the Woodland Period (1200 BCE to 1600 CE), groups including the Nacotchtank people cultivated the land. In the late 14th and early 15th centuries, Algonquian-speaking people settled in the greater Potomac River Valley area and continued farming and fishing the waters of the Potomac River (Virginia Department of Historic Resources 2018; Hanna 2001: 4; National Park Service, Native Peoples of Washington, DC 2018; Elder and Weldon 2018: 36).

In the decades after Captain John Smith explored the region in 1608, English colonizers claimed the lands that Smith explored. As tracts of land were seized from Indigenous peoples and granted to colonizers, the land was used to farm. By the mid-17th century, tobacco became an increasingly important cash crop, and plantations worked by enslaved laborers developed across the Potomac region.

In 1802, three tracts of land were combined to form "Carderrock," a 1,705-acre plantation owned by Robert Peter, Georgetown's first mayor and a prominent tobacco merchant. By the mid-19th century, as the region's economy diversified and industrialization began to take root, the land use in Carderock evolved.

On July 4, 1828, construction began on the C&O Canal, connecting growers and producers in the Potomac River Valley with ports on the Eastern Seaboard (Elder and Weldon 2018: 31). In 1832, following the completion of approximately 60 miles of the canal (up to Harpers Ferry), the land was used for trade and transporting agricultural products, commercial items, lumber, and coal along the canal, through the project area, to Georgetown.

Beginning in 1831, packet boat services carrying mail began operation on the canal. These boats also functioned as tourist excursion boats, offering trips from Georgetown to points further west along the canal, including as far as Harpers Ferry, Virginia (now part of West Virginia) (Elder and Weldon 2018: 64). Recreational boat tours operated along the canal until 1924 (and later resumed in 1941).

In 1894, the 59-acre Potomac Brick Company was established immediately north of the C&O Canal and project area; the brickyard operated until 1928. A 1900 map produced by the U.S. Geological Survey depicts approximately five buildings within the project area, between the C&O Canal and Potomac River, and two more buildings just north of the canal and south of the brickyard. These buildings likely represent residential use associated with local laborers (McMahon 2022: 198-99).

The cliffs of Carderock were used by area rock-climbers beginning in the 1920s, and in the 1930s, the Potomac Appalachian Trail Club (PATC) established the Billy Goat Trail for recreation.

In 1920, Michael J. Keane, a lawyer and real estate developer from Washington, D.C., purchased 275 acres of Carderock, which he platted as "Camp Carderock," a residential subdivision. However, the economic downturn in the 1920s curtailed development, and Keane sold the land to Frank P. Harman, Jr. in 1924. Harman, like Keane, struggled to develop the housing subdivision, eventually selling it to the Woodside Homes Corporation in 1927.

The landscape's commercial, transportation, and industrial use ended in 1924, when commercial boat traffic ceased on the C&O Canal (McCarthy 2014: 7). In 1935, the federal government purchased the Camp Carderock subdivision from the Woodside Homes Corporation, and in 1938, purchased the

broader C&O Canal, with the intention to develop it as a work relief project and repurpose the first 22 miles of canal from Georgetown to Seneca for recreational use. These transactions marked pivotal transitions of the Carderock cultural landscape from private ownership to public land uses focused on recreation and conservation.

In 1938, the CCC established two camps within the Carderock cultural landscape, housing Black CCC enrollees who developed the canal and its surrounding lands for recreational use. The project area thus served as the headquarters for the CCC's conservation efforts, in additional to residential and educational uses associated with enrollee/officer housing and training/education facilities. The baseball diamond depicted northwest of Camp NP-2-MD in the 1938 plan also demonstrates the ongoing recreational use of the landscape by CCC enrollees.

Camp NP-2-MD closed in 1941, and Camp NP-1-MD closed the following year. Camp NP-1-MD was briefly repurposed for military use as a training facility, before closing shortly thereafter in July of 1942.

Mission 66 funding resulted in a major expansion of Carderock's recreational land use. As part of the George Washington Memorial Parkway extension, the NPS incorporated the Carderock area into its broader plan to provide recreational facilities along the Potomac River. The Carderock picnic pavilion and related amenities were completed in 1965 for public use.

Several historic land uses are no longer present within the Carderock cultural landscape: the agricultural land use related to Indigenous use and later plantations; industrial land use associated with the brickyard; residential uses throughout the periods of significance; commercial, industrial, and transportation land uses related to the C&O Canal; residential, administrative, educational, and training land uses associated with the CCC; and the military use associated with Camp NP-1-MD.

Today, the landscape retains its historic recreational and conservation land uses, with an added, non-historic land use as an interpretive site.

Recreation

HISTORIC CONDITIONS

The Carderock cultural landscape has a centuries-long history associated with recreational land use. The landscape was likely used for fishing, boating, and other forms of recreation during the period of significance associated with canal operations (1828-1924). Recreational boating existed along the C&O Canal beginning in the 1830s.

Research by the Potomac Appalachian Trail Club (PATC) Mountaineering Section suggests that the tradition of recreational rock climbing began in Carderock in the 1920s. In the early 20th century, there were several hiking and climbing clubs active in and around Washington, D.C., that took advantage of the nearby cliffs. While these activities were apparently male-dominated, women also joined the clubs and found ways to participate in spite of contemporary dress. Over the course of the 20th century, their participation increased.

With several rock outcrops throughout the western portion of the cultural landscape, Gustave Gambs, Donald Hubbard, and Paul Brad were among the early rock climbers to establish climbing routes in Carderock, using "heavy manila ropes, pounded pitons into cracks for protection, and in addition to bottom to top routes, put up traverses to get the maximum length routes on the relative short cliffs" (Hanel 1990: 5).

In the 1930s, the federal government acquired the C&O Canal—including the study area—as part of New Deal conservation efforts to repurpose the first 22 miles of the canal specifically for recreational use. The CCC played a pivotal role in transforming the canal and its surroundings into a recreational space. Among other tasks, the CCC enrollees constructed a picnic area in Carderock. Other early forms of recreation within the cultural landscape likely included hiking, biking, bird watching, and picnicking. The Billy Goat Trail was also likely constructed in the 1930s, bolstering the recreational features within the cultural landscape. (Refer to the Circulation section for more information about the trail itself.)

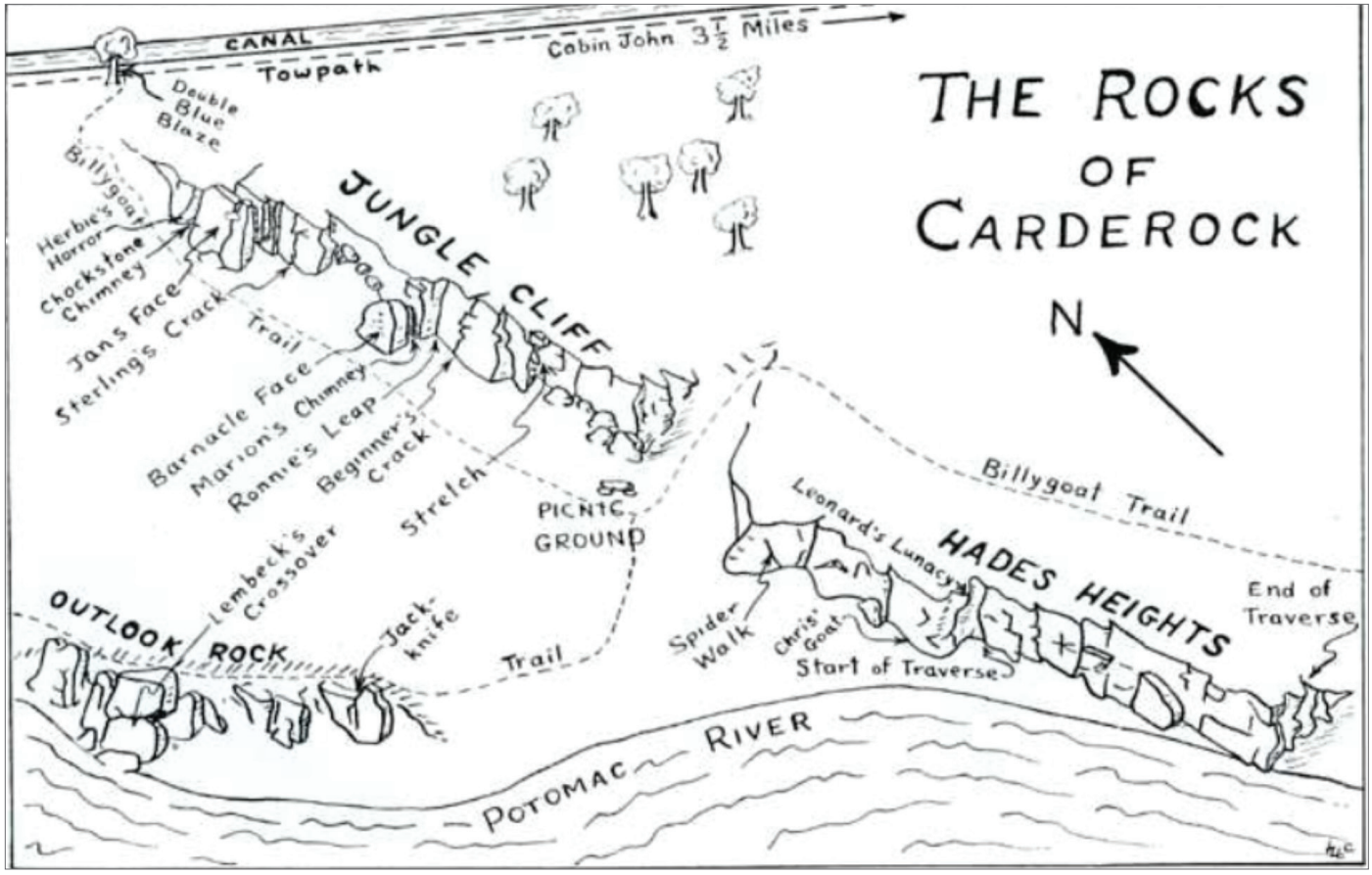


Figure 64: A map of "The Rocks of Carderock" by Herbert Conn depicting the names of several climbing routes and the Billy Goat Trail, 1944 (Source: Potomac Appalachian Trail Club Bulletin, July 1944, 59–68).

In July 1941, the NPS launched its first public boat rides, continuing the tradition established in the 1830s. The *Canal Clipper* was the first government-sponsored public boat on the canal, and was propelled by one or two mules walking along the canal towpath.

During World War II, rock-climbers could access Carderock's cliffs by taking the trolley line (which ran parallel to MacArthur Boulevard) from Georgetown to Cabin John, and then making a four-mile walk along the C&O Canal (Hanel 1990: 5). Beginning in 1942, climbing and caving pioneer Jan Conn established several routes at Carderock. Conn celebrated the achievements of local female climbers noting, "Girl rock-climbers who lead and are willing to assume equal responsibility for an ascent are fairly rare, but the climbing group in Washington, D.C., has turned out more than its share" (*Conn Appalachia* 1952).

In 1944, Jan and Herb Conn established a newsletter called *Up Rope* to record the achievements of local climbers and connect individuals with similar interests. In July 1944, Herbert Conn and Arnold Wexler published a guide



Figure 65: Visitors use the Carderock picnic pavilion (Urban Heritage Project 2024).

for climbing at Carderock that included a hand-drawn map (***see Figure 64***). The map includes several names for the Carderock climbing areas (such as Jungle Cliff and Hades Heights) and individual routes that are still used today in climbing guidebooks.

The Carderock picnic pavilion and related amenities were completed in 1965 for public recreational day-use. When the C&O Canal National Historical Park (NHP) was established a few years later, recreation was explicitly named in the enabling legislation. Established on January 8, 1971, the purpose of the C&O Canal NHP was "to preserve and interpret the historic and scenic features... and develop the potential of the canal for public recreation."



Figure 66: Visitors playing pétanque in the flat gravel area surrounding the picnic pavilion (Urban Heritage Project 2024).



Figure 67: Cyclists on the C&O Canal towpath (Urban Heritage Project 2024).

EXISTING CONDITIONS

Today, as part of the Chesapeake and Ohio Canal NHP, Carderock is managed as a public area for day-use recreation. The cultural landscape includes small-scale features, circulation features, and buildings and structures that bolster the recreational land use. Today, Carderock is a popular day-use recreational destination, with visitors partaking in hiking, bicycling, volleyball (a movable volleyball net is located within the open recreation field), bird watching, rock climbing, picnicking, bocce/pétanque, horseshoes, and other recreational activities (***see Figures 65, 66, and 67***).

The rock-climbing tradition continues at Carderock to this day (***see Figures 68 and 69***). The western portion of the Carderock cultural landscape continues to be a destination for rock climbing, as



Figure 68: Rocky cliffs of Carderock overlooking the Potomac River (Urban Heritage Project 2024).



Figure 69: Rocky cliffs of Carderock overlooking the Potomac River (Urban Heritage Project 2024).



Figure 70: Wayside interpreting the CCC history of the cultural landscape (Urban Heritage Project 2024).

it was during the second, third, and fourth periods of significance. With several established routes for a range of difficulty levels, Carderock is among the most popular rock-climbing destinations in the Washington, D.C., area.

Recreation retains integrity and is a contributing land use.

Conservation

HISTORIC CONDITIONS

Beginning in 1938, CCC enrollees undertook extensive restoration and conservation projects within the study area, including clearing the canal bed, restoring the towpath, and repairing historical structures such as locks and lockhouses in order to open the canal landscape for public access and recreation. The canal's success as a recreational destination was ultimately made possible by the conservation work of CCC Companies 325 and 333.

EXISTING CONDITIONS

In 1961, the study area was included within the boundaries of the C&O Canal National Monument, and on January 8, 1971, it became part of the newly created C&O Canal National Historical Park. Originally managed as a part of the George Washington Memorial Parkway, Carderock likely came under C&O Canal NHP management in 1974. The Carderock cultural landscape is a federal area that is managed in accordance with the National Park Service's mission, with the purpose to,

> ...conserve the scenery, natural and historic objects, and wild life in the System units and to provide for the enjoyment of the scenery, natural and historic objects, and wild life in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.

The conservation land use retains integrity and is a contributing feature.

Interpretation

HISTORIC CONDITIONS

The NPS launched its first public boat rides in July 1941. Operated primarily by CCC workers, tours on the *Canal Clipper* ran once per week between Chain Bridge and Carderock during July and August; between Carderock and Great Falls during August and September; and between Great Falls and Rushville (at Lock 23 and Inlet Lock 2, adjacent to Dam 2 and the Seneca Falls) during September and October. A uniformed Park Ranger provided interpretive commentary on the four-hour tours (McCarthy 2014: 08). In the spring of 1961, the *Canal Clipper* was replaced by the larger *Canal Clipper II*, which offered round-trip tours from Georgetown to Lock 5 (approximately Mile Marker 5.0). These tours did not travel as far as the project area. As was true on the *Canal Clipper*, a NPS naturalist or historian

generally accompanied the tour groups to provide commentary (McCarthy 2014: 10).

EXISTING CONDITIONS

From 1941 through 2011, excursion boats offered interpretation of the canal and its history. These tour boats traveled through the project area from 1941 through 1961; tour boats no longer travel through the Carderock cultural landscape.

In 2020, the NPS installed waysides in the Carderock cultural landscape to interpret the history of the CCC camps in this location (*see Figure 70*). With these features in place, interpretation is a contributing land use.

EVALUATION

The conservation, recreation, and interpretation land uses at Carderock retain integrity and are contributing features. Overall, land use at Carderock is contributing.

Land Use: Character-Defining Features

Feature Description	*9000 BCE - 1500 CE (Paleo-Indian through Late Woodland)*	*1828 - 1924 (Canal operations)*	*1938 - 1942 (CCC)*	*1964 - 1965 (Mission 66)*	*Contributing Status*
Recreation		X	X	X	Contributing
Conservation			X	X	Contributing
Interpretation			X		Contributing

Topography

The topography of the Carderock cultural landscape is varied. The land encompassing the C&O Canal and towpath is generally flat, with terraces south of the canal and varied wooded slopes along the riverfront. The topography has not changed since the periods of significance.

Flat towpath

HISTORIC CONDITIONS

The C&O Canal was engineered with several stepped, flat sections to facilitate the travel of boats along the waterway; extensive engineering created a level, steady, and controlled waterway for boats. (For more on the canal's design, see the Constructed Water Features section.) The canal towpath, running alongside the canal adopted the same relatively flat elevation. Historically, the towpath maintained the same elevation as the top of the canal. This topographic arrangement allowed mule teams to pull the canal boats during the period of canal operations; during the later periods of significance, this topography was an asset for the landscape's recreational use, making the towpath accessible for public hiking and cycling. Throughout the second, third, and fourth periods of significance (1828-1924; 1938-1942; 1964-1965), the topography of the towpath remained flat.

EXISTING CONDITIONS

As during the later periods of significance, the topography of the canal towpath is primarily flat (*see Figure 71*). The flat topography of the canal towpath is a contributing feature of the cultural landscape.

Gradual slope of former Camp NP-2-MD site

HISTORIC CONDITIONS

During the third period of significance (1938-1942), the CCC selected a site for Camp NP-2-MD that was mostly flat, with a gentle grade towards the south/southeast. An oblique aerial photograph taken c. 1940 depicts a flat area in which the buildings are sited.

In May of 1964, portions of this area were mechanically graded to create the recreation field



Figure 71: The C&O Canal towpath on the right with the canal visible on the left (Urban Heritage Project 2024).

and construct the picnic pavilion, thus slightly altering the topography.

EXISTING CONDITIONS

Today, the topography of the Camp NP-2-MD site reflects the third period of significance (*see Figure 72*). The gradual slope retains integrity to the later periods of significance and is a contributing topographic feature.

Gradual slope of former Camp NP-1-MD site

HISTORIC CONDITIONS

The buildings of Camp NP-1-MD were primarily sited on a fairly flat terrace just south of the C&O Canal and towpath, with a steep slope separating the camp from the river. This site was selected based on its existing topography, which offered favorable landscape conditions for building construction and close proximity to the canal.

EXISTING CONDITIONS

The topography of former Camp NP-1-MD has not been altered; it continues to feature a broad terrace, separated from the Potomac River by steep slopes (*see Figure 73*). The gradual slope upon which Camp NP-1-MD was developed retains integrity and is a contributing feature.

Slopes to the Potomac River

HISTORIC CONDITIONS

Situated on the north bank of the Potomac River, the Carderock cultural landscape historically included gradual slopes along the riverbanks. (The area's cliffs represent more dramatic topography, and are addressed in the Natural Systems and Features section above.) The grades of the slopes along the riverfront were likely varied, shifting over the centuries due to flood events that were a natural occurrence for this riverfront site.



Figure 72: View looking north/northeast towards the picnic pavilion across the recreation field (Urban Heritage Project 2024).



Figure 73: Slope in the location of former Camp NP-1-MD (Urban Heritage Project 2024).



Figure 74: Gentle slope near a section of the Billy Goat Trail, in the eastern portion of the cultural landscape (Urban Heritage Project 2024).



Figure 75: Steep slopes within the western portion of the cultural landscape, above the Potomac River (Urban Heritage Project 2024).

EXISTING CONDITIONS

The grade of the slopes to the Potomac River has likely changed in recent decades, eroding due to ongoing weather events and human use (***see Figure 74 and Figure 75***). In 1990, author Selma Hanel noted that,

> Carderock has an erosion problem because of its proximity to the river. Many climbs, such as those near Easy Layback, have lost 2′ of top soil at the bottom of the route within a few decades....From records forty years ago [referring to c. 1950], it is evident that human use has increased the rate of erosion by wearing away the vegetation which holds the riverbank intact. (Hanel 1990: 03)

The downhill gradients towards the Potomac River are varied, with a range of steep and gradual slopes along the riverfront. While the slopes have shifted over the decades, they retain integrity as topographic features within the cultural landscape.

Generally flat topography of the recreation field

HISTORIC CONDITIONS

The CCC selected a site for Camp NP-2-MD that was mostly flat, with a gentle grade towards the south/southeast. During the operation of CCC Camp NP-2-MD, a generally flat area existed between the Camp NP-2-MD residential and administrative cluster to the northwest and the Camp NP-2-MD maintenance cluster to the southeast; this area included vehicular circulation and a few individual tree plantings.

During the Mission 66 development of the Carderock cultural landscape, this generally flat area became the northwestern half of a recreation field. The Camp NP-2-MD maintenance cluster occupied the southeastern half of what is today the recreation field. Grading for the recreation field took place in 1964, creating an open, grassy area that measured approximately three acres. Portions of this area were mechanically graded in May of 1964 to create the recreation field. Associated with the Carderock picnic pavilion, the open recreation



Figure 76: Generally flat topography of the recreation field, looking west (Urban Heritage Project 2024).

field was established on a bank above the Potomac River; its perimeter was defined on the northwest, southwest, and southeast by the forest edge.

EXISTING CONDITIONS

Today, the topography of the recreation field reflects the 1964-1965 period of significance (*see Figure 72 and Figure 76*). The generally flat topography of the recreation field retains integrity and is a contributing topographic feature.

Discrete rises within open recreation field

EXISTING CONDITIONS

There are discrete rises within the otherwise fairly level grass recreation field (*see Figure 77 and Figure 78*). The rises are a few feet in height, visible to the human eye as a variation in the otherwise level topography of the field. The source of these rises is unknown, and their contributing status is undetermined.

EVALUATION

The topography of the Carderock cultural landscape has not significantly changed since the periods of significance and retains integrity. While the contributing status of the discrete rises is undetermined, the remaining topographic features retain integrity and are contributing.



Figure 77: View looking southeast towards the discrete rises within the open field (Urban Heritage Project 2024).



Figure 78: Discrete rises in the land within the southeastern section of the open field (Urban Heritage Project 2024).

Topography: Character-Defining Features

Feature Description	*9000 BCE - 1500 CE (Paleo-Indian through Late Woodland)*	*1828 - 1924 (Canal operations)*	*1938 - 1942 (CCC)*	*1964 - 1965 (Mission 66)*	*Contributing Status*
Flat towpath		X	X	X	Contributing
Gradual slope of former Camp NP-2-MD site		X	X	X	Contributing
Gradual slope of former Camp NP-1-MD site		X	X	X	Contributing
Slopes to the Potomac River		X	X	X	Contributing
Generally flat topography of the recreation field				X	Contributing
Discrete rises within open recreation field					Undetermined

*NOTE: Refer to **Drawing 7** (Natural Systems and Features + Topography) on page 141 for these features.*

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Figure 79: (opposite) Plan depicting the development of two CCC camps at Carderock (indicated by hatching), 1939 (Source: National Park Service ETIC 412/80271).

Spatial Organization

The spatial organization of the C&O Canal and towpath, oriented southeast to northwest along the northern portion of the cultural landscape, have been consistent since their completion in 1830. Since that time, features within the landscape have been oriented around and in relationship to the canal and towpath.

The Billy Goat Trail Section C was blazed in the 1930s, establishing a throughline feature that complemented the towpath. This trail generally ran parallel to the river, with connecting spurs at the western and eastern ends of Carderock.

During the CCC period, the spatial organization of the landscape was also defined by the two camps, located on the south side of the canal separated by a narrow stretch of land along the Potomac River (*see Figure 79*). Camp NP-2-MD closed in November of 1941, and the buildings were relocated for wartime mobilization efforts sometime thereafter. In April of 1942, Camp NP-1-MD was converted into a defense camp, known as NP(D)3, that operated until Congress formerly ended the CCC program in July of 1942. The buildings were thereafter removed.

During the Mission 66 period, the National Park Service developed a plan for the Carderock Recreation Area, establishing a new system of spatial organization within the study area. The c. 1958 plan included two picnic areas (A and B); four picnic shelter/comfort station structures; five parking lots, with a capacity of 420 cars; two other picnic shelters; and camping areas (*see Figure 80*). However, when the recreation area was completed in 1965, it was whittled down to one picnic pavilion, two comfort stations, four parking lots connected by a road, and limited open areas for recreational fields.

The C&O Canal and towpath; the Billy Goat Trail; the four parking lots and their connecting road; and the picnic pavilion are all central features of the cultural landscape's spatial organization.

Linear organization of the canal and towpath

HISTORIC CONDITIONS

The C&O Canal was designed to facilitate the travel of boats along the waterway, with a parallel towpath to allow mule teams to pull the canal boats in the 1800s.

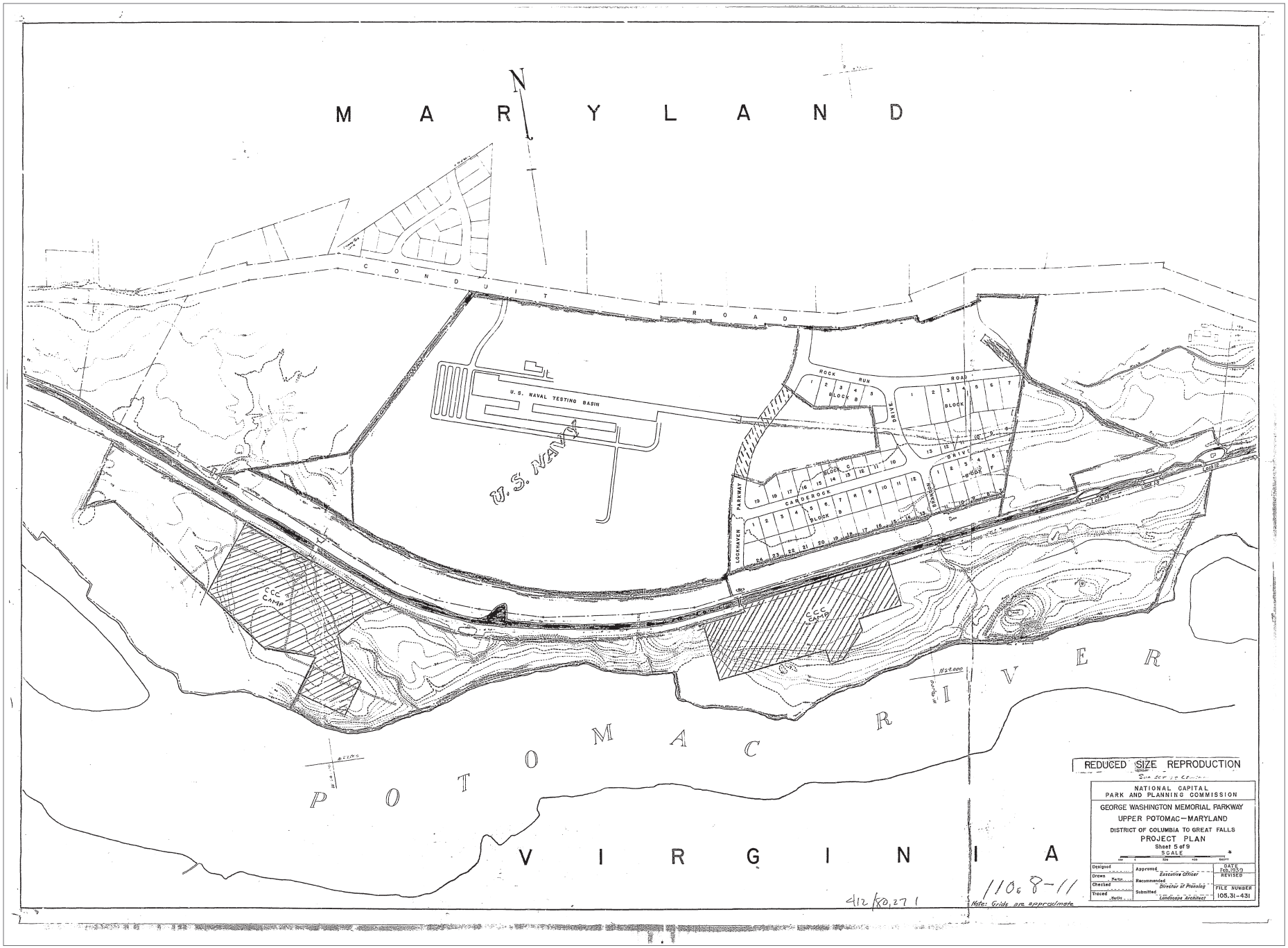
EXISTING CONDITIONS

The linear organization of the canal and towpath has not changed since the era of canal operations. Today, as during the periods of significance, the towpath and canal are parallel linear features (*see Figure 81*). The canal and towpath, oriented northwest to southeast across the cultural landscape, continue to be dominant organizing features in the landscape's spatial arrangement. The linear organization of the canal and towpath maintains integrity and is a contributing feature of the cultural landscape's spatial organization.

Billy Goat Trail as towpath connector at the west and east ends of the study area

HISTORIC CONDITIONS

The Potomac Appalachian Trail Club (PATC) established the Billy Goat Trail in three sections in the 1930s, with Section C extending through this CLR's study area. (For more on the trail's design and physical history, see the Circulation section.) The trail complemented the towpath's route and


M A R Y L A N D
N
C O N D U I T R O A D
U.S. NAVAL TESTING BASIN
U.S. NAVY
ROCK RUN ROAD
BLOCK
DRIVE
GARDEROCK
PARKWAY
LOOP
C.C.C. CAMP
C.C.C. CAMP
P O T O M A C R I V E R
V I R G I N I A
REDUCED SIZE REPRODUCTION
NATIONAL CAPITAL
PARK AND PLANNING COMMISSION
GEORGE WASHINGTON MEMORIAL PARKWAY
UPPER POTOMAC—MARYLAND
DISTRICT OF COLUMBIA TO GREAT FALLS
PROJECT PLAN
Sheet 5 of 9
SCALE
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Executive Officer
Recommended
Director of Planning
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Landscape Architect
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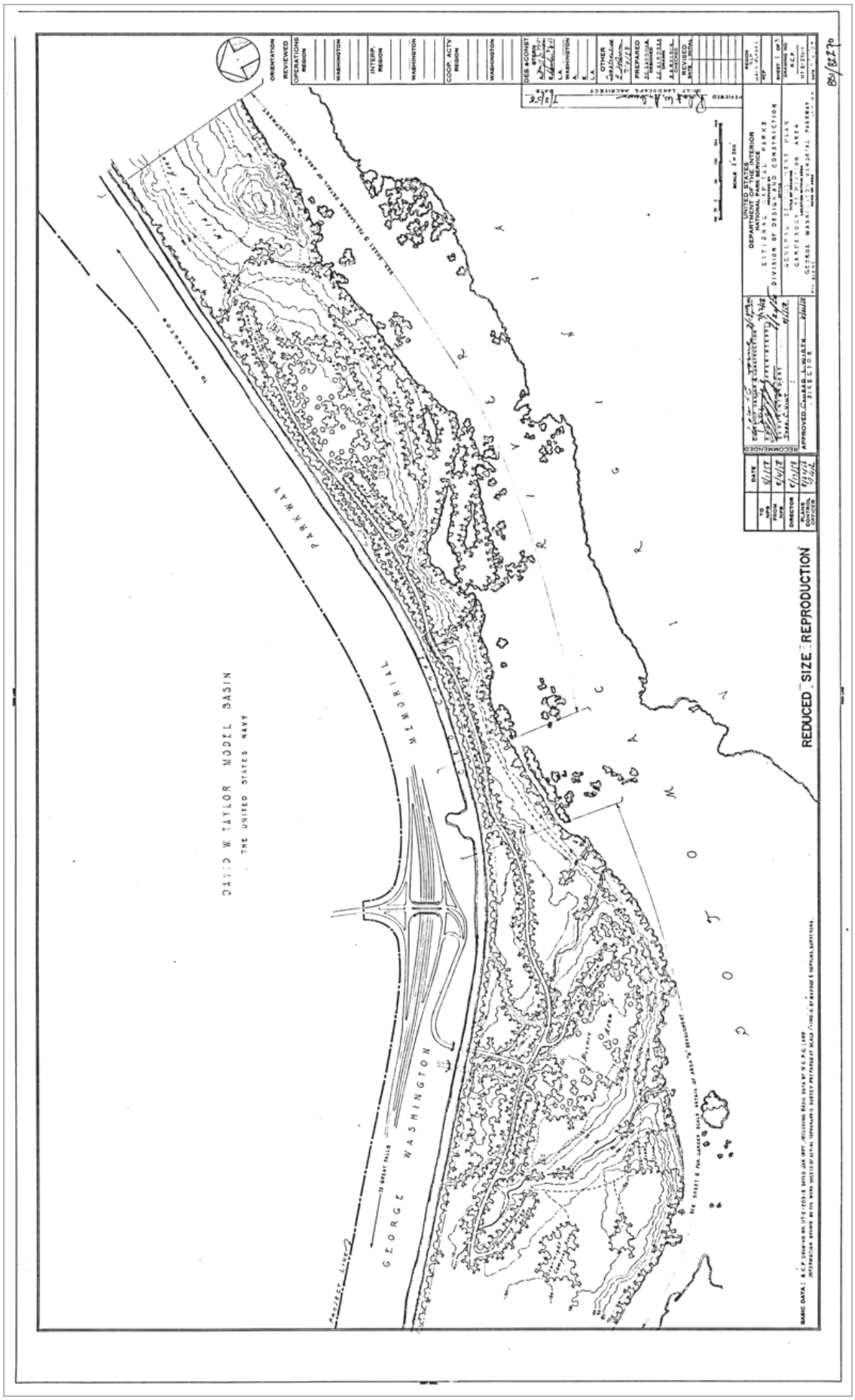


Figure 80: 1958 General Development Plan, Carderock Recreation Area, George Washington Memorial Parkway, page 1. Note: CLR authors were not able to locate a higher-resolution version (Source: National Park Service ETIC 851/82270).



Figure 81: The linear C&O Canal towpath on the left side of the photograph, with the canal visible on the right (Urban Heritage Project 2024).

extended along the Potomac River shoreline; the two linear circulation features intersected at the west and east ends of the study area.

When the parking lots were subsequently constructed during the Mission 66 development period, they were established in relation to the existing trail and towpath as organizing features.

EXISTING CONDITIONS

As during the later periods of significance, Section C of the Billy Goat Trail intersects with the C&O Canal towpath and connects the west and east sides of the study area by way of the Potomac River (*see Figure 82*). While the precise route of the trail may have shifted over the decades, following flood events, the trail retains integrity as a connector through the landscape and is a contributing feature of spatial organization.



Figure 82: Intersection of the Billy Goat Trail and the C&O Canal towpath (Urban Heritage Project 2024).

Picnic pavilion as central organizing feature within Parking Lot 1

HISTORIC CONDITIONS

Although the Mission 66 plans for Carderock were originally grander in scope, the area ultimately received a scaled-down version of the c. 1958 plan. As built, the primary organizing feature was a picnic pavilion on the north side of the recreation field, completed in 1965 to serve as a central focal



Figure 83: View towards the picnic pavilion from Parking Lot 1 (Urban Heritage Project 2024).

point (visible from Parking Lot 1) and the heart of the recreation area.

EXISTING CONDITIONS

The picnic pavilion serves as the central organizing feature in developed area near Parking Lot 1, the easternmost parking lot; the spatial relationships in this area have not changed since the period of significance (*see Figure 83*). The spatial organization of the picnic pavilion as the central organizing feature within Parking Lot 1 is a contributing feature in the cultural landscape.

Series of four parking lots within surrounding forest, connected by a road

HISTORIC CONDITIONS

Built as part of the Mission 66 development at Carderock, a series of four parking lots—linked by a two-way road—was constructed on the south side of the towpath and approached from the intersection with the entrance road off of George Washington Memorial Parkway (today Clara Barton Parkway). The parking lots are under construction in a 1962 aerial photograph. The easternmost parking area (Parking Lot 1) was constructed southeast of the picnic pavilion (completed in 1965) and adjacent to the associated recreation field. The access road thereafter traveled northwest to the second parking area (Parking Lot 2), then the third (Parking Lot 3), followed by the westernmost and final parking area (Parking Lot 4).

EXISTING CONDITIONS

The series of four parking lots has not been altered since its construction, organizing the movement through the cultural landscape in a manner consistent with the period of significance. The easternmost parking area (Parking Lot 1) maintains its spatial relationship with the recreation field, picnic pavilion, and Billy Goat Trail; the westernmost parking area (Parking Lot 4) is spatially associated with the nearby cliffs. The parking lots and their connector road retain integrity as a spatial organization feature for the cultural landscape.

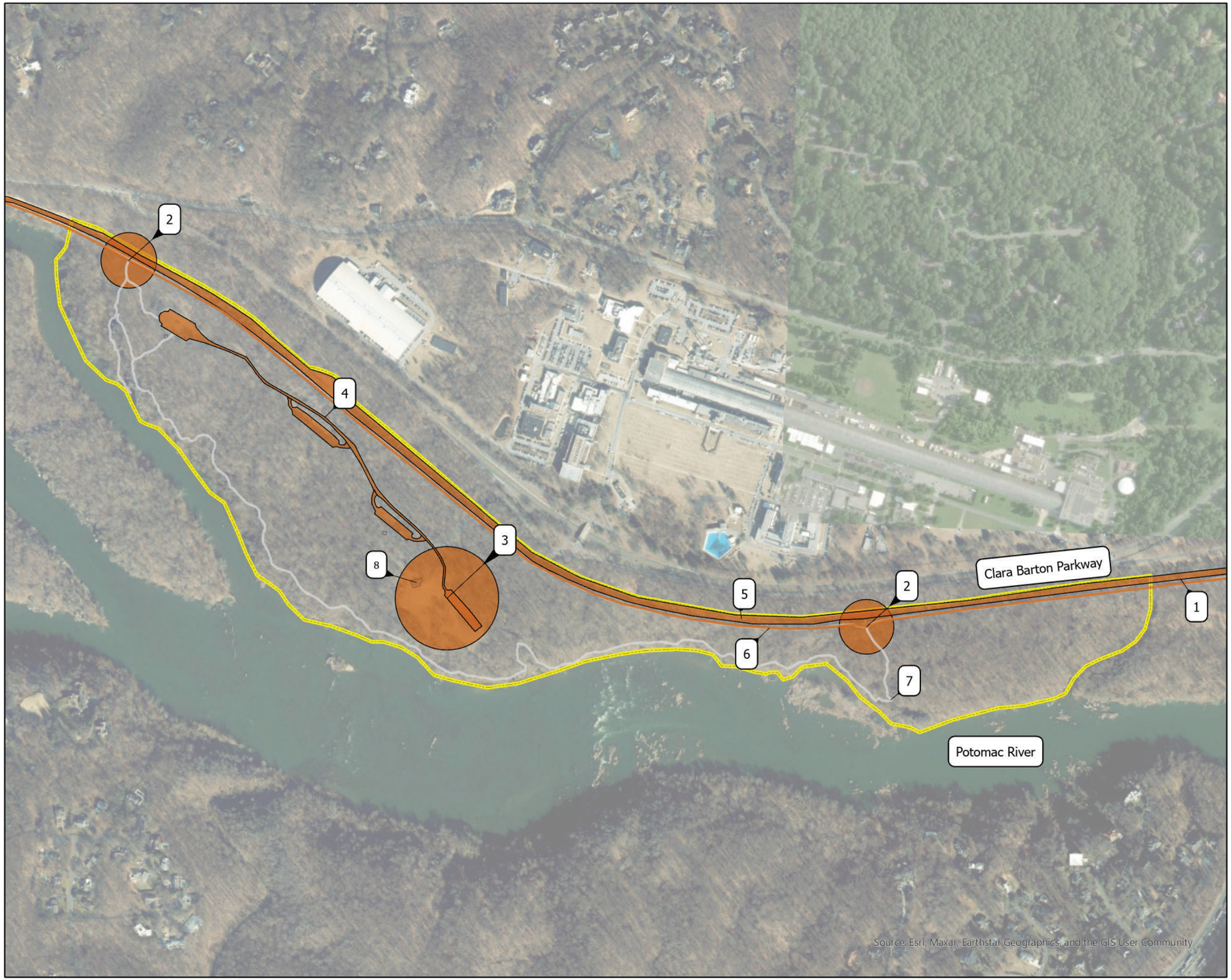
EVALUATION

All features associated with the spatial organization of the Carderock cultural landscape date to the periods of significance. The landscape's spatial organization retains integrity.

Spatial Organization: Character-Defining Features

Feature Description	*9000 BCE - 1500 CE (Paleo-Indian through Late Woodland)*	*1828 - 1924 (Canal operations)*	*1938 - 1942 (CCC)*	*1964 - 1965 (Mission 66)*	*Contributing Status*
Linear organization of the canal and towpath		X	X	X	Contributing
Billy Goat Trail as towpath connector at the west and east ends of the study area			X	X	Contributing
Picnic pavilion as central organizing feature within Parking Lot 1				X	Contributing
Series of four parking lots within surrounding forest, connected by a road				X	Contributing

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Cultural Landscape Report

Carderock

Chesapeake and Ohio Canal NHP
Potomac, MD

Spatial Organization

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

In cooperation with:
National Capital Region, National Park Service

Sources
1. Ortho Imagery, 2025
2. Data collected in July, October 2024, and March, April 2025

Drawn By
Meg Frisbie, ArcGIS Pro 3.2.2, 2025

Legend

- CLR Boundary
- Spatial Organization, Contributing
- Billy Goat Trail
- Spatial Organization, Contributing
- Buildings+Structures

1. Linear organization of the canal and towpath
2. Billy Goat Trail Section C as towpath connector at the west and east ends of the study area
3. Picnic pavilion as central organizing feature within the first parking area
4. Series of four parking lots within surrounding forest, connected by a road
5. C&O Canal
6. C&O Canal towpath
7. Billy Goat Trail Section C

Notes
1. Projection: NAD 1983 UTM Zone 18N

N 0 350 700 1,400 Feet

Drawing #8

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Cluster Arrangement

Little is known about the cultural landscape's cluster arrangements during the period of significance associated with canal operations. A 1900 map produced by the U.S. Geological Survey depicts a cluster of approximately five buildings between the C&O Canal and Potomac River within the project area, with an additional two buildings immediately north of the canal. This cluster was likely residential, perhaps depicting homes of brickyard workers, or it may comprise the core of the historically Black community of Brickyard (McMahon 2022: 198-99). Maps from 1894, 1900, and 1904 depict a cluster of two buildings located off an unimproved road south of the canal within the project area (for the 1894 map, *see Figure 10* on page 64; for the 1900 map, *see Figure 12* on page 69; for the 1904 map, *see Figure 13* on page 69).

While the nature of the late-19th- and early-20th-century maps, and the scale of the features on the maps, make them difficult to georeference precisely, overlaying the historic maps with LIDAR imagery offers some information. A road trace visible in LIDAR imagery (*see Figure 172*, Feature B, on page 249) is located near the two southernmost and westernmost buildings visible in the 1900 map. The unimproved road visible in the 1900 map roughly aligns with portions of the CCC road trace, and the buildings are in the approximate location of CCC Camp NP-2-MD.

During the CCC era, the Civilian Conservation Corps introduced new clusters of features in the study area: the Camp NP-1-MD residential and administrative cluster; the Camp NP-1-MD maintenance cluster; the Camp NP-2-MD residential and administrative cluster; and the Camp NP-2-MD maintenance cluster. All four clusters were sited south of the canal. From east to west, they were arranged as follows: the Camp NP-1-MD maintenance cluster, the Camp NP-1-MD residential and administrative cluster, the Camp NP-2-MD maintenance cluster, and the Camp NP-2-MD residential and administrative cluster.

Camp NP-1-MD included an access road along the north side of the developed campus (*see Figure 84*). The road accessed the Camp NP-1-MD residential and administrative cluster, which was arranged on an irregular grid with linear walking paths connecting the buildings and structures. The residential barracks were concentrated in the central portion of the cluster, and administrative offices were located east of the barracks. Other common buildings, including the recreation hall, education building, kitchen, and other buildings, were arranged around the perimeter.

Separated physically and by use, the Camp NP-1-MD maintenance cluster was located east of the Camp NP-1-MD residential and administrative cluster. The maintenance cluster consisted of garages and other maintenance structures situated on the north and south sides of the access road.

The Camp NP-2-MD residential and administrative cluster was accessed from "Camp Road" by way of an underpass underneath the canal from the north (*see Figure 85*). The residential and administrative cluster was arranged on an irregular grid with linear walking path connecting the buildings and structures. The residential barracks were concentrated at the center of the cluster. Administrative and common buildings—including the recreation hall, education building, infirmary, kitchen, etc.—were arranged around the perimeter. An army garage was located at the south side of the cluster, accessed by way of "Camp Road."

The Camp NP-2-MD maintenance cluster was located southeast of Camp NP-2-MD. The "NPS Quadrangle" (as it was labeled on contemporary site plans) was accessed from the "Camp Access Road" off of the canal towpath and consisted of a ring of maintenance buildings and structures arranged around a common area.

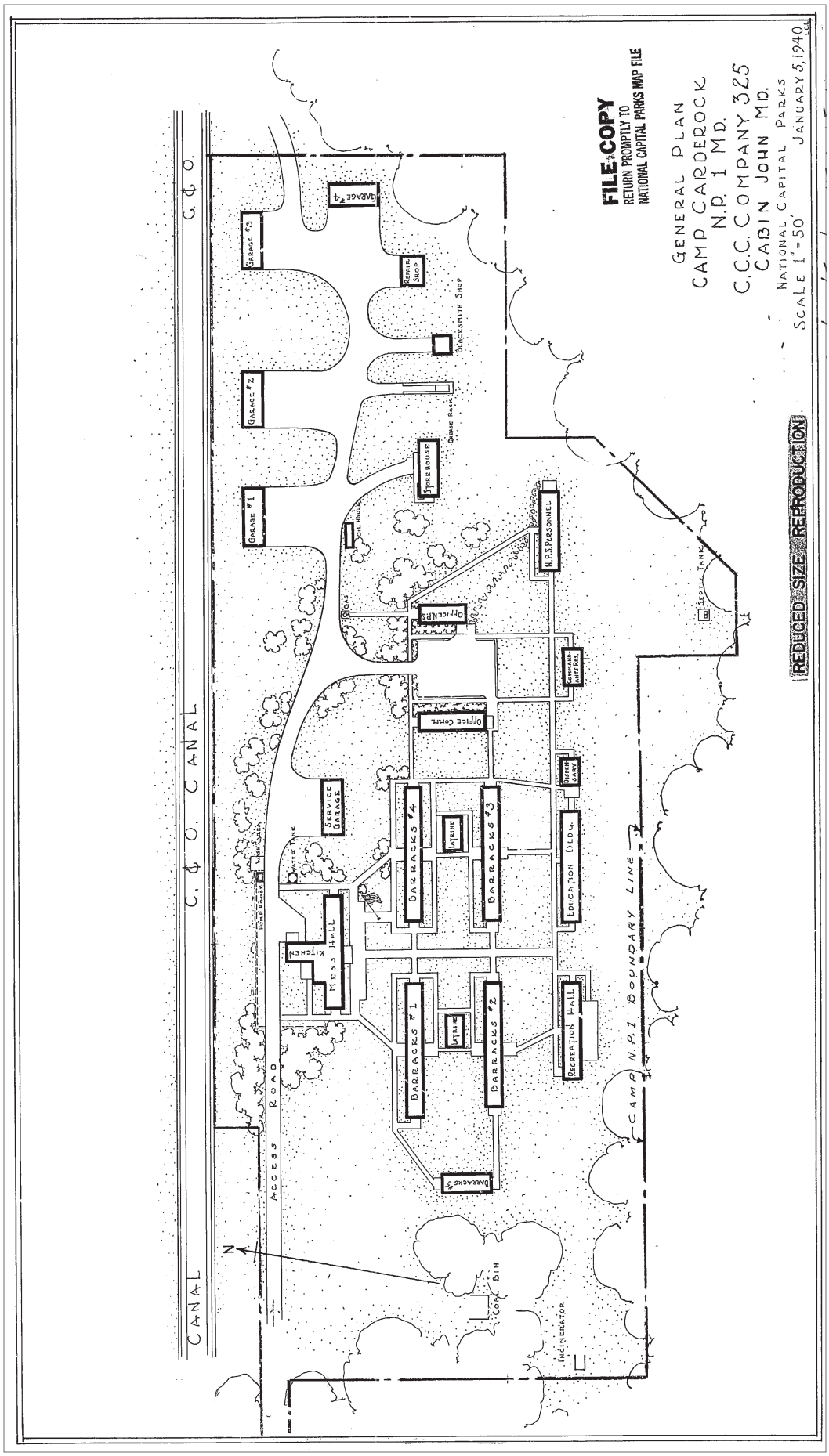


Figure 84: Plan of Camp NP-1-MD, 1940 (Source: Howard 2017: 54; the original drawing has not been located).

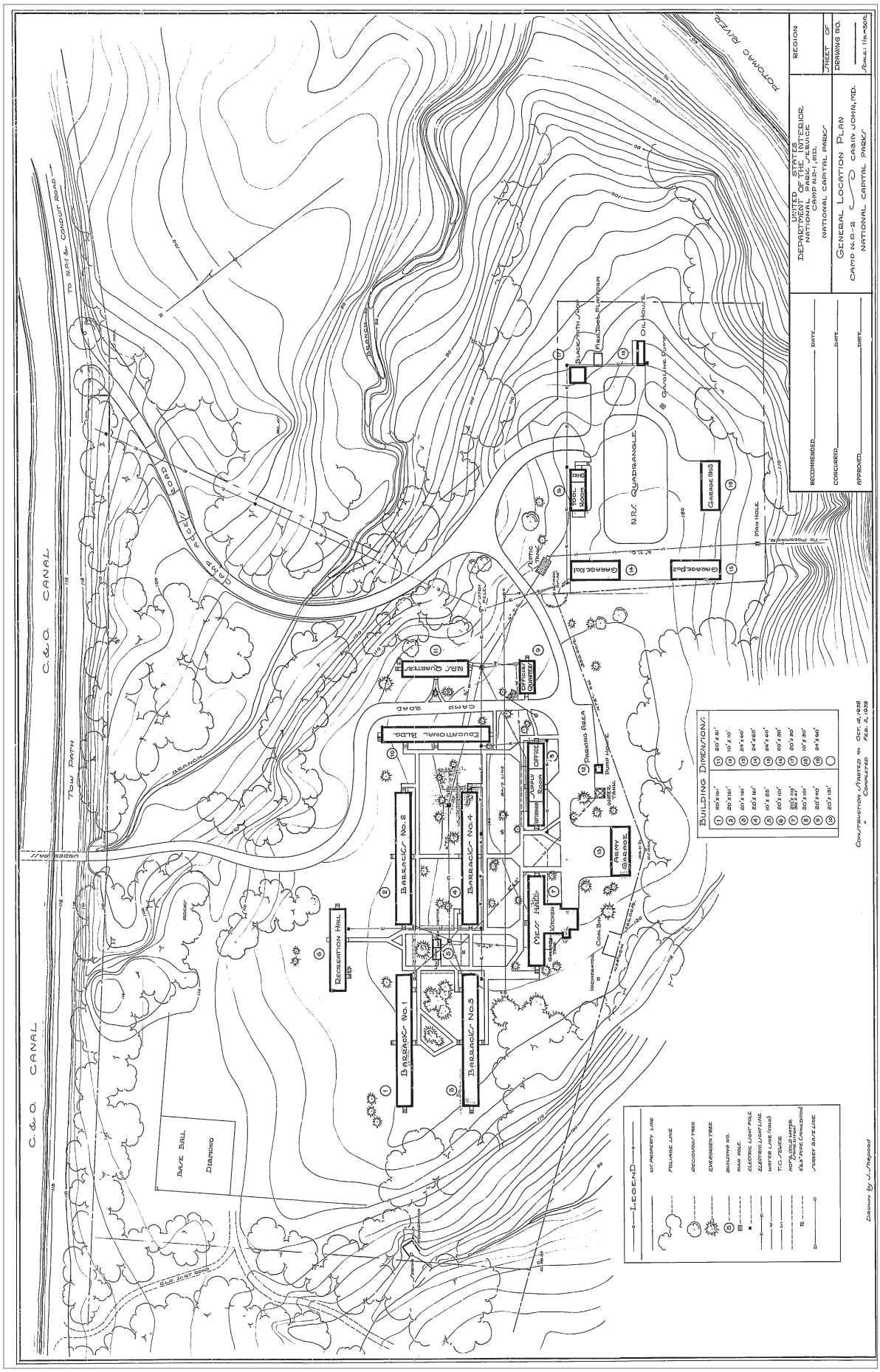


Figure 85: Plan of Camp NP-2-MD, 1938 (Source: Howard 2017: 79; the original drawing has not been located).

All four CCC-related clusters were removed following the end of the camp operations.

The extant cluster arrangement dates to the last period of significance, associated with Mission 66. Ultimately, the Mission 66-era cluster arrangement included a picnic pavilion, east comfort station, and associated picnic area.

Cluster of the picnic pavilion, east comfort station, and picnic area

HISTORIC CONDITIONS

The original Mission 66 plans for Carderock included two picnic areas (A and B); five parking lots; four picnic shelter/comfort station structures; two other picnic shelters; and camping areas. Ultimately, only a fraction of these plans were realized; the scaled-down development that exists today is located in what was envisioned as Picnic Area A. Completed in 1965, the cluster arrangement introduced during this period included a picnic pavilion on the north side of the recreation field and a separate comfort station located northwest of the pavilion.

EXISTING CONDITIONS

Today, the picnic pavilion and comfort station remain in their original locations, maintaining the cluster arrangement established during the most recent period of significance. This relationship is disrupted somewhat by individual tree plantings, which have obscured some of the views between the two structures. The cluster arrangement retains integrity and is a contributing feature.

EVALUATION

The cultural landscape does not retain any cluster arrangement features from earlier periods of significance, including the camp clusters associated with the Civilian Conservation Corps.

The cluster arrangement of the picnic pavilion, east comfort station, and picnic area retains integrity to the final period of significance (1964-1965) and is a contributing feature.

Cluster Arrangement: Character-Defining Features

Feature Description	*9000 BCE - 1500 CE (Paleo-Indian through Late Woodland)*	*1828 - 1924 (Canal operations)*	*1938 - 1942 (CCC)*	*1964 - 1965 (Mission 66)*	*Contributing Status*
Cluster of the picnic pavilion, east comfort station, and picnic area				X	Contributing



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Carderock

Chesapeake and Ohio Canal NHP
Potomac, MD

Cluster Arrangement

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Sources
1. Ortho Imagery, 2025
2. Data collected in July, October 2024, and March, April 2025

Drawn By
Meg Frisbie, ArcGIS Pro 3.2.2, 2025

Legend
- CLR Boundary
- Circulation
- Cluster Arrangement, Contributing
- Buildings+Structures
- Circulation
- Constructed Water Features

1. Cluster of picnic pavilion, east comfort station, and picnic area
2. Carderock picnic pavilion
3. East comfort station
4. Parking Lot 1
5. Parking Lot 2
6. C&O Canal towpath

Notes
1. Projection: NAD 1983 UTM Zone 18N

N 0 50 100 200 Feet

Drawing #9

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Views + Vistas

Historically, views and vistas within the cultural landscape boundaries would have been limited by the forest setting. During the 19th century into the early 20th century, much of the land along the C&O Canal was cleared for agriculture, grazing, timber, or firewood. As visible in a 1937 aerial photograph, some cleared area remained though successional forest growth had filled in by this time (*see Figure 22* on page 81). Views along the C&O Canal and towpath would have followed the linear waterway. Once the two CCC camps were constructed, views would have existed within and across the developed camp areas, interrupted by the rows of buildings and structures; views beyond the camps would have been limited by surrounding woods. The camps likely had few intentionally designed or managed views, although camp planners no doubt took advantage of views toward the Potomac River wherever possible.

Extant views and vistas include views across the recreation field, views within the parking lot, views along the C&O Canal towpath, and views along the Billy Goat Trail (including limited views within forested areas and expansive views at Potomac River overlooks).

Views across the recreation field

HISTORIC CONDITIONS

The recreation field south of the picnic pavilion was graded and established in the mid-1960s as part of the Mission 66 development of the Carderock Recreation Area. The clearance of the recreation field allowed for open views within the recreation area, framed and limited by surrounding woods. Aerial imagery from 1963 depicts a copse of trees within the open field, interrupting some views within the field.

EXISTING CONDITIONS

Currently, the copse of trees remains in place at the approximate center of the recreation field, limiting some views across the otherwise open field. Elsewhere in the recreation field, there are views in all directions toward the surrounding woods (which also define the edges of the views) (*see Figure 86 and Figure 87*). Views across the recreation field retain integrity and are contributing to the views and vistas of the cultural landscape.

Views along and from the C&O Canal towpath

HISTORIC CONDITIONS

Linear views along the canal towpath were present within the cultural landscape during the periods of significance. The towpath itself was free of obstructions, with open views along the linear feature.

Additionally, there were open views across the canal towards the northeast, with views to the southwest side of the towpath framed and limited by the surrounding forest.

EXISTING CONDITIONS

The long linear views along the canal towpath within the cultural landscape were retained throughout the periods of significance; these views remain extant and continue to be framed on the southwestern edge by woods (*see Figure 88*).

Today, vegetation within the canal obscures some views looking northeast across the canal; these view obstructions across the canal vary seasonally and are a varied condition across the canal within the study area.



Figure 86: View looking west/ northwest across the open field towards the picnic pavilion (Urban Heritage Project 2024).

Overall, views along and from the towpath retain integrity and are contributing.

Views along the Billy Goat Trail, including limited views within forested areas and expansive views at Potomac River overlooks

HISTORIC CONDITIONS

The Billy Goat Trail Section C has been a hiking destination for decades. Since this section of the trail was established in the 1930s, there have been views from the trail to the Potomac River by way of overlooks, as well as limited views along the trail itself, framed by the surrounding woods; these latter views change seasonally, as sightlines are more open in fall and winter and more limited in spring and summer.

EXISTING CONDITIONS

The views along the Billy Goat Trail shift seasonally and have undoubtedly changed with growth and natural succession of forest canopy. Nonetheless, views from the trail to the Potomac River and more limited views along the trail itself remain intact (***see Figures 89, 90, 91, and 92***). These views retain integrity and are contributing.



Figure 87: View across the recreation field, looking northwest, towards the copse of trees (Urban Heritage Project 2024).



Figure 88: View looking along the C&O Canal towpath, with the forest edge along the southwestern side of the canal and intruding vegetation (on right), limiting views across the canal that would have been available historically (Urban Heritage Project 2024).





Views within parking lots

HISTORIC CONDITIONS

Following the completion of Mission 66 development at Carderock, four sequential parking lots were established in a roughly southeast-northwest orientation across the cultural landscape. Views between parking lots were limited by surrounding forests, while views within and looking across the parking lots were uninterrupted.

EXISTING CONDITIONS

As during the fourth period of significance, there are no obstructions within the parking lots to limit views (***see Figure 93 and Figure 94***). The forest context continues to define the edges of the parking lots, limiting views between the lots. These open internal views are contributing and retain integrity.

EVALUATION

The views and vistas within the cultural landscape all date to the periods of significance and are contributing. The cultural landscape retains integrity with respect to this landscape characteristic.

Figure 89: (top) Limited views along the Billy Goat Trail, framed by surrounding vegetation (Urban Heritage Project 2024).

Figure 90: (bottom) Limited views along the Billy Goat Trail, framed by surrounding vegetation (Urban Heritage Project 2024).



Figure 91: Views along the Billy Goat Trail include views towards the Potomac River (Urban Heritage Project 2024).



Figure 92: Views along the Billy Goat Trail include views towards the Potomac River (Urban Heritage Project 2024).



Figure 93: View looking northwest within Parking Lot 4 (Urban Heritage Project 2024).



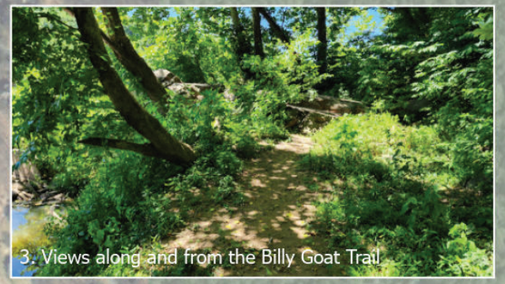
Figure 94: View looking northeast within Parking Lot 4 (Urban Heritage Project 2024).

Views + Vistas: Character-Defining Features

Feature Description	*9000 BCE - 1500 CE (Paleo-Indian through Late Woodland)*	*1828 - 1924 (Canal operations)*	*1938 - 1942 (CCC)*	*1964 - 1965 (Mission 66)*	*Contributing Status*
Views across the recreation field				X	Contributing
Views along and from the C&O Canal towpath		X	X	X	Contributing
Views along the Billy Goat Trail, including limited views within forested areas and expansive views at Potomac River overlooks			X	X	Contributing
Views within parking lots				X	Contributing











Cultural Landscape Report

Carderock

Chesapeake and Ohio Canal NHP
Potomac, MD

Views + Vistas

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

In cooperation with:
National Capital Region, National Park Service

Sources
1. Ortho Imagery, 2025
2. Data collected in July, October 2024, and March, April 2025

Drawn By
Meg Frisbie, ArcGIS Pro 3.2.2, 2025

Legend
- CLR Boundary
- Views+Vistas, Contributing
- Circulation
- Buildings+Structures
- Circulation
- C&O Canal

1. Views across the recreation field
2. Views along and from the C&O Canal
3. Views along and from the Billy Goat Trail Section C
4. Views within parking lots

Notes
1. Projection: NAD 1983 UTM Zone 18N
2. View cones are positioned in representative locations, and associated photographs are representative of general conditions for each feature.

N 0 350 700 1,400 Feet

Drawing #10

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Constructed Water Features

C&O Canal

HISTORIC CONDITIONS

Within the Carderock cultural landscape, the main constructed water feature is the Chesapeake and Ohio Canal (C&O Canal). The C&O Canal is an engineered waterway that was constructed beginning in 1828 to connect growers and producers in the Potomac River Valley with markets and ports on the Eastern Seaboard. Spanning 184.5 miles, the canal stretches between the Georgetown neighborhood in Washington, D.C., at the confluence of Rock Creek and the Potomac River, and Cumberland, Maryland; the study area is located from east of Mile Marker 10.0 to Mile Marker 11.0.

In November 1830, workers completed construction on the first 20 miles of the C&O Canal, from Little Falls to Seneca, including the section of canal that travels through the project area. The following year, the canal opened to navigation between Little Falls and Georgetown. The canal reached Harpers Ferry, Virginia (now West Virginia), by 1833, and reached the canal terminus in Cumberland, Maryland, in 1850.

The commercial and industrial uses of the canal ceased in 1924, and in 1938, the federal government purchased the C&O Canal, with the intention to repurpose the first 22 miles of canal from Georgetown to Seneca for recreational use.

EXISTING CONDITIONS

As during the periods of significance, the section of the C&O Canal within the project area is a linear feature oriented roughly southeast to northwest through the cultural landscape. The portion of the canal within the project area was not watered at the time of this CLR's preparation in 2024-2026, and encroaching vegetation has somewhat obscured the waterway. (The canal will be rewatered from



Figure 95: The C&O Canal in 2022, prior to the Log Wall Project at Mile Marker 11.0, west of the project area (Urban Heritage Project 2022).



Figure 96: The C&O Canal with vegetation (Urban Heritage Project 2024).

Violettes Lock [Lock 23], near Seneca, Maryland, to Georgetown after extensive rehabilitation projects are completed both upstream and downstream from the CLR study area.) This existing condition affects the canal's integrity, but could be redressed with treatment. The canal remains legible as a dominant feature within the landscape, and retains overall integrity (***see Figure 95 and Figure 96***). While no longer in use as an industrial channel, the canal is a contributing resource.



Figure 97: The wasteweir from the C&O Canal towpath (Urban Heritage Project 2025).

Wasteweir

HISTORIC CONDITIONS

A wasteweir was constructed at mile 9.67 along the C&O Canal; according to the 2015 *National Register of Historic Places Additional Documentation and Boundary Increase* for the C&O Canal, the wasteweir at this location was constructed c. 1900. Wasteweirs were built into the wall of the canal—generally on the towpath side—to regulate the water level by providing an outlet for excess canal water. The wasteweirs were originally constructed of stone, with wood planks across the top forming a towpath bridge. According to the National Register nomination update, many of the canal's wasteweirs were replaced by concrete weirs between 1906 and 1914; it is unknown if the wasteweir in the cultural landscape was also replaced during this timeframe.

EXISTING CONDITIONS

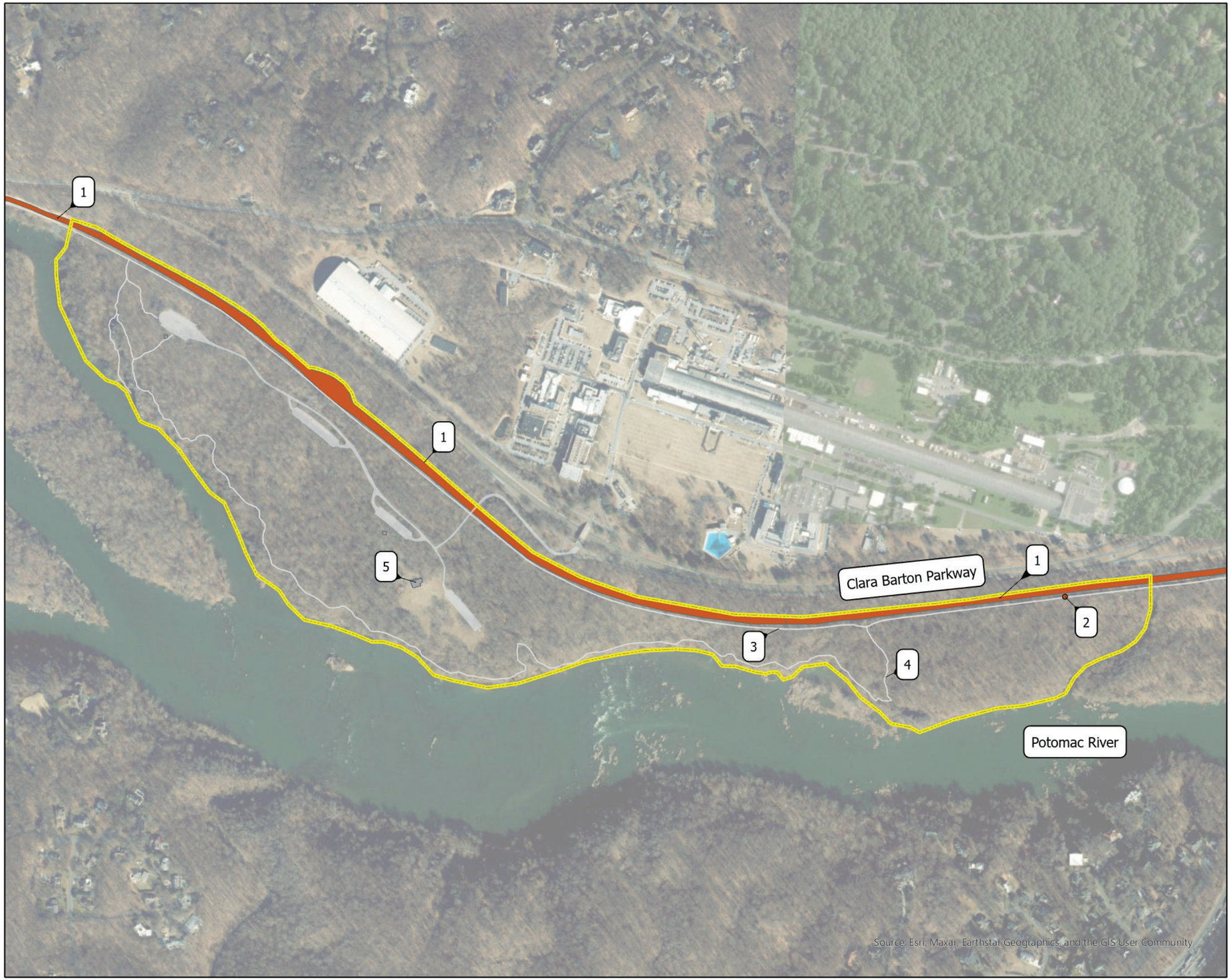
As during the periods of significance, the wasteweir at mile 9.67 travels below the canal towpath. Today, the structure features concrete walls with metal hand railings affixed to the concrete at towpath grade (*see Figure 97*). At the time of survey in June and July of 2024, the hand railings on the north side were missing. Although the material has changed since construction, the wasteweir retains integrity and is a contributing structure.

EVALUATION

The C&O Canal and its associated wasteweir remain in place as constructed water features in the cultural landscape. Although the canal's integrity is somewhat diminished by the existing conditions (unwatered, and with encroaching vegetation), it nevertheless retains overall integrity to the periods of significance. The cultural landscape retains integrity with respect to its constructed water features.

Constructed Water Features: Character-Defining Features

Feature Description	*9000 BCE - 1500 CE (Paleo-Indian through Late Woodland)*	*1828 - 1924 (Canal operations)*	*1938 - 1942 (CCC)*	*1964 - 1965 (Mission 66)*	*Contributing Status*
Chesapeake and Ohio Canal		X	X	X	Contributing
Wasteweir		X	X	X	Contributing



Cultural Landscape Report

Carderock

Chesapeake and Ohio Canal NHP
Potomac, MD

Constructed Water Features

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Department of Historic Preservation
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In cooperation with:
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Sources
1. Ortho Imagery, 2025
2. Data collected in July, October 2024, and March, April 2025

Drawn By
Meg Frisbie, ArcGIS Pro 3.2.2, 2025

Legend

- CLR Boundary
- Constructed Water Features, Contributing
- Constructed Water Features, Contributing
- Buildings+ Structures
- Circulation

1. Chesapeake and Ohio (C&O) Canal
2. Wasteweir
3. C&O Canal towpath
4. Billy Goat Trail Section C
5. Carderock picnic pavilion

Notes
1. Projection: NAD 1983 UTM Zone 18N

N 0 350 700 1,400 Feet

Drawing #11

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Buildings + Structures

Prior to the colonization of the Washington, D.C. area, Indigenous peoples inhabited the region for thousands of years, hunting and farming on the land. Indigenous groups established settlements—including unknown buildings and structures—along the waterways known today as the Potomac and Anacostia Rivers. Little is known about these pre-contact structures, including how long they remained standing after the colonization of the area. Research to date has not identified any confirmed buildings or structures within the study area prior to the 20th century.

A 1900 map produced by the U.S. Geological Survey depicts approximately five buildings between the C&O Canal and Potomac River within the project area, and two more buildings just north of the canal, below the brickyard (*see Figure 98*). These buildings likely represent houses, perhaps of brickyard workers, or they may comprise the core of Brickyard, a Black residential community established in the late 19th century (McMahon 2022: 198-99). Of the five buildings depicted in the 1900 map, the easternmost two are still depicted in a 1904 map, located off of an unimproved road (*see Figure 99*). The three westernmost structures are no longer depicted.

In 2022, archeologists from WSP, USA recorded domestic artifacts dating to the late 19th or early 20th century. These artifacts may be related to the buildings depicted in the early 20th-century maps.

When CCC Camp NP-1-MD was established on September 19, 1938, the buildings and structures were constructed in rows (*see Figure 100*). These buildings included a cluster of four 20' x 140' barracks; a 20' x 40' officers' quarters; a 20' x 100' recreation hall; a T-shaped mess hall/kitchen; 20' x 80' technical services quarters for NPS personnel; an educational building (enlarged from 20' x 60' to 20' x 120' in 1939); two latrines for enrollees; two office structures for the army commander and the technical services supervisor; a pump house; three garages; and a blacksmith shop. In April of 1942, CCC Camp NP-1-MD was converted into a defense camp, which operated for a short period until Congress formerly ended the CCC program in July of 1942.

Camp NP-2-MD was completed by February 2, 1939, and remained open until November 15, 1941 (*see Figure 101*). The camp buildings included:

- four parallel barracks (each 20' x 161');
- officer's quarters (20' x 40');
- an educational building (20' x 131');
- a mess hall (20' x 110', with an attached kitchen measuring 36' x 41');
- a recreation building (20' x 101');
- a technical service quarters (20' x 81');
- a laundry facility (10' x 25');
- a structure (20' x 101') containing a hospital, headquarters' office, and supply room;
- an Army garage (24' x 60');
- portable garages (24' x 60');
- a blacksmith shop (20' x 20');
- a oil house (20' x 30');
- a tool room and office (20' x 50'); and
- a pump house (10' x 10').

Camp NP-2-MD closed in November of 1941, and the buildings were repurposed and relocated for wartime mobilization efforts. Some of the Camp NP-2-MD buildings were relocated for use by the Aqueduct Police in safeguarding the Washington D.C. water supply (Howard 2017: 106). Sometime after November of 1941, four barracks were transferred to Bolling Field in Washington, D.C., and all buildings were ultimately moved to other sites.

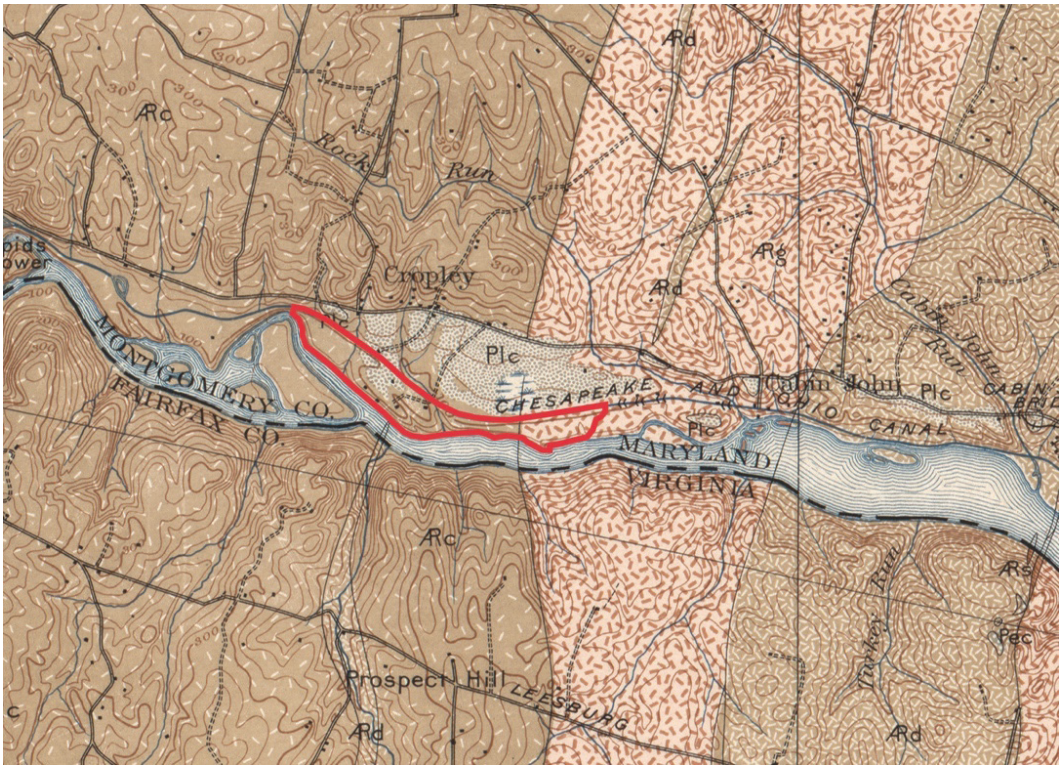


Figure 98: Historical geology sheet, Maryland--District of Columbia--Virginia, Washington quadrangle, U.S. Geological Survey, 1900, with approximate CLR boundary in yellow (Source: Library of Congress, Control Number 87693496).

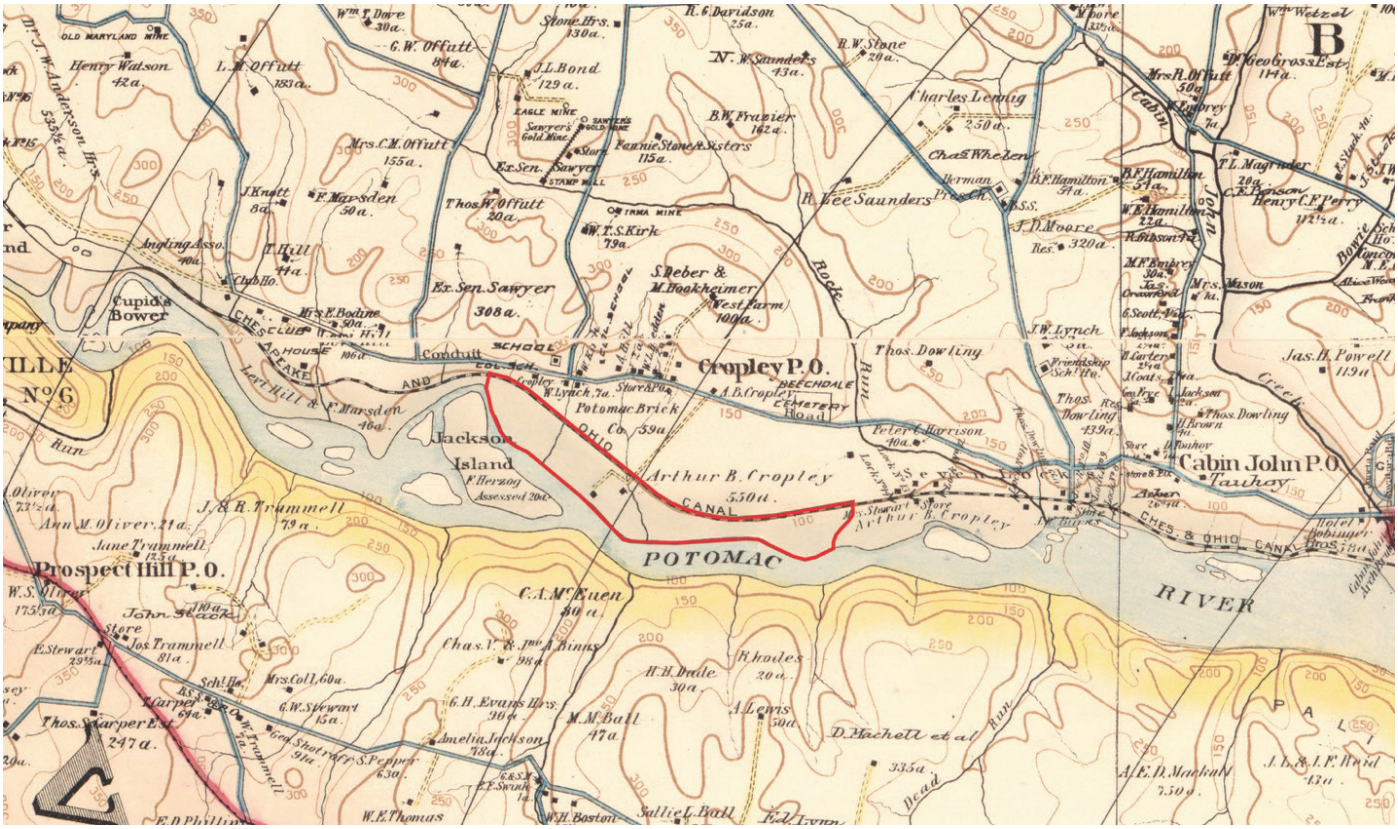


Figure 99: Detail of Baist's Map of Washington, D.C., showing the project area owned by Arthur Cropley, 1904, with approximate CLR boundary in yellow (Source: Library of Congress, Control Number 87691445).

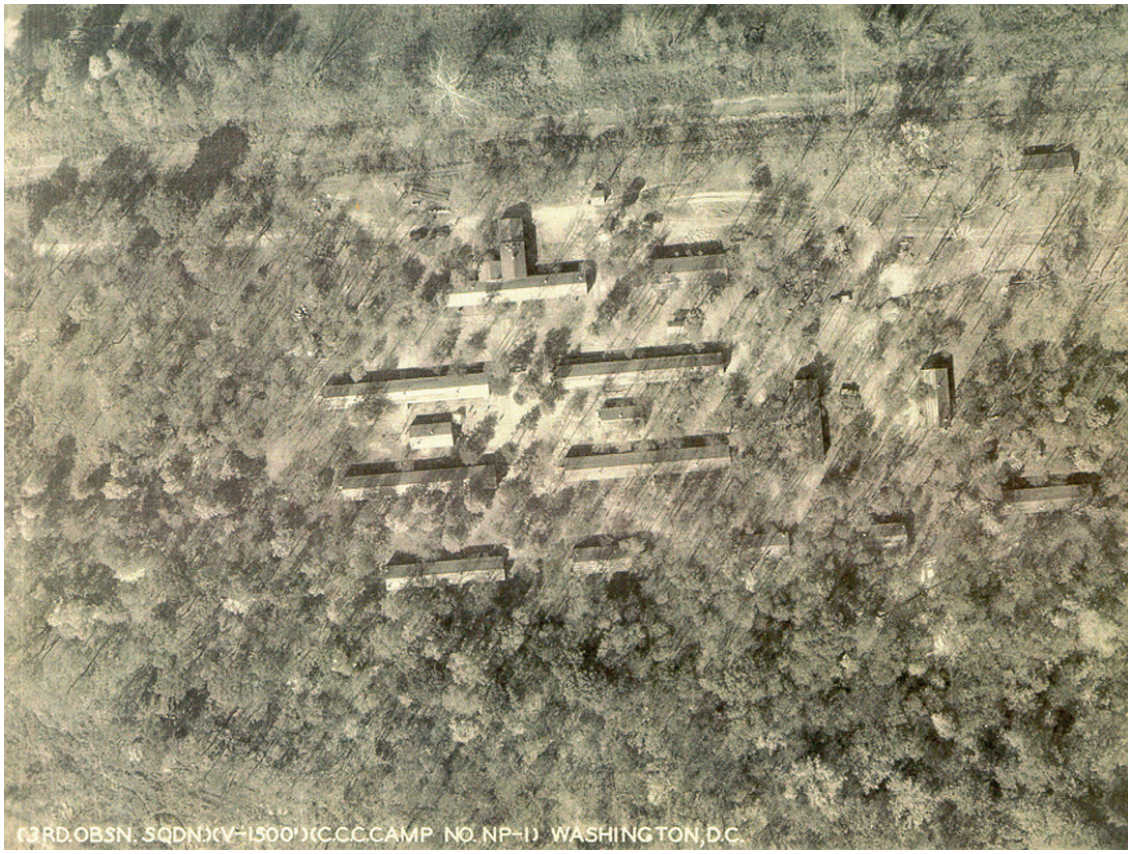
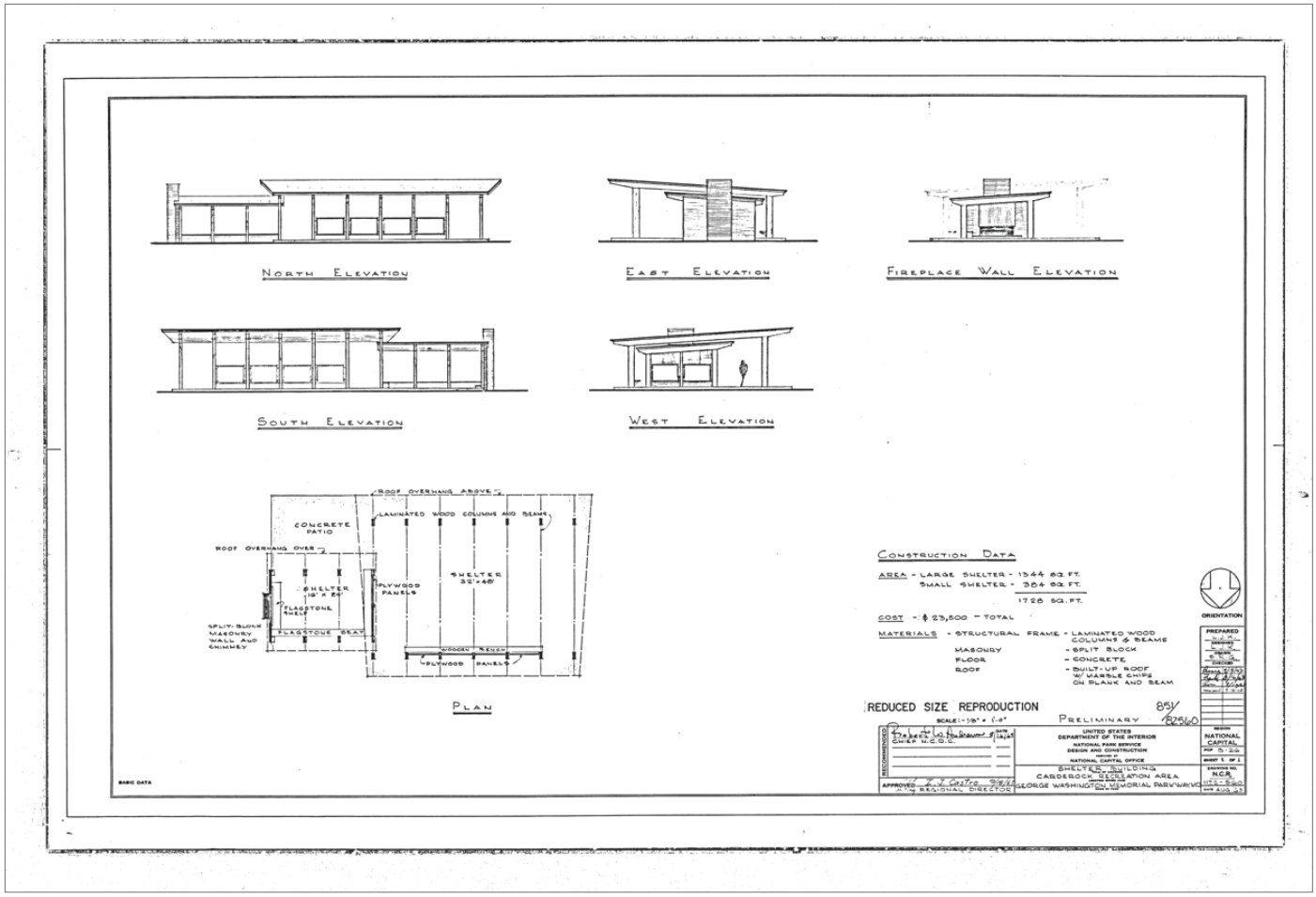


Figure 100: Aerial photograph of Camp NP-1-MD, c. 1940 (Source: Howard 2017: 53).

Figure 101: (below) Camp NP-2-MD under construction, 1938 (Source: Sirna 2011: 87).





Picnic Pavilion

Figure 102: Carderock Picnic Pavilion plans (Source: National Park Service ETIC 851/82577).

HISTORIC CONDITIONS

In 1964, the NPS awarded a contract to William F. Klingensmith of Germantown, Maryland, to construct the Carderock picnic pavilion, completed the following year. The pavilion was constructed in what the c. 1958 general development plan designated as "Picnic Area A." The picnic pavilion, oriented roughly northeast to southwest, featured two massings: a small, covered area (measuring 384 ft^2) with a fireplace comprised the northeast section of the building, and a larger attached shelter (measuring 1,344 ft^2) comprised the southwest section (***see Figure 102***). Both sections featured shed roofs built-up with marble chips on plank and beam and supported by vertical laminated wood columns and beams; the roof was slightly higher on the larger, southwest portion of the pavilion. The northeast wall of the picnic pavilion was split-block masonry and included a built-in fireplace faced with



Figure 103: The Carderock picnic pavilion, looking south (Urban Heritage Project 2024).



Figure 104: Detail of the covered area sheltering the fireplace of the Carderock picnic pavilion (Urban Heritage Project 2024).



Figure 105: The fireplace within the picnic pavilion (Urban Heritage Project 2024).

corrugated steel and built-in flagstone seating. The floor was concrete.

EXISTING CONDITIONS

As during the last period of significance, the picnic pavilion remains in its original location and continues to function in its original capacity as the main shelter within Carderock (***see Figures 103, 104, and 105***). The materials have not changed since construction. Fixed picnic tables are located within the shelter, and movable picnic tables are located around the shelter. The roof was replaced in-kind in 1979. In 1991, the picnic pavilion was repainted, and the following year, the roof was stripped and again replaced. In 1994, the pavilion was repainted, and the site was excavated for new PVC pipes to facilitate site drainage. The roof was again repaired and repainted in 2012. The Carderock picnic pavilion reflects its original design, workmanship, and materials. The picnic pavilion retains integrity and is a contributing resource.

West Comfort Station

HISTORIC CONDITIONS

Constructed c. 1965, the west comfort station at Carderock was constructed of concrete masonry units (CMU) in an atypical stacked-bond pattern (***see Figure 106***). The comfort station was constructed according to the standardized Mission 66 plans for "Type D, subtype D1, Comfort Station," the most common type constructed in the National Capital Region. The comfort station featured stacked CMU

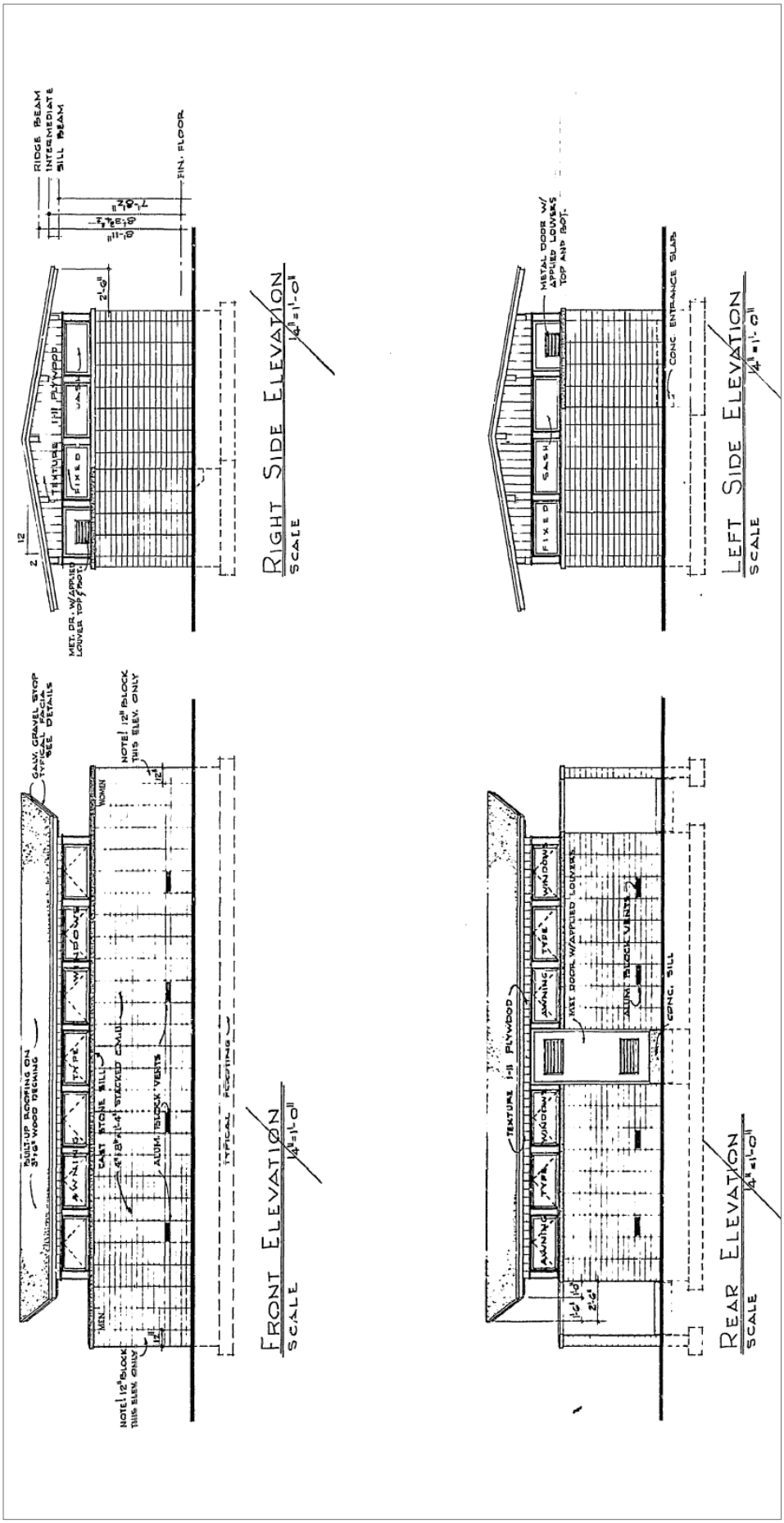


Figure 106: Typical Mission 66 Type D comfort station design, undated (Source: Carderock Historic Property Project Documentation Workbook).

construction, horizontal ribbon windows at the top of the walls, and shallow-pitched gable roofs with pronounced overhanging eaves.

EXISTING CONDITIONS

In the decades since its construction, NPS workers have rehabilitated the west comfort station with in-kind materials (*see Figure 107*). The interior and exterior of the comfort station were painted in 1991, and the interior was again repainted in 1994 and 1997. Also in 1997, a windowpane was replaced. In 2022, a leaking water line leading to both comfort stations was replaced. In 2025, while this CLR was underwway, this comfort station was extensively vandalized, with the toilets and sinks smashed. It remains closed as of summer 2026.

Despite the impacts of that vandalism, the comfort station reflects the character-defining features of its original design, workmanship, and materials. The

Figure 107: The west comfort station (Urban Heritage Project 2024).





Figure 108: The east comfort station (Urban Heritage Project 2024).

comfort station retains integrity and is a contributing resource.

East Comfort Station

HISTORIC CONDITIONS

Constructed c. 1965, the east comfort station at Carderock featured concrete masonry unit (CMU) walls with an atypical stacked-bond pattern (*see Figure 106*). The comfort station was constructed according to the standardized Mission 66 plans for "Type D, subtype D1, Comfort Station," the most common type constructed in the National Capital Region. It featured stacked CMU construction, horizontal ribbon windows at the top of the walls, and shallow-pitched gable roofs with pronounced overhanging eaves.

EXISTING CONDITIONS

Over the decades, NPS workers have rehabilitated the east comfort station with in-kind materials (*see Figure 108*). The interior and exterior of the comfort station were painted in 1991, and the interior was again repainted in 1994 and 1997. In 2022, a leaking water line leading to both comfort stations was replaced. In 2025, while this CLR was underwway, this comfort station was extensively vandalized; it remains closed as of summer 2026. Despite the impacts of that vandalism, the comfort station reflects the character-defining feature of its original design, workmanship, and materials. The comfort station retains integrity and is a contributing resource.

Carderock Road Culvert (Culvert 15)

HISTORIC CONDITIONS

A culvert constructed c. 1830 (located at Mile Marker 10.43; CRIS #12714) offered passage to the Potomac River by passing under the C&O Canal and towpath. A 1918 map titled *Trails Below Great Falls and Cliffs of Ravines of Washington* depicts the culvert, located immediately west of the present-day vehicular approach from Clara Barton Parkway (*see Figure 109*).

EXISTING CONDITIONS

The culvert still exists today, cutting below the C&O Canal and towpath at an angle immediately west of the vehicular approach from Clara Barton Parkway (*see Figure 110 and Figure 111*). The wide barrel arch measures 12'-6" wide and approximately 152' long. The ringstones of the wall are of gray and red stone. The road culvert is a contributing structure.



Figure 109: Trails Below Great Falls and the Cliffs and Ravines, 1918, with red circle showing location of the culvert with words, "Culvert under canal, a possible passage" (Source: Taken from the draft report A History of the Billy Goat Trail in Great Falls, MD, *2006).*



Figure 110: The opening of Culvert 15, located on the south side of the canal (Urban Heritage Project 2024).



Figure 111: View looking north into Culvert 15, located below the C&O Canal towpath (National Park Service 2025).

Pivot bridge pier and abutments

HISTORIC CONDITIONS

A pivot bridge was constructed in c. 1941 at mile 9.92 to connect the roads on the north side of the C&O Canal with the CCC camps located south of the canal. Design documents date to 1941 and it is unknown who completed the construction of the pivot bridge. The pivot bridge was constructed with a stone pier placed in the center of the canal; the pier's footprint measured 8' x 10'. The flanking abutments were constructed on each side of the canal, serving as retaining walls and supporting the road as it crossed the waterway. The pier supported the bridge gears and rack assembly, which controlled the operation of the bridge; as the bridge gears rotated the bridge deck in a counterclockwise direction, the pivot bridge allowed boats navigating the canal to continue (*see Figure 112*).

Figure 112: Portion of original 1941 pivot bridge construction drawing showing details of bridge rail, gears, and bearing plates (Source: National Park Service ETIC 412/80276).

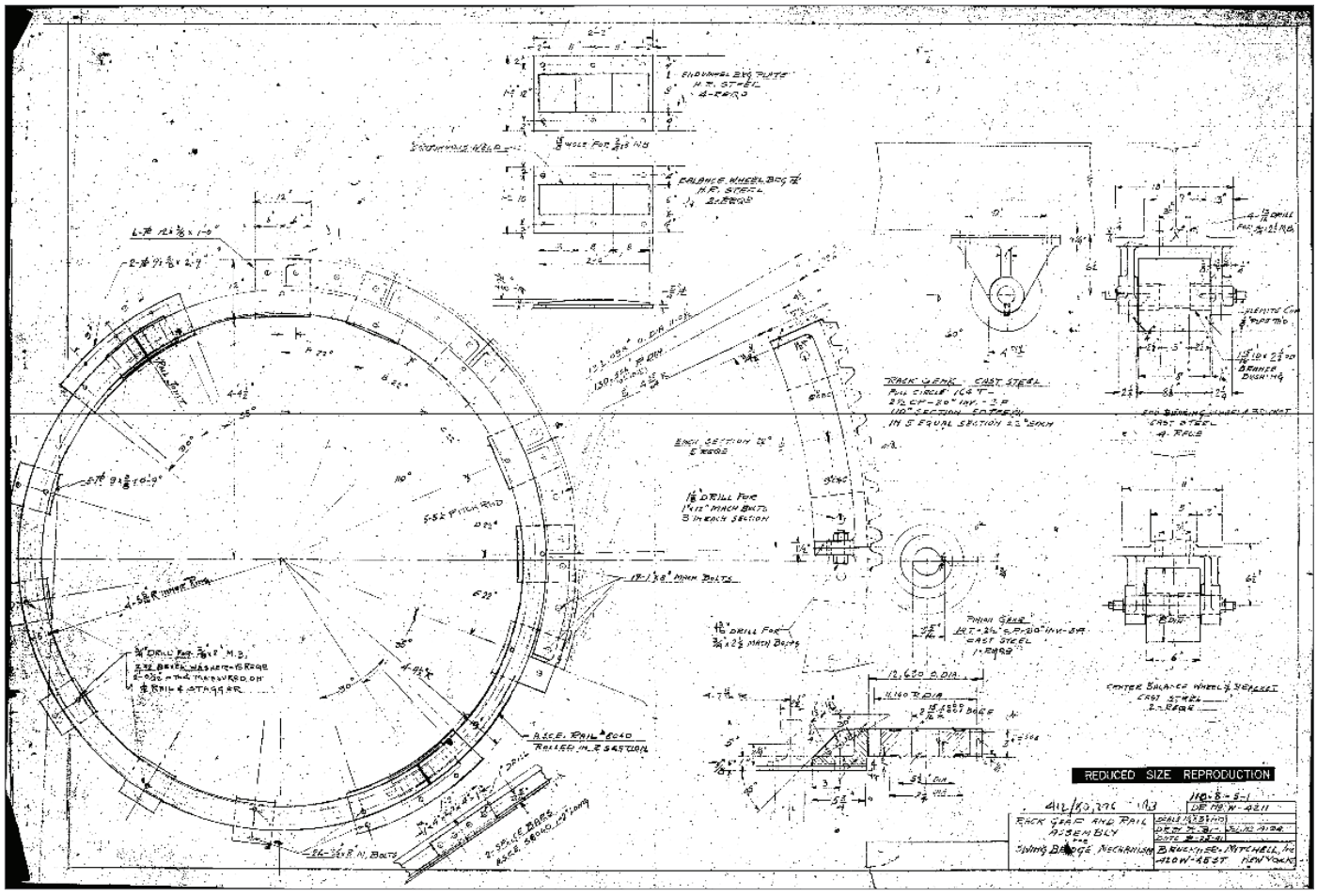




Figure 113: Pivot bridge remnants within the C&O Canal (Urban Heritage Project 2024).

EXISTING CONDITIONS

While the pivot bridge superstructure is no longer extant, the central stone pier and abutments remain in their original locations and retain their metal ridged gear ring. The base is made of mortared stone and is approximately 12' tall, 10' long, and 8' wide. Together, the pivot bridge pier and abutments are a contributing feature (*see Figure 113 and Figure 114*).

Carderock concrete road culvert

HISTORIC CONDITIONS

While road construction at Carderock began in 1959, delays extended the project and it was not until 1963 that workers completed the access road and bridges at Carderock/David Taylor Model Basin and Cabin John Gardens off of George Washington Memorial Parkway. The cultural landscape was approached by way of a two-lane paved road from George Washington Memorial Parkway (today's Clara Barton Parkway) via an interchange. Vehicles then traveled below the C&O Canal and towpath via a concrete road culvert. The concrete road culvert was substantially completed by 1963 based on aerial photography.



Figure 114: Pivot bridge remnants within the C&O Canal (Urban Heritage Project 2024).



Figure 115: The Carderock concrete road culvert and access road (Urban Heritage Project 2024).



Figure 116: View looking into Culvert 14 (National Park Service 2025).



Figure 117: View looking toward Culvert 14 with metal door (National Park Service 2025).

EXISTING CONDITIONS

Built during the Mission 66 era, the Carderock concrete road culvert provides the sole vehicular access to the cultural landscape (*see Figure 115*). The access road travels below the concrete culvert from Clara Barton Parkway into the landscape. Proposed repairs in 2025 for the culvert included addressing concrete spalling/cracking. The Carderock concrete road culvert is a contributing feature.

Culvert 14

HISTORIC AND EXISTING CONDITIONS

A 19th-century stone culvert (CRIS #012715) is located in the eastern portion of the cultural landscape to channel water flow underneath the towpath (*see Figure 116 and Figure 117*). A gate was installed over the outlet of the culvert sometime between the 2016 condition survey and a 2020 survey by the Naval Surface Warfare Center. The culvert inlet is located on the Naval Surface Warfare Center property. As per the 2022 NPS condition assessment for the culvert, “structural stability should be monitored." The culvert is a contributing structure.

Gate

EXISTING CONDITIONS

A metal swing gate blocks public vehicular access to the gravel road leading to the C&O Canal towpath (*see Figure 118*). The metal gate was added by the National Park Service and is a non-contributing, but compatible feature.

Chain-link backstops in recreation field (count: 2)

EXISTING CONDITIONS

Two chain-link backstops are located within the grass recreation field near the picnic pavilion (*see*

Figure 119). It is unknown when they were added to the landscape. The contributing status of these structures is undetermined.

EVALUATION

Most of the extant buildings and structures within the Carderock cultural landscape are contributing features; the metal gate is non-contributing, but compatible; and the chain-link backstops are features of undetermined status. Overall, this landscape characteristic retains its integrity.



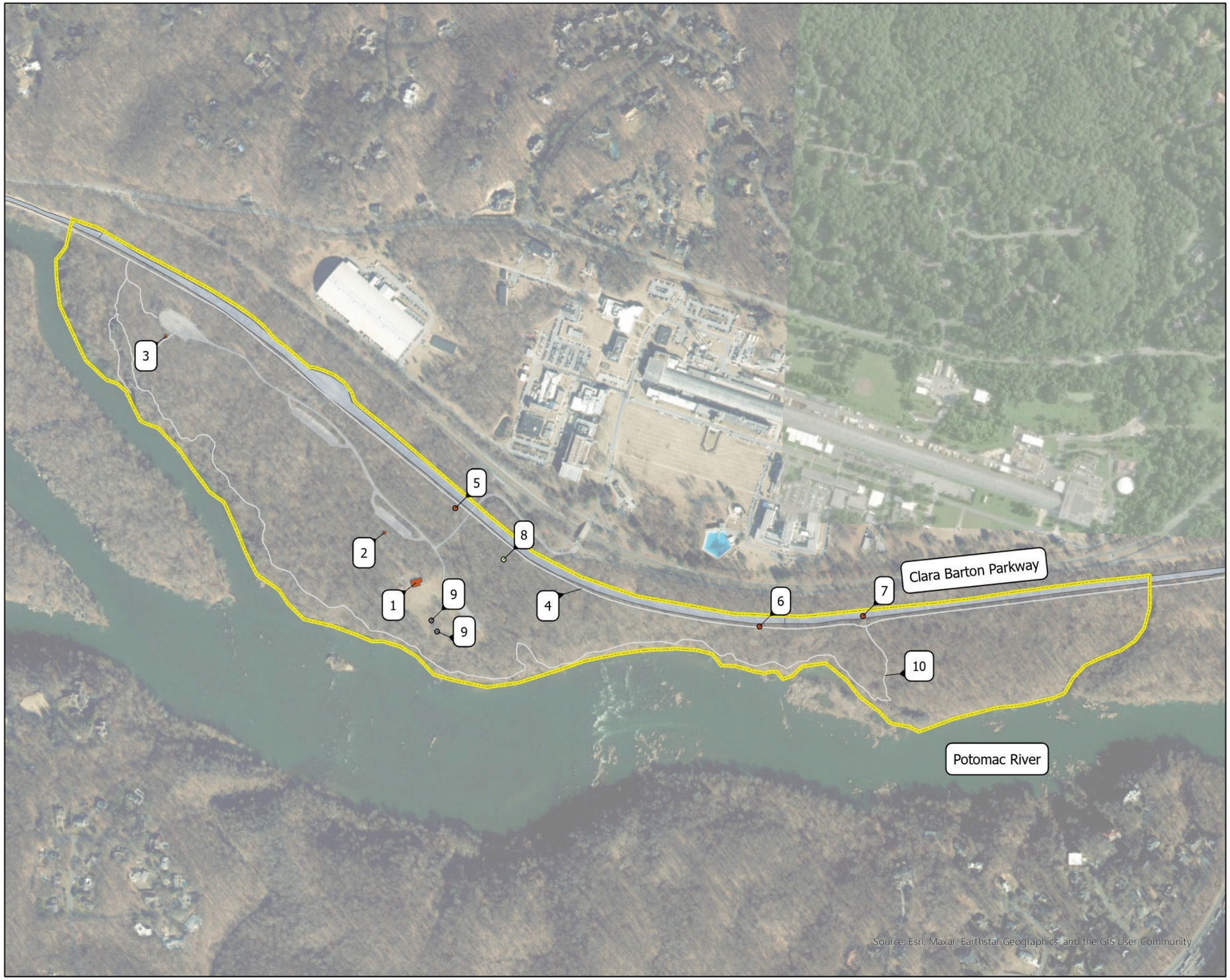
Figure 118: Metal swing gate across the gravel road leading to the C&O Canal and towpath (Urban Heritage Project 2024).



Figure 119: One of the chain-link backstops located in the recreation field (Urban Heritage Project 2024).

Buildings + Structures: Character-Defining Features

Feature Description	9000 BCE - 1500 CE (Paleo-Indian through Late Woodland)	1828 - 1924 (Canal operations)	1938 - 1942 (CCC)	1964 - 1965 (Mission 66)	Contributing Status
Picnic pavilion				X	Contributing
West comfort station				X	Contributing
East comfort station				X	Contributing
Carderock Road Culvert (Culvert 15)		X	X	X	Contributing
Pivot bridge pier and abutments			X	X	Contributing
Carderock concrete road culvert				X	Contributing
Culvert 14		X	X	X	Contributing
Gate					Non-contributing, compatible
Chain-link backstops in recreation field (count: 2)					Undetermined



Cultural Landscape Report

Carderock

Chesapeake and Ohio Canal NHP
Potomac, MD

Buildings + Structures

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

In cooperation with:
National Capital Region, National Park Service

Sources
1. Ortho Imagery, 2025
2. Data collected in July, October 2024, and March, April 2025

Drawn By
Meg Frisbie, ArcGIS Pro 3.2.2, 2025

Legend

- CLR Boundary
- Buildings+Structures, Contributing
- Buildings+Structures, Non-contributing
- Buildings/Structures, Non-contributing - Compatible
- Buildings+Structures, Undetermined
- Buildings+Structures, Undetermined
- Circulation
- Buildings+Structures, Contributing
- Circulation
- C&O Canal

1. Carderock picnic pavilion
2. East comfort station
3. West comfort station
4. C&O Canal towpath
5. Culvert 15
6. Culvert 14 and pier
7. Pivot bridge and abutments
8. Gate
9. Backstop
10. Billy Goat Trail Section C

Notes
1. Projection: NAD 1983 UTM Zone 18N

N 0 350 700 1,400 Feet

Drawing #12

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Circulation

Other than the C&O Canal's towpath, there are no roads or trails depicted within the project area on maps prior to the 1890s. An 1894 Hopkins map of Washington, D.C., and its vicinity depicts an unpaved road within the project area, traveling south from Conduit Road (oriented east-west) past the C&O Canal. The road ends at an unlabeled structure and appears to travel under the canal by way of Culvert 15. Maps from 1894, 1900, and 1904 continue to show an unimproved road south of the canal that travels towards the Potomac River, accessing the handful of buildings depicted in the project area during this period.

While the nature of the late-19th- and early-20th-century maps, and the scale of the features on the maps, make them difficult to georeference precisely, overlaying the historic maps with LIDAR imagery offers some information. The unimproved road visible in the 1900 map (*see Figure 12* on page 69) roughly aligns with portions of the CCC-era road trace. The road on the 1904 map (*see Figure 13* on page 69) appears to be located between the CCC-era road trace and the other road trace (*see Figure 172*, on page 249).

The Potomac Appalachian Trail Club (PATC) blazed the Billy Goat Trail Section C in the 1930s for public recreational use. Section C of the trail departs from the C&O Canal in the western portion of the cultural landscape, then travels along the Potomac riverfront, before reconnecting with the C&O Canal towpath in the eastern portion of the cultural landscape. Since the area became a rock-climbing destination in the 1920s, visitors have created additional trail spurs to access the cliffs in the western portion of the cultural landscape.

A 1940 plan of the Civilian Conservation Corps' Camp NP-1-MD shows an access road south of the canal running parallel to the canal's general orientation and extending along the north side of the camp's residential and administrative cluster of buildings (*see Figure 84* on page 169). The mess hall/kitchen and a service garage were located on the south side of, and accessed via, this road. East of the service garage, a spur road traveled south from the main access road to an open area between the "Office Comm." Building and "Office NPS." From there, the road continued east through the maintenance area of the camp. There were three garages on the north side of the access road, and an oil house, store house, grease rack, blacksmith shop, repair shop, and one additional garage along the south side of the road. The plan shows the access road continuing east thereafter, though it is unknown how far it extended or where it terminated.

In the 1940 plan of the camp, there is no vehicular circulation depicted within the residential and administrative cluster of buildings. Linear pedestrian paths (of unknown material) connect the barracks, mess hall/kitchen, offices, education building, recreation hall, and other buildings within the cluster. No pedestrian paths are depicted connecting the maintenance buildings in Camp NP-1-MD.

Camp NP-2-MD included two different vehicular approaches. The camp was approached either via an underpass labeled "Camp Road" in the 1938 plan, or via the "Camp Access Road" from the towpath (*see Figure 85* on page 170).

"Camp Road" traveled from the canal through the woods, extending between the Educational Building and NPS Quarters before intersecting with the "Camp Access Road" in the parking lot east of the Army garage.

The "Camp Access Road" was constructed following the closure of the private road. CCC enrollees cleared overgrowth, built a temporary bridge across the canal, and graded a portion of land set aside for the George Washington Memorial Parkway in order to construct the "Camp

Access Road." From the canal, this road curved gently through the woods, with one spur traveling southeast to the maintenance cluster associated with Camp NP-2-MD. The road created a loop through the maintenance area, accessing the buildings located around the "N.P.S. Quadrangle." The other spur of the road traveled west to the Army garage and associated parking lot on the southern side of the administrative/residential cluster; the mess hall and supply room were located on the north of the road and aforementioned parking lot. The Camp NP-2-MD "Camp Access Road" is still discernible in the landscape and visible on LIDAR (see the Archeological Sites section).

Pedestrian circulation in Camp NP-2-MD included linear walking paths connecting all of the buildings within the residential/administrative buildings cluster. Pedestrian paths (of unknown material) were located between the barracks and nearby recreation hall, mess hall, supply building complex, educational buildings, and officers' quarters. The 1938 plan did not represent any pedestrian paths in the maintenance cluster of Camp NP-2-MD.

Road construction for Mission 66 development at Carderock began in 1959. The access road to Carderock followed the access road to Camp NP-2-MD below the canal. Delays in construction extended the project timeline, and the vehicular access road to Carderock from George Washington Memorial Parkway (today's Clara Barton Parkway) was not completed until 1963. The access road approached Carderock from the northeast, traveling southwest through an underpass below the canal before reaching a T intersection; at the intersection, the access road intersected with a northwest-southeast road that connected the four visitor parking lots. Today, trails from the parking lots connect visitors with the C&O Canal towpath.

Aerial imagery from the 1970s and later features a trail leading north from the southwest side of the picnic pavilion through the picnic area to the east comfort station; this path was likely established during the fourth period of significance. However, this trail was not discernible during the fieldwork for this project due to the ongoing Fairfax County sewer rehabilitation project; a construction equipment access road covered this trail during the time of survey in 2024. The trail is therefore not represented on the maps of existing conditions.

Canal towpath

HISTORIC CONDITIONS

The canal towpath runs along the C&O Canal, oriented southeast to northwest within the cultural landscape boundaries. A United States Board of Engineers report published on October 23, 1826, and completed by James Geddes and Nathan Roberts, included the original design for the canal towpath. The towpath was planned along the south side of the canal, 9′ wide and situated 2′ above the surface of the canal. In 1831, C&O Canal engineers Thomas Purcell and Charles Fisk updated the towpath specifications and enlarged the dimensions of the canal towpath to be no less than 12′ wide. Further research is needed to confirm the original dimensions of the towpath in the project area, as well as the materials used in its original construction.

In 1938, the federal government purchased the C&O Canal to develop the corridor as a recreational landscape. Known as Federal Project 712, CCC enrollees restored the first 22 miles of canal towpath from Georgetown to Seneca. Records do not indicate what materials were employed in these towpath restoration efforts. The restoration efforts of the CCC were destroyed by a flood in October 1942, and the towpath was rebuilt the following year with a clay and cement mixture to make the towpath more flood-resistant.

EXISTING CONDITIONS

Today, the canal towpath is an unpaved trail on the south side of the canal, traveling roughly northwest to southeast through the cultural landscape (*see Figure 120*). Due to the proximity to the Potomac River and the constant threat of floods and washouts, the NPS resurfaces the towpath periodically. Typically, the base layer of the towpath surface is crush and run gravel, which creates an adequate drainage system, and the top layer is a finer material such as stone dust, which provides a



Figure 120: C&O Canal towpath, with the canal visible (but somewhat obscured by vegetation) on the right (Urban Heritage Project 2024).



Figure 121: Parking Lot 1, looking southeast (Urban Heritage Project 2024).



Figure 122: Parking Lot 4, looking northwest. This is the largest of the four parking lots, and features a central grassy island (Urban Heritage 2024).

smooth surface. It measures approximately 10′-6″ wide.

The canal towpath retains integrity and is a contributing circulation feature to the cultural landscape.

Parking Lot 1, Parking Lot 2, Parking Lot 3, Parking Lot 4, and connecting road[1]

HISTORIC CONDITIONS

Four asphalt parking lots connected by a two-way asphalt road were constructed as part of Mission 66 development for visitor access to Carderock. While road construction related to Carderock began in 1959, workers completed the access road and likely the parking lots in 1963. With varied sizes and configurations, the four parking lots were constructed in a southeast to northwest orientation across the cultural landscape. The vehicular circulation ended at the westernmost parking lot (Parking Lot 4); traffic would then return to the George Washington Memorial Parkway (today's Clara Barton Parkway) along the same two-way road.

1. Until recently, the parking lots had no official designation. In spring 2026, they were officially named Parking Lot 1, Parking Lot 2, Parking Lot 3, and Parking Lot 4. Previously, they were alternately known as Parking Lot A, Parking Lot B, Parking Lot C, and Parking Lot D.



Figure 123: View along the two-way access road, in the area between Parking Lots 1 and 2 (Urban Heritage Project 2024).

The easternmost parking lot (Parking Lot 1) was constructed southeast of the picnic pavilion, adjacent to the open recreation field. The next parking lot heading west along the connecting road (Parking Lot 2) was constructed northeast of the east comfort station. The third parking lot (Parking Lot 3) was constructed in a wooded area northwest of the Parking Lot 2. The westernmost parking lot (Parking Lot 4) was constructed northeast of the west comfort station, with access to the Billy Goat Trail and nearby climbing cliffs.

EXISTING CONDITIONS

Today, the parking lots reflect their original design, construction, and function, as they continue to provide access to the recreational opportunities in Carderock; they remain connected by the two-way asphalt road (*see Figure 121 and Figure 122*). In Parking Lots 1, 2, and 3, parking is available on the northeast and southwest sides of each lot. Parking Lot 4, also called Carderock Cliffs North Parking, is the largest of the four parking lots and is a dead-end loop with an island in the center; there is parking on either side of the island, as well as on the northeast and southwest sides of the parking lot. Each parking lot features a pedestrian access path to the C&O Canal. The road that connects the four parking lots has not changed since construction and remains a two-way paved asphalt road with no shoulder (*see Figure 123*).

Parking Lots 1, 2, 3, and 4, and the connecting road retain integrity to the Mission 66 period and are contributing circulation features.

Vehicular approach from Clara Barton Parkway

HISTORIC CONDITIONS

The National Capital Park Design and Construction Office prepared plans for Carderock as early as summer 1958. While road construction began in 1959, delays extended the project and it was not until 1963 that workers completed the access road and bridges at Carderock/David Taylor Model Basin and Cabin John Gardens off of George Washington Memorial Parkway. This section of the parkway was renamed as Clara Barton Parkway in 1989.

The two-lane paved road accessing the cultural landscape departed George Washington Memorial Parkway via an interchange and then traveled below the C&O Canal and towpath via an underpass. Southwest of the underpass, the road then created a T with the paved road that connected to the four parking lots.

EXISTING CONDITIONS

The vehicular approach from Clara Barton Parkway retains its historic location (*see Figure 124*). Today, as during the periods of significance, the paved two-lane asphalt road departs the Clara Barton



Figure 124: View looking northeast along the vehicular approach road from Clara Barton Parkway. The road travels underneath the C&O Canal, visible in the background (Urban Heritage Project 2024).



Figure 125: Section C of the Billy Goat Trail, along the Potomac River (Urban Heritage Project 2025).



Figure 126: Section C of the Billy Goat Trail, along the Potomac River (Urban Heritage Project 2024).

Parkway by way of an interchange, travels below the C&O Canal and towpath via an underpass, and continues southeast to intersect with the road to the four parking lots. The vehicular approach from Clara Barton Parkway retains integrity and is a contributing circulation feature.

Section C of the Billy Goat Trail (and associated access spurs)

HISTORIC CONDITIONS

Although the precise date of establishment is unknown, the segment of the Billy Goat Trail within the study area was likely created by the Potomac Appalachian Trail Club (PATC) in the 1930s; a 1939 map authored by Robert Shosteck provides the earliest reference to the name "Billy Goat Trail." Shosteck later wrote, "The entire riverside trail from Carderock to Great Falls for a distance of over eight miles has been designated the Billygoat [*sic*] Trail by a group of hikers who, in the 1930s, laid out, cleared, and blue-blazed this rugged and picturesque route to the falls" (Shosteck 1968: 38).

EXISTING CONDITIONS

Today, the complete Billy Goat Trail contains three different sections; Section C of the trail continues to travel through the Carderock cultural landscape (***see Figure 125 and Figure 126***). The three sections of 4.75-mile trail are not continuous; rather, they each connect to the towpath at either end. The



Figure 127: A wooden bridge along the Billy Goat Trail, Section C (Urban Heritage Project 2024).

west end of Section C of the Billy Goat Trail intersects with the C&O Canal towpath northwest of Parking Lot 4. From there, it travels south toward the Potomac River, extending along the riverfront before returning north to reconnect with the C&O Canal towpath at mile 10.9. The trail is a narrow, unpaved route; some trail crossings feature wooden bridges or wooden raised decking (*see Figure 127*). The Billy Goat Trail remains a popular trail along the north bank of the Potomac River and retains integrity to the period of significance. It is a contributing circulation feature of the cultural landscape.

Access paths from the parking lots to the canal towpath

EXISTING CONDITIONS

There are pedestrian paths connecting the parking lots to the C&O Canal towpath. From the access road off of Clara Barton Parkway, a wide gravel pathway is located southeast of the canal underpass; it follows a gentle grade east/southeast uphill through the woods to connect with the towpath (*see Figure 128*). This gravel path also serves as a maintenance road for authorized vehicles to access the canal towpath. There are also short unpaved access trails from Parking Lot 2 and Parking Lot 4 that connect to the towpath (*see Figure 129 and Figure 130*). The paths are on the north side of the connecting road near the Parking Lot 2, and on the north side of Parking Lot 4. These paths were added after the periods of significance and are considered non-contributing but compatible features.

Social trails

EXISTING CONDITIONS

Social trails likely existed during the periods of significance, as individuals and groups sought access to the Potomac River and other locations within the landscape. Today, the social trails within the cultural landscape are continued evidence of individuals and groups accessing points of interest off of the Billy Goat Trail, particularly along the riverfront and around the rock climbing areas of Carderock (*see Figures 131, 132, and 133*). The social trails are ever-changing based on foot traffic and weather impacts, including erosion, particularly along the riverfront, where individuals traverse the slopes to get to the river. Social trails are non-contributing features.

Stairs, ramp, and sidewalk by west comfort station

HISTORIC CONDITIONS

There are no known photographs of the west comfort station from the time of its construction c. 1965; therefore, research to date has not confirmed



Figure 128: Wide gravel path from the vehicular access road to the towpath (Urban Heritage Project 2024).



Figure 129: Unpaved connection from the connecting road to the towpath, north of Parking Lot 2 (Urban Heritage Project 2025).

the historic circulation features that accessed this building in its initial years. However, the comfort station was positioned below the grade of Parking Lot 4, which suggests that there has consistently been a staircase from the parking lot down to the building.

EXISTING CONDITIONS

Today, as was likely true during the most recent period of significance, a set of stairs descends from Parking Lot 4 to the northwest side of the west comfort station (***see Figure 134***). The seven wide steps are delineated by dimensional lumber, and the stair treads are composed of compacted dirt. A concrete ramp flanked by metal railings approaches the southeast side of the comfort station (***see Figure 135***). A sidewalk, composed of large aggregate concrete, is located along the southwest side of the parking lot, linking the stairs and ramp with the parking (***see Figure 136***). Because research to date has not confirmed the physical history of these features, their contriuting status is undetermined.

EVALUATION

Most of the circulation features within the Carderock cultural landscape date to the periods of significance and are contributing features. The exceptions include the social trails and the access paths from the parking lots; these features are considered non-contributing but compatible. Overall, the cultural landscape retains integrity of circulation.



Figure 130: Unpaved connection from Parking Lot 4 to the towpath (Urban Heritage Project 2024).



Figure 131: Social trail leading away from the Billy Goat Trail to the Potomac River (Urban Heritage Project 2024).



Figure 132: Social trail adjacent to the canal underpass, leading up the steep slope to access the C&O Canal towpath (Urban Heritage Project 2024).



Figure 133: Social trail from the first parking lot to the picnic pavilion (Urban Heritage Project 2024).



Figure 134: Stairs from Parking Lot 4 to the west comfort station (Urban Heritage Project 2024).

Figure 135: (right) Paved ramp from the west comfort station to Parking Lot 4 (Urban Heritage Project 2024).

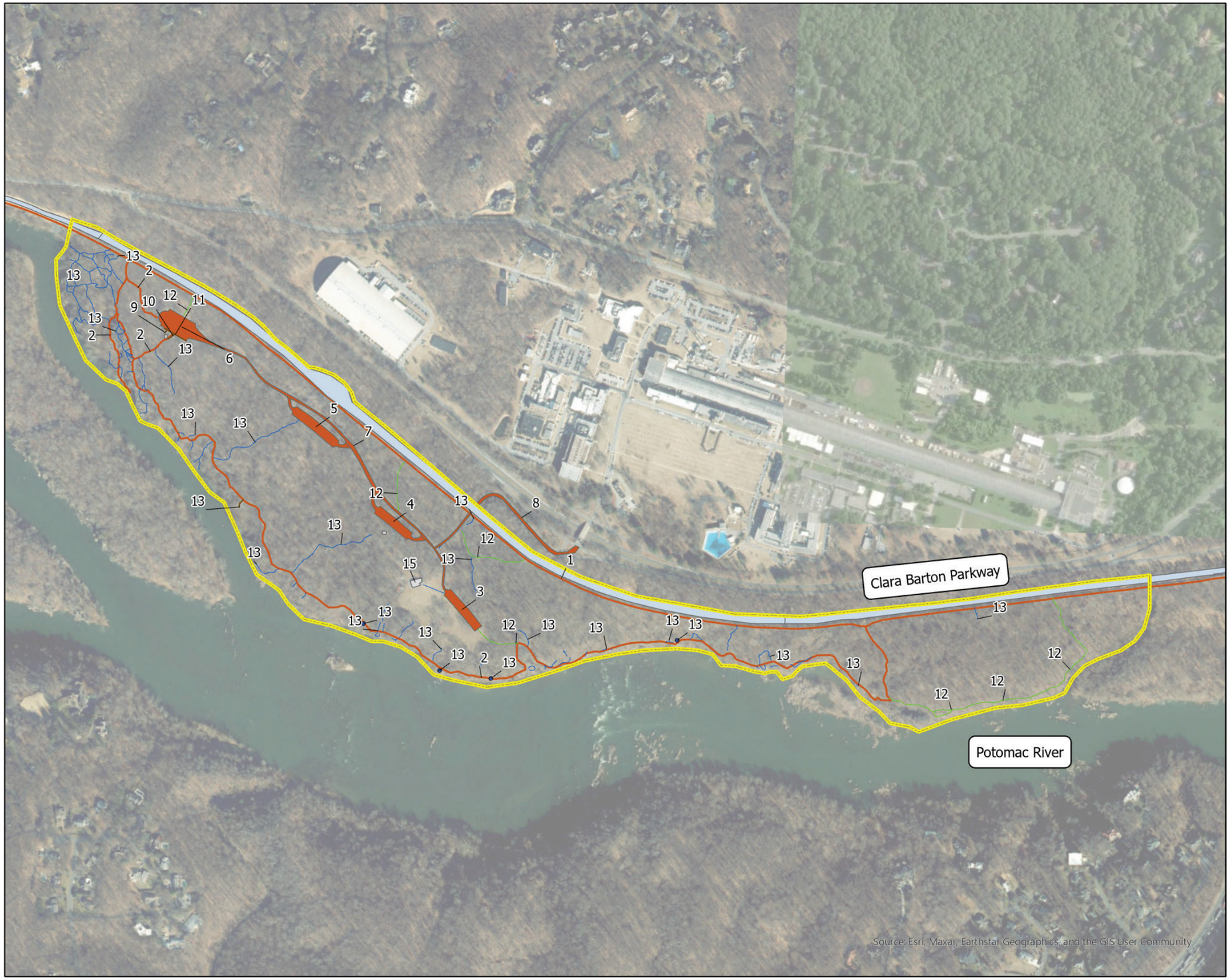




Figure 136: View looking southeast of the ramp to the west comfort station. The sidewalk along the parking lot's edge is visible in the upper-left corner of the photograph (Urban Heritage Project 2024).

Circulation: Character-Defining Features

Feature Description	*9000 BCE - 1500 CE (Paleo-Indian through Late Woodland)*	*1828 - 1924 (Canal operations)*	*1938 - 1942 (CCC)*	*1964 - 1965 (Mission 66)*	*Contributing Status*
Canal towpath		X	X	X	Contributing
Parking Lot 1, Parking Lot 2, Parking Lot 3, Parking Lot 4, and connecting road				X	Contributing
Vehicular approach from Clara Barton Parkway				X	Contributing
Section C of the Billy Goat Trail (and associated access spurs)			X	X	Contributing
Access paths from the parking lots to the canal towpath					Non-contributing, compatible
Social trails					Non-contributing
Stairs, ramp, and sidewalk by west comfort station				X	Undetermined



Cultural Landscape Report

Carderock

Chesapeake and Ohio Canal NHP
Potomac, MD

Circulation

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

In cooperation with:
National Capital Region, National Park Service

Sources
1. Ortho Imagery, 2025
2. Data collected in July, October 2024, and March, April 2025

Drawn By
Meg Frisbie, ArcGIS Pro 3.2.2, 2025

Legend

- CLR Boundary
- Circulation, Non-contributing social trail
- Circulation, Contributing
- Circulation, Non-contributing social trail
- Circulation, Non-contributing, Compatible
- Circulation, Undetermined
- Circulation, Contributing
- Buildings+Structures
- C&O Canal

1. C&O Canal Towpath
2. Billy Goat Trail Section C
3. Parking Lot 1
4. Parking Lot 2
5. Parking Lot 3
6. Parking Lot 4
7. Connecting road
8. Access road
9. Stairs
10. Concrete ramp
11. Sidewalk
12. Trail
13. Social trail
14. Wooden bridge
15. Carderock picnic pavilion

Note: All blue lines represent social trails

Notes
1. Projection: NAD 1983 UTM Zone 18N

N 0 350 700 1,400 Feet

Drawing #13

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Vegetation

Prior to European colonization of the region, indigenous species of vegetation existed in the areas around the Potomac and Anacostia Rivers. During the Paleo-Indian period, from 15,000 to 8000 BCE, coniferous forests dominated the area, with species including pine (*Pinus* spp.) and spruce (*Picea* spp.). As the climate warmed, deciduous species of oak (*Quercus* spp.) and chestnut (*Castanea* spp.) trees populated the Potomac River Valley. During the Archaic Period, from 8000 BCE to 1200 BCE, deciduous forests dominated. (For more on the cultural landscape's forest, see the Natural Systems and Features section.)

Indigenous groups introduced horticulture and farmed species of crops such as corn, beans, and squash. The introduction of horticulture marked a shift in vegetation from wild growth of native species to controlled and manipulated crops for human consumption and sustenance.

English colonizers claimed the region that includes the project area in the early 17th century. By mid-century, colonizers cultivated tobacco as a major cash crop, with enslaved laborers planting and harvesting it across the Potomac region. In 1802, the 1,705-acre "Carderrock" plantation was established.

Research to date has not found any description of vegetation within the cultural landscape during the canal's years of operation in the 19th and early 20th centuries. Much of the area along the canal was cleared in the 19th and early 20th centuries for agriculture, grazing, timber, and firewood. Aerial imagery from 1937 shows some of the project area as cleared but filling in with successional growth.

When the federal government acquired the canal landscape in the 1930s, portions of the cultural landscape's forest were cleared to develop two CCC camps. The 1940 plan of Camp NP-1-MD does not specify tree types but includes approximate tree locations. The plan represents trees on the north side of the access road, creating a buffer between the canal and the camp. There are also some trees on the south side of the access road around the mess hall and other camp buildings such as the NPS offices. The plan does not depict any trees within the clusters of barracks or maintenance garages. Continuous foliage is depicted to the west, south, and east of the camp's developed area.

A 1938 plan for Camp NP-2-MD depicts evergreen trees planted within the complex, including:

- Clusters of evergreen trees between Barracks 1 and 3;
- Clusters of evergreen trees along the pedestrian walkways connecting Barracks 2 and 4;
- A few scattered evergreen trees on the northwest side of Barracks 1 and north of the recreation hall;
- Individual evergreen trees south of Barrack 4 between the barrack and the mess hall and supply room;
- Individual evergreen trees around the Army garage;
- Scattered evergreen trees near the educational building and NPS Quarters on either side of "Camp Road."

The plan also indicates several instances of deciduous trees in Camp NP-2-MD, including a few individual deciduous trees west and north of the garages in the "N.P.S. Quadrangle," though there are no individual trees or clusters of trees depicted within NPS Quadrangle itself. The foliage line of primarily deciduous trees is depicted on the outskirts of the developed camp areas. An oblique aerial photograph of Camp NP-2-MD, taken c. 1940, shows the vegetation within the camp after construction. The developed area is largely void of vegetation between buildings and structures; mature woods surround the developed area (*see*

Figure 100 on page 192). A few smaller individual trees and clusters of trees are visible between and among the buildings.

Following the removal of camp facilities during the World War II era, portions of the cleared areas of the cultural landscape experienced revegetation. No further development occurred in the Camp NP-1-MD area where the forest reestablished. With Mission 66 development of the Carderock cultural landscape in the 1960s, the former site of Camp NP-2-MD's maintenance cluster was cleared and graded for the establishment of a grass recreation field.

Open recreation field

HISTORIC CONDITIONS

During the operation of CCC Camp NP-2-MD, an open area existed between the two main building clusters (the residential and administrative cluster to the northwest and maintenance cluster to the southeast). This open area became the northernmost part of a recreation field established during the Mission 66 development of the Carderock cultural landscape. Grading for the recreation field took place in 1964, creating an open, grassy area that measured approximately three acres. Associated with the Carderock picnic pavilion, the open recreation field was established on a bank above the Potomac River; its perimeter was defined on the northwest, southwest, and southeast by the forest edge.

EXISTING CONDITIONS

Today the recreation field remains in place, consistent with its condition during the third and fourth periods of significance. It is a generally open grass field located south of the picnic pavilion, encompassing approximately three acres (***see Figures 137, 138, and 139***). Dotted with a limited number of individual trees and one centrally located copse of trees, the recreation field retains integrity and is a contributing vegetation feature.



Figure 137: Recreation field with grass near the picnic pavilion, looking southeast (Urban Heritage Project 2024).



Figure 138: View across the recreation field, looking northwest, towards the copse of trees (Urban Heritage Project 2024).



Figure 139: Recreational field with grass near the picnic pavilion, looking southwest (Urban Heritage Project 2024).



Figure 140: Individual trees in the picnic area, looking southeast towards the picnic pavilion (Urban Heritage Project 2024).



Figure 141: Individual trees in the picnic area, looking northwest towards the east comfort station (Urban Heritage Project 2024).

Individual trees in picnic area

HISTORIC CONDITIONS

The picnic area north of the pavilion was cleared for the construction of buildings during camp operations, as visible in the c. 1940 aerial photograph. After the removal of the camp buildings, this area experienced reforestation, and individual trees discernible by the early 1960s, according to a 1962 aerial image of the area. When the Carderock Recreation Area was established during the fourth period of significance, these trees were retained to establish the shaded character of the picnic area—a marked contrast with the open recreation field immediately east of the picnic area.

EXISTING CONDITIONS

Today, the individual trees scattered throughout the picnic area to the north of the picnic pavilion are consistent with the vegetative character that existed in this area during the fourth period of significance (***see Figure 140 and Figure 141***). The dominant species are tulip poplar (*Liriodendron tulipifera*), willow oak (*Quercus phellos*), and red oak (*Quercus rubra*), with occasional other species such as dogwood (*Cornus florida*) and beech (*Fagus* sp.). There is no understory among the trees. The individual trees within the picnic area retain integrity to the fourth period of significance and are contributing vegetation features.



Figure 142: Vegetation growing within the C&O Canal (Urban Heritage Project 2024).

Vegetation within canal

EXISTING CONDITIONS

During the period of canal operations, the canal was watered; the basin would not have featured any vegetation. Today, the canal is temporarily not watered, and vegetation has established within the basin, creating a marshy environment of grasses, shrubs, and trees (*see Figure 142 and Figure 143*). At the time of survey in 2024, the canal had been without water for 4-5 years due to ongoing rehabilitation work in the area, including the "Restoration of Canal & Dry Stone Wall" project west of the Carderock between mile 11.0 and 11.3. Once these other projects are complete, the park intends to re-water the canal, which will kill the incompatible plants within the waterway. Vegetation growing within the canal is a non-contributing feature, but will be redressed with the re-watering of the canal.

EVALUATION

Today, vegetation within the cultural landscape includes the open recreation field, individual trees in the picnic area, and vegetation growing within the canal. With the exception of the vegetation within the canal, these features contribute to the significance of the cultural landscape. Vegetation is therefore a contributing landscape characteristic.



Figure 143: Vegetation growing within the C&O Canal (Urban Heritage Project 2024).

Vegetation: Character-Defining Features

Feature Description	*9000 BCE - 1500 CE (Paleo-Indian through Late Woodland)*	*1828 - 1924 (Canal operations)*	*1938 - 1942 (CCC)*	*1964 - 1965 (Mission 66)*	*Contributing Status*
Open recreation field				X	Contributing
Individual trees in picnic area				X	Contributing
Vegetation within canal					Non-contributing

Label	Feature
LT	Tulip poplar (*Liriodendron tulipfera*)
QP	Willow oak (*Quercus phellos*)
QR	Red oak (*Quercus rubra*)
QA	White oak (*Quercus alba*)
QPA	Pin oak (*Quercus palustris*)
QC	Scarlet oak (*Quercus coccinea*)
QUND	Oak, undetermined variety
FG	American beech (*Fagus grandifolia*)
UL	Elm (*Ulmus* sp.)
NS	Black gum (*Nyssa sylvatica*)
VP	Black haw (*Viburnum prunifolium*)
CC	Eastern redbud (*Cercis canadensis*)
CO	Dogwood (*Cornus* sp.)
PV	Virginia pine (*Pinus virginiana*)
AR	Red maple (*Acer rubrum*)
AS	Sugar maple (*Acer saccharum*)
FA	White ash (*Fraxinus americana*)
JN	Black walnut (*Juglans nigra*)
ST	Stump
UNK	Unknown tree species



Cultural Landscape Report

Carderock

Chesapeake and Ohio Canal NHP
Potomac, MD

Vegetation - Detail of field

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

In cooperation with:
National Capital Region, National Park Service

Sources
1. Ortho Imagery, 2025
2. Data collected in July, October 2024, and March, April 2025

Drawn By
Meg Frisbie, ArcGIS Pro 3.2.2, 2025

Legend
- CLR Boundary
- Vegetation, Contributing
- Vegetation, Non-contributing
- Circulation

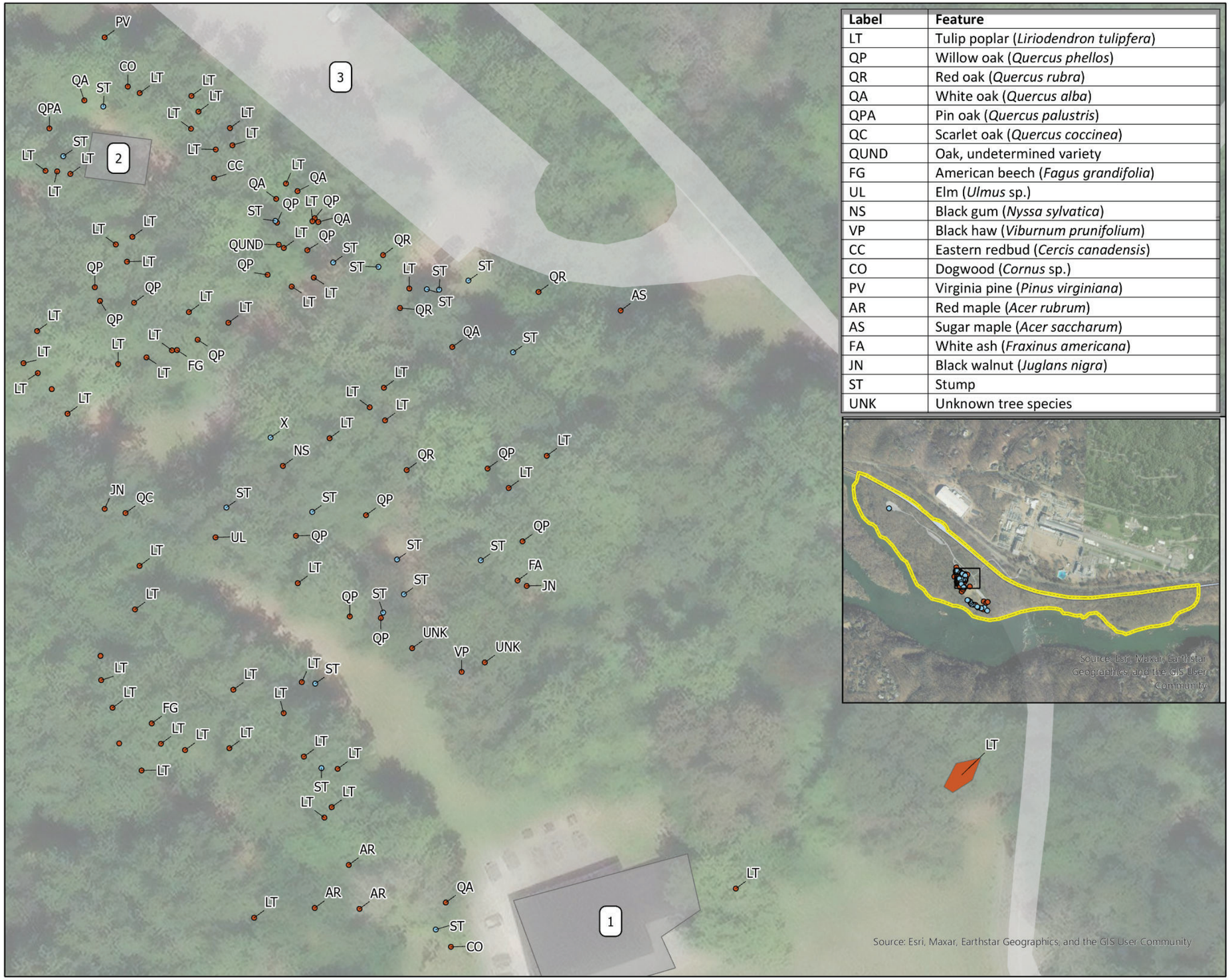
1. Parking Lot 1

Notes
1. Projection: NAD 1983 UTM Zone 18N

N 0 15 30 60 90 Feet

Drawing #14

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Label	Feature
LT	Tulip poplar (*Liriodendron tulipfera*)
QP	Willow oak (*Quercus phellos*)
QR	Red oak (*Quercus rubra*)
QA	White oak (*Quercus alba*)
QPA	Pin oak (*Quercus palustris*)
QC	Scarlet oak (*Quercus coccinea*)
QUND	Oak, undetermined variety
FG	American beech (*Fagus grandifolia*)
UL	Elm (*Ulmus* sp.)
NS	Black gum (*Nyssa sylvatica*)
VP	Black haw (*Viburnum prunifolium*)
CC	Eastern redbud (*Cercis canadensis*)
CO	Dogwood (*Cornus* sp.)
PV	Virginia pine (*Pinus virginiana*)
AR	Red maple (*Acer rubrum*)
AS	Sugar maple (*Acer saccharum*)
FA	White ash (*Fraxinus americana*)
JN	Black walnut (*Juglans nigra*)
ST	Stump
UNK	Unknown tree species

Cultural Landscape Report

Carderock

Chesapeake and Ohio Canal NHP
Potomac, MD

Vegetation - Detail of picnic area

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

In cooperation with:
National Capital Region, National Park Service

Sources
1. Ortho Imagery, 2025
2. Data collected in July, October 2024, and March, April 2025

Drawn By
Meg Frisbie, ArcGIS Pro 3.2.2, 2025

Legend

- CLR Boundary
- Vegetation, Contributing
- Vegetation, Non-contributing
- Vegetation, Contributing
- Buildings+Structures
- Circulation

1. Carderock picnic pavilion
2. East comfort station
3. Parking Lot 2

Notes
1. Projection: NAD 1983 UTM Zone 18N

N 0 15 30 60 90 Feet

Drawing #15

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Small-Scale Features

There is no known documentation of small-scale features that existed within the cultural landscape during the early periods of significance. Small-scale features within the cultural landscape during the era of canal operations likely would have reflected daily life in an agricultural and domestic environment.

During the CCC era, small-scale features likely would have related to camp operations and residential life in the CCC camps. Utilitarian small-scale features likely would have been associated with daily work (such as tools) and daily life, including small-scale features for domestic life, training, education, and recreation. The camps would have included typical features such as utilities, other infrastructure, and flagpoles.

This transition over the decades from an agricultural and industrial landscape to a recreational waterfront resulted in fewer features associated with industry and labor, and an increase in features associated with visitor use and recreation. Today, small-scale features in the cultural landscape primarily pertain to use of the cultural landscape for recreation, including curbing, grills, picnic tables, a drinking fountain, and signage.

Flagpole near picnic pavilion

HISTORIC AND EXISTING CONDITIONS

A flagpole is located west/southwest of the picnic pavilion (***see Figure 144***). The standard metal pole with a spherical pole topper is believed to have been associated with the CCC Camp NP-2-MD. The flagpole is a contributing small-scale feature that dates to the third period of significance (1938-1942).



Figure 144: Flagpole located west of the picnic pavilion (Urban Heritage Project 2024).

Grills around the picnic pavilion (two types)

EXISTING CONDITIONS

There are two types grills located east and north of the picnic pavilion, with the larger type located immediately north of the picnic pavilion (***see Figure 145***). The smaller grills are located throughout the picnic area between the picnic pavilion and the east comfort station (***see Figure 146***). It is unknown when any of the grills were added to the landscape. The grills are considered non-contributing but compatible features.



Figure 145: Larger grill type located immediately north of the picnic pavilion (Urban Heritage Project 2024).



Figure 146: Smaller grill type located between the picnic pavilion and the east comfort station (Urban Heritage Project 2024).

Picnic tables (three types) (Count: 62)

EXISTING CONDITIONS

At the time of survey in summer 2024, three types of picnic tables were located within the cultural landscape (***see Figure 147 and Figure 148***). Picnic tables are located within the picnic pavilion, as well as in the picnic area north of the pavilion and in the recreation field south of the pavilion; they are typically arranged around the picnic area's grills. While the picnic tables within the picnic pavilion are fixed in place, the majority of the picnic tables are movable. It is unknown when the picnic tables were added to the landscape. They are considered non-contributing but compatible features.



Figure 147: Moveable picnic tables north of the picnic pavilion (Urban Heritage Project 2024).



Figure 148: Fixed picnic tables located within the picnic pavilion (Urban Heritage Project 2024).

Interpretive signage

EXISTING CONDITIONS

NPS added interpretive waysides to the cultural landscape in 2020, to interpret the history of the CCC camps at Carderock (***see Figure 149 and Figure 150***). These in-ground waysides have a single tilted horizontal exhibit panel. They are located in the recreational field adjacent to the northwest side of Parking Lot 1, on the southwest side of the picnic pavilion, and near the east comfort station.



Figure 149: An interpretive wayside near the east comfort station (Urban Heritage Project 2024).



Figure 150: An interpretive wayside on the southwest side of the picnic pavilion (Urban Heritage Project 2024).



Figure 151: C&O Canal mileage marker along the canal towpath (Urban Heritage Project 2024).

Additionally, there are vertical waysides that include information about the Potomac River. Interpretative signage is a non-contributing but compatible small-scale feature.

Trail and mileage markers

EXISTING CONDITIONS

Standardized mileage markers are located along the canal towpath; they were added along the entirety of the resource at an unknown time (*see Figure 151*). Additionally, there are markers for the Billy Goat Trail at connection points along the canal towpath and in the parking lots. The trail and mileage markers are considered non-contributing but compatible small-scale features.

Bollards between road and recreation field

EXISTING CONDITIONS

Standard brown wooden posts, square in footprint and approximately 3′ tall, are located along the southwest side of the access road, demarcating the road from the recreational space (*see Figure 152 and Figure 153*). The posts stretch along the access road from the far east side of Parking Lot 1 to the west side of Parking Lot 2. At the time of survey in summer of 2024, there were 224 total posts, some of which appear to be recent replacements. CHOH maintenance and compliance files indicate that the bollards were added in the 1990s. The bollards are non-contributing, but compatible features.

Bench

EXISTING CONDITIONS

A bench is located along the southwest side of the C&O Canal towpath, southwest of the underpass access road, for visitor use. As of 2025, the Canal Trust is in the process of adding benches along the canal towpath, to be maintained by volunteers. The bench is a non-contributing but compatible feature.

Regulatory and other signage

EXISTING CONDITIONS

There are several instances of regulatory signage across the cultural landscape, placed individually or in clusters (***see Figures 154, 155, and 156***). These signs address driving, parking, steep slope conditions, and other regulatory messaging. Regulatory and other signage is considered is non-contributing.

Drinking fountain (count: 1)

EXISTING CONDITIONS

There is one metal drinking fountain near the east comfort station (***see Figure 157***). The fountain has a brown enamel finish and a pet fountain near its base. The water fountain is anchored in a concrete pad. The date of installation likely post-dates the periods of significance. The water fountain is considered a non-contributing feature.

Utilities

EXISTING CONDITIONS

Modern utilities are located throughout the cultural landscape (***see Figure 158***). These include drainage grates in parking lots, a concrete pad surrounding the drinking fountain, and other utility boxes and related features. These features are non-contributing.

Pay phone (count: 1)

EXISTING CONDITIONS

A non-operating pay phone of standard design is located near the east comfort station, adjacent to Parking Lot 2 (***see Figure 159***). It is unknown when the pay phone was installed in the Carderock cultural landscape. It is a non-contributing feature.



Figure 152: Standard wooden posts along the access road leading to Parking Lot 2 (Urban Heritage Project 2024).



Figure 153: Standard wooden posts along the edge of Parking Lot 1 (Urban Heritage Project 2024).



Figure 154: Cluster of signs near the entrance to Carderock (Urban Heritage Project 2024).



Figure 155: Cluster of maps and regulatory signage near the east comfort station (Urban Heritage Project 2024).



Figure 156: Regulatory sign for bicycle users (Urban Heritage Project 2024).



Figure 157: Drinking fountain near the east comfort station (Urban Heritage Project 2024).



Figure 158: Utilities cluster in front of the west comfort station, near Parking Lot 4 (Urban Heritage Project 2024).



Figure 159: Payphone located near the east comfort station (Urban Heritage Project 2024).

Curbing around road and parking lots

EXISTING CONDITIONS

Concrete curbing lines the four parking lots and the access road off of the Clara Barton Parkway, ending at the T-shaped intersection within the study area (*see Figure 160, Figure 161, and Figure 162*). (There is no curbing along the road connecting the four parking lots.) Parking Lot 4 includes a central traffic island, which is also lined with concrete curbing. It is unknown if the curbing dates to the Mission 66 construction period. The contributing status of the curbing is thus undetermined.



Figure 160: Curbing within Parking Lot 1 (the easternmost parking area) (Urban Heritage Project 2024).

Metal pipes in field near picnic pavilion

EXISTING CONDITIONS

A single metal pipe is located on the far southeast end of the recreation field (*see Figure 163 and Figure 164*). The original purpose and date of establishment of the metal pipe are unknown. The contributing status of the pipe is undetermined.



Figure 161: Curbing along the access road from the Clara Barton Parkway (Urban Heritage Project 2024).

Water pump and spigot

EXISTING CONDITIONS

A standard water pump is located near the picnic pavilion (*see Figure 165*). The contributing status of the water pump and spigot is undetermined.

Dimensional lumber surrounding pavilion

EXISTING CONDITIONS

Dimensional lumber frames a gravel apron around the picnic pavilion, although some sections are missing or no longer legible (*see Figure 166 and Figure 167*). There are no known historic photographs of this area to determine when the



Figure 162: Curb cuts within Parking Lot 2 (Urban Heritage Project 2024).



Figure 163: Single metal pipe in southeastern end of open recreation field (Urban Heritage Project 2024).



Figure 164: Detail of single metal pipe (Urban Heritage Project 2024).

dimensional lumber or gravel perimeter were added. The contributing status of the dimensional lumber is undetermined.

Concrete pad with hatch opening

EXISTING CONDITIONS

A concrete pad with a hatch opening is located between the picnic pavilion area and the Billy Goat Trail Section C (***see Figure 168***). The history and significance of this feature is unknown; its contributing status is undetermined.

EVALUATION

Most of the small-scale features in the Carderock cultural landscape post-date the periods of significance and are thus either non-contributing, or non-contributing but compatible. There are also several undetermined small-scale features. One flagpole dates to the CCC era and is considered contributing. Overall, the small-scale features do not retain integrity to periods of significance.



Figure 165: Water pump located near the picnic pavilion (Urban Heritage Project 2024).



Figure 166: Dimensional lumber surrounding the picnic pavilion (Urban Heritage Project 2024).



Figure 167: Dimensional lumber define the edge of the gravel apron surrounding the picnic pavilion (Urban Heritage Project 2024).



Figure 168: Large concrete pad with hatch opening between the picnic pavilion area and the Billy Goat Trail (Urban Heritage Project 2025).

Small-Scale Features: Character-Defining Features

Feature Description	9000 BCE - 1500 CE (Paleo-Indian through Late Woodland)	1828 - 1924 (Canal operations)	1938 - 1942 (CCC)	1964 - 1965 (Mission 66)	Contributing Status
Flagpole near picnic pavilion			X	X	Contributing
Grills around the picnic pavilion (two types)					Non-contributing, compatible
Picnic tables (three types) (Count: 62)					Non-contributing, compatible
Interpretative signage					Non-contributing, compatible
Trail and mileage markers					Non-contributing, compatible
Bollards between road and recreation field					Non-contributing, compatible
Bench					Non-contributing, compatible
Regulatory signage					Non-contributing
Drinking fountain (count: 1)					Non-contributing
Utilities					Non-contributing
Pay phone (count: 1)					Non-contributing
Curbing around road and parking lots					Undetermined
Metal pipes in field near picnic pavilion					Undetermined
Water pump and spigot					Undetermined
Dimensional lumber around gravel perimeter apron surrounding pavilion					Undetermined
Concrete pad with hatch opening					Undetermined



Cultural Landscape Report

Carderock

Chesapeake and Ohio Canal NHP
Potomac, MD

Small-scale Features

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

In cooperation with:
National Capital Region, National Park Service

Sources
1. Ortho Imagery, 2025
2. Data collected in July, October 2024, and March, April 2025

Drawn By
Meg Frisbie, ArcGIS Pro 3.2.2, 2025

Legend

- CLR Boundary
- Small-scale Features, Contributing
- Small-scale Features, Non-contributing
- Small-scale Features, Non-contributing - Compatible
- Small-scale Features, Undetermined
- Small-scale Features, Non Contributing - Compatible
- Circulation
- Small-scale Features, Undetermined
- Buildings+Structures
- Circulation
- C&O Canal

1. Flagpole
2. Wayside
3. Regulatory sign
4. NPS informational sign
5. Mile and trail markers
6. Grill
7. Bench
8. Pay phone
9. Water fountain
10. Storage box
11. Utilities
12. Metal pipe
13. Water pump
14. Concrete pad
15. Horseshoe pits
16. Rail ties around picnic pavilion
17. Bollards (count: 224)
18. Billy Goat Trail Section C
19. C&O Canal towpath

Notes
1. Projection: NAD 1983 UTM Zone 18N

N 0 350 700 1,400 Feet

Drawing #16

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Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Cultural Landscape Report

Carderock

Chesapeake and Ohio Canal NHP
Potomac, MD

Small-scale Features - Detail

Urban Heritage Project
Department of Historic Preservation
Weitzman School of Design
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Sources
1. Ortho Imagery, 2025
2. Data collected in July, October 2024, and March, April 2025

Drawn By
Meg Frisbie, ArcGIS Pro 3.2.2, 2025

Legend

- CLR Boundary
- Small-scale Features, Contributing
- Small-scale Features, Non-contributing
- Small-scale Features, Non-contributing - Compatible
- Small-scale Features, Undetermined
- Small-scale Features, Non Contributing - Compatible
- Circulation
- Small-scale Features, Undetermined
- Buildings+Structures
- Circulation
- C&O Canal

1. Flagpole
2. Wayside
3. Regulatory sign
4. NPS informational sign
5. Mile and trail markers
6. Grill
7. Bench
8. Pay phone
9. Water fountain
10. Storage box
11. Utilities
12. Metal pipe
13. Water pump
14. Concrete pad
15. Horseshoe pits
16. Rail ties around picnic pavilion
17. Bollards (count: 224)
18. Carderock picnic pavilion
19. East comfort station

Notes
1. Projection: NAD 1983 UTM Zone 18N

N 0 40 80 160 Feet

Drawing #17

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Archeological Sites

No archeological work was completed for this CLR. The 2015 *National Register of Historic Places Additional Documentation and Boundary Increase* for the C&O Canal discusses the archeology of the canal, noting:

> The C&O Canal National Historical Park was established in a landscape that has been inhabited for over 11,000 years. Embedded in the landscape is a rich archeological record of human use and occupation that includes Early and Late Archaic riverine base camps; Early and Middle Woodland camp sites; Late Woodland villages, hamlets, and camps; eighteenth-century domestic sites of the first squatters and settlers; eighteenth- and nineteenth-century farmsteads and industrial sites; along with sites associated with the construction and operation of the canal; and Civil War fortifications and camp sites. The number of eligible and previously listed archeological resources on the National Register includes 20 prehistoric and 30 historic archeological sites. (Salvatore and Potter 2015: 7-9, 10)

An archeological identification and evaluation study conducted for the C&O Canal NHP between 2003 and 2010 identified more than 100 new archeological sites and thousands of artifacts. For additional information on the archeology of the C&O Canal, please refer to the 2002 *Archeological Overview and Assessment, C&O Canal National Historical Park* by URS Corporation, and the nine volumes of the *Archeological Identification and Evaluation Study of C&O Canal National Historical Park*, by The Louis Berger Group, Inc.

More recently, between 2020 and 2022, WSP USA, Inc. completed an archeological survey and accompanying report, titled *Archeological Identification and Evaluation Study of Two African American CCC Camps*. The main goals of this study were to determine what remained from the CCC era in these two locations and to evaluate those remains for listing in the National Register. The WSP USA, Inc. report identified an archeological site at each camp: Site 18MO781 at Camp NP-1-MD, encompassing 12.13 acres, and Site 18MO773 at Camp NP-2-MD, encompassing 14.90 acres.

CCC Camp NP-1-MD

HISTORIC AND EXISTING CONDITIONS

Camp NP-1-MD, housing Company No. 325, was established on September 19, 1938, within a predominantly wooded area near the C&O Canal. As noted in the Buildings and Structures section, the CCC camp included a range of buildings for administration, education, recreation, barracks and other quarters, and infrastructure. In April of 1942, CCC Camp NP-1-MD was converted into a defense camp, which operated for a short period until July of 1942. The buildings were later removed.

Within the landscape are a variety of features, including metal debris (***see Figure 169***), a fallen flagpole (***see Figure 170***), two brick hearths (***see Figure 171***), an upright wooden pole, and a septic pad. While no artifacts can be dated with certainty to the CCC period, many shovel tests at this camp encountered layers of gravel or asphalt that are clearly remnants of the camp, including what may have been access roads, parking lots, or building pads. The base of the camp flagpole remains, and there are other artifacts scattered throughout the former camp site. The WSP USA, Inc. report concluded that Camp NP-1-MD should be considered eligible for listing in the National Register of Historic Places under Criterion A, because of the site's association with the canal, the New Deal, the CCC, and Black American history. The Maryland Historical Trust concurred with the determination of eligibility on March 23, 2023.



Figure 169: Metal debris within the area of Camp NP-1-MD (Urban Heritage Project 2024).



Figure 170: Fallen flagpole within the area of Camp NP-1-MD (Urban Heritage Project 2024).



Figure 171: Brick hearth remains within the area of Camp NP-1-MD (Urban Heritage Project 2024).

CCC Camp NP-2-MD

HISTORIC AND EXISTING CONDITIONS

Camp NP-2-MD housed Company No. 333 from October 5, 1938, until November 15, 1941. As noted in the Buildings and Structures section, the CCC camp included a range of buildings for administration, education, recreation, barracks and other quarters, and infrastructure. Upon closing, the buildings and structures were repurposed and relocated for wartime mobilization efforts.

Camp NP-2-MD was located on the portion of the site that is now occupied by the Carderock picnic pavilion and associated parking lots, picnic grounds, and open areas used for recreation. As such, there is minimal above-ground evidence of Camp NP-2-MD, although there are three concrete features and fill deposits between the picnic pavilion and the east comfort station that may date to the CCC-period. The WSP USA, Inc. archeological report concluded that Camp NP-2-MD lacks the integrity to be eligible for listing in the National Register; the Maryland Historical Trust concurred with the determinations of eligibility on March 23, 2023. However, this cultural landscape report considers CCC Camp NP-2-MD to be a contributing archeological feature based on the potential to yield additional information and the ongoing association between this site's recreational use and the CCC's transformation of the canal landscape. A section of CCC-period access road also survives (see next record).

CCC-era road trace

HISTORIC CONDITIONS

Initially, CCC members accessed Camp NP-2-MD via a private road through an adjacent property. Following the closure of the private road, enrollees cleared overgrowth, built a temporary bridge across the canal, and graded a portion of land set aside for the George Washington Memorial Parkway in order to construct a new access road to the camp. This road is labeled "Camp Access Road" on the 1938 plan (*see Figure 85* on page 170) and is depicted



Figure 172: LIDAR imagery showing (Feature A) the CCC-era road trace, (Feature B) an undated road trace, and (Feature C) an undated pit feature. (Source: MD iMAP, LiDAR Inventory, Maryland.gov).

as a gently curved road that traveled from the canal through the woods to access both the maintenance cluster and administrative/residential cluster of the camp.

EXISTING CONDITIONS

Evidence of the CCC-era road is discernible in the landscape and visible on LIDAR (*see Figure 172*). The road trace is considered a contributing archeological feature.

Building foundation at the edge of the picnic area

EXISTING CONDITIONS

A rectangular concrete foundation is located near the picnic pavilion (*see Figure 173*). Three sides are visible within grassy area. An "old foundation" is depicted on the 1938 plan for Camp NP-2-MD, which is consistent with the extant feature. The foundation is most like a CCC-era resource and considered a contributing feature.



Figure 173: Concrete foundation remnants near the picnic pavilion (Urban Heritage Project 2024).



Figure 174: Petroglyph in the western portion of the Carderock cultural landscape (Urban Heritage Project 2024).



Figure 175: Petroglyph in the western portion of the Carderock cultural landscape (Urban Heritage Project 2024).

Petroglyph

EXISTING CONDITIONS

A petroglyph is carved into a rock face in the western portion of the landscape; it resembles a face, with discernible eyes and a nose (***see Figure 174 and Figure 175***). The petroglyph is of unknown origin, and its contributing status is undetermined.

Pit and possible domestic, agricultural, or industrial site with bricks

EXISTING CONDITIONS

A pit and scattered bricks that may have served domestic, agricultural, or industrial functions is located within the cultural landscape boundaries, located in the woods between the Billy Goat Trail and Parking Lot 3 (***see Figure 172***). The pit is visible in LIDAR imagery. When georeferenced, the pit is located further west in the cultural landscape than any of the buildings represented on the early maps.

The origins of these features are unknown, and their contributing status is undetermined.

Road trace

EXISTING CONDITIONS

A road trace, oriented roughly northeast to southwest, is located west/southwest of the second parking area (***see Figure 172***). The date of construction and purpose of the road are unknown, though culverts were constructed to access existing properties when the canal was built. The road trace may pre-date the canal. The contributing status of the road is undetermined.

EVALUATION

Archeological resources associated with Camp NP-1-MD, Camp NP-2-MD, and the CCC-era road trace are contributing. The contributing status of the petroglyph; the pit and possible domestic, agricultural, or industrial site with bricks; and the building foundation are undetermined.

Archeological Sites: Character-Defining Features

Feature Description	*9000 BCE - 1500 CE (Paleo-Indian through Late Woodland)*	*1828 - 1924 (Canal operations)*	*1938 - 1942 (CCC)*	*1964 - 1965 (Mission 66)*	*Contributing Status*
CCC Camp NP-1-MD			X	X	Contributing
Fallen flagpole at former Camp NP-1-MD			X	X	Contributing
CCC Camp NP-2-MD			X	X	Contributing
CCC-era road trace			X	X	Contributing
Building foundation at the edge of the picnic area			X *(likely)*	X *(likely)*	Contributing
Petroglyph					Undetermined
Pit and possible domestic, agricultural, or industrial site with bricks					Undetermined
Road trace					Undetermined

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PART 2: TREATMENT RECOMMENDATIONS

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Introduction

This chapter presents a treatment strategy for the long-term preservation and management of the Carderock cultural landscape within the Chesapeake and Ohio Canal National Historical Park (C&O Canal; CHOH; NHP), based on the research, inventory, and analysis conducted for Part 1 of this Cultural Landscape Report (CLR).

Treatment is the collective set of actions taken within a cultural landscape, intended to ensure the protection and preservation of the resources and characteristics that contribute to its historic character. Treatment guidance may range from broad guidelines and principles to specific tasks. The overall goal of treatment is to provide a basis for the sound stewardship of the cultural landscape according to the National Park Service's *Cultural Resource Management Guidelines* (1997), the Secretary of the Interior's *Standards for the Treatment of Historic Properties and Guidelines for the Treatment of Cultural Landscapes*, and the historic preservation mandates of the National Historic Preservation Act of 1966.

The treatment recommendations that follow for the Carderock cultural landscape of the C&O Canal NHP were developed through discussion with park staff and refined based on a treatment workshop convened in May 2026 at the C&O Canal NHP headquarters in Williamsport, MD. The treatment workshop included C&O Canal NHP staff from resource management, interpretation, maintenance, fees, and law enforcement including:

- Ed Wenschhof - Acting Superintendent, C&O Canal NHP
- Andrew Landsman - Chief of Resource Management, C&O Canal NHP
- Chris Stevens - Cultural Resources Program Manager and Historical Landscape Architect, C&O Canal NHP
- Justin Ebersole - Cultural Resource Specialist, NHPA Coordinator, C&O Canal NHP
- Katherine Boyle - Historian and Archeologist, C&O Canal NHP
- Shaun Lehmann - Partnerships Coordinator, C&O Canal NHP
- Mary Kate Gentile - Park Special Use Permit and Commercial Use Authorization Coordinator, C&O Canal NHP
- Evan Costanza - Supervisory Recreation Fee Specialist, C&O Canal NHP
- Blyth McManus - Museum Curator, C&O Canal NHP
- Austin Jones, Chief of Visitor and Resource Protection, C&O Canal NHP
- Matthew Morgan, Supervisory Facility Operations Specialist, C&O Canal NHP
- Ben Helwig, Chief of Business Management, C&O Canal NHP
- Stephanie Spencer, Facility Operations Specialist, C&O Canal NHP

Treatment Framework

Enabling Legislation

The C&O Canal was acquired by the National Park Service on September 23, 1938, to rehabilitate the canal landscape for recreational use. On January 18, 1961, President Dwight Eisenhower established the Chesapeake and Ohio Canal National Monument under the authority of the Antiquities Act. A decade later, on January 8, 1971, President Richard Nixon signed the Chesapeake and Ohio Canal National Historical Park Act, establishing the canal as a National Historical Park:

> In order to preserve and interpret the historic and scenic features of the Chesapeake and Ohio Canal, and to develop the potential of the canal for public recreation, including such restoration as may be needed, there is hereby established the Chesapeake and Ohio Canal National Historical Park, in the States of Maryland and West Virginia and in the District of Columbia. (Public Law 91-664, H.R. 19342)

Definitions of Policies, Guidelines, and Standards

The treatment and use of the cultural landscape must be considered within a framework of applicable laws, agreements, and policies. These mandates govern a wide range of management issues, including the preservation, protection, and interpretation of the landscape's cultural resources. Key federal and local laws, regulations, and functional requirements that underpin the recommended treatments include the following:

> Treatment of the cultural landscape is subject to the **National Park Service Organic Act** (1916), which established the National Park Service and defines its purpose "to conserve the scenery, natural and historic objects, and wild life in the System units and to provide for the enjoyment of the scenery, natural and historic objects, and wild life in such manner and by such means as will leave them unimpaired for the enjoyment of future generations" (54 USC 100101).

The **National Historic Preservation Act of 1966,** as amended, protects buildings, sites, districts, structures, and objects that have significant scientific, historic, or cultural value. Section 106 of the National Historic Preservation Act requires federal agencies to consider the effects of their undertakings on properties listed, or potentially eligible for listing, in the National Register of Historic Places. All actions affecting a park's cultural resources must comply with this law, which is implemented through 36 CFR 800.

Executive Order 11593, Protection and Enhancement of the Cultural Environment (1971) mandates that "the Federal Government shall provide leadership in preserving, restoring, and maintaining the historic and cultural environment of the Nation."

The **National Park Service Resources Management Guidelines (NPS-28) (1998)** provide guidance on management and landscape preservation, including biotic systems, which are defined as plant and animal communities associated with human settlement and use. NPS- 28 directs management of specimen vegetation—such as trees, shrubs, and orchards—to ensure health and vigor and, if appropriate, provide for propagation of the next generation, especially for rare plants or those unavailable in commerce. For natural systems, NPS-28 calls for managing landscape patterns to allow for natural dynamics. Exotic plant species, which are often found in cultural landscapes, should be monitored and controlled to avoid spreading and disrupting adjacent natural plant communities. In addition to biotic systems, NPS-28 states that historic circulation features are to be rehabilitated

to accommodate health and safety codes in ways that minimize impact on historic character.

The **National Environmental Policy Act (1969)** also includes consideration and preservation requirements for cultural resources (e.g., "...it is the continuing responsibility of the Federal Government to use all practicable means...to the end that the Nation may...preserve important historic, cultural, and natural aspects of our national heritage...").

DOI Departmental Manual 516 DM 1 - Handbook of National Environmental Policy Act Implementing Procedures (2026) also includes consideration and preservation requirements for cultural resources (e.g. "In considering the potentially affected environment, the Responsible Official should consider, as appropriate to the proposed action, any connected actions, the scope of the affected area [national, regional, or local], reasonably foreseeable trends and planned actions within that area, and the affected area's natural and cultural resources.")

The National Park Service's **Preservation Brief 32: Making Historic Properties Accessible (1993),** introduces the complex issue of providing accessibility at historic properties and cultural landscapes, and underscores the need to balance accessibility and historic preservation.

The Secretary of the Interior's **Standards for the Treatment of Historic Properties + Guidelines for the Treatment of Cultural Landscapes (effective 1995)** acknowledges that "it is often necessary to make modifications to cultural landscapes so that they will be in compliance with current accessibility code requirements....The goal is to provide the highest level of access with the lowest level of impact on the integrity of the landscape."

National Park Service Management Policies (2006) provide guidance that parks are required to follow. Specifically, chapter 5 covers Cultural Resources Management, and section 5.3.5.2 discusses cultural landscapes.

Summary of Management Objectives and Goals

The purpose of the C&O Canal National Historical Park is "to preserve and interpret the 19th-century transportation canal from Washington, DC, to Cumberland, Maryland, and its associated scenic, natural, and cultural resources, and to provide opportunities for education and appropriate outdoor recreation" (National Park Service 2013: 04). Guidance for the management of the C&O Canal NHP was included in the introduction of the 1976 general plan for the park, which noted that,

> Protecting for public enjoyment a historical park which will, more and more, become an outlet for urban seekers after outdoor recreation will be the difficult task facing the National Park Service in its stewardship of this limited resource. (National Park Service 1976, 02)

A **Foundation Document** for the C&O Canal NHP was completed in 2013, and includes the following significance statements for the NHP:

- The Chesapeake and Ohio Canal National Historical Park preserves and interprets 19th century canal transportation, civil engineering technology, and the evolution of a flat-water transportation system in support of the industrial growth of the nation.
- The Chesapeake and Ohio Canal National Historical Park contains more than 1,300 historic structures, including one of the largest collections of 19th-century canal features and buildings in the national park system.
- The Chesapeake and Ohio Canal National Historical Park preserves archeological evidence of 13,000 years of human habitation along the Potomac River.
- Through preservation efforts that began in the 1950s, the Chesapeake and Ohio Canal National Historical Park towpath was transformed into one of the most heavily used recreational trails

in the nation and serves as the backbone for national and regional trail systems.

- The Chesapeake and Ohio Canal National Historical Park provides diverse recreational opportunities for millions of visitors annually, including numerous access points to the Potomac River, ranging from urban to rural settings.
- The 15-mile-long Potomac Gorge, managed in part by the Chesapeake and Ohio Canal National Historical Park, is one of the most biologically diverse natural areas in the national park system.
- Paralleling the Potomac River for 184.5 miles and travelling through four physiographic provinces, Chesapeake and Ohio Canal National Historical Park provides a natural buffer of forest, woodlands, prairies, and barrens and a wildlife corridor along the second-largest tributary to the Chesapeake Bay.
- Interpretive and educational opportunities engage a diverse cross-section of urban and rural communities along the length of the Chesapeake and Ohio Canal National Historical Park and were envisioned in the park's enabling legislation. Living history events, school programming, canal operations demonstrations, and a nationally renowned Canal Quarters program offer visitors the opportunity to experience different eras of the canal's existence.

The **Chesapeake and Ohio Canal NHP Strategic Plan (2019-2023)** articulates the park's purpose:

> To preserve and interpret the 19th-century transportation canal from Washington, DC, to Cumberland, Maryland, and its associated scenic, natural, and cultural resources, and to provide opportunities for education and appropriate outdoor recreation. (National Park Service, Chesapeake and Ohio Canal NHP Strategic Plan, iii)

The goals outlined in the strategic plan include:

> Goal 1: Maintain and Protect Wisely: Ensure towpath continuity, and protect and preserve cultural and natural resources.
>
> Goal 2: Engage and Inspire Creatively: Provide opportunities for visitors to safely experience and enjoy the park's cultural, natural, and recreational resources.
>
> Goal 3: Collaborate Purposefully: Engage stakeholders who are focused on the implementation of shared priorities that align with the park's vision, goals, and capacity.
>
> Goal 4: Manage and Lead Smartly: Implement sound business practices, and establish a positive leadership culture that engages and values employees.
>
> Goal 5: Operate Safely and Efficiently: Provide high-quality visitor and administrative services.

The treatment recommendations presented in this cultural landscape report seek to align with and further implement these management objectives and planning goals.

Stakeholder Engagement

METHODS AND PARTICIPANTS

In order to gain first-hand perspective on the uses and perceptions of the Carderock cultural landscape, the project team interviewed several C&O Canal NHP staff members. Virtual conversations were held in September and December of 2025 with the following C&O Canal NHP staff:

- Ed Wenschhof, Acting Superintendent
- Shaun Lehmann, Partnerships Coordinator
- Evan Costanza, Supervisory Recreation Fee Specialist
- Tracy Ballesteros, Recreation Fee Program Manager for National Capital Region
- Andrew Landsman, Chief of Resource Management
- Layne Strickler, Natural Resource Program Manager
- Chris Stevens, Cultural Resource Program Manager
- Katherine Boyle, Archeologist & Historian

SUMMARY OF INTERVIEW PERSPECTIVES

These conversations underscored several attributes for the cultural landscape, beginning with its unique position as the only designated recreation area on the canal. The open space is more extensive at Carderock than most other developed areas within the linear park, and is suitable for use by large groups. Interviewees emphasized that Carderock offers a rich history; diverse plant communities; a range of recreational opportunities, including a popular climbing area; a picnic pavilion and comfort stations; and four parking lots that provide an important hub for recreational access. Other strengths of the Carderock area include important examples of Mission 66 architecture and the historic significance of Carderock as the hub of Civilian Conservation Corps (CCC) restoration work along the canal. Despite these assets, and a healthy number of visitors, Carderock is still underutilized, as the majority of canal visitors head to the nearby Great Falls area instead.

For those who do visit the Carderock area, there is no on-site staff and limited signage to direct people to their desired activities. There is also a physical and wayfinding disconnect between the towpath/canal and the recreation area. Some of the other challenges associated with the cultural landscape include its susceptibility to flash floods (a parkwide concern), seasonal gulleys, and erosion issues. Additionally, without consistent NPS presence within the cultural landscape, vandalism is a threat. As of early 2026, the Carderock comfort stations have been impacted by vandalism in recent months, and were closed to the public in the later stages of this CLR's preparation. Additional programming of the playing fields at Carderock might attract more visitors; with a more consistent and more robust public presence, threats from vandalism might be minimized.

Other challenges and threats include the impacts from social trails and erosion, and potential impacts to the vegetation communities (including certain instances of rare plants) from off-trail use of the Carderock area. Erosion is an ongoing issue, particularly in the climbing area, and is exacerbated by extreme weather and intensifying rain events.

In addition to these overall observations of the Carderock area, several specific themes emerged during the stakeholder conversations, including: recreational user groups; amenities such as the comfort stations, picnic pavilion, and parking; social trails; maintenance; fees; and interpretation and signage.

User Groups

Recreation within the cultural landscape includes use of the towpath, Section C of the Billy Goat Trail, the rock climbing area, and the fields and associated pavilion. The usage of the cultural landscape spans many user groups (as formal renters and informal visitors), including rock climbers, paddlers, picnickers, hikers, and cyclists, in addition to day-campers and others during the summer months.

The rock climbing area in the western portion of the cultural landscape is utilized by individuals, small groups, outfitters, and fire departments (which use the rock face for high-angle training). Carderock is one of the few climbing areas in the region that is good for beginners; as such, it is utilized by several camps and schools. The Mid Atlantic Climbers are the primary steward of the rocking climbing area, with interests specific to this area in the park and many completed volunteer projects over the years.

At present, there is no permitting or reservation system for individuals or small groups using the rock climbing area; outfitters require commercial use authorization. In some visitor use surveys of climbing stakeholders, respondents expressed a desire for permitting the climbing area to help manage the size of climbing groups and stay in touch with user groups. Currently, climbing as an individual or in a small group does not require a permit.

Elsewhere in the Carderock area, the Potomac Appalachian Trail Club (PATC) is the primary steward of the Billy Goat Trail. The NPS provides logistical support and materials, while PATC completes regular maintenance through a programmatic agreement. The number of volunteers and projects ebbs and flows with leadership, but at the time of the engagement conversation in fall of 2025, it was reported that more work had been completed

in the previous six months than the prior three or four years. Projects included erosion control, trail realignments, and brushing in social trails. PATC volunteers hike the Billy Goat Trail a few times a week and address social trails and downed trees, while also providing preventative search and rescue support.

Paddlers and boaters are another user group within (and beyond) the cultural landscape. Individuals paddling on the Potomac River often use the Carderock area to get off the river. Individuals fishing also use the Carderock cultural landscape for recreation. While there is less fishing at Carderock than elsewhere along the river, improved paddling access also benefits those who paddle to specific parts of the shoreline to fish.

Amenities

The Carderock cultural landscape includes a picnic pavilion, comfort stations, and parking lots. Since 2015, the Carderock picnic pavilion has been available to rent via the recreation.gov website. With rental fees that are often more economical than renting a private facility, the pavilion is popular with many different entities, including government agencies using it for annual picnics; civic groups renting it for special events; and day camps renting it as their home base for a week. Spring and fall tend to be peak use for the pavilion. The picnic pavilion is not fully accessible, as it does not have a paved access path from the parking lot or to the comfort station. Although it is already relatively well-used, some interviewees suggested investing more money and staff time to market the pavilion.

There are two comfort stations in the Carderock cultural landscape that date to the Mission 66 era of development. As of fall 2025 and winter 2026, the comfort stations were both closed due to extensive vandalism, which became a recurring problem in late 2024/early 2025. Apart from the impacts of the vandalism, the buildings have age-related issues, including internal mechanical challenges, exterior erosion issues, flat roofs that collect water, and limited accessibility in the current design.

If the comfort stations at Carderock undergo rehabilitation, they will need extensive engineering to be made accessible. According to our interviewees, the cost to rehabilitate a Mission 66 comfort station is generally on par with building a new one. The NPS region has invested in new and rehabbed comfort stations in the past five years, including at Fort Hunt, Great Falls, Teddy Roosevelt Island, and Turkey Run along George Washington Memorial Parkway in Rock Creek Park; the comfort station at Great Falls Tavern was rehabilitated about 15 years ago. The short-term solution at Carderock is to complete some rehabilitation work to reopen the comfort stations for the fall of 2026; in the long-term, replacement is the expressed preferred solution.

The parking lots at Carderock are used by visitors accessing the Billy Goat Trail; the Potomac River; the towpath and canal; the picnic pavilion and fields; and the rock climbing area. Parking Lot 4 is also used for visitors camping in the Marsden Tract, a group campsite located upstream outside of the boundaries of the cultural landscape between Anglers Inn and Carderock. The parking lot has also been used as a commuter lot and as overflow parking for David Taylor Model Basin north of the cultural landscape. The parking lots at Carderock are currently free of charge.

There is currently no designated and/or sheltered space for NPS staff in the Carderock cultural landscape. Interviewees noted that a small staff area would be useful during busy times; with a more consistent on-site presence, a staff person could monitor the activities at the pavilion and the rock climbing area. NPS staff expressed interest in a small contact station that would not expand the existing building footprints; they suggested the contact station at the US Marine Naval Corps War Memorial as a comparable.

Social Trails

There are many social trails within the Carderock cultural landscape. Since the area is recreation-focused and there is minimal NPS presence, many users seek out recreational routes/destinations that are off the formalized trails. Some of these social trails may cause impacts to rare plants, erosion issues, or other safety concerns.

Engagement conversations suggested that rock climbers will likely keep expanding their footprint,

given the growing popularity of the sport. The trails accessing the climbing area are largely informal at present. Stakeholder engagement conversations suggested that certain social trails should be formalized for access to the climbing area. As trails within the climbing areas are formalized, the NPS could redirect climbers to specific trails, minimizing the impact to the surrounding landscape.

Similarly, although the proximity to the Potomac River is a major asset for the Carderock area, there are no formal access points to the riverfront for paddlers, boaters, or fishers. If river access is formalized and made clearer for users, then it will be appropriate to direct visitors away from excess river access points (and mitigate the conditions of those areas).

With a formalized trail system in place, offering clearer trails in the climbing area and access to multiple waterfront destinations, the wayfinding should be expanded to communicate these access points to visitors and discourage them from venturing off-trail to other areas. These adaptations should minimize off-trail use, reducing impacts from erosion and damage to rare plants.

Maintenance and Infrastructure

Prior to being vandalized, the comfort stations were cleaned daily through a custodial contract; this has ceased since the comfort stations have been closed to visitors. Other contracted maintenance activities include mowing, as Carderock is included in the mowing contract for the Palisades. A contractor mows the fields from Great Falls to Georgetown.

The Carderock road culvert is one of three tunnels within CHOH that will be rehabilitated in 2026. During this project, the Carderock cultural landscape will remain open, but road traffic through the road culvert will be restricted to one lane.

Fees

Carderock is currently a fee-free area, but interviewees reported that it may be considered for designation as a fee area in the future, since there are visitor amenities. Adding fees for NPS properties is a complex process that involves community involvement. There are no formal entrance stations or parking meters in place (or currently planned) at Carderock; in lieu of that infrastructure, fee collection could take place by way of digital passes. Any fees collected would go directly to visitor improvement projects.

Currently, the only fees collected along the entire length of the C&O Canal NHP are imposed at Great Falls and the park's campgrounds. Revenue at the C&O Canal has increased in recent years from $876,000 in 2020, to $1.3 million in 2021, and $1.1 million in 2025. Improvements along the C&O Canal towpath over the past few years have been funded through the fee program (improvements were not limited to the paid-fee areas of the park).

The introduction of a fee at Carderock might rebalance visitor priorities and movement across the park (with both positive and negative implications). For example, if visitors have to pay at other locations in the Great Falls vicinity, then they may seek out specific destinations more directly, rather than parking in a fee-free lot and hiking to a nearby area. Climbers would seek out Carderock, paddlers would go to specifically their place of interest (within or outside of Carderock), hikers would go to their chosen portion of the Billy Goat Trail, etc. These potential shifts might alter the visitation numbers and activities within the cultural landscape, as some visitors might bypass the Carderock area if forced to pay an admission fee.

Interpretation and Signage

Visitors have specific objectives when they visit Carderock, but there are no on-site NPS staff and limited wayfinding and informational signage. Along the canal in particular, there is minimal information on, or direction to, the recreation amenities elsewhere in the Carderock area. At the trailheads for the Billy Goat Trail, signage is limited, and there is guidance to connect visitors at the recreation area to the towpath and canal to the north.

While there are interpretive waysides (installed in 2020) that address the CCC history at Carderock, there is limited interpretive information throughout the Carderock area and no interpretation along the canal in particular. There are currently no interpretive programs offered at Carderock. There is

the possibility for programs to be offered through a mobile visitor station, akin to one at Great Falls.

SWOT Analysis

A SWOT analysis is a strategic planning tool that identifies current conditions (strengths/weaknesses) and future influences (opportunities/threats) for a specific park or system of parks, allowing National Park Service representatives and their partners to evaluate current and future contexts for park planning. The strengths and weaknesses reflect existing conditions; the opportunities and threats reflect potential—but not inevitable—outcomes. Each of these categories may include internal and external influences.

The analysis below was completed in 2026 by the authors of this CLR, shaped by the Part 1 research, fieldwork, mapping, and stakeholder engagement. The bullet points within each quadrant of the diagram are not arranged in priority order.

STRENGTHS	WEAKNESSES
• Diversity of recreation opportunities • Proximity to DC • CCC history and related archeological resources • Ecological value of the forested areas • Established trail system • Ample parking for visitors • Rentable pavilion • Strong partnerships with PATC • Access to restroom facilities • Popular rock climbing area that accommodates a large number of users and range of skill levels • Rare plant communities • Significant examples of Mission 66 architecture and park planning • Access to solitude/quiet • Picnic pavilion and grove that accommodates large groups • Shaded areas • Rare public open space in this area • Flexibility to accommodate different uses • Relatively high tolerance for change • Towpath/canal experience and throughway • Loyal user groups • Fee-free user area • Access to other areas of the canal • Least-strenuous segment of Billy Goat Trail (suitable for all ages) • Distinctive historic features such as the historic entrance culvert • Only recreation area along the canal	• Extensive social trails and related erosion concerns • Loss of integrity of CCC resources • Trails are not fully accessible • Buildings/facilities are not fully accessible • Lack of NPS personnel presence • Few distinctive features along the canal within the cultural landscape • Inconsistent wayfinding • Minimal interpretation • No clear formalized access points to the river • Obscure access points from the recreation area to the towpath • Deferred maintenance of facilities • Carderock is low visibility in overall C&O canal system • Subject to flooding • Current temporary condition of the canal (no water)

OPPORTUNITIES	THREATS
• More formalized access points to the river • Interpretation of the pivot bridge abutment • Standardization of signage and improved wayfinding • More programming of recreation fields • Additional interpretation and recognition of CCC history and natural history • Opportunity to demonstrate the dual mandate of conservation and recreation • Entrance fees may add revenue for visitor improvement projects • New, accessible comfort station • Ranger station to add NPS presence • Preserve rare plants • Potential to yield archeological info • Robust use of pavilion/picnic area for gatherings • Potential to add features along canal (such as benches) • Improved access to the towpath • Re-watered canal • Rehabilitation of the oak tree canopy	• Ecological sensitivity; there is a risk to rare plants from off-trail visitor use • Vandalism • Flooding of the shoreline along the river • Flooding of the C&O Canal • Climate change • Overuse of climbing area • Introduction of entrance fees may disrupt public access or reduce visitation • Continued erosion from social trails • Disturbance of archeological remains of Camp NP-1-MD • Deferred maintenance • Diminished NPS staff capacity • Deer population impacts on oak regeneration • Invasive species

Treatment Philosophy + Approach

For cultural landscapes, a treatment philosophy defines an overall goal of enhancing historic character and perpetuating those characteristics and features that convey historic significance based on the landscape's historic integrity, park policies and planning, natural resource protection, park operations, and other resource management issues.

PRINCIPLES + ASSUMPTIONS

Based on the input of stakeholders and park managers, the CLR authors have established these principles and assumptions to guide the treatment philosophy, approach, and recommendations. They include design and preservation principles, grounded in the appropriate management policies and treatment standards, and assumptions about the current and future context of the landscape.

According to both its historic development and its existing conditions, the cultural landscape represents multiple uses and values simultaneously; **its industrial/transportation history coexists with its significance as a recreation area.**

During one of the periods of significance, Black laborers from the CCC were integral in transforming the C&O Canal landscape from its industrial character to its recreational use. **The CLR's recommendations should seek to preserve the significance of the CCC's work with both physical treatment and interpretation.**

This is a landscape defined by cycles of flooding and recovery. Inundation events and associated campaigns of repair, restoration, and rehabilitation have defined the landscape from its initial development as a canal and should continue to do so with reoccurring natural events.

The existing character of the two former Civilian Conservation Corps (CCC) camps are very different, and warrant different treatments. The former Camp NP-1-MD is situated in a revegetated area on a flat terrace rising above the Potomac River, while the former Camp NP-2-MD was converted into a Mission 66 recreation area. The existing conditions of these camps call for different treatment approaches: while the area around former Camp NP-1-MD should remain undisturbed and undeveloped, the area around former CCC Camp NP-2-MD (the current picnic pavilion and fields) can continue to be developed to accommodate contemporary uses.

The cultural landscape is valuable to many user groups and should continue to provide a diversity of recreational opportunities. The Carderock cultural landscape is both a national historical park and a de facto local park, with numerous recreational opportunities; treatment recommendations should embrace the "both-and" nuances of this identity as they plan for the recreational use of this area.

Much of the study area has a high tolerance for change, particularly compared with other areas of the C&O Canal landscape. There are opportunities to increase visitation at Carderock, and **this area is flexible enough to accommodate growth.**

TREATMENT STRATEGY

The Secretary of the Interior is responsible for establishing professional standards on the preservation of cultural resources listed in or eligible for listing in the National Register of Historic Places. The Secretary of the Interior's *Standards for the Treatment of Historic Properties*, revised in 1992, were codified as 36 CFR Part 68 in the 12 July 1995 Federal Register (Vol. 60, No. 133). The standards identify four primary treatment approaches: preservation, rehabilitation, restoration, and reconstruction. Each treatment calls for a different level of physical intervention and includes specific guidelines and standards, as described below.

> **Preservation** is the act or process of applying measures necessary to sustain the existing form, integrity, and materials of a historic property. Work, including preliminary measures to protect and stabilize the property, generally focuses upon the ongoing maintenance and repair of historic materials and features rather than extensive replacement and new construction. New exterior additions are not within the scope of this treatment; however, the limited and sensitive upgrading of mechanical, electrical, and plumbing systems and other code-required work to make properties functional is appropriate within a preservation project.

Rehabilitation is the act or process of making possible a compatible use of a property through repair, alterations, and additions while preserving those portions or features that convey its historical, cultural, or architectural values.

Restoration is the act or process of accurately depicting the form, features, and character of a property as it appeared at a particular period of time by means of the removal of features from other historic periods in its history and reconstruction of missing features from the restoration period. The limited and sensitive upgrading of mechanical, electrical, and plumbing systems and other code-required work to make the property functional is appropriate within a restoration project.

Reconstruction is the act or process of depicting, by means of new construction, the form, features, and details of a non-surviving site, landscape, building, or objects for the purpose of replicating its appearance at a specific period of time in its historic location.

This CLR recommends **rehabilitation** as the primary treatment for the cultural landscape. The recommended treatment of rehabilitation provides the flexibility needed to preserve the historic resources and enhance the historic character of the canal landscape, while improving site conditions and resilience to flooding, invasive species, visitor uses that could affect resources, climate, and differing recreational uses.

According to the Secretary of the Interior's *Standards for the Treatment of Historic Properties*, rehabilitation treatment actions must conform to the following standards:

- A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.
- The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.
- Each property will be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.
- Changes to a property that have acquired historic significance in their own right will be retained and preserved.
- Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.
- Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be supported by documentary and physical evidence.
- Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
- Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.
- New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work will be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.
- New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

Treatment Goals

The following treatment goals—which apply to the full cultural landscape—respond to the essential qualities of the historic character of the Carderock cultural landscape. For the entire Carderock area of the C&O Canal, these goals include addressing social trails and creating formalized access points to destinations within the cultural landscape; increasing accessibility; improving signage and wayfinding; and protecting rare and endangered plant species.

These goals establish overarching strategies and benchmarks for treatment; the treatment tasks for each character area (beginning on page 289) offer specific implementation guidance to achieve these goals.

Assess and Address Social Trails

Visitors to the Carderock cultural landscape generally have specific recreational objectives and associated destinations within the cultural landscape, including a rock climbing route, the towpath, the Billy Goat Trail Section C, or a put-in/take-out spot for a boat on the Potomac River waterfront (*see Figure 176 and Figure 177*).

As visitors seek alternative paths to a desirable recreation resource or interesting feature, they create informal and unsanctioned paths, also called social trails. Carderock has an extensive network of social trails that continue to evolve based on changing conditions and visitor behaviors. The potential impacts from social trails include the trampling of vegetation, including rare plants; alteration of vegetation composition; potential introduction and spread of non-native plants; compaction and soil loss; potential impacts to historic and archeological resources; and potential disorientation of hikers.

The social trails in the rock climbing area were mapped as of 2023 by the team responsible for the Research to Support Climbing Management Planning at Carderock Recreation Area and Great Falls Park. That geolocation data was incorporated into the fieldwork data for this CLR, and complemented by new social trail mapping for the rest of the cultural landscape in spring of 2025. Both the 2023 and 2025 fieldwork inventoried the locations and extents of the social trails, but did not record characteristics such as the width, depth, and degree of soil erosion. The locations of the social trails offer some information on the primary use of the social trail, whether to a viewpoint access, water access, fishing, hiking, climbing, etc.

It is a challenge for land managers to identify, assess, and mitigate the impacts created by social trails. As Jeffrey Marion, a recreation ecologist with the U.S. Geological Survey stationed at Virginia Tech, notes in Guidance for Managing Informal Trails: “Informal trails with poor, non-sustainable design attributes, trails that threaten sensitive resources, or unnecessary trails with duplicative routings should generally be closed and rehabilitated” (Marion 2019: 6). However,

> ...some informal trails may have reasonably sustainable design attributes and access locations, such as vistas or campsites (hikers), water resources (fishermen), or cliffs (climbers) that are acceptable to land managers. When visitor access to these locations is appropriate, such trails should generally be left open as informal trails or even designated and managed as formal trails. (Marion 2019: 5)

In order to balance recreation with resource protection, some social trails should be formalized to direct visitors to particular desired locations within the landscape; other social trails should be revegetated. The formalized social trails should lead to key access points for paddlers, fishers, and hikers.

Land managers should consider an array of criteria in selecting which social trails to formalize. Marion outlines a numerical assessment that classifies social trails into three classes by percent coverage/loss of vegetation. He also offers a descriptive classification system with five classes based on how legible the social trail is within the landscape. Marion writes,

> Condition class methods provide a quick summary of general trail condition and can be applied to just the visible section of social trails at their junctions with a designated trail or to entire trails or trail segments when a measuring wheel or GPS device is used. Quantitative methods involve measures of separate indicators (e.g., trail width, depth, soil loss, muddiness) generally taken at transects sampled along the trail with a standard interval (e.g., every 300 ft). (Marion 2019: 11)

The linear extent and the condition of informal trails are important attributes to assess social trails, as is the use of the social trail and the impacts to other park resources. The report authors have developed a decision-making rubric that addresses all of these factors, helping land managers to determine which social trails should be formalized and which should be brushed in and allowed to recover.

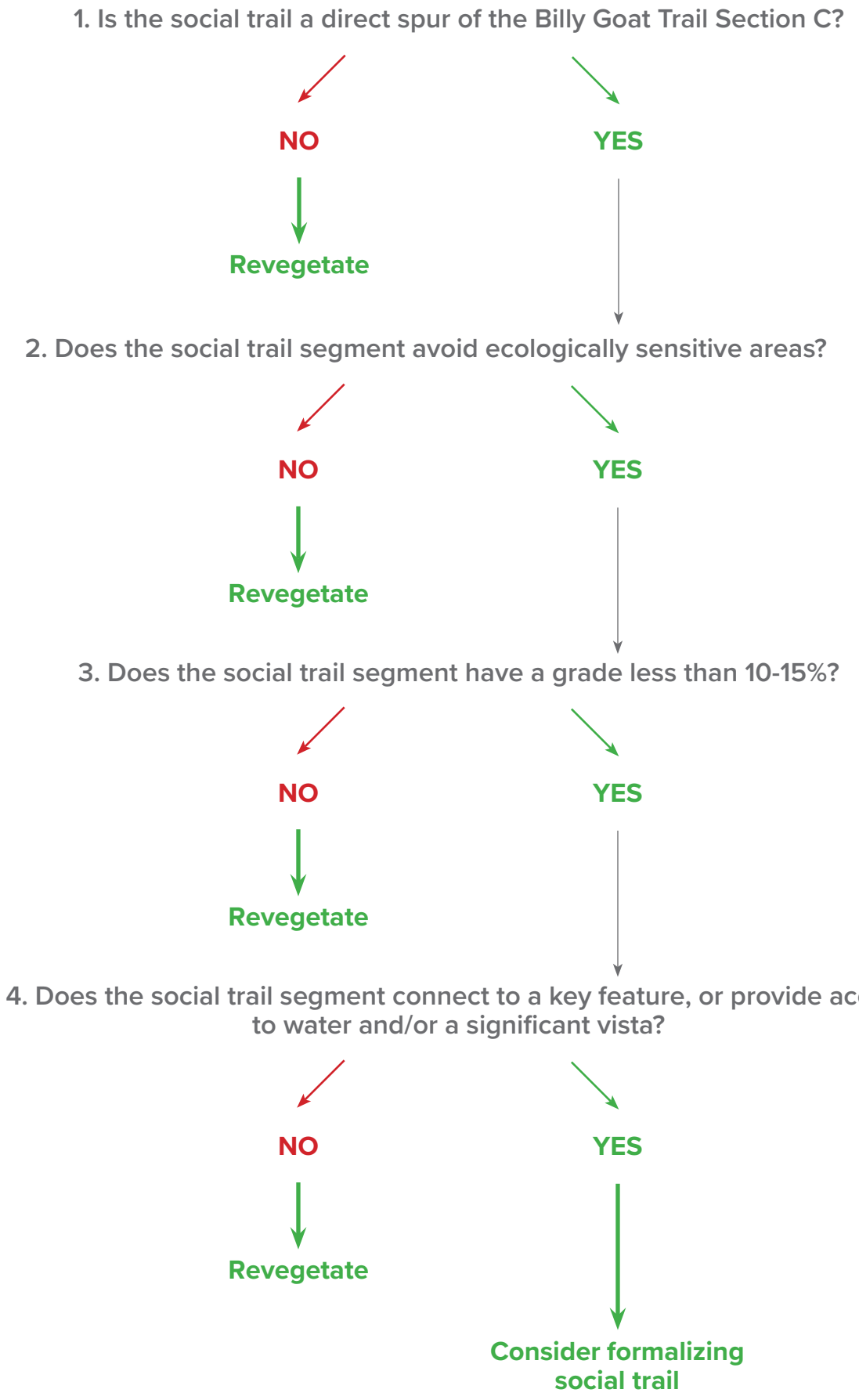


Figure 176: Unofficial but well-established trail connecting the recreation area to the Billy Goat Trail Section C (Urban Heritage Project).



Figure 177: Short social trail from Billy Goat Trail Section C to the Potomac River shoreline (Urban Heritage Project).

SOCIAL TRAIL ASSESSMENT



In other words: if, in ground-truthing a social trail, landscape managers determine that the trail

- Is connected to Billy Goat Trail Section C;
- Does not impact ecologically sensitive areas;
- Has a reasonable grade (<10-15%);
- Is aligned to the slope (in a side-hill alignment, not a direct-ascent alignment); and
- Connects visitors between two key features and/or accesses the water or a significant vista

then that social trail should become a formalized trail. Any trails that impact rare or endangered plant species should be revegetated. If multiple social trails within a dense area fit the above conditions, establish a policy of a certain reasonable buffer (e.g. 1/8 mile), and eliminate redundant social trails/access points within that given distance. All trails should be monitored during revegetation. Signage should be added to the routes to inform visitors of the formal trail.

In addition to revegetation efforts, an educational component would build the public understanding of social trail rehabilitation and hopefully encourage appropriate visitor behavior. This educational component should communicate the rationale for the restrictions and make visitors aware that:

- Trampling impacts represent a significant threat to resource protection in some areas;
- Off-trail traffic has created informal trails that managers would like to close and restore;
- Remaining on formal trails avoids these impacts;
- Formal trails can be distinguished from informal (visitor-created) trails by distinctive markings; and
- Even small amounts of continued off-trail traffic prevent the landscape's recovery and restoration. (Marion 2019: 7)

Marion concludes that "management experience and research have demonstrated that integrating site management and educational actions consistently achieve the highest rates of success [in addressing social trails]" (Marion 2019: 6).

Increase Accessibility While Improving Amenities and Circulation Features

There are opportunities to increase accessibility while improving circulation features and other amenities within the Carderock cultural landscape. Pathways within the recreation area should be fully accessible and minimize the travel distance for visitors between amenities and nearby parking lots. These pathways should exceed the minimum requirements for universal accessibility.

Accessible circulation features should include:

- An accessible trail from Parking Lot 1 to the picnic pavilion (*see Figure 178*)
- An accessible trail from the picnic pavilion to the east comfort station
- An accessible trail from Parking Lot 2 to the east comfort station
- An accessible trail to the C&O Canal and towpath

In establishing accessible trails:

- New paths should defer to and preserve character-defining landscape features, jogging around mature vegetation or other contributing landscape features;
- Surface materials should be durable and accessible, but should not detract from the natural setting in coloring, layout, or materiality; and
- All new circulation features should be designed in consultation with a historical landscape architect.
- These paths should be marked as accessible routes with clear, consistent signage.

In addition to these improvements to circulation accessibility, the two comfort stations at Carderock are not currently accessible. The east and west comfort stations were constructed in 1965, as part of the Mission 66 development (*see Figure 179, Figure 180, and Figure 181*). The comfort stations are classified as Type D comfort stations, which were the most common Mission 66 comfort stations built in the National Capital Region according to



Figure 178: The current condition of the unpaved path from Parking Lot 1 to the picnic pavilion; this path does not meet accessibility standards (Urban Heritage Project).

standardized plans. The NPS erected at least 15 Type D comfort stations in the region between 1965 and 1970.

Mission 66 comfort stations are a contributing property type, and the Carderock comfort stations are contributing resources at the local level per the 2021 National Register nomination titled *Mission 66-Era Visitor Centers, Administration Buildings, and Public Use Areas in the Maryland, Virginia, West Virginia and the District of Columbia Parks of the National Capital Region of the National Park Service*.

The comfort stations are not fully accessible, and the necessary upgrades would require complex engineering. In the short term, park managers would like to rehabilitate the comfort stations to address the impacts from recent vandalism and open them to visitors for the summer of 2026. In the long term, the cost to make a Mission 66 comfort station fully accessible is roughly equivalent to the cost for a new-build replacement. Thus, the long-term replacement of the comfort stations would allow for updated mechanical systems and fully accessible structures. Given the prevalence of Type D comfort stations within this region, replacement of some structures (such as one or both of the Carderock examples) may be appropriate. Replacement comfort stations would likely have a longer service life than rehabilitating the extant Mission 66 comfort stations, thus adding greater long-term value. Integrating additional interpretation around the comfort stations would leverage these new investments.

One option is to construct a new, fully accessible comfort station, and to rehabilitate at least one of the historic comfort stations for use as a visitor contact station, rock climbing registration building, and/or storage facility. This would meet several goals, allowing for a new visitor contact station, NPS space for storage, and retaining one of the historic comfort stations.

If one or both of the historic comfort stations are rehabilitated, the buildings should:

- Develop and adhere to a cyclical maintenance plan, including:
  - Annual inspections of the foundation, siding,

windows, doors, finishes and coatings, and roof material;
  - Cleaning of windows and doors on an annual basis; and
  - Repainting every five (5) years
- Retain character-defining features;
- Conduct repairs in kind;
- Avoid exterior alterations; and
- Include consultation with a historical landscape architect.

To increase accessibility to and within the comfort stations:

- Create an accessible route to the comfort station and within the comfort station;
- Consider the dimensions of the turning radius within the area enclosed by privacy screens;
- Width of the entry door and clearances;
- Wheelchair accessible toilet compartment(s);
- Location of and accessibility to interior wash sinks and toilet accessories (e.g. soap and towel dispensers); and
- Include consultation with a historical landscape architect.

The above recommendations come from the *Design and Maintenance Guidelines, Mission 66 Comfort Stations, National Capital Region,* prepared by Quinn Evans in 2019.

If replaced, the new comfort stations at Carderock should:

- Meet structural requirements for appropriate visitor capacity in the Carderock area;
- Provide permanent restroom facilities that are fully compliant with the Architectural Barriers Act Accessibility Standards (ABAAS), and associated health and safety standards;
- Assert the smallest possible imprint on the landscape; and
- Ensure the health and safety of the public and improve the visitor experience while preserving the setting of the park.



Figure 179: The east comfort station (Urban Heritage Project).



Figure 180: The west comfort station (Urban Heritage Project).



Figure 181: The access ramp leading to the west comfort station (Urban Heritage Project).



Figure 182: A new comfort station at the U.S. Marine Corps War Memorial, completed in 2018 (Source: Ritz Builds, NPS Comfort Station U.S. Marine Corps Memorial).

The design of replacement comfort stations should:

- Use construction materials that are sensitive to and compatible with the character defining features and materials of the surrounding cultural landscape
- Thoughtfully complement the surrounding landscape and picnic pavilion maintaining a low profile within the landscape
- Incorporate a visitor contact station and provide a location for park staff to work and store items that facilitates the recreation area's operations. Such a facility would provide an improved visitor experience, in addition to the possibility of increasing NPS presence at Carderock. Space for programming equipment. The facility could be staffed during special functions and period of high visitor use;
- Consider self-locking/unlocking facilities at with set opening and closing times; and
- Include consultation with a historical landscape architect.

As a comparable example for Carderock, the George Washington Memorial Parkway (GWMP) constructed a new comfort station in 2018 at the U.S. Marine Corps War Memorial (*see Figure 182*). This comfort station includes accessible restrooms, an office space for staff, a water refilling station, and a janitorial closet.

Improve Wayfinding and Interpretive Signage

There is minimal NPS staff presence at Carderock, and orienting signage is limited. Wayfinding signage within the Carderock cultural landscape can be expanded along the trail system to clarify which trails are official, and to create new connections between the C&O Canal/towpath and the rest of the recreation area. Moreover, additional signage could improve the public interpretation of the cultural landscape.

Currently, there is a perceived disconnect between the recreation area and the C&O Canal towpath. The official trail to the C&O Canal and towpath is unpaved and marked by a sign reading "No Unauthorized Vehicles"; this message creates confusion, and suggests that visitors should not use this road. Without clear guidance or wayfinding, many visitors use social trails to approach the towpath from the entrance road. Similarly, until spring of 2026 the four parking lots lack standardized, explicit signage to guide visitors to the towpath. Updated signage may clarify the connections across the landscape, guiding visitors to the towpath from the entrance road and parking lots and reinforcing the historical and existing connections between the canal and the Carderock recreation area. New wayfinding signage should be consistent with standard NPS signage, compelling visuals, and limited text.

Wayfinding signage should also be improved for the Billy Goat Trail Section C, guiding visitors to the

trail's access points throughout the Carderock area. Along the trail itself, there is minimal wayfinding signage. Additional signage can orient visitors by clarifying the official trail route and thus minimize off trail hiking.

In addition to the limited program of wayfinding signage, the Carderock area includes few interpretive features. In 2020, the NPS added waysides about the CCC-history of the cultural landscape to the recreational field adjacent to the northwest side of Parking Lot 1, the southwest side of the picnic pavilion, and the east comfort station area (***see Figure 183 and Figure 184***).

Additional interpretive panels could be introduced throughout the cultural landscape, including along the towpath (***see Figure 185*** for an example of a compelling interpretive panel). Appropriate themes for additional interpretive panels include:

- CCC history along the C&O Canal
- Industrial / engineering history of the C&O Canal
- The history of rock climbing in the area
- Geological / physiographic context
- Rare plant communities along the C&O Canal
- Culvert 15 and uses of the land prior to the CCC-era

Appropriate locations for additional interpretive panels include:

- Access paths from parking lots to the towpath
- Pivot bridge remnants / along the towpath
- Pavilion area / Parking Lot 1 (to complement / supplement existing signage)
- Near the backstop in the recreational field
- Parking Lot 4 (in / near the rock climbing area)

Signage throughout the cultural landscape should be reviewed for de-cluttering and standardization; at present, some signs are clustered so closely that they may cause confusion (***see Figure 186***). As new wayfinding and interpretive signage is added (according to this CLR's recommendations), their placement should avoid this cluttered effect. Each parking lot should include orientation signage, including standardized directional and regulatory information regarding how to minimize impacts



Figure 183: Interpretive wayside near the east comfort station, with information about the CCC history at Carderock (Urban Heritage Project).



Figure 184: Interpretive wayside near the east comfort station, with vertical informational signs in the background (Urban Heritage Project).



Figure 185: Example of a compelling interpretive wayside in Birmingham, Alabama (Urban Heritage Project).



Figure 186: Cluster of signage upon entering the Carderock cultural landscape (Urban Heritage Project).

to the trails and leave-no-trace principles. High-activity areas (e.g. the parking lots/comfort stations, towpath, trailheads, etc.) should also include interpretive signage, if possible.

Protect Rare and Endangered Plant Communities

The Carderock cultural landscape hosts diverse plant communities, including state-listed rare, threatened, or endangered (RTE) plant species. Across the cultural landscape, these plant species should be protected with social trail mitigation, ongoing monitoring, and visitor education.

Statement of Desired Landscape Character

The overlapping layers of history, significance, integrity, and use are vital to the desired landscape character—and would not coexist without the work of Black laborers from the Civilian Conservation Corps (CCC) and their contributions to the ongoing repair and maintenance of the canal landscape in the late 1930s and early 1940s. This CLR's recommendations seek to strengthen the public understanding of those crews' role in maintaining the landscape's integrity and adapting its use during the periods of significance.

Thus, the desired landscape character includes preserved resources associated with the CCC. The former site of CCC Camp NP-2-MD will maintain this significance and association by retaining multiple recreational uses; the former site of CCC Camp NP-1-MD will remain undisturbed and undeveloped as an archeological site. Both camps will be robustly interpreted in multiple places and multiple modes: Camp NP-2-MD will be interpreted within the boundaries of the former camp, while Camp NP-1-MD will be interpreted at an appropriate distance from the sensitive archeological site.

Based on the treatment recommendations, the cultural landscape will continue to host and support a range of recreational opportunities, including rock climbing, hiking, paddling, fishing, cycling, picnicking, and other individual and group activities. In partnership with user groups, improvements to the existing recreational trail system and pavilion will enhance these recreational uses, while new recreational amenities will improve the visitor experience and bolster the historic location, setting, design, feeling, and association of this area.

The presence of water in the canal is paramount to its character, and the canal will be rewatered following the completion of rehabilitation work west of the CLR study area. However, flooding events along both the canal and the Potomac River will continue to be a natural occurrence within the landscape (exacerbated by extreme weather). The treatment recommendations anticipate ongoing repairs and rehabilitation in response to these flooding events.

The recreation area and the canal/towpath will be better linked with physical infrastructure (including improved wayfinding) and interpretation. This increased connectivity within the landscape will contribute to and create a more coherent landscape character throughout the study area.

The landscape will provide access to the Potomac River for visitors, with clear access points as destinations for hikers, paddlers, and anglers. The majority of existing social trails will otherwise be revegetated, mitigating the current evidence of erosion and protecting the cultural landscape's rare plant communities from visitors. Carderock can be an exemplar of the National Park Service's multiple mandates of conservation, recreation, and cultural resource preservation.

As a component of a mid-Atlantic Mesic Mixed Hardwood Forest, the Carderock forest is important for maintaining regional biodiversity and ecosystem health. The treatment recommendations will rehabilitate the historic oak canopy within the Carderock forests to maintain the historic character of the site. Additionally, the tree canopy within the picnic area will be protected and planted with additional understory tree species, bolstering the successional health of the forest for the long term.

The treatment recommendations that follow also describe the desired landscape character for specific features and areas within the cultural landscape.

Treatment Character Areas

To achieve the holistic effect within the overall cultural landscape, this report divides the cultural landscape into six management zones, or character areas, to articulate historical character, establish priorities, consolidate treatment efforts, and facilitate the cultural landscape's management. These management zones are based on geographic location, use, character, and extant features. Each character area may have different treatment tasks, but the overarching treatment philosophy and goals apply globally.

These character areas are: the C&O Canal and towpath; the picnic pavilion area (including the pavilion structure, adjacent field, picnic grove, and east comfort station); the Billy Goat Trail Section C; the connecting road and parking lots; the rock climbing area; and the wooded areas across the landscape. The character areas are described below and depicted in ***Drawing 18***. The area names are abbreviated with a two-letter code (e.g. CT) that is used to organize and enumerate treatment tasks throughout the narrative and associated treatment maps.

C&O CANAL AND TOWPATH (CT)

The C&O Canal is an engineered waterway that was constructed beginning in 1828, to connect growers and producers in the Potomac River Valley with markets and ports on the Eastern Seaboard. The waterway and towpath are linear resources located along the northern boundary of the cultural landscape. The towpath travels along the south side of the C&O Canal, parallel to the waterway. The C&O Canal and towpath are distinguished from the rest of the cultural landscape by a change in grade; as the topography shifts south of the towpath, a sloping wooded area separates the canal/towpath from the rest of the developed area. This character area is bounded by the north side of the canal and by the south side of the towpath; on the east and west ends, this character area is delineated by the study area boundaries (as the canal and towpath both extend beyond this study area).

PICNIC PAVILION AREA (PP)

Established during the Mission 66 era of development, this character area is subdivided into three zones: the pavilion and field, the east comfort station, and the picnic area between them. The primary organizing feature of the character area is the picnic pavilion on the north side of the recreation fields, completed in 1965. North of the picnic pavilion (by approximately 109 yards) is the Mission 66-era east comfort station. Between the two structures is a picnic area shaded by trees. This character area is bounded approximately on the northeast side by the connecting road and parking lots. It then encompasses the recreation field on the south and southwest sides, and extends through the picnic area up to the east comfort station on the south side of Parking Lot 2.

BILLY GOAT TRAIL SECTION C AND POTOMAC RIVER SHORELINE (BG)

The Billy Goat Trail Section C is a narrow unpaved pedestrian trail that primarily follows the Potomac River shoreline. It features connections to the C&O Canal towpath on the west side of cultural landscape (northwest of Parking Lot 4) and on the east side of the cultural landscape at mile marker 10.9. The character area boundaries are defined on the north, east, and west by the trail extents; the Potomac River shoreline marks the southern boundary of the character area.

CONNECTING ROAD AND PARKING LOTS (CR)

The two-way paved connecting road and series of four parking lots were built as part of the Mission 66 development at Carderock. The connecting road approaches the cultural landscape from the intersection with the Clara Barton Parkway and travels below the C&O Canal and towpath before traveling through and terminating at the four parking lots. Located within the western half of the cultural landscape, this character area incorporates these circulation features and the related resources that immediately surround them.

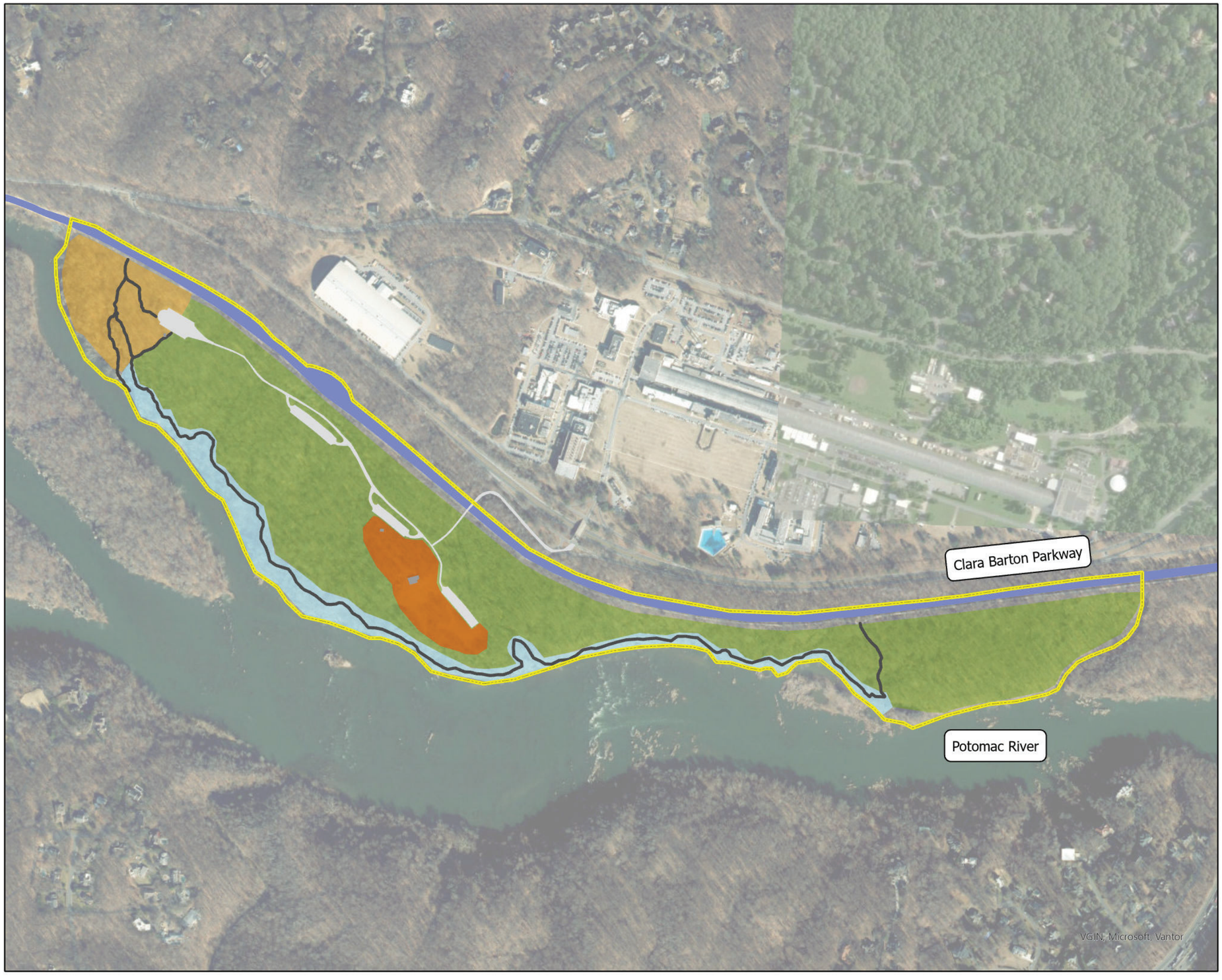
ROCK CLIMBING AREA (RC)

Located in the northwest portion of the cultural landscape, the cliffs of the Carderock Climbing Area have been a rock climbing destination since the 1920s. This character area is bound by the Potomac River to the west and south, the C&O Canal towpath to the north and the east boundary is the Billy Goat Trail spur where it travels south from Parking Lot 4 and the connecting trail from Parking Lot 4 to the towpath.

WOODED AREA (WA)

The wooded portions of the cultural landscape are composed of the undeveloped forests that make up the majority of the cultural landscape south of the C&O Canal towpath. The wooded area is located throughout the cultural landscape; for the purposes of this CLR, this character area is considered as any forested area of the cultural landscape that is not addressed by any other character area.

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Cultural Landscape Report

Carderock

Chesapeake and Ohio Canal NHP
Potomac, MD

Character Areas

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

In cooperation with:
National Capital Region, National Park Service

Sources
1. Ortho Imagery, 2025
2. Data collected in July, October 2024, and March, April 2025

Drawn By
Meg Frisbie, ArcGIS Pro 3.2.2, 2026

Legend
- CLR Boundary
- Billy Goat Trail Section C
- C&O Canal and Towpath (CT)
- Connecting Road and Parking Areas (CR)
- Picnic Pavilion Area (PP)
- Wooded Area (WA)
- Rock Climbing Area (RA)
- Billy Goat Trail Section C and Potomac River Shoreline (BG)

Notes
1. Projection: NAD 1983 UTM Zone 18N

N 0 350 700 1,400 Feet

Drawing #18

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Physical Treatment Recommendations (by character area)

These treatment recommendations address physical interventions based on the appropriate treatment approaches, as well as policy/management-related recommendations. They offer site-specific guidelines to achieve the overall treatment goals, addressing each character area in a deeper level of detail.

The tasks are organized according to the six character areas. For locations of the character areas, refer to Drawing 18, and see detailed treatment task maps for individual character areas in Drawing 19, Drawing 20, Drawing 21, Drawing 22, Drawing 23, and Drawing 24.

C&O Canal and Towpath (CT)

DESIRED LANDSCAPE CHARACTER

The C&O Canal and towpath are essential to the significance of the Carderock cultural landscape. The C&O Canal should retain its existing alignment and historic spatial relationship to the towpath. The landscape should provide opportunities for rest within, and interpretation of, this portion of the canal and towpath. Additionally, the canal and towpath should more readily be connected to the recreation area by way of accessible trails and adequate signage. The canal should be re-watered when possible to reflect its historic character.

CHARACTER AREA TREATMENT TASKS

CT-1: Preserve the C&O Canal and towpath

The spatial relationship between the C&O Canal and towpath is essential to the significance of the cultural landscape and should be maintained in order to continue to reflect their historic character. There should be no encroachments on the towpath, and the towpath and canal should not be widened.

The towpath should remain unpaved. Given the proximity to the Potomac River, the towpath will continue to experience impacts from floods and washouts. Thus, the park should continue to resurface the towpath periodically with materials that are compatible and long-lasting. Currently, the NPS maintains the base layer of the towpath surface with crush-and-run gravel, and the top layer as a finer material like stone dust. The crush-and-run layer creates an adequate drainage system, so that heavy rainfall can easily drain off the towpath, while the finer top layer provides a smooth surface.

The canal normally contains water. At the time of this report's preparation, there was no water in the C&O Canal due to ongoing rehabilitation work west of the CLR study area. During this time, vegetation has grown within the canal, altering the character of the historic waterway and the cultural landscape (*see Figure 187 and Figure 188*). The encroachment of the vegetation is reversible, however; when the rehabilitation work is complete, the canal should be re-watered to reflect its historic character.

CT-2: Interpret the pivot bridge

In the early 1940s, a pivot bridge was constructed to connect the roads on the north side of the C&O Canal with the CCC camps located south of the canal. The pivot bridge, located at Mile 9.92, was supported by a stone pier placed in the center of the canal. Flanking abutments were constructed



Figure 187: The C&O Canal towpath, with the canal at left (obscured by vegetation while this section of the canal is drained for construction nearby) (Urban Heritage Project).



Figure 188: The C&O Canal towpath, with the canal at right (obscured by vegetation) (Urban Heritage Project).



Figure 189: The CCC-era pivot bridge at Mile 9.92, within the C&O Canal (Urban Heritage Project).

on each side of the canal, supporting the road as it crossed the canal. The pier supported the bridge gears and rack assembly, which controlled the operation of the bridge; as the bridge gears rotated the bridge deck in a counterclockwise direction, the pivot bridge allowed boats navigating the canal to pass by. At present, the pivot bridge superstructure is no longer extant. The central stone pier and abutment remain in their original locations (***see Figure 189***).

There are currently no interpretive features along the C&O Canal towpath in this area. The pivot bridge is an appropriate location to introduce new interpretation about this historic feature and the broader history of the role of Black CCC crews in reshaping the canal for recreational use. Wayside(s) in this location could interpret the nearby remnants of CCC Camp NP-1-MD without diverting visitors off-trail, thus minimizing impacts to those archeological resources. Interpretive signage should adhere to NPS standards and maintain design consistency with the interpretive features elsewhere in the cultural landscape.

Vegetation around the pivot bridge should be managed to minimize any impacts to the structure.

CT-3: Add bench near the pivot bridge

The C&O Canal Trust Bench Sponsorship Program offers an opportunity to add a bench near the pivot bridge remnants on the towpath—particularly in



Figure 190: The official connecting path from the entrance road to the C&O Canal and towpath (Urban Heritage Project).



Figure 191: The metal gate at the base of the official trail acts as a deterrent to visitors, seemingly preventing public access via this road to the C&O Canal and towpath (Urban Heritage Project).

tandem with new interpretive features in this area (refer to CT-2 above). This would offer a resting point for hikers and bikers near the new interpretive signage and the access point for the Billy Goat Trail Section C.

CT-4: Clarify the official trail from the access road to the towpath

Visitors currently experience a disconnect between the recreation area and the C&O Canal and towpath. The NPS should make the connection between the two areas more clear through updated signage and clarification of the official routes between the two areas.

The sanctioned trail connection from Parking Lot 1 to the C&O Canal and towpath is via a wide, unpaved road located southeast of the Carderock entrance road culvert (***see Figure 190***). Although this is the official route for visitors, the road has a metal access gate, a sign reading "No Unauthorized Vehicles," and reads as a maintenance road for official use only (***see Figure 191***). It is not clear to visitors that this is the permitted trail connection to access the towpath. Replace the current metal access gate with a typical wing gate design used elsewhere in the CHOH located closer to the paved entrance road.

Rather, many visitors use a steep social trail on the east side of the entrance road culvert for direct access from the entrance road to the towpath (***see Figure 192 and Figure 193***). This trail is too steep to



Figure 192: Since the adjacent gravel road seems to deter public access to the towpath, visitors have created a steep social trail to the towpath on the east side of the Carderock entrance road culvert (Urban Heritage Project).



Figure 193: Looking down from the steep social trail towpath, located on the east side of the Carderock entrance road culvert (Urban Heritage Project).



Figure 194: Social trail along the side of the entrance road ,created by visitors trying to access the C&O Canal and towpath (Urban Heritage Project).



Figure 195: Culvert 15, constructed c. 1830 (Urban Heritage Project).

be safe, and causes erosion issues. As signage is improved to guide visitors to the official access road, the steep social trail should be closed and revegetated.

Additionally, visitors need to walk from Parking Lot 1 to the sanctioned trail connection to the C&O Canal and towpath —but there is no pedestrian path to do so. In the absence of one (and in order to stay off the road), visitors have created a social trail along the west side of the entrance road (*see Figure 194*). A path along the entrance road should be formalized to create a safe pedestrian connection between Parking Lot 1 and the sanctioned trail (the maintenance road) leading to the towpath.

With updated signage, formalized connections, and a wing gate near the paved road, a clear and safe route can carry visitors from the parking lot to the sanctioned trail connection, and onto the C&O Canal and towpath.

CT-5: Create an accessible trail to the towpath

An accessible trail to the C&O Canal and towpath from one of the four parking lots is needed. Of the possible options, rehabilitating the existing trail from Parking Lot 4 to the towpath to meet existing accessibility requirements is the most desirable based on existing topography and conditions. The trail and parking lot should be signed appropriately to inform visitors that there is an accessible route from this parking lot to the towpath.

CT-6: Preserve Culvert 15

The c. 1830 culvert (also called the Carderock Road Culvert) historically offered passage to the Potomac River by crossing under the C&O Canal and towpath. This culvert should be preserved and should continue to be cyclically monitored (*see Figure 195*). Culvert 15 should be interpreted in a location that does not impact the resource.

CT-7: Preserve Culvert 14

The stone culvert in the eastern portion of the cultural landscape that travels below the C&O



Figure 196: The Carderock road culvert, visible in background as the entrance road passes under the canal towpath (Urban Heritage Project).

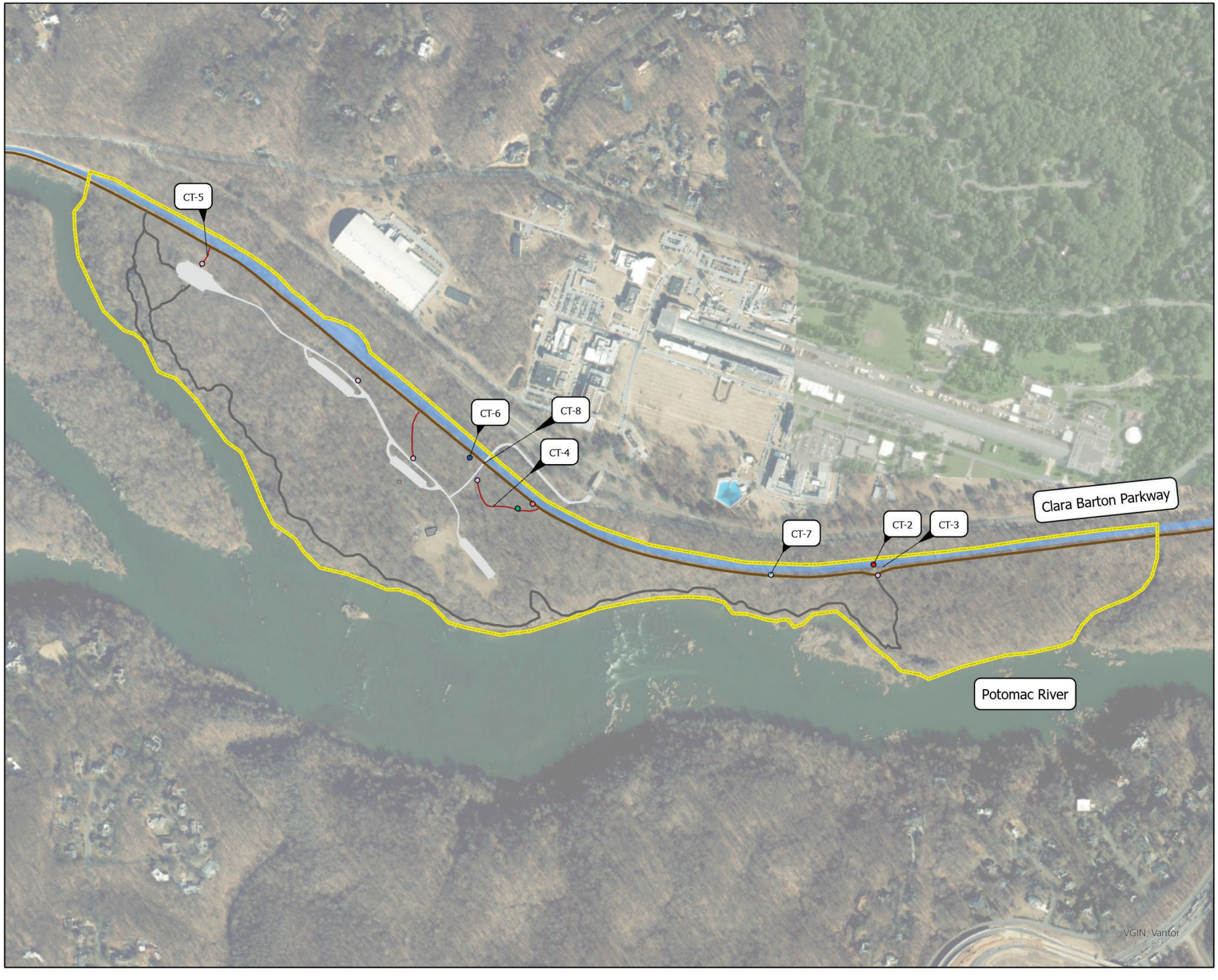
Canal should be preserved and continue to be cyclically monitored by NPS staff.

CT-8: Complete planned repairs on the Carderock road entrance culvert

The Carderock road entrance culvert is a concrete box culvert that is experiencing erosional issues (*see Figure 196* and PEPC Project 124412). The rehabilitation of this culvert should be completed as planned, including repairing the deteriorated concrete along the tunnel lining and portal faces, removing vegetation, repointing the stone masonry wingwalls and resetting coping stones, repairing erosion, repaving the asphalt approaches, and installing new traffic signage.

The National Register of Historic Places historic district nomination should be updated to include this culvert as a contributing feature.

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Cultural Landscape Report

Carderock

Chesapeake and Ohio Canal NHP
Potomac, MD

C&O Canal and Towpath - Treatment Map

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

In cooperation with:
National Capital Region, National Park Service

Sources
1. Ortho Imagery, 2025
2. Data collected in July, October 2024, and March, April 2025

Drawn By
Meg Frisbie, ArcGIS Pro 3.2.2, 2026

Legend
- CLR Boundary
- Culvert 15
- Culvert 14
- Pivot bridge
- Metal swing gate
- Bench
- Sign
- C&O Canal Towpath (CT)
- Billy Goat Trail Section C
- Connecting Trail
- C&O Canal (CT)
- Connecting Road and Parking Areas
- Buildings+Structures

Treatment Tasks

CT-1. Preserve the C&O Canal and towpath*
CT-2. Interpret the pivot bridge
CT-3. Add bench near the pivot bridge
CT-4. Clarify official trail to towpath
CT-5. Create an accessible trail to the towpath
CT-6. Preserve Culvert 15
CT-7. Preserve Culvert 14
CT-8. Complete repairs on Carderock road entrance culvert
*Not mapped, applies across the entire character area

Notes
1. Projection: NAD 1983 UTM Zone 18N

N 0 350 700 1,400 Feet

Drawing #19

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Picnic Pavilion Area (PP)

DESIRED LANDSCAPE CHARACTER

The character area encompassing the picnic pavilion, recreation fields, picnic grove, and comfort station is a hub of recreational activities and information within the Carderock cultural landscape. This character area should include practical wayfinding and informational signage, in addition to updated recreational amenities for the visitors to the Carderock cultural landscape. The picnic pavilion should remain a rentable feature to accommodate large groups; it should be linked to other accessible amenities via accessible trails. The tree canopy within the picnic area should be retained to provide shade for picnickers. Extant resources dating to the CCC era and earlier should be retained and preserved.

For the purposes of coding the treatment tasks, the character area is addressed overall (***Task PP-1***) and then addressed as three subzones: the picnic pavilion and fields (PP.A), the picnic grove (PP.B), and the east comfort station (PP.C).

CHARACTER AREA TREATMENT TASKS

PP-1: Create accessible trails (across the three zones)

There are no fully accessible trails to connect visitors from parking lots to the picnic pavilion or to the nearest comfort station. At present, connecting paths around the picnic pavilion are unpaved gravel or mulch trails that erode easily. In order for an outdoor ground surface to be considered accessible under the American with Disabilities Act (ADA) or Architectural Barriers Act Accessibility Standards (ABAAS), it must be “firm and stable” (Guide to the ABA Accessibility Standards, Outdoor Developed Areas, https://www.access-board.gov/aba/guides/chapter-10-outdoor/). Thus, loose or deep gravel does not comply. However, a specific combination of crush-and-run and stone dust can achieve compliance with the standards if installed and maintained correctly.

Accessible paths should be created:

- Between Parking Lot 1 and the picnic pavilion (*see Figure 197*)
- Between the picnic pavilion and the east comfort station
- Between Parking Lot 2 and the east comfort station
  - Refer to the Treatment Goals on page 272 for additional guidance on the desired character of these improvements.



Figure 197: Path between Parking Lot 1 and the picnic pavilion (Urban Heritage Project).



Figure 198: The Carderock picnic pavilion (Urban Heritage Project).



Figure 199: View of the Carderock picnic pavilion from across the recreational fields (Urban Heritage Project).

PP.A-2: Rehabilitate the picnic pavilion

The Carderock picnic pavilion was completed in 1965, during the era of Mission 66 development, and continues to reflect its original design, workmanship, and materials (*see Figure 198 and Figure 199*). The picnic pavilion is listed in the National Register nomination for "Mission 66-Era Visitor Centers, Administration Buildings, and Public Use Areas in the Maryland, Virginia, West Virginia and the District of Columbia Parks of the National Capital Region of the National Park Service," as a contributing feature with significance at the local level in the area of Recreation. Rehabilitation work on the picnic pavilion in recent decades has included roof replacement and repainting when needed. The picnic pavilion should continue to be rehabilitated to retain its integrity, and should continue to operate as a rentable public picnic pavilion within the landscape.

In an effort to increase NPS presence within the Carderock cultural landscape, one possibility is to rehabilitate the picnic pavilion with additional sheltered space for use as an NPS visitor contact station and for staff storage. Any changes to the configuration of the picnic pavilion to increase NPS presence must retain the character-defining features of the pavilion (refer to the Part 1).

PP.A-3: Update recreational equipment

Recreational facilities at Carderock have been reduced over time. In order to maintain a robust recreational use—in keeping with the site's historic significance—recreational features within the fields should be improved and/or reintroduced to the landscape (*see Figure 200*). For example, a volleyball net could be added where there are currently two metal poles (*see Figure 201*).

New recreational features should be concentrated on one side of the copse of trees within the field, in order to allow the other portion of the field to remain open for less structured activities.

Planning for new recreational amenities, fixtures, and facilities should include stakeholder engagement with visitors and user groups.

PP.A-4: Preserve pre-Mission 66-era resources

There are extant resources within this character area that predate the Mission 66-era. The CCC-era flagpole is extant and should be retained (*see Figure 202*).

Additionally, the concrete foundation and other features with undetermined significance should be retained; as additional research confirms their history and significance, these features can be reevaluated for future treatment.



Figure 200: One of two chain-link backstops within the recreation fields (Urban Heritage Project).



Figure 201: The recreation fields adjacent to the picnic pavilion, with two metal poles visible in background (Urban Heritage Project).

PP.A-5: Establish a trail from the picnic pavilion to the Potomac River waterfront

In an effort to address social trails to the Potomac River waterfront, the NPS should create an official trail from the picnic pavilion to a designated location (or a limited number of locations) on the river. (This designated trail could ultimately serve as the sanctioned paddler access; see *Task BG-3* on page 307 in following section.) Currently, a long social trail extends from southwest of the east comfort station to the Billy Goat Trail. This would be an appropriate trail to formalize due to its proximity to parking lots and access to the riverfront, though further groundtruthing should be completed to confirm.

PP.B-6: Replace the grills and picnic tables as needed

Visitor amenities within the recreation area include grills and picnic tables, which support the recreational use of the cultural landscape (*see Figure 203 and Figure 204*). These features should be periodically monitored and replaced in-kind when necessary.

PP.B-7: Maintain the tree canopy within the picnic grove

The tree canopy within the picnic grove provides shade for visitors (*see Figure 205*). The NPS



Figure 202: The CCC-era flagpole within the recreation fields (Urban Heritage Project).



Figure 203: An example of a grill in the picnic area (Urban Heritage Project).



Figure 204: Picnic tables and grill within the picnic grove (Urban Heritage Project).



Figure 205: Mature trees within the picnic grove (Urban Heritage Project).

should develop a stepwise approach to replant and regenerate the high-value canopy over the picnic area. This treatment should begin with the removal of existing dead and dying canopy trees; strategic replanting should include desired canopy species and should use planting stock of at least 2 inches in diameter (dbh). Add understory tree species (e.g., dogwood, American hornbeam, etc.) in and around the picnic area. Additionally, use site-specific and appropriate methods to amend the soil and establish the next generation of canopy trees in and around the picnic area. Use appropriate tree protection measures; once new trees are established, continue to remove dead and dying trees, and replace them as resources are available.

PP.C-8: Remove the payphone if necessary

The payphone near Parking Lot 2 is no longer operable and can be removed if necessary from the cultural landscape.

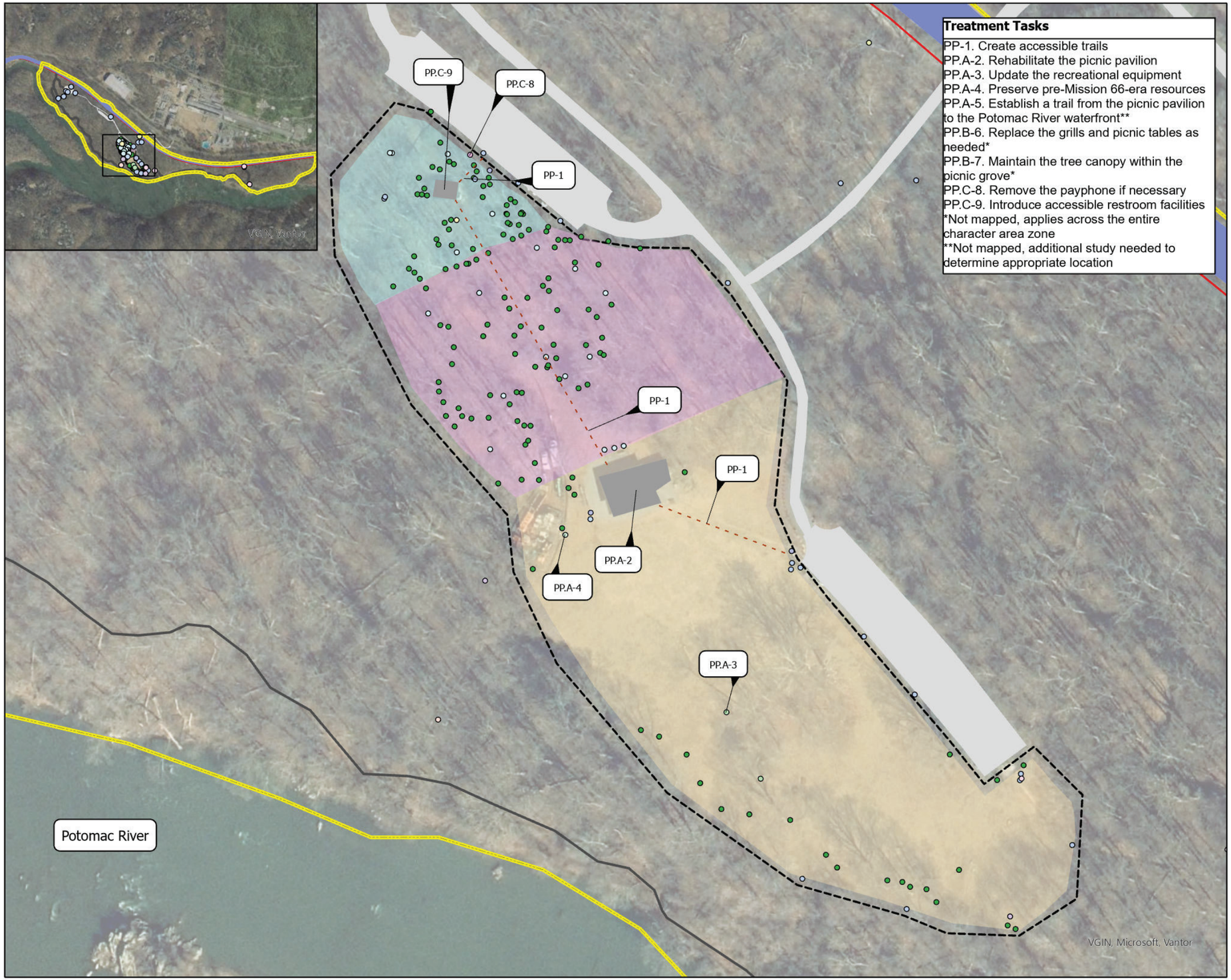
PP.C-9: Introduce accessible restroom facilities

Comfort stations should include accessible facilities to serve all visitors. The east comfort station on the south side of Parking Lot 2 is not fully accessible (*see Figure 206*). This comfort station should be rehabilitated to include accessible restroom facilities, or replaced with a fully accessible structure. Refer to the related treatment goal on page 275 for additional guidance for this task.



Figure 206: The east comfort station (Urban Heritage Project).

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Treatment Tasks

PP-1. Create accessible trails
PP.A-2. Rehabilitate the picnic pavilion
PP.A-3. Update the recreational equipment
PP.A-4. Preserve pre-Mission 66-era resources
PP.A-5. Establish a trail from the picnic pavilion to the Potomac River waterfront**
PP.B-6. Replace the grills and picnic tables as needed*
PP.B-7. Maintain the tree canopy within the picnic grove*
PP.C-8. Remove the payphone if necessary
PP.C-9. Introduce accessible restroom facilities
*Not mapped, applies across the entire character area zone
**Not mapped, additional study needed to determine appropriate location

Cultural Landscape Report

Carderock

Chesapeake and Ohio Canal NHP
Potomac, MD

Picnic Pavilion Area - Treatment Map

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

In cooperation with:
National Capital Region, National Park Service

Sources
1. Ortho Imagery, 2025
2. Data collected in July, October 2024, and March, April 2025

Drawn By
Meg Frisbie, ArcGIS Pro 3.2.2, 2026

Legend

- CLR Boundary
- Vegetation
- Sign
- Wayside
- Trail sign
- Flagpole
- Backstop
- Concrete pad
- Telephone
- Grill
- Water fountain
- Water pump
- Culvert
- Metal pipe
- Proposed accessible trail
- C&O Canal Towpath
- Billy Goat Trail Section C
- Picnic Pavilion Area (PP)
- Picnic Pavilion and Fields (PP.A)
- Picnic Grove (PP.B)
- East Comfort Station (PP.C)
- C&O Canal
- Connecting Road and Parking Areas
- Buildings+Structures

Notes
1. Projection: NAD 1983 UTM Zone 18N

N 0 60 120 240 Feet

Drawing #20

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Billy Goat Trail Section C and Potomac River Shoreline (BG)

DESIRED LANDSCAPE CHARACTER

Billy Goat Trail Section C (the segment of trail within the study area) was likely created by the Potomac Appalachian Trail Club (PATC) in the 1930s; a 1939 map authored by Robert Shosteck provides the earliest reference to the name "Billy Goat Trail." The Billy Goat Trail Section C should provide a high-quality, forested hiking experience with naturalistic trails, mature tree canopy, clear wayfinding, and opportunities to view and gain access to the Potomac River (*see Figure 207, Figure 208, Figure 209, and Figure 210*). Natural and cultural resources along Billy Goat Trail Section C should be protected. The riverfront should include specific designated access points—with clear signage directing visitors to these points—in order to deter social trails to the waterfront.



Figure 207: Path from Parking Lot 1 approaching the Billy Goat Trail Section C (Urban Heritage Project).



Figure 208: The Billy Goat Trail Section C (Urban Heritage Project).



Figure 209: The Billy Goat Trail Section C (Urban Heritage Project).



Figure 210: The Billy Goat Trail Section C (Urban Heritage Project).



Figure 211: Path from Parking Lot 1 approaching the Billy Goat Trail Section C, looking towards the parking lot (Urban Heritage Project).

CHARACTER AREA TREATMENT TASKS

BG-1: Update signage to and along the Billy Goat Trail Section C

Within the CLR study area boundaries, the Billy Goat Trail Section C can be accessed from the canal towpath at the east and west ends of the cultural landscape. Additionally, it can be accessed from the east side of Parking Lot 1 (*see Figure 211*). There is a cluster of signs at the east side of Parking Lot 1 associated with the trail access, including vertical information panels and regulatory information. Once on Billy Goat Trail Section C, signage is minimal.

Existing signage should be reviewed and updated as necessary, and new signage should be introduced to assist in wayfinding and to minimize off-trail hiking. The newer signage along Billy Goat Trail Section A can be used as a model. All signage should adhere to NPS standards.

BG-2: Address social trails

The majority of social trails within the Carderock cultural landscape are associated with the Billy Goat Trail Section C, forming as unsanctioned spurs off of the official trail. These social trails can threaten rare plants and cause erosion issues; most social trails should be eliminated, while a limited number should be formalized.

For each social trail in this character area, use the Social Trail Assessment on page 274 to assess the character, impacts, and value of the trail. If the trail meets all of the following conditions, it should be formalized as a sanctioned (and signed) trail:

- Is connected to Billy Goat Trail Section C;
- The trail does not impact ecologically sensitive areas;
- The trail has a reasonable grade (<10-15%);
- The trail is aligned to the slope (in a side-hill alignment, not a direct-ascent alignment); and
- The trail connects visitors between two key features and/or accesses the water or a significant vista.

If multiple social trails within a dense area fit the above conditions, the NPS should eliminate redundant social trails/access points within the appropriate distance established by policy (see page 274).

On the east side of the cultural landscape, the long unofficial trail that follows the riverfront and is accessed from the towpath meets these conditions and should be formalized (*see Figure 212*). It should be advertised as part of the established trail system and should feature posted NPS wayfinding signage.

By contrast, any trails that impact rare or endangered plant species should be revegetated. All trails should be monitored during revegetation.

Figure 212: A portion of the long unofficial trail on the east side of the cultural landscape that connects with the Billy Goat Trail Section C (Urban Heritage Project).



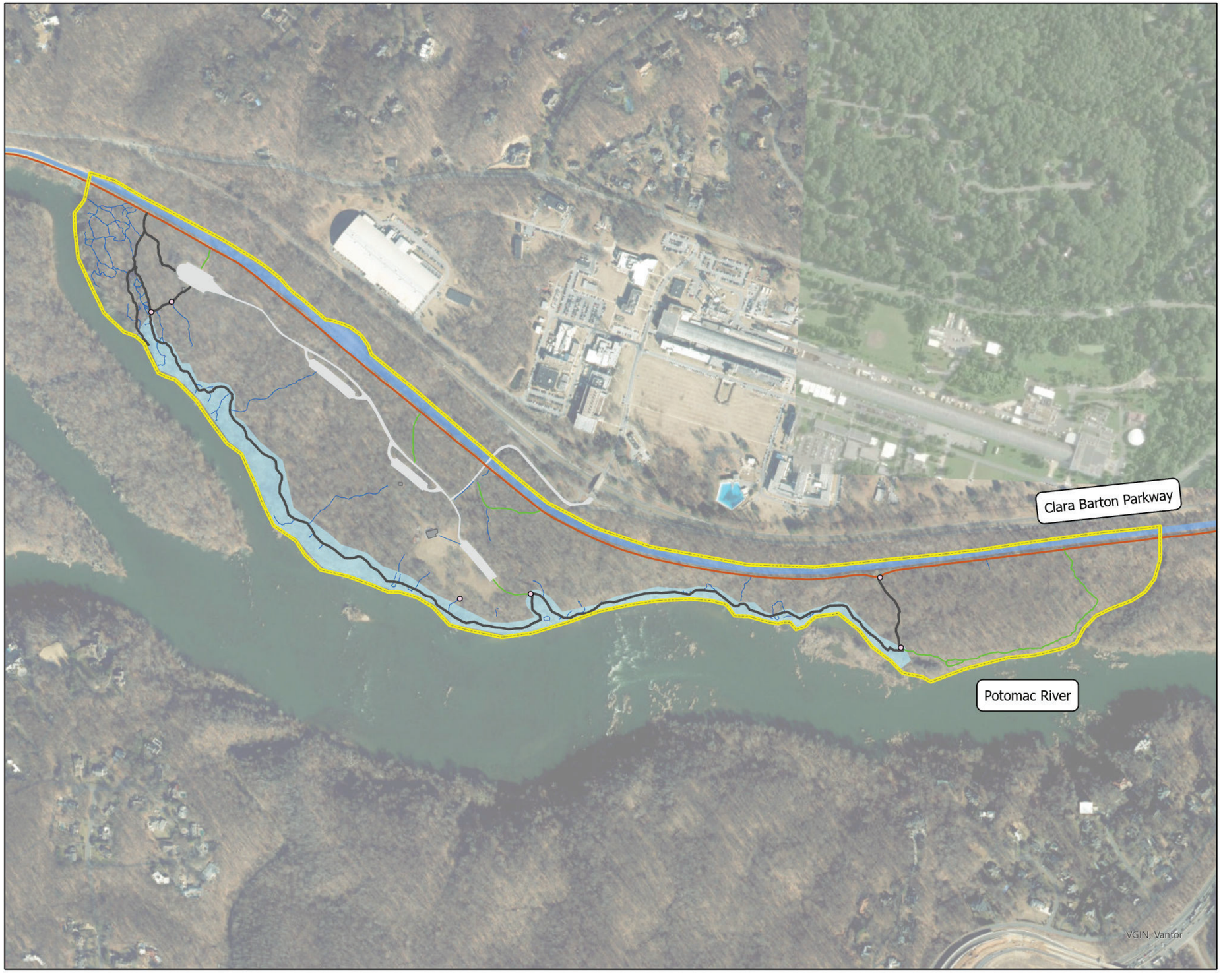
BG-3: Establish designated put-in/take-out locations for paddlers and boaters

In order to decrease the use of social trails and minimize impacts to natural and cultural resources, designated put-in and take-out locations along the Potomac River for paddlers and boaters should be established. When establishing designated locations on the Potomac River waterfront for paddlers, the location should include input from the boating community and should consider:

- Erosion and grade
- Access and proximity to parking
- Ecological sensitivity

The designated locations should be linked with (and relatively close to) at least one parking lot. They should be formally signed as sanctioned access points and should be advertised to the boating community as the designated river access locations.

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Cultural Landscape Report

Carderock

Chesapeake and Ohio Canal NHP
Potomac, MD

Billy Goat Trail Section C and Potomac River Shoreline - Treatment Map

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

In cooperation with:
National Capital Region, National Park Service

Sources
1. Ortho Imagery, 2025
2. Data collected in July, October 2024, and March, April 2025

Drawn By
Meg Frisbie, ArcGIS Pro 3.2.2, 2026

Legend
- CLR Boundary
- Sign
- Billy Goat Trail Section C (BG)
- C&O Canal towpath
- Social trails
- Connecting trails
- C&O Canal
- Buildings+Structures
- Connecting Road and Parking Areas
- Billy Goat Trail Section C and Potomac River Shoreline (BG)

Treatment Tasks

BG-1. Update signage to and along the Billy Goat Trail Section C*
BG-2. Address social trails*
BG-3. Establish a designated put-in location for paddlers and boaters**
*Not mapped, applies across the entire character area
**Not mapped, additional study needed to determine appropriate location

Notes
1. Projection: NAD 1983 UTM Zone 18N

N 0 350 700 1,400 Feet

Drawing #21

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Connecting Road and Parking Lots (CP)

DESIRED LANDSCAPE CHARACTER

The road and parking lots within the Carderock cultural landscape should safely and efficiently connect visitors to the amenities and recreational opportunities available within the Carderock cultural landscape (*see Figure 213, Figure 214, Figure 215, and Figure 216*).

CHARACTER AREA TREATMENT TASKS

CP-1: Rehabilitate the road and parking lots as needed

Four asphalt parking lots connected by a two-way asphalt road were constructed for visitor access as part of Mission 66 development. These features should be monitored and rehabilitated as needed. Their existing configurations and widths should be maintained.

CP-2: Standardize identifying signage and literature relating to the names of the parking lots

While this CLR project was in progress, NPS updated the naming convention and related signage of the parking lots at Carderock. While the parking lots previously had no official name designation, the four parking lots were designated as Parking Lot 1, Parking Lot 2, Parking Lot 3, and Parking Lot 4, from east to west, in spring of 2026. (The parking lots have also been referenced as A, B, C, and D in older documents.) The CHOH website and any print or web-based literature should be updated to reflect this updated naming convention.

CP-3: Add a picnic area to Parking Lot 3 or Parking Lot 4

Parking Lots 1 and 2 feature an adjacent picnic area, but there are no such amenities at Parking Lot 3 or Parking Lot 4. Establish an additional picnic area near Parking Lot 3 or Parking Lot 4 to provide picnicking amenities throughout the cultural landscape.

Parking Lot 3 has flat topography that would accommodate the addition of a picnic area. However, the creation of the picnic area would require removal of some portion of the 50-year-old tree canopy to accommodate the infrastructure and



Figure 213: The Carderock entrance road (Urban Heritage Project).



Figure 214: The connecting road through the Carderock cultural landscape (Urban Heritage Project).



Figure 215: The connecting road through the Carderock cultural landscape, with the entrance road intersection visible on the left (Urban Heritage Project).



Figure 216: Parking Lot 4 within the Carderock cultural landscape (Urban Heritage Project).

may impact archeological sites. Consult the park archeologist and historical landscape architect in planning for an additional picnic area.

CP-4: Update signage in parking lots

Each parking lot should include informational signage, including standardized directional and regulatory information regarding appropriate visitor behaviors, e.g. how to minimize trail impacts, and how to "leave no trace." Signage in Parking Lot 4 should specifically include regulatory information and best practices for rock climbing (see ***CT-6***).

Unpaved trails from Parking Lot 2 and Parking Lot 4 provide pedestrian access to the C&O Canal and towpath to the north. The connecting trail for Parking Lot 2 begins at the connecting road on the north side of the parking lots (not the parking lot itself), while the connecting trail from Parking Lot 4 is from the parking lot (***see Figure 217 and Figure 218***). (See ***CT-5*** for recommendation to rehabilitate the trail from Parking Lot 4 to an accessible trail). Wayfinding and regulatory signage should be updated and standardized in the parking lots to guide visitors along these trails to the towpath. New wayfinding signage should be consistent with standard NPS signage.

CP-5: Add crosswalk on north side of Parking Lot 2

Add a striped pedestrian crosswalk on the connecting road on the north side of Parking Lot 2 where visitors cross to access the pedestrian trail to the towpath. The crosswalk will alert drivers of potential pedestrian presence.



Figure 217: Trail connecting the access road around Parking Lot 2 to the C&O Canal and towpath to the north (Urban Heritage Project).



Figure 218: Connecting path from Parking Lot 4 to the C&O Canal and towpath (Urban Heritage Project).

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Cultural Landscape Report

Carderock

Chesapeake and Ohio Canal NHP
Potomac, MD

Connecting Road and Parking Lots - Treatment Map

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

In cooperation with:
National Capital Region, National Park Service

Sources
1. Ortho Imagery, 2025
2. Data collected in July, October 2024, and March, April 2025

Drawn By
Meg Frisbie, ArcGIS Pro 3.2.2, 2026

Legend
- CLR Boundary
- Wayside
- Sign
- Billy Goat Trail Section C
- C&O Canal Towpath
- Connecting trail
- Connecting Road and Parking Areas
- Buildings+Structures
- C&O Canal

Treatment Tasks

CP-1. Rehabilitate the road and parking lots as needed*
CP-2. Standardize identifying signage and literature relating to the names of the parking lots*
CP-3. Add a picnic area near Parking Lot 3 or Parking Lot 4
CP-4. Update signage in parking areas*
CP-5. Add a crosswalk on the north side of Parking Lot 2
*Not mapped, applies across the entire character area

Notes
1. Projection: NAD 1983 UTM Zone 18N

N
0 220 440 880
Feet

Drawing #22

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Rock Climbing Area (CA)

DESIRED LANDSCAPE CHARACTER

The Carderock climbing area should remain a public climbing destination for a range of skill levels (***see Figure 219, Figure 220, and Figure 221***). A climbing destination since the 1920s, Carderock is a unique climbing resource near Washington, D.C.; the associated natural and cultural features should be preserved and the climbing area should be accessed by formalized trails that minimize the impacts to the surrounding environment.

CHARACTER AREA TREATMENT TASKS

RC-1: Preserve and protect the natural and cultural resources, while providing for recreational climbing activities.

Rock climbing has been growing in popularity for the past several decades. Rock climbing can have impacts to both natural and cultural resources, and climbing policy requires a balance of resource protection, public access, and public safety. The popularity of the Carderock climbing area has resulted in impacts to vegetation communities and soil compaction and erosion at the base of the rock faces.

Inventory of sensitive habitats: Park managers should create an inventory of sensitive habitats and rare species in the climbing area. This inventory should assess the extent that rock climbing affects the vegetation at the shoreline, on the cliff-face, and on cliff-top environments. In addition to monitoring natural resources, the face-like petroglyph located within the climbing area should be monitored.

Anchoring practices: Currently, rock climbers use trees at the top of the Carderock cliffs to tie off on as anchors for top-rope climbing. Over time, the trees have been negatively impacted by this practice, and there are fewer trees to use as a result. One option to address this situation is for the NPS to add anchor points to the rock faces. Fixed anchors can be attached permanently or semi-permanently to rocks designated for this purpose.

It is important to note that by adding anchor points, the NPS would be formalizing and sanctioning certain climbing routes. Further research is needed to determine the appropriate accessibility for certain



Figure 219: Rocky cliffs of the Carderock climbing area (Urban Heritage Project).



Figure 220: Views to the Potomac River from the west side of the Carderock cultural landscape (Urban Heritage Project).



Figure 221: Rocky cliffs of the Carderock climbing area (Urban Heritage Project).

routes, and how best to communicate liability of use with NPS-established anchor points.

Informational Signage: Signage should be introduced within the climbing area that communicates best practices to minimize impacts to natural and cultural resources within the cultural landscape.

RC-2: Address social trails

As is true in other character areas, the climbing area features excessive social trails (particularly west of the Billy Goat Trail Section C), created as rock climbers seek to reach climbing routes. The network of social trails west of the Billy Goat Trail Section C generally connect back to the Billy Goat Trail or the C&O Canal towpath. The 2025 Research to Support Climbing Management Planning at Carderock Recreation Area and Great Falls Park report concluded that, "The majority of informal trails at Carderock are northwest of the primary climbing areas, and these trails are primarily used by hikers" (Jackson et al. 2025: ii).

An interviewee from the *Qualitative Interview Assessment for Harpers Ferry, Great Falls, and Carderock Rock Climbing Management Study* (undated) suggested, "[We] don't need 10 approach trails. [The park should] focus people on one or two approach trails, so to minimize that, so aesthetically it looks nice" (Jackson et al. 2025: Appendix I).

For each social trail in this character area, use the Social Trail Assessment on page 274 to assess the character, impacts, and value of the trail. If the trail meets all of the following conditions, it should be formalized as a sanctioned (and signed) trail:

- Is connected to Billy Goat Trail Section C;
- The trail does not impact ecologically sensitive areas;
- The trail has a reasonable grade (<10-15%);
- The trail is aligned to the slope (in a side-hill alignment, not a direct-ascent alignment); *and*
- The trail connects visitors between two key features and/or accesses the water or a significant vista.



Figure 222: The west comfort station, located on the south side of Parking Lot 4 (Urban Heritage Project).

If multiple social trails within a dense area fit the above conditions, the NPS should eliminate redundant social trails/access points within the appropriate distance established by policy (see page 274).

RC-3: Introduce accessible restroom facilities

The west comfort station is located in the rock climbing area on the south side of Parking Lot 4; it is not fully accessible (*see Figure 222*). This comfort station should be rehabilitated to include accessible restroom facilities, or replaced with a fully accessible structure.

A concrete ramp flanked by metal railings approaches the southeast side of the comfort station. Both the ramp and railings are deteriorated and should be rehabilitated (*see Figure 223*).

Refer to the related treatment goal on page 275 for additional guidance for this task.



Figure 223: The ramp accessing the west comfort station (Urban Heritage Project).

RC-4: Address erosion at base of climbing area

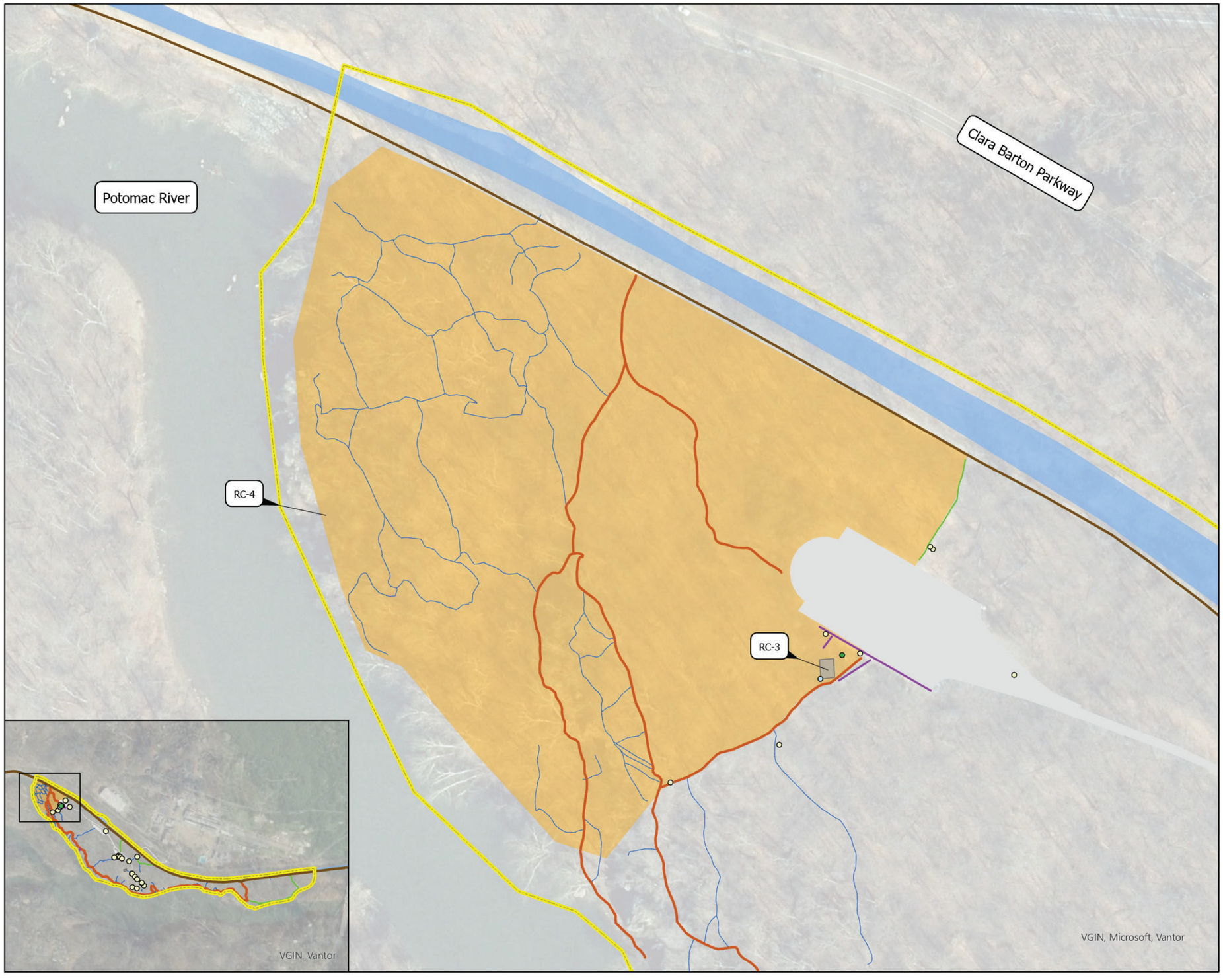
Located on the Potomac River shoreline, the base of the Carderock climbing area is subject to erosion and the land area has decreased and will continue to diminish over time. In order to retain Carderock as a recreational destination for climbing, the impacts from erosion of the shoreline should be studied and remediated.

An interview from the undated Qualitative Interview Assessment for Harpers Ferry, Great Falls, and Carderock Rock Climbing Management Study,

completed by James Maples and Holly Ningard, included this comment from one climber:

> So, Carderock obviously is on the bank of a river, and it's eroding away, and we really need to shore up the base of the cliff in order to accommodate the river, so that the staging area would allow for the same number of people that were able to visit the area thirty years ago, forty years ago. In addition, the limitations on climbing, not that the area cannot accommodate an increased number of people, it's that the erosion and the infrastructure itself is dilapidated and needs maintenance. (Jackson et al. 2025: Appendix I)

The erosion impacts within the climbing area should be evaluated and remediated. When climbers were asked (as part of the 2025 *Research to Support Climbing Management Planning at Carderock Recreation Area and Great Falls Park)* for their preferred method for addressing erosion at the Hades Heights route on the Potomac River, researchers found that the most preferred option for erosion control was "green" infrastructure (planting vegetation), followed by "gray" infrastructure (constructing a belay platform at the base of the route), followed by seasonal closures, with limiting use and "do nothing" the least preferred options (Jackson et al. 2025: iii, 113). These findings suggest a desire for increased direct management of the climbing area.



Cultural Landscape Report

Carderock

Chesapeake and Ohio Canal NHP
Potomac, MD

Rock Climbing Area -
Treatment Map

Weitzman School of Design
University of Pennsylvania

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

In cooperation with:
National Capital Region, National Park Service

Sources
1. Ortho Imagery, 2025
2. Data collected in July, October 2024, and March, April 2025

Drawn By
Meg Frisbie, ArcGIS Pro 3.2.2, 2026

Legend
- CLR Boundary
- Sign
- Storage Box
- Utilities
- Billy Goat Trail Section C
- C&O Canal Towpath
- Social trail
- Connecting trail
- Stairs, ramp, and sidewalk
- Rock Climbing Area (RA)
- C&O Canal
- Buildings+Structures
- Connecting Road and Parking Areas

Treatment Tasks
RC-1. Preserve and protect natural and cultural resources*
RC-2. Address social trails*
RC-3. Introduce accessible restroom facilities
RC-4. Address erosion at base of climbing area**
*Not mapped, applies across the entire character area
**Applies across the waterfront in this character area

Notes
1. Projection: NAD 1983 UTM Zone 18N

N 0 65 130 260 Feet

Drawing #23

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Wooded Area (WA)

DESIRED LANDSCAPE CHARACTER

The wooded areas of the Carderock cultural landscape should exhibit the characteristics of a healthy mid-Atlantic Mesic Mixed Hardwood forest (*see Figure 224*). The Carderock forest should support regional biodiversity and provide a variety of ecosystem services that absorb and store carbon, helping to mitigate climate change; regulate water flow; reduce runoff; filter pollutants; stabilize soil; and prevent erosion, especially on slopes and stream banks. Conservation efforts are important to protect these ecosystems and maintain the existing corridor connectivity of the Carderock wooded areas.

Within the forested portions of the Carderock cultural landscape, the historically dominant oak (*Quercus* spp.) component has given way to large canopy gaps that are being colonized by undesirable and/or invasive species, and by lower stature sub-dominant canopy species. The historic oak canopy should be rehabilitated to maintain the historic character of the site.

Steps should be taken to encourage natural oak regeneration to ensure the persistence of oak dominance in the forest ecosystem. If natural regeneration is not viable, human-assisted regeneration methods should be implemented.

The treatment tasks below highlight the priority actions for this character area. See Appendix A for expanded treatment recommendations for the forested areas of the Carderock cultural landscape, prepared by Blake Troxel as the consulting forest ecologist for this CLR.



Figure 224: The forests within the Carderock cultural landscape (Urban Heritage Project).

CHARACTER AREA TREATMENT TASKS

WA-1: Encourage natural oak regeneration

Identify existing natural oak regeneration, and protect from herbivory using deer exclosures and fencing.

Perform selective thinning techniques that allow for a slight increase of sunlight onto the forest floor to stimulate existing advanced oak regeneration, but not to "release" competitive species.

Once the oak seedlings have reached a height of 4-6 feet, a larger harvest of canopy species should be considered to release the advance oak regeneration.

Natural regeneration of an oak stand is a process of repeated disturbances to favor oak, and should not be thought of as a single-disturbance event. On high-quality sites, it is recommended to perform this process gradually, over 20 years or more.

WA-2: Initiate assisted oak regeneration and canopy establishment

If there are insufficient resources to encourage regeneration naturally, human-assisted regeneration techniques are likely necessary.

Oak acorns should be collected *in situ* during mast years, and transported to a local nursery for germination and growth.

Once seedlings are viable for transplant, relocate them back into the forest. Identify natural canopy gaps or locations with enough light to stimulate seedling growth. This may also require the creation of new canopy gaps and/or removal of mid-story trees.

Protect seedlings from herbivory with exclosures if necessary, and routinely manage for competing vegetation.

Once seedlings have reached a height of 4-6 feet, a larger harvest or creation of canopy openings should be considered to release the advance oak regeneration.

If local seedling stock is unavailable and/or unviable, purchase appropriate seedlings or nursery tree stock and plant in canopy gaps, as indicated above.

WA-3: Continue to manage invasive non-natives

Staff should continue to manage invasive and non-native vegetation that competes with desired native species.

Take steps to ensure that future construction zones do not create conditions for invasive species along the forest edge to thrive and advance further into the stand interior.

- Establish buffer zones between construction areas and sensitive natural habitats. These zones can help prevent the spread of invasive species from construction zones to adjacent natural areas.
- Ensure that all construction equipment is thoroughly cleaned before moving to and from the site to avoid transferring soil, seeds, or plant material.
- Implement erosion control BMPs, such as silt fences and sediment traps, to prevent soil runoff that could carry invasive species seeds or fragments.
- Monitor and/or test bare soil for invasive species seeds or propagules. If contamination is detected, treat the soil or use it in a way that minimizes the risk of spreading.
- While on site and within construction zone, proactively remove all existing invasive species through the use of both mechanical and chemical methods.
- Implement a monitoring and maintenance program to track the presence and spread of invasive species in and around the construction site. Regular inspections should continue for several years after construction.

Maintain a holistic Integrated Pest Management (IPM) program to ensure effective and prolonged invasive species control.

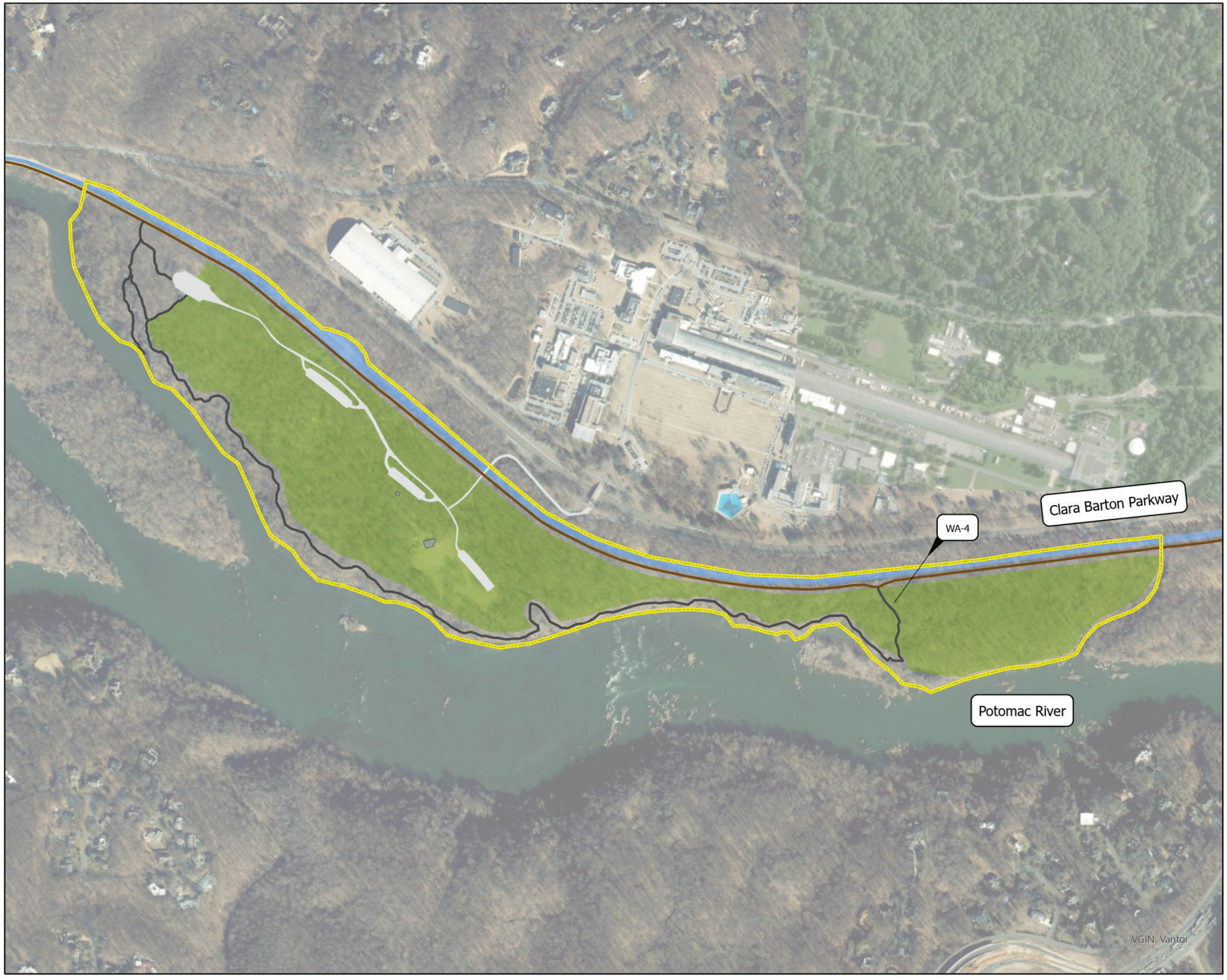
WA-4: Leave Camp NP-1-MD undisturbed and undeveloped

CCC Camp NP-1-MD was located in the wooded area on the eastern side of the cultural landscape. Archeological fieldwork conducted in 2021 concluded that,

> No artifacts were found that can be dated with certainty to the CCC period…However, testing at Camp NP-1 revealed that much evidence of the CCC-period landscape remains. Asphalt and gravel pads show the locations of roads, parking lots, and buildings. The septic tank is still intact, and it is likely that the pipes leading to it are also intact. Even the camp flagpole is still present. (Bedell, Cagney, and Raszick 2022: 59)

This portion of the cultural landscape should remain undeveloped and should be managed as an archeological site. The park archeologist determined that the aboveground features documented in the 2022 archeology report should be monitored on a five year cycle. NPS staff should continue monitoring the features.

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Cultural Landscape Report

Carderock

Chesapeake and Ohio Canal NHP
Potomac, MD

Wooded Area -
Treatment Map

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

In cooperation with:
National Capital Region, National Park Service

Sources
1. Ortho Imagery, 2025
2. Data collected in July, October 2024, and March, April 2025

Drawn By
Meg Frisbie, ArcGIS Pro 3.2.2, 2026

Legend

- CLR Boundary
- C&O Canal Towpath
- Billy Goat Trail Section C
- Wooded Area (WA)
- C&O Canal
- Buildings+Structures
- Connecting Road and Parking Areas

Treatment Tasks

WA-1. Encourage natural oak regeneration*
WA-2. Initiate assisted oak regeneration and canopy establishment*
WA-3. Continue to manage invasive non-native species*
WA-4. Leave Camp NP-1-MD undisturbed and undeveloped
*Not mapped, applies across the entire character area

Notes
1. Projection: NAD 1983 UTM Zone 18N

N 0 350 700 1,400 Feet

Drawing #24

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Partnerships + Policies

Partnerships

- Continue the partnership with the C&O Canal Trust. Currently, CHOH consolidates fundraising efforts through the C&O Canal Trust, which serves as the conduit to connect user groups with the resources they require for stewardship projects.
  - Consider adding an additional bench along the towpath within the cultural landscape through the C&O Canal Trust's Bench Sponsorship Program.
- Continue the partnership with the Potomac Appalachian Trial Club (PATC) for trail maintenance projects.
  - Provide training to volunteers on avoiding impacts to cultural and natural resources in their projects.
- Continue to partner with other user groups for stewardship projects, including climbing organizations such as the Mid Atlantic Climbers and other local and national groups.
  - Include these user groups in the communication strategies to protect rare plants and other natural and cultural resources in the landscape.
  - Create a climber education program, with a list of regulations, expectations, and best practices; these resources should be shared with any climbers visiting the park and disseminated online.
- Partner with Montgomery County to offer field space to adult recreation leagues, thus finding additional ways to program the open space within the recreation area.

Policies

ENTRANCE FEES

- There is currently no entrance fee at Carderock. Due to the presence of amenities, there is the potential for Carderock to be converted to a fee collection site in the future. The introduction of a new entrance station is not desired; however, there have been improvements of fee collection methods in recent years with the introduction of digital passes for remote fee collection that would not require the introduction of new infrastructure within the cultural landscape.

ROCK CLIMBING POLICIES

- There are currently no fees or permits required for individuals or small groups for rock climbing at Carderock. While permitting is not actively being considered by the park, park managers should consider the data provided in the 2025 report *Research to Support Climbing Management Planning at Carderock Recreation Area and Great Falls Park* to develop a comprehensive and proactive plan for managing the rock climbing area at Carderock. Expectations for climbers should be communicated and must include minimizing impact to cultural and natural resources, including rare plant communities.
  - The report concluded that from the climbers queried there was a preference for no permit or registration for climbing at Carderock, followed by a preference for on-site self-permit/registration, and preference for an online self-permit registration was the last choice (Jackson et. al. 2025: iii).
- The CHOH website should be updated to offer additional information about rock climbing at Carderock.
  - While there are currently many unofficial maps of Carderock climbing routes available online, some of these routes are no longer usable or accessible. NPS can highlight preferred climbing routes, best practices for minimizing impacts to natural and cultural resources, best practices for safety, and language about acknowledgment of risk as a user of the climbing area.
- Update the Superintendent's Compendium to include information and regulations about rock climbing at

Carderock.

Comparable Policies: The "Staying Safe" NPS webpage for rock climbing states that,

> Climbers assume responsibility for their personal safety and must have the appropriate skill and equipment for the route, conditions, weather and season. (National Park Service, "Staying Safe," 2021 https://www.nps.gov/subjects/climbing/staying-safe.htm)

The Joshua Tree National Park "Climbing Safety" webpage states,

> The NPS does not inspect, maintain, or repair fixed anchors (e.g., bolts, pitons). Climbers assume full responsibility for the safety and reliability of any gear they use. ("Climbing Safety," Joshua Tree National Park, https://www.nps.gov/jotr/planyourvisit/climbing_safety.htm?fullweb=1)

The Rocky Mountain National Park webpage regarding "Climbing Regulations" concurs with this conclusion, stating,

> The National Park Service does not inspect, maintain, or repair bolts and other climbing equipment anywhere in the park. Make sure your climb is adequately protected by visually inspecting any pre-existing bolts or fixed pins. Your safety is your responsibility!" ("Climbing Regulations," Rocky Mountain National Park, https://www.nps.gov/romo/planyourvisit/climbing-regulations.htm).

The Rocky Mountain National Park webpage regarding Climbing Regulations includes the following guidance on "Minimum Impact Climbing":

> Practice the following principles and help to minimize impacts to protect the fragile ecosystem and climbing areas we all love:

- Pack out all trash. Leave the area cleaner than you found it.
- Pack out all human waste and toilet paper. Use wag bags.
- Use existing access trails to approach climbs. Avoid short-cutting trails.
- Know and respect historic and environmentally sensitive areas.
- Be considerate of wildlife and other users.
- Leave the rock and its environs in its natural condition. Avoid placing permanent protection. Chipping and drilling holds destroys the rock face. Avoid changing the rock to make the route easier. Accept nature on its terms.
- Renew your commitment to leave no trace.
- Respect other visitors and keep noise and visual disturbances to a minimum.
- Know and abide by local regulations.
- Only by following a low-impact climbing ethic can we protect our outstanding natural features and their biological diversity for future generations ("Climbing Regulations," Rocky Mountain National Park, https://www.nps.gov/romo/planyourvisit/climbing-regulations.htm).

CONCESSION + WASTE POLICIES

- The Carderock recreation area should remain a trash-free park.
- Request that concessionaires (food trucks) expand their services to Carderock (provided food trucks carry out their own trash). This offers a low-impact way to expand visitor amenities in this area. Establish a parking area near the picnic pavilion (Parking Lot 1 or Parking Lot 2) or the climbing area (Parking Lot 4) for food trucks to park.

TREE PROTECTION POLICIES

- Create a protocol to protect existing canopy trees and character-defining vegetation during future construction projects. (See ANSI A300 Part 5 [Management of Trees and Shrubs During Site Planning, Site Development, and Construction].)

Areas of Further Study

- A Climbing Management Plan should be completed in collaboration with the climbing community. This should include considerations on how to mitigate the erosion of land at the base of the rock climbing area.
- A study should be completed to consider the advantages and disadvantages of converting Carderock to a fee collection site.

APPENDICES

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Appendix A: Field Ecology Field Notes

Blake Troxel, Consulting Forest Ecologist

C&O CANAL - CARDEROCK AREA FIELD NOTES

13 June 2025

Weitzman School of Design
University of Pennsylvania
210 S 34th St
Philadelphia, PA 19104

Dr. Randal Mason:

Below are notes interpreting vegetation conditions, ecological dynamics, landscape management issues and opportunities for the Carderock forest site. The information may be used to assist in formulating treatment recommendations for the Carderock cultural landscape report (CLR).

A single site visit to the North and South CCC areas, the picnic area, and the C&O Canal trail connecting the sites was conducted on the following date:

- 28 October 2024

MARYLAND FOREST CONTEXT

Maryland's forests are diverse and vital ecosystems that cover about 39% of the state's land area. These forests range from coastal plain woodlands, to the central Piedmont Plateau, to mountainous forests in the western part of the state. The Oak-Hickory Forest type is one of the most common and ecologically significant forest types in Maryland, particularly in the Piedmont Plateau region. These forests are characterized by a mix of oak and hickory species, along with other common eastern hardwoods, and are a defining feature of Maryland's upland and mid-elevation forests.[1]

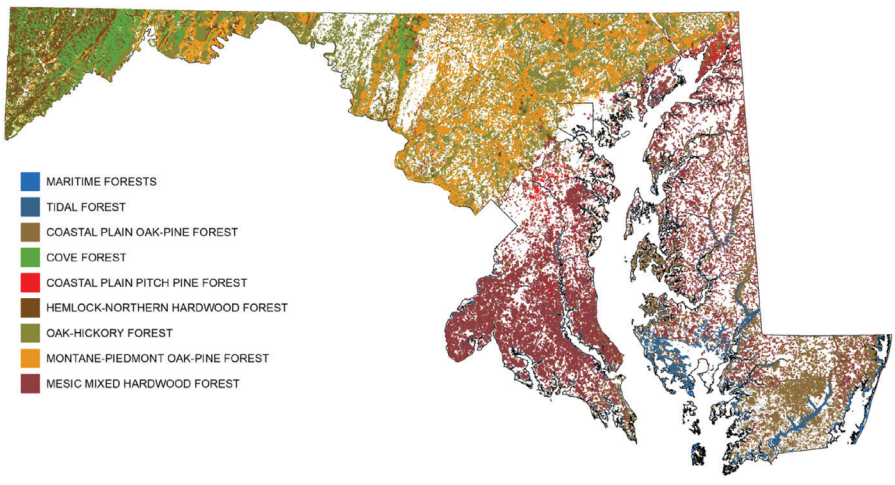


Figure 1: Map of Maryland Forest Types (MD DNR 2020 Forest Action Plan)

[1]https://dnr.maryland.gov/forests/Documents/Maryland-State-Assessment-2020FINALpages.pdf

Within the larger Oak-Hickory forest type group, the Mid-Atlantic Mesic Mixed Hardwood association most closely describes the site conditions found within the Carderock project site. This forest type is typically located in areas with moderate to high moisture levels (mesic conditions) and is characterized by a diverse mixture of hardwood tree species. These forests thrive on lower slopes, valley bottoms, or mesic ridges, where soils are deep, well-drained, and rich in nutrients. These site conditions are regularly found in the Carderock project area between the C&O Canal and the Potomac River.

The well developed, closed canopy is commonly composed of a mix of hardwood trees, with species such as *Acer rubrum, Fagus grandifolia, Liriodendron tulipifera, Quercus alba, Quercus rubra,* and/or *Quercus velutina, Carya alba, Carya glabra, Carya ovalis, Nyssa sylvatica, Quercus coccinea, Quercus montana (= Quercus prinus)*, and S*assafras albidum*. Understory trees typically include A*simina triloba, Cornus florida, Carpinus caroliniana, Ostrya virginiana,* and I*lex opaca*. Most of these overstory and understory species are present to varying degrees within and around the Carderock project area. However, the Carderock forest canopy structure appears to be less developed and the compositions appears to be less divers in areas along the C&O Canal trail and around the southern CCC site.

As a component of the Mid-Atlantic Mesic Mixed Hardwood Forest, the Carderock forest is important for maintaining regional biodiversity and ecosystem health. It supports a variety of ecosystem services which absorb and store carbon, helping to mitigate climate change; regulate water flow, reduce runoff, and filter pollutants; stabilize soil and prevent erosion, especially on slopes and stream banks. While this forest type is typically resilient, it is threatened by human activities such as development, invasive species, and climate change. These pressures can reduce biodiversity, alter the natural processes, and degrade habitat quality, underscoring the importance of conservation efforts to protect these ecosystems and maintain the existing corridor connectivity of the Carderock forest.

In particular, forest conservation efforts along the Potomac River have focused on restoring and protecting the river's riparian forests, mitigating the effects of deforestation, urbanization, and pollution, and improving water quality. These efforts are crucial for maintaining the health of the Potomac River ecosystem, which plays a vital role in the larger Chesapeake Bay watershed. Various government agencies, non-profits, and local communities are involved in these efforts, which target habitat restoration, water quality improvement, and sustainable land management. The C&O Canal - Carderock park, located along the Potomac River - within a high-value green infrastructure corridor[2] - should continue to implement and expand similar conservation and preservation efforts.[3]

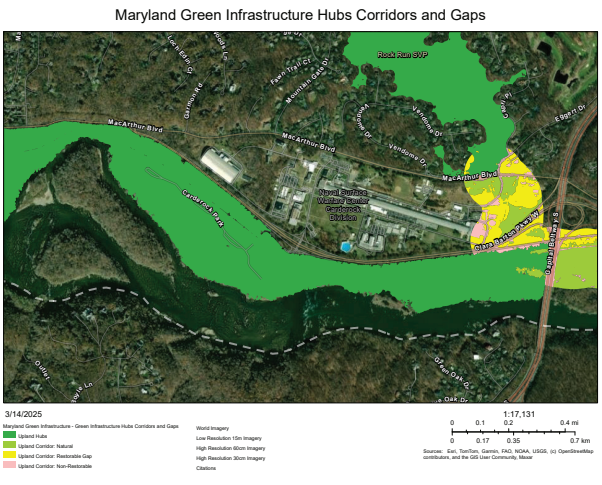


Figure 2: Carderock Park is located in an area of high ecological value that has been identified as a conservation priority by the Maryland Department of Natural Resources (DNR)

[2] https://dnr.maryland.gov/land/Pages/Green-Infrastructure-Mapping.aspx

[3] https://potomac.org/annualreport2024

GENERAL FOREST CONDITIONS

The general forest condition of the Carderock forest can be considered fair overall. While a number of healthy canopy specimens remain in tact, many of the mature canopy trees - that are reminiscent of the historic forest character - are in various stages of decline. This has resulted in a degradation of the closed canopy structure and the historical canopy composition. The historically dominant Oak component has given way to large canopy gaps which are being colonized by undesirable and/or invasive species, and lower stature sub-dominant canopy species.

Without the existence of adequate advanced oak regeneration, the rehabilitation of the oak canopy may require concerted intervention. Advanced regeneration in oak species refers to the process by which young oak seedlings establish and grow in the understory of a forest before the overstory canopy is opened up, typically due to disturbances such as harvesting or natural events like storms and natural senescence. This strategy enables oaks to maintain their presence in the forest ecosystem by ensuring a continuous presence of younger individuals ready to take advantage of available resources and growing conditions. Advanced regeneration relies on the ability of oak seeds to remain viable in the soil for extended periods until conditions become suitable for germination and growth. Once the overstory canopy is opened, either naturally or through human intervention, these pre-established seedlings can rapidly grow and occupy the newly available growing space, ensuring the persistence of oak dominance in the forest ecosystem.



Example of degraded canopy structure with large gaps



Example of young canopy structure/ composition

During the site visit NPS staff mentioned that oak seeding predation by existing deer populations have greatly impaired natural oak regeneration. As a result, staff intervention will be necessary to ensure the continuation of a historic oak component in the Carderock forest. This may include the collection of acorns, the growth of nursery stock, the planting and protection seedlings, and the continued management to stimulate oak regeneration while suppressing competitive species and vegetation.

In localized areas around the woods, there are examples of healthy and vigorous canopy, mid-story and understory trees representative of a diversity of structure and composition found in the Mid-Atlantic

Mesic Mixed Hardwood Forest. However, in some areas, the understory appears to be over-represented by younger hickory and beech specimens which is likely result of heavy deer browse. The presence of existing non-native invasive species (i.e. *Microstegium vimineum, Lonicera japonica, Berberis thunbergii, and Oplismenus undulatifolius*) and lack of overstory diversity will likely have a detrimental affect on the future forest composition.

While the existence of several non-native, invasive species were reported by NPS staff within the forest interior, a higher density of non-native species was primarily observed along the forest edges and near existing trails. Care should continue to be taken to prevent the unimpeded regeneration of non-native species where possible.

Common species identified through visual assessment during the field visit, and generally found in and around the Carderock forest are identified in the table below (this does not represent an exhaustive list of forest species existing within the Carderock forest).

Common Name	Scientific Name	Plant Type
White oak	*Quercus alba*	Over-story
Red oak	*Quercus rubra*	Over-story
Chestnut Oak	*Quercus montana*	Over-story
Chinquapin Oak	*Quercus muehlenbergii*	Over-story
Tulip-tree	*Liriodendron tulipifera*	Over-story
Hickory sp.	*Carya sp.*	Over-story / Mid-story
American Beech	*Fagus grandifolia*	Mid-story / Under-story
Red maple	*Acer rubrum*	Mid-story
American holly	*Ilex opaca*	Under-story
Common Pawpaw	*Asimina triloba*	Under-story
Dogwood	*Cornus florida*	Under-story
American hornbeam	*Carpinus caroliniana*	Under-story
Japanese stilt grass	*Microstegium vimineum*	Non-native
Japanese honeysuckle	*Lonicera japonica*	Non-native
Japanese Barberry	*Berberis thunbergii*	Non-native
Wavyleaf Basketgrass	*Oplismenus undulatifolius*	Non-native

Much of the forest conditions are documented in greater detail in the National Park Service Vegetation Mapping Inventory Program Baseline report for National Capital Region; Maryland, Virginia, West Virginia and the District of Columbia; however, specific observations and CLR recommendations for the Carderock Forest are listed in the section below.

GENERAL RECOMMENDATIONS

1. Rehabilitate Historic Oak Canopy

   1.1. The historic oak canopy is in a state of decline and should be rehabilitated to maintain the historic character of the site.

   1.2. Steps should be taken to encourage natural oak regeneration to ensure the persistence of oak dominance in the forest ecosystem.

   1.3. If natural regeneration is not viable, human assisted regeneration methods should be implemented.

2. Encourage Natural Oak Regeneration

   2.1. Identify existing natural oak regeneration and protect from herbivory using deer exclosures and fencing.

   2.2. Perform selective thinning techniques that allow for a slight increase of sunlight onto the forest floor to stimulate existing advanced oak regeneration, but not as to "release" competitive species.

   2.3. Once the oak seedlings have reached a height of 4-6 feet, a larger harvest of canopy species should be considered to release the advance oak regeneration.

   2.4. Natural regeneration of an oak stand is a process of repeated disturbances to favor oak, and should not be though of as a single disturbance event. On high quality sites, it is recommended to perform this process gradually, over 20 years or more.[4]

3. Initiate Assisted Oak Regeneration and Canopy Establishment

   3.1. If there are insufficient resources to encourage regeneration naturally, human assisted regeneration techniques are likely necessary.

   3.2. Oak acorns should be collected in situ during mast years, and transported to a local nursery for germination and growth.

   3.3. Once seedlings are viable for transplant, relocate them back into the forest. Identify natural canopy gaps or locations with enough light to stimulate seedling growth. This may also require the creation of new canopy gaps and/or removal of mid-story trees.

   3.4. Protect seedlings from herbivory with exclosures if necessary, and routinely manage for competing vegetation.

   3.5. Once seedlings have reached a height of 4-6 feet, a larger harvest or creation of canopy openings should be considered to release the advance oak regeneration.

   3.6. If local seedling stock is unavailable and/or unviable, purchase appropriate seedlings or nursery tree stock and plant in canopy gaps as indicated above.

[4] https://www.srs.fs.usda.gov/pubs/chap/chap_2015_schweitzer_001.pdf

4. Picnic Area / Poplar Grove

4.1. Develop a stepwise approach to replant and regenerate the high-value canopy over the picnic area.

4.2. Begin with the removal of existing dead and dying canopy trees, and strategically replant with desired canopy species using planting stock of at least 2 inches in diameter (dbh).

4.3. Add additional understory trees species (e.g. Dogwood, American hornbeam, etc.) in and around the picnic area.

4.4. Use site specific and appropriate methods to amend the soil and establish the next generation of canopy trees in and around the picnic area.

4.5. Use appropriate tree protection measures, and once new trees are established, continue to remove dead and dying trees, and replace them as resources are available.

5. Continue to Manage Invasive Non-Natives

5.1. Staff should continue to manage invasive and non-native vegetation that competes with desired native species.

5.2. Take steps to ensure that future construction zones do not create conditions for invasive species along the forest edge to thrive and advance further into the stand interior.

5.2.1. Establish buffer zones between construction areas and sensitive natural habitats. These zones can help prevent the spread of invasive species from construction zones to adjacent natural areas.

5.2.2. Ensure that all construction equipment is thoroughly cleaned before moving to and from the site to avoid transferring soil, seeds, or plant material.

5.2.3. Implement erosion control BMPs, such as silt fences and sediment traps, to prevent soil runoff that could carry invasive species seeds or fragments.

5.2.4. Monitor and/or test bare soil for invasive species seeds or propagules. If contamination is detected, treat the soil or use it in a way that minimizes the risk of spreading.

5.2.5. While on site and within construction zone, proactively remove all existing invasive species through the use of both mechanical and chemical methods.

5.2.6.Implement a monitoring and maintenance program to track the presence and spread of invasive species in and around the construction site. Regular inspections should continue for several years after construction.

5.3. Maintain an holistic Integrated Pest Management (IPM) program ensure effective and prolonged invasive species control.

PHOTOS AND NOTES OF INTEREST



Large canopy gap produced by dead/dying canopy trees common throughout the Carderock Site.



Example of existing non-native, invasive species: honeysuckle. and oriental bittersweet



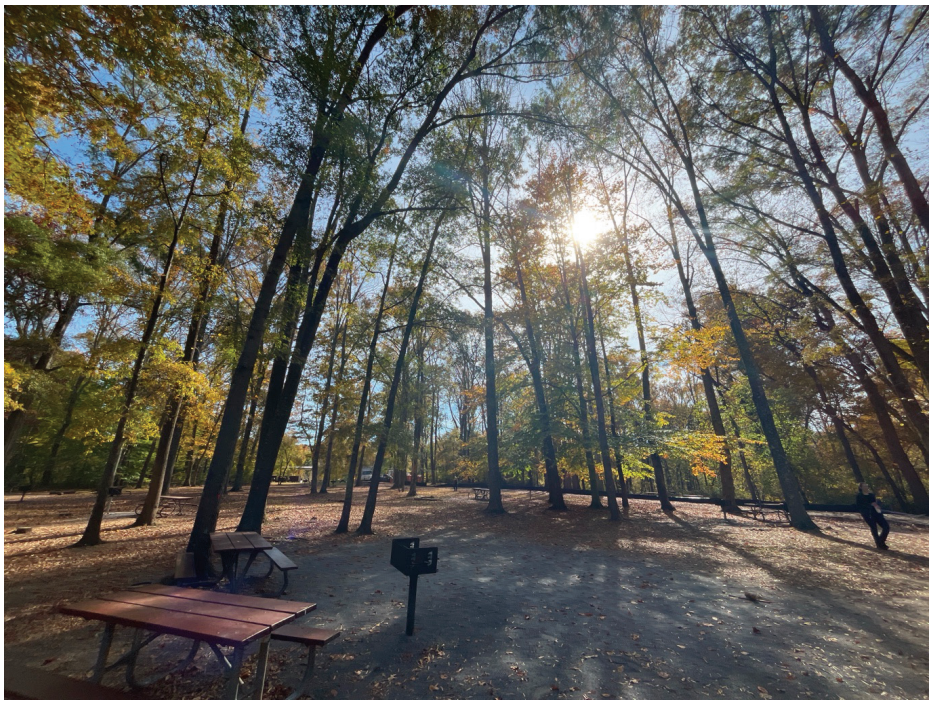
Forest conditions representative of the southern CCC site: lower stature species, open canopy structure, existing invasive species.



Example of dead and dying canopy tree



Example of existing canopy structure and composition near the CCC site.



Conditions at the picnic area / poplar grove. Removal of dead/dying trees and replanting is recommended.



Side view of the poplar grove in and around the picnic area



A good specimen of a Dogwood tree in the picnic area

9



Current conditions at the northern CCC site.



Example of beach mid-story with hickory and oak canopy



Common conditions along the C&O canal trail



Example of healthy canopy structure and composition



Example of healthy forest structure and composition



Example of CCC campsite that was likely cleared after World War II. The stand is probably 60 to 70 years old with many small diameter stems primarily consisting of hickory species.

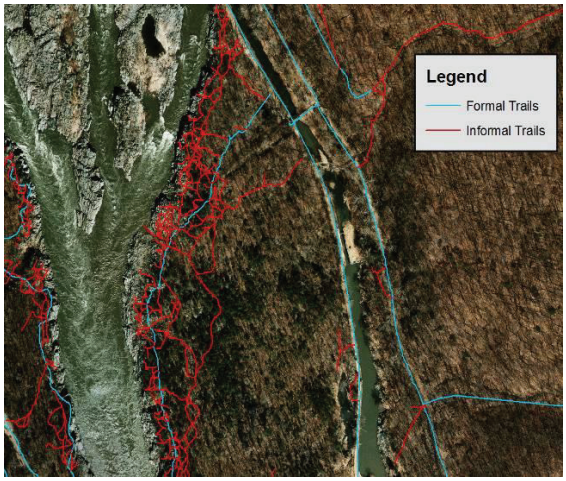


Wavy leaf basket grass, a particular non-native species of concern.

Appendix B: Informal Trail Management

Guidance for Managing Informal Trails

Jeff Marion, USGS Research Scientist
(jmarion@vt.edu, 540-231-6603)



The development, deterioration and proliferation of visitor-created informal trails in protected areas can be a vexing management issue for land managers. Formal trail systems never provide access to all locations required by visitors seeking to engage in a variety of appropriate recreational activities. Traveling off-trail is necessary to engage in activities such as nature study, fishing, or camping. Unfortunately management experience reveals that informal trail systems are frequently poorly designed, including "shortest distance" routing with steep grades and alignments parallel to the slope. Such routes are rarely sustainable under heavy traffic and subsequent resource degradation is often severe. Vegetation impacts include trampling damage leading to changes in species composition, potential introduction and dispersal of non-native plants, and the loss of vegetation cover. Soil impacts include the pulverization and loss of organic litter, and exposure, compaction, and erosion of soil. Soil deposition in streams, disturbance to wildlife, and damage to historic resources are also possible. Creation of multiple routes to common destinations is another frequent problem, resulting in "avoidable" impacts such as unnecessary vegetation/soil loss and fragmentation of flora/fauna habitats.

This guidance is provided to assist land managers and volunteer trail organizations in evaluating informal trail impacts and selecting the most appropriate and effective management responses.

Adopt a Decision-Making Process

The management of informal trail networks can benefit from application of a planning and decision-making process or framework that includes public dialogue and input. Decisions regarding impact acceptability and the selection of actions needed to prevent recreation-related resource impacts fall into the domain of carrying capacity decision-making. The NPS defines carrying capacity as "the type and level of visitor use that can be accommodated while sustaining the desired resource and visitor experience conditions in the park" (NPS 2006). The NPS applies the Visitor Experience and Resource Protection (VERP) decision-making framework (NPS 1997), while the U.S. Forest Service applies the Limits of Acceptable Change (LAC) framework (Stankey *et al.* 1985).

These formal frameworks direct managers to prescribe objectives for biophysical and social conditions they intend to achieve for specific park zones. Numerical standards of quality are established for each indicator and zone to define the critical boundary line between acceptable and unacceptable conditions, establishing a measurable reference point against which future conditions can be compared through periodic monitoring. These frameworks incorporate an adaptive management decision process, whereby managers can apply actions, evaluate their

success, and when needed, apply alternative actions as a follow-up until management objectives are achieved. A simplified framework known as Protected Area Visitor Impact Management (PAVIM) employs an expert panel and problem analysis process (Table 1) that requires less data (Farrell and Marion 2002). The problem analysis process, which is particularly applicable and useful in informal trail management decision-making, is described below.

Problem Analysis Process

Assemble a team of knowledgeable and experienced individuals with expertise in recreation resources management, visitor management, social science, site and trail management, natural resource management, and interpretation. Visit the site where the impacts or problems are occurring and apply this problem analysis process to guide discussions.

Identify and Evaluate the Problem

The problem analysis begins by developing the group's collective knowledge of the area, amounts and types of recreational uses, and the resource and social problems currently present. Group members most knowledgeable about these topics are asked to share their knowledge with the group. The sharing of differing perspectives, land management agency, trail club, recreation representatives, is encouraged. The significance of the problems and degree to which current conditions are unacceptable are considered when deciding whether management actions are needed. Next, participants with the longest experience in the area are asked to relate the history of the problems or impacts. Previous management actions are described and their effectiveness discussed and evaluated, including why implemented actions were or were not effective.

The core of a good problem analysis is a thorough evaluation of a problem's underlying causes and identification of factors that influence impact severity. For example, substantial off-trail traffic may be the cause for excessive vegetation loss but fragile ground vegetation and poorly marked or maintained formal trails may significantly contribute to the creation of unacceptably extensive or impacted informal trails. The relative influence of three groupings of factors: use-related, environmental, and managerial, should be examined. An improved understanding of these causes and factors are essential to evaluating alternative actions and selecting effective actions.

Identify and Evaluate Strategies and Actions

Step two involves brainstorming by team members to list and then evaluate a diverse array of management strategies and actions. Following list development, study team discussions should focus on careful evaluations of the advantages and disadvantages of each action. A number of important attributes should be considered, including potential effectiveness, management feasibility, costs to visitor freedom and satisfaction, expected visitor compliance, and others as appropriate.

The final step is selecting one or more preferred actions recommended for implementation. Careful consideration of the history of impacts and their management, the desired resource and social conditions for the area, and factors which either cause or influence impacts can help guide more objective and effective decision-making. Management objectives or desired condition statements will suggest the appropriateness of alternative actions relative to the natural, social, and managerial settings of the zone the area is situated within.

Generally, initial actions are feasible, have a low "cost" to visitors, and are judged to have a good chance at effecting the desired change in conditions. For example, indirect actions such as education or site maintenance should be considered before regulatory or site development actions as they are less obtrusive and do not compromise visitor freedom. More restrictive, expensive, and/or obtrusive actions are generally deferred until justified by the failure of one or more preceding actions. However, severe or unacceptable impacts may warrant bypassing such light-handed efforts in favor of actions necessary to achieve more effective or immediate results. Alternative actions should be identified for potential implementation in the event that initial actions are ineffective.

For each action, identify likely individuals or organizations responsible for implementing the action and describe the necessary resources they will require. An implementation schedule should also be developed and efforts to obtain funding and staff initiated. At this time it is also useful to consider how a planned action should be monitored for evaluating effectiveness. For example, an accurate GPS survey of informal trail networks with condition class assessments provides a baseline for future comparison and should be conducted prior to implementing corrective actions.

Table 1. Problem analysis for managing resource and social impacts related to visitation.

I. Identify and Evaluate the Problem

- ***Describe area and use(s)*** - provide background information about the area, facilities, and visitor use.
- ***Describe problem(s)*** - briefly describe the facility, resource and social impact problems that are occurring.
- ***Problem significance*** - consider if and why the impacts are significant or unacceptable to land managers and protected area visitors
- ***Previous management actions*** - describe the history of the problems and previous actions; discuss the effectiveness of these actions and why they did or didn't work.
- ***Causes and influential factors*** - discuss the underlying causes for the impacts and the role of non-causal but influential factors that may intensify impacts. Consider use-related factors (type and amount of visitor use, visitor behavior and motives, use density), environmental factors (soil and vegetation type, environmental sensitivity, topography), and managerial factors (siting, design, construction, and maintenance of facilities, visitor management).

II. Identify and Evaluate Strategies and Actions

- ***List potential strategies and actions*** - create a comprehensive list of appropriate and potentially effective management strategies and actions. Strategies are broad approaches (e.g., modify visitor behavior, manage sites and facilities) and actions are the specific means used to implement a strategy (e.g., educate visitors, relocate campsites).
- ***Evaluate strategies and actions*** - discuss and evaluate the following attributes for each strategy and action: potential effectiveness, management feasibility (cost, staffing, long-term maintenance), advantages/disadvantages (e.g., costs to visitor freedom), expected visitor compliance, etc.
- ***Formulate recommendations*** - through group discussion, develop and write recommendations that reflect the group's consensus views. Describe the recommended action or group of actions to implement first and what might be tried next if these are ineffective.

Problem Definition: For informal trail management decision-making, an inventory of the informal trail network within an area of management concern is particularly useful. If GPS devices and expertise is available, a simple inventory technique is to conduct a walking GPS survey, provided the terrain and forest canopy permit accurate GPS use. GIS software can input, map and analyze the data, providing a visual display of the informal trail network relative to designated trails, roads and other resource features. Computation of the lineal extent of the informal trail network is also possible. If GPS devices cannot be used then an inventory can be made by hand-sketching informal trails onto large-scale maps with lengths assessed by pacing or a measuring wheel.

Where possible, managers may also wish to consider various options for assessing the condition of the informal trails. Many options, ranging from simple condition class evaluations, to trail width and depth measurements, or detailed assessments of soil and vegetation loss are possible. Guidance for assessing trail conditions may be found in the scientific literature (Cole 1983, Leung & Marion 2000, Marion & Leung 2001). Some rapid assessment "condition class" options are included at the end of this document or contact the author for examples of alternative monitoring protocols and manuals. An objective assessment of informal trail conditions can produce quantitative data for indicator variables that can be summarized to characterize current trail conditions, or when replicated, to monitor changes in trail conditions over time. Such data can be used in the previously described formal or informal adaptive management decision-making frameworks.

Evaluate Impact Acceptability: The acceptability of informal trail impacts should be evaluated according to park or management zone objectives. Informal trails located in pristine areas where preservation values are paramount are less acceptable than when located in areas that are intensively developed and managed for recreation use. Trails in areas with sensitive cultural and archaeological resources are particularly unacceptable if they threaten such irreplaceable resources.

Environmental factors: Informal trails located in sensitive or fragile plant/soil types, near rare plants and animals, or in critical wildlife habitats are less acceptable than when located in areas that are resistant to trampling damage and lack rare species. Informal trails that directly ascend steep slopes and/or will easily erode are less acceptable than trails with a side-hill design. Informal trails prone to muddiness and widening are less acceptable, as are trails that may contribute soils to water resources.

Use-related factors: Why is a trail in a particular location and what are the visitors trying to access? Which recreation activities are most responsible for creating informal trails? What are the motives responsible for off-trail hiking? Are some impacts avoidable? For example, informal trail impacts related to a poorly marked formal trail or that result from visitors trying to circumvent muddiness or severe erosion are more easily avoided and should be targeted first. It is not uncommon to find several "duplicative" informal trails in close proximity to each other accessing a common destination. Impacts caused by visitors seeking to shortcut a longer, more resistant route are unacceptable, as are impacts caused by visitors who could alternately access their intended destination by staying on resistant durable surfaces (e.g., rocks or gravel) (www.LNT.org). Informal trails resulting from illegal or inappropriate types of uses are less acceptable than if they are caused by permitted uses.

A careful consideration of these and other relevant factors (e.g., visitor safety) can assist managers in making value-laden decisions regarding the acceptability of informal trail impacts. The acceptability of these impacts, in turn, guides decisions about which trails should be left open, rerouted, or closed, and selection of appropriate and effective management interventions.

Selection of Management Strategies: The problem analysis process can assist managers in considering and evaluating a diverse array of potential management strategies and actions. Note that some degree of degradation to natural resources is an inevitable consequence of recreation use, requiring managers to balance recreation provision and resource protection mandates. Roads and formal trails can never provide complete access to the locations visitors wish to see, hence, some degree of informal trail development is inevitable and must be tolerated. The challenge for managers is to evaluate the impacts in light of recreation provision and resource protection objectives, and apply professional judgment to determine which impacts are unacceptable and require management action.
The following section describes four general strategies for managing informal trail impacts: 1) Improve management of formal trails, 2) Ignore or formalize informal trails, 3) Maintain informal trails, and 4) Close and restore unacceptable trails,.

Improve Management of Formal Trails

If formal trail problems are contributing to the development of informal trails, then addressing such problems is generally one of the more effective and efficient options available to managers. Four problems are common. Make sure that formal trails are well-marked in some distinctive fashion so that visitors can clearly distinguish between formal and informal trails – this is often very confusing to most visitors. In rocky areas, paint blazes may be needed on rocks rather than trees because the terrain demands constant attention to the immediate trail tread. “Overblazing” or clearly defined trail borders (e.g., spaced rocks, logs, or scree walls) may be necessary in some tricky areas. Boardwalks, low symbolic fencing, or higher rustic fencing are more effective but more visually obtrusive and costly. The treads of formal trails should be the most attractive location for walking, maintained to be free of muddiness or deeply eroded ruts with exposed roots and rocks. When braided or multiple parallel treads occur managers should define a single intended tread throughout.

Ignore or Formalize Informal Trails

Some informal trails may have reasonably sustainable design attributes and access locations, such as vistas or campsites (hikers), water resources (fishermen), or cliffs (climbers) that are acceptable to land managers. When visitor access to these locations is appropriate, such trails should generally be left open as informal trails or even designated and managed as formal trails. They serve an important resource protection function by concentrating visitor traffic on a narrow tread and protecting adjacent vegetation from trampling damage. Recreation ecology studies have consistently found a curvilinear relationship between the amount of traffic and trampling impacts (Leung and Marion 2000). The majority of trampling impact occurs with relatively low levels of trampling; once a trail is established, further trampling impact is greatly minimized by a “concentration” strategy that focuses all further traffic to its barren tread. An alternate “dispersal” strategy is only effective under conditions of very low use and/or when traffic can be confined to durable substrates (e.g., rock, gravel) or vegetation (grasses/sedges).

Sometimes a portion of such informal trails may require a reroute to improve the sustainability of an alignment, such as a very steep section aligned with the fall-line (parallel to the landform

slope). An experienced trails professional should conduct a review and provide recommendations for informal trails left open to use. Generally trail alignments should favor side-hill over fall-line alignments, avoid grades over 15%, and favor rocky substrates and non-vegetated or grassy groundcover. As with formal trails, leaving an informal trail with a poor "impact susceptible" alignment is rarely a preferred long-term solution. Site development actions, such as graveling or installation of water bars and rock steps, could be applied but these are generally less appropriate on informal trails and would be unnecessary on a well-designed alignment. In most instances, relocation to an improved alignment will be a more cost-effective and sustainable long-term solution, even though pristine terrain is affected.

Due to the relatively poor trail design skills of visitors, it may even be necessary to replace several non-sustainable informal trails with a new well-designed informal or formal trail (with appropriate environmental reviews). An objective evaluation of the aggregate or cumulative impacts, including the total area of trampling disturbance and soil loss, will generally support such a decision. However, this option should only be attempted when managers are relatively certain of their ability to effectively close the pre-existing informal trails.

Maintain Informal Trails

Historically, most park managers have not maintained informal trail networks. However, extending maintenance work to those trails with reasonably sustainable designs left open to use can substantially reduce impacts. For example, managers can piece together a single sustainable route in an area with numerous braided trails and trim obstructing vegetation, subtly enhance tread drainage, or install natural-appearing rockwork on steep slopes. These actions will effectively encourage use and reduce impacts on the sustainable route while reducing use and encouraging natural recovery on alternate informal trail segments. Additional actions, discussed in the following section, can be applied to discourage their continued use.

Close and Restore Unacceptable Trails

Informal trails with poor, non-sustainable design attributes, trails that threaten sensitive resources, or unnecessary trails with duplicative routings should generally be closed and rehabilitated. Managers should recognize that successful trail closures and restoration are rare and require substantial and sustained management effort. The principal reason for low success rates is that while trampling impacts occur rapidly with low levels of use, vegetative and soil recovery occurs very slowly and complete recovery is prevented unless nearly all traffic is removed from treads for several consecutive years. A substantial restoration program involving the addition of soil and plantings of native species, with watering as needed to ensure survival, can hasten natural recovery. However, care must be taken to apply such intensive work only when managers are reasonably certain that effective measures are in place to prevent further trampling of the restoration work.

Selection of Management Actions: An adaptive management program involving education and site management actions is recommended when implementing strategies. Management experience and research have demonstrated that integrating site management and educational actions consistently achieve the highest rates of success. Site management actions are needed to mark and keep visitors on formal trails or to block or hide informal trails; educational actions are needed to inform visitors of the impacts associated with off-trail traffic and what managers would like them to do to protect natural and cultural resources. Visitors frequently misunderstand site management actions that lack signs placed to convey information about impacts of concern and management intent. In the absence of site management actions, visitors may choose to

disregard a prompter sign if a well-used informal trail branches off to what looks like an appealing vista.

Educational Actions

An educational component is often critical to communicate a clear rationale for an action – for example, that significant resource impacts can occur in some areas if visitors travel off designated trails. A message with a rationale should be followed by a plea for visitors to remain on formal trails, which need to be clearly designated through site management actions (e.g., blazing, symbolic markers, cairns) to distinguish them from informal trails. Social science research and theory has found that signs with a compelling rationale and clear behavioral plea are more effective than simple "do" and "do not" messages (e.g., "Please Stay on Designated Trails to Preserve Sensitive Vegetation") (Cialdini 1996, Cialdini *et al.* 2006, Johnson & Swearingen 1992, Marion & Reid 2007, Vande Kamp *et al*. 1994, Winter 2006). Such literature should be consulted to improve the efficacy of educational messaging.

Some principal goals that educational efforts seek to communicate include: 1) trampling impacts represent a significant threat to resource protection in some areas, 2) that off-trail traffic has created informal trails that managers would like to close and restore, 3) remaining on formal trails avoids these impacts, 3) formal trails can be distinguished from informal (visitor-created) trails by distinctive markings, and 4) even small amounts of continued traffic prevents the recovery of informal trails that managers are seeking to close and restore. Unfortunately, as you might expect, this is a lengthy and complex educational message that is challenging to communicate effectively. Research suggests that more complex messages are more effectively communicated personally, rather than on signed or in brochures. Regardless, examples of signs that seek to accomplish these objectives and that have received NPS approval for use are depicted in Figure 1. Note the inclusion of the "no-step" icons that communicate the message with just a glance and are understandable by children and non-English speaking visitors. Generally the larger informative signs are placed in conspicuous locations near trailheads and the more numerous "prompter" signs are placed just beyond junctions with informal trails.

Site Management Actions

A variety of site management actions are available for closing informal trails. Close lightly used trails by actions that naturalize and hide their tread disturbance, particularly along initial visible sections where visitors make the decision to venture down them. Effective actions include raking organic debris such as leaves onto the tread, along with randomly placed local rocks, gravel, and woody debris designed to naturalize and hide the tread. These actions also lessen soil erosion and speed natural recovery. On trails that have been effectively closed, transplanting plugs of vegetation at the beginning of wet seasons can hasten natural recovery. Revegetation work conducted before successful closure is achieved can be a frustrating waste of time and materials if visitors continue use of the trail and trample the transplanted vegetation.

For well-used trails, such work generally cannot fully disguise the disturbed substrates and vegetation so additional measures are necessary for effective closures. Construct a visually obvious border along the main trail, such as a row of rocks or a log, to communicate an implied blockage for those seeking to access the closed trail. Alternately, embed large rocks or place large woody materials or fencing to obstruct access at the entrance to closed trails to fully clarify management intent. Even temporary 2 ft tall post and cord symbolic fences can communicate the importance of closures and effectively deter traffic (Figure 2) (Park *et al*. 2006). Taller plastic

fencing (preferably in green or brown) is also easy to transport and install to discourage traffic on trails that prove more difficult to close. However, fencing is generally perceived as visually obtrusive and inappropriate in more primitive settings.

Placing rocks or woody debris that physically obstructs traffic beyond the beginning of closed trails may be ineffective if visitors are able to circumvent these by walking around them. This can result in new trampling and trails parallel to the "closed" trail – a significant problem in areas with sensitive or rare vegetation. In such areas it is better for hikers who ignore closures to remain on the "closed" tread than to create new treads on each side (Johnson *et al.* 1987). If the trail is in sloping terrain its closure may require the addition of soil to fill ruts and reestablish the original surface contour, and organic litter and vegetation to keep the soil from eroding. Finally, integrating site management work with temporary educational signs may be necessary to obtain a level of compliance that allows vegetative recovery. Also, consider signs to communicate the location of a preferred alternate route when visitors are seeking to reach a particular destination and their only visible access trail is closed.

Conclusions: Informal trail management actions should be implemented as part of an ongoing adaptive management program Experimentation will be necessary to refine site management procedures that are appropriate in each management zone or location. Some form of periodic monitoring is critical to program success. A 5-year interval could be sufficient for monitoring with quantitative procedures, but annual informal evaluations are needed to effectively guide the application of management actions.

Objective monitoring will be needed if any potentially controversial management actions may be needed (e.g., use restrictions or high fencing). In exceptionally high use areas with sensitive resources there is a good probability that such actions will be necessary. For example, a combination of signs and restoration work may be able to keep 95% of visitors on a designated



Figure 1. Examples of informative trailhead sign (left) and trailside prompter signs that can assist management efforts in closing informal trails.

trail but 5% of 2000 visitors/day is 100 visitors/day, a level of trampling that is sufficient to both create and maintain informal trails. Tall fencing or a regulatory sign that prohibits use of the closed trail and threatens fines may be necessary on trails that are particularly difficult to close. Such situations also indicate a need for further dialogue with trail users to discover their motives and a review of whether the formal trail system should be extended or modified.



Figure 2. Low symbolic post and rope fencing (left) and high fencing designed to physically obstruct access (right).

Regardless, periodic monitoring provides feedback for gauging the success of management interventions in keeping conditions within acceptable limits. A documented failure of one intervention can be used to justify the use of a more obtrusive or expensive intervention.

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Trail Indicators

The number, lineal extent and condition of informal trails are attributes that can be assessed as indicators of impact for informal trail systems.

Number: Count the number of informal trails that branch off of a designated trail.
Lineal Extent: Push a measuring wheel or run a GPS device along every informal trail within a defined area to determine their aggregate lineal extent.
Condition: Assess the condition of social trails with a "condition class" method (see below) or with quantitative measurements (contact the author). Condition class methods provide a quick summary of general trail condition and can be applied to just the visible section of social trails at their junctions with a designated trail or to entire trails or trail segments when a measuring wheel or GPS device is used. Quantitative methods involve measures of separate indicators (e.g., trail width, depth, soil loss, muddiness) generally taken at transects sampled along the trail with a standard interval (e.g., every 300 ft).

Trail Condition Class Systems

Trail condition class systems can be applied to an entire trail (if in uniform condition) or to segments. For the latter you would use a GPS or push a measuring wheel down the trail and record a condition class rating to segments of the trail in uniform condition. A minimum distance rule, like 30 ft as the smallest segment that can be labeled as a new condition class, is helpful.

Numerical

Class 1: >10% vegetation cover on trail
Class 2: <10% vegetation cover and less than 20 inches (0.5m) wide
Class 3: <10% vegetation cover and > 20 inches wide

Comments: Only 3 categories, though that's easy to apply and should be fine for most areas (additional categories could be added). The criteria (10% and 20 inches) could be modified if needed. Judging the 10% vegetation cover might be somewhat difficult in some places due to patchy vegetation.

Descriptive

Class 0: Trail barely distinguishable; no or minimal disturbance of vegetation and/or organic litter.
Class 1: Trail distinguishable; slight loss of vegetation cover and/or minimal disturbance of organic litter.
Class 2: Trail obvious; vegetation cover lost and/or organic litter pulverized in primary use areas.
Class 3: Vegetation cover lost and/or organic litter pulverized within the center of the tread, some bare soil exposed.
Class 4: Nearly complete or total loss of vegetation cover and organic litter within the tread, bare soil widespread.
Class 5: Soil erosion obvious, as indicated by exposed roots and rocks and/or gullying

Comments: More categories but less quantitative. Potentially has a greater possibility for subjectivity in application or differences in interpreting findings.

Appendix C: List of CCC Enrollees + Administrators

Source: Josh Howard, *"Our Only Alma Mater": The Civilian Conservation Corps and the C&O Canal,* Special History Study, Final Draft (Washington, D.C.: U.S. Department of the Interior, National Park Service, 2017).

From C&O Canal (Camp NP-1 and Camp NP-2) inspection reports & Newspapers

OCT. 13, 1938 (CAMP NP-1)

- Lewis G. Heider, Project Superintendent
- Roger J. Hudson, Senior Engr. Foreman
- Williams G. Barber, Foreman
- Lawrence C. Lemmon, Sr. Foreman Archt.
- Virgils Berry, Gen. Mechanic
- Norman B. Krebs, Gen. Mechanic

Newspaper Editorial Staff (Mar. 31, 1938)

- Oliver Morgan, Editor in Chief
- John Gholson
- Frank White
- Herman Johnson

From Towpath Journal (31 Mar 1939)

- Everett D. Wilberger, 1st Lt. Cav. Res., Commanding Officer (Admin Staff)
- Bernard E. Babcock, 2nd Lt. Ca. Res., Adjutant (Admin Staff)
- Donald C. Singe, Capt. Med. Res., Camp Surgeon (Admin Staff)
- C. Rushton Long, Educational Adviser (Admin Staff)
- L.G. Heider, Project Superintendent
- H.V. Moulding, General Foreman
- A.C. Silvius, Forester
- J. Sheppard, Landscape Foreman
- G.W. Harris, Carpenter

NEWSPAPER EDITORS

- Frank White, Editor
- Edmond Jackson, Associate Editor
- Carl Palmer
- Amos Custis
- Morris Langston
- Thomas Bunting
- William Allen
- William Green
- John Gholson
- James Chaney
- Claiburn Pina (?)
- Thomas Christian

From Towpath Journal (30 Jun 1939), Changes in personnel

- Sandford W. Hickey, 2nd Lt. C/-Res, Adjutant
- J. Fritz, Forester
- Pansy L. Williams, Special Instructress
- Harry Dean, Associate Editors
- James Carey
- Edward Thompson

From August 25, 1939 Report on Technical Personnel

CAMP NP-1

- Lewis G. Heider, Project Superintendent
- Roger J. Hudson, Senior Engr. Foreman
- Williams G. Barber, Sr. Foreman
- Lawrence C. Lemmon, Sr. (Lcp. Arc) Foreman
- George W. Brew, Jr. Foreman
- Ralph C. Ward, Jr. Foreman
- Donald F. Green, Mechanic
- Norman B. Krebs, Mechanic

CAMP NP-2

- Harry V. Maulding, Sr. Foreman
- Josiah Shepard, Sr. (Lcp. Arc.) Foreman
- Jules Fritz, Sr. Foreman
- George W. Harris, Jr. Foreman
- Earle R. Jenkins, Asst. Clerk
- Thomas A. Basnight Jr., Mechanic
- George F. Clayton, Mechanic

From Census Population Schedule, April 1940

Note: CCC enrollee's appeared on the census based on their home district. Only full-time CCC employees were enumerated within the census records of Montgomery County. All of those listed in the 1940 census were assigned by the Army.

CAMP NP-1

- Howard H. Ruppert, Company Commander, White Male, 39 years old, married, college graduate, born in Ohio, living in Pinegrove Furnace, PA on 4/1/1935, Company Commander, Civilian Employee of US Army, worked 52 weeks at $2174
- Donald C. Singer, Medical Officer, White Male, 30 years old, married, college graduate, born in Pennsylvania, living in Schenectady, NY on 4/1/1935, Medical Officer, Civilian Employee of US Army, worked 52 weeks at $2940
- Marion A. Thorpe, Educational Advisor, African American Male, 28 years old, married, college graduate, born in South Carolina, living in Rock Hill, SC on 4/1/1935, Educational Advisor, Civilian Employee of US Army, worked 52 weeks at $2000

CAMP NP-2

- Everett D. Wilburger, Head Capt., White Male, 42 years old, single, high school graduate, born in Nebraska, living in Louisberg, PA on 4/1/1935, Company Commander, Civilian Employee of US Army, worked 52 weeks at $3466
- John A. McCrary Jr., Lieut., White Male, 27 years old, single, college graduate, born in Virginia, living in Alexandria, VA on 4/1/1935, Subaltern, Civilian Employee of US Army, worked 52 weeks at $2276
- C. Rushton Long, Educational Advisor, African American Male, 30 years old, single, college graduate, born in Virginia, living in Kane, PA on 4/1/1935, Educational Advisor, Civilian Employee of US Army, worked 52 weeks at $2000
- Irvin B. Ady, Foreman, White Male, 30 years old, single, completed two years of college, born in Virginia, living in Ft. Hunt, VA on 4/1/1935, Landscaper, Civilian Employee of US Army, worked 52 weeks at $1860

From February 28, 1941 Report on Technical Personnel

CAMP NP-1

- Roy E. Rountree, Project Superintendent
- William G. Barber, Foreman
- Harrison C. Jacobs, Sr. Foreman (Engr.)
- George W. Brew, Foreman
- Norman B. Krebs, Gen. Mech.
- Donald F. Green, Gen. Mech.
- Henry L. Benson, Asst. Clk. Typist
- William M. Barber, Carp.
- Albert R. Lucas, Plumber
- Ira R. Beckner, Heavy Equip. Opr.

CAMP NP-2

- Harry V. Maulding, Sr. Foreman
- Josiah Shepard, Sr. Foreman
- Jules Fritz, Foreman
- Thomas A. Basnight Jr., Foreman
- George Clayton, Gen. Mech.
- Sutton T. Jett, Sr. Foreman, Historian

From February 5, 1942 Report on Technical Personnel

CAMP NP-1

- Roy E. Rountree, Superintendent
- Harrison C. Jacobs, Sr. Foreman
- Stanley W. McClure, Sr. Foreman
- William G. Bzrber, Foreman
- George W. Brew, Foreman
- Hugo Hableutzel, Foreman
- Norman B. Krebs, Mechanic

Appendix D: CCC Baseball Clubs

Source: Josh Howard, *"Our Only Alma Mater": The Civilian Conservation Corps and the C&O Canal,* Special History Study, Final Draft (Washington, D.C.: U.S. Department of the Interior, National Park Service, 2017).

Barracks #1

- John Gholson
- Bernard Spicer
- Quinlon Garrett
- Herbert Eldrige
- Van Lewis
- William Owen
- Jake Kitching
- Junius Payne
- Odis Stowe
- Walter Claven
- William Dysen
- William Wall
- Lorenzo Kelliebrew

Barracks #2

- Charles Harvey
- James Reeder
- James Mosley
- Wilton Jennings
- James Cary
- James Chaney
- Theato Wilburn
- James Campbell
- Harlie Gaddie
- Thomas Jackson
- Claudius Greene
- Ralph Gibson
- Alonzo Davis
- Sam Reid

Barracks #3

- Robert G. Brown
- Carl Palmer
- Randolph Tilghman
- Reginald Sterling
- John Hancock
- Earl Bailey
- Francis Lowery
- Marshall Sykes
- Raymond Brooks
- Amos Custis

Barracks #4

- Francis Carter
- Thomas Burrville
- George Cofield
- Robert Miles
- Henry Barnes
- Francis Johnson
- Claibron Pina
- Edward Caufield
- Jessie Corbin
- William Braxton
- Albert Edwards

Appendix E: Other CCC Athletic Teams

Source: Josh Howard, *"Our Only Alma Mater": The Civilian Conservation Corps and the C&O Canal,* Special History Study, Final Draft (Washington, D.C.: U.S. Department of the Interior, National Park Service, 2017).

Boxing

- Dan Simmons
- Elwood Godson
- Benjamin Sullivan
- Alexander Tucker
- James Moore
- James Johnson

Wrestling

- Kelley Tucker
- Peter Carter
- Joseph Carter
- Charles Harvey

Basketball (Wilderness, Dec. 31, 1937)

- Robert Miles
- Arthur Edwards
- John Cunningham
- John Hughes
- Willie Graves
- James Johnson
- James Moore
- Alonzo Slight
- Edward Anderson
- James H. Jackson
- Homer Williams
- Peter Carter
- Amos Custis

Basketball (Wilderness, Mar. 31, 1938)

- Henry Jefferson
- James Jackson
- John Clifton
- Robert L. Miles
- Herman Johnson
- Odis Stowe
- Edward Anderson
- John Stork
- Ernest Rivers
- Amos Custis

Pool (Straight Pool)

- Leroy Huntam (?)
- Joseph H. Long
- Leland Miller
- James Mason
- George Emey (?)
- James Brown

Pool (Black Ball)

- Nathan Anderson
- Kelley Tucker

- George Wiggins
- James Reide
- Robert Roy
- James Edwards
- Willie Jas Smith
- Bonnie Quarles
- James Wallace
- Elwood Gadson
- Alfred Brown
- Eddie Washington
- Herman Ricks
- Willie Murden
- Thomas Bunting
- Clarence Johnson
- John Taylor
- Alexander Tucker
- Leroy Thomas

Pool (Last Ball)

- Eugene Raddick (?)
- George Wiggins
- Samuel Reid
- Amos Custin

Pool (Rotation)

- Robert Hill
- William Gorum
- Willie Graves
- Peter Carter

Appendix F: Classes Offered for Company 325 at Camp NP-1-MD (Cabin John) by Subject, August 1939

Source: Josh Howard, *"Our Only Alma Mater": The Civilian Conservation Corps and the C&O Canal,* Special History Study, Final Draft (Washington, D.C.: U.S. Department of the Interior, National Park Service, 2017).

- Reading & Writing
- Stenography
- Buildings
- Vis. Edu.
- Arithmetic
- Typewriting
- Surveying
- Forums
- English & Spelling
- Woodworking
- Fire-Pre.S.
- Teacher Tr.
- Civics & History
- Dramatics
- Road Trails
- Leader Tr.
- Agriculture
- Music
- Sex Edu.
- Lectures
- Auto Mechanics
- Fine Arts
- Safety
- Cabinet Making
- Hand-crafts
- First Aid
- Landscaping
- Woodcarving
- Personal Hygiene

Classes Offered for Company 325 at Camp NP-1-MD (Cabin John), August 1939

Subject	*Instructors*	*Title*
English and Penmanship	Nelson Burke, Jr.	WPA Instructor
Athletics	Carl D. Coleman	WPA Instructor
Music	Louvenia Alford	WPA Instructor
Carpentry	Nathaniel Neal (Enrollee), Lionel Cromwell (WPA Instructor), R.C. Ward (Enrollee) & Harold T.King (Enrollee)	
First Aid	Ira L. Ferguson	WPA Instructor
Handcrafts	Maxine Wilson	WPA Instructor
English & Civics	William M. Thornton	WPA Instructor
Journalism	J.F. McCallan	WPA Instructor
History & Science	William B. Griffith	WPA Instructor
Sign Painting	Irving W. Carter	Enrollee
Painting	Lewis E. Holmes	Enrollee
Leaders' Training	W. Edward Johnson	Enrollee
Typewriting	John Henry Johnson (Enrollee) & Nathaniel Tracy (Enrollee)	Enrollee
Elementary English	Richard B. Washington	Enrollee
Building & Estimating	L.G. Heider	Project Superintendent
Blasting & Dynamite	W.C. Barber	Foreman
Masonry & Concrete	G.W. Brew	Foreman
Auto Mechanics	D.H. Green (Foreman) & N.B. Kerbs (Foreman)	
Landscaping	L.C. Lemon	Foreman
Camp Administration	Edwin T. Arnold	Company Commander
Health Education	Capt. Donald C. Singe	Camp Surgeon

Appendix G: Classes Offered for Company 333 at Camp NP-2-MD (Cabin John), August 1939

Source: Josh Howard, *"Our Only Alma Mater": The Civilian Conservation Corps and the C&O Canal,* Special History Study, Final Draft (Washington, D.C.: U.S. Department of the Interior, National Park Service, 2017).

- Reading & Writing
- Current Events
- History
- Hygiene
- Penmanship
- Practical English
- Practical Mathematics
- World Affairs
- Typing
- Commercial Art
- Carpentry
- Journalism
- Trail Canal Excavations
- Canal Drainage
- Truck Driving
- Cooking
- Dramatics
- Music
- Model Making
- Social Courtesy
- First Aid
- Safety
- Health
- Teacher Training
- Foreman Training

Classes Offered for Company 333 at Camp NP-2-MD (Cabin John), August 1939

Subject	*Instructors*	*Title*	*Category*
Reading & Writing	Miss P.L. Williams	WPA Teacher	Academic
Current Events	Carl Palmer	Leader	Academic
History	Miss P.L. Williams	WPA Teacher	Academic
Hygiene	Capt. Donald C. Singe	Camp Surgeon	Academic
Penmanship	Miss P.L. Williams	WPA Teacher	Academic
Practical English	Miss P.L. Williams	WPA Teacher	Academic
Practical Mathematics	C. Rushton Long	Educational Adviser	Academic
World Affairs	C. Rushton Long	Educational Adviser	Academic
Typing	Amos Custis	Project Assistant	Academic
Commercial Art	James Cheney	Asst. Leader	Vocational
Carpentry	Capt. Everett D. Wilberger (Camp Commander) & John Holson (Asst. Leader)		Vocational
Journalism	C. Rushton Long	Educational Adviser	Vocational
Trail Canal Excavations	G.W. Harris	Foreman	Job Training
Canal Drainage	J. Sheppard	Landscape Architect	Job Training
Truck Driving	H.V. Maulding	General Foreman	Job Training
Cooking	Capt. Everett D. Wilberger	Commanding Officer	Job Training
Dramatics			Informal
Music	William Green	Asst. Leader	Informal
Model Making	Claudius Geeno	Asst. Leader	Informal
Social Courtesy	C. Rushton Long	Educational Adviser	Informal

Subject	*Instructors*	*Title*	*Category*
First Aid	Capt. Donald C. Singe	Camp Surgeon	Misc. Activities
Safety	L.G. Heider (Proj. Supt.), Cap. E.D. Wilberger (C.O.), H.V. Maulding (G.F.), & C.R. Long (Ed. Ad.)		Misc. Activities
Health	Capt. Donald C. Singe	Camp Surgeon	Misc. Activities
Teacher Training	C. Rushton Long	Educational Adviser	Professional Training
Foreman Training	Harry V. Maulding	General Foreman	Professional Training
Leader Training	Capt. Everett D. Wilberger	Camp Commander	Professional Training



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