

Colvin Run Mill Historic Site Cultural Landscape Report



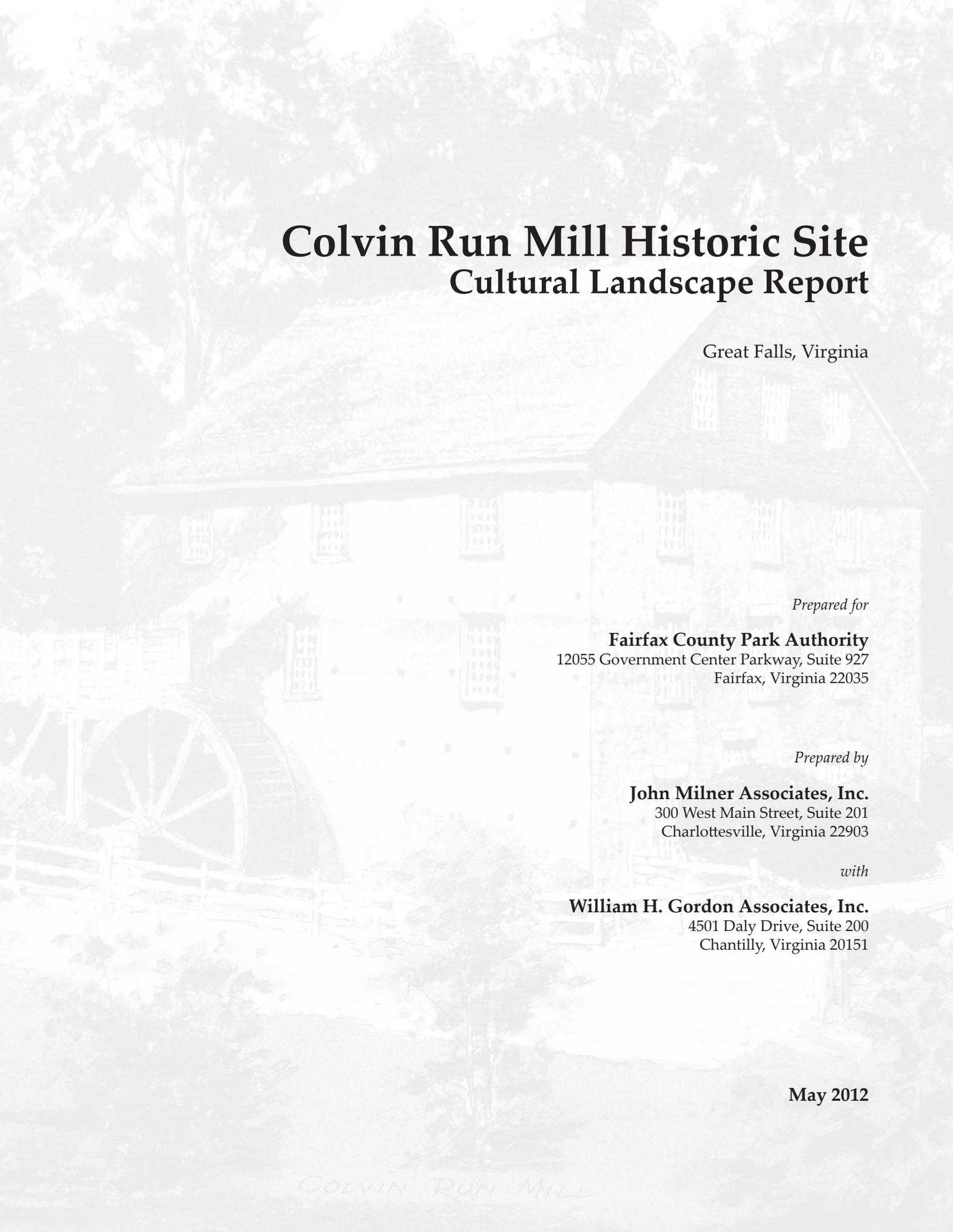
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May 2012



Colvin Run Mill Historic Site Cultural Landscape Report

Great Falls, Virginia

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Chapter 6 • Schematic Design

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Maps

Map 6-1 Schematic Design

Introduction

Project Summary

This Cultural Landscape Report (CLR) has been prepared by John Milner Associates, Inc. (JMA) to provide the Fairfax County Park Authority (Park Authority) with guidance regarding the long-term preservation and management of the Colvin Run Mill Historic Site (CRMHS) landscape. CRMHS is part of a National Register-eligible historic district (Colvin Run Mill Historic District) that protects and interprets a wealth of historic resources relating to the Colvin Run Mill and its significance as a functioning example of early American industrial technology and the community that supported it.

Over the past few years, the historic site has also become an oasis of open space within an increasingly densely settled suburban residential community. As such, and because of its historic significance, it is a popular destination for school groups and history and technology buffs as well as local residents. Faced with accommodating the growing needs and interests of their burgeoning constituency, the Park Authority determined that a CLR would help establish a framework for site management that would enhance stewardship of historic resources and facilitate decision making regarding preservation and park operational needs.

CLRs are by nature synthetic documents that integrate the work of various disciplines into a comprehensive view of a place. This CLR builds on various planning documents previously developed for the park. In particular, the report was guided in its general approach to site management by the 2008 Master Plan Revision and design guidelines developed for the CRMHS Historic Overlay District.^{1, 2} The CLR also benefited from available historical context and cultural resource documents, such as the 1977 National Register of Historic Places nomination and the 1996 Fairfax

County Landmarks Inventory Form.^{3, 4} Finally, the report integrates information available in planning projects prepared for the historic site concurrently with this report, in particular, schematic design plans for a new visitor center for the CRMHS and a historic structure report for the Miller's House.

In addition to synthesizing existing reports and studies, the CLR provides detailed information about the park's contemporary physical features and the evolution of the site's character over time, which has led to the park's current configuration. By documenting the historical development of the cultural landscape, identifying the origin of existing landscape features, and establishing the connections between the site's historical significance and extant resources, the CLR presents a comprehensive understanding of this special place. The culmination of these efforts is the Treatment Approach presented in Chapter Five, which provides recommendations and guidelines for long-term management of the site that both meet the goals set forth for the project by the Park Authority and establish a vision for the landscape derived from collaboration between the Park Authority and the JMA CLR team.

Location and Description of Property

See figures 1-1 and 1-2, context and location maps.

The CRMHS is located at 10017 Colvin Run Road in Great Falls, Virginia, approximately 20 miles along State Route 7 (Route 7, Leesburg Pike) northwest from Old Town Alexandria. The park is approximately 67 acres in size and is bordered by Colvin Run Road to the northeast, Carper's Farm Way on the southeast, residential lots to the north, and several residential subdivisions to the west, including Colvin Meadow Estates, Brick Mill

1 1 Fairfax County Park Authority, "Colvin Run Mill Historic Site Master Plan Revision," (2008).

2 1 Fairfax County, "Colvin Run Mill Historic Overlay District Design Guidelines," (1992).

3 1 Elizabeth S. David, "Colvin Run Mill; National Register of Historic Places Inventory—Nomination Form," (Philadelphia: National Park Service, Mid-Atlantic Regional Office, 1977).

4 1 E.K. Bryans-Munson, "Fairfax County Landmarks Inventory Form—Colvin Run Mill and Miller's House," (Falls Church, VA: Fairfax County Office of Comprehensive Planning, 1996).

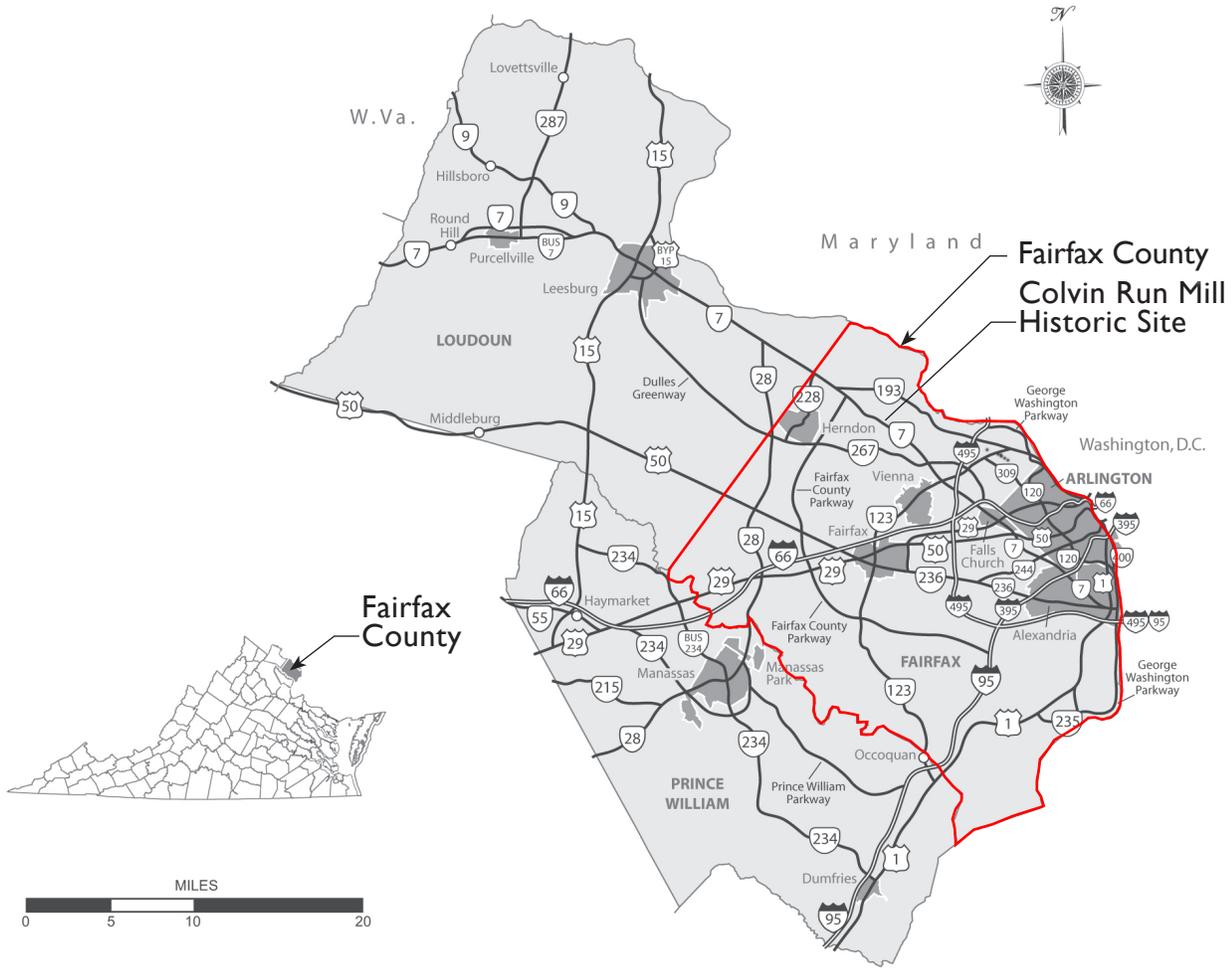


Figure 1-1. Fairfax County context and location. Virginia Department of Transportation, Office of Public Affairs, Cartography Section, created August 2004; modified by JMA, 2010.

Manor, and Mill Run Acres. Route 7 cuts through the park, dividing the northern section, containing the historic Colvin Run Mill, from the Colvin Run stream valley in the southern section.

Historic properties within the immediate vicinity of the historic site include the Dr. Alfred Leigh House, the Kalorama Springs/Greek Revival House/Eastern Shore House, the Colvin Run Community Center, the Feighery Store and House/Thelma’s Ice Cream, and the William Wine House/Summer Road property. Three miles northeast along Route 7 is the Dranesville Tavern Historic District, formed around the historic Dranesville Tavern, the sole remnant of some five taverns that were in that area along the Middle Turnpike (approximate location of Route 7) in the eighteenth century (see Chapter Two). Other historic buildings in that area include the Dranesville Methodist Church and four historic

residences: Holly Knoll/Bloomfield, Dunbarton, Ivy Chimney, and Mayfield.⁵

Project Scope

The CLR is the primary instrument adopted from the National Park Service by numerous municipal and regional governments for the treatment of cultural landscapes. The National Park Service has developed specific guidance for undertaking these projects that has become the standard used by most professional preservationists. The National Park Service’s *A Guide to Cultural Landscape Reports: Contents, Process, and Techniques*, used to prepare this CLR, notes:

⁵ Fairfax County Inventory of Historic Sites, <http://www.fairfaxcounty.gov/dpz/historic/ihs>, accessed December 14, 2010.

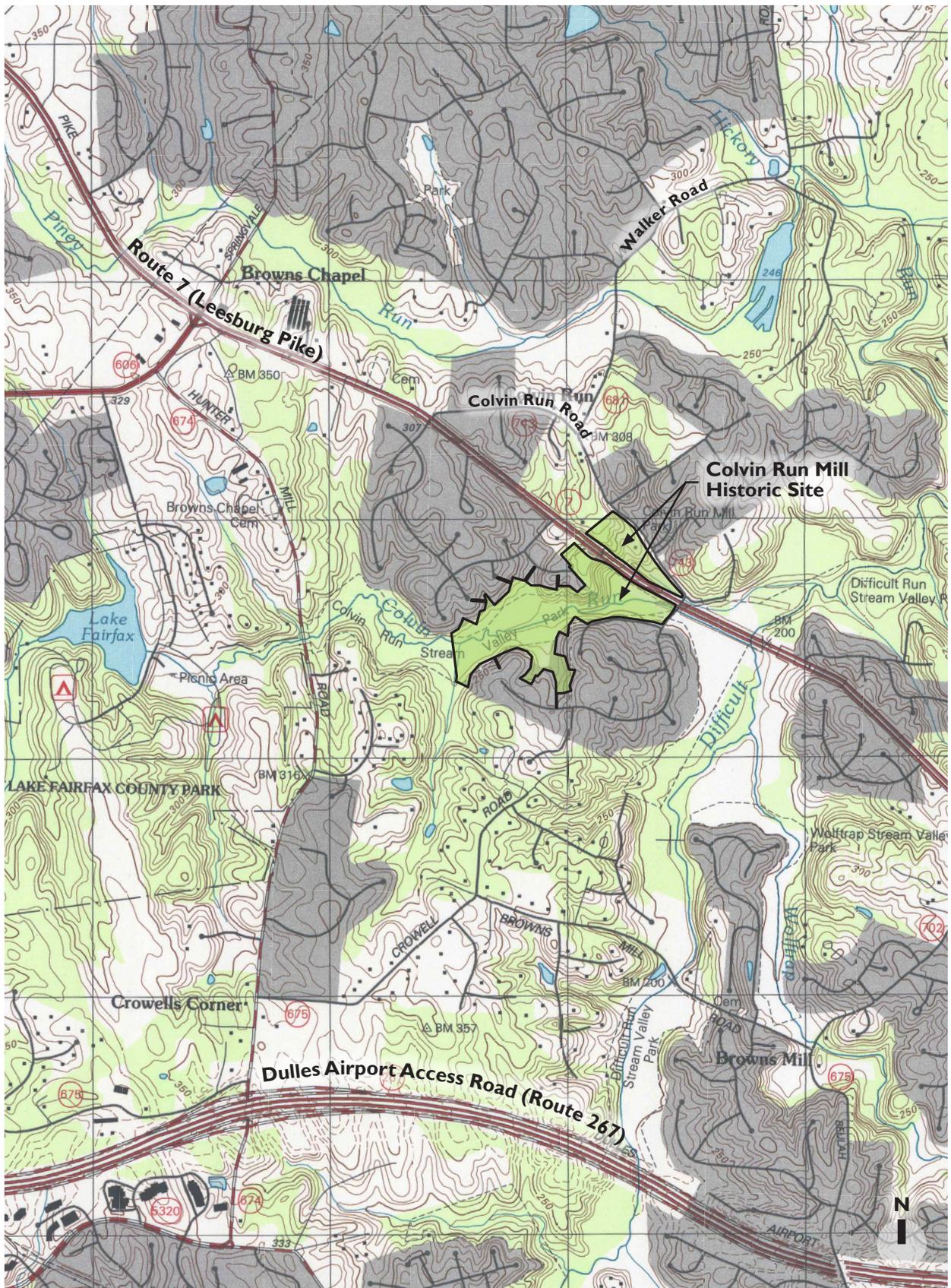


Figure 1-2. Colvin Run Mill Historic Site context and location. United States Geological Survey, Vienna Quadrangle, 1994.

A CLR must establish preservation goals for a cultural landscape. The goals must be grounded in research, inventory, documentation, and analysis and evaluation of a landscape's characteristics and associated features. The content of a CLR provides the basis for making sound decisions about management, treatment, and use. Information about the historical development, significance, and existing character of a cultural landscape is also valuable for enhancing interpretation and maintenance.⁶

Generally, CLRs document and evaluate the character-defining features, materials, and qualities to determine a landscape's eligibility for listing in the National Register of Historic Places. They analyze the landscape's development and evolution, modification, materials, construction techniques, geographical context, and use over time. CLRs are generally intended to provide a synthetic and cohesive view of a site's historic and existing features through comprehensive documentation, analysis, and evaluation. Using this knowledge as a basis for decision making, CLRs feature carefully considered cultural resource treatment recommendations.

Within the parameters of the federal guidelines for these studies, there is much flexibility in the emphasis and level of investigation provided in a CLR. Most CLRs are interdisciplinary in nature, drawing on information developed by historians, landscape architects, ecologists, botanists, architects, archeologists, and other project-specific disciplines. The level of investigation conducted for each CLR is determined by many factors, including the historical significance and integrity of the site, identified management objectives, past documentation efforts, and landscape alterations or changes under consideration by the owner of the site.

Typically, CLRs are composed of two parts:

- 1 Part I includes a site physical history, existing conditions documentation, comparative analysis of historic and existing conditions, and National Register-level significance evaluation and integrity assessment.

- 1 Part II includes a treatment plan based on the information developed in Part I and any identified management goals for the site.

This report includes the elements of both parts in a single format with Part I comprised of Chapters One through Four and Part II comprised of Chapters Five and Six. The bibliography and appendices serve all sections.

The CLR has been prepared in accordance with a scope of work provided to JMA by the Park Authority. The specific elements called for in the project scope of work are as follows:

- 1 Research historic background to determine how it changed over time and document probable appearance during period of significance;
- 1 Explore connections between this site and surrounding sites;
- 1 Document existing landscape features, including vegetation, roadbeds/paths, archeological features, views, and spatial organization;
- 1 Analyze and evaluate the impact a new visitor center or other new improvements will have on the historic landscape and make recommendations based on the analysis;
- 1 Provide schematic and/or photogrammetric designs that show the size, location, and character of recommended improvements; and
- 1 Provide treatment recommendations that will allow Park Authority staff to manage the cultural landscape.

Project Methodology

The CLR for CRMHS has been prepared in accordance with the guidance offered in the most recent versions of various federal standards documents, including:

- 1 *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes*;
- 1 National Register Bulletin 30: *Guidelines for Documenting and Evaluating Rural Historic Landscapes*;

⁶ Robert R. Page, Cathy A. Gilbert, and Susan A. Dolan, *A Guide to Cultural Landscape Reports: Contents, Process, and Techniques* (Washington: National Park Service, 1998), 4.

- 1 *A Guide to Cultural Landscape Reports: Contents, Process, and Techniques*;
- 1 *Cultural Resource Management Guideline, NPS-28*; and
- 1 *U.S. Department of Justice ADA Standards for Accessible Design*.

The methodology used by project members in preparing each component of this study is described in detail below.

Project Initiation—Project Meeting #1

In March 2010, JMA's CLR team members gathered with the Park Authority's Project Team at the CRMHS for a project initiation meeting for the CLR and for the related visitor center design. During the meeting, the two teams established project procedures and methods for accessing materials available through Park Authority personnel, and discussed available studies and research materials. The Park Authority indicated a primary point of contact for providing relevant data and reports. After the meeting was completed, park personnel provided the JMA CLR team with an orientation tour of the site.

Background Research and Data Collection Methodology

JMA project personnel were provided with various documents relating to the project by the Park Authority, including historical documents and photographs, current and historic aerial photographs, the Virginia Department of Transportation plans for Route 7, AutoCAD files based on Geographic Information System (GIS) data for the site and surrounding area, and the site's 2008 Master Plan Revision. In addition, JMA gathered and reviewed zoning and overlay district information and other publicly available data, primarily on-line.

Historical Research Methodology

Historical research was conducted on behalf of the CLR starting in spring 2010. This effort focused on review of the material housed in the CRMHS archives, which is extensive and well organized. JMA's CLR team also performed research at the Park Authority's Walney collections, the Park Authority's Cultural Resource Management and Protection Section collections, the Virginia State

Library, the Smithsonian Institution and Library of Congress web sites, the National Archives, and the Virginia Room in the Fairfax City Regional Library. Despite many hours spent scouring archives and repositories, there remains a dearth of direct references to the historic site and sufficient primary source documentation to determine its character until the early twentieth century, particularly the locations and types of buildings, structures, and use areas on the site. Much time was spent, therefore, in developing contextual information relating to the regional setting and its history, intended to inform future investigations. Unfortunately, even contextual-level information related to merchant mill complexes of the nineteenth century was lacking, so analysis was based on the few written descriptions and historic photographs of the CRMHS from the twentieth century.

Site Physical History Preparation Methodology

The site physical history was drafted upon review of all materials collected during the various research efforts. The important dates associated with physical events at CRMHS were organized into a site history chronology, which was then divided into a series of definable historic periods. Historic periods were developed based on the dates of known events and physical developments thought to have significantly altered the character, land use, or spatial patterns of the landscape. A major development, usually a change in ownership, typically marks the transition between periods. Each period encapsulates what is currently known about the physical development of the park and regional landscape during the years associated with it, and is described through historical narrative, supplemented with period maps, photographs, and plans.

Base Mapping Methodology

The Park Authority provided JMA's CLR team with AutoCAD data based on GIS data for the project area. Information included base data with topographic contours, soil types, water resources, wetlands, roads, buildings, and other physical characteristics of the project area. This information was verified in the field and any changes noted; additional information documented in the field was added to the base data.

Historic Period Plan Preparation

Historic period plans were prepared of the CRMHS landscape at snapshot moments in the park's history, selected to coincide with important moments in the site's history. Each period plan was registered to the existing conditions base mapping, so preparation of this base map preceded work on the period plans (refer Comparative Analysis Methodology, below). JMA's CLR team then used primary source materials to create maps for each of the periods. Examples of the primary sources consulted to prepare the period plans include historic mapping, aerial and ground-level photographs, written descriptions of the landscape, and park administrative records. Written sources were used to identify potential features and elements within the landscape for which no graphic information was available. The records of archeological investigations and previous park planning studies also contributed to map development. Available secondary sources were used to corroborate information and to generate queries for primary sources. Secondary sources were typically evaluated for their credibility and used with caution.

All of the historic period plans are presented at a consistent scale and configuration, and, as mentioned above, using the existing conditions map as the basis for registering information. Features appearing over two or more periods are consistently located and represented.

Existing Conditions Methodology

On April 27 and 28, 2010, JMA's CLR team visited the site to conduct field investigations. Site administrators met with JMA's CLR team to discuss particular site concerns and accompanied the team into the field, providing insight into park operations and helping to locate and identify resources. During field investigations, preliminary mapping generated from available digital data was field verified. JMA personnel extensively documented site resources and conditions using digital photography, noting the location and orientation of views.

Documentation of existing conditions was subsequently prepared through review and compilation of base mapping, field photographs, aerial photography, field investigations, and Park Authority planning documents. The documentation conveyed in Chapter Three of this report is comprised of a cross-referenced narrative, graphic, and photographic depiction of landscape features

associated with the property in accordance with the guidelines provided in the National Park Service's *Guide to Cultural Landscape Reports* and National Register Bulletin 30: *Guidelines for Documenting and Evaluating Rural Historic Landscapes*. The categories used to organize documented landscape features and qualities include:

- 1 patterns of spatial organization;
- 1 natural systems and features;
- 1 responses to natural resources;
- 1 topographic modifications;
- 1 views and vistas;
- 1 land uses;
- 1 circulation;
- 1 cultural vegetation;
- 1 constructed water features;
- 1 buildings and structures;
- 1 small-scale features; and
- 1 archeological resources.

The existing conditions documentation is introduced with descriptions of the regional environmental and cultural context and setting for the park. Photographs of representative cultural landscape features are included in the chapter. These are referenced in the text, and their photographic station points are indicated on a base map included within the chapter.

The last section of the chapter is an inventory of the features identified as part of the CLR. The inventory serves as the basis for identifying contributing and non-contributing resources in Chapter Four of the CLR. The inventory includes feature condition assessments that were based on the following categories suggested by the *Cultural Landscapes Inventory Professional Procedures Guide*:⁷

- 1 **Good** indicates that the inventory unit shows no clear evidence of major negative disturbance and deterioration by natural and/or human forces. The inventory unit's cultural and natural values are as well preserved as can be expected under the given environmental conditions.

⁷ 1 Robert R. Page, Gretchen Hilyard, and Jeffrey Killion, *National Park Service Cultural Landscapes Inventory Professional Procedures Guide* (Washington: National Park Service, 2009).

- 1 **Fair** indicates that the inventory unit shows clear evidence of minor disturbances and deterioration by natural and/or human forces, and some degree of corrective action is needed within three to five years to prevent further harm to its cultural and/or natural values. If left to continue without the appropriate corrective action, the cumulative effect of the deterioration of many of the character-defining elements will cause the inventory unit to degrade to a poor condition.
- 1 **Poor** indicates that the inventory unit shows clear evidence of major disturbance and rapid deterioration by natural and/or human forces. Immediate corrective action is required to protect and preserve remaining historical and natural values.
- 1 **Unknown** indicates that not enough information is available to make an evaluation. This description is used in reference to features for which a definitive condition assessment could not be made, particularly those with important underground or otherwise hidden components in unknown condition, or for those for which not enough historical documentation is available to make an assessment.

The ratings were annotated to include specific condition-related observations made in the field.

Significance Evaluation Methodology

A National Register-level significance evaluation was made based upon review of the previously completed nomination form for the Colvin Run Mill and additional findings based upon documentation of the physical history of the site and its environs. National Register Bulletins 15 and 30 were used to evaluate the significance of the landscape and its resources.

Comparative Analysis Methodology

To better understand the relationship between the character of the existing landscape and its character during the period of significance for the CRMHS proposed by the CLR, JMA's CLR team prepared a comparative analysis of historic and existing landscape conditions that forms the bulk of Chapter Four. The analysis focuses primarily on extant features and their dates of origin, and features present within the period of significance which are

non-extant. The three goals for the comparative analysis were to

- 1) I understand which features survive from the period of significance;
- 2) I establish the basis for an integrity assessment; and
- 3) I provide an understanding of the similarities and differences between historic and existing conditions that would contribute to the development of a well-grounded treatment plan for the cultural landscape.

The tools for conveying comparative analysis information included the period plans, mentioned above, that illustrate the park's landscape at various snapshot moments in its history; a narrative discussion of the evolution of individual features over time; and comparative photography whereby historic images are juxtaposed with contemporary photographs from a similar viewpoint. The comparison of historic and contemporary views illustrates changes that have occurred within the landscape over time.

Identification of Contributing and Non-Contributing Resources Methodology

Through the development of the comparative analysis of historic and existing landscape conditions, the features included in the existing conditions inventory, as well as those identified as missing, were used to prepare lists of contributing and non-contributing features. Contributing features survive from the period of significance, while non-contributing features originated after the period of significance. Missing resources existed during the period of significance but are no longer evident in the landscape except possibly in the archeological record. Conjectural information was indicated as such within the lists.

Assessment of Integrity Methodology

The site's overall integrity was assessed in accordance with the seven aspects—location, design, setting, materials, workmanship, feeling, and association—as described in National Register Bulletin 15: *How to Apply the National Register Criteria for Evaluation* and in National Register Bulletin 30:

Guidelines for Documenting and Evaluating Rural Historic Landscapes.^{8,9}

Treatment Plan Methodology

The treatment plan was based upon the guidance provided in the project scope of work, the findings of each of the chapters presented herein, and additional specific guidance conveyed by the Park Authority during review meetings. In addition to identifying a preferred concept diagram depicting the location of the proposed visitor center, meeting attendees discussed a variety of issues that would set the stage for the treatment plan. The issues included:

- 1 Site and building programming;
- 1 Staffing of CRMHS;
- 1 Implications of adopting *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes*;
- 1 Interpretive goals and methods;
- 1 Appropriate treatment recommendations for individual features; and
- 1 Management and maintenance.

JMA's CLR team considered carefully the needs, goals, and objectives as voiced by the Park Authority and the staff of CRMHS in developing a treatment plan that was also consistent with professionally recognized preservation approaches and federal guidelines.

Summary of Findings

The Colvin Run Mill is currently listed on the National Register for its significance in the areas of agriculture and engineering. Detailed investigations conducted on behalf of the CLR suggest an expansion of the areas and period of significance, as well as the historic contexts that pertain to the

site. The CLR recommends that documentation in the nomination be revised to reflect these additions, either in the form of an amendment to the current nomination or as a nomination of the site to the National Register on the state level as a historic district.

It is recommended that areas of significance include exploration/settlement, industry, engineering, architecture, landscape architecture, and archeology. In addition, the CLR recommends that the period of significance extend from 1763, the year of the purchase of the site as a mill seat by George Washington, to 1934, the end of the Millard tenure at the mill.

Several historic resources survive from the proposed period of significance that support the eligibility of the site. These include the Colvin Run Mill, the Miller's House, the mill lane, the General Store, the stone foundation, the two quarries, and the mill water-supply system with its headraces, earthen dams, and at least one mill pond. These features all contribute to the integrity of the site as a historic property.

The integrity assessment prepared for the CLR suggests that, while the historic site currently possesses integrity to the proposed period of significance, several resources that post-date the period of significance diminish its integrity. The degree to which the site continues to convey its significant historic associations varies due to the level of impact of these later additions. In order to convey the degree to which the site's integrity has been affected, JMA's CLR team prepared a map illustrating areas with high, moderate, and low integrity. The areas identified as having a high degree of integrity retain many historic resources and have weathered contemporary interventions with minimal damage. These include the mill building, the Miller's House, and the stretch of mill lane that connect them.

Areas with moderate integrity have lost some of the historic resources that characterized the area during the period of significance, and may also include contemporary additions that interfere with visitor understanding of the historic landscape. These areas include the mill complex that was associated with the milling operation, the residential complex that was located in association with the Miller's House, the mill pond area with its headraces and earthen dams, and the wooded margins of the site in that area.

8 1 Patrick W. Andrus and Rebecca H. Shrimpton, National Register Bulletin 15 – *How to Apply the National Register Criteria for Evaluation* (Washington: U.S. Government Printing Office, 1990, revised 2002).

9 1 Linda Flint McClelland, et al., National Register Bulletin 30 – *Guidelines for Evaluating and Documenting Rural Historic Landscapes* (Washington: U.S. Government Printing Office, 1990).

Areas with low integrity have been substantially changed since the period of significance to accommodate non-historic uses. These areas include the farmyard complex to the northwest of the house, and the two farmsteads that were located north of the farm road.

Given the proposed road-widening projects for Route 7 and the large-scale residential developments encroaching from all sides, the integrity of the National Register-eligible historic district beyond the site's boundaries remains severely threatened.

Based on this evaluation and assessment, JMA's CLR team developed an overarching treatment concept to guide future management of the site. The concept proposes that the Park Authority continue to maintain the property for primarily interpretive purposes, focusing on exhibits that highlight its history as a mill complex with secondary uses for recreation and nature study, this primarily in the area south of Route 7. To this end, historic buildings, objects, and sites would be maintained and interpreted.

The proposed visitor center would interpret the spatial organization of the historic farm complex. Historic features would be restored as feasible by the addition of new buildings housing the visitor center in the vicinity of old.

Pedestrian access to historic resources will be promoted whenever possible through designated walks and trails. These trails will also connect to the Rails-to-River Trail, where interpretation of this recreational resource will be provided, as well as a system of self-guided nature and hiking trails that afford an opportunity to interpret the connection between the site's natural and cultural resources. Throughout the site, contemporary programmatic elements, such as non-historic buildings and structures, parking, roads, and trails, will be designed, constructed, and managed to promote protection of significant historic resources and environmental sustainability.

Recommendations for Further Study

While there is ample information available regarding the chain of ownership of the historic site since it was purchased in 1763 by George Washington, as well as documentation of the restoration of the mill in the 1960s, there remain numerous gaps

in information regarding the physical history of the site. For example, it is thought that there was at least one mill located on the site prior to the construction of the current mill, but very little documentary or physical evidence has been found that can absolutely confirm this thesis. In addition, not much is known regarding the effect of the Civil War on the site, particularly whether or not the mill was visited by passing troops before or after the Battle of Dranesville. A more thorough examination of the Swartz papers held at the CRMHS archives and other documents, such as officers' reports and maps, as well as archeological investigations, may reveal more information.

In addition, there is little information, with the exception of the 1937 aerial photograph, regarding the actual appearance of the site around the Miller's House, the farmyard, and associated gardens during the period of significance. Additional primary research, such as the careful perusal of letters, family documents, and family photographs may reveal the appearances and type of structures, descriptions of plantings around the house, crops used to sustain the miller's family, orchards, or other cultural vegetation. There may also be images or descriptions of small-scale furnishings, such as benches, trellises, or arbors. It is recommended that descendants of the Millards be contacted for this information.

There is still much to discover through archeological investigation, including the locations and types of outbuildings, such as chicken coops, privies, and well houses, as well as use areas on the site during the period of significance, such as garden areas or wash yards. In addition, very little is known about the date of excavation and use of the two quarries located on the site.

Further archeological investigation may uncover additional information about the three earthen dams on the site, such as the dates of their construction, which in turn may help determine the location of earlier mill sites. Archeological investigation is also recommended to determine the extents of unidentified remnant headraces related to these dams and the locations of the various mill ponds. Finally, the site around the spring located on Colvin Run should be surveyed for evidence of a springhouse or other structures related to the spring.

Site History

Introduction

The Colvin Run Mill Historic Site (CRMHS) is located in a region that has undergone significant changes throughout its history. Prehistoric evidence describes a forested region crossed by numerous streams that supported both temporary and permanent settlements of populations living off of its rich provisions of flora and fauna. When Europeans settled the region, they cleared vast swaths of forest for crops and pasture and to establish settlements around plantations, farms, and roads. Other settlements sprang up around the numerous mills that were established in Fairfax County to process the abundant grain grown in the area.

George Washington was one of these early industrialists; he acquired the property that became the Colvin Run Mill Historic Site. Washington recognized the site's potential for success due to its location on both a fast-flowing stream and a major turnpike linking the area to the port of Alexandria. The success of subsequent owners proved Washington correct in his instincts and the Colvin Run Mill thrived as a merchant mill well into the twentieth century.

The narrative that follows traces the evolution of the CRMHS cultural landscape from prehistory to the present. Because there remain many gaps in the understanding of the physical development of the site over time, this chapter includes historic context information about relevant regional trends in agriculture, industry, transportation, and residential life as needed to help set the property in time and space.

The narrative is organized chronologically into a series of discrete historic periods:

- 1 Prehistory to Early Contact, ca. 10,000 BC–ca. AD 1566
- 1 Early European Settlement and Land Use, ca. 1566–1739
- 1 “My small tract at the Bridge”: Colville, Fairfax, and Washington, 1739–1799
- 1 Establishment of a Mill, ca. 1800–1811
- 1 Carper’s Merchant Mill, 1811–1842
- 1 Depression to Reconstruction, 1842–1883
- 1 The Golden Years of the Millard Era, 1883–1934
- 1 Change and Early Preservation, 1934–1965
- 1 A Mill Reborn, 1965–present

Prehistory to Early Contact, ca. 10,000 BC–ca. AD 1607

The prehistoric cultural sequence for this area of Fairfax County generally conforms to that defined for other areas in the Middle Atlantic region. In the following discussion, this sequence is divided into three periods: Paleo-Indian (ca. 20,000–10,000 BC), Archaic (ca. 10,000–1200 BC), and Woodland (ca. 1200 BC to AD 1607). The Archaic and Woodland periods are further divided into Early, Middle, and Late Periods, characterized by changes in stylistic attributes of projectile points and the use of ceramics.

Paleo-Indian Period, ca. 20,000–10,000 BC

The first inhabitants of the Middle Atlantic region, where the CRMHS is located, were Paleo-Indian hunters that many archeologists now believe arrived around 20,000 BC at a time of extreme cold¹. Others believe that they arrived later, around 10,000 BC.² This culture lasted during a time of dramatic climate change at the Late Pleistocene/Early Holocene climatic boundary until about 10,000 BC.

Paleo-Indians in this region probably hunted deer, elk, mastodon, and other animals. The end of the Paleo-Indian cultural period during the Younger-Dryas climatic reversal coincided with the extinction of herd animals and mega fauna. Floral and aquatic remains recovered at Dust Cave and the Shawnee-

1 1 Ted Goebel, Michael R. Waters, and Dennis H. O'Rourke, “The Late Pleistocene Dispersal of Modern Humans in the Americas,” *Science* 319:1497–1502, 2008.

2 1 Stuart J. Fiedel, “The Kennewick Follies: “New” Theories about the Peopling of the Americas,” *Journal of Anthropological Research* 60(1): 75–110, 2004.

Minisink site suggest that foraging was a part of the subsistence system level along with fishing and shellfish gathering.³

Archaic Period, ca. 10,000–1200 BC

The Archaic Period began with a break in cultural patterns at about 10,000–9600 BC with a dramatic climatic shift to warmer temperatures, increased precipitation, and more marked seasonality. These conditions became characteristic of the area by 7000 BC, leading to a change in focus from hunting large game to more general foraging.

This period can be divided into three sub-periods: the Early Archaic (10,000–6500 BC), the Middle Archaic (6500–3000 BC), and the Late Archaic (3000–1200 BC). During the Early Archaic, settlement patterns suggest a greater exploitation of areas not previously populated, likely in response to the changes in climate. Subsistence strategies diverged somewhat from the previous Paleo-Indian period with the use of the wider variety of resources presented by the newly emerging Holocene ecology.⁴ Evidence from local Early Archaic sites indicates the consumption of hickory nut, butternut, and, possibly, acorns along with some tuberous plants. A rise in population also seems to be a factor in an increased number of sites.

The Middle Archaic period corresponds to environmental episodes that accelerated the warming trend. First, there was a moist period, which lasted until approximately 4500 BC, followed by a warmer and drier period that lasted until approximately 3000 BC. These climate changes increased deciduous vegetation, created more marked seasonality of plant resources, and increased the numbers of game animals such as turkey and deer. The increased growth of the oak-hickory forest provided more mast products (acorns and other nuts), a nutritious and storable food source.⁵

A shift to locally available tool materials suggests more restricted movements of Middle Archaic bands due to growing populations moving into previously unsettled upland settings. During the Middle Archaic, many more sites appeared in upland settings, and groups often took advantage of

interior wetland areas as temporary camp locations for the consumption of seasonal food sources.⁶ Major floodplains were still sites for large base camps, suggesting a fusion-fission settlement system. Smaller bands would unite at large floodplain base camps when certain resources were available and would later divide to take advantage of upland settings when scarcity of resources demanded.

The Late Archaic period in the Middle Atlantic region was marked by major changes, both environmental and cultural. During this period, the major riverine and estuarine systems in the region were established due to the rising sea levels at the end of the Late Pleistocene. These rivers and estuaries offered a major food resource for the groups inhabiting the area. Subsistence strategies were based on general adaptations to the various resources available in different areas of the region. It is during these phases of the late Archaic that populations were establishing larger sites with storage pits, indicating more sedentary lives that were supported by better means of food storage and preservation.

Woodland Period, ca. 1200 BC–AD 1607

The Woodland period had a more stable climate, in which milder, moister conditions prevailed as the climate evolved to its present condition, leading to increased periods of occupation at campsites. The eastern deciduous forest that evolved during this period, described later by early European visitors and settlers of the Atlantic coast, included such species as oaks, chestnuts, and hickories on the uplands, and mesic and hydric species, such as maples, yellow poplar, beech, and sycamore, in the lower-lying areas. These species towered over

3 1 Richard J. Dent, *Chesapeake Prehistory: Old Traditions, New Directions* (New York: Springer, 1995), 128.

4 Dent, *Chesapeake Prehistory*, 172.

5 Dent, *Chesapeake Prehistory*, 177.

6 1 William M. Gardner, "Comparison of Ridge and Valley, Blue Ridge, Piedmont, and Coastal Plain Archaic Period Site Distribution: An Idealized Transect (Preliminary Model)," in *Journal of Middle Atlantic Archeology* 3:49–80, 1987; Dent, *Chesapeake Prehistory*, 177.

a highly layered and dense plant community that supported a variety of wildlife.⁷

The Woodland period can be sub-divided into Early Woodland (1200–500 BC), Middle Woodland (500 BC–AD 900), and Late Woodland (AD 900–1607). During the Early Woodland, some larger sites represent long-term villages, typically situated on large floodplains, but most sites represent short-term camps of small bands. A number of these appear to have been occupied for a longer period of time, as indicated by storage pits and evidence of houses. It is highly likely that in this respect, the Early Woodland Period could be seen as a continuation and refinement of settlement practices originating in the Late Archaic. Even smaller sites seem to represent small foray camps used while harvesting nuts and hunting deer and turkey that are typically situated in upland settings. Further evidence of subsistence practices from excavations indicates a focus on shellfish, fish, and deer.⁸ It is also likely that many smaller interior camps represented winter dispersal habitations. Winter resources probably were not sufficient to support large concentrated populations.

During the Middle Woodland, the regional population grew; groups became more sedentary and participated in regional exchange networks. Continuity in site location between the Early and Middle Woodland periods suggests that earlier subsistence-settlement systems persisted in most

areas. Some early Middle Woodland societies in the Middle Atlantic region practiced elaborate mortuary rituals (e.g., the stone burial mounds of the Shenandoah Valley and deep graves with elaborate burial goods) and may have developed social ranking.⁹ Based on the absence of mortuary elaboration or concentrations of exotic trade items, it appears that groups in the Potomac Valley did not develop ranked societies until the Late Woodland period.

The Late Woodland period is marked by the adoption around AD 900 of maize horticulture by Middle Atlantic groups. Hunting, gathering, and fishing were still important subsistence activities, but the storage of surplus crops permitted the establishment of small permanent hamlets and then villages after AD 1300 and a subsequent increase in Late Woodland population densities. These large settlements and agricultural activities were located primarily near higher-quality soil, usually near major rivers or estuaries, but seasonal settlement patterns probably persisted in some form. Early settlements prior to AD 1300 or 1400 appear not to have been stockaded, suggesting that inter- and intra-group hostilities did not play a significant role.

The dramatic increase in the number of villages, the deep cultural deposits, and the numerous storage pits found at these sites suggest that Late Woodland populations were relatively sedentary. In response to this, more complex socio-political structures developed. Thus, the Late Woodland period is characterized by the emergence of ranked societies.¹⁰ These complex societies developed into the tribal confederations and chiefdoms encountered by the Europeans in the late sixteenth and early seventeenth centuries.¹¹ The presence of these confederations and chiefdoms in different recognized territories across the region restricted the movement of any one group into another's area. Groups such as the Powhatan chiefdom on the inner Coastal Plain were constricted by the Monacan and other Siouan-speaking confederacies west of the Atlantic Seaboard fall line and the

71 Plant species that characterized the upland woodlands most certainly included a variety of oaks, including white (*Quercus alba*), Northern red (*Q. rubra*), chestnut (*Q. prinus*), black (*Q. velutina*), post (*Q. stellata*), and blackjack (*Q. marilandica*); American chestnut (*Castanea dentata*), which has since been all but eradicated from Eastern forests by blight; and hickories (*Carya spp.*). Understory species included flowering dogwood (*Cornus florida*), sassafras (*Sassafras albidum*), redbud (*Cercis canadensis*), American holly (*Ilex opaca*), black gum (*Nyssa sylvatica*), serviceberry (*Amelanchier spp.*), and mountain laurel (*Kalmia latifolia*). Clearings in the tree canopy were typically colonized by pines (*Pinus virginiana*, *P. taeda*), black locust (*Robinia pseudoacacia*), and Eastern red cedar (*Juniperus virginiana*). Lowlands were characterized by maples (*Acer negundo*, *A. rubrum*), swamp white oak (*Q. bicolor*), pin oak (*Q. palustris*), yellow poplar (*Liriodendron tulipifera*), American beech (*Fagus grandifolia*), sweetgum (*Liquidambar styraciflua*), sycamore (*Platanus occidentalis*), elm (*Ulmus spp.*), and willow (*Salix spp.*). Understory species included spicebush (*Lindera benzoin*), azalea (*Rhododendron spp.*), and redosier (*Cornus spp.*).

81 Gregory A. Waselkov, "Shellfish Gathering and Shell Midden Archeology," Doctoral Dissertation, University of North Carolina, Chapel Hill, NC, 1982:312 (Ann Arbor, MI: University Microfilms International, 1982).

91 Gardner, 70.

10 Martin D. Gullivan, *James River Chiefdoms: Inequality in the Chesapeake* (Lincoln, NB, University of Nebraska Press, 2003).

11 E. Randolph Turner, III, "An Archeological and Ethnohistorical Study of the Evolution of Rank Societies in the Virginia Coastal Plain," Doctoral Dissertation (College Station, PA: Pennsylvania State University, 1976).

Dogue (Moyomaps) on the Upper Potomac Estuary blocked European settlement in Northern Virginia until the late seventeenth century. It appears that the fall line itself was for the most part uninhabited and may have acted as a cultural boundary or buffer zone between groups from the west and east. These areas may have also represented neutral zones where different groups would conduct trade and take advantage of spring fish runs.¹²

Early European Settlement and Land Use, ca. 1566–1739

Early European Exploration

European exploratory excursions made little impact on the Virginia Coast during the sixteenth century. In the mid-century, the Spanish governor of Florida, Menedez de Aviles, made two attempts to colonize the Chesapeake Bay area. The first was in 1566, but it met with failure. The second was only minimally successful: in 1570, a group of Jesuit missionaries, including two priests, three scholars, three laymen, and a servant boy, landed near Aquia, Virginia. They built a chapel and a house, but soon after, all but the servant boy were killed. Years later, Spanish records report that in 1588, one of their ships seized two American Indian children from the bay area with the intention of educating and training them to be guides for further Spanish exploration. Both children died soon after capture.¹³

British explorers first visited and mapped the coast of Virginia in the first decade of the seventeenth century. The first reported visit was by Captain Bartholomew Gilbert, who, in 1603, sailed into the Chesapeake Bay, but was “shot at by locals” and presumably did not return.¹⁴ In 1606, the Virginia Company, a group of London businessmen, was granted a royal charter by King James I that gave the company the authority to establish a proprietary colony in the Chesapeake region.¹⁵ By

¹² Dent, *Chesapeake Prehistory*, 251.

¹³ Carolyn Werle, “Fairfax County at the Very Beginning: Colonial Stafford County and the Northern Neck of Virginia,” in Fairfax County 2007 Community Citizen Planning Committee, *Fairfax County Stories, 1607–2007*, Fairfax VA: County of Fairfax, 2007, 3–4.

¹⁴ Werle, 4.

¹⁵ A proprietary colony is one where the governance of the colony is in the hands of an individual or group of individuals, rather than the state or crown, as with a royal colony. The owners of the proprietary colony (proprietors) have the authority to make and enforce their own laws.

May 1607, a group of over 100 settlers sent by the Virginia Company had established Jamestown, on the James River.¹⁶

Captain John Smith, one of the leaders of the colony, and a small group of men left Jamestown in 1608 to explore the Chesapeake Bay. As part of this journey, Smith and his crew sailed up the Potomac River to the fall line, passing along the northern boundary of today’s Fairfax County. Smith mapped the river and the American Indian communities he came across on his trip. He and his crew encountered Algonquian-speaking people along the southwestern shore of the Potomac; all except the Dogue were hostile.

Primarily agriculturalists, the Dogues lived in villages near streams and cleared fields for growing corn, beans, pumpkins, cucumbers, potatoes, and tobacco; their diet was supplemented with deer, turkey, and skunk. Taking advantage of their proximity to the Potomac and its abundance of fish, the Dogue became traders. This activity eventually caused their downfall, however, as they found themselves caught between different indigenous groups, each attempting to dominate trade in the area.¹⁷ Initially, European impact on the land inhabited by the Dogue had more to do with paper transactions that divided up the land than with physical settlement. Early European settlement was sporadic and occurred primarily in proximity to transportation routes, the rivers in particular.¹⁸

*Settling Fairfax County*¹⁹

Sixteen years after Smith’s trip up the Potomac, the Virginia Company’s 1606 charter was revoked by King James I and the new colony became a crown colony. With this change in governance, the British crown retained ownership of the land and the

¹⁶ Preservation Virginia, “History of Jamestown,” http://www.preservationvirginia.org/rediscovery/page.php?page_id=6 (accessed July 6, 2010).

¹⁷ Kim Nguyen, et al., eds. “A History of Fairfax County Native Americans Specifically Seen through the Excavation of the Newgate Apartment Site (44FX1118).” Unpublished manuscript at the Fairfax County Archeological Services Archives, 1985.

¹⁸ Rhys Isaac, *The Transformation of Virginia, 1740–1790* (Chapel Hill, NC: University of North Carolina Press, 1982), 11–15.

¹⁹ Much of the information regarding ownership of the Colvin Run Mill Tract was taken from an unpublished report by Sam Swartz, “The Colvin Run Mill Tract: A Study of Ownership in the Seventeenth, Eighteenth & Nineteenth Centuries,” prepared for Mike Henry, Director of the Colvin Run Historic Site in 2003. Additional sources are cited using footnotes.

authority to dispose of it. In 1625, James died and was succeeded by Charles I. Charles I was beheaded in 1649 by Oliver Cromwell, and the son, Charles II, departed for France, taking his supporters with him. The Northern Neck of Virginia, lying between the Potomac and Rappahannock Rivers, remained in the possession of Charles II and he granted it as a proprietary to seven of his supporters.²⁰ The terms of this grant were largely unrecognized until the late seventeenth century, even though the colonial government had begun granting land within the Northern Neck, disregarding the authority of the Northern Neck proprietors. By the late seventeenth century, Thomas, second Lord Culpeper, controlled six out of seven shares of the proprietary. His daughter Caroline, and her husband Thomas, fifth Lord Fairfax, inherited these shares on Lord Culpeper's death in 1689.

The previous year, Lord Culpeper had been granted a new patent for the Northern Neck by King James II, who had succeeded Charles II.²¹ Lord Fairfax gained the sole ownership of the grant in 1690 and was confirmed as the owner by the Privy Council in 1692. However, Fairfax was not recognized by the Virginia Assembly as the owner until 1736. Ownership appears to have remained at question for many years, because the assembly was called upon again in 1748 to reaffirm Lord Fairfax's ownership of the Northern Neck.

Under Fairfax, tracts of Northern Neck land were leased to agents for minimal quit rents.²² The agents then sold large tracts to land speculators, who in turn sold or leased parcels of 100 to 400 acres to settlers. The earliest of these settlements were along the Potomac River and other navigable waterways, as roads were largely nonexistent during this period and most transit was done by water routes.²³ Members of the Fairfax family set aside considerable tracts of riverfront land for themselves in present-day Fairfax County during the 1730s.

Settlement further inland did not take place until years later due to the presence of Indians and the need to develop roads through the region.

Once inland settlement took root, the population of the Northern Neck grew during the early eighteenth century. The original counties established in the colony were repeatedly subdivided with the continuing establishment of Anglican parishes in concert with population growth forming the basis and geographical boundaries of the county subdivisions.²⁴ The area that is now Fairfax County was originally part of Northumberland County (1645–1653). After a subdivision in 1653, the land encompassed by the present Fairfax County became part of Westmoreland County until 1664, then Stafford County (1664–1730), Prince William County (1730–1742), and, finally, in 1742, the area became Fairfax County.

By this time, much of the land in what became Fairfax County had been granted to land speculators or investors. Many prominent investors bought large tracts of land, more than they needed for farming, because they were driven by the need for a reserve of fertile soil at a time when tobacco had depleted the soil on the older plantations.²⁵ Most of these large tracts were worked by overseers and slaves sent to clear the land and establish tobacco quarters. Eventually, as the quarters grew productive and owner families grew larger, descendants of the owners settled on the newer tracts.

Plantations, Farms, Mills, and Roads

Among the largest Northern Neck speculators were Robert 'King' Carter and Thomas Lee.²⁶ From 1703, Robert 'King' Carter acted as agent for the Northern Neck Proprietary. As he surveyed, he opened up lands for settlement; in the process, he often acquired fertile land for himself. Holding either the agency of or a lease to the proprietary provided enormous benefit in the opportunity to learn where the best lands lay and in taking out patents for them. It was also perfectly legal for the agent or lessee to do so if he paid the fees and quit rents on any property that he patented. In turn, he

20 A proprietary was a land area or colony that a monarch could grant rights of exclusive control to a proprietor or proprietors, who were sometimes known as Lords Proprietors. Proprietorship meant having the right to give, grant, or by any other means sell or alienate these lands.

21 Netherton, et al., *Fairfax County, Virginia: A History* (Fairfax, VA: Fairfax County Board of Supervisors, 1978) 5–7.

22 Quit rents were annual fees paid to the proprietor or governor by the property owner or lessee. Kenton Kilmer and Donald Sweig, *The Fairfax Family in Fairfax County* (Fairfax, VA: Fairfax County Office of Comprehensive Planning).

23 Netherton et al., *Fairfax County*, 20.

24 Ibid, 8–10; Charles P. Poland, Jr., *From Frontier to Suburbia* (Marceline, MO: Walsworth Publishing Co., 1976) 13.

25 Willard F. Bliss, "The Rise of Tenancy in Virginia," in *The Virginia Magazine of History and Biography* 58(4):427–441.

26 Poland, *From Frontier to Suburbia*, 7–8.

received fees and rents from those who entered into an agreement to occupy his land.²⁷

To take firm title to a colonial land patent, a person was required to “seat and plant” on his land within three years. This requirement could be met either by clearing an acre of ground, or by building a dwelling and keeping a few livestock. Often a landholder met the seating and planting requirement by settling an indentured servant or slaves on the land. Agriculture was a crucial component of settlement in the Northern Neck from its early days as a proprietary. Large landowners speculated on the lands with the most profitable soils, cleared swaths of woodland, and settled them with slaves and overseers, and later tenant farmers. They developed knowledge and expertise by experimenting with types of crops and methods of growing and harvesting, and sharing this information among themselves. Correspondence between the families that dominated the landscape of Virginia is replete with advice and information about their experiences with different crops and produce and how to grow them.

Early on, tobacco was the dominant cash crop grown in the region. Although initially highly profitable, tobacco soon destroyed the soil, requiring the acquisition and clearing of previously uncultivated land to support ongoing production. Eventually the area began to generate a variety of farm produce, including corn and wheat, as well as livestock, of which cattle and sheep were the most valuable.²⁸ Timber was also abundant for harvest. As early as 1716, British explorer John Fontaine described the area of land that would become Fairfax County as having “the largest timber, deepest mold, and the best grass I ever did see.”²⁹

Mills and other industries began to appear in Fairfax County starting around 1750, when the county court granted permission for Edward Garret to build a gristmill on Beaverdam Branch of Goose Creek, south of Leesburg.³⁰ Several other mills soon

followed, indicating a rise in the production of local grain products.³¹ Even before mid-century, the port at Alexandria had made great efforts to export wheat and flour brought in from the surrounding counties, and by the mid-1750s grain products were coming from as far away as the Shenandoah Valley. Local Fairfax County farmers had begun to shift from tobacco into grain crops by the 1760s, and this trend accelerated during the remainder of the century.³²

Milling grain into flour was an important service starting in the colonial period. Larger plantations operated their own mills, such as the grist mill George Washington had on his plantation near Mount Vernon, but most people depended on the local miller for their flour.³³ Commercial establishments grew up in the vicinities of mills, but during this early period, most farm families were, to a great extent, self-sufficient, only needing to purchase essentials such as salt, sugar, molasses, and few other items from a store. Food crops were provided and processed on the farm or close by in the neighborhood.

Merchant mills were larger in scale than the earlier neighborhood or plantation-focused mills. They produced flour specifically for the commercial market, whether overseas or regional markets, rather than for local use. After 1795, many of these mills were built according to the ideas of Oliver Evans, the foremost mechanical engineer at that time, and those of Thomas Ellicott, who had designed and built a number of mills in Maryland and Virginia. Evans’s ideas had been used in the design of George Washington’s grist mill and in Ellicott’s mill on the Occoquan River.

Trade in grain and grain products was facilitated by the construction of new roads through the county that connected to Alexandria and Georgetown ports on the Potomac. The primary means of travel through the county before 1740 was the Leesburg Road running from Alexandria west past Falls Church and the first Fairfax County Courthouse at Springfield (near present-day Tysons Corner) into Loudoun County and on to Leesburg. The earliest

27 1 Douglas Southall Freeman, *George Washington, A Biography*. Volume 1 (New York: Scribner’s, 1948), 495–496 in Edmund Berkeley Jr., “The Diary, Correspondence, and Papers of Robert ‘King’ Carter of Virginia, 1701–1732,” online at <http://etext.virginia.edu/users/berkeley/#Brent> (accessed March 2, 2007).

28 Netherton et al., *Fairfax County*, 169. 1

29 The Herndon Web, “History of Herndon,” online at http://herndonweb.com/community/history_hern.html (accessed March 2, 2007).

30 Netherton, et al., *Fairfax County*, 61.

31 Besides grist mills, other early mill types included grinding bark to extract tannin for tanning hides (tanning mills), processing timber (sawmills), and finishing cloth (fulling mills).

32 Netherton et al., *Fairfax County*, 81. 1

33 Ross D. Netherton, *The Colvin Run Mill* (Fairfax, VA: Fairfax County Park Authority, 2000, first printing 1976), 1–6.

alignment of this road is believed to be fairly close to the present alignment of the Route 7 and Colvin Run Road. This route was known by various names over time, including “the old court house road,” “Middle Turnpike,” and later, the Alexandria and Leesburg Road or Turnpike. In recent times, this name has been shortened to simply Leesburg Pike, and referred to in this report as Route 7. This road, which was winding in places, had been largely straightened to its present alignment by 1826.³⁴

Other mills that were established in the area around Colvin Run Mill included Jackson’s Grist Mill, built around 1814 on Difficult Run about one mile to the northeast; another mill, called variously “Old Mill” or “Aug. Brown Saw Mill” was located along Colvin Run less than a mile to the west. Walter’s/ Brown’s Mill, extant from 1860 to 1955 was located about one mile south on Wolf Trap Run (see figure 2-4). It appears that Jackson’s Grist Mill was the closest competitor to Colvin Run Mill, but because it was not on the main turnpike, it may be that it served only local needs. Other mills that appear on nineteenth-century maps of this area are identified as sawmills.

“My small tract at the Bridge”: Colville, Fairfax, and Washington, 1739–1799

The Colvin Run Mill is located on property that was granted by the crown to John Colville in 1739.³⁵ Colville’s grant of 5,568 acres is delineated on a survey drawing by John Warner taken in August 1739 for William Norris (figure 2-1). Noted on the survey as the “Wm. Norris” tract, the land may have been leased to Norris by Colville. Close inspection of the survey indicates that the tract was traversed by the “Main Road,” a generally north-to-south route that was an earlier alignment of what in the nineteenth century became known as the Alexandria-Leesburg Turnpike. On the survey drawing, Warner also indicates a waterway called Bridge Branch, which, after Colville’s purchase of the land, became known as Colville’s Branch and, eventually, Colvin Run. A year later, Colville

transferred the land to William Fairfax.³⁶ William’s son Bryan inherited it in 1753 and eventually sold a portion of the tract to George Washington in 1763 (figures 2-2 and 2-3).^{37, 38}

A map drawn by Washington between June 1765 and February 1766 shows a road extending from a tributary of the Potomac to Difficult Run, perhaps the “Main Road” referenced above (figure 2-4). Along the road are noted the locations of various landmarks, including inns, a mill, and a number of dwellings. In this survey, the line indicating the road terminates at the confluence of what appears to be called “Mill Run” with Difficult Run. This appears to be a study that Washington did after his purchase of the property, indicating his intention towards the property. Washington did not succeed in establishing a mill on his property during his tenure: in 1784, he attempted to lease the property, advertising it as a valuable mill seat on Difficult Run, with a term of “three lives,” that is for 21 years.³⁹ It is not known if Washington was successful, but it is apparent that Washington had not yet constructed a mill on the property—in that case, he would have also advertised the buildings. He succeeded in leasing the land in 1793, when he made an arrangement with a “Dutchman” for 60 pounds a year.⁴⁰

Two years later, he arranged to lease the land to John Gill, who had recently purchased land close by in the area. Washington wrote to Gill in May of 1795, expressing his concern that Gill was leasing the land to take the wood and would leave it in poor condition afterwards.⁴¹ Although Washington did finally agree to lease the land to Gill, it is apparent that Gill did not lumber the land and had made

34 Charles W. Stetson, *Four Mile Run Land Grants* (Washington, D.C.: Mimeoform Press, 1935) 98–101.

35 Netherton, *Colvin Run Mill*, 11, 43. Note: the deed for this transfer, dated August 17, 1739, is reported to have been recorded in Prince William County Deed Book C, which Netherton reports as now missing and the deed now unverifiable.

36 Fairfax County Deed Book E-1: 203–207. 1

37 Fairfax County Will Book B: 171–174. 1

38 Fairfax County Deed Book C-1: 458–463. 1

39 “To Be Rented,” *Virginia Journal and Alexandrian Advertiser*, September 23, 1784, 3; Shaffer, Wilson, Sarver & Gray, P.C. (SWSG), DRAFT Colvin Run Miller’s House Historic Structure Report, 2.3.

40 Letter from George Washington to Robert Lewis, Esqr., August 26, 1793, George Washington Papers at the Library of Congress; SWSG, DRAFT Colvin Run Miller’s House Historic Structure Report, 2.3.

41 Letter from George Washington to John Gill, May 4, 1795, George Washington Papers at the Library of Congress; SWSG, DRAFT Colvin Run Miller’s House Historic Structure Report, 2.4.

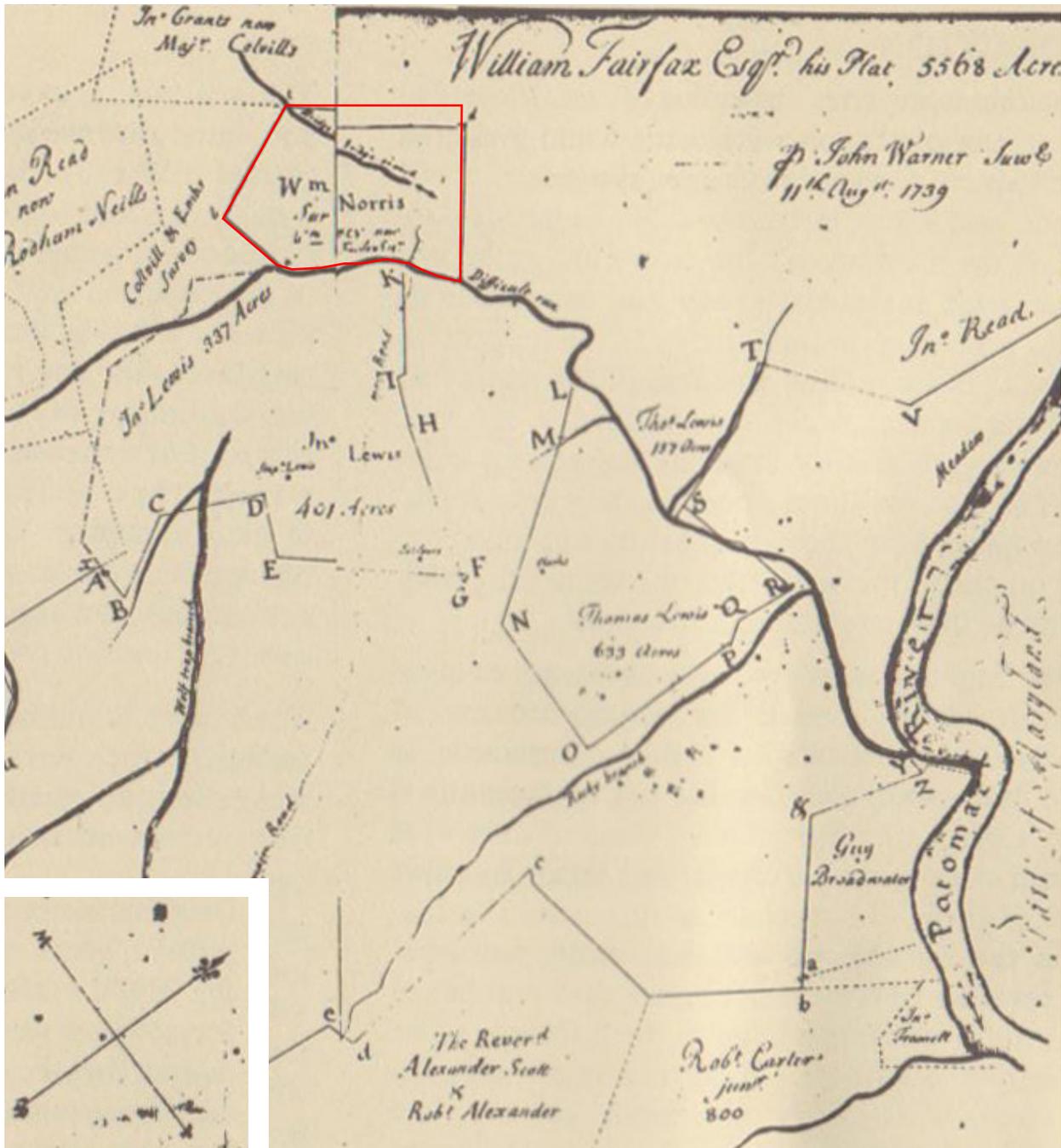


Figure 2-1. John Warner’s survey, dated August, 1739. The Norris tract can be seen on the left edge of the survey, center. It is located along the northwest banks of Difficult Run and Bridge Branch (now Colvin Run), bisects the tract. Netherton, *Colvin Run Mill*.

no improvements at all to the property by October 1799, two months before Washington’s death.⁴²

Meanwhile, Bryan Fairfax leased two parcels of his remaining tract adjacent to George Washington’s land to John Sheppard.⁴³ The parcel Sheppard

42 Letter from George Washington to John Gill, October 13, 1799, George Washington Papers at the Library of Congress; SWSG, DRAFT Colvin Run Miller’s House Historic Structure Report, 2.4.

43 Christine A. Jirikowic, “History Notes: Old and New Thoughts on the Early History of Colvin Run Mill” (Fairfax County Park Authority, Cultural Resources Management and Protection Section, 1999); Netherton, *Colvin Run Mill*, 11.

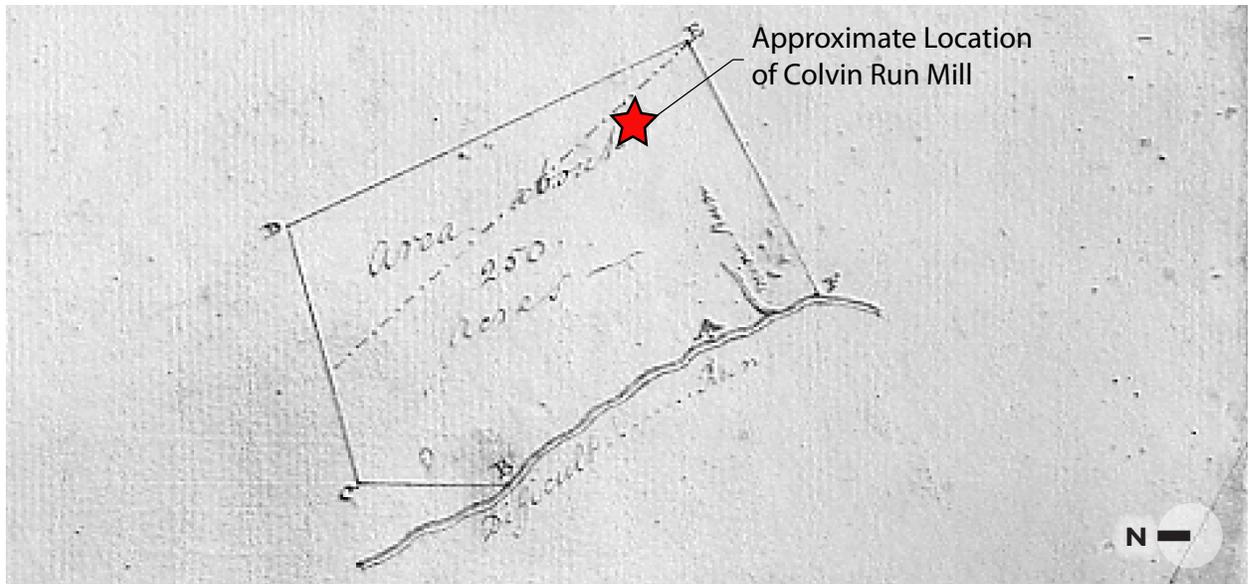


Figure 2-2. Detail from map entitled “Plan of Mr. Clifton’s Neck Land from an original made by T.H. in 1755 and copied by G. Washington in 1760,” annotated to show the approximate location of Colvin Run Mill. This survey of Washington’s Difficult Run tract, taken in 1799, is located on the “missing” quadrant of the document that the Library of Congress holds. The “missing” quadrant is available in the archives of the Mount Vernon Ladies’ Association. The discovery of this quadrant extended the known life of the overall map from 1760 to 1799. The map, illustrating the plats of a number of properties, is actually the working document by which Washington recorded land transactions and surveys for almost 40 years of his life. *Library of Congress and Mount Vernon Ladies’ Association.*



Figure 2-3. Approximate boundaries of George Washington’s land, outlined in red over a USDA aerial photograph from 1937. One trace of William Sheppard’s land is outlined in blue. *SWSG, 2010.*

leased in 1773 was 41 acres just across Difficult Run from George Washington's land. In 1786, Fairfax leased another parcel to Sheppard, being 80 acres adjoining the southeast side of the 41-acre parcel. In 1789, Sheppard purchased these two parcels of land.⁴⁴

In 1786, Sheppard was ordered by the Fairfax County Court to serve with others to "view the Road from Alexandria to Difficult bridge," with an eye toward considering how it might be straightened to make it a more usable and convenient road for the public.⁴⁵ This was a common practice in the late seventeenth century, because active landowners, or lessees in the case of Sheppard, knew in intimate detail the roads that passed through their area, and could best recommend solutions to keep them passable.⁴⁶

During the 1780s, Washington wrote a number of letters to friends in the area concerning his land on Difficult Run and his worries about actions that his neighbors might be taking toward acquiring this tract. Knowing the potential for constructing a mill there, on June 15, 1783, Washington wrote to Bryan Fairfax about his earlier intentions for the land and his concern about moves being made by Sheppard toward condemnation:

I have been informed (by Mr. Lund Washington) that some person has petitioned or is about to petition the Court at Loudoun for an Acre of the Land I bought of you on Difficult to build a Mill on; but I hope no advantage will be permitted, by that Worshipful Bench, to be taken of my absence in this Affair.—The losses I have already sustained by an Eight years absence from home & the total neglect of my private concerns, are already capitally great—they need not be augmented by lessening the value of what is left me—With the greatest esteem and regard...

Sheppard was not ultimately successful at that time in condemning and taking Washington's land, but continued to try and expand his own holdings.

Just two weeks before his death on December 14, 1799, Washington communicated to Fairfax more of his concerns regarding the integrity of his tract:

My Lord—I thank you for the courses of so much of your land on Difficult as had any relation to my small tract at the Bridge over that stream; and for the communication contained in your favour of the 28th Inst.

My information derived from these sources has satisfied me that the opinion of the Borderers on my land that it extended to Tankerville's line—and my own opinion (when I found the lines separated at the Bridge Branch) that what lay between them was vacant, is erroneous—and it has, of course, arrested all proceedings of mine to obtain it as waste land.

The smallness of my tract (275 acs only, by Norris' Survey) and the pillage of its timber, together with the clearing of a part thereof (where useless to me) by Muir, rendered the core which had been deemed mine of some importance to the tract; altho' the land is hilly—broken—and the soil and wood thin, especially in the article of timber—so far as I could form an opinion by running the course of my Deed. Yet, even under these circumstances, such an addition might have enabled me to cut down more of the 275 acres—which, small as it is, I am told is to have part taken away by an older Patent of Lewis's which calls for a straight line from my corner to the old ford at Difficult to my upper corner thereon; & which will take away some of the best land in the bend of the run. The right to do this you, perhaps, can judge better than I who have no knowledge of the property thereabouts.

As you hold the land on the North & East of my tract, and (according to information) Mr. Ferd. Fairfax possesses that which is on the South & Wt nothing remains to be done but in the settled and temperate part of the ensuing Spring if health will permit, for your Lordship Mr. Fairfax & myself to repair to the scene—agree upon—and mark our lines of separation to

44 Jirikowic, "History Notes," 1.

45 Beth Mitchell, *Fairfax County Road Orders, 1749–1800* (Charlottesville, Virginia; published for the Fairfax County History Commission in cooperation with the Virginia Transportation Research Council, June 2003), 119.

46 Mitchell, *Road Orders*, ix–x.

prevent encroachment on either side in the future.⁴⁷

It appears that much of his concern was maintaining the value of his land on Difficult Run while he found a buyer. However, while he had attempted to sell the tract several times in the 1790s, he could not agree with a buyer on a price before he died.

Upon his death, Washington's property went to his wife, Martha. The Difficult Run tract was valued at \$6,666, as indicated on a schedule of property associated with his will.⁴⁸ Martha died in 1802 and her executors put the property up for sale.⁴⁹

In June of the year after Washington's death, William Sheppard, a local businessman and brother to John Sheppard, applied for a land grant to obtain a 49 $\frac{1}{4}$ -acre parcel along the northwest side of Washington's property (figure 2-5). He had the land surveyed in 1801 and finalized the grant in May of 1802.⁵⁰ This tract may have included some of the land that Washington had considered to be his, but Washington's survey was likely inaccurate.⁵¹ A year later, in 1803, Washington's executors sold Washington's 275 acres near Difficult Run to William Sheppard for 2,000 pounds, Virginia currency.⁵²



Figure 2-5. Approximate location of Sheppard's 1802 grant, outlined in green. Washington's tract is outlined in red and Sheppard's other tract is outlined in blue. SWSG, 2010.

47 Charles W. Stetson, *Washington and His Neighbors* (Garrett & Massie, Richmond, 1956), 196. in Netherton, *Colvin Run Mill*, 11–13.

48 Fairfax County Will Book H1:657, January 20, 1800, Will of George Washington; SWSG, DRAFT Colvin Run Miller's House Historic Structure Report, 2.4.

49 *Alexandria Advertiser*, November 1, 1802; SWSG, DRAFT Colvin Run Miller's House Historic Structure Report, 2.4.

50 Northern Neck Land Grant Z:173, Survey no. 5, p. 415, May 3, 1802; SWSG, DRAFT Colvin Run Miller's House Historic Structure Report, 2.5.

51 SWSG, DRAFT Colvin Run Miller's House Historic Structure Report, 2.5.

52 Fairfax County Deed Book E2:150–153.

Establishment of a Mill, ca. 1800–1811

As recognized by Washington, the 275-acre tract had the right qualities needed for a mill: location, water power, and access to a main road. Although there is no reason to think that Washington himself constructed a mill on the property, there may have been a mill on the site before William Sheppard acquired the land.^{53, 54} The mill building today has a section of rock foundation that is on a different elevation than the ground outside and the foundation of the mill inside. The relationship between these suggests that an earlier mill may have occupied the site and the rock foundation may be part of that earlier mill.⁵⁵

It was not unusual prior to and during the early Federal period for a prospective purchaser to establish themselves on a piece of land they were attempting to acquire. It is possible that prior to constructing the current mill, Sheppard had operated another mill on the property, but this has not been confirmed. Interestingly, William and John Sheppard's signatures have been found on a letter of recommendation for a Fairfax County miller, Jacob McConathy, who worked for the Sheppards for three years in the 1790s. Evidence of a lawsuit filed against McConathy by the Sheppards in 1800 suggests that they had been operating a mill somewhere in Fairfax County prior to that year.⁵⁶

That such a mill would be constructed at that location during that period is not surprising. As historian Fairfax Harrison wrote:

It was for this new trade [in wheat] that, during the third quarter of the eighteenth century, there were developed at strategic points on the streams flowing out of the highlands of old Prince William, those merchant mills whose sites are commemorated for the archaeologist in place names...The location of these mills determined the revised routes on which the

turnpikes were constructed, just as the location of the tobacco rolling roads determined the routes of the first roads to the tidewater. The wheat of the piedmont and the Valley was hauled to the mills in great "Conestoga" wagons, drawn by six-horse teams gay with bells and bunting. Converting their loadings into flour enroute, the teams then went on to a primary market at tidewater, and so constituted those caravans of "flour wagons," which in 1777 were already the life of the tidewater trade.⁵⁷

This first mill complex may have been configured differently than the one currently identified. Sheppard may have originally built a mill closer to the main road. A mill race was listed in the deed of sale from Sheppard to Philip Carper in 1811.⁵⁸ In addition, in 1848, the deed of sale from George Hunter to Alfred Leigh for a property adjacent to Carper's indicated the location of a mill race along the southern edge of the property on the other side of Colvin Run (*figure 2-6*).⁵⁹ This mill race may have been constructed by Sheppard's neighbor, Alexander Dow; Dow's principal occupation was constructing ditches. He worked with a boy named Isaac, who may have been a slave. Dow died in 1815.⁶⁰

The current mill building was constructed by William Sheppard in the early nineteenth century. He was quite familiar already with the property, having operated a tavern nearby, close to the bridge that crossed Difficult Run north of the present bridge (*figure 2-7*).⁶¹ Sheppard's choice of a site for his mill was influenced by the location of the road that extended from Alexandria westward to the Shenandoah Valley. This road was known in its early history by several names, including "the New Church Road," referring to the Falls Church in the 1740s; "the Ridge Road," referring

53 "BUILT IN 1794" was painted above the door of the current mill building for a number of years, and could be the date of an earlier mill but may also have been painted by the Millard family at the turn of the twentieth century to indicate the date of the start of their family business (see Millard Family Ownership section, below).

54 Millard family member, personal interview with CRMHS staff, n.d.

55 Netherton, *Colvin Run Mill*, 11.

56 Fairfax County Court Order Book 1799–1800, in Netherton, *Colvin Run Mill*, 43.

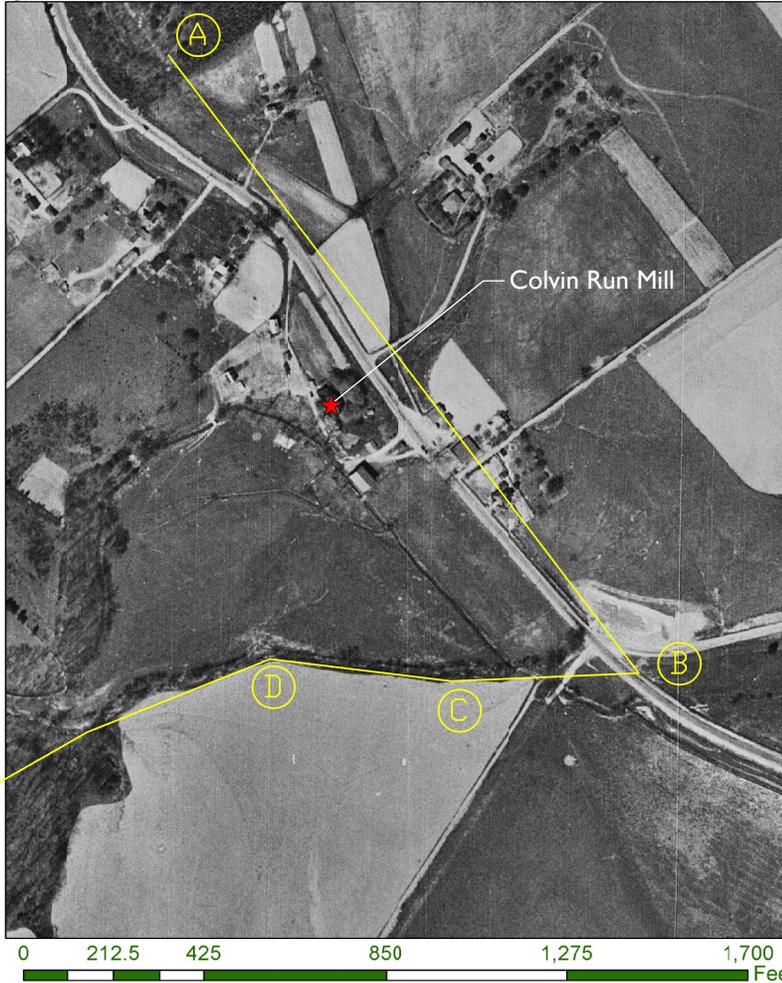
57 1 Fairfax Harrison, *Landmarks of Old Prince William* (Privately printed, the Old Dominion Press, 1924, two volumes), 405, in Netherton, *Colvin Run Mill*, 43.

58 Fairfax County Deed Book L2(38):193, August 22, 1811, William Sheppard to Philip Carper, in SWSG, DRAFT Colvin Run Miller's House Historic Structure Report, 2.6.

59 1 Fairfax County Deed Book Q3(69):344, May 23, 1848, George W. Hunter to Alfred Leigh, in SWSG, DRAFT Colvin Run Miller's House Historic Structure Report, 2.6.

60 Fairfax County Chancery Case #059_1846_015, Leigh vs. Hunter, Deposition of Ephraim Beedle, in SWSG, DRAFT Colvin Run Miller's House Historic Structure Report, 2.6.

61 Fairfax County Deed Book K1(11):308, May 13, 1773, in SWSG, DRAFT Colvin Run Miller's House Historic Structure Report, 2.4.



- (A) Nixon's Meadow
- (B) Box Oak near Leesburg Turnpike
- (C) Near a Sycamore on the mill race or canal
- (D) Junction of Canal with mill bed (?) run

Note: Other deeds note that the mill race (aka canal, aka ditch) runs from point C to point D.

Figure 2-6. Partial plot of George Hunter's sale to Alfred Leigh, neighbor of Powell. Plat outline is sketched over the 1937 aerial of the mill property; the mill is at the approximate center of the photograph. *Fairfax County Park Authority.*

to its general alignment with high land; "the Great Road," indicating its importance as a connection between Alexandria and the valley; and "the Main Road," also emphasizing its important role.⁶² It was mentioned as the Great Road in a deed conveying a nearby tract as crossing Difficult Run via a ford located at the mouth of Bridge Branch, which was shown on other surveys as "Colvill's Run."⁶³

It was regularly traveled by George Washington, as well as the numerous farmers and traders traveling between Alexandria and the valley.

General Braddock transported some of his troops and supplies to Fort Duquesne on that road in 1755. Being aligned primarily on the "Eastern Ridge," it was one of the primary roads in the area. Not only was the mill located on this road, but it was also less than a mile from its intersection with another road that led to the Potomac, now called the Towlston Road.⁶⁴ The mill was around 16 miles west of Alexandria, a day's travel, which was not too far for transporting flour to market. It was seven miles west of Falls Church and three miles east of Dranesville, so it was convenient for local use, as well.

⁶² Netherton, *Colvin Run Mill*, 15. 1

⁶³ Harrison, *Landmarks*, 480, in Netherton, *Colvin Run Mill*, 43.

⁶⁴ Netherton, *Colvin Run Mill*, 15.

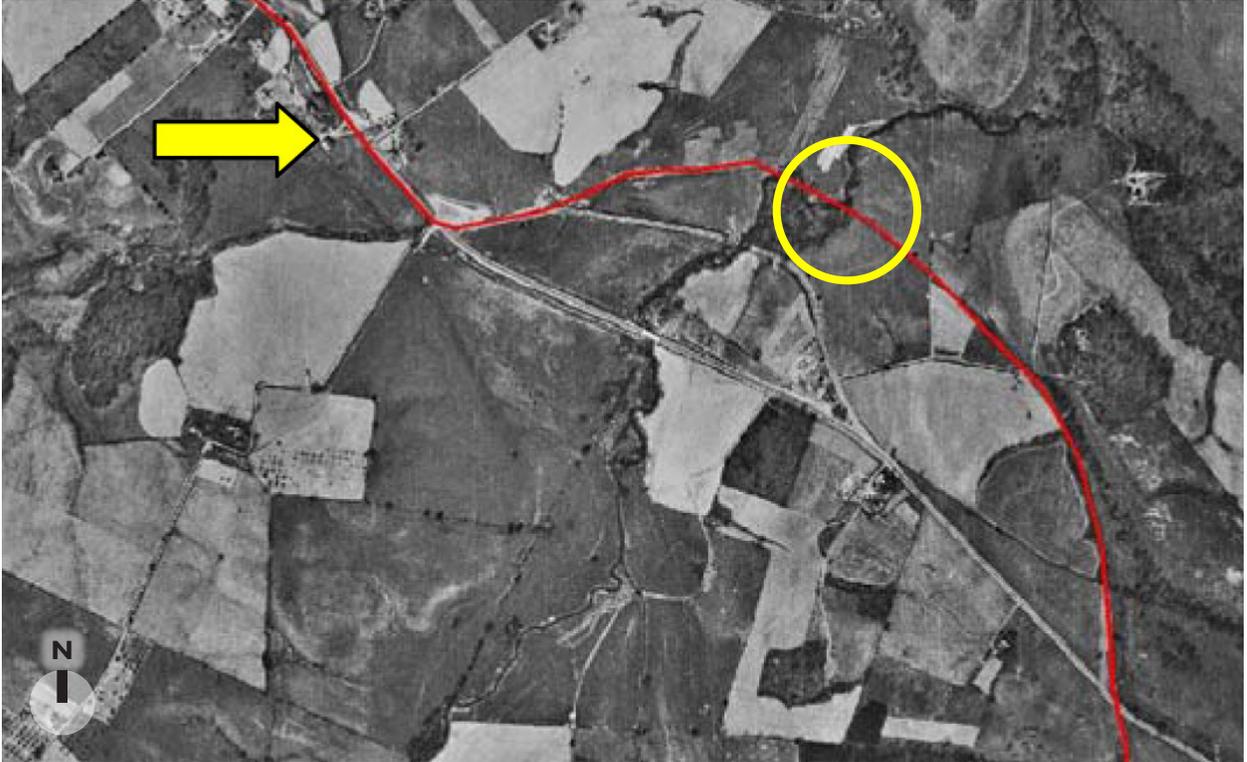


Figure 2-7. Path of the main road ca. 1803, drawn over a USDA aerial photograph from 1937. Sheppard's tavern (area indicated by circle) would have been almost directly east of the mill (indicated by arrow) and close to Difficult Run. SWSG, 2010.

In order to supply the mill with adequate water pressure, Sheppard built a mill dam on the northwest boundary of his property, about 2,000 feet away from the mill race mentioned above. Unfortunately, the pond created flooding on his neighbor's property. Sheppard had to breach that dam and construct another about 1,900 feet from the mill.⁶⁵ These two dams are likely the westernmost of the three that have been identified within the southern portion of the site (see Chapter Three).

There were likely other structures located in the vicinity of the mill that would have provided support for the milling operation, such as a blacksmith shop, a warehouse for storing grain and finished products, a cooper's shop, and others.⁶⁶

Sheppard may not have ever operated the mill, having acquired the land in 1803 and the mill construction taking some time. Indeed, he struggled in making his mortgage payments, making only

partial payment in July of 1804, but none after that.⁶⁷ In 1807, his fate was sealed with the passing of the Embargo Act of 1807, which prevented American ships from traveling to foreign ports. A merchant mill with no foreign market was destined to fail during this period. In fact, after the act was passed, America fell into an economic depression that lasted from 1807 to 1809 and did not fully recover until 1814.⁶⁸

In 1809, only six years after formally acquiring the property, Sheppard advertised the mill for rent in the *Alexandria Gazette*:

I wish to RENT for one or more years, A VALUABLE MILL, which is in good order for manufacturing wheat into flour, and also well calculated for country work, in Fairfax county,

⁶⁵ SWSG, DRAFT Colvin Run Miller's House Historic Structure Report, 2.7.

⁶⁶ *Alexandria Gazette*, April 23, 1811, 1; SWSG, DRAFT Colvin Run Miller's House Historic Structure Report, 2.7.

⁶⁷ Eugene Ernst Prussing, *The Estate of George Washington, Deceased* (New York: Little, Brown, and Company, 1927), in SWSG, DRAFT Colvin Run Miller's House Historic Structure Report, 2.19.

⁶⁸ United States Department of Agriculture, "A History of American Agriculture: Economic Cycles", online at: http://www.agclassroom.org/gan/timeline/economic_cycles.htm; SWSG, DRAFT Colvin Run Miller's House Historic Structure Report, 2.7.

on the direct road leading from Leesburg to Alexandria; with two water wheels, one 21 feet high one 20 feet high, with one pair of five feet burr stones and one pair of four and half feet country stones, and a place for another pair of burr stones, which can be in order in short time if required – it has every machinery necessary. For the particulars apply to the subscriber living in Fairfax County, Virginia. William Sheppard⁶⁹

In 1811 Sheppard advertised the mill again;

Mill for Sale. I will sell or I will let, for a Term of years, a grist and merchant Mill & 70 acres of good fertile land...and 10 miles from any other merchant mill, and in a good neighborhood for wheat, corn, rye, &c and it being so immediately on the road where all kinds of horse food will sell to great advantage. The Mill House is built with brick; it is 41 feet by 50 feet and 3 stories high, and on a never failing stream, with 2 water wheels, one pair of good country stones, and one pair of five feet French Burrs of good quality, and a conveniency for another pair, part of the works already framed, and seasoned timber sufficient to finish them; it has every conveniency and necessary machinery for the manufacturing flour and country work. The works are almost new and in complete order, with a good dwelling-house, kitchen, cooper's shop & other buildings necessary, and a good peach orchard. There is about 2 acres of improved meadow, and 6 or 8 more may be added; the balance is well timbered... William Sheppard.⁷⁰

In this advertisement Sheppard indicated that the mill may have yet been incomplete, suggesting that perhaps he never actually operated the mill. Sheppard probably did not live in the “good dwelling-house” mentioned in the ad, and likely maintained his residence close to or in the tavern he operated. It is not known if the house listed is that currently existing on the property or if it was constructed later.

It is clear that Sheppard was not successful in leasing the mill operation in 1811, because he could not keep up his mortgage payments. That

year, the county commissioners decreed that land surrounding the mill sufficient to pay off Sheppard's mortgage and interest be sold.⁷¹ Deed records show that the land went to Edmund Lee and Thomas Swann of Alexandria in 1811, but very quickly after, Sheppard enlisted Lawrence Lewis, one of Washington's heirs, to help him buy back the land. In the late summer of 1811, a deed was filed recording the sale of the mill to Sheppard and Lewis.⁷² Lewis turned around and conveyed his part of the tract back to Sheppard, who then sold a portion of the land and buildings to Philip Carper of Frederick County, Maryland, in August of the same year.^{73,74} The deed of sale to Carper specified 90 acres of land containing a mill, miller's house, dam, race, and other features, the land described as part of a tract purchased by William Sheppard from the executors of George Washington's will and part of a tract granted by the Commonwealth of Virginia to Sheppard.⁷⁵

Carper's Merchant Mill, 1811–1842

Philip Carper's family was of German descent, and like many other Germans from Pennsylvania and Maryland, they migrated south into Virginia. Carper was an experienced miller and had owned a successful mill in Frederick County, Maryland, before he and his family relocated to Fairfax County. His Maryland mill on Catoctin Creek had been destroyed by a flood in 1810, but Carper was nevertheless fortunate to have sold the property for a good price. In 1811, he was able to pay \$5,500 in cash for the mill property on Colvin Run.⁷⁶ Provisions contained within the deed documents allowed Carper to increase the mill pond acreage by raising the dam, which would flood some of Sheppard's remaining property, but without owing him compensation.⁷⁷

⁶⁹ *Alexandria Gazette*, July 25, 1809; SWSG, DRAFT Colvin Run Miller's House Historic Structure Report, 2.8.

⁷⁰ *Alexandria Gazette*, April 23, 1811:1; SWSG, DRAFT Colvin Run Miller's House Historic Structure Report, 2.8.

⁷¹ *Alexandria Gazette*, May 30, 1811:1; SWSG, DRAFT Colvin Run Miller's House Historic Structure Report, 2.8.

⁷² Fairfax County Deed Book L2:190–192.

⁷³ Fairfax County Deed Book L2:190.

⁷⁴ Fairfax County Deed Book L2:193; Jirikowic, “History Notes,” 7.

⁷⁵ Fairfax County Deed Book L2:193.

⁷⁶ Sansome, *Journey to Bloomfield*, 20.

⁷⁷ Fairfax County Deed Book L2(38):193, August 22, 1811, in SWSG, DRAFT Colvin Run Miller's House Historic Structure Report, 2.10.

Within two years, Carper's mill was exceeded in value by only three other merchant mills on a list of 30 in Fairfax County operating at the time.⁷⁸ In 1813, he expanded his property by acquiring adjoining parcels, including 37½ acres on the east end of his original 90 acres that he purchased from William Sheppard for \$750.⁷⁹ After the British seized 21 American ships in Alexandria's harbor in 1814 and war ensued, Virginia farmers began to grow more grain for American consumption. This contributed to the prosperity of local millers and certainly to Carper's increasing success. By 1815, records showed that Carper owned five male slaves, and two horses and nine cattle, as well as the miller's house, valued at \$2000.⁸⁰ In 1818, Carper added a general store to his mill property, and in 1822, obtained a license to sell ardent spirits in addition to the ordinary staples already available.⁸¹

Although there was a milling system in place when Sheppard owned the property, it appears that Philip Carper was responsible for installing the milling system that has been reconstructed by craftsmen for the Park Authority and is currently in use at Colvin Run Mill. Carper was aware of the latest advances in milling technology led by Oliver Evans, which made for more efficient mill operations. Carper even owned a copy of Evans' 1784 *The Young Wheelwright's and Miller's Guide*, which remains in the private collection of Carper family papers.⁸² Evans had developed an automated milling system that integrated what had previously been separate milling activities into one continuous process, a development that reduced the amount of manual labor required for a gristmill. As he described it,

These...machines are...applied...so as to perform every necessary movement of the grain, and meal, from one part of the mill to another, or from one machine to another, through all the various operations from the time the grain is emptied from the wagoner's bag...until it be completely manufactured into flour...and separated, ready for packing into barrels, for sale or exportation. All which is performed by the force of the water, without the aid of manual

*labour, excepting to set the different machines in motion, &c. This lessens the labour and expense of attendance of flour mills, fully one-half.*⁸³

At Colvin Run Mill, four different machines were linked to form a system that moved products through the mill in the continuous process that Evans described.

Carper had purchased the mill to operate it as a merchant mill. At a merchant mill, the miller is active in processing flour and other products, as well as in buying and exporting the area's surplus grain. Carper's Mill, located close to the turnpike, was part of the system that supplied flour and grain to domestic and international markets.⁸⁴ Although he ran the facility as primarily a merchant mill, Carper continued to grind grain to order for neighbors and local residents like Samuel Colman, who sent corn to the mill for processing.⁸⁵ Records from his ledger indicate that, in the course of one week, he ground 1,147 bushels of wheat; by the end of that year he had ground 13,072 bushels of wheat. From his mill he sold wheat, flour, rye-meal, bran, and wheat shorts (by-product of wheat milling). He also used the works to grind plaster.⁸⁶

Carper's success depended on having access to a road system to make transportation of flour to port cities faster and easier, so the mill had been located on what had been called the "Main Road" (figure 2-8). In 1803, traffic from the Shenandoah Valley was diverted to the Little River Turnpike.⁸⁷ In response, farmers in Fairfax County joined with those in Shenandoah Valley and the Leesburg area of Loudoun County to petition the General Assembly for another turnpike. The new turnpike company was created in 1813 and incorporated by an Act of Congress on July 13. Tolls were: "for each head of sheep, five cents, each head of hogs, five cents, every horse or mule and driver, three cents, and every stage or wagon and two horses, ten cents."⁸⁸

78 1 Fairfax County Personal Property Tax Ledgers, 1813–1815, Microfilm, Fairfax County Public Library, Virginia Room, in SWSG, DRAFT Colvin Run Miller's House Historic Structure Report, 2.11.

79 Jirikowic, "History Notes," 10.

80 Jirikowic, "History Notes," 10.

81 Sansome, *Journey to Bloomfield*, 21–22.

82 Colvin Run Mill Historic Site archives.

83 Oliver Evans, 1795, quoted in "Colvin Run Mill: A Historic Mechanical Engineering Landmark," report by Fairfax County Park Authority, Great Falls, Virginia, May 20, 2001.

84 Netherton, *Colvin Run Mill*, 17. 1

85 Sansome, *Journey to Bloomfield*, 21. 1

86 This source does not provide a year that these amounts of wheat were ground. Sansome, *Journey to Bloomfield*, 21.

87 Netherton, et al., *Fairfax County*, 190–202.

88 James R. Caton, *Legislative Chronicles of the City of Alexandria* (Alexandria, VA: Newell Cole Co., 1933), in Netherton, et al., *Fairfax County*, 195.



Figure 2-8. Survey of proposed road from Hunter Mill Road to Mateer's Tavern, 1845, with insert for detail around the mill. *Fairfax County Circuit Court Archives in DRAFT Historic Structures Report for the Miller's House, SWSG.*

Construction on the improved road, called the "Middle Turnpike," began in 1818, proceeding well into the 1830s. A. Sommers' 1827 survey for the proposed road indicates "Carper's Mill" at its location on "Colville Branch," just west where it joined with Difficult Run (*figure 2-9*). As construction proceeded, engineers reported that the road was straight and fairly level, but the road bed had proved to be expensive because local soils called for a capping of stone.^{89, 90}

As the road approached the mill, Philip Carper became more actively engaged in local road planning and construction. After his wife died in 1832, Carper applied to have a road built from the mill north to the Falls Bridge Turnpike, later the Georgetown-Leesburg Turnpike. He also served as "viewer" for other road projects in Fairfax County, being paid six dollars a year for his services to the county.⁹¹ Nonetheless, construction on the Middle Turnpike was slow and did not reach Carper's mill until 1836. Ever the optimist, after construction on the road was finally complete in 1839, Carper continued to expand his property, purchasing an

additional 38 acres of land along the turnpike and northwest of the mill tract (*figure 2-10*).⁹²

Even as Carper was expanding his holdings, Fairfax County was experiencing an agricultural depression due to local agricultural practices of the early nineteenth century. It had been customary during this period to clear fields, crop them until the soil gave out, and then abandon them to clear new land. As one critic of this practice wrote, "the wide domains that descended from opulent ancestors become insufficient to supply this system of wasteful extravagance," and the "impoverished proprietor" sells his lands "for a small consideration, and... with his family and slaves sets off to...the fertile regions of the South West, there to pursue, from incorrigible habit, the same blighting and ruinous system."⁹³

This practice caused a local depression that likely strongly affected the success of Carper's mill operation. This may be why, in addition to his milling activities, Philip Carper pursued a number of other interests. He often functioned as a community banker and financial advisor, and arbitrated legal cases and conducted estate appraisals. Eventually, his other pursuits became

89 Netherton, et al., *Fairfax County*, 195. 1

90 There are two quarries within the historic site along Colvin Run. No documentary information has been located regarding the date or purpose of excavation, but it is possible that stone was quarried and crushed for use in road construction.

91 Sansone, *Journey to Bloomfield*, 23.

92 1 Jirikowic, "History Notes," 10.

93 1 [Samuel M. Janney], *The Yankees in Fairfax County, Virginia* (Baltimore, MD: Snodgrass & Wehrly, 1845), 4-5, 7, 11; Netherton, et al., *Fairfax County*, 252.

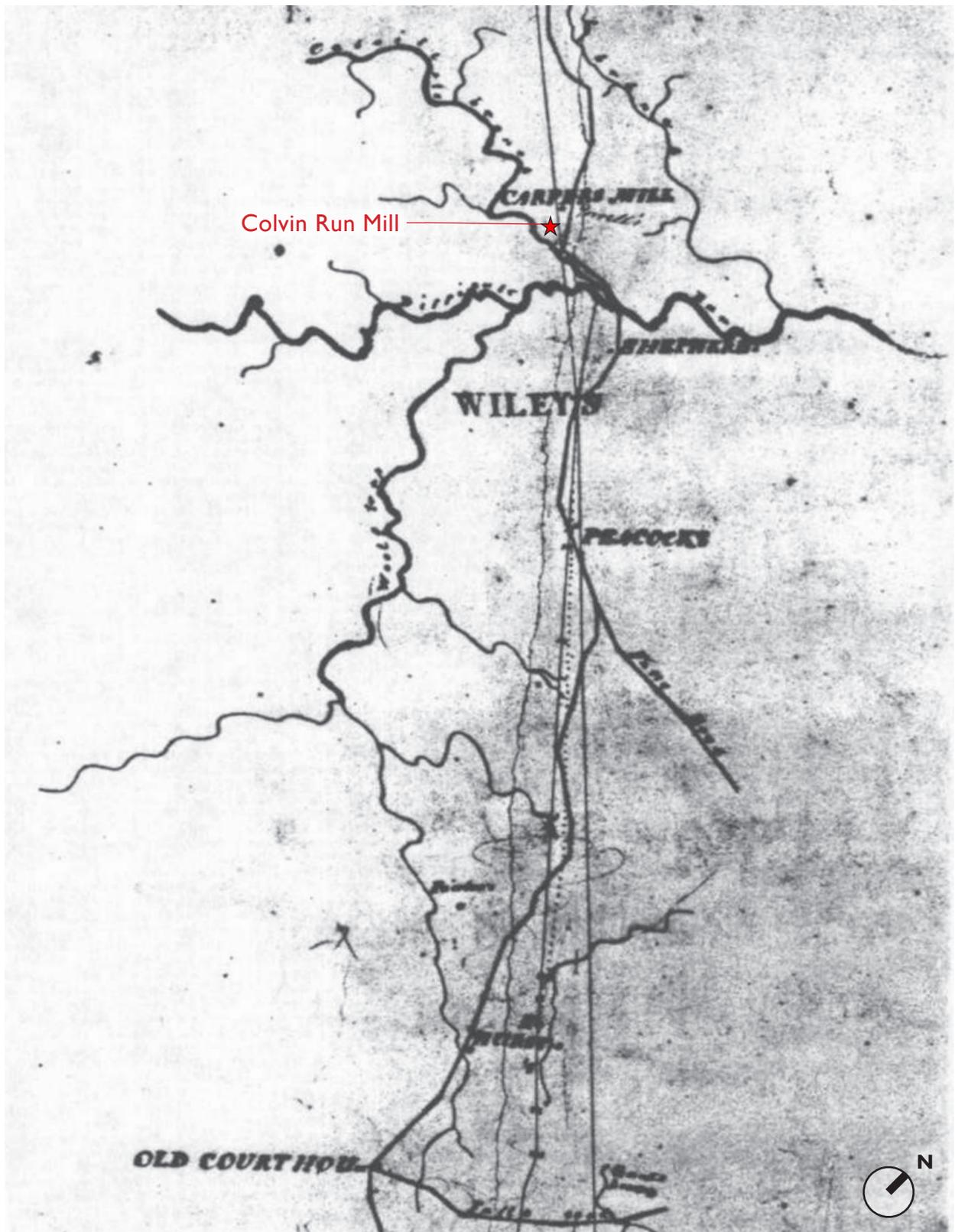


Figure 2-9. Detail from Sommers' 1827 "plat of the contemplated Turnpike Road from Alexandria to Difficult run by Wileys" is an early road survey showing the route of Middle, or Leesburg Turnpike, then under construction. Colvin Run Mill is shown on this map as Carper's Mill. *Colvin Run Mill Historic Site archives.*

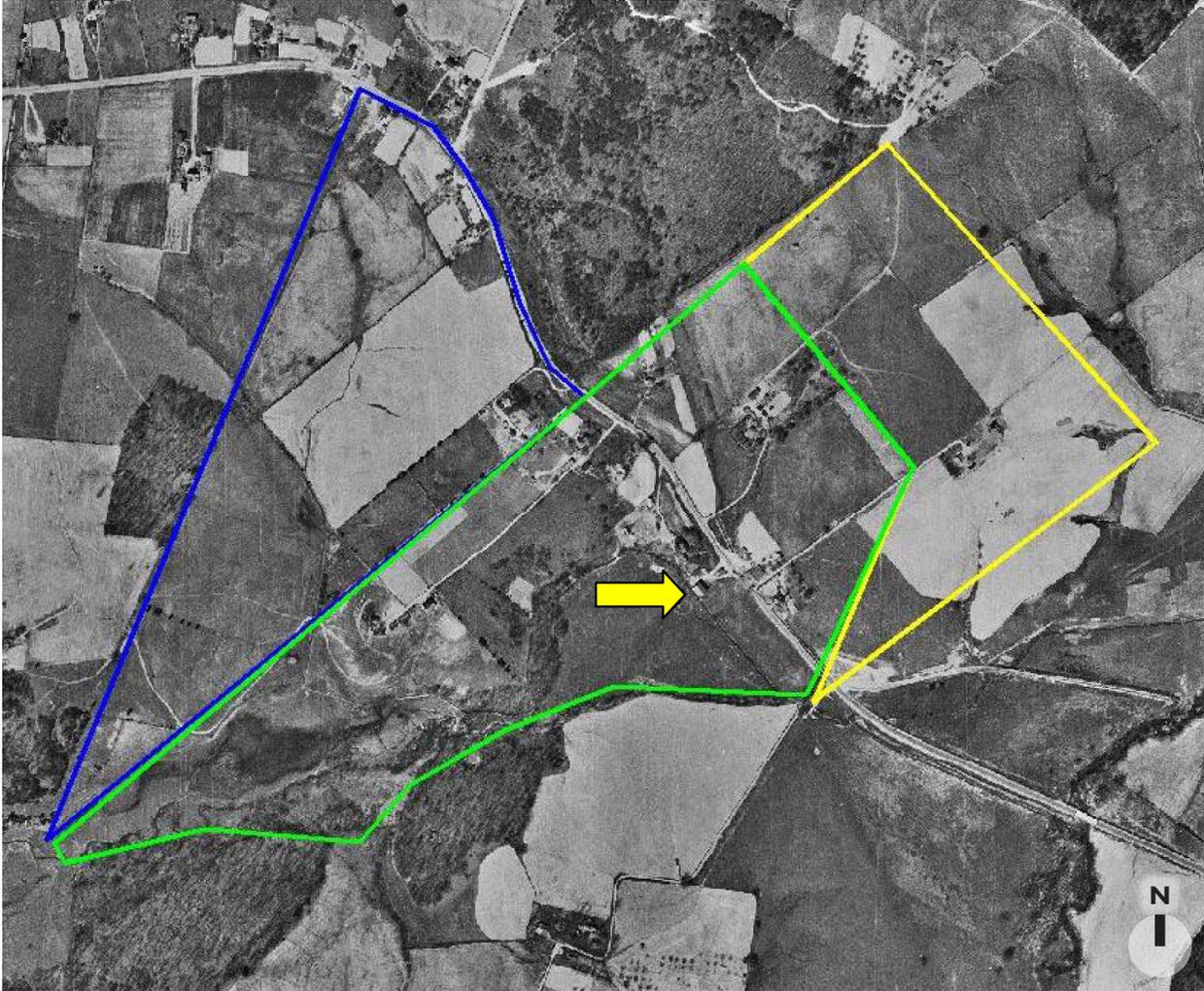


Figure 2-10. Philip Carper's tracts surrounding the mill. The first 90-acre tract, purchased in 1811, is delineated in green; the 37 ½-acre tract purchased in 1813 is delineated in yellow, and the 38-acre tract purchased in 1839 is delineated in blue. The yellow arrow points to the mill. SWSG, 2010.

more important, or perhaps more profitable, than the mill. In September 1842, after operating the facility for 31 years, Carper sold the property to John Powell for \$6,500, only \$1,000 more than what he had originally paid for the land thirty-one years earlier. Carper subsequently moved to Loudoun County to live with his daughter.⁹⁴

The sale included the mill, mill dam, the headrace, and the house. The three parcels of land that comprised the tract were the 90- and 37½-acre parcels Carper bought from William Sheppard, and the adjacent 38-acre parcel he bought from Orlando Fairfax in 1839. The deed stipulated that the one-eighth acre family cemetery noted as being located northeast of what is now Colvin Run Road

was not conveyed and was reserved for the use of the Carper family.⁹⁵ This cemetery has not been located in the modern landscape.

Depression to Reconstruction, 1842–1883

John Powell owned the mill from 1842 until 1883. The timing of his purchase could not have been better because the agricultural economy of Fairfax County had taken a positive turn. A combination of factors led to an influx of Northern farmers into the area during the second half of the nineteenth century: the price of farmland in the Northeast

⁹⁴ 1 Fairfax County Deed Book G3:157.

⁹⁵ 1 Sansome, *Journey to Bloomfield*, 20, 23. Note that the exact location of this cemetery is not known.

had risen considerably. An increase in demand for agricultural products by the growing population of the District of Columbia and innovations in transportation, such as the modern development of railroads, led to an increased interest on the part of Northern farmers in acquiring worn-out farmland. With them, they brought knowledge of new scientific agricultural techniques, including crop rotation, applications of manure as fertilizer, and intercropping with timothy and clover, that revolutionized agriculture in the county.

The Powell family did not move to the Colvin Run Mill area right away. Instead, they continued to maintain a residence in Alexandria until after 1850. The 1850 census lists Edward Bond, a miller, and his family as residing in the near vicinity of the mill.⁹⁶ Bond may have been operating the mill for Powell.

When he purchased the property, John Powell was still working as a lawyer in Alexandria, handling cases such as land bounty claims for military service, bills of sale, and deeds.⁹⁷ He was active in politics, representing Fairfax County in the Virginia House of Delegates in the 1839/40 and 1842/43 terms as a Republican, and in fact, named his mill operation Republican Mills.⁹⁸ Just a few years later, in 1849, a post office was established at Republican Mills with Powell's neighbor, Alfred Leigh, as the first postmaster. Powell assumed the job in 1856 and continued serving until 1860.^{99, 100}

By the time the 1860 census was taken, the Powell family had moved to the Colvin Run area, perhaps occupying the miller's house at Colvin Run Mill or another location nearby.¹⁰¹ The census indicates that Powell employed a professional miller and

helpers, both free and slave.^{102, 103} The miller may have lived in the house on the property later when the Powell family moved to Dranesville. It is not known where the miller lived while Powell resided on this property, or the living quarters of the other mill staff, free or slave. At the time, there were millers who traveled from mill to mill, working for the owners on a contract basis.

A community began to develop around the mill, particularly after the completion of the turnpike work and related projects. In addition to Powell's mill, there was a sawmill, a blacksmith shop, and a general store nearby. Most members of the community that would have gathered at the mill on a regular basis were farmers and planters. Local farmers typically grew corn, wheat, oats, rye, and potatoes. They kept horses and oxen for work, and cows for milk and butter. They ate most of what they grew and would trade butter, honey, wool, or hides for services or dry goods that they would typically buy in Dranesville. Most farmers were self-sufficient and could make most of their own supplies; the only craftsmen that settled near the mill were those that the mill employed, such as coopers and blacksmiths.¹⁰⁴

Soon after acquiring the mill, Powell continued Carper's efforts to petition the county court for a new road to connect the mill with the Falls Bridge Turnpike (later called Georgetown-Leesburg Turnpike). When he received an unfavorable answer from the court, he appealed the decision in the Superior Court.¹⁰⁵ Easy access to the turnpike was very important for the mill and some other businesses as a way to transport product to market.

Dr. Alfred Leigh became Powell's neighbor in 1848, when he purchased land to the southwest, also along Colvin Run, and constructed his large residence on a small hill across the road from the mill. A plat surveyed for the purchase by Alfred Leigh of his land adjacent to Colvin Run references several features along the shared boundary, indicating a

96 1 U.S. Bureau of the Census, Population Schedules, 1850 (accessed May 7, 2010).

97 *Alexandria Gazette*, September 2, 1848: 3; SWSG, DRAFT Colvin Run Miller's House Historic Structure Report, 2.12.

98 *Alexandria Gazette*, March 29, 1842: 2; SWSG, DRAFT Colvin Run Miller's House Historic Structure Report, 2.12.

99 *Alexandria Gazette*, July 9, 1849: 3; SWSG, DRAFT Colvin Run Miller's House Historic Structure Report, 2.13.

100 U.S. Postal Records, microfilm, Fairfax County Public Library, Virginia Room; SWSG, DRAFT Colvin Run Miller's House Historic Structure Report, 2.13.

101 U.S. Bureau of the Census, Population Schedules, 1850, 1860 (accessed May 7, 2010).

102 Ibid.

103 Larry Myers, "Work and Livelihood in Rural Fairfax County, ca. 1740–1930, with a Special Emphasis on the Colvin Run Community," 20.

104 U.S. Census of Agriculture, 1860—Virginia, Fairfax County; S.C. Drane Account Book, 1841–1842, Virginia Historical Society, Richmond VA; U.S. Census of Population, 1850—Virginia, Fairfax County, in Myers, "Work and Livelihood," 21–22.

105 Netherton, *Colvin Run Mill*, 18.

mill race in that location (see figure 2-6). It is possible that it had been constructed to parallel Colvin Run, but no evidence of this race has been found in that location. In addition to Leigh, Powell's land shared boundaries with the Jackson, Brown, Johnson, Allen, Hatch, and Money families (figure 2-11).

During the period before the Civil War, Powell had become quite wealthy from the mill and from buying and selling land in Fairfax County. The 1860 census values Powell's real estate at \$12,000 and his personal property at \$4,250. Nonetheless, in the late 1850s and early 1860s, Powell began to suffer

financial difficulties and a number of judgments were filed against him in the county court—in 1860–1861 alone, there were eleven such judgments entered.¹⁰⁶ The start of the Civil War caused further disruption to his business at the mill.

Although the mill was located outside the circle of forts guarding the District of Columbia, both Union and Confederate armies foraged across Fairfax County, taking animals, produce, and staples from farms for food. Patrols were sent along the roadways and skirmishes frequently broke out, making travel dangerous for ordinary citizens. The land

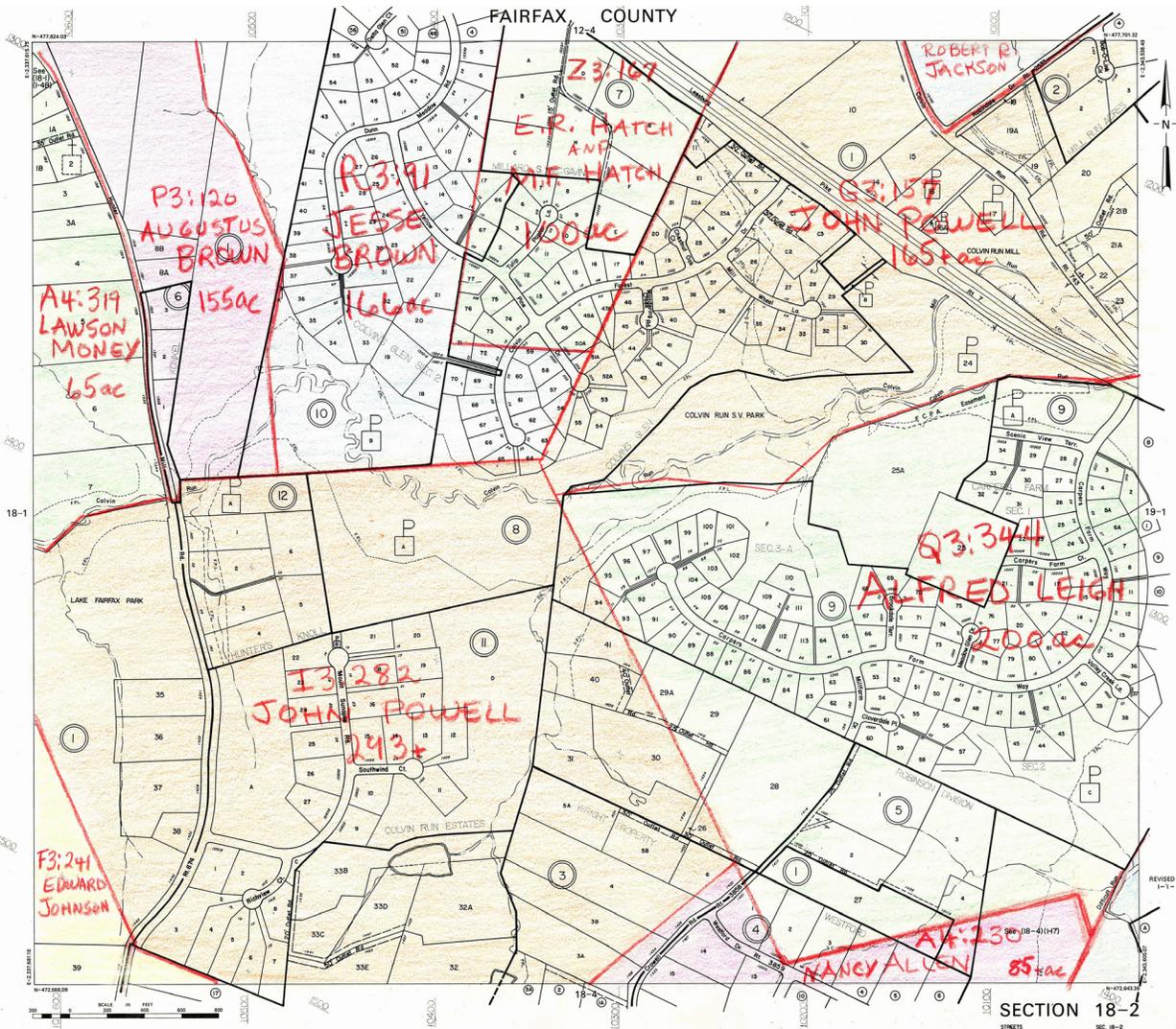


Figure 2-11. Map is from a study entitled “Fairfax County in 1860: Property Owners,” prepared by historian Beth Mitchell. It depicts the land parcels and respective owners in the county in 1860 overlain on the 1981 Real Property Identification Map of Fairfax County using colored pencil. Fairfax County Park Authority web site, <http://www.fairfaxcounty.gov/histcomm/1860maps/18-2.jpg>

106 Netherton, Colvin Run Mill, 18.

surrounding the mill and miller's house may have been the location of a skirmish.¹⁰⁷ In 1861, the Battle of Dranesville occurred only three miles away from the mill, and it is possible that Ord's troops headed back towards their headquarters in Langley after the battle along the Leesburg Pike, passing along the road in front of the mill, possibly even stopping (figure 2-12). However, it is also possible that they took the Georgetown Pike east to Langley.

Maps of the area from the Civil War show the locations of notable features of the landscape, including the ridge on which the mill house was located and illustrates its wooded quality in contrast with the planted farms to the north and south (figure 2-13). Fairfax County appears in these and other maps of the period as a primarily rural area.

These maps also show the system of roads in the vicinity around the mill (figure 2-14). The Alexandria-Leesburg Turnpike ran northwest to southeast past the mill and over a bridge that crossed Difficult Run. Other roads extended from the turnpike to the northeast and southwest. An important intersection near the mill was where the shortcut to the Georgetown-Leesburg Turnpike petitioned for by both Carper and Powell met the Leesburg Turnpike between the Thompson and Brown properties. At this point it also split, with one section heading north and the other leading to Jackson's Mill on Difficult Run. Just opposite, a road led from just north of Powell's property westward, paralleling Colvin Run, crossing the road to Hunter's Mill and ending at the Loudoun & Hampshire Railroad. Oddly, there has been no mention of Powell using this connection to the railroad. Michler's map also shows a road leading from the mill to Alfred Leigh's property on the other side of Colvin Run.

Despite this network of roads, merchant milling and transporting flour to market became impossible to sustain during the war. Powell's mill scaled back its operations, grinding grain only for close neighbors. It is not known exactly what physical losses Powell's property sustained as a result of the war; he did not file a claim with the Southern Claims Commission, so it could be that either the mill did not sustain direct and documentable damage as a result of

Union actions or that Powell simply chose not to file a claim.¹⁰⁸

Things did not improve for Powell after the war ended—an economic depression had set in with falling prices and rising costs. By 1870, Virginia's wheat and corn production had dropped to half of what it had been in the 1860s. In the 1870s, banks were not lending and land was not selling. Local farmers had difficulty maintaining the gains in production seen before the Civil War because they lacked the capital to invest in fertilizers, seed, and labor. Fairfax County saw a second influx of Northerners who took advantage of low land prices and had the cash reserves to invest in increasing the land's productivity. A lack of local capital hindered millers' efforts to modernize and improve their facilities. The 1870 census listed John Powell as a "farmer" with no entries in the real and personal property columns. There is no mention of the mill at all.¹⁰⁹

Powell's debts and judgments against him rose, and in 1872 he declared bankruptcy. His property was sold by assignees appointed by the court in order to pay his creditors. The mill property was advertised in the *Alexandria Gazette* newspaper as consisting of "brick dwelling house and usual outbuildings and a valuable brick grist mill and merchant mill."¹¹⁰ The advertisement described the land as wooded, well watered, and of good quality. The mill property was advertised a number of times over the next several years, but the actual sale of the mill was tied up in bankruptcy proceedings until 1883 when Joseph House of Frederick County, Maryland, purchased the property as an investment. Three days later, House sold the mill property to Addison Millard of Frederick County, Maryland.¹¹¹

107 Joseph Balicki, Kerri Culhane, Walton H. Owen II, and Donna J. Seifert, Ph.D., "Fairfax County Civil War Sites Inventory," Prepared for Fairfax County Park Authority, August 2002, 21.

108 Geographical List of Southern Claims Commission Claimants (Washington, DC: National Archives Microfilm Publication, M87—Roll 13, available online through the St. Louis Library Archives, http://www.slcl.org/sc/pdfs/scc_geolist.pdf, accessed October 1, 2010.

109 Netherton et al., *Fairfax County*, 407–411.

110 Netherton, *Colvin Run Mill*, 19.

111 Fairfax County Deed Book C5:190; Fairfax County Deed Book C5:223; Jirikowic, "History Notes," 11; Netherton, *Colvin Run Mill*, 20.

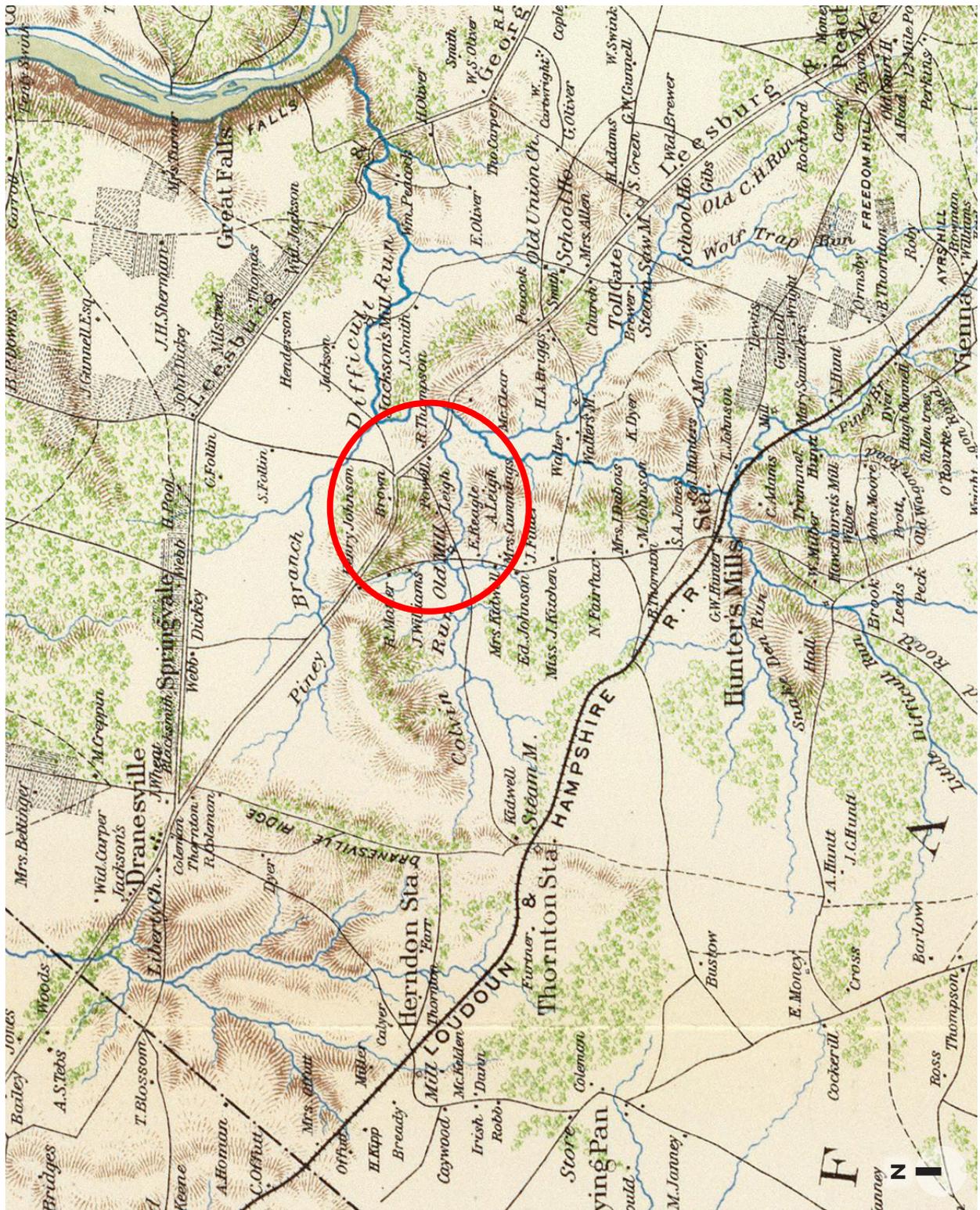


Figure 2-13. Detail from McClellan's 1862 map, annotated to show the location of the mill. The "Old Mill" identified at the base of the ellipse may have been a sawmill that was located on Colvin Run further to the west, or simply a misplaced label that should have identified Colvin Run Mill. It is notable that Colvin Run Mill is not identified by name, but that Powell's residence is identified, suggesting that perhaps the mill was not in operation when the map was made. Davis, et al., *The Official Military Atlas of the Civil War*.



Figure 2-14. Detail from Michler's 1864 map, annotated to show the location of the mill. This map shows the network of roads in the vicinity around the mill, although the mill is not labelled. Colvin Run is shown as Colville Run. The road indicated to the northwest of the mill may be what remains in trace as the "farm road." *Library of Congress.*

The Golden Years of the Millard Era, 1883–1934

Map 2-1. Millard Ownership Period Plan

Addison Millard was a miller by trade and learned his skills from his father, Samuel Millard, at their family's mill in Urbanna, Maryland.¹¹² By 1883, Addison was already training his own sons in the trade and looking to buy a mill of his own. Although the Colvin Run community had suffered through hard times, it was already well underway in its recovery by the time Millard bought the property. The community's population had reached 200 by 1878, when the U.S. Post Office established a second post office there and hired John Henry Johnson to be the first postmaster.¹¹³ The Millard's tenure at the mill was the most successful period in its history as a merchant mill. With the mill again in operation, the community continued to grow, attracting more craftsmen and businessmen to the town. Blacksmiths, wheelwrights, and carpenters offered their services to local farmers. In the 1880s, a general store was established in the front room of a residence, while an undertaker worked out of the back of the house. There was also a butcher shop, a physician, a magistrate, and a constable.¹¹⁴

After buying the mill on Colvin Run, Addison Millard immediately began to make repairs, including rebuilding parts of the mill machinery. During the Civil War and for a while afterward, the mill, the mill dam, the mill pond and the headrace had been neglected and had begun to deteriorate. In addition, the property that Millard purchased from House was pared down from its extents when Powell owned it, so that the mill pond was now outside its boundary. Millard constructed a third dam and another headrace, which remained in use until the construction of Route 7 in the 1940s. During the family's ownership, Millard, then later his wife and sons, repeatedly modernized the milling machinery as milling equipment and technology evolved through the late nineteenth and early twentieth centuries. Millard may have also added rooms to his house to accommodate his large family; Fairfax County tax records show an increase

in the value of his property from 1890 to 1891, likely reflecting many of these improvements.¹¹⁵

The roller mill was invented in Europe in the 1830s, but was not widely used in the United States until around 1874, when an American John Stevens developed a way to cut corrugations into the chilled iron rolls. By 1894, Millard had purchased roller milling equipment and was using it in milling operations. The new method of milling was called the "New Process," involving grinding at a high rate of speed with millstones or rollers set at higher levels and grinding the grain several times rather than just once. "New Process" milling was practiced for a short time after the invention of roller mills around 1870. Millers would first run wheat through a smaller, higher tentered millstone, where it was broken in larger pieces called "middlings." These were then sent to a purifier that extracted some flour, called patent flour, and cleaned the middlings. At this point they were sent through a full-size stone set close for the final grind. This practice was believed to give a higher yield per bushel of superfine flour than traditional one-pass grinding or close grinding.¹¹⁶

Using this new technology, Millard was quite successful, and by the first decades of the twentieth century the mill was serving the neighborhood; supplying stores in Washington, D.C., and Richmond; and shipping to stores in New York, Maine, Pennsylvania, Ohio, and Kentucky.¹¹⁷ A printed receipt from Millard, dated 1894, boasted the "Colvin Run Roller Mills" in type embossed at the top (*figure 2-15*).^{118, 119}

By the early 1900s, droughts and subsequent lowering of the water level in Colvin Run made waterwheel power unreliable. The Millards installed two steam turbines to supply a reliable source of auxiliary power for the mill stones and rollers. Comparison of a photograph of the mill taken in 1900 with one from 1910 shows changes wrought by the introduction of steam power (*figures 2-16 and 2-17*).

112 SWSG, DRAFT Colvin Run Miller's House Historic Structure Report, 2.16.

113 Report of Site Locations, Division of Topography, Records of the U.S. Post Office Department (RG 28), National Archives, Washington, D.C.; Myers, "Work and Livelihood," 23.

114 Myers, "Work and Livelihood," 23.

115 Fairfax County Land Tax Ledger, 1891, in SWSG, DRAFT Colvin Run Miller's House Historic Structure Report, 2.17.

116 Mason Maddox, personal communication.

117 Ibid.

118 Netherton, *Colvin Run Mill*, 22.

119 For more information, see "New Process Milling" in B.W. Dedrick, *Practical Milling* (National Miller, 1989).

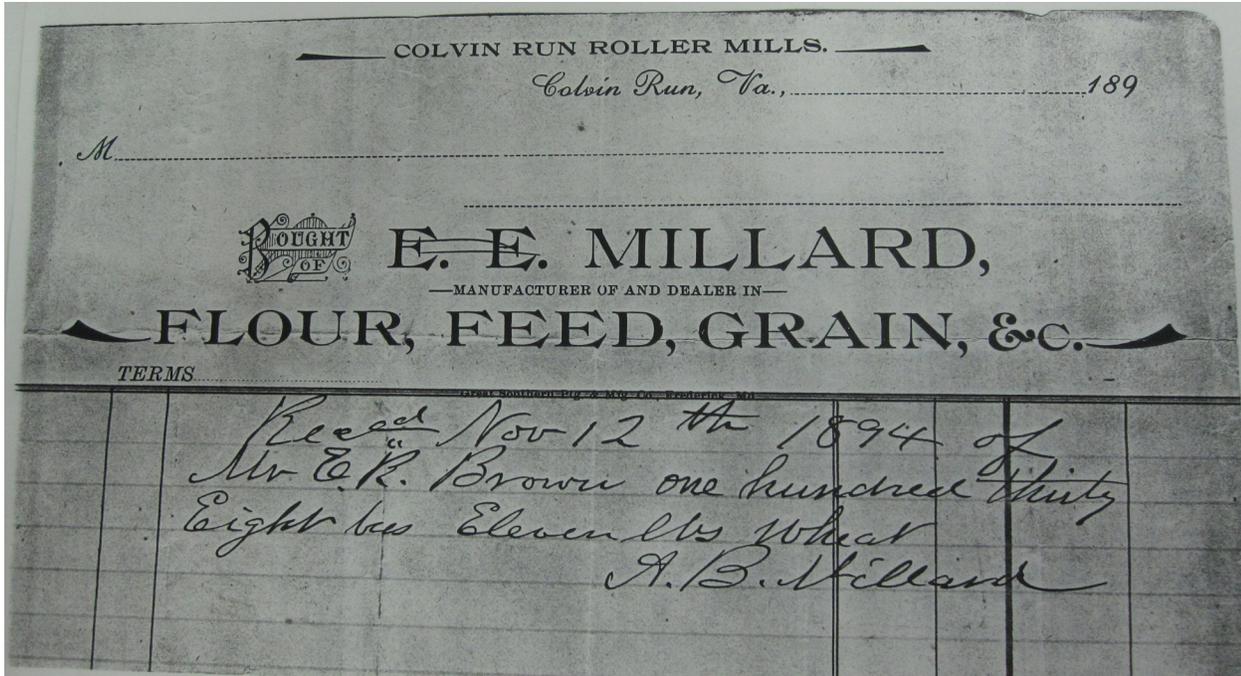


Figure 2-15. 1894 receipt describing the facility as the Colvin Run Roller Mills. Virginia Room, Fairfax County Public Library.



Figure 2-16. The Millard Brothers Mill ca. 1900. Virginia Room, Fairfax County Public Library.



Figure 2-17. The Millard Brothers Mill in 1910. Note the addition of wood piles, which were used to fuel the steam turbines, which replaced running water as a source of power. *Colvin Run Mill Historic Site archives.*

In these photographs and others, a number of accessory buildings and other features in the landscape of the Millard's property can be seen. The Millards were fairly self-sufficient, like many of their neighbors, and maintained a large garden in a large area west of the mill's headrace. They also had space to pasture cattle, a barn to house them, and facilities to process milk, including an ice house cut into the foot of the ridge on the southeast side of the miller's house. Other buildings on the Millard's property included a shed for wagons and a buggy, a chicken house, a smokehouse, and a washhouse.¹²⁰ Descendents of the Millards also recall a large corncrib and other sheds in the yard between the mill and the Leesburg Pike (*figures 2-18 through 2-22, and see figures 2-16 and 2-17*). Others recall that along the turnpike, in front of the mill and the miller's house, stood a post and rail fence. One of the Millard's grandchildren recalled that the smokehouse was located northwest of the miller's house. Most recollections report that these

accessory buildings were of log construction and roofed in split shingles.¹²¹

A three-sided stone foundation banked into a slope west of the current visitor parking lot has been identified as the remains of the building constructed in the 1880s for the storage of farm equipment and harness gear. During the twentieth century, it maintained a similar function as a garage for automobiles.¹²² It may have been used by the Garner family, who had a small farm adjacent on the north side of the Millard's property (*figure 2-23*).

After the turn of the century, a number of residences, small shops, and other businesses had become established near the mill (*figure 2-24*). Two general stores, a blacksmith shop, and a post office were located across from the mill, on the east side of the Alexandria-Leesburg Turnpike (*see figure 2-23*). The blacksmith's shop was moved to the west side of

¹²⁰ Netherton, *Colvin Run Mill*, 22–23, 33.

¹²¹ *Ibid.*, 32–33.

¹²² Martha R. Williams, "Test Excavations, Colvin Run Mill, Interim Field Report," Fairfax County Park Authority Division of History, June 8, 1977.



Figure 2-18. Photograph of the mill around the turn of the twentieth century. *Colvin Run Mill Historic Site archives.*



Figure 2-19. Photograph of the mill ca. 1910. The pile of firewood indicates that the mill was still using steam power. *Fairfax County Public Library.*



Figure 2-20. Photograph of the mill ca. 1920. *Fairfax County Public Library.*



Figure 2-21. Photograph of the mill taken in 1910. Note tailrace bridge and corncrib. *Fairfax County Public Library.*



Figure 2-22. This snapshot of a girl posing on the north end of the mill was taken around 1930. Note the white frame building that also appears in a photograph from 1910. *Fairfax County Public Library*.

the road near the mill after its building burned. The Millard family operated the mill and sold various kinds of flour, as well as grain, animal feed, poultry supplies, fence wire, and roofing material in their store.

This era also saw continued growth of the Colvin Run community. Religion held the community together: most people attended church at Brown's Chapel, and there were camp meetings held in Dranesville, just three miles to the north. A public school was established in the community by the Fairfax County School Board in 1893, and seven years later, the community constructed their first school building. The school became the center for community gatherings, including meetings of the Colvin Run Citizens League, which worked to improve community health, child welfare, roads, agricultural practices, and general citizenship. Unfortunately, the school competed with the school in Dranesville for students and eventually was closed in 1931.¹²³

The Millard family was an active part of this community. Addison and Emma Millard had 20 children, most of whom grew up at Colvin Run. The children assisted with work at the mill, at home, and in the family garden. When work slowed during the summer growing season, the mill pond and Colvin Run, itself, were used for swimming and fishing. In the 1880s and 1890s, baseball became a local passion, and locals, including the Millards, were celebrated players. In the winter, there were hayrides, and when the mill pond froze over, there was ice-skating. The community was active and far from being isolated, located on the main road and only three miles from the railroad station at Hunter's Mill.¹²⁴

When Addison Millard died in 1898, his wife, Emma, and two of their sons continued to operate the mill until 1921 when the two sons, Alfred and Samuel, took over the business. One of their challenges was the condition of local roads, a constant problem affecting the economic prosperity of the area. The mill was located on a small rise, and to the south the land leveled off to a flat low area. Water collected

¹²³ Myers, "Work and Livelihood," 27.

¹²⁴ Netherton, *Colvin Run Mill*, 26–28.

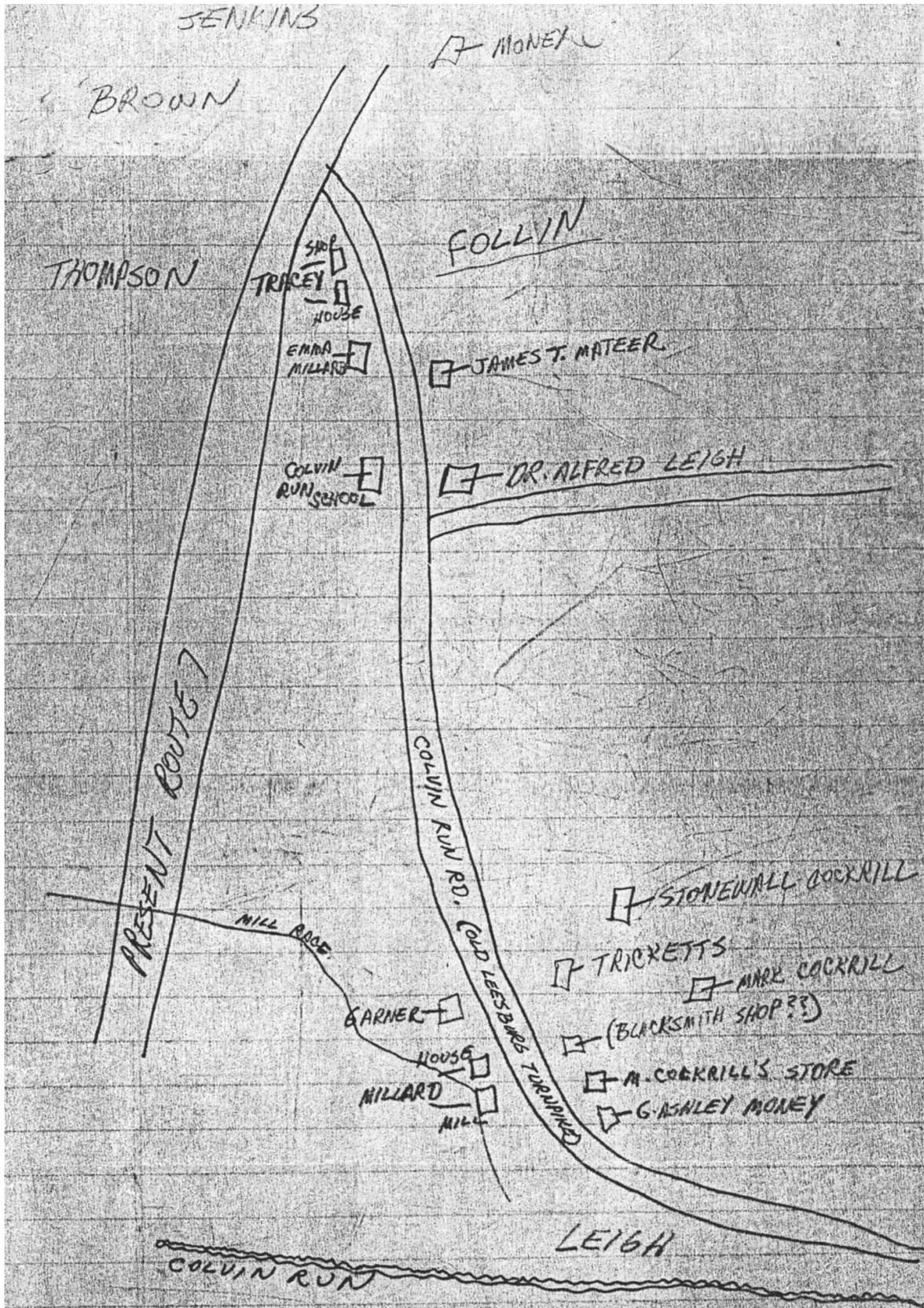


Figure 2-23. Hand-drawn map, showing local conditions ca. 1900 to 1930. Colvin Run Mill Historic Site archives.



Figure 2-24. Detail from USGS Topographic Survey of a portion of the Fairfax Quadrangle of Virginia, taken 1911–1912, annotated to show the location of the mill. The Colvin Run community is represented by at least 30 households indicated by small boxes on the map. The community took on a linear settlement pattern because it developed along the Leesburg Pike. It is interesting to note that the road that once led from the mill over to Hunter’s Mill Road was no longer in use by this time. *United States Geological Survey.*

in this area and it became marshy in wet weather. Water also collected along the edge of the turnpike. The common practice was to maintain the center of the road higher than the edges and keep the ditches on each side clear, but during heavy rains, the turnpike still became flooded.¹²⁵

In about 1903 or 1904, the County Road Board proposed a culvert opposite the mill to divert the water into Millard's meadow (figure 2-25). Emma Millard objected that the plan would result in silting up the tailrace of the mill with mud. It was brought to the attention of the court that farmer Stonewall Cockrill, living across the road from the mill, had moved his fence across the drainage ditch that ran along the road, filled the ditch, and cultivated crops there. This channeled water onto the roadway rather than draining it away.¹²⁶ The County Surveyor charged that the Millards had also encroached on the road and recommended building the culvert. The Millards objected because of the cost of cleaning mud out of the tailrace and

the inconvenience to many people in the area if they had to stop mill operations often to do the cleaning. The court ultimately granted in favor of the Millards.¹²⁷

The Millard family lived and worked at the Colvin Run Mill for 51 years, Addison for the first 15 years and then his wife, Emma, and his sons for another 36 years. As popular tastes changed, the Millards adjusted their process accordingly. One advertisement suggests that the rolling process had been abandoned by the 1920s in favor of a return to using the French burr grinding process (figure 2-26). As such, the sons continued to run the mill as partners until 1934.

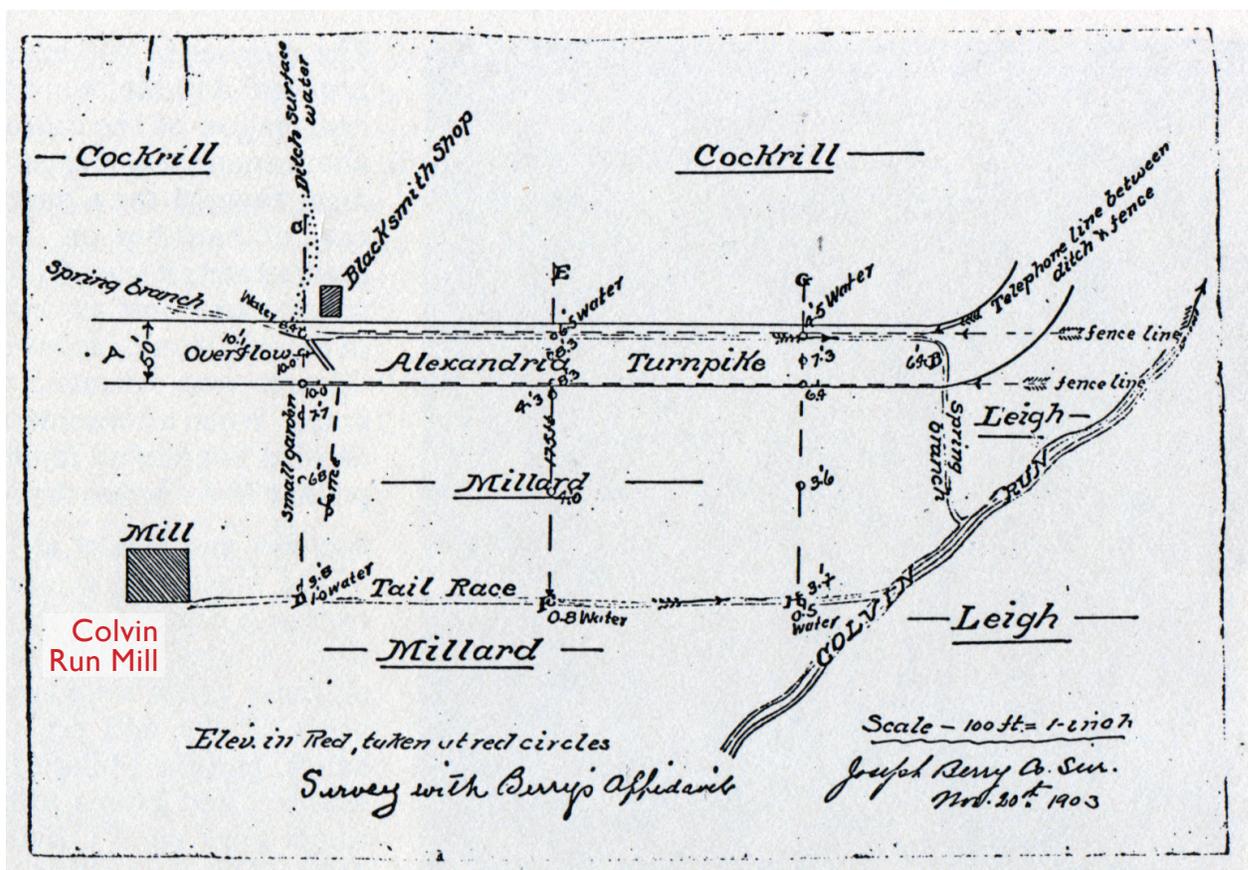


Figure 2-25. 1903 Survey. Netherton, Colvin Run Mill.

125 Ibid, 23-25. 1

126 Ibid, 25.

127 Netherton, Colvin Run Mill, 26. 1

**OLD FASHIONED WATER GROUND
MEAL AND HEALTH FLOUR**

THE old French Burrs driven by water power, on which this meal is made, were imported from France many years ago. They have been in active operation in this same old mill for more than a century. During these years they have ground more than a million bushels of grain. They are now making bread meal by the same old process that retains the germ, compounds and elements that the corn and wheat absorbed as it grew.

MILLARD BROTHERS

R.F.D. Vienna, Va. Phone Falls Church 825-F-4

Figure 2-26. Advertisement in the *Fairfax County Independent*, April 18, 1929. *Virginia Room, Fairfax County Public Library.*

Change and Early Preservation, 1934–1965

Map 2-2. Bailey Ownership Period Plan

Bernard Bailey purchased the mill, mill dam, and millrace on 32 acres of land from the Millard brothers in August 1934.¹²⁸ When he purchased the property, the community surrounding the Colvin Run Mill was clustered along the Alexandria Turnpike (now called the Leesburg Turnpike) across from and north of the mill.¹²⁹ The community had electrical service, but the road was still gravel-paved and enclosed on both sides by fences made of barbed wire and wooden posts (*figure 2-27*).

Bailey was an attorney by profession, but wanted to remodel the mill and produce stone-ground flour



View of Road at Colvins Run, VA.
Photo by Last Bros., 3/26/32, F. Nymark, Photographer.

Figure 2-27. Looking north on the Leesburg Pike in 1932 to the Colvin Run Mill community. The mill is the building on the left; the Miller's House is just beyond. Numerous other farm structures are discernible in front of the mill and on the ridge level of the house. The area was well supplied with electrical power by this time and the road was well-maintained. *Colvin Run Mill Historic Site archives.*

¹²⁸ Fairfax County Deed Book O11:229.

¹²⁹ Marty Nelson, "The Colvin Run School History," article included in "History of Colvin Run Schoolhouse" website, <http://www.colvinrun.org/About/History.aspx>.

and cornmeal as a business. With an eye toward protecting the old building from the vibrations caused by the roller milling equipment, he intended to remove the rollers and return to water power with stones for grinding, but needed to be sure he had a reliable supply of water. However, in 1940, the Virginia Department of Highways began to survey the Colvin Run Mill area for the purpose of relocating a portion of State Route 7 (the Alexandria Pike), which would cut the millrace in two, thus foiling Bailey's plans for a successful remodel.¹³⁰

The new section of highway was to be realigned south of the mill across Bailey's land between the mill and the mill dam (*figure 2-28*). The realignment would require a deep cut to be excavated through the hill northwest of the mill, and the excavated soil to be dumped at the foot of the hill. The highway engineers planned to pipe the millrace beneath the new highway for about 100 feet in a large concrete culvert. Bailey objected to this idea, complaining that the pipe was likely to become clogged and be difficult to clean out. He could not convince the Department of Highways to change the plan, so Bailey went to court over the matter.

Standing before both the County Circuit Court and the Virginia Supreme Court of Appeals, Bailey argued against what he saw as arbitrary proposals and an unauthorized taking of his land. The courts responded that, first, all alternatives had been explored for the new road and that this was the best option, and, secondly, that the public use represented by a gristmill was not a compelling enough reason to bar the use of eminent domain to acquire the land. Bailey turned to the U.S. Supreme Court, which denied his appeal; the relocation of the highway was implemented as proposed.¹³¹

Shortly after the Route 7 plans were revealed, World War II set in, exacerbating the challenges Bailey faced in his plans to rehabilitate the mill. Little of the equipment left by the Millards could be salvaged or used, so Bailey sold the cast-iron roller milling machinery for scrap metal to be used in war-time steel making. During the war, however, building material and machinery were difficult to obtain because of rationing, so Bailey could not acquire replacement equipment.

After the war, Bailey continued to work on the mill restoration, but the work was slow and there were

still too many difficulties. Bailey had invested in a solid-steel waterwheel to replace the old warped and rotted wooden wheel, but the construction of Route 7—as predicted—resulted in a diminished water supply to the mill, and flow could not be relied on to turn the wheel. Bailey considered alternate uses for the mill, such as refitting the mill as a restaurant, but none proved ultimately feasible. During this period, Bailey continued to maintain a farmyard northwest of the house. As evident in comparison of aerial photographs, at some point between 1937 and 1954, Bailey may have moved or added structures, but the configuration remained much as it had been during the Millard era (*figure 2-29*).

In the early 1960s, citizens interested in historic preservation petitioned the Fairfax County Board of Supervisors to buy the mill, but that plan failed. However, in 1965, through condemnation proceedings, the Fairfax County Park Authority acquired the mill and 30 acres of land, including the Miller's House, sheds, a barn, the millrace, and the mill dam.¹³²

A Mill Reborn, 1965–present

Map 2-3. Fairfax County Park Authority Ownership

To create the Colvin Run Mill Historic Site, the Park Authority acquired a total of five parcels between 1965 and 1980 (*figure 2-30*). The first was acquired in 1965 for the express purpose of preserving the mill building. The property included much of the current site on both sides of Route 7 and a small parcel on the other side of Colvin Run Road that held the original Cockrill's Store. The smaller parcel was sold after the building was moved to its present location in 1973 or 1974 and repurposed as the General Store.

Extensive research was conducted, and between 1968 and 1972, the mill was restored based on pieces of an old mill from Prince William County (*figure 2-31*). The reconstruction used wood components fabricated on the site inside the structure now known as "the Barn" (*figure 2-32*). The site was renovated around the mill, including the creation of a central turfed area planted with a shade tree (*figure 2-33*). The Miller's House was also renovated in 1968 to restore the main brick section. Three previous frame additions were removed and a modern addition

¹³⁰ Ibid. 1

¹³¹ Netherton, *Colvin Run Mill*, 28. 1

¹³² Netherton, *Colvin Run Mill*, 32.



Figure 2-29. Aerial photograph from 1954, showing the area surrounding Colvin Run Mill. Note the realignment of the State Route 7 cutting through the mill property. The current boundary of the Historic Site is shown in red. *Fairfax County Park Authority.*

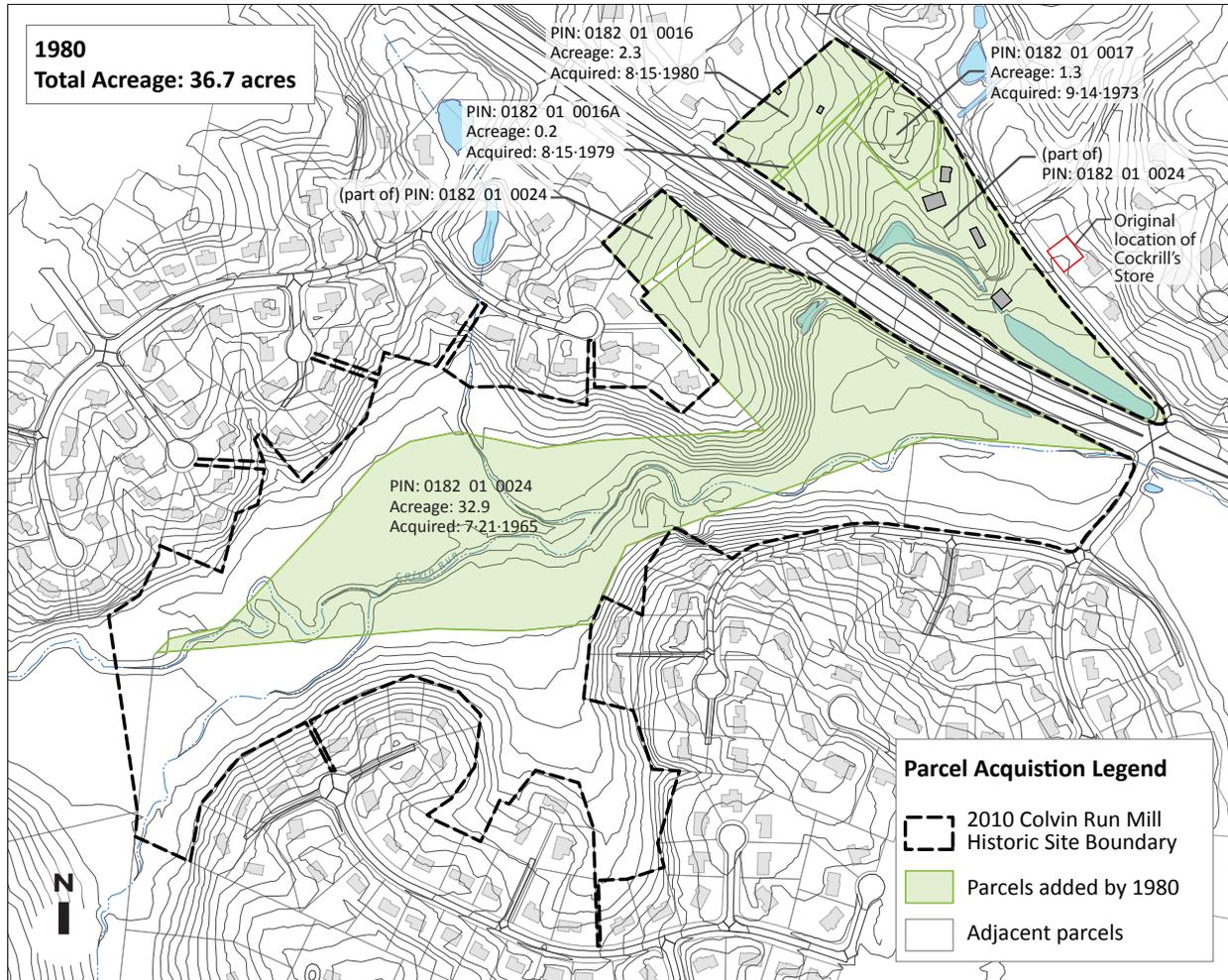


Figure 2-30. Map showing the dates of parcel acquisition for the Colvin Run Mill Historic Site. JMA, 2010; created from Fairfax County GIS data.

was constructed on the north end of the house (figures 2-34 through 2-37).¹³³ Other buildings were present on the site, but were demolished, rather than preserved or restored (figure 2-38). The mill opened to the public in 1972 with the waterwheel turning the stones for grinding corn and wheat. In 1972, the Fairfax County Department of Planning and Zoning established the Colvin Run Mill Historic District, in accordance with state enabling legislation to further protect the site.

In 1973, the Park Authority purchased another lot for the development of the current parking lot. There had been a wood-frame house located on the site until as late as 1963, along with a small barn or garage built into the hillside on the northern edge

of the property.¹³⁴ The house appears in the USDA aerial photograph from 1954, but is not known if it was still in place by 1974 when the parking lot was constructed. The stone foundation remains of the barn or garage have survived on the site. Around the same time, in 1973 or 1974, Cockrill's Store was moved from the parcel across Colvin Run Road to its current location on the Colvin Run Mill property.

In the late 1970s, the Barn was renovated as a gathering space, and a blacksmith shop was added to the side of the building. Since that time, there have been additional small changes to the property, most having to do with circulation improvements.

At some point either during this process or even before, the mill was documented by large format

133 Ibid.

134 HistoricAerials.com, accessed July 28, 2010.



Figure 2-31. Colvin Run Mill ca. 1965, before restoration. *Fairfax County Public Library.*



Figure 2-32. Colvin Run Mill ca. 1969, during restoration. The white building at the top was the restoration shop, now known as the Barn. *Fairfax County Public Library.*



Figure 2-33. Colvin Run Mill, ca. 1970s. *Colvin Run Mill Archives*.



Figure 2-34. The Miller's House ca. 1965, before restoration. Note the dry-stack stone wall in the foreground and the four hemlocks planted in front of the house. *Fairfax County Public Library.*



Figure 2-35. The Miller's House ca. 1972, after restoration. Hemlocks have been removed. *Fairfax County Public Library.*



Figure 2-36. North end of the Miller's House ca. 1972, after restoration. *Fairfax County Public Library.*



Figure 2-37. South end of the Miller's House ca. 1972, after restoration. *Fairfax County Public Library.*



Figure 2-38. Barn, ca. 1969. *Fairfax County Public Library.*

photography and a written report, and filed in the Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER) collections. It is possible that this work was done in 1969 when the property was documented for the Fairfax County Inventory of Historic Sites. The written report, at 50 pages, has not been located, but is noted on the HABS/HAER data card.¹³⁵ In 1977, Colvin Run Mill was listed on the National Register of Historic Places.

A year later, in 1978, the Park Authority purchased what had been a road right-of-way to the north of the parking lot, and then in 1980, another tract to the north of the right-of-way. There was a small house at one time on the tract, and although the house is gone, its well is extant on the property.

As a result of the restoration work done on the Colvin Run Mill, the Washington Metropolitan Chapter of the American Institute of Architects presented Fairfax County with its first-place award “for achievement of excellence in historic preservation and architectural design.” Just two

years later, the American Institute of Architects presented an Honor Award for Craftsmanship to the Park Authority “in recognition of the distinguished accomplishment in preservation craft technology in the program of restoration (1973) of the Colvin Run Mill.”¹³⁶

In 2001, Colvin Run Mill was designated a Historic Mechanical Engineering Landmark by the American Society of Mechanical Engineers.

Site History Chronology

A chronology of events relevant to the physical history of the site is as follows:

1739	John Colville granted 5,568 acres by the crown
1740	Tract transferred to William Fairfax
1753	Bryan Fairfax inherits the tract from William

¹³⁵ Historic American Buildings Survey, *Colvin Run Mill*, VA-502 (HABS VA,30-COLV,1-) <http://www.loc.gov/pictures/item/va0428/> (accessed May 7, 2010).

¹³⁶ Elizabeth S. David, “Colvin Run Mill; National Register of Historic Places Inventory—Nomination Form,” (Philadelphia: National Park Service, Mid-Atlantic Regional Office, 1977).

1763	1	George Washington purchases 275 acres of the tract from Bryan Fairfax	1883	Joseph House purchases mill property from John Powell
1802	1	William Sheppard obtains land grant for 49½ acres adjacent to Washington		Addison Millard purchases a portion of the mill property from Joseph House, which excluded Powell's mill pond
1803	1	William Sheppard purchases Washington's 275 acres from his executors	1898	Addison Millard dies
Early 1800s	1	William Sheppard constructs the mill and miller's house	ca. 1905	Millards retool the milling operation to run off steam power
1811	1	Philip Carper purchases 90 acres from Sheppard, including the mill system	1929	U.S. stock market crashes
1813	1	Philip Carper purchases an additional 37½ acres from Sheppard adjacent to the tract purchased in 1811	1934	Bernard Bailey purchases 37 acres of the mill property from the Millards
		Middle Turnpike created	1940s	State Route 7 constructed through the mill property
Early 1800s	1	Area suffers local depression	1965	Fairfax County acquires 30 acres of the mill property
1836	1	Middle Turnpike reaches Carper's mill	1968–1972	Mill and miller's house restored, barn constructed
1839	1	Carper purchases 38 acres from Orland Fairfax	1972	Colvin Run Mill Historic District established
1842	1	John Powell purchases the 164½-acre mill tract from Philip Carper and names the operation "Republican Mills"	1974	Cockrill's Store relocated to mill property
1849	1	Post office established close to the mill and named Republican Mills		Visitor parking lot constructed
1856	1	John Powell becomes postmaster of Republican Mills and relocates his household to the mill property	1977	Colvin Run Mill listed on National Register
1861	1	Battle of Dranesville occurs three miles north of the mill	Late 1970s	Barn renovated and blacksmith shop added
1878	1	Second post office established close to the mill	1978	Park Authority purchases right-of-way of old farm road
1880s	1	General store is established close to the mill	1980	Park Authority purchases tract to the north of the farm road

Existing Conditions

Introduction

This chapter documents the existing landscape features of the Colvin Run Mill Historic Site (CRMHS) through narrative text, photographs, and mapping, and is organized into three sections. The first section—Environmental Context and Setting—sets the site within a regional context and looks at the broader natural systems that affect the site property. The second section—Cultural Context and Setting—describes regional elements such as road corridors, planning and zoning policies, and demographics that provide a cultural framework for the site. The third section—Description by Landscape Characteristic—depicts in narrative and graphic form the landscape features and resources that comprise the site. These descriptions are organized into the following landscape characteristic categories:

- 1 patterns of spatial organization;
- 1 natural systems and features;
- 1 responses to natural features;
- 1 topographic modifications;
- 1 views and vistas;
- 1 land use;
- 1 circulation;
- 1 vegetation;
- 1 buildings and structures;
- 1 small-scale features; and
- 1 archeological features.

Use of these categories is consistent with the methodology recommended in National Register Bulletin 30: *Guidelines for Evaluating and Documenting Rural Historic Landscapes*, and the National Park Service's *A Guide to Cultural Landscape Reports: Contents, Process, and Techniques*. An inventory list of each of the documented landscape features follows the documentation section.

Environment Context and Setting

CRMHS is located in the northwestern reaches of Fairfax County, near its border with Loudoun County and the Potomac River. Fairfax County straddles two physiographic provinces: the Piedmont Upland and the Coastal Plain. CRMHS falls within the Piedmont Upland province, characterized by wide, rolling hills, except in large stream floodplains (*figure 3-1*). The province has a well-dissected dendritic drainage pattern. There is little-to-no old growth forest in this portion of Fairfax County due to several centuries of resource use and clearing activities as well as the environmental devastation wreaked by the Civil War in this region.

Rural areas of this province traditionally supported a range of agricultural activities well into the twentieth century. However, prior to the rapid development in northwestern Fairfax County during the latter half of the twentieth century, secondary growth forests had reclaimed much of the land that had previously been farmed, and today, remaining undeveloped land in the county is characterized by mature forest cover.¹ Local weather, with moderate mean temperatures, annual precipitation of nearly 45 inches, and generally fertile soils contributes to the suitability of the region for agriculture.

Geology

Geologically, the Piedmont Upland province, which occupies approximately 56 percent of Fairfax County, is underlain by metamorphic rocks, particularly schist, granite, gneiss, and greenstone. The geomorphology of this region is exhibited by hilltops that are broad and rolling, except in places located along large streams. Valleys are generally

11 Fairfax County Park Authority, "Fairfax County Comprehensive Plan, 2007 Edition, Chesapeake Bay Supplement, Adopted 11-15-2004." <http://www.fairfaxcounty.gov/dpz/comprehensiveplan/policyplan/chesapeakebay/waterfactors.pdf> (accessed May 20, 2010), 35-39.

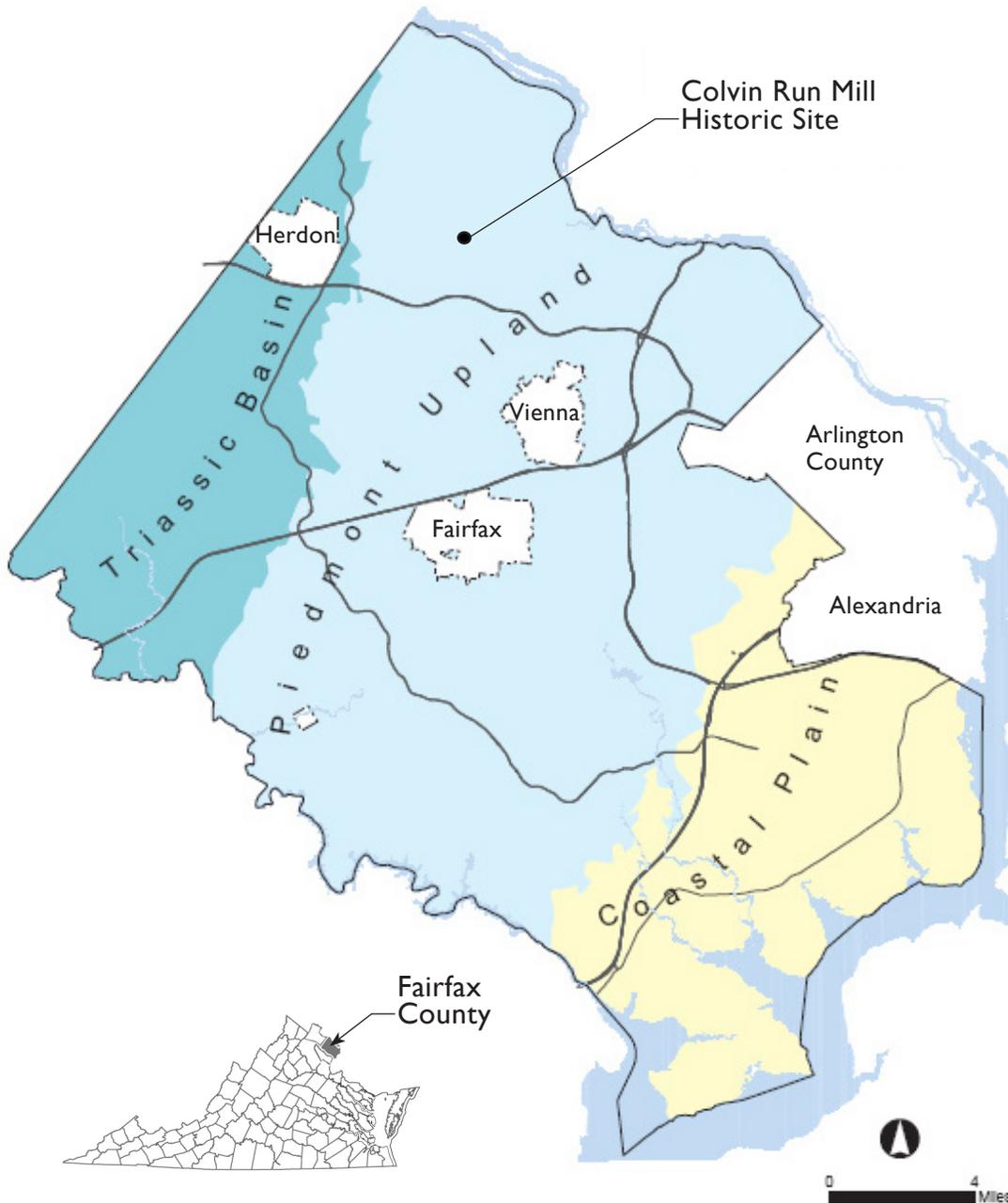


Figure 3-1. Colvin Run Mill Historic Site lies within the Piedmont Upland physiographic province of Fairfax County. *Fairfax County Park Authority, 2004.*

V-shaped with steep slopes and narrow ridge tops.²

Soils

Although CRMHS lies within the Piedmont Upland, much of the area of the site within the Colvin Run stream valley contains soils more typical of the Triassic Basin, the physiographic province that occurs on the far western edge of Fairfax County. Such an occurrence is not uncommon as remnant areas reflecting older geological epochs sometimes appear in the form of soil that has moved via water

2.1 Fairfax County Department of Public Works and Environmental Services, "Description and Interpretive Guide to NRCS Mapped Soils in Fairfax County," April 2008, 5-6; Fairfax County Park Authority, "Fairfax County Comprehensive Plan, 2007 Edition, Chesapeake Bay Supplement, Adopted 11-15-2004" <http://www.fairfaxcounty.gov/dpz/comprehensiveplan/policyplan/chesapeakebay/waterfactors.pdf> (accessed May 20, 2010), 23.

downstream through stream valleys. Soils of the Triassic Basin forming over sedimentary rock are often shallow (2 to 10 feet deep to bedrock). Large flat areas have low permeability and are slow to drain. Soils formed over igneous rock have a distinct plastic clay layer.³

Hydrology

Drainage patterns in Fairfax County are generally well-developed, dendritic systems. The entirety of the county lies within the Potomac River watershed, a subcomponent of the 64,000 square-mile Chesapeake Bay Watershed. Within the county, 30 local watersheds have been identified (*figure 3-2*).

CRMHS straddles the Colvin Run and Lower Difficult Run subwatersheds, both of which contribute to the Difficult Run watershed, which drains directly into the Potomac River. The southern part of the site is drained by Colvin Run, a degraded stream with steep banks, which flows northeast through the site. Part of the northern section drains toward Colvin Run Road where it is collected in drainage ditches and eventually channeled into the Lower Difficult Run watershed. The remainder feeds into the mill pond, which is also artificially fed by water pumped from Colvin Run and under State Route 7 (also known as Leesburg Pike) in order to operate the mill. This water falls into the tailrace and is then conveyed via a culvert east of the site, where it eventually rejoins Colvin Run. Colvin Run empties into Difficult Run, which in turn drains into the Potomac River to the north.

A section of Colvin Run and its associated drainageways within park boundaries are within a Chesapeake Bay Restoration Act Resource Protection Area (RPA) (*figure 3-3*). RPAs are environmentally sensitive areas buffering streams that drain into the Potomac River and the Chesapeake Bay. RPAs protect water quality by filtering pollutants and slowing stormwater runoff. They are also intended to prevent erosion and perform other critical biological and ecological functions. RPAs include all major floodplains as well as areas within one hundred feet of any tidal wetland or shore, any water body with perennial flow, and any nontidal wetlands connected by

surface flow or contiguous to a tidal wetland or waterbody with perennial flow.⁴

The region's hydrology has been heavily affected by residential, commercial, and industrial development in the late twentieth and early twenty-first centuries. Loss of woodlands and an increase in impermeable surfaces, coupled with the enhanced velocity caused by channelization, has contributed to heavy erosion of local creek and river banks. The water quality of local waterways has been diminished by the surface runoff from developed areas and other non-point-source pollution. The Fairfax County Park Authority is working to enhance local water quality through the establishment of detention areas and vegetation communities intended to filter sediments and pollutants from stormwater within the RPA. The Park Authority works with the U.S. Department of Agriculture and representatives of Chesapeake Bay Preservation Act enforcement agencies to ensure that parks manage these areas in compliance with all federal, state, and local laws.

Vegetation

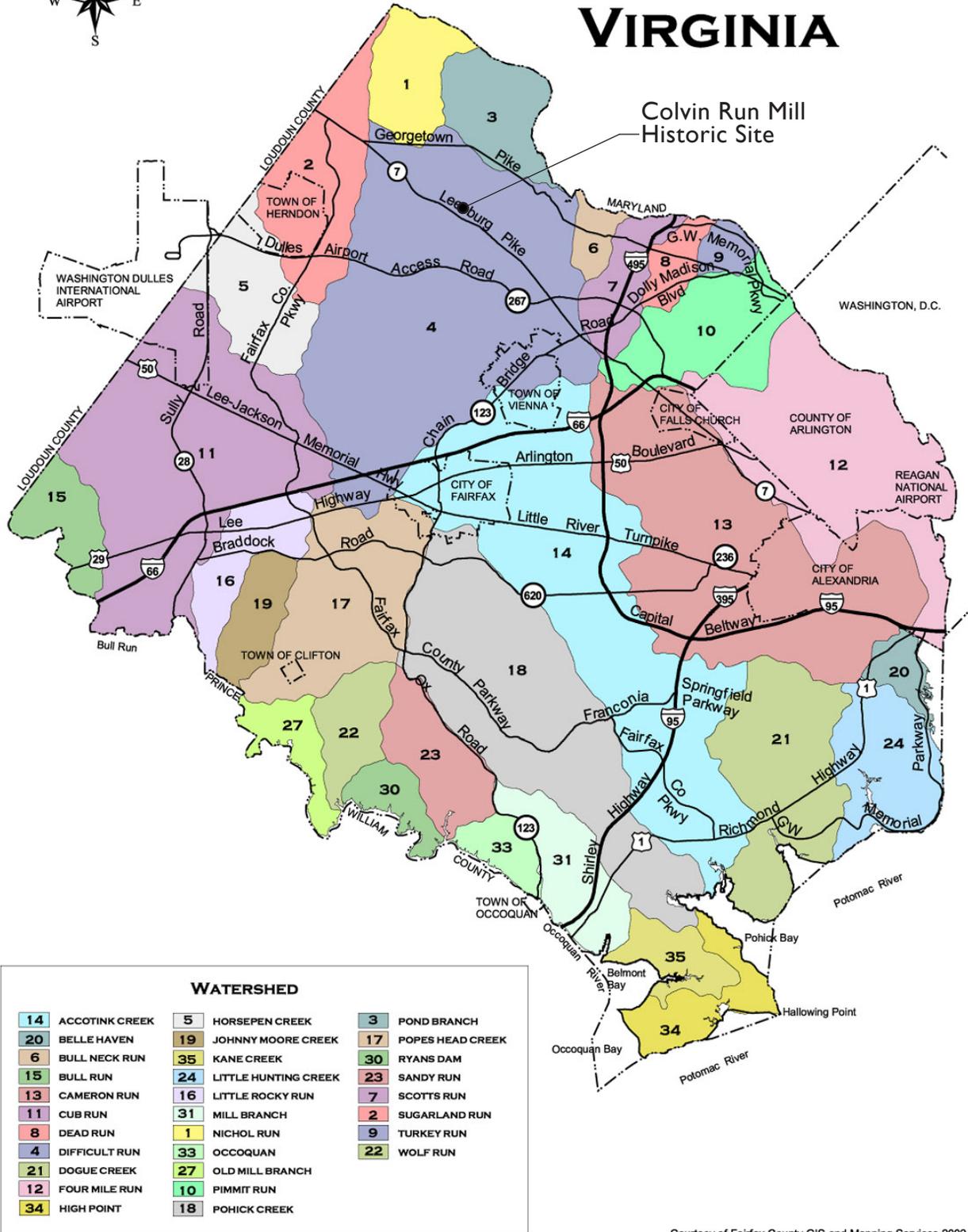
As previously mentioned, there is little to no pre-settlement vegetation left in Fairfax County, although many undeveloped tracts of land in the county are characterized by mature, second- or third-growth forest cover. Since the 1970s, there has been a steady decline in forest cover throughout the county, with an average decrease of a one percent loss per year. Large, unfragmented tracts of forest are generally limited to park lands and stream-valley corridors, such as the part of the Colvin Run stream valley that passes through CRMHS.⁵ Succession trends associated with local plant communities generally lead toward a climax community representative of the Eastern deciduous forest, with oak and hickory dominant in upland areas, and maple, sycamore, ash, and elm prevalent as canopy species in bottomland areas. Because previously disturbed areas are more susceptible to invasion from non-native plants, local woodland

³ Ibid.

⁴ 1 Fairfax County, "FAQs: Resource Protection Areas," <http://www.fairfaxcounty.gov/dpwes/navbar/faqs/rpa.htm> (accessed May 20, 2010).

⁵ 1 Fairfax County Park Authority, "Fairfax County Comprehensive Plan, 2007 Edition, Chesapeake Bay Supplement, Adopted 11-15-2004," <http://www.fairfaxcounty.gov/dpz/comprehensiveplan/policyplan/chesapeakebay/waterfactors.pdf> (accessed May 20, 2010), 35-39.

FAIRFAX COUNTY VIRGINIA



Courtesy of Fairfax County GIS and Mapping Services 2002

Figure 3-2. Colvin Run Mill Historic Site lies within the Difficult Run Watershed of Fairfax County. Fairfax County Park Authority, 2002.

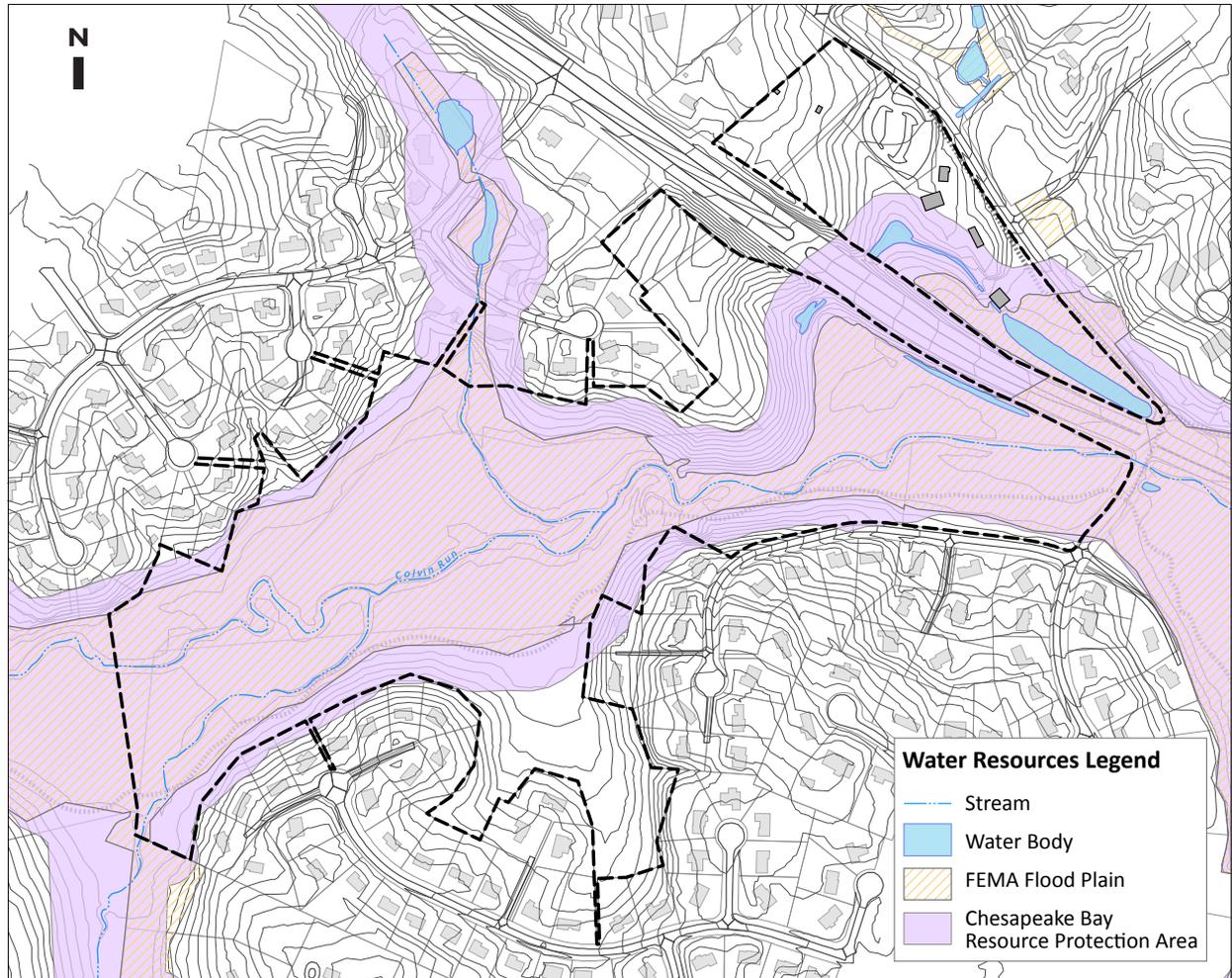


Figure 3-3. Hydrology and water resources in the vicinity of Colvin Run Mill Historic Site. JMA, 2010; created from Fairfax County GIS data.

communities are often heavily infested with invasive plants.

Cultural Context and Setting

Fairfax County is a rapidly growing area of suburban and urban development within the larger Washington, D.C., metropolitan area. Its proximity to the cities of Washington, D.C., Alexandria, and Arlington, as well as the Pentagon, Ronald Reagan Washington National Airport, and Dulles International Airport, has attracted intensive residential and commercial development. Over the past few decades, the population of the Upper Potomac Planning District, which includes the area of Colvin Run Mill and the towns of Great Falls, Reston, and Herndon, has increased dramatically. From 1970 to 2005, the population increased 900

percent from approximately 20,000 to 183,245 residents.⁶¹

Land Use and Zoning

CRMHS lies within the Hickory Community Planning Sector of the Upper Potomac Planning District (figure 3-4). The Upper Potomac Planning District is bounded on the north by the Potomac River, on the east by Difficult Run, on the south by Route 50, and on the west by Loudoun County and Dulles International Airport. The character of the

⁶¹ Fairfax County Park Authority, "Fairfax County Comprehensive Plan 2007, Upper Potomac Planning District." <http://www.fairfaxcounty.gov/dpz/comprehensiveplan/area3/upperpotomac.pdf> (accessed May 18, 2010); Fairfax County Park Authority, "Parks Existing Conditions Report – Upper Potomac Planning District, January 2008". http://www.fairfaxcounty.gov/parks/plandev/Downloads/XCR_UpperPotomac.pdf (accessed May 18, 2010).

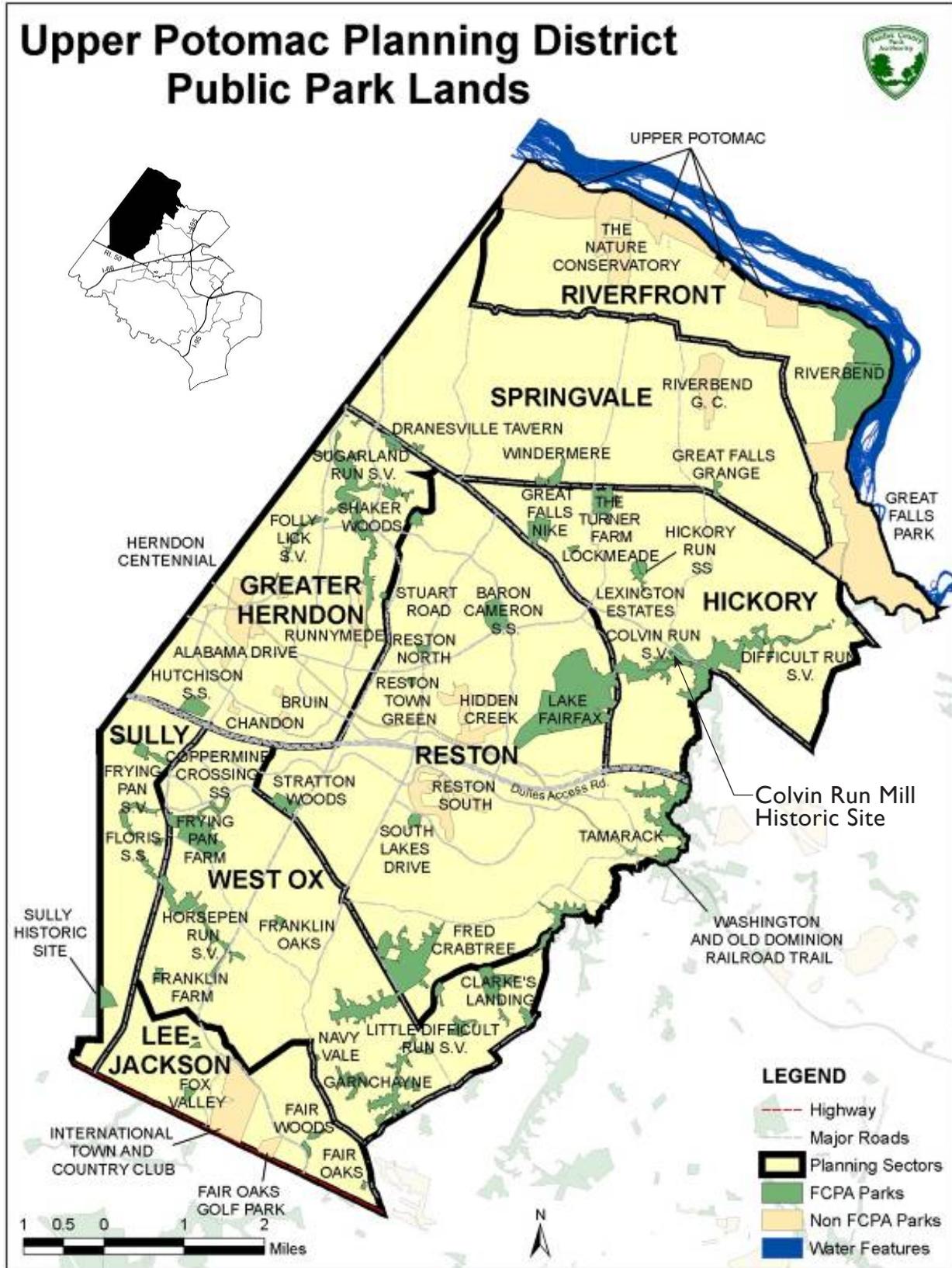


Figure 3-4. Upper Potomac Planning District. Fairfax County Park Authority, 2008.

Upper Potomac Planning District varies widely, from semi-rural Great Falls along the Potomac River to the urban Reston-Herndon area and Dulles Suburban Center, to suburban neighborhoods along West Ox Road and Route 50.

The Hickory Community Planning Sector is located east of Reston and Herndon. It is generally bounded by Georgetown Pike to the north, Old Dominion Drive and Towlston Road to the east, and Route 7 to the south. A piece of the sector extends south of Route 7 to the Dulles Airport Access Road, bounded on the east by a branch of Difficult Run and on the west by Hunter Mill Road. This sector is largely developed with stable low-density residential neighborhoods, but also includes local-serving commercial areas at Great Falls Village, at the intersection of Colvin Run Road with Walker Road, and the Colvin Run Mill Historic Overlay District. Other commercial uses are located in adjacent sectors.⁷

The 2007 edition of the Fairfax County Comprehensive Plan (amended through March 2010) recommends that the Hickory Community Sector should continue with large-lot infill suburban neighborhood development that is compatible with the sector's low-density residential character. It is also recommended that the Colvin Run Mill Historic Overlay District be maintained. The regulations of this overlay district limit development to residential uses with the exception of commercial uses appropriate to the mill site. All improvements are to be designed to be compatible with the scale and appearance of the historic site, and all proposed development within this district is to be reviewed by the Architectural Review Board. It is also recommended by the comprehensive plan that consideration be made towards expanding the district to include the Dr. Alfred Leigh House, located close to CRMHS.

Demographics

Fairfax County is the most populous jurisdiction in the Washington, D.C. metropolitan area. In general, this population is affluent, educated, and diverse. The median household income for the county is one of the highest in the nation, an estimated \$107,448

in 2008.⁸ In 2000, over half of the county's adult residents (persons age 25 and older) had attained a four-year college degree or higher educational status.⁹ Racial and ethnic minorities have grown from 6.8 percent in 1970 to 35.6 percent in 2000, and are projected to climb to 45 percent in 2010. Fairfax County has a large foreign-born population; in 2004, an estimated 26 percent of the total population was born outside the United States. Additionally, in 2004, approximately one out of every three residents of the county spoke a language other than English at home.¹⁰

Fairfax County has rapidly transitioned from a suburban, commuter-based economy to an employment destination. The largest growth area has been in the service sector, which includes federal contractors and technology-intensive businesses. This economic area is expected to expand, increasing more new jobs than there will be new residents in Fairfax County by 2020. In the Upper Potomac Planning District, nearly 60 percent of workers are employed in management, professional, and related occupations. Construction and transportation-related industries are minor concentrations of employment, each with less than 4 percent of the total workforce. Less than 70 of the almost 90,000 employed residents work in farming, fishing, or forestry-related occupations.¹¹

Transportation

CRMHS is accessed by vehicle from Colvin Run Road, which creates a mile-long loop on the north side of Route 7. This highway runs approximately southeast to northwest across Fairfax County and into Loudoun County, connecting Alexandria with Leesburg. Funding by the Virginia Department of Transportation to widen Route 7 to six lanes is

8 1 Fairfax County Department of Systems Management for Human Services, "Demographic Reports 2008, County of Fairfax, Virginia." <http://www.fairfaxcounty.gov/demogrph/demrpts/report/fullrpt.pdf> (accessed May 18, 2010), II-7.

9 1 Fairfax County, "Census Profiles by Planning District: UpperPotomac," http://www.fairfaxcounty.gov/demogrph/pdf/2000census_pd_prof.pdf (accessed May 18, 2010), 50-53.

10 Fairfax County Department of Systems Management for Human Services, "Anticipating the Future: A Discussion of Trends in Fairfax County, March 2006." http://www.fairfaxcounty.gov/demogrph/pdf/anticipating_future.pdf (accessed May 18, 2010), 15-17.

11 Fairfax County, "Census Profiles by Planning District: UpperPotomac," http://www.fairfaxcounty.gov/demogrph/pdf/2000census_pd_prof.pdf (accessed May 18, 2010), 50-53.

7 Ibid, 99.

currently under consideration.¹² Route 7 connects to the Dulles Toll Road (Route 267) to the south and the Fairfax County Parkway (Route 7100) to the west. The site is situated approximately halfway between the county line and Tysons Corner, which are five miles to the northwest and southeast, respectively. Other towns close to CRMHS include Great Falls, two miles to the north; Reston, three miles west; Vienna, five miles to the southeast; Herndon, five miles west; and Sterling, eight miles northwest.

In addition to vehicular transportation, CRMHS can be accessed via the Cross County Trail (CCT). The CCT, a 40-mile-long, multi-use trail network, travels approximately north-south through Fairfax County, and through a variety of different landscapes. It is paved with varying materials based on its location. The trail connects wooded stream valleys, developed parks, recreation centers, and historic sites. It also links to several other trail systems, including the W&OD trail, Fairfax County Parkway trail, and three stream-valley trail systems (figure 3-5).¹³ In the future, the trail will link to Prince William and Loudoun Counties, the Route 1 Bikeway, and the Potomac Heritage National Scenic Trail.

Historical Designation

Most of CRMHS is encompassed by the Colvin Run Mill Historic Overlay District, a Fairfax County designation established in 1972 (figure 3-6). Fairfax County has established a number of these districts to protect general areas, as well as individual structures, that have historical, architectural, or cultural significance. The designation is intended to:

protect against destruction of or encroachment upon such areas, structures, and premises; to encourage uses which will lead to their continuance, conservation, and improvement in a manner appropriate to the preservation of the cultural, social, economic, political, architectural, or archeological heritage of the County;

12 Virginia Department of Transportation, "Proposed Route 7 Widening (additional segment): From Reston Avenue to Lewinsville Road in Fairfax County," http://www.virginiadot.org/projects/northernvirginia/route_7_widening_additional_segment.asp (accessed May 19, 2010).

13 Fairfax County Park Authority, "Cross County Trail," <http://www.fairfaxcounty.gov/parks/cct/> (accessed May 19, 2010).

to prevent creation of environmental influences adverse to such purposes; and to assure that new structures and uses within such districts will be in keeping with the character to be preserved and enhanced.¹⁴

In addition to this designation, Colvin Run Mill itself is listed in the National Register of Historic Places as significant in the areas of agriculture and engineering. The nomination indicates the period from 1810 to 1820 as significant for being the known approximate date of construction of the mill.

Park Classification

Fairfax County's Parks Classification System organizes the county's parks into five distinct groups in accordance with their resources and public uses. Grouping parks according to common typical characteristics helps to guide open space and public facilities planning. The classification system is also intended to assist in the development of both public and private land management plans. The five types of parks are: Local Parks, District Parks, Countywide Parks, Resource-Based Parks, and Regional Parks.¹⁵ Due to the presence of significant cultural and natural resources, CRMHS is classified as a Resource-Based Park, defined as a park that primarily functions to preserve, protect, and interpret natural and/or cultural resources.

Friends of Colvin Run Mill

Activities of the non-profit organization, Friends of Colvin Run Mill (FOCRM), are focused on preserving the technological and industrial heritage represented by the historic site and its features. Members of the group were key to accomplishing the restoration of the mill in the 1960s and continue to support preservation of the mill and its site by providing supplemental funds for activities not funded by the Park Authority.¹⁶

14 Fairfax County, "Historic Overlay Districts," <http://www.fairfaxcounty.gov/dpz/historic/overlaydistricts.htm> (accessed May 21, 2010).

15 Fairfax County Park Authority, "Park Classification System," <http://www.fairfaxcounty.gov/parks/plandev/downloads/parkclassifications.pdf> (accessed May 21, 2010).

16 Fairfax County, "Friends of Colvin Run Mill," <http://www.fairfaxcounty.gov/parks/crm/friends.htm> (accessed December 27, 2010).

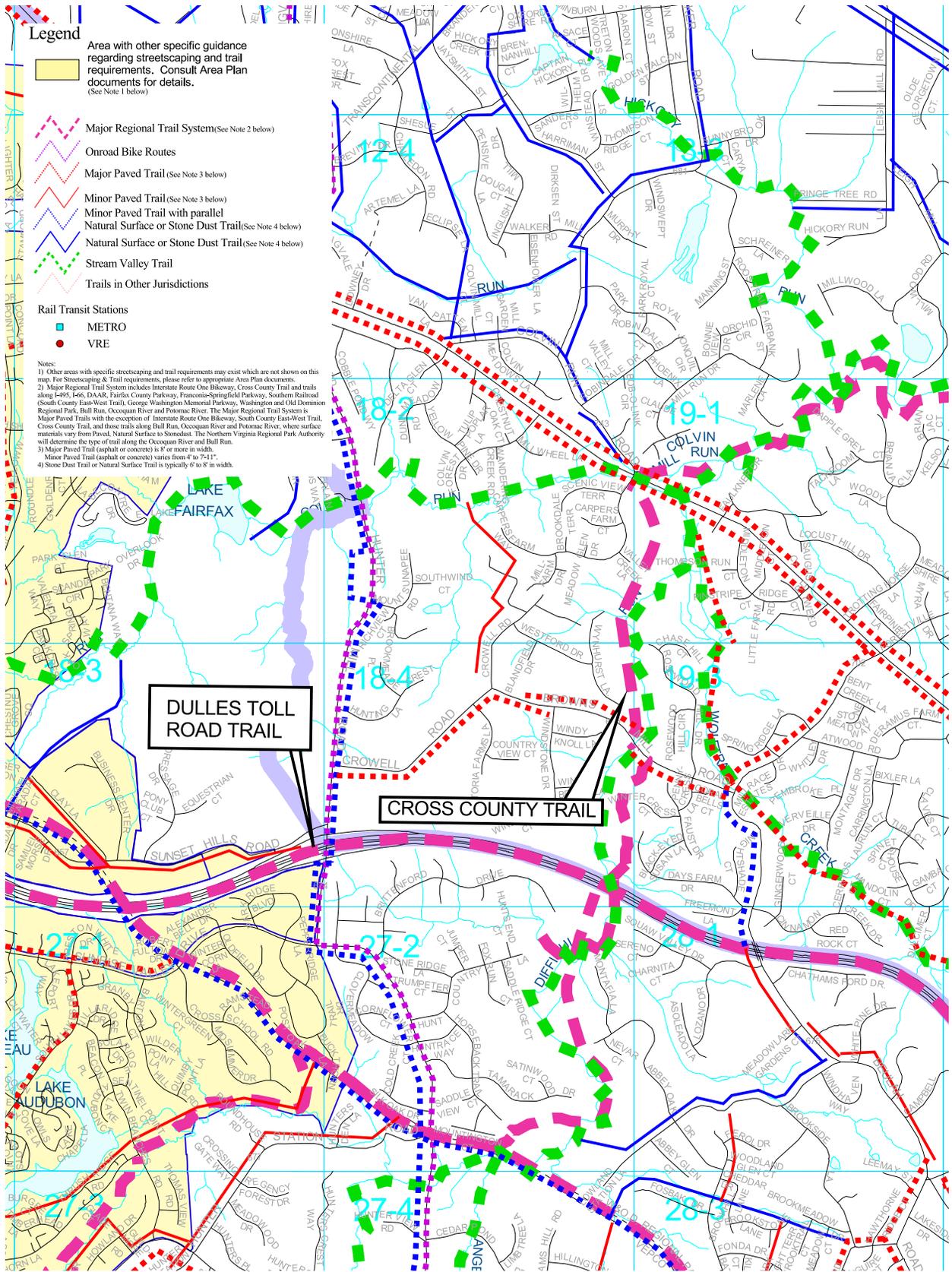
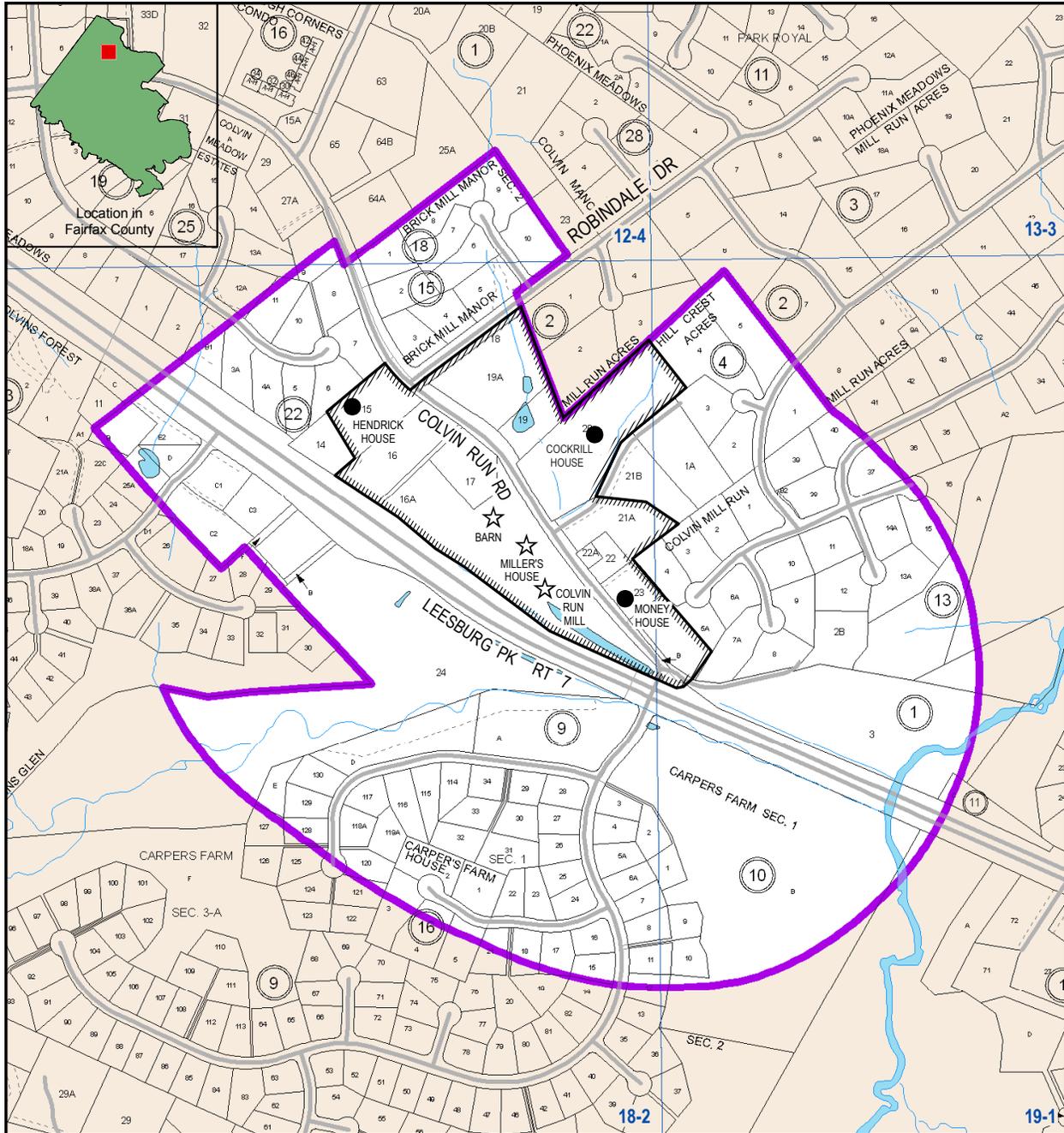


Figure 3-5. Portion of the Countywide Trails Plan, developed as part of the Fairfax County Comprehensive Plan. Fairfax County Park Authority, accessed 2010.



COLVIN RUN MILL
HISTORIC OVERLAY DISTRICT
FAIRFAX COUNTY, VA

Adopted by the Board of Supervisors 1972
 Supervisor Districts: Dranesville, Hunter Mill
 Planning Area and District: Area III, Upper Potomac; Area II, McLean
 Community Planning Sector: UP3 Hickory, M7 Wolf Trap
 Map data current to February 2009
 Map prepared by Planning Division,
 Department of Planning & Zoning



Legend

- ☆ Historic Property
- Contributing Property
- ▨ District Core Boundary
- █ District Boundary



G:\projects\ocp\pd\historic_districts\ColvinRun\ColvinRun_final.mxd

Figure 3-6. Colvin Run Mill Historic Overlay District. Fairfax County, 2009.

Description by Landscape Characteristic

CRMHS is an active public park. Visitors are invited to participate in many programs and special events throughout the year. While most visitors come to see the mill in action, they also benefit from visiting the Miller's House, the General Store, and the blacksmithing operation currently housed in the Barn. In addition to these buildings, other important features include the mill's headrace, the Mill Pond, the remains of three dams; the site of one of the mill ponds; the Colvin Run stream corridor; roads, paths, and trails; two historic quarry sites; woodlands, tree plantings, and gardens; and site furnishings, signs, and fences. All resources described below are in good condition unless otherwise noted.

The first section below describes the various distinct areas that comprise the site. Subsequent sections

provide descriptions of the individual features that are found within these different areas.

Patterns of Spatial Organization

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

CRMHS is comprised of three distinct places, that is, character areas, each of which has its own internal spatial organization (*figure 3-7*). East to west, these areas are as follows: the **Historic Core**; the **Visitor Services Complex**; and the **Historic Mill Pond Area**. The spatial organization of each of these places is described below.

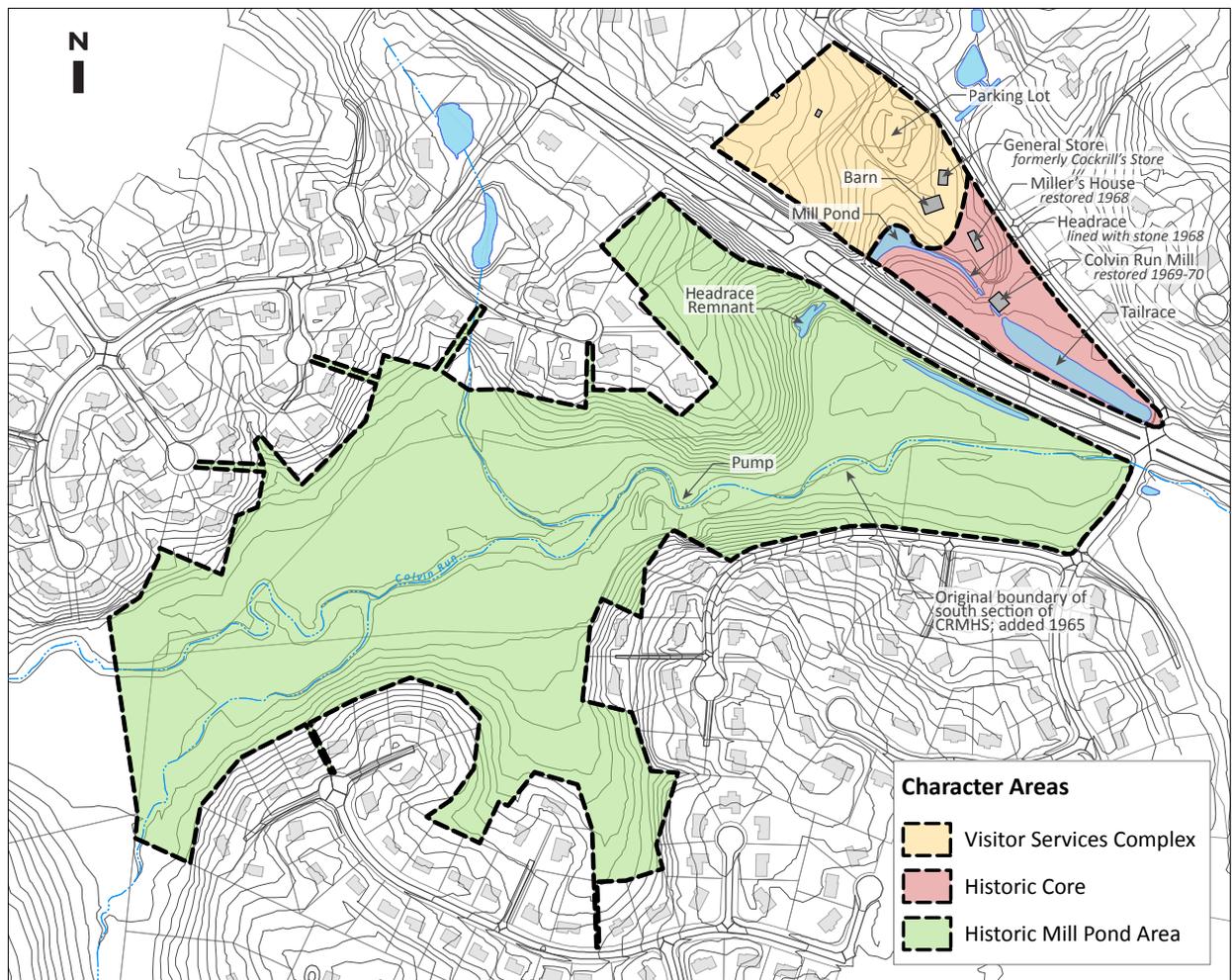


Figure 3-7. Colvin Run Mill Historic Site character areas. JMA, 2010; created from Fairfax County GIS data.

Historic Core

Map 3-1. Historic Core

The Historic Core encompasses much of the landscape associated with the historic functions of the Colvin Run Mill north of Route 7. This area is approximately four acres in size and includes buildings, structures, paths, walks, roads, and parking, as well as planted or naturalized vegetation associated with the historic mill and later visitor accommodations. Subcomponents of the Historic Core include the mill complex and the house complex. The **mill complex** is comprised of the restored Colvin Run Mill and waterwheel mechanism, the headrace, the tailrace, the Carpenter's Building, and the historic mill lane leading from the mill up to the Miller's House. These features are organized within the relatively flat triangular area bounded by Colvin Run Road, Route 7, and the slope below the Miller's House.

The mill is oriented to Colvin Run Road, which was the original alignment of the Alexandria-Leesburg Turnpike, and set back approximately 235 feet from the road (*figure 3-8*). Its functional waterwheel is attached to the southwest side of the building. About 45 feet to the northeast of the mill is the Carpenter's Building, a small wooden structure used for storage; the date of its construction is not known, but was likely in the 1970s after the mill was restored. A wide gravel drive, which doubles as an open work area, provides vehicular access to the mill from Colvin Run Road. This entrance, however, is not open for public use.

To the northwest of the mill is its headrace, which supplies water to turn the waterwheel (*figure 3-9*). It runs in an arc inscribed in the hillside about 15 feet above the level of the mill. The arc ends where Route 7 separates this end of the headrace from its original extension, extant on the south side of the highway. The current headrace is supplied by water pumped from Colvin Run through pipes laid in the bed of the historic headrace. The headrace water supply serves the mill and then descends into the tailrace, which passes through the floodplain below and into a culvert, eventually feeding into Colvin Run east of the site (*figure 3-10*). The culvert supports the end of Colvin Run Road, which, with its supporting structure, forms an almost dam-like barrier and spatial terminus to the site on that end. Two wooden bridges provide pedestrian access, one crossing the headrace, and the other crossing the tailrace.



Figure 3-8. The mill is oriented to Colvin Run Road (right), the original alignment of the Alexandria-Leesburg Turnpike. JMA, 2010.



Figure 3-9. The curved headrace, which supplies water to turn the waterwheel, is inscribed in a hill northwest of the mill. JMA, 2010.

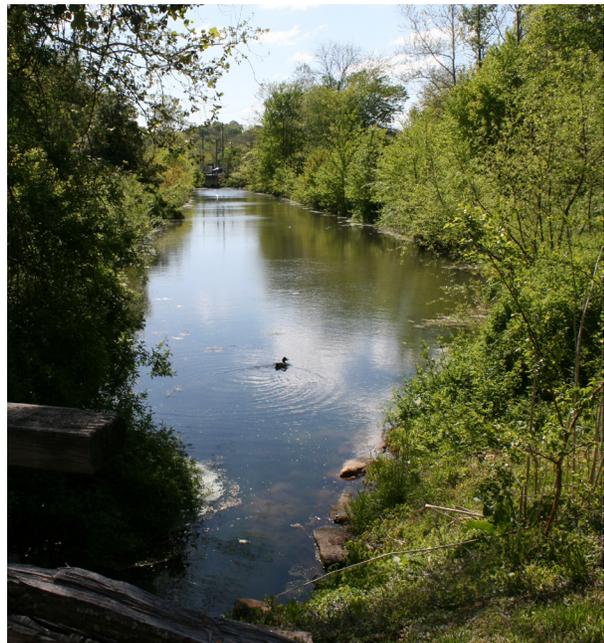


Figure 3-10. The tailrace passes through a culvert under Colvin Run Road, visible in the background of this photograph. JMA, 2010.

Up the hill to the northwest is the **house complex**, containing the Miller's House, the upper reaches of the mill lane, the garden spaces that surround it, and the upper reaches of the slope above the mill, which also contains the site of what was the icehouse (*figure 3-11*). To the north of the house is an open grassy area that is currently undefined, but which may historically have been a garden. To the south are two garden terraces, defined by stone walls that cascade down the slope toward the mill. The west side of the house functions as an entrance garden and is accessed by two paths. The east side, generally defined by an open lawn edged with a loose grouping of trees and shrubs, functions as the accessible entrance. The boundaries of this area are flexible and would ultimately be based on the location of the fence that once encompassed the house yard.



Figure 3-11. The Miller's House (left) can be reached from the mill via the mill lane. *JMA, 2010.*

Visitor Services Complex

Map 3-2. Visitor Services Complex

The Visitor Services Complex, at almost seven acres, is characterized by the clustered arrangement of the Barn, the General Store, the associated entrance kiosk, fencing, and the entry garden. The complex also includes the primary visitor entrance to the site, the visitor parking lot, a picnic area below it, a walking trail through the wooded area to the southwest, and a gravel area to the northwest which serves as an overflow parking and maintenance area.

The primary visitor entrance drive into the site is located on Colvin Run Road. A secondary drive extends from the entrance drive up the hill to the overflow parking and maintenance area. Approaching the complex through the main vehicular entrance and past the parking area, visitors have a view of the rear of the General Store, the Barn, and the entrance kiosk (*figure 3-12*). From the parking lot, visitors first encounter the entrance kiosk and landscaped path, which directs them towards their first stop, the General Store, where tickets to the site tour and souvenirs can be purchased (*figure 3-13*).

The General Store is oriented parallel to the slope line leading down to Colvin Run Road and at a diagonal to the road alignment at approximately 50 feet from the road edge. The Barn is located approximately 250 feet from the road edge and at an acute angle to the General Store, creating a partially enclosed space between the buildings in which large visiting groups can gather for orientation and to view demonstrations (*figure 3-14*).



Figure 3-12. The General Store, Barn, and entrance kiosk are accessed from the parking lot. *JMA, 2010.*

Adjacent to and below the entrance kiosk to the southwest is a tree-shaded picnic area with eight tables (*figure 3-15*). A nature trail leads from the picnic area into the small woodland that lies between it and Route 7.



Figure 3-13. The landscaped path leads visitors from the parking lot to the General Store. *JMA, 2010.*



Figure 3-14. The Barn is set at an acute angle to the General Store. *JMA, 2010.*



Figure 3-15. The shaded picnic area is sited adjacent to the parking lot. *JMA, 2010.*

Historic Mill Pond Area

Map 3-3. Historic Mill Pond

To the southwest of the Historic Core and the Visitor Services Complex, across Route 7, lies the Historic Mill Pond Area. At around 56 acres, it is characterized by rolling topography that was formed by the activities of water flowing into Colvin Run. It contains the remnants of three dams and associated headraces that served Colvin Run Mill, as well as two rock quarries that likely date from the mid-nineteenth century; there also is a high probability of American Indian archeological sites. The Historic Mill Pond Area is oriented roughly northeast to southwest and contains a stretch of Colvin Run and associated tributaries. Its irregular outline is a result of subdivision planning intended to provide access points from the surrounding neighborhoods into the Colvin Run stream valley.

Outcrops of schist and metagraywacke rock line the southern edge of the Historic Mill Pond Area, having been exposed by the activities of Colvin Run. Woodlands now occupy most of this part of the site, but thin out to become riparian meadow on its eastern end (*figure 3-16*).

The Historic Mill Pond Area is accessed by trails and service roads. One access point is located on the western side of Carpers Farm Way; from this point the trail leads to the west and then splits into two trails approximately 900 feet into the historic site (*see figure 3-16*). These trails, which serve pedestrians, equestrians, and bikers, provide access through the site for neighborhoods to the north and south (*figure 3-17*). Smaller trails leading from the neighborhoods connect with these two primary trails.



Figure 3-16. The trail system is accessed from Carper's Farm Way. Note the riparian meadow in the background. *JMA, 2010.*



Figure 3-17. The Historic Mill Pond Area is characterized by large areas of woodland, traversed by multi-use paths. *JMA, 2010.*

Natural Systems and Features

Natural systems and features are the environmental resources and qualities that have influenced the development and physical form of a landscape. These include the underlying landform and topography, soils, water resources which permeate and circulate the landscape, and attendant native plant communities.

Landform and Topography

CRMHS lies within the stream valley of **Colvin Run**, which is generally characterized by gently to moderately sloping topography with occasional rocky outcroppings. The northwest portion of the site is located at the edge of a ridge that cuts into the stream valley; the site slopes generally from west to east from the edge of the ridge, with steeper slopes just above the floodplain (*figure 3-18*). Slopes are



Figure 3-18. The topography slopes generally west to east from the edge of a ridge in the northwest portion of the site. *JMA, 2010.*

more level in the floodplain of Colvin Run, which approximately bisects the southern portion of the site (*figure 3-19*). The floodplain contains several low-lying wet areas that harbor standing water, classified as **wetlands** (*figure 3-20*). Steep slopes can also be found along the edges of Colvin Run in the western portion of the site due to erosion (*figure 3-21*). A number of **small tributaries**, some merely



Figure 3-19. Much of the topography associated with floodplain of Colvin Run is relatively level. *JMA, 2010.*



Figure 3-20. Low-lying wet area in the Colvin Run floodplain. *JMA, 2010.*

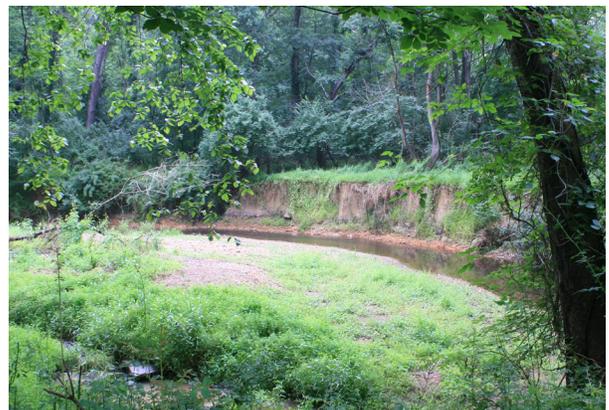


Figure 3-21. The level floodplain has several areas with steeply eroded banks. *JMA, 2010.*

seasonal drainage channels, fall into Colvin Run from the north and south.

The high point of the site occurs on a **knoll** on the south side of Route 7, overlooking the stream valley, at 285 feet above mean sea level (AMSL). The low point of the site, at 190 feet AMSL, is associated with Colvin Run as it is joined by a drainage ditch which runs along the south side of Route 7.

Geology

Rock outcroppings lie close to the surface in much of the area of CRMHS. The site lies within the Mather Gorge Formation, a highly complex metamorphosed sedimentary formation dating to

the Lower Cambrian or Late Proterozoic Era (figure 3-22). These rocks do not have fossils, but have been determined to be approximately 600 million years old. Two types of bedrock are found within CRMHS: one a quartz-rich **schist** with secondary deposits of **mica gneiss** (Zms), the other a **Metagraywacke** and **metasiltstone schist** (Zmg). The quartz-rich schist and mica gneiss deposits consist of a mixture of greenish gray rocks that have different textures. The schist is less massive and has a finer grain than the gneiss. The Metagraywacke and metasiltstone schist deposits consist of gray, dirty sandstone embedded with siltstone.¹⁷ One of the rock quarries is located in the area dominated by schist and the other in the area dominated by Metagraywacke (see figure 3-22).

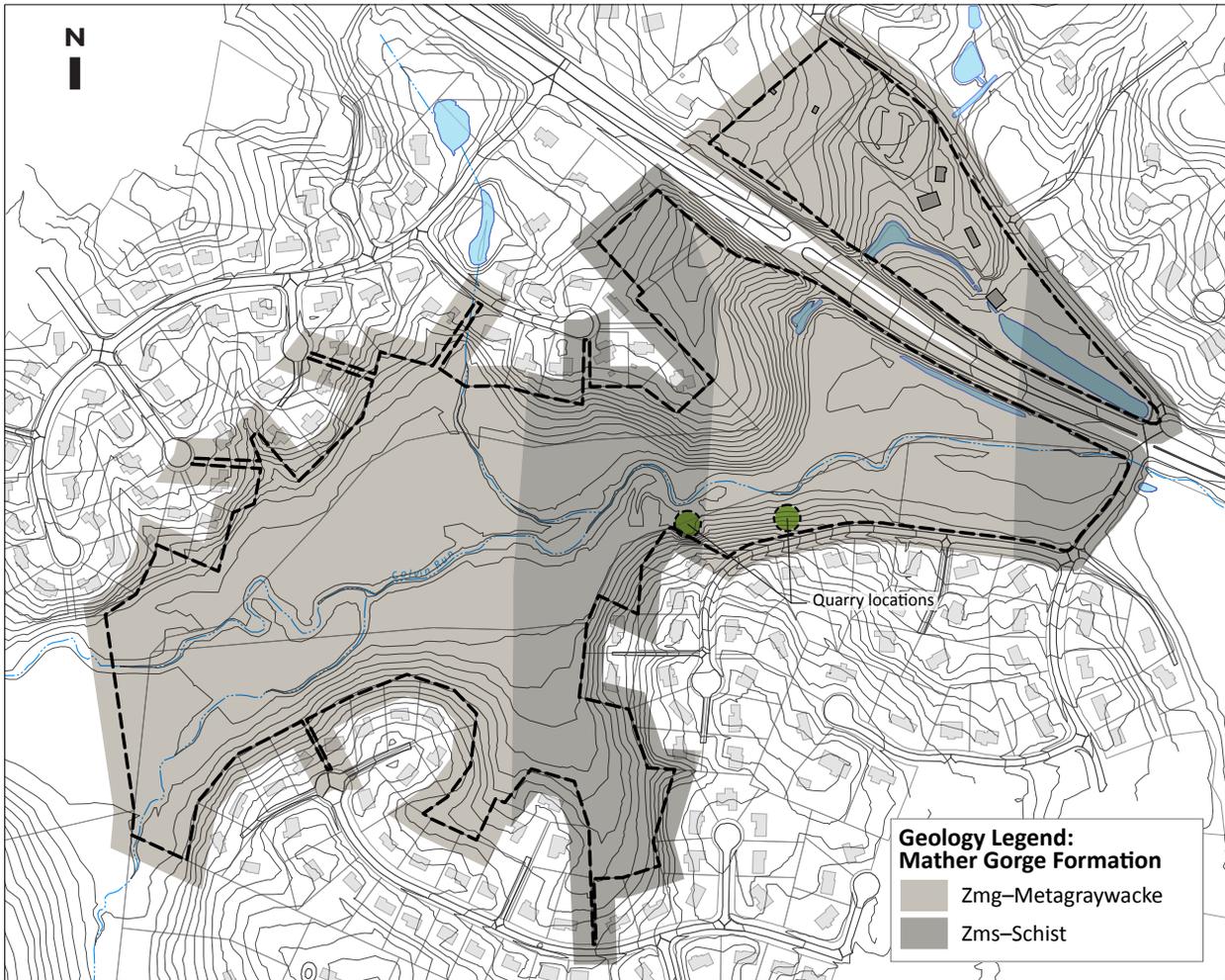


Figure 3-22. Bedrock geology and abandoned quarry sites in Colvin Run Mill Historic Site. JMA, 2010; created from USGS and Fairfax County GIS data.

¹⁷ 1 Scott Southworth and Carrie Fingeret, “Geologic Map of the Potomac River Gorge: Great Falls Park, Virginia, and Part of the C&O Canal National Historical Park, Maryland,” 2000.

Soils

Six soil types developed from the metamorphic rocks mentioned above are present within CRMHS (figure 3-23). These include Albano (1), Chantilly-Catlett (18), Chantilly-Delanco (20), Chantilly-Dulles (21), Chantilly-Nestoria (24), and Hattontown-Kelly (55). Albano soils dominate the site, though there are concentrations of Chantilly-Dulles soils which dominate the developed core of the site. The other soil types are found only along the far edges of the site and are of little concern for the purposes of this report, so only the properties of the Albano and the Chantilly-Dulles soils are described below. It appears that the mill was built on Albano soils and that the other structures were built on Chantilly-Dulles soils. County soil numbers are shown in parentheses.

Albano (1) soil consists of silty and clayey alluvium over weathered bedrock. The soil is poorly drained

with the water table at or near the surface during much of the year. It occurs on almost perfectly flat areas in and around drainage ways and can contain plastic clays with moderate shrink/swell capacities. Depth to bedrock is 3½ to 5 feet, but soil strength may be poor because of wetness and plastic clays. Septic drainfields and infiltration trenches are poorly suited because of the high water table and shallow bedrock. Hydric soils, which include non-tidal wetlands, occur extensively in this mapping unit. Albano soils are considered Class III soils, which are undisturbed natural soils that characteristically have high shrink/swell or expansion issues, are highly compressible and low-bearing, have a high water table and are prone to flooding, and have unstable slopes. It is within this soil area that the Colvin Run Mill was originally constructed, which explains the ongoing problems with the stability of the southwest wall of the structure.

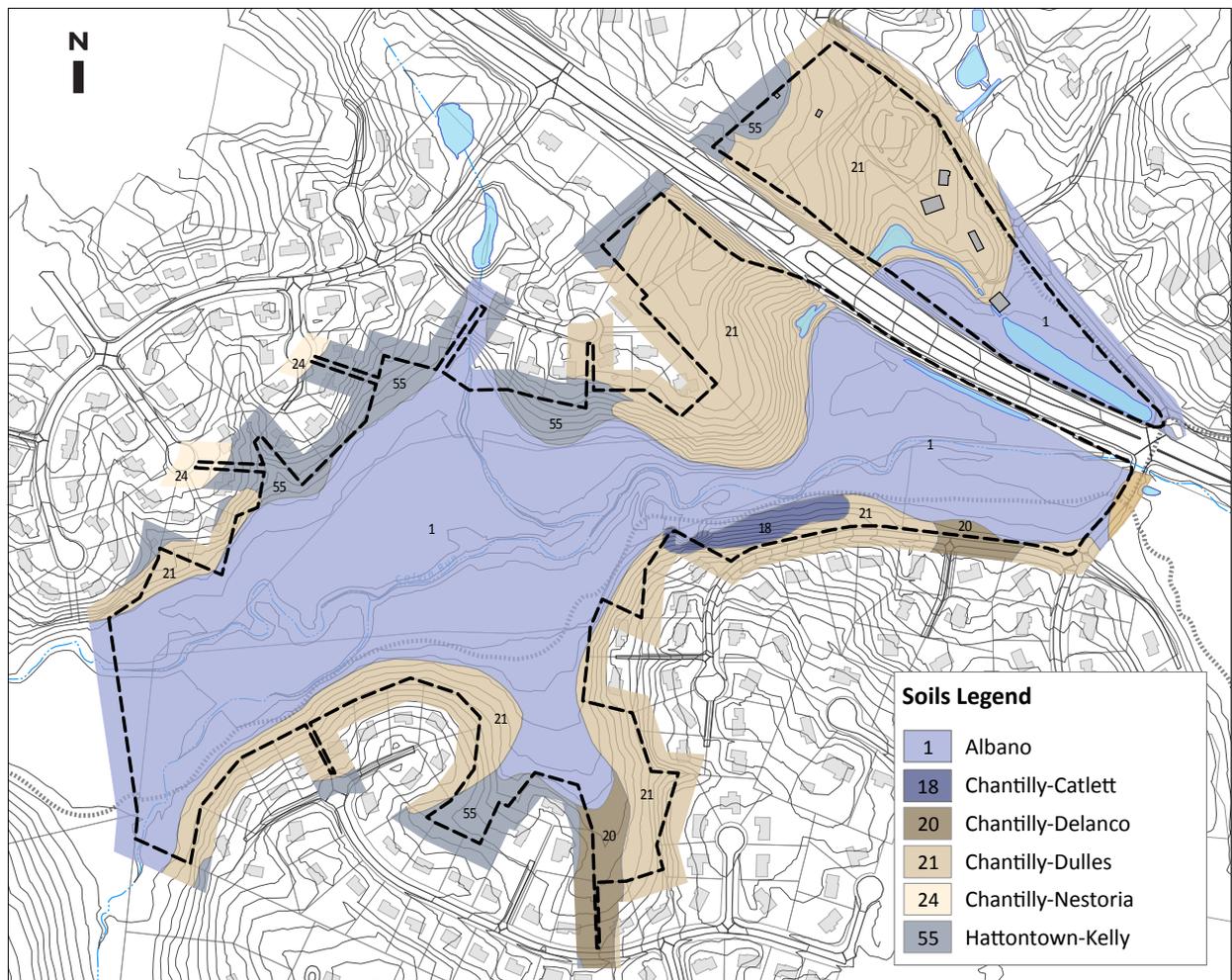


Figure 3-23. Soil types found in Colvin Run Mill Historic Site. JMA, 2010; created from Fairfax County GIS data.

Chantilly-Dulles Complex (21) is a mixture of the development-disturbed Chantilly soil and the natural Dulles soil. This soil dominates in the developed part of the CRMHS and above the Colvin Run floodplain along the southern border to the site. Typically, this soil complex occurs in areas with sedimentary shale, sandstone, and siltstone bedrock that have been developed but retain a good portion of undisturbed soil. Chantilly soil will be clustered around foundations, streets, sidewalks, playing fields, and other graded areas. Dulles soil will be found under older vegetation in ungraded back and front yards and common areas.

The Chantilly-Dulles Complex is considered to be a Class IVA soil, which is described as disturbed land associated with Class III soil, of which the Dulles is one. It is likely that the Chantilly soil was imported as fill for foundation support and other purposes. Individually, these soils can be described as follows:

Chantilly (12) is a dark red soil consisting of sand, silt, and clay weathered from sedimentary bedrock that has been mixed, graded, and compacted during development and construction. Characteristics of the soil can be quite variable depending on what materials were mixed in during construction. The subsoil is generally loam but can range from sandy loam to clay. The soil has been compacted, resulting in high strength and slow permeability. The soil is well drained and its depth to bedrock is greater than five feet. In most cases, foundation support is suitable, assuming that the soil is well compacted and contains few clays. Because of the slow permeability, suitability for septic drainfields is poor and for infiltration trenches is marginal. Grading and subsurface drains may be needed to eliminate wet yards caused by the slow permeability. This soil is found in developed areas with sandstone, siltstone, and shale bedrock.

Dulles (34) is a silty to clayey soil occurring in drainageways and at the bottom of slopes, and is underlain by sandstone, siltstone, and shale. Slowly permeable plastic clays exist in the subsoil. Depth to weathered bedrock is typically 40 inches. Depth to hard, unweathered bedrock is typically five feet. A perched water table forms atop the bedrock and clays one foot below the surface. Foundation support may be poor because of soft plastic soil and seasonal saturation. Basements below existing grade are

not recommended because of potential wetness problems. Engineered drainage is often needed to eliminate wet yards. Septic drainfields and infiltration trenches are poorly suited because of slow permeability, high water table, and shallow bedrock. The bedrock disintegrates rapidly, limiting its use in engineered fill, road embankment, and trench backfill.

Water Resources

Water resources within the historic site include streams, wetlands, features associated with the mill, and other drainageways. The dominant water resource of CRMHS is Colvin Run, which drains from west to east through the portion of the property south of Route 7, joining with Difficult Run about a quarter of a mile east of the site north of Route 7. Several small tributaries, drainageways, and ephemeral streams flow through the site into Colvin Run from the arms of the undeveloped area that extends into the surrounding neighborhoods. Colvin Run is described as a degraded stream characterized by steep banks with exposed soil, tree roots, bank failure, downed trees in the channel, and poor riffle-pool structure (*figure 3-24*).¹⁸ Colvin Run is also described as a flashy stream with high energy during storm events and displays a poor overall stream habitat. Several of its feeder creeks exhibit the same characteristics (*figure 3-25*).¹⁹ Colvin Run and its tributaries are included within the Chesapeake Bay Watershed RPA, discussed earlier (*see figure 3-3*). A small **spring** flows into Colvin Run



Figure 3-24. The banks of Colvin Run are severely eroded in several locations. *JMA, 2010.*

¹⁸ Memorandum from Charles Smith, Naturalist III, Fairfax County Park Authority, 2008.

¹⁹ Fairfax County Department of Public Works and Environmental Services, "Difficult Run Watershed Management Plan" (2007): 3.97-3.118.



Figure 3-25. Several of the stream's feeder creeks also exhibit erosion. JMA, 2010.

near the site of the quarries; this is thought to be the former location of a springhouse and is marked by a stand of skunk cabbage (*Symplocarpus foetidus*).

The National Wetlands Inventory identifies two types of non-tidal wetlands in the southern portion of the site, each with different water regimes (figure 3-26).²⁰ Two areas of Freshwater Emergent Wetland are located in the northeast corner of the southern portion of the site, one semi-permanently flooded and the other seasonally flooded. Freshwater Emergent Wetlands are characterized by persistent perennial emergent vegetation that typically remains standing until the beginning of the next growing season. Semi-permanently flooded areas (PEM1F) typically have standing water throughout the growing season (see figure 3-20). Seasonally

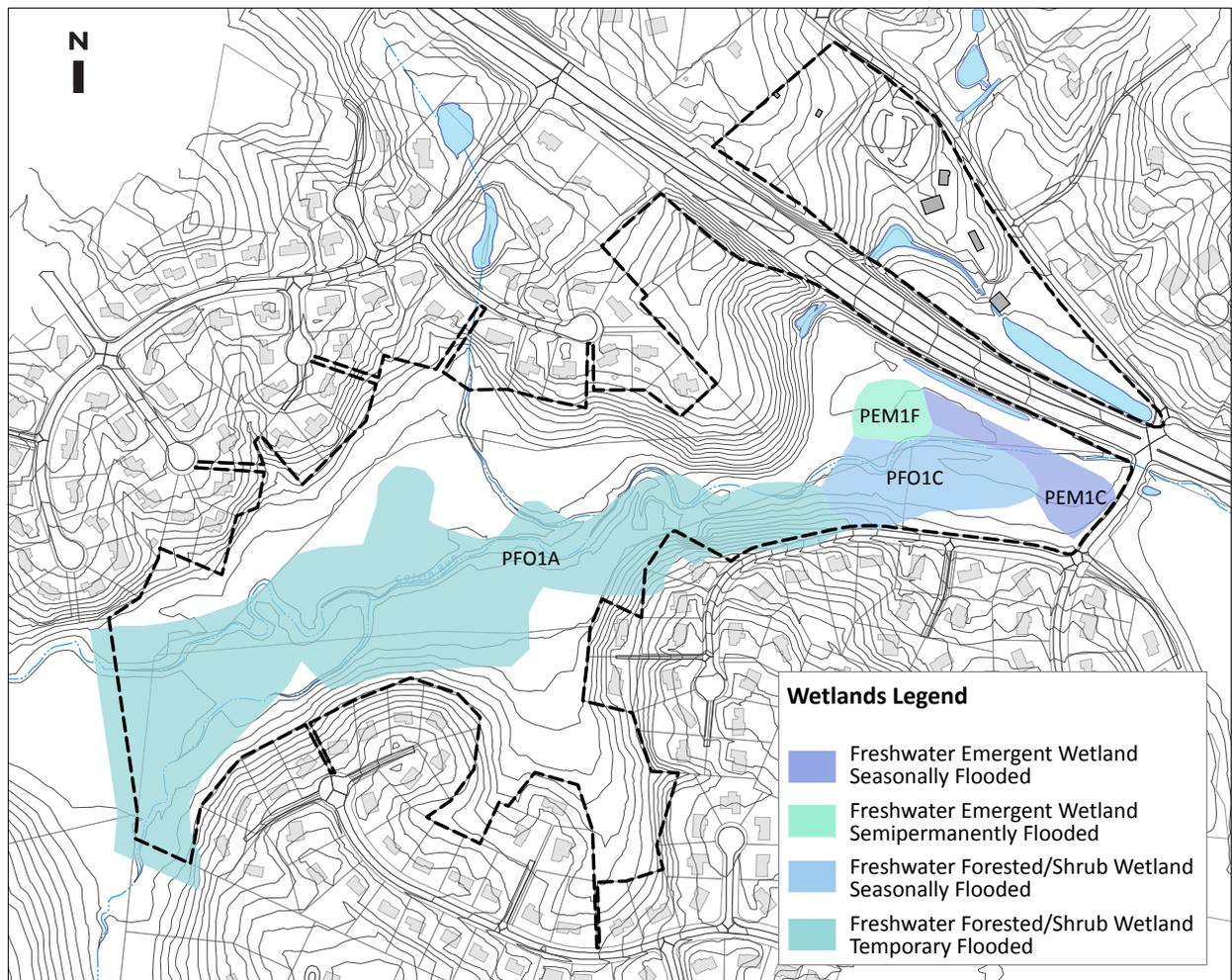


Figure 3-26. Wetlands found in Colvin Run Mill Historic Site. JMA, 2010; created from Fairfax County GIS data and U.S. Fish and Wildlife National Wetlands Inventory data.

²⁰ U.S. Fish and Wildlife Service, National Wetlands Inventory, "Wetlands Mapper" <http://www.fws.gov/wetlands/Data/index.html> (accessed December 29, 2010).

flooded areas (PEMIC) have surface water for extended periods early in the growing season, but which dissipates by the end of the growing season. Two areas of Freshwater Forested/Shrub Wetland are located along the Colvin Run stream corridor, one seasonally flooded and one temporarily flooded. Freshwater Forested/Shrub Wetlands are characterized by woody trees or shrubs, typically broad-leaved deciduous trees that lose their leaves during the cold or dry season. Temporary flooded areas (PFO1A) may have surface water present for brief periods during the growing season, but typically have a water table that lies below the soil surface. Associated vegetation ranges from wetland to upland species. Seasonally flooded areas (PFO1C) have surface water present for extended periods early in the growing season, but which dissipates by the end of the growing season.

Concrete drainageways are located along the south side of Route 7, which carry the flow of Colvin Run as it empties toward Difficult Run.

Other water resources in the historic site are associated with the millrace and pumping system, described later in this chapter in *Constructed Water Features* and *Small-scale Features—Utilities* (figure 3-27).



Figure 3-27. Colvin Run in the vicinity of the pump that carries water to the mill headrace. JMA, 2010.

Plant Communities

At CRMHS, the underlying shale, sandstone, siltstone, and diabase bedrock, low soil permeability, high water table, and shallow, plastic clay soils are responsible for the character of the site's vegetative communities. In addition, human manipulation, edge exposure, and surrounding residential areas have introduced numerous invasive plant species.

A small portion of the site is maintained in open vegetative cover, including **riparian meadows** and manicured lawns, but overall, **woodland areas** dominate the historic site.

The northern portion of the property, containing the Historic Core and the Visitor Services Complex, is characterized overall by highly disturbed vegetation in areas outside of those displaying cultural, or planted, ornamental vegetation. The small wooded area on the western end of the parcel adjacent to Route 7 is an early to mid-succession forest stand dominated by black locust, black cherry, black walnut, and red maple. The understory includes native tree and shrub species, but also a high degree of non-native **invasive plant cover**. Outside of this wooded area, vegetation is characterized by a mixture of native and non-native with a high invasive plant component.

The southern portion of the property, the Historic Mill Pond Area, contains roughly six habitat types defined by location in the landscape and cover type: 1) mature upland forest, 2) early to mid-succession upland forest, 3) upland field, 4) mature bottomland forest, 5) early to mid-succession bottomland forest, and 6) wetland or wet meadow. The only high-quality community in this area is the mature upland forest, probably not more than five acres in size, located along the southern edge of the parcel near Scenic View Terrace (see figures 3-17 and 3-18).

Rare, Threatened, or Endangered Plant and Animal Species

The Virginia Natural Heritage program's website identifies hundreds of plant species that are rare, threatened, or endangered. Further investigation is needed to identify species on that list that grow within the historic site boundaries.²¹ Rare, threatened, or endangered animal species that may be present within the site have likewise not been identified.

Invasive Species

The southern portion of the property is vegetated by a mix of native and non-native plants. Several of the non-native species, often found in proximity to surrounding neighborhoods, are considered

21 John F. Townsend, "Natural Heritage Resources of Virginia: Rare Plants," April 2009. Online at http://www.dcr.virginia.gov/natural_heritage/documents/plantlist09.pdf (accessed May 20, 2010).

invasive. These include: tree of heaven (*Ailanthus altissima*) Japanese stilt grass (*Microstegium vimineum*), burning bush (*Euonymus alatus*), Japanese barberry (*Berberis thunbergii*), Japanese holly (*Ilex crenata*), Oriental bittersweet (*Celastrus orbiculatus*), Japanese honeysuckle (*Lonicera japonica*), multiflora rose (*Rosa multiflora*), English ivy (*Hedera helix*), Japanese wisteria (*Wisteria floribunda*), and bamboo. There has been a high degree of relatively recent human disturbance throughout the site, which increases the likelihood of the introduction of invasives.

Responses to Natural Resources

The primary responses to natural resources associated with CRMHS include the **siting of the mill along Colvin Run, stabilization of local non-structural soils** to support the mill structure, the **excavation of a hillside terrace to support the mill headrace**, the **establishment of the tailrace in**



Figure 3-28. A pumping system was installed along Colvin Run to feed the mill headrace after the restoration of the mill. The pump equipment was replaced in 2006. *JMA, 2010.*

the Colvin Run floodplain, the construction of a **pumpingsystem** to feed the mill, and **establishment of the rock quarries in areas of shallow bedrock** (figures 3-28 and 3-29).

Topographic Modifications

A number of modifications to the natural topography of the Colvin Run Mill site were made to facilitate its industrial use. Essential to the mill operation was the creation of **earthen dams on Colvin Run** to create the various mill ponds that supplied the headrace over its history. The dams which created the various mill ponds and supplied headraces have been breached and their earthworks all but eroded away.

It was also necessary to create **linear earthen terraces** to support the headrace on the side of the hill below the mill pond (figure 3-30). For most of its length, the headrace itself was originally a simple **earthen ditch** excavated into the linear terrace. Most of the length of the earthen ditch that constituted the headrace has been filled in the southern part of the site, and although the linear terraces on which it was constructed are still visible, they are eroding and are obscured by vegetation.

To support the mill, a **broad earthen terrace** would have been excavated at the bottom of the hill and an area in front graded to accommodate mill-related activities. The earthen terrace and graded area associated with the mill are still evident, but were modified as part of the mill restoration. The graded area associated with the mill exhibits some signs of erosion due to stormwater run-off from Colvin Run Road.



Figure 3-29. Two abandoned quarry sites are located in the southern portion of the site. *JMA, 2010.*

Other modifications to the topography included **road cuts** excavated to create the mill lane, the main CRMHS entrance, and the entrance to the overflow parking area. Very intensive modifications were also made to the site when the **Route 7 berm** was constructed. Although originally a fairly flat area along the ridge top, the area above the General Store was leveled **to create the parking lot**. In addition to this work, the current **Mill Pond** and **tailrace** on the north side of Route 7 were also excavated to hold the water that is now being supplied by the pumping system (*figure 3-31*). The tailrace exhibits signs of erosion and has widened considerably since its installation.

Views and Vistas

Views are defined as expansive and panoramic prospects, whether naturally occurring or designed, while vistas are deliberately designed



Figure 3-30. Level terraces were constructed to hold the headrace in the southern portion of the site. *JMA, 2010.*



Figure 3-31. Intensive topographic modifications were made to excavate the tailrace and mill pond during the mill restoration following the installation of Route 7. *Friends of Colvin Run Mill, Currie Collection.*

and enhanced views directing the gaze to a linear feature or particular focal point. In the north portion of CRMHS, some views from adjacent areas and within the site contribute to a visitor's sense of the site's history. Views of the surrounding developed area are often screened to protect the historic character of the site from modern influences and to imbue the site with a more rural feeling. In the southern portion of the site, views within the site and of surrounding areas are limited by vegetation, though views of the adjacent neighborhoods are visible in several locations.

Dynamic views of the mill, tailrace, and Miller's House are afforded from Colvin Run Road along the northeast edge of the site. Vegetation along the edge of the tailrace partially screens views of the mill and tailrace near the southeast end of the road near its intersection with Route 7 (*figure 3-32*). The mill and Miller's House are more visible as visitors travel northwest along Colvin Run Road (*figures 3-33 and 3-34*). **Views to the mill from Route 7** are screened by vegetation between the tailrace and the edge of the highway.



Figure 3-32. The mill and tailrace are partially screened from view along Colvin Run Road by vegetation growing between the tailrace and the edge of the site. *JMA, 2010.*



Figure 3-33. A view of the mill from the secondary entrance off Colvin Run Road. *JMA, 2010.*



Figure 3-34. A view of the Miller's House from Colvin Run Road. Fairfax County Park Authority, 2009.

As mentioned previously, **views** within the southern portion of CRMHS are **limited** by the woodland vegetation. Within the northern portion of the site, there is a **directed view of the mill down the mill lane**, past the Miller's House, which is partially screened seasonally by ornamental vegetation (figure 3-35). There is also an **exchange of views between the mill and the Miller's House**. These views are partially blocked by non-contributing vegetation and site furnishings on the knoll between the two buildings (figures 3-36 and 3-37).



Figure 3-35. Directed view to the mill down the mill lane. JMA, 2010.

The woodlands in the southern portion of the site serve as a **visual buffer to the adjacent residential developments**, with occasional or seasonal views of houses close to the boundaries of the site (figure 3-38). There are also several areas with **open views to the adjacent developments** (figure 3-39). In the northern portion of the site, views to Route 7 are screened as much as possible by vegetation along the road (figure 3-40).



Figure 3-36. View of the Miller's House from beside the mill. JMA, 2010.



Figure 3-37. View of the mill from the knoll on which the Miller's House stands. The view is partially blocked by non-contributing fencing and other small-scale features. JMA, 2010.



Figure 3-38. Woodlands buffer most views out of the historic site, but there are some screened views of the adjacent developments. JMA, 2010.



Figure 3-39. Open views of the adjacent neighborhoods are present in several locations along the edges of the site. *Fairfax County Park Authority, 2007.*



Figure 3-40. Views of Route 7 from within the site are screened by vegetation along the road. *JMA, 2010.*

Land Uses

Land use describes the principal activities in a landscape that form, shape, and organize it as a result of human interaction. CRMHS is a multi-use park in the middle of a densely developed suburban area. As such, it is programmed to serve the needs of various populations and demographics. The site interprets history, preserves natural resources, provides community recreational opportunities, and provides facilities for additional educational activities. Land uses currently represented within the historic site include: **Industrial; Commercial; Museum/Interpretive/Educational; Natural Resource Protection; Administrative/Operational/Maintenance; Recreational; and Equestrian.** They are described in more detail below.

Industrial

Industrial land use at CRMHS is represented by the milling operations at the Colvin Run Mill. The mill is fully operational and provides a ready supply of wheat flour, cornmeal, and grits that is sold at the General Store.

Commercial

Commercial land use at the historic site is represented by activities at the Colvin Run Mill General Store. The store functions as a ticket office for the site, is interpreted as an historic post office, and has items for sale such as products ground at the mill.

Museum/Interpretive/Educational

CRMHS displays various interpretive waysides and exhibits in the General Store, the Barn, the Miller's House, and the Colvin Run Mill. These displays educate the public about the industrial history of the property as well as many other topics of interest, such as farming and blacksmithing.

Site tours and special educational programs are also offered at CRMHS. Hour-long tours of the mill and Miller's House guide visitors through two exhibit rooms in the house and the two lower floors of the mill, focusing on concepts of community and technology as they relate to the daily life of the miller and his family. Additional programs are held onsite throughout the year:

- 1 site programs, which are recurring events such as the Maple Syrup Boil-down, Glory Day, ice cream making, candlelight tours, craft workshops, and blacksmithing demonstrations;
- 1 special museum programs and themed annual events (such as Autumn Traditions in October and County Christmas in December), which have a number of associated activities; and
- 1 museum education programs, which include a variety of lessons for elementary school students, programs for Boy and Girl Scouts to earn badges, and puppet shows for nursery school-age children.²²

²² Mary Allen and Ann Korzeniewski, "Colvin Run Mill Historic Site Docent Manual," 1995.

Natural Resource Protection

As mentioned previously, a section of Colvin Run and its associated drainageways within park boundaries are within a Chesapeake Bay Restoration Act Resource Protection Area (RPA) (see figure 3-3).

Administrative/Operational/Maintenance

Maintenance equipment is stored on the property in the area adjacent to the overflow parking lot. The site's administrative offices are located within the Miller's House. Other administrative and operational functions also occur at the Barn.

Recreational

Recreational land uses include visitor use of the trail systems, both the Nature Trail adjacent to the picnic area and the Historic Mill Pond Area trails, as well as community activities held in the Barn and other locations on the site. Accessible to the surrounding neighborhoods from many points, the Historic Mill Pond Area trails are enjoyed by many nearby residents who hike and ride horses along the Rails-to-River Trail (see figure 3-17). The northern portion of CRMHS hosts programs and events for children as well as adults throughout the year. A picnic area is located adjacent to the parking lot (figure 3-41). Music performances are also hosted on weekends in the spring and summer on the stage below the General Store.

Equestrian

Although there are no formal equestrian facilities on the site, the Rails-to-River Trail is available for horseback riding. It connects with the Cross County



Figure 3-41. A group of elementary school children have a picnic lunch following an educational program. JMA, 2010.

Trail which passes near the southern portion of the site.

Circulation

Circulation includes the spaces, features, and applied material finishes that constitute the systems of movement in a landscape. Circulation at CRMHS relates primarily to interpretive programming, all visitor services, and recreation/equestrian land uses, of which have different needs. Within the historic site, there are entry drives, parking areas, internal lanes, and a variety of trails. With the exception of the entrance walk and ADA-accessible path to the Miller's House, much of the site's pedestrian circulation is informal and gravel-paved.

Roads

Public roads edge and bisect the historic site. **Colvin Run Road**, a two-lane, striped, asphalt road, forms the site's northern boundary (figure 3-42 and see figure 3-32). The visitor entrance and secondary access to the mill are gained from this road (figure 3-43 and see figure 3-33). **Carper's Farm Way** and



Figure 3-42. Colvin Run Road, looking southeast. JMA, 2010.



Figure 3-43. Colvin Run Mill Historic Site visitor entrance, with gravel overflow drive visible on the right. JMA, 2010.

Scenic View Terrace form the site's boundary at its southeast corner. The site boundaries also extend in finger-like shapes to connect with several **adjacent neighborhood streets** including Mill Wheel Lane and Yellow Pine Drive.

To the southwest and intersecting with Colvin Run Road at the site's eastern boundary, **Route 7**, also known as Leesburg Pike, bisects the site, creating two discrete units, north and south (*figure 3-44*).



Figure 3-44. Leesburg Pike (Route 7) divides the site into two portions. JMA, 2010.

Driveways, Service Roads, and Lanes

Vehicular drives and parking at CRMHS are located primarily within the Visitor Services Complex. The main site entrance is accessed off Colvin Run Road along the **main visitor entrance drive** (*see figure 3-43*). The **gravel drive** that leads to overflow parking and the maintenance area extends off of the main entrance drive (*see figure 3-43*). A **secondary entrance** into the site is also off of Colvin Run Road and provides access to the open area in front of the mill (*see figure 3-33*).

The **mill lane** is a historic road that leads from the mill up the hill past the Miller's House to the Barn (*see figures 3-35 and 3-36*). Historically, it led past the barn and connected with Colvin Run Road at the current visitor entrance. The lane is in fair condition, exhibiting runoff channels due to erosion. A **road trace** that marks the location of what was once a farm road is marked by the remnants of fence posts and barbed wire and visible on historic aerial maps. The farm road once led from Colvin Run Road to the southeast and across where Route 7 is now located.

In addition to these, a **dirt and gravel service road** provides limited access into the Historic Mill Pond

Area for purposes of utility service to the trails and pumping equipment (*figure 3-45*). The road is wide enough to accommodate standard service vehicles and also serves as part of the Rails-to-River Trail (*see Pedestrian Routes*). It has several areas of standing water and has lost its gravel surfacing to erosion in some locations. The road fords Colvin Run downstream from the pump equipment. Narrower portions of the Rails-to-River Trail are not wide enough to accommodate standard-sized vehicles, but can be accessed by smaller service vehicles. Vehicular access to the service road is limited by the careful placement of bollards at the entrance off Carper's Farm Way (*see figure 3-16*).



Figure 3-45. The hard-packed earth and gravel service road leading to the pump in the southern portion of the site. Fairfax County Park Authority, 2008.

Parking

CRMHS contains three parking areas. The primary visitor parking area is the **large asphalt parking lot** north of the General Store and Barn and accessed from Colvin Run Road. This complex is comprised of two double-loaded parking bays and one single-loaded bay, all surfaced with asphalt (*figure 3-46*). The lot does not have a curb and gutter drainage system, which allows water to sheet flow off of the pavement and into the surrounding lawn. On the hill above this lot is an **overflow parking area** surfaced with gravel (*figure 3-47*). A **mill yard** exists adjacent to the mill, providing access to the front of the mill from Colvin Run Road, and serves as a parking area for service vehicles (*see figure 3-33*). This area is in fair condition, showing signs of erosion due to stormwater runoff from Colvin Run Road. No parking is designated for trail access; trail



Figure 3-46. The asphalt-paved parking lot north of the Barn and Country Store. JMA, 2010.



Figure 3-47. The overflow parking area above the main parking lot is surfaced with gravel. JMA, 2010.

users often park on the road verge or in an **open gravel area along Carper's Farm Way**.

Pedestrian Routes

The main pedestrian access point into the site is through the entrance kiosk just off the parking lot. Here, visitors pass down a winding **concrete paver entry walk** leading to the porch of the General Store, where they can buy tickets for guided site tours (figure 3-48). From the store, visitors emerge into the **rock-edged pea gravel gathering area** between the store and the Barn (figure 3-49). An **asphalt path** through this area is intended to provide a stable and accessible route to the Barn and Miller's House (see figure 3-49). Universal access is also provided on the site via a **wooden ramp** from the gathering area to the restrooms, located in the rear of the General Store, **two concrete ramps** that lead into the Barn, and another **ramp** leading to the front door of the Miller's House (figure 3-50).

From the visitor gathering area, a **gravel path** lined with rocks leads past the Miller's House and down the mill lane to the mill itself (figure 3-51). A mill stone is embedded in the gravel at the main entrance to the mill (figure 3-52). The path is in fair condition, showing some signs of erosion due to stormwater runoff, and the some of the loose gravel has migrated to the adjacent grass areas. Another gravel path leads around the mill, into the basement door on its southeast end, and across the **wood pedestrian bridge** to the waterwheel (figures 3-53 and 3-54). A similar wood pedestrian bridge leads across the headrace, with stone steps leading up to each side of the bridge (figure 3-55). A **gravel path** lined with rock also leads from the mill lane and around the Miller's House on the northeast side (figure 3-56). This path is rarely used and is in poor condition, showing signs of erosion due to stormwater runoff, loss of gravel, and weeds growing through the loose gravel. On the opposite side of the Miller's House, a **stone path with a stone stairway** leads directly to the central door of the house (figures 3-57 and 3-58). Another **stone**



Figure 3-48. The concrete paver path leading to the porch of the General Store from the parking lot. JMA, 2010.



Figure 3-49. Gravel visitor gathering area between the General Store and the Barn. The asphalt path leading to the Barn and Miller's House is visible along the edges of the space. *JMA, 2010.*



Figure 3-50. Ramp leading to the back entrance of the Miller's House. *JMA, 2010.*



Figure 3-52. An old grinding wheel is embedded in the gravel outside the main entrance to the mill. *JMA, 2010.*



Figure 3-51. The stone-lined gravel path leading past the Miller's House, down the mill lane, and to the mill. *JMA, 2010.*



Figure 3-53. The stone-lined gravel path leading to the basement door of the mill. *JMA, 2010.*



Figure 3-54. Wood pedestrian bridge leading across the tailrace to the waterwheel. *JMA, 2010.*



Figure 3-55. Wood pedestrian bridge leading over the headrace, with stone steps. *Fairfax County Park Authority, 2009.*



Figure 3-56. A stone-lined gravel path leads around the northeast side of the Miller's House and is in poor condition. *JMA, 2010.*



Figure 3-57. A stone paver path leads from the main gravel walk to the Miller's House. *JMA, 2010.*



Figure 3-58. Stone stairs leading to the Miller's House. *JMA, 2010.*

stairway provides access from one garden level to another (*figure 3-59*).

Pedestrian trails are found in both the northern and southern portions of CRMHS (*figure 3-60*). A pedestrian and equestrian trail system provides access through the Historic Mill Pond Area from the primary trail head on Carper's Farm Way just south of Route 7. The main trail is the **Rails-to-River Trail**, part of the Stream Valley Trail System, which connects to Lake Fairfax Park and to the Cross County Trail on the south side of Carper's Farm Way (*see figures 3-16, 3-17, and 3-45*). The Rails-to-River Trail passes through the site along the southern boundary of the Historic Mill Pond Area and provides direct access to at least three sections of Colvin Run. The trail is marked by wood posts painted white and carved with a horseshoe. A **secondary neighborhood trail** splits off of the Rails-to-River Trail in the approximate location of the quarries and leads along the northern boundary of the area to a location further

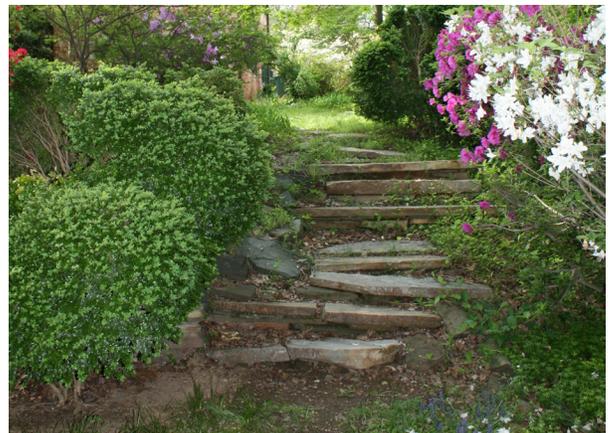


Figure 3-59. Stone stairs in the terraces associated with the Miller's House. *JMA, 2010.*

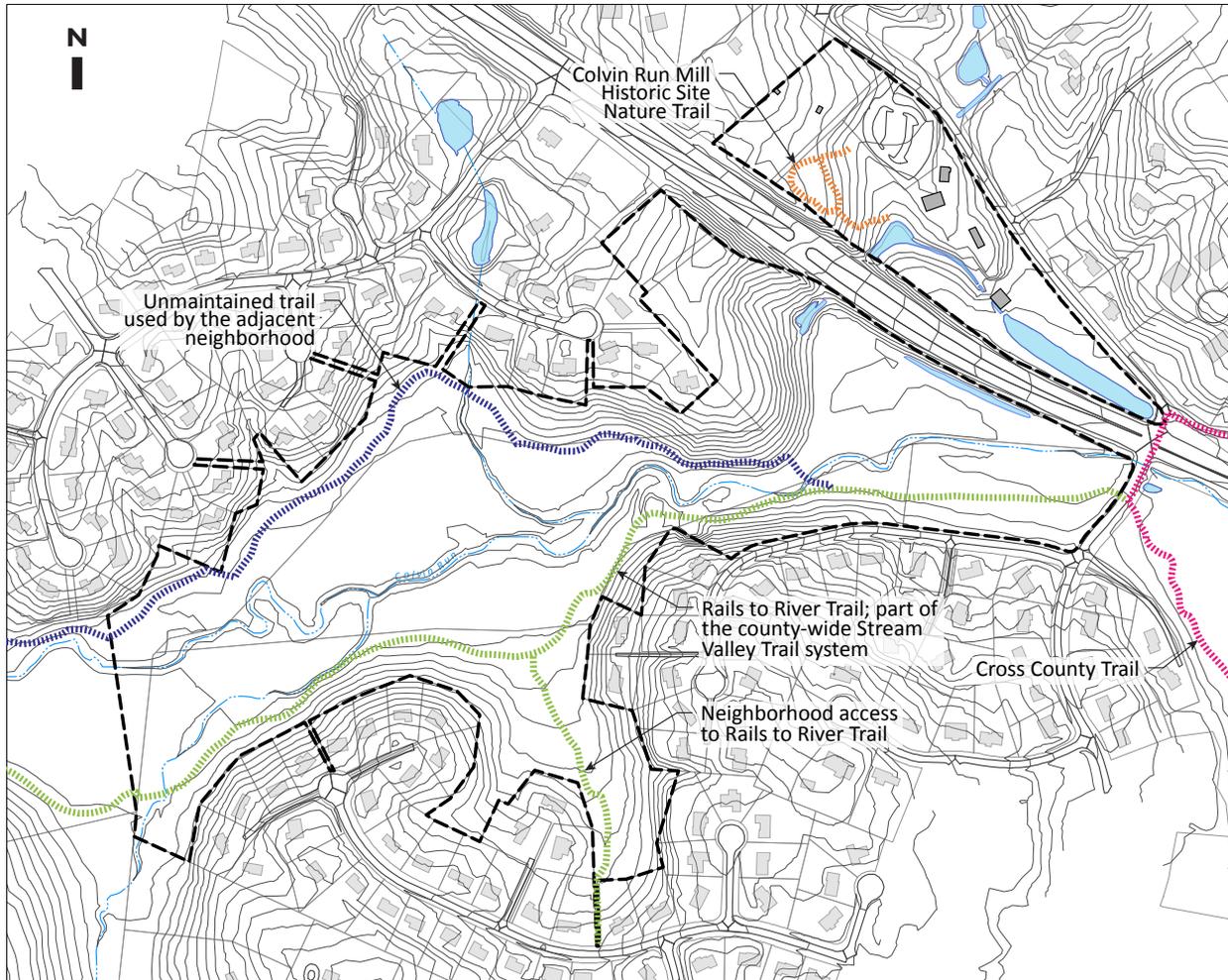


Figure 3-60. Trails in the vicinity of Colvin Run Mill Historic Site. JMA, 2010; created from Fairfax County GIS data.

west. This trail is used by residents of the adjacent neighborhoods and is not maintained by CRMHS. There are several **tertiary trails** that lead from the Rails-to-River Trail and the secondary trail into the neighborhoods through utility right-of-ways. Some of these trail connections are simply mowed-grass paths and pass very close to adjacent houses (*figure 3-61 and see figure 3-38*). Both the neighborhood trail and the tertiary connector trails have simple **plank bridges** to allow pedestrians to cross the tributaries of Colvin Run (*figure 3-62*).

In the north portion of the site, a pedestrian trail called the **Nature Trail** leads through the wooded area west of the picnic area and parking lot (*figure 3-63*). The path is marked by a wooden sign and is lined with cut logs, but is poorly maintained and difficult to discern. It appears to have been surfaced with mulch at one point, but much of this is now covered in leaf litter.



Figure 3-61. A mowed-grass trail connects to the Rails-to-River Trail in the southern part of the site. JMA, 2010.



Figure 3-62. Simple plank bridges carry pedestrians across the tributaries of Colvin Run. JMA, 2010.



Figure 3-63. The Nature Trail in the wooded area west of the parking lot. JMA, 2010.

Equestrian Routes

Equestrian access into the site is available on the Rails-to-River Trail, which enters the site off Carper's Farm Way and passes through the site along the southern boundary of the Historic Mill Pond Area.

Cultural Vegetation

Cultural vegetation includes the deciduous and evergreen trees, shrubs, vines, ground covers, and herbaceous plants that have been introduced into a landscape by cultural activities. Invasive and naturalized secondary growth influenced by cultural activities is addressed in *Plant Communities*, above. Only cultural vegetation located in the northern portion of the site will be discussed in this section.

As one moves through the site, dominant in the northern part of the site is the **broad expanses of**

turf used to support outdoor gatherings in the picnic area, around the wooden stage, in the gardens related to the Miller's House, and in the meadow below the mill. Mowed turf lines both sides of Colvin Run Road and the entrance to the site (see figure 3-32). White-flowering azaleas (*Rhododendron* sp.) and daffodils (*Narcissus* sp.) are planted in a **rock-bordered bed at the entrance sign** (figure 3-64). Another **ornamental planting bed** is located within the **parking lot** island and contains redbuds, one mountain rhododendron, and groups of Dutch irises (*Iris* x sp.) (figure 3-65).

The visitor entrance path passes through the **entrance garden of ornamental plants** that partially screen the parking lot from view (see figure 3-48). Plant species in this garden include holly (*Ilex* sp.), yew (*Taxus* sp.), forsythia (*Forsythia* sp.), daylily (*Hemerocallis* sp.), hosta (*Hosta* sp.), and daffodil.

Adjacent to and in the vicinity of the **Miller's House** is a **garden** planted with a number of ornamental species (see figures 3-37 and 3-59). These include



Figure 3-64. A bed of azaleas and daffodils is planted around the sign adjacent to the site entrance. JMA, 2010.



Figure 3-65. A bed of ornamental plants in the parking lot. JMA, 2010.

daylily, daffodil, azalea, Dutch iris, boxwood (*Buxus* sp.), mountain rhododendron, Japanese wisteria (*Wisteria sinensis*), and periwinkle (*Vinca minor*). Tree species include red oak (*Quercus rubra*), hemlock (*Tsuga* sp.), American holly (*Ilex opaca*), dogwood, Japanese maple (*Acer palmatum*), and a katsuratree (*Cercidiphyllum japonicum*) that may have been planted by the Millard family.

West of the Barn is a small, stone-lined **butterfly garden** (figure 3-66). This planting bed is set with several ornamental species intended to attract butterflies and other pollinators. Another small area, the Audubon Society’s pollinator garden, is located to the left of the pedestrian entrance into the mill.

There are several areas of **ornamental vegetation around the base of the mill**. These plantings feature a variety of shrubs and perennial species, including azaleas, hostas, irises, hollies, and many others (figures 3-67 and 3-68 and see figure 3-52).

In addition to the ornamental plantings in the northern part of the site, there is an **area of skunk**



Figure 3-66. The butterfly garden west of the Barn. JMA, 2010.



Figure 3-67. Azaleas and other ornamental vegetation at the base of the mill. JMA, 2010.



Figure 3-68. Ornamental vegetation adjacent to the back door of the mill. JMA, 2010.

cabbage (*Symplocarpus foetidus*) at the site of the spring along Colvin Run (figure 3-69). This location is thought to be the site of a springhouse, and as this plant has not been observed in other parts of the site, it is possible that the skunk cabbage is associated with that structure or it could just be growing there naturally.



Figure 3-69. A stand of skunk cabbages may be associated with a reported springhouse that may have stood at this site. JMA, 2010.

Constructed Water Features

Constructed water features within the historic site are all related to the functionality of the mill itself. Of primary interpretive importance is the **stone headrace** that powers the waterwheel (figure 3-70). The headrace is supplied by water that is pumped from Colvin Run to the current **Mill Pond** below the picnic area (figure 3-71). This system replaces the **original headrace** that extended from far upstream on Colvin Run and along the hillside to the mill. A remnant of this headrace is extant, and the terraces that supported the original headrace are still visible in the southern portion of the site (figure 3-72 and see figure 3-30). This solution was proposed when it was

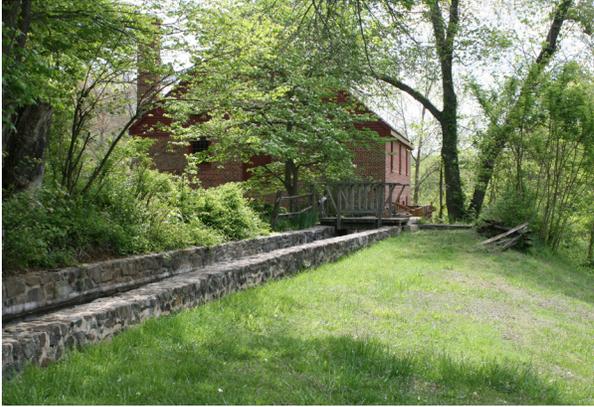


Figure 3-70. The stone-lined headrace as it approaches the mill. *JMA, 2010.*



Figure 3-71. Water is pumped from Colvin Run to the Mill Pond. *JMA, 2010.*



Figure 3-72. A portion of the original headrace is visible in the southern part of the site. *JMA, 2010.*

discovered that the headrace culvert constructed when Route 7 was built was too narrow and tended to silt up quickly.

Below the mill is the **tailrace**, which takes the water from the mill to an outlet that eventually leads downstream to Difficult Run (see *figure 3-10*). Adjacent and parallel to the tailrace is the **drainage**

ditch into which flows the overflow from the new mill pond (*figures 3-73 and 3-74*).

The Mill Pond Area contains the **site of the original 30-acre mill pond**. There are some remnants of the **three earthen dams** that created the pond; one can be seen in the Colvin Run stream valley close to the pumping station.



Figure 3-73. The stone-lined overflow weir from the Mill Pond. *JMA, 2010.*



Figure 3-74. The drainage ditch that parallels Route 7 along the edge of the site. *JMA, 2010.*

Buildings and Structures

Buildings are elements constructed primarily for sheltering any form of human activity in a landscape. Structures are elements constructed for functional purposes other than sheltering human activities. The majority of the buildings and structures at CRMHS are associated with the interpretive function of the site.

The **Colvin Run Mill** is the central feature of the historic site (*figure 3-75*). It is one of the few surviving operational nineteenth-century water-powered mills in the Washington, D.C. Metro Area, and its restored mechanism represents a nationally



Figure 3-75. Colvin Run Mill, constructed ca. 1811 and restored in 1968–1972. *JMA, 2010.*

significant example of automated technologies pioneered in milling and later adopted across American industry.²³ It is a four-story brick and frame structure set on a stone foundation that was originally built ca.1811. It was restored between 1968 and 1972. This simple, rectangular structure is 50'-3" long, 41'-8" wide, and 47'-6" high. The walls are brick, set in American common bond with every fourth course in headers, and topped by a gable roof. Approximately 75 percent of the more than 200,000 bricks in the structure are replacements, all made by old methods to the exact size of the original bricks. The windows are double-hung sash, 12 over 12, except for those in the gable ends, which are 12 over 8. The gable ends are covered with wood siding, 1'-6", and 5" to the weather. The roof is covered with cedar shakes.²⁴ Attached to the south side of the mill is the overshot wheel, fully operational and providing power to the mill, which still grinds corn, wheat, and buckwheat for sale in the General Store.

During the restoration, it was discovered that a section of the mill's rock foundation is on a different elevation than the ground outside and the foundation of the mill inside. The relationship between these suggests that an earlier mill may have occupied the site and the rock foundation may be part of that earlier mill.

23 Fairfax County Park Authority, "Colvin Run Mill: A Historic Mechanical Engineering Landmark," 2001.

24 David, "Colvin Run Mill; National Register of Historic Places Inventory—Nomination Form."

Set at right angles to the mill building is a small wood structure, the **Carpentry Shop**, which was built to be interpreted as an eighteenth/nineteenth-century carpentry shop, but is currently used for storage (*figure 3-76*).²⁵



Figure 3-76. The small Carpentry Shop standing to one side of the mill yard is used for tool storage. *JMA, 2010.*

On the hilltop above the mill is the **Miller's House**, a two-story red brick structure that for many years served as the residence of the miller and his family (*figure 3-77*). Built sometime between 1811 and 1820, the house was designed with formal, symmetrical windows across the front and dentil molding decorating the roof line, features that point to the Federal period.²⁶ A wood frame addition was constructed on its north end in the 1960s, its design based on information from archeological investigations around the house combined with contextual information regarding architectural styles popular during the early years of the house.²⁷



Figure 3-77. The Miller's House, constructed sometime between 1811 and 1820. *JMA, 2010.*

25 Ibid.

26 Fairfax County Park Authority, "Colvin Run Mill Historic Site," pamphlet, 2005.

27 1 Fairfax County Park Authority Division of History, "The Miller's House—Colvin Run Mill," no date. Online at http://www.gfhs.org/local_lore/millers_house.htm.

Up the hill from the Miller's House is the ca.1890 **Colvin Run General Store**, existing once as Cockrill's Store at the base of the hill and across Colvin Run Road from the mill (*figure 3-78*). The small wood-framed building was moved to the historic site in 1973–74. It serves as a museum facility by interpreting an early-twentieth-century general store, and also contains public restroom facilities.²⁸



Figure 3-78. The Colvin Run General Store, formerly called Cockrill's Store, was relocated to the site in 1973–1974. *JMA, 2010.*

Located at an acute angle to the store is the **Barn** (*figure 3-79*). It was originally conceived as a workshop for the mill restoration and was constructed in the location of an older building. The wood-frame structure houses storage areas, meeting spaces, and a cold-storage room for grains. It also houses displays of farm implements and tradesmen's tools, such as a broom machine used by a local craftsman, and a scale model of the mill. Under the northeastern eaves of the barn is a working blacksmith shop where blacksmiths demonstrate how to make and repair metal tools, as well as other items such as nails, hinges, hooks, wheel rims, and iron railings.²⁹



Figure 3-79. The Barn, with the blacksmith shop visible under the roof extension. *JMA, 2010.*

28 David, "Colvin Run Mill; National Register of Historic Places Inventory—Nomination Form."

29 1 Fairfax County Park Authority, "Colvin Run Mill Historic Site," pamphlet, 2005.

In the area of the overflow parking lot is a small **maintenance shed** that serves the site (*figure 3-80*). Further up from the maintenance shed, and encroaching onto the historic site is a small **storage building** that is currently being used by the adjacent property owner (*figure 3-81*). Tucked into the hillside below the overflow parking area is a **stone foundation** that may be all that remains of a farm building (*figure 3-82*). Two lengths of **stone retaining wall** create two garden terraces south of the Miller's House (*see figures 3-37 and 3-59*). The date of their installation is not known.



Figure 3-80. The maintenance building in the overflow parking lot. *JMA, 2010.*



Figure 3-81. A small storage building on the edge of the property is used by an adjacent property owner. *JMA, 2010.*



Figure 3-82. The stone foundation of a farm building, below the overflow parking lot. *JMA, 2010.*

Other structures within the historic site include: the **wooden stage** east of the barn; the mortared **stone headrace channel** and the **headrace bridge** that crosses it; the **tailrace bridge** at the base of the mill; the **overflow weir and channel** adjacent to Route 7; the **tailrace overflow structure** that passes under Colvin Run Road; the remnant sections of **headrace terracing** on the south side of the pike; and several **small plank bridges** crossing tributaries of Colvin Run along the trails in the Historic Mill Pond Area (figures 3-83 and 3-84, and see figures 3-54, 3-55, 3-62, 3-70, and 3-73).



Figure 3-83. The wooden stage below the General Store. JMA, 2010.



Figure 3-84. The concrete overflow structure carries water from the tailrace under Colvin Run Road to Difficult Run. JMA, 2010.

Small-scale Features

Small-scale features are the elements providing detail and diversity for both functional needs and aesthetic concerns in a landscape. Many small-scale features associated with the CRMHS property are in service for the comfort and convenience of visitors to the historic site or for the programmatic goals of site staff. The site also contains small-scale features associated with historic uses and commemoration.

Commemorative Markers

Just inside the vehicular visitor entrance to the historic site is a **Virginia Department of Historic Resources marker** that was installed in 1999 (figure 3-85). It describes the significance of Colvin Run Road as a historic route, the “Old Road to the West,” as follows:

Colvin Run Road is a remnant of an 18th-century wagon road from the Shenandoah Valley to Alexandria that probably originated as an Indian path. George Washington passed by here in 1753 and 1754 en route to persuade the French on the Ohio River to withdraw from English territory. In 1755, during the French and Indian Wars, a brigade lead by Maj. Gen. Edward Braddock’s army traveled the road on its ill-fated march to Fort Duquesne. The road was incorporated into the Middle Turnpike before 1840. A century later, the moving and straightening of Route 7 reduced Colvin Run Road to a byway.



Figure 3-85. The Virginia Department of Historic Resources marker adjacent to the parking lot, installed in 1999. JMA, 2010.

Placed on the terrace above the mill is a **Daughters of the American Revolution marker** placed to commemorate the significance of the Colvin Run Mill (figure 3-86). Its text reads as follows:

Freedom Hill Chapter, National Society, Daughters of the American Revolution, commemorates the significance of Colvin Run Mill as a tribute to the American craftsman and to the rich historical legacy of Fairfax County. Mill built ca. 1790-1820. Placed 6/13/87.



Figure 3-86. The Daughters of the American Revolution marker, placed in 1987. *JMA, 2010.*

Fences

Fencing is an important and visually prominent feature within the CRMHS landscape, particularly in the north portion of the site. There are various examples of fencing and fence types present on the CRMHS property. These include:

- 1 Remnant hand-made **barbed wire fencing** that marks the alignment of the old road close to the maintenance area;
- 1 Four-rail **wooden worm fencing** throughout the site (*figure 3-87*);
- 1 Three-rail **wooden post-and-rail fencing** throughout the site (*figure 3-88*);
- 1 **Metal-post and rope barrier** along entry walk between the kiosk and the General Store (*figure 3-89*);
- 1 **Wooden screen fence** surrounding the dumpster (*figure 3-90*);
- 1 **Wooden screen fence and wooden post-and-rail fencing** surrounding the apiary (*figure 3-91*);
- 1 **Metal pipe railings** at the blacksmith shop (*figure 3-92*);
- 1 **Metal guardrail** with wooden posts along Route 7 (*figure 3-93*);
- 1 **White vinyl three-board post-and-rail fence** along Carper's Farm Way (*figure 3-94*); and



Figure 3-87. Wooden worm fencing is found throughout the northern part of the site. *JMA, 2010.*



Figure 3-88. Wooden post-and-rail fencing is also found throughout the northern part of the site. *JMA, 2010.*



Figure 3-89. A metal-post and rope barrier is located along the entrance walk. *JMA, 2010.*



Figure 3-90. A wooden board fence screens the dumpster in the parking lot. *JMA, 2010.*



Figure 3-91. Wooden fencing surrounds the apiary adjacent to the overflow parking lot. *JMA, 2010.*



Figure 3-92. Metal pipe railings at the blacksmith shop. *JMA, 2010.*



Figure 3-93. Metal guardrail with wooden posts along Route 7. *JMA, 2010.*



Figure 3-94. A vinyl post-and-board fence borders the site where it edges Carper's Farm Way. *JMA, 2010.*



Figure 3-95. A wooden post-and-board fence along one side of the pumping station. *JMA, 2010.*

- 1 **Wooden post-and-board fence** at pumping station (*figure 3-95*).

Edging

Stone, timber, and steel are used as edging materials in different areas of the historic site. **Boulders** are used in part of the parking lot to discourage driving on the parking island, which is not curbed (*figure 3-96*). **Smaller rocks** are used to line gravel walks and gathering areas throughout the site (*figure 3-97*). **Timber** is used to outline table pads in the picnic area and to edge the parking lot above the picnic area (*figure 3-98*). **Steel edging** provides stability to the concrete pavers of the entrance walk (*see figure 3-89*). **Low wire edging** borders the Pollinator's Garden. Most memorable are the **millstones** that are used to line the base of the hill along the mill lane (*figure 3-99*).



Figure 3-96. Boulders are used as edging in parts of the parking lot. *JMA, 2010.*

Signs

Signs around the site serve a variety of purposes. **Park identity** and **informational signs** are located along Colvin Run Road at the visitor entrance and at the service entrance to the mill level (*figure 3-100*,



Figure 3-97. Gravel walkway lined with small rocks. JMA, 2010.



Figure 3-98. Timber used to create picnic table platform. JMA, 2010.



Figure 3-99. Millstones used as edging. JMA, 2010.



Figure 3-100. Park identity sign on eastern end of site. JMA, 2010.

and see figures 3-33 and 3-64). At the inside corner of the parking lot is the **metal kiosk** that marks the entrance into the historic site (figures 3-101 and 3-102). It consists of two metal arches connected by a metal frame that holds boards with visitor information on either side of the arch. The curvature of the arches is intended to echo the curvature of the waterwheel.



Figure 3-101. Metal entrance kiosk. JMA, 2010.



Figure 3-102. Side board of entrance kiosk. JMA, 2010.

The historic site also has a few **regulatory signs** placed at key locations within the northern part of the site. These are typically rectangular wooden signs painted brown, with routed letters painted yellow, mounted on either one or two wooden posts (*figures 3-103 and 3-104*). Regulatory signs are located at the entrance to the Nature Trail, along the entrance walk, on the hill between the mill and the Miller's House, and at the entrance to the Rails-to-River Trail. There are also a few **metal posts**, painted red and blue, marking the Rails-to-River Trail (*see figure 3-16*). Signs are primarily constructed of wood, but metal is also used. Along the trail, **wood bollards** are painted white and have carved horseshoes to indicate the trail may be used by equestrians (*see figure 3-45*). In addition to these signs, there are a number of regulatory **traffic signs** along both Colvin Run Road and Route 7.



Figure 3-103. Wooden park sign. JMA, 2010.



Figure 3-104. Wooden sign close to mill lane. JMA, 2010.

Lighting

The historic site contains minimal lighting, but metal **spotlights** are arranged to illuminate the mill at night (*figure 3-105*). One **single-arm streetlight** is located in the parking lot, and there are **exterior lights** mounted on the General Store to illuminate the porch and restroom area.



Figure 3-105. Metal spotlight at mill building. JMA, 2010.

Site Furnishings

Site furnishings within the historic site are primarily for the comfort and convenience of visitors. Several types of **wood and metal picnic tables** are clustered in the picnic area adjacent to the parking lot and in the flat area adjacent to the Miller's House (*figure 3-106, and see figures 3-15 and 3-98*). Simple **wood benches** are found along the Nature Trail, on the porch of the General Store, and along the interpretive route (*figures 3-107, 3-108, and 3-109*). **Backed wood benches** ornament two small gardens close to the Miller's House (*figures 3-110 and 3-111*). Trash receptacles include large **wood barrels** used throughout the site and **wood panel units** in the picnic area (*figures 3-112 and 3-113*).



Figure 3-106. Wood-and-metal picnic tables. JMA, 2010.



Figure 3-107. Simple wood bench along the Nature Trail. JMA, 2010.



Figure 3-108. Simple wood bench on porch of General Store. JMA, 2010.



Figure 3-109. Simple wood bench along asphalt path. JMA, 2010.



Figure 3-110. Backed wood bench in garden below Miller's House. JMA, 2010.



Figure 3-111. Backed wood bench in garden across mill lane from Miller's House. JMA, 2010.



Figure 3-112. Wood barrel used as trash receptacle. JMA, 2010.



Figure 3-113. Wood panel unit trash receptacle. JMA, 2010.

Other furnishings include the concrete **wheel stops** that are used in the paved parking lot; the small, white-painted **wood arbor** adjacent to the Miller's House; a white-painted **wood trellis** leaning on the east wall of the house; the **metal base** of what had been a drinking fountain adjacent to the General Store; and **PVC tubes** used as speaker posts adjacent to the wooden stage (figures 3-114, 3-115, 3-116, and 3-117). There is also a cluster of square **wooden beehives** adjacent to the overflow parking area (see figure 3-91). A **plastic rainbarrel** is located adjacent to the southwest corner of the mill, and there is an old **waterwheel shaft** lying in the mill yard.



Figure 3-114. Concrete wheel stops. JMA, 2010.



Figure 3-117. Metal base of drinking fountain. JMA, 2010.



Figure 3-115. Wood garden arbor south of Miller's House. JMA, 2010.



Figure 3-116. Wood trellis on east side of Miller's House. JMA, 2010.

Utilities

Site utilities include **culverts and other drainage structures**, including where the headrace passes under Route 7 and where the tailrace passes under Colvin Run Road (*figure 3-118 and see figure 3-84*). Small **trench drains** exist in several places near the picnic table adjacent to the entrance walk and crossing the gravel mill lane close to the Miller's House, while **black plastic corrugated pipe** carries the outfall from the trench drains downhill (*figures 3-119 and 3-120*). **Overhead utility lines** follow Colvin Run Road on the historic site side and cross through the intersection of that road with Route 7 (*see figure 3-8*). **Water supply lines** run along both roads, and public **sanitary sewer lines** cross the site in at least four places. Additionally, a **dumpster** is located on one side of the parking lot, screened by a fence (*see figure 3-90*).

Of great importance to the interpretation of the site is the **pumping system** that replaced the function of the original headrace (*figure 3-121*). The system takes water from Colvin Run and pumps it in a buried line along the alignment of the original headrace and into the pond that is now interpreting



Figure 3-118. Culvert under Route 7. JMA, 2010.



Figure 3-119. Trench drain on mill lane. JMA, 2010.



Figure 3-120. Black plastic corrugated pipe that carries the flow from the trench drain. JMA, 2010.



Figure 3-121. Concrete pumping system housing. JMA, 2010.



Figure 3-122. Pumping system control panel. JMA, 2010.

the original mill pond. A **control panel** for the pump is located in a clearing west of the pump (figure 3-122). In addition to these features, a **concrete-and-metal structure** is located in the western portion of the Historic Mill Pond Area, which may be the remains of a structure related to one of the former mill ponds (figure 3-123).



Figure 3-123. Concrete-and-metal structure of unknown purpose. JMA, 2010.

Archeological Resources

Archeological sites are the ruins, traces, or deposited artifacts in a landscape, evidenced by the presence of either surface or subsurface features. Within the historic site, there have been few archeological surveys conducted. In 1998, the Park Authority's Cultural Resource Protection Section conducted archeological investigations at the site in preparation for the construction of a universally accessible pathway and ramp into the Miller's House. The first phase entailed testing of areas around the house that were subject to disturbance by the construction—namely, the north, south, and east sides.

Discovery of a dense concentration of undisturbed subsurface features on the north end of the house led to the second phase of investigation. The objective of this phase was to identify the temporal and functional origins of these features. These investigations concluded the house was likely built after 1811 and that there was more than one addition to the house on its north end during its history.³⁰

³⁰ Christine A. Jirikowic, "Archeological Investigations at the Miller's House at Colvin Run Mill," Fairfax County Park Authority Cultural Resource Protection Group, 1999.

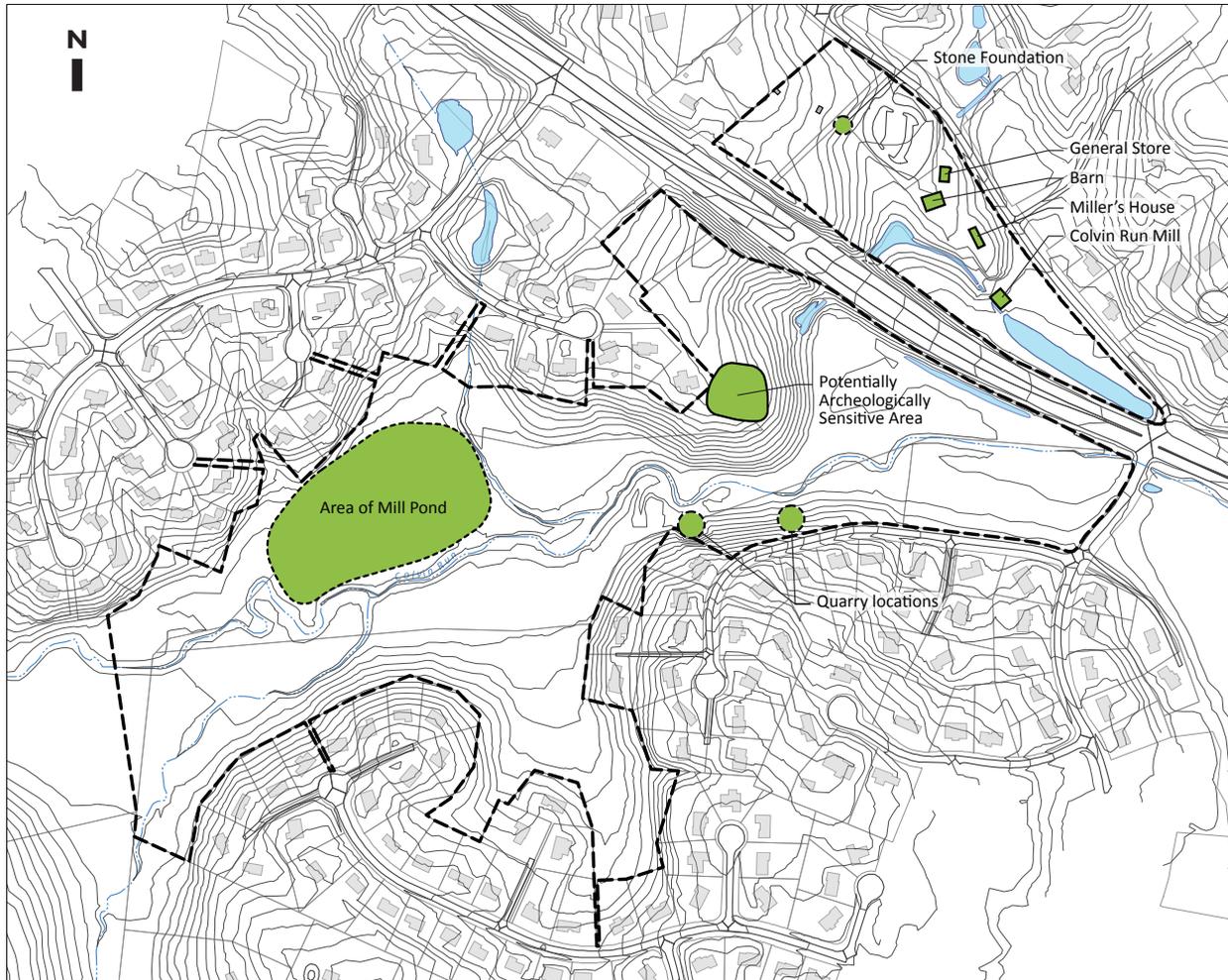


Figure 3-124. Archeological resources in the Colvin Run Mill Historic Site. JMA, 2010; created from Fairfax County GIS data.

While the core of the CRMHS property has been altered over the years, it remains highly likely that many areas of the site have good information potential and may retain subsurface evidence of significant historical events and associations. The site may also contain evidence of prehistoric cultural occupation, particularly along stream corridors. Additional investigation into the archeological information potential of the property and the integrity of surviving sites and subsurface resources is merited to further define the significance of CRMHS.

The sites of features known to have existed during the period of significance but that are no longer extant and in areas not having undergone ground-disturbing activity are potential archeological resources. The list of missing features presented below constitutes potential archeological resources (figure 3-124).

Inventory of CRMHS Landscape Features by Characteristic

The physical landscape resources and associated qualities of interest to this planning study described above are listed below by landscape characteristic. This inventory is also conveyed in a table at the end of chapter four. Results of analyses presented in chapter four are assembled in the table as well.

Patterns of Spatial Organization

- Historic Core
 - Mill complex
 - House complex
- Visitor Services Complex
 - Picnic and nature trail area
 - Visitor orientation area

- Historic Mill Pond Area 1

Natural Systems and Features

- 1 Colvin Run
- 1 Wetland areas
- 1 Tributaries to Colvin Run
- 1 Knoll
- 1 Schist, mica gneiss, Metagraywacke, and metasiltstone schist geology
- 1 Soil types developed from the metamorphic rocks
- 1 Spring
- 1 Riparian meadows
- 1 Woodland areas
- 1 Invasive plant cover

Responses to Natural Resources

- 1 Site of the mill along Colvin Run
- 1 Stabilization of local non-structural soils
- 1 Excavation of hillside terrace to support headrace 1
- 1 Establishment of a tailrace in the Colvin Run floodplain
- 1 Pumping system
- 1 Establishment of rock quarries in areas of shallow bedrock

Topographic Modifications

- 1 Earthen dams on Colvin Run
- 1 Linear earthen headrace terraces
- 1 Earthen headrace ditch
- 1 Broad earthen mill terrace
- 1 Road cuts
- 1 Route 7 berm
- 1 Parking lot grading
- 1 New Mill Pond and tailrace grading

Views and Vistas

- 1 Dynamic views of site from Colvin Run Road 1
- 1 Screened views to the mill from Route 7
- 1 Limited views into southern portion of site

- Open views to the adjacent developments
- 1 Visual buffer to the adjacent residential developments
- 1 Exchange of views between the mill and the Miller's House
- 1 Directed view of the mill down the mill lane

Land Uses and Activities

- 1 Industrial
- 1 Commercial
- 1 Museum/Interpretive
- 1 Educational
- 1 Natural Resource Protection
- 1 Administrative/Operational/Maintenance
- 1 Equestrian
- 1 Recreational

Circulation

- 1 Colvin Run Road
- 1 Carper's Farm Way
- 1 Scenic View Terrace
- 1 Adjacent residential streets
- 1 Route 7 (Leesburg Pike)
- 1 Visitor entrance drive
- 1 Gravel drive to overflow parking
- 1 Secondary entrance
- 1 Mill lane
- 1 Farm road trace
- 1 Dirt and gravel service road
- Visitor parking lot 1
- Overflow parking area 1
- Mill yard
- Open gravel area along Carper's Farm Way
- 1 Concrete-paver entry walk
- 1 Stone-edged pea gravel gathering area
- 1 Asphalt walkway
- 1 Wooden ramp to restrooms
- 1 Concrete ramps at Barn
- 1 Ramp to Miller's House
- 1 Gravel paths lined with rocks

- 1 Wooden bridge over headrace
- 1 Wooden bridge over tailrace
- 1 Stone path with stone stairway
- 1 Stone stairway between garden levels
- 1 Rails-to-River Trail
- 1 Secondary neighborhood trail
- 1 Tertiary trails
- 1 Plank bridges
- 1 Nature Trail

Vegetation

- 1 Broad expanses of turf
- Rock-bordered bed at the entrance sign
- Ornamental planting bed in parking lot 1
- 1 Entrance garden of ornamental plants
- 1 Miller's House garden
- 1 Butterfly garden
- Audubon Society Pollinator garden
- Ornamental vegetation around mill 1
- Area of skunk cabbage
- Ornamental vegetation throughout Historic Core

Constructed Water Features

- 1 Stone headrace
- Mill pond 1
- Original headrace 1
- 1 Tailrace
- 1 Drainage ditch
- 1 Three earthen dams
- 1 Site of original 30-acre mill pond

Buildings and Structures

- 1 Colvin Run Mill
- 1 Carpentry Shop
- 1 Miller's House
- 1 Colvin Run General Store
- 1 Barn
- 1 Maintenance shed
- 1 Storage shed

- 1 Stone foundation
- 1 Stone retaining walls
- 1 Stone headrace channel
- 1 Timber retaining wall
- 1 Headrace bridge
- Tailrace bridge 1
- Overflow weir and channel 1
- 1 Tailrace overflow structure
- 1 Headrace terracing
- 1 Small plank bridges over Colvin Run

Small-scale Features

- 1 Virginia Department of Historic Resources marker
- 1 Daughters of the American Revolution marker
- 1 Remnant barbed-wire fencing
- 1 Wooden worm fencing
- 1 Wooden post-and-rail fencing
- 1 Metal-post and rope barrier
- 1 Wooden screen fence
- 1 Metal pipe railings at blacksmith shop
- 1 Metal guardrail
- 1 White vinyl three-board post-and-rail fence
- 1 Wooden post-and-board fence
- 1 Boulders
- 1 Smaller rocks
- 1 Timber
- 1 Steel edging
- 1 Low wire edging
- 1 Millstones
- 1 Park identity and informational signs
- 1 Metal kiosk
- 1 Regulatory signs
- 1 Metal posts marking entrance to the Cross County Trail
- 1 Wood bollards marking Rails-to-River Trail
- 1 Traffic signs
- 1 Metal spotlights
- 1 Single-arm streetlight

- 1 Exterior lights mounted on General Store
- 1 Wood and metal picnic tables
- 1 Simple wood benches
- 1 Backed wood benches
- 1 Wood barrels
- 1 Wood panel unit trash receptacles
- 1 Concrete wheel stops
- 1 Wood arbor at Miller's House
- 1 Wood trellis at Miller's House
- 1 Metal drinking fountain base
- 1 PVC tubes adjacent to stage
- 1 Beehives
- 1 Plastic rainbarrel
- 1 Waterwheel shaft
- Icehouse below the Miller's House
- 1 Garden sites in the northern section
- 1 Springhouse site
- 1 American Indian sites

Utilities

- 1 Culverts and other drainage structures
- 1 Trench drains
- Black plastic corrugated pipe 1
- Overhead utility lines 1
- 1 Water supply lines
- 1 Sanitary sewer lines
- 1 Dumpster
- 1 Pumping system
- 1 Pump control panel
- 1 Concrete and metal structure

Archeological Resources

- 1 Stone foundation of bank barn in Visitor Services Complex³¹
- 1 Rock quarries
- 1 Privy locations (unknown)
- 1 Well site
- 1 Historic fence lines along Colvin Run Road and within the site
- 1 Historic outbuilding sites in Visitor Services Complex
- 1 Headrace and mill pond dam sites

31 Martha R. Williams, "Test Excavations, Colvin Run Mill, Interim Field Report," Fairfax County Park Authority Division of History, June 8, 1977.

Analysis and Evaluation

Introduction

The analysis and evaluation of the historic and existing conditions of a historic site are key to determining its treatment. This chapter is comprised of four sections:

- 1 an evaluation of the significance of Colvin Run Mill Historic Site (CRMHS) in accordance with National Register of Historic Places criteria;
- 1 an evaluation of the significance of CRMHS within the historic contexts set up by the Virginia Department of Historic Resources;
- 1 a comparative analysis of historic and existing landscape conditions; and
- 1 an integrity assessment.

Together, these sections are intended to convey the historic values and associations of CRMHS in such a way as to support their protection for future generations, and to provide the basis for enhanced interpretation to visitors.

The evaluation of significance identifies the important historic associations of the property as well as the ability of existing physical resources to convey these associations. The cultural landscape report (CLR) ties the property's significance to a discrete period of time in which the important contributions were made and a series of historic contexts within which the property's significant associations may be placed.

Based upon this identification of the property's significance and the period during which it is significant, JMA's CLR team prepared a comparative analysis of historic and existing landscape conditions. The goal of the analysis is to provide an understanding of how well the property and its extant resources reflect their character and appearance during the period of significance.

One of the byproducts of the comparative analysis is the identification of resources that survive from a property's period of significance. These are defined as **contributing** features. The identification of contributing resources helps afford the protection necessary to ensure that the integrity of the park

is retained. **Non-contributing** resources are those features that cannot be tied to the site's significant historic periods or associations. These resources are considered to be less sensitive to change within the context of landscape treatment. **Missing features** are also identified in this chapter through the comparative analysis. Knowledge of missing features is important to protection of potential archeological sites and can be useful for interpretation.

The final section of the chapter provides an assessment of the property's integrity and summarizes to what degree the property retains its ability to convey its historic associations for the identified period of significance.

The National Register of Historic Places

Evaluation Criteria

For a property to be considered eligible for inclusion in the National Register of Historic Places, it must possess significance for its association with at least one of the following four criteria:

- 1 A: An event or a series of events that have made a significant contribution to our history; or
- 1 B: The lives of persons significant in our past; or
- 1 C: Embodiment of the distinctive characteristics of a type, period, or method of construction or representing the work of a master, or possessing high artistic values, or representing a significant and distinguishable entity whose components may lack individual distinction; or
- 1 D: Yielding, or likelihood of yielding, information important in prehistory or history.¹

¹ Patrick W. Andrus and Rebecca H. Shrimpton, National Register Bulletin 15 – *How to Apply the National Register Criteria for Evaluation* (Washington: U.S. Government Printing Office, 1990, revised 2002).

Properties may also be considered eligible if they meet the following criteria considerations:

- 1 a: a religious property deriving primary significance from architectural or artistic distinction or historical importance; or
- 1 b: a building or structure removed from its original location but which is significant primarily for architectural value, or which is the surviving structure most importantly associated with a historic person or event; or
- 1 c: a birthplace or grave of a historical figure of outstanding importance if there is no appropriate site or building directly associated with his or her productive life; or
- 1 d: a cemetery which derives its primary significance from graves of persons of transcendent importance, from age, from distinctive design features, or from association with historic events; or
- 1 e. a reconstructed building when accurately executed in a suitable environment and presented in a dignified manner as part of a restoration master plan, and when no other building or structure with the same association has survived; or
- 1 f: a property primarily commemorative in intent if design, age, tradition, or symbolic value has invested it with its own exceptional significance; or
- 1 g: a property achieving significance within the past 50 years if it is of exceptional importance.²

An eligible property is one associated with an area of significance, such as Education, Religion, Government, or Agriculture. Listed properties are also considered significant at different levels that recognize the geographic area within which the property has an influence, whether local, state, or national. Finally, properties are determined significant within a specific period of time. Significance is evaluated through the process of identifying the criteria, areas, level, and period of significance for a site by placing it within and comparing it against recognized historic contexts.

² Ibid.

Current National Register Status of Colvin Run Mill Historic Site

Colvin Run Mill is listed in the National Register of Historic Places as significant in the areas of agriculture and engineering. The nomination, entered into the National Register in 1977, indicates the period from 1810 to 1820 as significant for being the approximate date of construction of the mill. The determination does not specify a level of significance for the district. Buildings associated with the Colvin Run Mill, such as the Miller's House, are mentioned only in passing in the nomination, and cultural landscape features are not discussed. Since the time the nomination was written, a fundamental shift has occurred from a building-oriented approach to property survey and evaluation to one that takes into consideration both buildings *and* their settings. In that light, this CLR augments the original National Register nomination findings and synthesizes new and existing research, providing landscape information that adds to the significance of the property. A summary and evaluation of the findings is detailed below and presented in a format that is compatible with today's more holistic guidelines. This information may prove useful for future modification of the National Register nomination and any further documentation and evaluation of the property by Fairfax County or other organizations.

Significance Evaluation

Research and analysis conducted on behalf of this report supports the conclusions of the 1977 nomination; however, it is proposed that the information presented below be included in either an amendment to this nomination or in a new nomination that proposes the site as a historic district.

CRMHS has been found to possess significance at the state level under Criteria A, B, C, and D, and Criteria Consideration b:

- 1 Criterion A in the area of **exploration/settlement** for the function of the mill complex in the development of the Colvin Run community.
- 1 Criterion B in the area of **engineering** for the association of the mill with Oliver Evans, inventor and technologist who helped bring the idea of the production line to America.

- 1 Criterion C in the area of **architecture** for the mill building and the Miller’s House, and in the area of **landscape architecture** for the siting of the mill, the mill water power system, and the Miller’s House.
- 1 Criterion D in the area of engineering for the stone foundation, headraces, earthen dams, mill pond sites, farmyard sites, the house site, and the mill site for the information they may yield regarding the history of the property.
- 1 Criteria Consideration b in the area of architecture and for the General Store, because, although it was moved from its original location across from the mill, it retains most of its original architectural fabric.

This list of the areas of significance does not include agriculture, which is listed in the current nomination, because the site was not significant in this area. It is possible that the author of the 1977 document meant to list it, instead, in architecture.

If the site is nominated as a district, it is recommended that the district be composed of two discontinuous areas connected by the Route 7 right-of-way. Constructed in the 1940s, Route 7 does not contribute to the district’s significance. In addition, the bulk of its berm prevents visual continuity between the north and south portions of the site.

Modifications in the form of either an amendment to the current nomination or a nomination of the CRMHS to the National Register as a historic district should include a statement of significance expanding the beginning of the period of significance from 1810 to 1763, the date of George Washington’s acquisition of the property, and the end to 1934, the last year of the ownership tenure of the Millard family. Establishing the beginning date as 1763 recognizes the importance of the site’s association with George Washington, himself, as well as his recognition of the potential of the site as a mill seat. A period of significance beginning in 1763 will also highlight the significance of earlier mill complexes, including building, dam, and mill pond sites that are contained within the site’s current boundaries. The proposed end date of 1934 is more consistent with the site’s significance, given that this is the date marking the end of the most successful period of the industrial and commercial use of the mill and being prior to the construction of Route 7 in the 1940s. No sub-periods have been identified due to the paucity of information regarding physical changes

to the site during the historic period. Consideration could also be given to extending the period of significance to the date of the restoration of the mill, substantially completed in 1972. In this case, the mill would be also significant under Criterion A for its role in commemorating the history of Fairfax County.

Virginia Department of Historic Resources Historic Contexts

Current Virginia Landmark Status of Colvin Run Mill Historic Site

Colvin Run Mill was listed in the Virginia Landmarks Register in 1976. For this purpose, Virginia relies on the same criteria used to evaluate resources for inclusion in the National Register. To assist with such nominations, the Virginia Department of Historic Resources (VDHR) has developed a list of historic contexts, that is, patterns or trends in history by which a specific occurrence, property, or site is understood and its meaning—and ultimately its significance—within history or prehistory is made clear. To evaluate significance within a historic context the following considerations need to be determined for each property:

- 1 the facet of history of the local area or the nation that the property represents;
- 1 whether that facet of history is significant;
- 1 whether it is a type of property that has relevance and importance in illustrating the historic context;
- 1 how the property illustrates that history;
- 1 whether or not the property possesses the physical features necessary to convey the aspect of history within which it is associated.

The VDHR region that encompasses the CRMHS is Northern Virginia, which is described as bounded on the east and north by the Potomac River, on the south by the Rappahannock River, and on the west by the western boundaries of Fairfax and Prince William Counties. It is geographically part of Virginia’s Piedmont Province, but culturally affiliated with

Washington, D.C.³ The periods identified by VDHR as the primary basis for understanding prehistoric and historic developments within this region of the state are:

- 1 Prehistoric Native American Settlement (10,000 BC–AD 1607)⁴
- 1 Settlement to Society (1607–1750)
- 1 Colony to Nation (1750–1789)
- 1 Early National Period (1789–1830)
- 1 Antebellum Period (1830–1860)
- 1 Civil War (1861–1865)
- 1 Reconstruction and Growth (1865–1917)
- 1 World War I to World War II (1917–1945)
- 1 The New Dominion (1945–present)

Overview of Historic Periods Relevant to CRMHS

Within the framework of the historic periods identified by VDHR, the site history of CRMHS can be understood as a series of chronological periods tied to site-specific physical developments and local, regional, or national trends and events. Seven, and possibly eight, historic periods noted above are represented in the site history of CRMHS. Known or potentially surviving physical resources that depict the periods and themes are identified with each.

Prehistoric Native American Settlement (10,000 BC to AD 1607)

It is likely that the CRMHS area was, at minimum, a travel route used by American Indians, if not the location of seasonal camps or other temporary settlements. To date, little information has been gathered regarding American Indian use of the Colvin Run stream valley, but it is possible that archeological investigations may reveal more information.

Settlement to Society (1607–1750)

At CRMHS, early European occupation is thought to date from as early as 1739, upon the granting of the property by the crown to John Colville. However, no physical features have been identified on the site that date to this period. It is possible that archeological investigations may reveal more information.

Colony to Nation (1750–1789)

It is possible that the mill property was occupied during this period, but to date, no remaining physical features have been identified. It is possible that archeological investigations may reveal more information.

Early National Period (1789–1830)

It was within this time period that the mill complex was established and Colvin Mill and the Miller's House were constructed. Although there was a milling system in place when Shepherd owned the property, it appears that Philip Carper was responsible for installing the Oliver Evans' milling system that was reconstructed by craftsmen for the Park Authority and is currently in use at Colvin Run Mill. It is possible that another mill structure preceded the current building, because the mill building today has a section of rock foundation that is on a different elevation than the ground outside and the foundation of the mill inside. In addition to the mill building, itself, there would have been other structures on the property related to the operation of the mill and in support of associated dwellings. It is also thought that William Sheppard constructed other mill dams and races on the property. Two dams were located in the field, and features that may be headraces are indicated in historic aerials and in the period plans. Further investigation may reveal more information.

Antebellum Period (1830–1860)

This period commenced with an economic depression due to local agricultural practices. New scientific agricultural techniques introduced by Northern farmers, including crop rotation, applications of manure as fertilizer, and intercropping with timothy and clover, revolutionized agriculture in the county and ended the depression in the 1840s. Improvements in the Middle Turnpike brought a number of small businesses to the area where the turnpike crossed

3 1 Virginia Department of Historic Resources, "Guidelines for Conducting Cultural Resource Survey in Virginia" (Richmond, VA: Commonwealth of Virginia, 1999).

4 1 The VDHR guidelines use the term "Native American." Other portions of this report use the term "American Indian" per the National Park Service style guide.

Difficult Run, including a sawmill, a coopers shop, a blacksmith shop, and a general store in addition to the merchant mill. A community began to develop in the area, leading to the establishment of a post office there in 1849.

Civil War (1861–1865)

The effects of the Civil War on the physical features of the CRMHS landscape are not known. It is possible that after the Battle of Dranesville in 1861, Ord's troops returned to their headquarters in Langley, passing along the road in front of the mill, perhaps even stopping there. This is only speculation, however. It appears that John Powell did not suffer any physical losses to his property because he did not file with the Southern Claims Commission.

Reconstruction and Growth (1865–1917)

It is very unlikely that there were many changes to the CRMHS landscape during the early years of Reconstruction. After the war, Powell tried and failed to raise any capital to maintain and improve the milling operation; he finally went bankrupt in 1872. Powell also tried many times to sell the mill during this period, but was not successful until 1883, when the Millards bought the property.

The period of Millard ownership and operation of the mill saw the most change in the landscape. When he acquired the property, Millard rebuilt the pond and the millrace. During the family's ownership, Millard, then later his wife and sons, repeatedly modernized the milling machinery as milling equipment and technology evolved through the late-nineteenth and early-twentieth centuries. Millard may have also added rooms to his house to accommodate his large family; Fairfax County tax records show an increase in the value of his property from 1890 to 1891. By the early 1900s, droughts and subsequent lowering of the water level in Colvin Run made waterwheel power unreliable. Millard installed two steam turbines to supply a reliable source of auxiliary power for the millstones and rollers. For this process, it was necessary to introduce storage for the wood used for fuel. Photographs from this period show the wood piled in front of the mill and additional outbuildings that may have been used for wood storage.

The Millards were fairly self-sufficient, like many of their neighbors, and maintained a large garden

in a large area west of the mill's headrace. They also pastured cattle on their property and constructed a barn to house them. They constructed facilities to process milk, including an icehouse cut into the foot of the ridge on the southeast side of the miller's house. Other buildings on the Millard's property included a shed for wagons and a buggy, a chicken house, a smokehouse, a large corncrib, a washhouse, and other sheds. The banked foundation of their wagon shed is extant just northwest of the visitor parking lot.

World War I to World War II (1917–1945)

The Millards likely continued to mold the landscape and its features to their own requirements for operating a mill and a large household. As popular tastes in flour products changed, the Millards adjusted their process accordingly. One advertisement suggests that the rolling process had been abandoned by the 1920s in favor of a return to using the French burr grinding process. The Millard family continued to work the mill until 1934, when they sold their property to Bernard Bailey.

With an eye toward protecting the old building from the vibrations caused by the roller milling equipment, Bailey intended to remove the rollers and return to water power and stones for grinding, counting on a reliable supply and flow of water from Colvin Run; however, the eventual construction of State Route 7 in the 1940s resulted in a diminished water supply to the mill, and flow could not be relied on to turn the wheel. Little of the equipment left by the Millards could be salvaged or used, so Bailey sold the equipment as scrap. After the war, Bailey continued to work on the mill restoration, but the work was slow and there were still too many difficulties. Bailey considered alternate uses for the mill, such as refitting the mill as a restaurant, but none proved feasible. In 1965, through condemnation proceedings, the Fairfax County Park Authority acquired Colvin Run Mill and 30 acres of land, including the Miller's House, sheds, a barn, the millrace, and the mill dam.

The New Dominion (1945–present)

If the period of significance for the CRMHS is extended to 1972, the site could also be considered within this context for the mill as a restoration that commemorates the history of Fairfax County. Many such projects have been taken on since the 1960s in response to threats to historic resources brought on by the rapid expanse of suburban development

in Northern Virginia. The Park Authority has been a leader in such projects and has initiated similar restorations since then.

Overview of Cultural Themes Relevant to CRMHS

VDHR has also defined eighteen cultural themes of interest for Virginia's material cultural history from prehistoric times to the present. Themes relevant to the significance of CRMHS include:

- 1 Domestic
- 1 Subsistence/Agriculture
- 1 Education
- 1 Commerce/Trade
- 1 Industry/Processing/Extraction
- 1 Landscape
- 1 Architecture/Landscape Architecture/ 1 Community Planning 1
- 1 Technology/Engineering

These themes are described in detail below, along with a list of landscape features at the CRMHS that are significant to each theme (*see Table 4-1*):

Domestic Theme

This theme relates broadly to the human need for shelter, a home place, and community dwellings. Property types include single dwellings, multiple dwellings, secondary domestic structures, hotels, institutional housing, and camps.

Resources at CRMHS that represent the theme:

- 1 Miller's House

Subsistence/Agriculture

This theme most broadly seeks explanations of the different strategies that cultures develop to procure, process, and store food. Property types for the subsistence/agriculture theme include resources related to food production such as prehistoric villages, small family farmsteads, large plantations with representative or important collections of farm and outbuildings, and other agricultural complexes such as agri-businesses; sites or properties associated with processing such as a meat or fruit packing plant, cannery, smokehouse, brewery, winery, or food-processing site; storage facilities such as a granary, silo, wine cellar, storage site, or tobacco

warehouse; agricultural fields such as a pasture, vineyard, orchard, wheatfield, complex of crop marks or stone alignments, terrace, or hedgerow; animal facilities such as a hunting and kill site, stockyard, barn, chicken coop, hunting corral, hunting run, or apiary; fishing facilities or sites such as a fish hatchery or fishing ground; horticultural facilities such as a greenhouse, plant observatory, or garden; agricultural outbuildings such as a barn, chicken house, corncrib, smokehouse, or tool shed; and irrigation facilities such as an irrigation system, canal, stone alignment, headgate, or check dam.

Resources at CRMHS that represent the theme:

- 1 Colvin Run Mill
- 1 Cattle barn foundation
- 1 Wagon shed foundation
- 1 Remnant garden space above Colvin Run Road

Commerce/Trade Theme

This theme relates to the process of trading goods, services, and commodities. Property types include businesses, professional, organizational, and financial institutions, and specialty stores; and department stores, restaurants, warehouses, and trade sites. Specific properties related to the theme include office buildings, trading posts, stores, warehouses, market buildings, arcades, shopping centers, offices, office blocks, and banks.

Resources at CRMHS that represent the theme:

- 1 General Store (relocated)

Industry/Processing/Extraction Theme

This theme explores the technology and process of managing materials, labor, and equipment to produce goods and services. Included in this theme are activities related to the extraction, production, and processing of materials. Property types include quarries, mills (grist, carding, textile, woodworking), factories, distilleries, shipyards, mines, forges and furnaces, kilns, laboratories, power plants, dams, tanneries, village shops, and other small crafts and industrial sites.

Resources at CRMHS that represent the theme:

- 1 Colvin Run Mill
- 1 Quarry sites
- 1 Blacksmith shop (relocated)

Landscape Theme

This theme explores the historic, cultural, scenic, visual, and design qualities of cultural landscapes, emphasizing the reciprocal relationships affecting the natural and the human-built environment. Investigations include studies into spatial organization patterns, land use, response to natural features, circulation networks, boundaries, vegetation, cluster arrangement of buildings, fences, and paths, structures, and small-scale landscape elements. Associated property types include not only deliberately designed or maintained landscapes such as parking lots, parks, plazas, gardens, street furniture and objects, conservation areas, and rural historic districts, but also unoccupied land, underwater sites, and natural features such as a mountain, valley, promontory, tree, river, island, pond, or lake.

Resources at CRMHS that represent the theme:

- 1 Historic Core, including garden spaces, interior road, cluster arrangement of historic buildings
- 1 Historic Mill Pond Area, including quarries, headraces, and dams

Architecture/Landscape Architecture/ Community Planning Theme

This theme explores the design values and practical arts of planning, designing, arranging, constructing, and developing buildings, structures, landscapes, towns, and cities for human use and enjoyment. Property types include impermanent structures, rural vernacular buildings and structures, urban vernacular buildings and structures, great architectural landmarks, buildings exemplary of national styles, parks, gardens, and landscaped cemeteries, town and village plans, urban design and planned communities, and company towns.

Resources at CRMHS that represent the theme:

- 1 Historic Core

Technology/Engineering Theme

This theme relates primarily to the utilization of, and evolutionary changes in, material culture as a society adapts to its physical, biological, and cultural environments. Research questions here range from artifact studies on the identification of changing tool types, their various functions, and how they

were manufactured to more general issues related to the organization of labor and presence/absence of craft or occupational specialization. All site types may contribute to the understanding of this theme. This theme also involves the practical application of scientific principles to design, construct, and operate equipment, machinery, and structures to serve human needs. Property types include wood, metal, and concrete bridges; highways, dams, canals, railroads, air-transport, and other transportation-related works; and various industrial structures, engines, and machinery.

Resources at CRMHS that represent the theme:

- 1 Colvin Run Mill
- 1 Mill pond dams
- 1 Headraces
- 1 Quarries

Commemoration Theme

VDHR will consider other themes that may be appropriate to the site in a larger context. Commemoration is suggested as a theme that would include the mill restoration if the period of significance is extended to 1968.

Table 4-1. Themes Relevant to the Colvin Run Mill Historic Site 1

	Prehistory– 1720	1720– 1800	1800– 1861	1861– 1865	1865– 1900	1900– 1958	1958– 2008
Domestic			X	X	X	X	X
Agriculture/Subsistence	X		X	X	X	X	X
Commerce/Trade			X	X	X	X	X
Industry/Processing/ Extraction		X	X	X	X	X	X
Architecture/Landscape Architecture/Community Planning			X	X	X	X	X
Technology/Engineering			X	X	X	X	X
Commemoration							X

Comparative Analysis of Historic and Existing Conditions

See Maps 2-1 through 2-3. Period Plans

A primary objective of this CLR is to evaluate the ability of the existing landscape to represent the identified period of significance. To better understand the relationship between the contemporary landscape as documented in Chapter Three and the landscape that existed during the period of significance discussed above, this CLR includes a comparative analysis of historic and existing conditions. The basis for this analysis—a comparison of landscape conditions today to the end date of the period of significance—is conveyed through review of these maps. The analysis focuses primarily on extant features, including their period of origin, associations, and modifications over time. Also identified are important missing landscape features. The analysis has yielded three lists of feature types, including those that:

- 1 survive from the period of significance (contributing resources);
- 1 are missing, but existed during the periods of significance;

- 1 pre-date or post-date the period of significance or are not character-defining (non-contributing resources).

The three primary goals for developing this comparative analysis are to:

- 1 develop an understanding about which features contribute to the period of significance; 1
- 1 establish the basis for an integrity evaluation;
- 1 provide insight into the similarities and differences between historic and existing conditions that will contribute to the development of a well-grounded treatment plan for the cultural landscape.

The analysis is organized according to many of the landscape characteristics used in Chapter Three to present existing conditions documentation information:

- 1 patterns of spatial organization;
- 1 natural systems and features;
- 1 responses to natural features;
- 1 topographic modifications;

- views and vistas;
- land use;
- circulation;
- vegetation;
- constructed water features
- buildings and structures;
- small-scale features;
- archeological resources.

Patterns of Spatial Organization

Highway development and suburbanization have profoundly changed the character of the area surrounding the CRMHS since its early history and have altered the spatial relationship of the property to the surrounding landscape. The 1862 McClellan map illustrates a landscape character very different from today's (see figure 2-13). By the mid-nineteenth century, this area of Fairfax County was characterized by a loose patchwork of woodlots and open pastures and farm fields, crossed by a few main roads, with houses widely scattered. Today it is much more densely settled and developed. While there are no detailed maps of the mill property in the nineteenth century, it was likely comprised of an informal cluster of buildings and structures arranged for functional use, similar to its appearance in the early twentieth century (see figures 2-16 through 2-22). Of these, the **mill building** and the **Miller's House** retain their original locations. The **spatial relationship between the mill and the Miller's House**, located respectively in the Colvin Run floodplain and on the ridge overlooking the mill, had already been established in the early nineteenth century.

In addition to the mill development, two **quarries** were established in the nineteenth century along Colvin Run in an outcrop consisting of schist, gneiss, and metagraywacke. It is possible that the rock excavated was the same used for the foundation of the mill, but may have also been quarried and crushed for local road development in the late nineteenth and early twentieth century.

By the 1930s, a small community had sprung up in the vicinity of the mill, although the surrounding area remained quite rural in character (see figures 2-23 and 2-28). A small number of farmsteads, houses, businesses, and other uses were scattered along what had been the Alexandria-Leesburg Turnpike, now Colvin Run Road. Just across the

road from the mill were located a blacksmith shop and Cockrill's Store, and just up the road to the north was the Colvin Run School. The area west of the mill was characterized by the **pattern of open fields and woodlands** on either side of the valley of Colvin Run. In addition to the mill building and associated waterworks, the **mill complex** included a cluster of buildings and structures that likely housed milling-related activities, such as coopering, blacksmithing, and storage of grain and milling products (figures 4-1 through 4-8). The pasture to the south of the mill and between the tailrace and the road was enclosed with what was likely barbed wire mounted on wooden posts (see figure 2-27). The farm road to the north was also enclosed on two sides with barbed wire. On the ridge above the mill, the **residential complex** included the Miller's House, a separate kitchen, the smokehouse, and a kitchen garden. On the west side of the mill lane, the **farmyard** consisted of a number of agricultural buildings such as a barn and dairy, chicken house, and wagon shed (see figure 2-38). The yard around the Miller's House was enclosed with fencing, possibly a woven wire attached to white-painted posts (see figure 2-27). With the exception of the barn, most of these structures were located along the mill lane in a **linear arrangement**.

In the 1930s, the **complex of mill pond, dam, headrace, and tailrace** was still in active use. In the landscape there is evidence of three different dams, two of which were likely constructed by Sheppard, and the third—and easternmost—constructed by Millard.

The spatial organization of the mill property changed drastically in the mid-twentieth century with the construction of Route 7 (see figures 2-28 and 2-29). The new roadway cut directly through several large tracts of pasture and fields, including the **large floodplain meadow** to the southwest of the mill. Grading for the road created what amounted to a wall that cut off the mill from its open and bucolic landscape setting (figures 4-9 and 4-10 and see figures 4-7 and 4-8). Remnants of the meadow can be seen on the north and south sides of Route 7 on the floodplain level of the site.

The spatial organization within the historic core of the site on the north side of Route 7 has undergone some change since the period of significance. The open field containing the tailrace is still maintained in pasture grass, although the tailrace was relocated during the reconstruction of the mill in the 1960s (figures 4-11 and 4-12). The mill remains



Figure 4-1. Colvin Run Mill ca. 1910, showing a corncrib or other grain storage building to the left and a supply of wood to fuel the steam-driven mill. *Colvin Run Mill Historic Site archives.*



Figure 4-2. The same view in 2010. *JMA 2010.*



Figure 4-3. Colvin Run Mill ca. 1915, showing that the 1910 outbuilding has been moved and an addition built between it and the mill. The device in the left foreground may be a grain scale or other machinery related to mill operations. *Colvin Run Mill Historic Site archives.*



Figure 4-4. The same view in 2010. *JMA 2010.*



Figure 4-5. The mill and waterwheel ca. 1930, with a corncrib or other storage structure in the left foreground. *Fairfax County Park Authority Colvin Run Mill Slide Collection.*



Figure 4-6. The same view in 2010. *JMA 2010.*



Figure 4-7. South and east sides of Colvin Run Mill in 1935. Here, the level grade of the mill run is visible in the background. Deliveries to the mill at this time were via the road that climbs the hill to the right. *Historic American Building Survey*.



Figure 4-8. The same view in 2010. Views to the mill run are now obscured by the Route 7 berm. A snake-rail fence replaces the post-and-woven-wire fence of the 1930s. Interestingly, the utility pole, although replaced by a milled pole, is in approximately the same location. *JMA 2010*.



Figure 4-9. 1932 view looking north along the Alexandria-Leesburg Turnpike, now Colvin Run Road, past the mill. The mill is visible on the left side of the photograph, and the Miller's House, featuring three chimneys, is visible just beyond. Frame structures stand just to the right of the mill, and other houses and structures are also visible along the road. Above-ground utility poles and a simple wood-post-and-wire-mesh fence line both sides of the road, which is not paved. *Colvin Run Mill Historic Site archives.*



Figure 4-10. The same view in 2010; the mill is barely visible from this part of the road, and the Miller's House is completely obscured by vegetation. The asphalt-paved road is still lined with fencing and above-ground utility poles. *JMA 2010.*



Figure 4-11. View of the tailrace during restoration ca. 1969. *Fairfax County Park Authority Colvin Run Mill Slide Collection.*



Figure 4-12. The same view in 2010; the tailrace has widened significantly, and surrounding vegetation has thickened so that Route 7 is no longer visible. *JMA 2010. 1*

in its original location, including the location of the headrace, although the associated outbuildings that were part of the mill complex are missing (*see figures 2-16 through 2-20*). The Miller's House also remains in its original location, although the outbuildings that made up the residential complex during the Millard era are missing. In addition, the use of the open space between the mill lane and Colvin Run Road as a **farm garden** has also ceased.

After acquisition of the site in the 1960s, the Park Authority demolished the barn that was on the property in the approximate location of the current picnic area (*see figure 2-38*), and constructed what eventually became known as the Barn on the site of another farm building. The Park Authority then moved **Cockrill's Store** (now General Store) from its **original location** across from the mill to a spot directly on top of the north arm of the mill lane (*figures 4-13 and 4-14*). Placement of the store at this location disrupted the alignment of the mill lane on that end and also the linear spatial arrangement of structures on the site along this internal spine.

At some point during or after the restoration, **enclosed ornamental gardens** were created close to and across the mill lane from the Miller's House. No documentation has been found to suggest that these spaces were used this way during the period of significance.

In the 1970s, the Park Authority acquired an additional tract to the north on which a large **parking lot** to serve the site was constructed, necessitating the demolition of two **rural homesteads**, including small houses and associated outbuildings and gardens.

The south portion of the site has also undergone dramatic change, as well. The **wall created by the Route 7 berm** fully separated the stream valley from the mill complex. In addition, the pastures and fields that once edged the Colvin Run stream valley have been replaced by housing developments on all but its far western end. **Subdivisions** constructed on the site of Carper's Farm and farmsteads to the north changed forever the **patterns of fields, fences, and hedgerows** that once characterized the area. Abandonment of the use of the millrace and its series of dams and appropriation of the area as a greenway has led to the replacement of **open riparian meadows** with the **enclosure created by riparian woodland** that likely characterized the area prior to settlement. Secondary growth has obscured the spatial configuration of the quarry sites.

Natural Systems and Features

Activities related to the development of the mill, including dam and headrace construction in the nineteenth century, affected the natural course of **Colvin Run**, but those features also contribute to the historical significance of the site. However, since the end of the period of significance, suburban development in the area has led to increased stormwater runoff, resulting in scouring actions during storm events. Scouring increases sediment in the stream, affecting both the flow of water and the ability of the stream to support a diverse ecology. Additional impacts to stream health include increased petroleum pollutants from paved areas and non-point source pollution from fertilizer and pesticides on suburban lawns. Scouring activities are the greatest threat to the stability of historic resources because they lead to the erosion of historic earthwork features like the dams and headraces.

Other natural features of the site include a variety of **erodible and buildable soils**, as well as the **floodplain and ridge topography**, which affected the location of various buildings. The availability of **metamorphic rock** along the southern border of the site led to the excavation of two quarries.

Close to the quarries, a **spring** flows into Colvin Run; this is thought to have been the location of a springhouse.

Responses to Natural Features

The **location of Colvin Run Mill** was heavily influenced by the crossing location of the Middle Turnpike (now Colvin Run Road) over Colvin Run. Colvin Run itself provided a regular flow that was strong enough to power a large milling operation, and the Middle Turnpike was essential for transporting commercial products like flour to the docks of Alexandria.

Soil quality for building varies widely through the site. The mill was constructed on unstable soils that led eventually to the collapse of one wall, but the streamside location was otherwise ideal for the structure. On the other hand, the **location of the Miller's House** on the ridge above Colvin Run was likely chosen because of the more stable soils there and because the top of the ridge was out of the stream's flood zone.



Figure 4-13. The newly relocated Cockrill's Store, now the General Store, ca. 1970. Note that the bed of the original internal access road is still visible in the foreground. *Fairfax County Park Authority Slide Collection.*



Figure 4-14. General Store with gravel walkway installed atop the old roadbed. *JMA, 2010.*

The **locations of mill dams and headraces** were chosen to take advantage of the natural topography of the stream valley. Colvin Run is still used to supply the mill operation, but reduced flows necessitated the introduction of a **pumping system**.

In addition to the features related to the mill operation, it appears that there was at least one **drainage ditch** located in the meadow to the west of the mill, presumably installed to drain the meadow and make it more useful as pasture. Most of this feature was destroyed during the construction of Route 7.

The **two quarries were located** where their metamorphic stone was easily accessible. The stone likely first appeared as an outcrop above the Colvin Run floodplain, exposed by the activities of floodwater.

Topographic Modifications

Two of the **mill dams** were placed where the stream valley narrowed between ridges; the third was placed in a more open area and likely required more imported earth to create, but may have allowed a larger impoundment. These structures are barely discernable in the field and are gravely threatened by erosion and flooding.

The **headraces** that fed the mill were engineered to transport water from the mill ponds at an even and consistently falling rate that would supply enough pounds per square inch to efficiently operate the mill. While some lengths of the headraces are still discernable in the field, the basins themselves were filled upon the installation of the pump system. The **east end of the headrace** was entirely reconstructed during the restoration of the mill in the 1960s. The **original tailrace** was located to drain directly through the riparian meadow to Colvin Run. When the mill was restored, it was necessary to relocate the tailrace so that it ran parallel to Route 7 and then channeled under the highway in a culvert to eventually meet Colvin Run further to the east.

In order to construct Route 7, it was necessary to first cut through the hill northwest of the residential complex, then use that fill to create a 20-foot-high berm to support the highway over the Colvin Run stream valley. The **Route 7 cut-and-fill** activity completely altered the character of the property as an integral mill complex, separating the mill from its source of power. This activity also destroyed a length of the headrace and replaced that section with a culvert.

Grading for the parking lot and entrance drive in the 1970s altered the historic topographic configuration by the addition of fill to create a flat area close to Colvin Run Road. This fill obliterated the north end of the mill lane where it met the public roadway. The project also required intensive grading of the **original hillside** in order to create a flat surface, further disrupting the historic spatial qualities of that end of the site.

While a dry-stack stone wall was on the site when it was acquired by the Park Authority, additional walls were installed to develop a **terraced garden** south of the Miller's House. It is not known when the stone retaining walls were installed in that area, but they may have been constructed as late as the 1980s, when the DAR plaque was dedicated.

Views and Vistas

During the period of significance, **views of the mill building** were available from vantage points along Colvin Run Road from its intersection with Carper's Farm Way to the area where the ridge on which sits the Miller's House blocks the view (see figures 4-9 and 4-10). It is unlikely that it could be seen from Carper's Farm Way because of the riparian vegetation along Colvin Run.

Views to Cockrill's Store across the road from the mill were available during the period of significance, but were lost when the building was moved to its current location (figures 4-15 and 4-16).

The Miller's House appears in the 1937 aerial photograph to have been screened by trees and other vegetation on the slope leading down to Colvin Run Road, and this is also the case today (figures 4-17 and 4-18, and see figures 2-34 and 2-35). Farm outbuildings were probably blocked from view from Colvin Run Road by the ridge topography. However, aerial photographs suggest that there was a clear **viewshed between the Miller's House and the mill**. This viewshed has been partially blocked by overgrowth of brushy vegetation and placement of garden furnishings (see figure 3-37).

Throughout the period of significance, there was a clear and directed view of the mill down the mill lane from its upper reaches (figures 4-19 and 4-20). This view is still available, although somewhat screened by ornamental vegetation growing on the south side of the lane. This view was partially controlled by a wood post-and-rail fence on that side, which is now missing.



Figure 4-15. View past the mill to Cockrill's Store, prior to the restoration of the mill and the relocation of the store. *Fairfax County Park Authority Colvin Run Mill Slide Collection.*



Figure 4-16. The same view in 2010. *JMA 2010.*



Figure 4-17. View of the Miller's House ca. 1930s. *Fairfax County Public Library.*



Figure 4-18. Similar view taken in 2007. *Fairfax County Park Authority.*



Figure 4-19. View down the mill lane ca. 1910. *Colvin Run Mill web site.*



Figure 4-20. Similar view, 2010. *JMA, 2010.*

Aerial and ground-level historic photographs show that **views of the headrace and riparian meadow**, were available from the mill until Route 7 was constructed (see figures 4-7 and 4-8).

Today, there are **views of the mill from Route 7**, although they are seasonally screened (figures 4-21 and 4-22).

Land Use

As indicated in William Sheppard's 1811 advertisement for the sale of the mill, in the early nineteenth century, the property hosted a number of uses, including **industrial** and **commercial** for the merchant milling operation and related cooper's shop; **residential** for the "good dwelling house"; and **agricultural** for the "improved meadow," likely used for livestock grazing, and the peach orchard listed in the text. In the late nineteenth and early twentieth centuries, the Millard family maintained the agricultural use with a large vegetable garden, facilities for housing and milking cattle, a chicken house, a corncrib, and a smokehouse for processing meat. The Millards also kept a shed to house farm equipment and, later, automobiles. After the turn of the twentieth century, a blacksmith shop was also established on the property.

Residential and agricultural land use ceased when the property was acquired by Fairfax County. After the mill was renovated, the county introduced a number of new uses onto the property, including **museum/interpretive, administrative/operational/maintenance, recreational, equestrian, and natural resource protection**. Industrial use continued when the mill once again became operational. Commercial use continued, but operates out of the General Store, which was moved onto the site in the 1970s.

Circulation

Colvin Run Road, known as the Leesburg Pike or the Middle Turnpike during the period of significance, remains in its original alignment from that time period, as does the **middle portion of the mill lane** that once connected the upper and lower parts of the site to the public road. The **northern end of the mill lane** was blocked when Cockrill's Store was relocated to the site and then completely obliterated with the construction of the **visitor parking lot**. The configuration of the **southern end of the mill lane**, where it passes by the mill to meet Colvin Run Road, has been altered somewhat

since the period of significance from a pronged connection to the road with a central island to a single entrance leading to an open gravel area.

Within the site, the **open farm yard**, where there would have been pedestrian, animal, and vehicular activity, is also no longer evident in the landscape. There would also have been other informal circulation patterns within the site, such as **paths to outbuildings**, as well as **farm roads**. As evident in the 1937 aerial photograph, one of these farm roads crossed the headrace over a **small bridge west of the cattle barn** and led into the meadow and along the headrace. Although difficult to discern in historic aerials, there would have also been a **quarry access road** along the creek.

Circulation around the Miller's House during the period of significance would have included **steps, porches, and landings** at all exterior doors, leading to **stone, gravel, or dirt pathways** to common use areas. During the reconstruction in the 1960s, a flagstone patio and series of pathways were established on the west side of the house (figures 4-23 and 4-24). In addition, dry-stack stone retaining walls were constructed to support the house terrace, one below the patio and one along the stone stairs leading to the front path (see figure 2-37). Leading to the Miller's House is the **gravel path to the east entrance** and the **access ramp**. There are also **stone steps** that lead down into the second level of the terraced garden and a **gravel path leading to the mill yard** connects to the one leading to the Miller's House.

In addition to the visitor parking lot and the mill lane, circulation within the historic site located around the current Barn includes the **gravel road** leading to the **overflow parking and maintenance area**, the **concrete-paver visitor entrance path**, the **gravel gathering area**, the **accessible asphalt pathway**, and the **access ramp at the General Store**. During the restoration in the 1960s, new **headrace and tailrace wooden bridges** were constructed.

Route 7, constructed before 1954 as indicated in historic aerials, passes through the historic site, separating the mill from the features that provided its power: the mill dams, mill pond (non-extant), and headraces. On the south side of Route 7, there are a number of **walking and equestrian trails** that lead through the woods and along the stream. Some of these may follow historic circulation routes. The most widely used trail is part of the **Rails-to-River Trail** system that connects to the Cross County trail



Figure 4-21. View from Route 7 (Leesburg Pike) to Colvin Run Mill in 1976. *Fairfax County Park Authority Colvin Run Mill Slide Collection.*



Figure 4-22. The same view in 2010; the mill is no longer visible from Route 7. *JMA 2010.*



Figure 4-23. View of the west side of the Miller's House after the additions were removed but before the restoration. Note that flagstones had been used to create a path between the west addition and a large tree. It also appears that access to the house from the mill lane was accomplished via an earthen ramp (foreground). *Fairfax County Public Library.*



Figure 4-24. Similar view after the restoration and the new addition to the north. Flagstone was used to create a patio outside the addition and a path to the main entrance. *Fairfax County Public Library.*

just south of the site. It appears to follow what may have been the quarry access road on the south side of the stream.

Vegetation

Vegetation on the historic site during the period of significance included the **improved meadow** to the west of the mill, as well as the **riparian and upland woodlands** along and above Colvin Run. These vegetation patterns have been more or less maintained, although the meadow in the southern part of the site and other **open areas of pasture** further to the west have shrunk due to encroaching secondary growth.

The aerial photograph from 1937 shows several areas of the site that may have been **farm gardens** or **fields for cultivated crops**. Historic records indicate that there was a farm garden located on the property, and the 1937 aerial shows a cultivated area to the north of the Miller's House that may be that garden. Another disturbed area further west on the south side of the headrace may have also been a garden. A **cornfield** was located to the west of the mill (*see figure 2-16*). In addition, a **peach orchard** was reported to be on the property during Sheppard's tenure, but its location is not known. There were likely other, **smaller culinary or ornamental gardens** maintained around the house, but their locations are not known.

Two other plowed fields were located within the other two homesteads north of the Miller's House; one is now the visitor center parking lot and the other has grown up in brush. A third was located further west and north of the headrace and it has also grown up in brush.

The aerial photograph also shows small clusters of trees and individual specimens within the three farmsteads that now comprise the historic site. The photograph was taken in the late fall or winter so that evergreen trees, likely **Eastern red cedar**, are easily visible, although restricted to fence rows. Deciduous trees appear in close proximity to residential buildings and would have been treasured for their shade in the summer. **Large deciduous trees** are visible around the Miller's House, particularly on its east, west, and south sides. There was also a **row of deciduous trees** lining what is now the north property line of the historic site, but these are not in evidence today.

Little is known regarding planted vegetation within the vicinity of the Miller's House during the period of significance. A photograph from the 1930s shows **four hemlocks** that were growing in a row along the east side of the house (*see figure 4-17*). These also appear in photographs of the house before restoration, but they are missing today (*see figures 2-34 and 2-35*). These may have been overgrown specimens of hemlock that were once maintained as a hedge on that side of the house. There is also a **Katsuratree** located within the garden to the south of the house that may have survived from the period of significance, but this has not been verified.

Since the Park Authority acquired the property, there have been a number of campaigns of ornamental plantings, resulting in a more **gardenesque character** than there would have been during the period of significance, this being more of a working than ornamental landscape. However, it is possible that some of the bulbs evident on the site, such as daffodil, daylily, and iris, may have survived from that period. However, the plantings of boxwood, azaleas, rhododendrons, and other shrubs were installed during and after the restoration. Plants located in **smaller gardens** located throughout the site are of **recent origin**, including the DAR garden below the Miller's House, the Butterfly Garden west of the Barn, the Pollinator's Garden adjacent to the mill, the ornamental garden at the visitor entrance, the plantings around the entrance sign and in the parking lot, and the ornamental plantings around the mill. **Recently planted trees** are also found within the parking lot and in other locations within the site, including the tree located within the center island in the mill yard (*figures 4-25 and 4-26*).

Much of the site north of Route 7 is maintained in **broad expanses of open, mowed turf**, which would have been limited during the period of significance because most open space would have been used for mill and farm activities or kept in garden or grazing meadow.

The rest of the site contains a good deal of **secondary growth**, which has replaced the open fields and pasture that characterized the area during the period of significance and sprung up in abandoned areas of use, such as the old farm road in the northern part of the site.

Constructed Water Features

Constructed water features surviving from the period of significance include **remnants of the**



Figure 4-25. The mill ca. 1970s, after reconstruction and renovation of the site. *Colvin Run Mill Historic Site archives.*



Figure 4-26. Similar view in 2010. *JMA 2010.*

earthen headraces and the **remnant mill pond dams**. Missing from that period are the **original 30-acre mill pond**, **portions of the original headrace**, and the entire **original tailrace**. Lengths of the original headrace and the entirety of the tailrace were lost when Route 7 was constructed. The waters from the headrace were re-routed through a **steel culvert under Route 7**. The **reconstructed tailrace** was built when the mill was restored in the 1960s and the waters drained through a **culvert under Colvin Run Road** to eventually meet Colvin Run to the south. The **stone headrace** on the site was also constructed during the restoration project. It is likely that the **mill pond** was abandoned during Bailey's tenure because there was no longer enough water pressure to continue its use.

Buildings and Structures

Buildings located within the historic site during the period of significance included **Colvin Run Mill**, a **cooper's shop**, a **blacksmith shop**, the **Miller's House**, the **cattle barn**, and **other agricultural outbuildings**. There were also residential outbuildings such as a **kitchen**, **smokehouse**, and **icehouse**, and at least **two farmhouses with associated outbuildings** on land adjacent to the Millard's to the north, now part of the historic site. While the mill is in excellent condition, its associated outbuildings are missing, as is the case with the Miller's House and its separate kitchen, smokehouse, and icehouse. There was a barn on the site when it was acquired by the Park Authority, but it was demolished in the 1960s (*figures 4-27 and 4-28*). None of the other agricultural outbuildings remain either, although the foundation of one may be extant under the Barn. It is also thought that there may have been a **springhouse** located along Colvin Run.

The **stone foundation** located below the overflow parking/maintenance area is all that remains of what is thought to be a wagon shed and then an automobile garage for neighbors of the Millards in the next lot to the north. Curiously, the modern **maintenance shed** currently serving the site appears to be in the same location as an outbuilding shown in the 1937 aerial.

The other buildings were constructed on the site after it was acquired by the Park Authority. These include the **General Store** (Cockrill's Store, relocated), the **Barn**, and the **Carpenter's Shop**.

Structures located within the site during the period of significance included the earthen **mill pond dams**, the **headrace**, a **drainage channel** in the riparian meadow, and the **small bridge** that crossed the headrace west of the cattle barn. All but the small bridge are extant, although the headrace was altered when it was used to lay pipe for the **pumping system** currently in use. The **two small bridges that cross the headrace and the tailrace**, consecutively, were installed after the mill was restored.

Small-scale Features

Small-scale features present within the historic site during the period of significance would have been primarily **functional items related to the business of milling and maintaining a small farm and residence**. All that remains that may have survived from that period are the **millstones**, which were repurposed as **garden ornamentation** in the 1960s, and one stretch of **hand-made barbed-wire fence** that runs along the trace of the farm road in the north end of the site.

Most small-scale features found within the historic site today are oriented toward interpretation and visitor services, and were installed during and after the restoration in the 1960s. Interpretive features include the **Virginia Department of Historic Resources** and **Daughters of the American Revolution** markers, a collection of **beehives**, and the **variety of wooden fencing** that defines the boundary of the site and use areas within the site. The worm fencing along Colvin Run Road parallels the approximate location of the barbed-wire fencing that was there in the 1930s, although it is offset for vehicular safety (*see figures 4-9 and 4-10*). Other barriers include one made of **metal posts and rope**, a **white vinyl three-board post-and-rail fence**, and the **metal guardrail** that lines Route 7 and its intersection with Colvin Run Road. **Boulders** and **wheelstops** are used in the visitor parking lot to keep cars out of the parking islands, and a **wooden screen fence** is used to block views to the dumpster. **Metal pipe railings** provide support at the accessible ramps. With the possible exception of the fencing along Colvin Run Road, none of these features is considered contributing to the significance of the site.

Furnishings installed for visitor orientation include the **park identity and informational signs** at the entrance drive and at the east end of the site, the metal **visitor kiosk** at the site pedestrian entrance,



Figure 4-27. View of barn on the western edge of the farm yard. *Fairfax County Public Library.*



Figure 4-28. Similar view of barn site in 2010, now an open picnic area. *JMA, 2010.*

and **regulatory and traffic signs** along Colvin Run Road and Route 7. Furnishings installed for visitor comfort include **wood and metal picnic tables; wood benches; wood barrels** used as trash receptacles, as well as other purposes; and **wood and metal trash receptacles**. Garden ornaments include the **wood vine trellis** on the east side of the Miller's House and the **wood garden arbor** to the south. None of these features are considered contributing.

Garden beds throughout the site are lined with **timber, steel, or stone edging**. Lighting within the site includes **spotlights** trained on the mill building, **single-armed streetlights** on the public roads, and other **exterior lights**. Utility features include plastic **rainbarrels, trench drains, utility poles, overhead utility lines**, and culverts under Route 7 and Colvin Run Road. **Water supply lines, gas lines, and sanitary sewer lines** also pass through the site and are often identified by **small identity signs**. The mill is supplied by a **pumping system** that moves water from the pump station on Colvin Run through pipes laid in the historic headrace and into the stone-lined headrace on the north side of the site. Other small-scale features include various **metal posts and bollards, a base and plumbing for an outdoor drinking fountain, and the waterwheel shaft** lying on the ground close to the mill. As with the others, none of these features is considered contributing.

Archeological Resources

Known archeological sites within CRMHS include the area within the **stone foundation** of the wagon shed, and the **area around the Miller's House** including the **icehouse site, the quarry sites, and the abandoned well** in the maintenance yard. There are likely other archeological resources within the historic site, such as other abandoned wells, **unidentified outbuilding sites, abandoned privies, trash burning/disposal locations, garden sites, and American Indian sites** within the Colvin Run stream valley. Also within that area are the **sites of the three mill pond dams and other headraces**, as well as the possible **site of the springhouse**.

Inventory of Contributing, Missing, and Non-Contributing Resources

Contributing Resources

Patterns of Spatial Organization

- 1 locations of mill building and Miller's House
- 1 spatial relationship between the mill and the Miller's House
- 1 quarries
- pattern of open fields and woodlands

Natural Systems and Features

- 1 Colvin Run
- 1 erodible and buildable soils
- 1 floodplain and ridge topography
- 1 metamorphic rock
- spring

Responses to Natural Features

- 1 location of Colvin Run Mill
- 1 location of Miller's House
- 1 location of mill dams and headraces
- location of quarries

Topographic Modifications

- 1 mill dams
- 1 headraces
- upper third of tailrace

Views and Vistas

- 1 views of the mill building from Colvin Run Road

Land Use

- 1 industrial
- commercial

Circulation

- 1 Colvin Run Road
- 1 middle portion of the mill lane
- 1 quarry access road

Vegetation

- 1 riparian and upland woodlands

Constructed Water Features

- 1 remnants of earthen headrace
- 1 remnant mill pond dams

Buildings and Structures

- 1 Colvin Run Mill
- 1 Miller's House
- 1 stone foundation
- 1 mill pond dams
- 1 headrace
- 1 drainage channel

Small-scale Features

- 1 millstones (relocated)
- 1 hand-made barbed-wire fence

Archeological Resources

- 1 stone foundation
- 1 area around the Miller's House
- 1 icehouse site
- 1 quarry sites
- 1 abandoned well
- 1 unidentified outbuilding sites
- 1 abandoned privies
- 1 trash burning/disposal sites
- 1 garden sites
- 1 American Indian sites
- 1 headrace and mill pond dam sites
- 1 springhouse site

Missing Features

Patterns of Spatial Organization

- 1 mill complex
- 1 residential complex
- 1 linear arrangement of outbuildings
- 1 complex of mill pond, dam, headraces, and tailrace

- 1 large floodplain meadow
- farm garden 1
- original location of Cockrill's Store 1
- 1 rural homesteads
- patterns of fields, fences, and hedgerows
- open riparian meadows

Natural Systems and Features

- 1 none

Responses to Natural Features

- drainage ditch 1
- original tailrace location 1

Topographic Modifications

- east end of original headrace 1
- original tailrace 1
- original hillside 1

Views and Vistas

- 1 views to Cockrill's Store
- 1 viewshed between the Miller's House and the mill
- 1 views of the headrace and riparian meadow from the mill

Land Use

- 1 residential use
- 1 agricultural use

Circulation

- northern end of mill lane 1
- open farm yard 1
- 1 paths to outbuildings
- 1 farm roads
- 1 small bridge west of cattle barn
- 1 steps, porches, and landings
- 1 stone, gravel, or dirt pathways

Vegetation

- improved meadow 1
- open areas of pasture 1

- 1 farm gardens
- 1 fields for cultivated crops
- 1 cornfield
- 1 peach orchard
- 1 smaller culinary or ornamental gardens
- 1 Eastern red cedar
- 1 Large deciduous trees around Miller's House 1
- 1 row of deciduous trees
- 1 four hemlocks
- 1 Katsuratree

Constructed Water Features

- 1 original 30-acre mill pond
- portions of the original headrace 1
- original tailrace 1

Buildings and Structures

- 1 cooper's shop
- 1 blacksmith's shop
- 1 cattle barn and other agricultural outbuildings 1
- 1 kitchen
- 1 smokehouse
- 1 icehouse
- 1 two farmhouses with associated outbuildings 1
- 1 springhouse
- 1 small bridge west of cattle barn
- 1 wood post-and-rail fence along mill lane leading to the mill

Small-scale Features

- 1 Functional items related to mill, residence, and farm operation

Non-Contributing Features

Patterns of Spatial Organization

- 1 wall created by Route 7 berm
- 1 subdivisions
- 1 location of Cockrill's Store

- 1 enclosed ornamental gardens
- 1 large parking lot
- 1 enclosure of riparian woodland

Natural Systems and Features

- 1 none

Responses to Natural Features

- 1 pumping system to supply mill

Topographic Modifications

- 1 original tailrace
- 1 Route 7 cut-and-fill
- 1 grading for parking lot and entrance drive
- 1 terraced garden

Views and Vistas

- 1 views of the mill from Route 7

Land Use

- 1 museum/interpretive
- 1 administrative/operational/maintenance
- 1 recreational
- 1 equestrian
- 1 natural resource protection

Circulation

- 1 visitor parking lot
- 1 southern end of the mill lane
- 1 dry-stack stone wall at entrance path
- gravel road
- overflow parking and maintenance area
- 1 concrete paver visitor entrance path
- 1 gravel gathering area
- 1 accessible asphalt pathway
- 1 access ramp at General Store
- 1 gravel path to Miller's House
- 1 access ramps to Miller's House entrance
- 1 stone entrance steps and path to Miller's House
- 1 stone steps in terraced garden

- 1 gravel path leading to the mill yard
- 1 headrace and tailrace bridges
- 1 Route 7
- 1 walking and equestrian trails
- 1 Rails-to-River Trail

Vegetation

- 1 gardenesque character
- 1 smaller gardens of recent origin
- 1 recently planted trees
- 1 broad expanses of open, mowed turf
- 1 secondary growth

Constructed Water Features

- 1 steel culvert
- 1 reconstructed tailrace
- 1 culvert under Colvin Run Road
- 1 stone headrace
- 1 mill pond

Buildings and Structures

- 1 dry-stack stone retaining walls west of the Miller’s House
- 1 maintenance shed
- 1 General Store
- 1 Barn
- 1 Carpenter’s Shop
- 1 pumping system
- 1 two small bridges

Small-scale Features

- 1 use of millstones as garden ornament
- 1 Virginia Department of Historic Resources marker
- 1 Daughters of the American Revolution marker 1
- 1 beehives
- 1 variety of wood fencing
- 1 metal posts and rope
- 1 white vinyl three-board post-and-rail fence
- 1 metal guardrail

- 1 boulders
- 1 wheelstops
- 1 wooden screen fence
- 1 metal pipe railings
- 1 park identity and informational signs
- 1 visitor kiosk
- 1 regulatory and traffic signs
- 1 wood and metal picnic tables
- 1 wood benches
- 1 wood barrels
- 1 wood and metal trash receptacles
- 1 wood vine trellis
- 1 wood garden arbor
- 1 timber, steel, or stone edging
- 1 spotlights
- 1 single-armed streetlights
- 1 exterior lights
- 1 rainbarrels
- 1 trench drains
- 1 utility poles and overhead lines
- 1 water supply, gas, and sanitary sewer lines
- 1 small identity signs
- 1 pumping system
- 1 metal posts and bollards
- 1 outdoor drinking fountain base and plumbing 1
- 1 waterwheel shaft

Integrity Assessment

Introduction

National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation states that

integrity is the ability of a property to convey its significance... Historic properties either retain integrity (that is convey their significance) or they do not. Within the concept of integrity, the National Register criteria recognize seven aspects or qualities that, in various combinations, define integrity.

To retain historic integrity a property will always possess several, and usually most, of the aspects. The retention of specific aspects of integrity is paramount for a property to convey significance. Determining *which* of these aspects are most important to a particular property requires knowing why, where, and when the property is significant.⁵

Assessment of integrity is based on an evaluation of the existence and condition of physical features dating from a property's period of significance, taking into consideration the degree to which the individual qualities of integrity are present. The seven aspects of integrity included in the National Register criteria are location, design, setting, materials, workmanship, feeling, and association. As noted in Bulletin 15 and expanded in National Register Bulletin 30: Guidelines for Evaluating and Documenting Rural Historic Landscapes,

Location refers to the place where the historic property was constructed or the place where the historic event occurred. In the case of a landscape that is composed of many historic components, these components must retain their historic location to have integrity of location.

Design is the combination of elements that create the form, plan, space, structure, and style of a property. In the case of a rural landscape, its design would result from conscious and unconscious decisions over time about where to locate land uses, roadways, buildings and structures, and vegetation in relationship to natural features and to each other.

Setting refers to the physical environment of a historic property. Features such as bodies of water, topographical features, and communities of vegetation contribute to the historic setting.

Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property. In a landscape, this includes materials that form buildings, roadways,

fencing, and other structures. Materials also include vegetation, which is a challenging component because it has a predictable lifespan and is greatly affected by season, weather events, and the effects of pollution and other human impacts.

Workmanship is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory. One can see the effects of workmanship in the way that buildings and other structures, such as fences or dams, are constructed or the way that a roadway is graded and paved.

Feeling refers to a property's expression of the aesthetic or historic sense of a particular period of time. It is the cumulative effect of setting, design, materials, and workmanship and the way they create a sense of the past. Alterations made after the period of significance can either add to or detract from the integrity of feeling.

Association is the direct link between an important historic event or person and a historic property. The continuance or revival of historic practices within a site can reinforce a property's integrity because they link the past with the present. New technology or practices can threaten the integrity of association.⁶

Integrity Assessment

Based on the comparative analysis of historic and existing conditions presented above, CRMHS retains sufficient integrity to convey to the visitor the important associations of the existing National Register nomination and the amendments proposed herein. Despite the many, and often dramatic, changes made to the site since the period of significance, there is a core grouping of features that still represents its history. Those cultural landscape features that survive from as far back as the early nineteenth century contribute to the significance of Colvin Run Mill as a historic property, as well as to the Colvin Run Mill Historic Overlay District, as identified by Fairfax County. The strong connection between the siting of buildings and structures with natural features and processes, as well as the

5 Patrick W. Andrus and Rebecca H. Shrimpton, National Register Bulletin 15 – *How to Apply the National Register Criteria for Evaluation* (Washington: U.S. Government Printing Office, 1990, revised 2002), 44.

6 Ibid, 44–45.

ongoing use of the property for merchant milling, reference conditions that were present during the proposed period of significance, that is, from 1763 to 1934. The mill, the Miller's House, and the mill lane represent the core of activity that make the site significant in the history of the county. In addition, some important visual and spatial connections also survive to a great degree, although changes to the landscape implemented after the period of significance by the construction of Route 7 and by the Park Authority to accommodate visitation have altered many of what had been historic character-defining patterns of spatial organization and views.

Overall, as a cultural landscape, the CRMHS retains integrity of **location** because the essential components of the historic property are extant where they were originally constructed. The mill building has never been moved from its original site along Colvin Run, and the Miller's House also remains in its original location. The central portion of the mill lane remains in its original alignment, and the stone foundation of a wagon shed is extant. The mill also maintains its original spatial relationship to Colvin Run Road, originally the Middle Turnpike. Further archeological investigations may also reveal the locations of outbuildings, gardens, and other use areas within the site. In addition to location, the site possesses integrity of **association** because of the continued use of the property as a merchant mill.

The **setting** of the CRMHS contributes very little to its integrity. While the immediate residential area on the north side of Colvin Run Road maintains a rural character, the overpowering presence of Route 7 and its supporting berm present a dominating visual and audible intrusion into what had been the site's historic character. In addition, the residential subdivisions that ring the south section of the site are visible from many locations within the historic site. These developments have irrevocably altered the rural vernacular setting that characterized the site during the period of significance.

Overall, the CRMHS possesses only moderate integrity of **design, materials, and workmanship**. These qualities persist in a lesser degree in the mill building because of the great extent of replacement materials during the restoration. These qualities are more evident in the exterior of the Miller's House and the stretch of the mill lane alongside and between the two buildings. The buildings maintain their original relationship to the ridge and floodplain topography of the site and to each

other; the mill lane maintains its original horizontal and vertical alignments as it extends down the ridge slope. These features also more or less maintain their original materials and evidence of workmanship. The length of old barbed wire in its original location also contributes to the significance of the site because of persistence of the materials and workmanship exhibited.

The numerous physical changes made to the site since its period of significance have negatively affected its ability to communicate its historic significance. The most dramatic was the construction of Route 7 through the site, which destroyed any spatial or visual connection between the mill and its waterworks and associated riparian landscape. The project also destroyed a stretch of the headrace and the entirety of the original tailrace.

The relocation of the General Store to the mill lane and the destruction of the northern reaches of the mill lane for the visitor parking lot grading in the 1970s negatively impacted the integrity of the design, materials, and workmanship of the site. The placement of the pumping system plumbing inside the original headrace and the subsequent backfilling of the structure also negatively affected its integrity. The two other houses that were located on the site along with the outbuildings and use areas that characterized the site, vegetative patterns of meadow and woodland, and patterns of planting in relationship to the Miller's House are gone and the original spatial organization of the site is no longer expressed.

Because of the effects of changes since the period of significance on the design, materials, and workmanship expressed on the site, as well as the loss of its historic setting, the CRMHS possesses only moderate integrity of **feeling**, which is the cumulative effect of these qualities.

While the site was found to possess sufficient integrity with regard to the seven aspects of integrity for an amendment to the National Register nomination or listing of the site as a historic district, the degree to which the site continues to convey its significant historic qualities will depend on where future developments are located. To illustrate the varying degrees of integrity within the site, and thus the sensitivity to change of different areas of the site, JMA's CLR team prepared a map that delineates three levels of integrity: high, moderate, and low (*figure 4-29*).

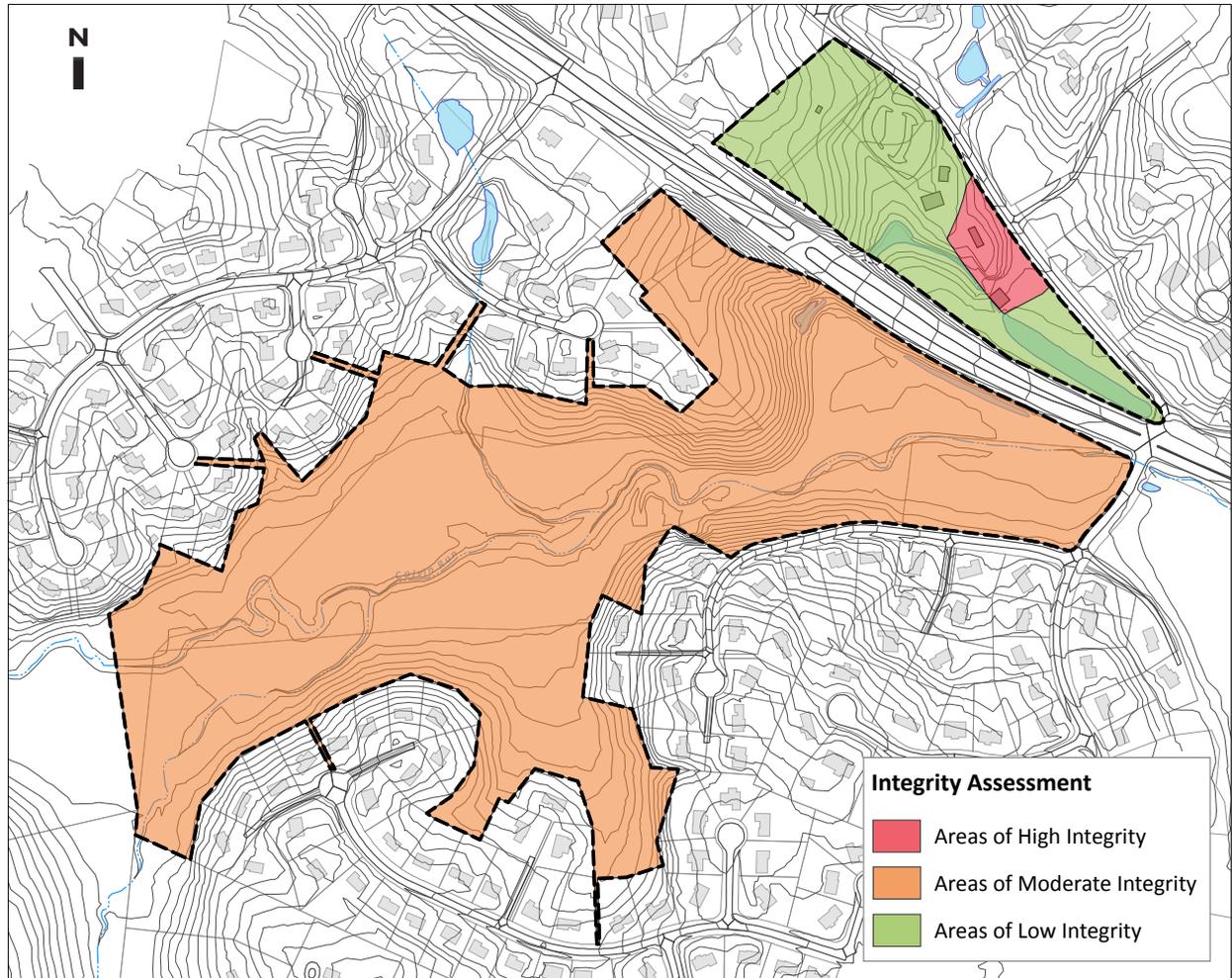


Figure 4-29. Integrity assessment diagram. JMA 2010.

The areas identified as having a high degree of integrity retain many historic resources and have weathered contemporary interventions with minimal damage. These include the mill building, the Miller's House, and the stretch of mill lane that connect them.

Areas with moderate integrity have lost some of the historic resources that characterized them during the period of significance and may also include contemporary additions that interfere with visitor understanding of the historic landscape. The Historic Mill Pond Area, with its headraces and earthen dams and the wooded margins of the site, has moderate historical integrity because of the conditions of these features and the views into and out of adjacent subdivisions.

Areas with low integrity have been substantially changed since the period of significance to accommodate non-historic uses. The entirety of the

Visitor Services Complex has low historical integrity. In general, given the proposed road-widening project for Route 7 and the large-scale residential developments encroaching from all sides, the integrity of the National Register-eligible historic district beyond the site's boundaries remains severely threatened.

Finally, while there has been a good deal of construction activity over the years on the ridge above the mill, there may still be some subsurface evidence remaining of significant historical events and associations, particularly in relation to farmstead activities within the site. Information regarding the location and date of construction of earthen dams and headraces in the southern section of the park, as well as the date of quarry excavation, may also be available. This area may also contain evidence of prehistoric cultural occupation, particularly along the stream corridor. Additional investigation into the archeological information potential of the

property and the integrity of surviving sites and subsurface resources is merited to further define the significance of the CRMHS.

Treatment Approach and Recommendations

This treatment approach and recommendations chapter has been prepared to provide the Fairfax County Park Authority (Park Authority) with an overall vision for managing the cultural and natural resources associated with Colvin Run Mill Historic Site (CRMHS). Specifically, the plan considers the needs and goals for site management identified in consultation with Park Authority personnel, as well as the preservation treatments befitting this historic property. Details regarding schematic plans for a new Visitor Center within the Visitor Services Complex are provided in Chapter Six.

This chapter is divided into four primary sections:

- **1 Management Issues, Goals, and Objectives.** This section documents the site management and preservation objectives established by the Park Authority for the Cultural Landscape Report (CLR);
- **1 Recommended Treatment Approach.** This section presents the four treatment alternatives recognized by the Secretary of the Interior for historic properties and identifies a recommended treatment approach for the CRMHS landscape;
- **1 General Management and Design Guidelines.** This section identifies general management and design guidelines that apply to the park as a whole, regardless of any alternatives-based treatment choices that are made by the park in the future; and
- **1 Treatment Plan Recommendations by Treatment Zones.** This section provides specific treatment recommendations for each of the park's treatment zones, based on character areas delineated in Chapter Three.

Management Issues, Goals, and Objectives

Colvin Run Mill Historic Site is an important cultural resource that demonstrates early American industrial technology in an authentic setting. Since the 1960s, preservation and restoration efforts as directed by the Park Authority have sought to

support interpretation for the site's 1810 to 1935 period of significance.¹

JMA's CLR team developed the treatment approach by taking into consideration the goals provided by the Park Authority at the beginning of the project, which were to:

- **1 Develop a treatment plan that helps fulfill the purpose of the historic site as stated in the 2008 *Colvin Run Mill Historic Site Master Plan Revision*, that is, to:**
 - **1 maintain and interpret the historic buildings and collections at the site for the enrichment of Fairfax County residents and visitors as they relate to the themes of technology and community in nineteenth and early-twentieth-century rural Northern Virginia;**
 - **1 preserve, protect, and interpret natural and cultural resources, to the extent that it does not conflict with management of either resource type onsite; and**
 - **1 provide a natural setting for passive recreational activities, which includes trail use and enjoyment of nature and history.²**
- **1 Develop treatment recommendations that are guided by the management objectives set forth in the General Management Plan contained in the 2008 *Colvin Run Mill Historic Site Master Plan Revision*, which include:**
 - **1 Education and Interpretation – To provide a broad range of educational and interpretive programs and exhibits promoting an appreciation of Fairfax County history with a focus on industry in the nineteenth and twentieth centuries.**

¹ Fairfax County Park Authority, "Request for Proposal Colvin Run Mill Historic Site – Cultural Landscape Report and Visitor Center Concept Plan," 2009.

² Fairfax County Park Authority, "Colvin Run Mill Historic Site Master Plan Revision," 2008, 8-9.

- Cultural Resources – To identify, record, and preserve the park’s cultural resources and foster attitudes and practices that support conservation of cultural resources.
 - Natural Resources – To conserve and, where appropriate, enhance designated natural areas. To foster attitudes and practices that support conservation of natural resources and responsible environmental stewardship.
 - Historic Collections – To preserve, protect, document, and manage the Historic Collection items according to best practices for historic building museums. To foster attitudes and practices that support good stewardship of historic objects and material culture.
- Identify historic resources. Through research and analysis, provide the park with an understanding of its important historic resources in support of their long-term protection and management.
 - Determine an appropriate treatment approach for the historic site that is consistent with the *Secretary of the Interior’s Standards for Historic Properties* and determine the actions that are needed to ensure stewardship of the site’s contributing resources. For those resources that have the potential for adaptive reuse, recommend new uses, where appropriate, based on identified programmatic needs.
 - Recommend ways to organize the site landscape that respects its historical significance while also enhancing pedestrian safety, resource protection, and the visitor experience.
 - Identify appropriate locations for the potential siting of the new visitor center facility.
 - Recommend ways to enhance and interpret the historic site’s natural environment, including environmental restoration projects. Identify opportunities to educate the public about environmental sustainability.
 - Provide information that will help the park tell the story of the historical development of the landscape. Recommend strategies for using the park landscape to tell the most

relevant and important stories through its cultural and natural resources.

Recommended Treatment Approach

To address the issues, concerns, and challenges associated with providing a new visitor center, new circulation patterns, and outdoor orientation and interpretive spaces for CRMHS while protecting the site’s significant historic resources, this report includes a recommended treatment approach for the site that is consistent with the *Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes* (the Standards), as well as Fairfax County Park Authority’s Policy 205 “Historic Restoration,” Appendix 12 “National Trust for Historic Preservation Guidelines” and Appendix 14, “Guidelines for Archeological Investigations in Virginia.”

The Department of the Interior – a federal agency that has established nationally accepted standards for historic preservation – currently recognizes four appropriate treatment alternatives for historic landscapes: preservation, rehabilitation, restoration, and reconstruction. These are defined and discussed in the Standards as follows:

- **Preservation:** the act or process of applying measures necessary to sustain the existing form, integrity, and material of a historic property. Preservation includes stabilization work, where necessary, as well as ongoing preservation maintenance and repair of historic materials and features.
- **Rehabilitation:** the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values.
- **Restoration:** 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 removing features from other periods in its history and reconstructing missing features from the restoration period.
- **Reconstruction:** the act or process of depicting, by means of new construction, the form, features, and detailing of a non-surviving

site, landscape, building, structure, or object for the purpose of replicating its appearance at a specific period of time and in its historic location.

Historic landscapes are rarely static environments. Management of a historic property often involves complicated choices and the accommodation of new uses, practices, and contextual influences. At CRMHS, the Park Authority must consider a wide range of management issues, not the least of which is the accommodation of visitors. In order to integrate the contemporary landscape features necessary to support visitor use of the park, and enhance the park's role as an educational facility, the recommended treatment approach is **rehabilitation**.

The rehabilitation approach is intended to improve the Park Authority's ability to meet current and future functional, maintenance, and management needs, while maintaining its core mission of preserving for public use and enjoyment the park's outstanding historic values. Taking into consideration the proposed future use of the site and the findings of this CLR, rehabilitation appears to best meet the goals and objectives of the Park Authority by preserving and stabilizing features of the historic property, while also allowing for new uses including a visitor center, visitor access and circulation, reconfigured parking, and ADA accessibility where possible. As part of rehabilitation, new design and management practices within the historic landscape must take into account the sensitivity of its character, and the qualities which render it significant. In addition to the protection of the site's overall historic landscape character and its individual historic features, the rehabilitation approach allows for the establishment of a clear, organized and compelling visitor experience through the addition of new facilities and circulation, reconfigured parking, and other functional site improvements and amenities. Rehabilitation will also allow the Park Authority the flexibility to incorporate new findings into site management and interpretation while pursuing resource management initiatives intended to promote sustainability.

The ten basic principles that comprise the Secretary of the Interior's Standards for Rehabilitation are intended to help preserve the distinctive character of a historic property, while allowing for reasonable change to meet new needs.

- 1) A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.
- 2) The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.
- 3) Each property will be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.
- 4) Changes to a property that have acquired historic significance in their own right shall be retained and preserved.
- 5) Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.
- 6) Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.
- 7) Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
- 8) Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.
- 9) New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work will be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.

- 10) New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

These standards apply to historic landscape features, as well as attached, adjacent, or related new construction.

General Management and Design Guidelines

The general management and design guidelines for treatment that follow arise from the application of the Standards. They pertain to CRMHS as a whole and should be used when planning for any future landscape change. Intended to support all landscape treatments proposed herein, the guidelines should be considered in conjunction with any project or treatment alternative that is undertaken at the historic site. These guidelines relate to a philosophy of cultural landscape treatment based on federal historic preservation guidance, including the Standards, the National Park Service's Director's Order No. 28: *Cultural Resource Management Guidelines*, and the National Park Service's *A Guide to Cultural Landscape Reports: Contents, Process, and Techniques*.

Site-Wide

- 1 Retain and maintain all extant features and systems of the CRMHS, except those specified for removal, below. Missing features and systems known to have existed during the period of significance should not be reconstructed unless the reconstruction is based on detailed documentary evidence or archeological investigation and evidence of the feature to be reconstructed.
- 1 Interpret the historic uses of the historic site to the greatest extent possible. Develop a new interpretive plan for CRMHS, incorporating new information about the history of the site, as it becomes available.
- 1 Provide pedestrian walkways and a site trail that links the interpreted features of the site. Encourage visitors to remain on the trail through informational and regulatory systems such as signs or brochures.

- 1 Avoid the introduction of new uses into the landscape at CRMHS that are not compatible with the documented historical uses of the overall property unless these uses support interpretation.
- 1 Consider the focal points within the landscape, particularly locations with a strong sense of place, where people will naturally stop and gather. Shape these as "nodes" within the interpretive system, taking the opportunity to locate waysides or other interpretive conveyances, and site furnishings such as benches within the nodes so that visitors can enjoy and appreciate the special character of the historic site.
- 1 Establish an identity sign system for the site that includes a consistent approach to graphic and narrative information depiction.
- 1 Eradicate invasive alien plant species currently in evidence on the site as is feasible. Allow vegetative brush to remain in areas when needed for screening.
- 1 Establish a monitoring program to periodically check for invasive alien plant species.
- 1 Document with photographs, maps and drawings, and narrative descriptions any feature to be demolished or removed from the site, no matter how recently established. Include all such documentation as part of the archival record of CRMHS.

Land Use

- 1 Avoid land-use activities, permanent or temporary, which threaten or impair known or potential archeological resources. These include activities that may lead to erosion or otherwise damage the soil surface.
- 1 Monitor and regulate use of the landscape to minimize immediate and long-term damage to historic landscape features.
- 1 Consider equally both natural and cultural features of the project area in treatment and land-use decisions.

Buildings and Structures

- 1 Consider the interpretive value of existing non-intrusive, non-contributing buildings and structures, and the potential for re-use prior to considering demolition.
- 1 Remove non-contributing structures that are intrusive to the historic landscape.
- 1 Document thoroughly all historic buildings and structures before removal.
- 1 Avoid conjectural reconstruction of historic buildings and structures.
- 1 Avoid siting new buildings and structures in any of the primary historic viewshed areas.

Circulation

- 1 Consider a variety of materials for path, trail, and parking area paving, and their potential visual impact on the historic site. Options for paving materials include stabilized crushed brownstone and colored concrete or stamped asphalt, either of which could be mixed using warm-brown-colored aggregate. Pervious paving techniques and materials should also be considered as part of Low Impact Development on the historic site.
- 1 Pedestrian paths should be universally accessible over the entire site if possible. This is especially true for visitor access, both parking and arrival to the visitor center as well as the interpreted historic core of the property. Refer to Preservation Brief #32: "Making Historic Properties Accessible" for more information.³
- 1 Prohibit visitor vehicular, bus, or bicycle access into the site except for the entrance road and parking area. Minimize other types of vehicular access and limit use to service, emergency, construction, and special-events vehicles.
- 1 Minimize the visual impacts of vehicles and vehicular access systems if not contributing

to the historical significance of the site. Consider how views from the historic core may be impacted by proposed new circulation systems.

- 1 Make non-historic vehicular access to the site as unobtrusive as possible. Consider noise and other impacts that visitor or event parking will have on the site. Work with topography or vegetative screening to limit visual impacts.
- 1 Encourage pedestrian circulation throughout the project area with universal accessibility where feasible. This increases opportunities to interpret the history of the site to the public.
- 1 Minimize the visual impacts of non-historic pedestrian access systems using topography or vegetative screening.

Sustainability

- 1 Institute cultural and natural resource treatment and maintenance methods that are environmentally and culturally sensitive and sustainable over the long term.
- 1 Minimize areas of woodland disturbance, earth grading and compaction, and drainage pattern alteration unless recommended to preserve historic character.
- 1 Promote biodiversity and native plant species.
- 1 Use mitigating devices, such as retaining walls, closed drainage systems, and large areas of cut and fill, sparingly. Implement the least-intrusive measures and those involving stabilization first, and subsequently proceed to the more invasive as necessary. Limit major new interventions to areas that have previously been disturbed.
- 1 Consider life-cycle costing of materials when assessing the long-term wearing capacity and maintenance costs. Use materials that are non-toxic, durable, long-lived, and low-maintenance.
- 1 Develop a stormwater-treatment system to handle runoff from new buildings and the existing parking lot that filters the water and then channels it into the Mill Pond.

³ Thomas C. Jester and Sharon C Park, Preservation Brief #32: *Making Historic Properties Accessible* (National Park Service Heritage Preservation Services web site) <http://www.nps.gov/history/hps/tps/tpscat.htm>, accessed December 14, 2010.

- 1 Reuse historic materials to the extent possible to avoid waste and preserve historic character.
- 1 Utilize excess rock and soil generated during new construction elsewhere on the site, preferably in areas of low integrity.
- 1 Refer to the Sustainable Sites Initiative's Guidelines and Performance Benchmarks 2009 for more information regarding sustainable site development.⁴

Topographic Modifications

- 1 Minimize soil disturbance and grading that would impact historic topographic forms or surfaces.
- 1 Preserve existing landforms and natural drainage patterns to the greatest extent possible.
- 1 Avoid attempts to reconstruct or restore historic grades unless supported by clear documentary evidence showing how they appeared at a specific period or as intended by its original constructed design.
- 1 Protect slopes from erosion by maintaining a healthy vegetative cover.

Land Cover Management

- 1 Encourage best management practices, integrated pest management, and soil and erosion control measures in all maintenance and management practices in order to minimize water pollution and degradation of natural systems.
- 1 Establish native vegetative cover on all slopes greater than 15 percent for erosion control. Consider planting species that are appropriate to the soil conditions, such as using wet-site species in perennially wet areas.

Forest Management

- 1 Remove, when necessary, existing trees using a method that minimizes the potential impacts on known and potential archeological resources. Undertake tree removal from areas with known or potential archeological resources under the guidance of a historical landscape architect and an archeologist.
- 1 Retain, where appropriate, existing woodlands; allow successional areas to mature, and establish new buffers along appropriate sections of the property boundary when protection of viewsheds is required. Buffers should consist of mixed species woodland with understory plants. Promote varied plant composition, and consider locally native woodland species for screen and buffer plantings.
- 1 Remove invasive alien species identified during woodland monitoring activities using ecologically sound removal techniques.
- 1 Maintain woodlands by thinning periodically to improve stand health and increase wildlife habitat.
- 1 Remove dead trees and shrubs, and those identified as potentially hazardous to individuals or resources because of their health or condition.

New Design and Construction

- 1 Avoid adding new features or altering existing features in ways that adversely affect the landscape's historic character. Introduce features to facilitate access and interpretation in ways that minimize any adverse impacts. Limit new construction to those alterations and additions that are necessary for visitor access, interpretation, and management. This will include a new visitor facility, vehicular, pedestrian and interpretive systems such as trails and paths, reconfiguration of parking, and unobtrusive and minimal wayside informational, identity, and regulatory sign systems. The new or altered features should be as unobtrusive as possible while allowing for accessibility and safety.

⁴1 The Sustainable Sites Initiative, Guidelines and Performance Benchmarks, 2009. Available online at <http://www.sustainable-sites.org/report/>, accessed January 13, 2011.

- Evaluate all proposed new uses in consultation with a historical landscape architect and other appropriate professionals.
- Document thoroughly any landscape features requiring modification, repair, or replacement before work is performed to protect research and interpretive values.
- Retain and maintain historic materials, features, finishes, construction techniques, spaces, and spatial relationships.
- Avoid landscape changes that create a false sense of historical development, including the addition of conjectural, “typical,” or representative features.
- Retain and maintain changes to the cultural landscape that have acquired historic significance in their own right.
- Repair, rather than replace, deteriorated historic features. Base repair of deteriorated features on archeological, documentary, or physical evidence. Replacement of historic features, if necessary, should also be based on archeological, documentary, or physical evidence; the new feature should match the old in design, color, texture, and, where possible, materials.
- Avoid the use of chemical or physical treatments that cause damage to cultural resources and natural systems. Undertake the surface cleaning of structures using the gentlest means possible.
- Protect and preserve archeological resources in place. If such resources must be disturbed, undertake mitigation measures such as recovery, curation, and documentation.
- Design and locate new additions or alternations to the landscape in ways that do not destroy historic materials, features, and spatial relationships that characterize the cultural landscape. Design all new additions and alterations to be a product of their time, and compatible with the historic resources in materials, size, scale, proportion, and massing. Differentiate new work from the existing historic resources.
- Design and locate new additions and alterations to the landscape in such a way that, if removed in the future, the essential form and integrity of the cultural landscape would be unimpaired.
- Minimize disturbance associated with the installation of visitor access facilities and systems that cross or abut wetlands to preserve existing landforms and plant and animal life.
- Design new features, systems, and programs to be universally accessible.

Adjacent Lands and Visual Quality

- Monitor and participate in regional and local planning activities in order to protect CRMHS’s setting and adjacent resources.
- Develop visual buffers along property lines abutting adjacent development. The clearing of woodlands on adjacent properties or properties within CRMHS’s viewshed are activities that could potentially threaten the visual quality of the historic site. Monitor adjacent planning and development activities and develop working relationships with adjacent landowners to yield information that may determine the need to establish additional buffers due to proposed development.
- Minimize further development impacts adjacent to and near the project area by working with developers during the planning process, suggesting increased setbacks and the least intrusive siting and character for improvements and new structures.

Access to Resources

- Limit, monitor, and control unauthorized access to the historic site.
- Consider alternative security measures that do not involve fencing the property.
- Develop an interpretive program that addresses cultural resources, natural systems, and their interrelationships.
- Minimize the visual and physical impacts of interpretive and visitor-access facilities on cultural resources and natural systems. Develop the least-intrusive interpretive

features, visitor center facility, and improvements to site access as possible.

- Provide an alternative means for interpretation, such as a Visitor Center exhibit, for those features located in areas that cannot be made universally accessible.
- Consider carefully any proposals to restore or reconstruct missing features. Prior to undertaking restoration or reconstruction efforts, carefully weigh the financial costs of both the initial effort as well as the subsequent maintenance costs; the ultimate benefit to be gained for interpretation; and the accuracy with which the feature could be reestablished.
- Consider means for interpreting significant missing historic features such as written interpretive information, site bulletins, web-site interpretation, personal-service

interpretation, and audio information rather than physical changes to the landscape.

- Use an integrated trail system to interpret the natural and cultural features encompassed by the entire park.

Treatment Plan Recommendations by Treatment Zones

This section provides more specific guidance on the treatments proposed by the CLR for protecting historic resources, addressing current and anticipated management and maintenance needs, and identifying appropriate sites and configurations for new interventions. The recommendations are organized by character areas as established in Chapter Three, referred to in this section as treatment zones (figure 5-1). Treatment

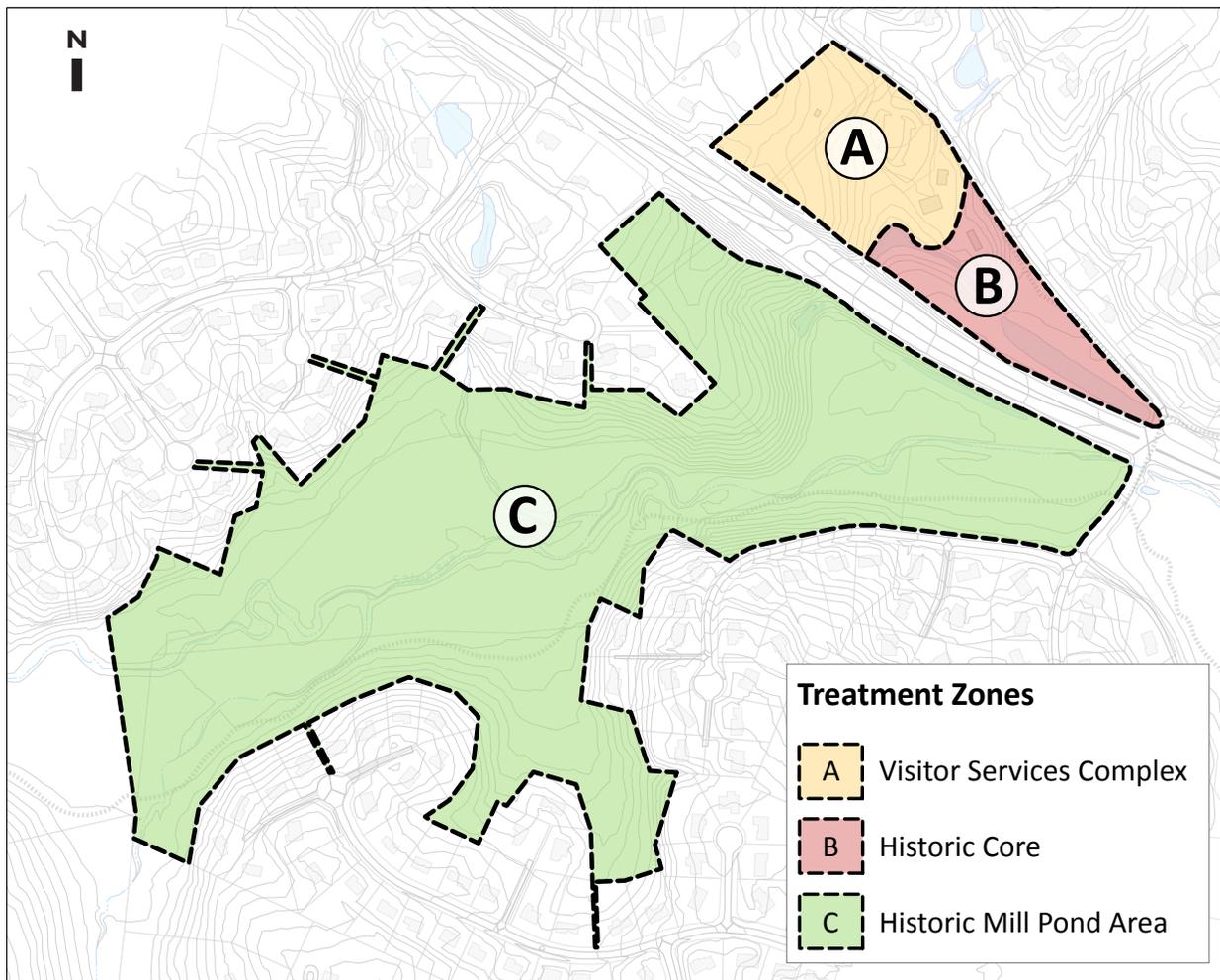


Figure 5-1. Treatment Zones based on character areas delineated in Chapter Three. JMA, 2010; created from Fairfax County GIS data.

zones help to establish a more specific framework or approach for treatment and management for distinct sub-areas. For example, stabilization and preservation, which are components of the Secretary of the Interior's discussion of rehabilitation as a treatment alternative, are the most appropriate treatment choice for sub-areas that retain higher degrees of integrity. Those areas that have already experienced a diminishment of integrity are better candidates for rehabilitation and the incorporation of necessary new uses or features. The treatment zones that comprise the site include:

- 1 Historic Core
- 1 Visitor Services Complex
- 1 Historic Mill Pond Area

These zones are based upon the identified character areas and are also based on the management zones delineated in the *Colvin Run Mill Historic Site Master Plan Revision* and the stated goals and recommendations for each of those zones. The treatment recommendations provided herein represent the best and highest use for the site as a whole. The recommendations are based in the opportunities and constraints identified for the entire site and for each character area. Site development to accommodate a new visitor center, visitor access to the site, circulation and interpretation, site management and maintenance, and site administration will require that choices be made that sometimes compromise to a greater or lesser degree these recommendations and is detailed in Chapter 6. The goal of this chapter is to provide the most appropriate treatment recommendations for this historical site in order to assist the Park Authority and their stakeholders in making wise and appropriate choices when implementing necessary changes.

Recommendations by Treatment Zone

Historic Core

Map 5-1. Historic Core

The Historic Core is comprised of the landscape surrounding and including Colvin Run Mill, the Miller's House, and constructed water features related to the functionality of the mill. Of primary interpretive importance is the headrace, the current mill pond, the original headrace, the tailrace, and the drainage ditch. The mill lane that leads from Colvin Run Road and passes along the west side of

the Miller's House is also significant. The Historic Core retains a high level of integrity and is highly sensitive to change. *The primary goals within the Historic Core are to preserve the existing contributing features and settings, interpret them, and render them accessible.*

Treatment recommendations for this zone include:

Patterns of Spatial Organization

- 1 Retain the existing spatial relationships formed by the mill, the Miller's House, and the mill lane.
- 1 Place any proposed additional buildings in locations where there were buildings during the period of significance. Proposed structures such as a new blacksmith's shop could be placed where structures were depicted in historic photographs.

Natural Systems and Features

- 1 Monitor areas of erodible soils for signs of loss, particularly on the slope between the mill and the Miller's House. Stabilize with erosion-control fabric and groundcover plantings or seed, or cover with sod, as needed.

Responses to Natural Resources

- 1 Assure that the outlet that drains the tailrace to Colvin Run is sufficiently clear to prevent flooding. Monitor on an annual basis.

Topographic Modifications

- 1 Monitor the road edges between the mill and the Miller's House for signs of erosion. Stabilize as described above.

Views and Vistas

- 1 Protect historic views of the mill building from the intersection of Colvin Run Road and Carper's Farm Way. Selectively clear vegetation to allow for intermittent views into the site. Avoid establishment of large trees in this area that may screen the view of the mill. Remove mid-range brushy vegetation.
- 1 Protect historic dynamic views of the mill and the Miller's House from Colvin Run Road. Dynamic views are those experienced by one moving through space, like a passenger in a moving vehicle.

- 1 Protect the view from the Miller's House to the mill and back. Control vegetation within the viewshed and remove any objects that may have been placed within the viewshed after the period of significance.

Circulation

- 1 Restore alignment of the mill lane to its relationship with northwest window of the mill as shown in a 1910 image (*see figures 4-19 and 4-20*).
- 1 Restore forked alignment of the access drive in front of the mill building, including the central island that once held a small building. Block unwanted vehicles with portable wood fencing that is compatible with the historic character of the site.
- 1 Evaluate existing pathways system for universal accessibility. Renovate non-compliant areas. Refer to Preservation Brief #32: "Making Historic Properties Accessible" for additional information.⁵
- 1 Consider new paving materials for those pedestrian circulation features that are to be universally accessible. There are pervious pavements that are also ADA compliant and are consistent in color and texture with the historical character of the site. Refer to Appendix C, "A Guide to Trail Surfaces for Historic Sites."
- 1 Avoid cutting to create level alignments for paths. Use distinguishable fill when necessary to effect appropriate grades for any new circulation routes while preserving archeological resources.
- 1 Evaluate the ramp on the east side of the Miller's House for compliance. If necessary, reconstruct the ramp and landings to meet ADA standards in a manner that is compatible with the historic character of the site.
- 1 Renovate the pedestrian area along the west façade of the Miller House to provide more even footing. Consider simplifying the

design to better reflect the functional yard of a farmhouse. Reference treatment at the Sully Historic Site.⁶ Do not re-grade this area for universal accessibility as topography prohibits this without major disruption to the historic site.

- 1 Preserve and maintain the vehicular entrance at the mill level for drop off and universal accessibility to the site. Simplify the arrangement of fencing and signage and include this area when contemplating a comprehensive signage system.
- 1 Remove gravel path that leads from just north of the Miller's House down the hill and along Colvin Run Road to the mill area. Direct pedestrians to use the mill lane.

Vegetation

- 1 Remove all ornamental vegetation around mill building and all stone bed edging.
- 1 Extend gravel paving to mill building face on all but the west side in order to better interpret the functional character of the mill's period of significance. Incorporate boulders from the site to control erosion.
- 1 Preserve and maintain the open turf area to the southeast of the Mill.
- 1 Simplify the entrance garden on the west side of the Miller's House to interpret it as a farmhouse garden. Recommend similar treatment as that seen at Sully Historic Site (*figure 5-2*).
- 1 Preserve and maintain large specimen trees, including the American holly to the west of the mill.
- 1 Conduct research regarding variety of Japanese maple and azaleas planted in DAR garden. If development of these varieties is found to post-date the period of significance, remove the specimens.
- 1 Assess the condition of trees within twenty feet of the Miller's House and the mill building in consultation with a certified arborist to determine if they present a hazard to visitors

⁵ Thomas C. Jester and Sharon C Park, Preservation Brief #32: Making Historic Properties Accessible (National Park Service Heritage Preservation Services web site, <http://www.nps.gov/history/hps/tps/tpscat.htm>, accessed December 14, 2010).

⁶ Fairfax County, "Sully Historic Site," <http://www.fairfaxcounty.gov/parks/sully/>, accessed January 13, 2011.



Figure 5-2. Simplify the garden west of the Miller's House, using the treatment approach at Sully Historic Site as a guide. *Fairfax County Park Authority website.*

or structures. Take appropriate measures to stabilize large specimen trees and those that contribute to the historic character of the site. Only if absolutely necessary, remove trees within this area that are considered a hazard.

- 1 Remove, when necessary, existing trees using a method that minimizes the potential impacts on known and potential cultural and archeological resources. Undertake tree removal from areas with known or potential cultural and archeological resources under the guidance of an archeologist. For example, it is recommended that tree stumps be left in place in order to avoid disrupting archeological resources and to minimize erosion.
- 1 Replace in-kind removed vegetation deemed to contribute to the historic character of the site. In-kind means the same species with a similar form and habit. If in-kind replacements are impossible due to scarcity or invasive quality of species, substitute with species of similar appearance and habit.
- 1 Replace large deciduous trees located on the east side of the Miller's House as indicated by stump locations.

- 1 Plant in-kind sapling within the open bole remnants of the large tree that once shaded the mill lane. Preserve bole in place for interpretive purposes.

Constructed Water Features

- 1 Preserve and maintain headrace structure, mill pond, and tailrace.

Buildings and Structures

- 1 Preserve and maintain the mill building per Secretary of the Interior's Standards.
- 1 Reconstruct the millwright shop on the north side of the Mill along Colvin Run Road next to the mill-level entrance.
- 1 Move the blacksmith shop from its current location at the barn to the vicinity of the millwright shop.
- 1 Protect and maintain stone walls used to channel water. Refer to Preservation Brief #2, "Repointing Mortar Joints in Historic Masonry Buildings," for additional information.⁷
- 1 Replace the existing fence on the site perimeter along Colvin Run Road with barbed wire on wooden posts as documented in historic photographs (*see figures 4-9 and 4-10*).
- 1 Remove stone edging on the west side of the mill lane and restore the plank fence shown in a photograph of the mill from 1910 (*see figures 4-19 and 4-20*).
- 1 Repair and maintain the worm fence to the west of the stone channel.
- 1 Remove timber terracing on the hillside west of the mill and restore to rough turf, using erosion control fabric, if necessary.

Small-scale Features

- 1 Keep lighting in the Historic Core minimal and as unobtrusive as possible. Install only as necessary for security and consider using motion-sensitive, dark-sky lighting fixtures to reduce light pollution. Avoid installing

⁷ 1 Robert C. Mack and John P. Speweik, "Preservation Brief #2— Repointing Mortar Joints in Historic Masonry Buildings," (Washington, D.C.: National Park Service Technical Preservation Services, 1998).

ornamental lighting unless documented as present during the period of significance.

- 1 Develop and incorporate new wayfinding and interpretive signage in the Historic Core as part of the site-wide interpretive plan.
- 1 Consider relocating DAR sign to Visitor Services Complex as it is currently in the historic viewshed between the Miller's House and the mill.
- 1 Replace site identification sign at southeast end of Historic Core with sign matching proposed sign at visitor entrance (*see Visitor Services Complex below*).
- 1 Remove flower pots from DAR garden. When wood bench warrants replacement, select simpler style that suits the historic character of the site.
- 1 Remove non-contributing site furnishings from around the mill building, including rain barrels, garden edging, and millstones used as ornaments.
- 1 Provide site furnishings to accommodate visitor use of the site. Place benches in key locations at interpretive nodes or primary pause sites. Choose a simple, contemporary style that is a product of its own time, not a period reproduction. Establish a single standard for all benches and matching site furnishings, such as trash receptacles.

Utilities

- 1 Work with local utility companies to minimize the number of above-ground utility-related features to be located within the historic viewshed, such as signage, standpipes, poles, and guy wires.

Archeological Resources

- 1 Protect and preserve any archeological resources in place. If they must be disturbed, undertake mitigation measures such as recovery, curation, and documentation. Incorporate the findings into the site interpretive program.

Visitor Services Complex

Map 5-2. Visitor Services Complex

The Visitor Services Complex encompasses more than half the land area in the portion of the historic site that is north of Route 7. It is less sensitive to change than the Historic Core and is envisioned as a zone that could accommodate the majority of the new improvements necessary to support visitor access and orientation to the site. The existing Barn is to be demolished and replaced by a new visitor center facility described in more detail in Chapter Six. *Rehabilitation is the most appropriate landscape treatment approach for this zone, particularly to accommodate public access, a new visitor center facility, organized and enhanced pedestrian areas for gathering and interpretation, and reconfigured parking.*

Treatment recommendations for this zone are as follows:

Patterns of Spatial Organization

- 1 Locate the proposed visitor center and surrounding use area as indicated in Chapter Six.
- 1 Base the locations of new buildings on the locations of outbuildings that comprised the farmyard of the site during the period of significance. Use the open area created by buildings for visitor gatherings and demonstrations.

Natural Systems and Features

- 1 Monitor areas of erodible soils for signs of loss. Stabilize with erosion control fabric and groundcover plantings or sod, as needed.

Topographic Modifications

- 1 Use low-impact development techniques for stormwater runoff and drainage in the area of the proposed Visitor Center and areas susceptible to erosion in and around the picnic area. Interpret efforts for low-impact development and sustainability.
- 1 Investigate and document the extent of undisturbed topography that may have been sealed by fill imported for the construction of the visitor parking lot. This will provide information about the topography of the site during the period of significance.

Views and Vistas

- 1 Screen views to overflow parking and maintenance areas from within the site.

Circulation

- 1 Reconfigure parking to accommodate 56 spaces, bus parking, and bus drop off.
- 1 Enlarge the area for overflow parking by relocating the maintenance shed and the bee yard. Address archeological conditions in this area before any ground excavation takes place for any purpose. Indicate area of overflow parking by directional signage.
- 1 Clean up and restore the nature trail to a consistent width and surface. Consider incorporating soil stabilization techniques, such as soil cement, in areas of trails prone to erosion.
- 1 Incorporate the farm road trace into the trail system and into the interpretive plan.
- 1 Consider alternative paving materials for the pedestrian circulation, including pervious materials that are also ADA accessible and consistent with the texture and color for the historic site.
- 1 Design pedestrian outdoor spaces and pathways to be universally accessible as is feasible in this zone.

Vegetation

- 1 Consult with an arborist regarding the health of trees in this area, particularly in the parking lot. Trim and otherwise treat trees as indicated or replace any recommended to be removed.
- 1 Relocate ornamental plantings at visitor entrance to the Miller's House garden area. Ornamental plantings would not have been in the farmyard area during the period of significance.
- 1 Relocate butterfly garden to area outside the historic viewshed. Consider moving it to the garden area recommended to be established to the east of the Barn.

- 1 Consider clearing brush to within 30' of Route 7 right-of-way to open up what was a cleared area historically.

Buildings and Structures

- 1 Remove the Barn from the site as recommended by the visitor center design and relocate the blacksmith shop to the area of the reconstructed Millwright Shop.
- 1 Locate the proposed visitor center as indicated in Chapter Six.
- 1 Preserve and maintain the General Store. Rehabilitate according to program needs including possible remodeling of the restroom space for another use. Restrooms will be provided in the proposed visitor center.
- 1 Remove the corrugated-metal shed at the north boundary of the site and the associated existing mulch/brush stockpile. Consult with adjacent property owner regarding possible relocation.
- 1 Replace the fencing along Colvin Run Road in front of the mill and further south with barbed wire or woven wire mounted on wood posts.

Small-scale Features

- 1 Redesign the historic site entrance sign so that it communicates the significance of the site to passersby. A low monument sign set on a stone base with a horizontal orientation, such as that used at Sully Historic Site, would fit well into the hillside at the current sign location (*figure 5-3*). The orientation would allow for the display of the mill silhouette



Figure 5-3. Replace the historic site entrance sign with a sign similar to the one located at Sully Historic Site. *Fairfax County Park Authority website.*

presently used as well as the Park Authority's logo and hours of operation. Stone should match that used in the foundation of the mill.

- 1 Incorporate new wayfinding signs as well as interpretive signage that is part of the overall interpretive plan for the site.
- 1 Repair and maintain the picnic area and structures. Provide at least two accessible picnic tables.
- 1 Relocate single picnic table currently located on the edge of the parking lot to the main picnic area.
- 1 Adopt a consistent style for picnic tables and trash receptacles. Recommended: wooden table and bench seats mounted on bent-metal frame painted black.
- 1 Design new pedestrian entrance kiosk. Consider utilizing architectural references to the mill, headrace, or Miller's House, such as a rustic stone or brick base.
- 1 Provide at the pedestrian entrance to the historic site an orientation map, directional signage, and interpretive signage that is part of the overall interpretive plan for the site.

Utilities

- Relocate the dumpster from the parking lot to the service area for the proposed Visitor Center.

Archeological Resources

- Stabilize and preserve the stone foundation set into the slope above the existing visitor parking area.

Historic Mill Pond Area

Map 5-3. Historic Mill Pond Area

The Historic Mill Pond Area encompasses the entirety of the parcel located south of Route 7. This area contains the site of the original 30-acre mill pond and the remnants of two dams and associated millraces that served Colvin Run Mill. It also contains trails for both pedestrian and equestrian use, including the Rails-to-River Trail. The trails provide access through the site for neighborhoods to the north and south. Vegetation within and

on the edges of the area provide a visual buffer. *Rehabilitation for this area includes preservation of desirable woodland conditions, trail preservation and maintenance, preservation and interpretation of cultural resource remnants, natural resource preservation and interpretation, and enhancement of the visual buffering qualities of the woodland cover.*

Treatment recommendations for this zone are as follows:

Patterns of Spatial Organization

- 1 Conduct clearing campaigns to reestablish and maintain the historic edge of the riparian meadow in the northwest part of this area.

Natural Systems and Features

- 1 Maintain riparian tree cover and other vegetation that will help reduce scouring and other sources of erosion that may negatively affect cultural resources.

Responses to Natural Resources

- 1 Conduct archeological surveys to:
 - 1 confirm the locations of the three dams identified in the field and initiate more intensive investigations to determine their date of construction;
 - 1 locate the extension of the headraces constructed in this area, including those that may be related to older mill pond dams;
 - 1 discover the location and extent of each mill pond impoundment; and
 - 1 reveal more information regarding the date of use and purpose of the two quarries.

Topographic Modifications

- 1 Protect slopes from erosion and maintain healthy vegetative cover.
- 1 Monitor effectiveness of groundcover over dam and headrace earthworks in protecting these features from erosion. Repair and revegetate eroded soil areas and block social trails that pass over these features.
- 1 Document using GPS technology the location and dimensions of both earthen dams as they

are severely threatened by stream activity, particularly flooding and scouring.

Views and Vistas

- 1 Allow vegetation to develop along the eastern edge of this area in order to screen Route 7 from view.
- 1 Reestablish, in order to screen views of adjacent subdivisions, vegetation along the boundaries of this area where adjacent residents have encroached on park property.

Circulation

- 1 Preserve and maintain existing trails.
- 1 Enhance access points to the trails through signage at Carper's Farm Way and at official access points from adjacent subdivisions.
- 1 Determine, through archeological investigation, the age and purpose of the road that runs along the north side of Colvin Run. Interpret as indicated.

Vegetation

- 1 Retain and maintain the native components of the woodlands in this area.
- 1 Preserve in particular large specimen trees and unusual species indicative of the vegetative community type.
- 1 Retain and enhance existing woodland as a visual buffer to limit views of adjacent residential development. Plant native woodland species as necessary to perpetuate screening quality of the wooded buffer.
- 1 Allow dead trees and shrubs to remain in place for wildlife habitat unless they present a hazard to pedestrians or equine users. If necessary to remove, use a method that minimizes impacts on known and potential natural or archeological resources.
- 1 Undertake tree removal from areas with known or potential archeological resources under the guidance of an archeologist.

Constructed Water Features

- 1 Stabilize and preserve remaining traces of headraces and earthen dams in this area.

Buildings and Structures

- 1 Avoid the addition of buildings or other above-ground structures in this area.
- 1 Preserve and interpret remnants of both dams, headrace terraces, and the site of mill ponds.

Small-scale Features

- 1 Incorporate signage along the trail for the interpretation of cultural resources, natural resources such as wildlife and water quality, and the function of the Resource Protection Area.

Utilities

- 1 Work with local utility companies to minimize the number of above-ground utility-related features to be located within this area, including signage, meters, standpipes, poles, guy wires, etc.

Archeological Resources

- 1 Preserve and interpret the site of a possible springhouse and the two quarry sites. Conduct additional archeological investigations within this area of the site in order to gather more information regarding the quarries, the two dam sites, the headrace, and the springhouse.
- 1 Protect and preserve any archeological resources in place; if they must be disturbed, undertake mitigation measures such as recovery, curation, and documentation.

Schematic Design

The schematic design presented below has been prepared to provide the Fairfax County Park Authority (Park Authority) with four schematic alternatives for the site design related to the development of a new Visitor Center at the Colvin Run Mill Historic Site (CRMHS) and further development of a preferred alternative.

This chapter is divided into four primary sections:

- **1 Site Opportunities and Challenges:** documents the issues raised by the Park Authority for consideration for the schematic site design.
- **1 Basis of Design Narrative:** narrative description of the alternative design concepts for the area around the proposed Visitor Center at the Colvin Run Mill Historic Site, including the Preferred Alternative.
- **1 Alternatives Considered:** graphic plans of the four alternatives considered in the development of the schematic design.
- **1 Schematic Design Concept:** graphic plan of the design concept for the area around the proposed Visitor Center at the Colvin Run Mill Historic Site.

Site Opportunities and Challenges

Over the course of the project, JMA's CLR team, with the help of the Park Authority, assembled an extensive list of site issues, concerns, and objectives that were to be considered in developing the treatment plan. This list is presented below. The issues are organized by character area, the discrete parts of a site that have similar land uses, resources, patterns of spatial organization, or a combination thereof. The three character areas identified for the park are the Visitor Services Complex, the Historic Core, and the Historic Mill Pond Area, illustrated in Chapter Three. Issues relating to the site as a whole precede those delineated by character area.

Site-wide Opportunities and Challenges

The issues, concerns and objectives were summarized into opportunities and challenges for the entire site and include the following:

Opportunities

- **1 Colvin Run Mill Historic Site** is listed on the Fairfax County Virginia Landmark Register and the National Register of Historic Places, making the site an important component of the Fairfax County park system, surrounding neighborhoods, and Dranesville Supervisory District.
- **1 Facilities** at the site are heavily used by residents from these communities and school groups.
- **1 Designated** as a Historic Mechanical Engineering Landmark by the American Society of Mechanical Engineers, Colvin Run Mill Historic Site contains significant cultural and natural resources.
- **1 The Colvin Run Mill Site** was the first outdoor facility to be accredited by the American Association of Museums. Updating of facilities and interpretation methods is critical to retention of this accreditation.
- **1 The unique visitor experience** of nineteenth-century milling technology and the community which grew up around it should be enhanced to provide better interpretation of these important cultural and natural features.
- **1 North of Route 7**, Colvin Run Mill Historic Site presents an opportunity to connect the mill site to the Cross County Trail and create an important link to the interconnecting trails on the south side of Route 7.
- **1 Colvin Run Mill Historic Site** could provide positive habitat benefits over time for a wide variety of animal species, particularly in the southern section. This would allow the site to offer an improved natural experience for the

public, with the potential for interpretation of these resources.

Challenges

- 1 The Virginia Department of Transportation (VDOT) has proposed widening Route 7 from two lanes to three lanes in both directions past Colvin Run Mill Historic Site. The area south of Route 7 will be impacted significantly. The plans also show the expansion and upgrades to the intersection with Colvin Run Road and Carper's Farm Way. Due to potential impacts to the site, the opportunity exists for negotiation with VDOT for mitigation of these impacts.
- 1 Topography on the site is a challenge to universal accessibility to all the historic resources and interpretive features. Even after the addition of new paving and ramps, there are accessibility issues on the historic site.
- 1 Stormwater runoff from the adjacent roadways contributes to erosion and siltation in the millraces. Future site development should provide detention for increased stormwater runoff through use of Low Impact Development methods.
- 1 Successional vegetation along the Route 7 right-of-way provides screening to the historic site from the highway, but contains a high concentration of non-native invasive plant species that can harm healthy vegetation.
- 1 Signs and walkways must be kept at a minimum to preserve the landscape and historic setting as well as to prevent impacts to important resources.

Identification of Landscape Opportunities and Challenges by Character Areas

Historic Core

Opportunities

- 1 Moving staff operations out of the Miller House would allow it to be preserved, restored, and opened to the public, furthering the site's mission of interpreting the mill community during the 1800–1900s period.

- The Colvin Run Mill is the central feature of the historic site and is the sole surviving operational nineteenth-century water-powered mill in the Washington, D.C. metro area, and its restored mechanism is a nationally significant example of automated technologies pioneered in milling and later adopted across American industry.

Constraints and Challenges

- 1 Steep topography in the historic core is a constraint to universal accessibility, especially to the mill itself. The access to the historic site to the southeast of the main entrance must be utilized for drop off for visitors unable to negotiate the steep pathway to the mill. There is currently no parking allowed at this access.
- 1 Increased demand for Colvin Run Mill's flour means more space is needed for grain and cold storage for ground flour.

Visitor Services Complex

Opportunities

- 1 A new visitor center will offer a primary visitor orientation point that provides basic site interpretation and education.
- 1 Location of the new visitor center and the consolidation of services, offices, and storage in that facility allows for a more accurate historic representation of the Miller's House and surrounding landscape.
- 1 Location of the new visitor center will help with visitor orientation to the historic site and wayfinding and interpretation in general.
- 1 Parking can be reconfigured to maintain existing number of spaces and more clarity given to opportunities for overflow parking.
- 1 Comprehensive site signage and consistency in design of site amenities will add to the overall character of the site and the enhancement of the visitor experience.

Constraints and Challenges

- 1 With the existing layout of the parking and visitor facilities, it is sometimes difficult for the visitor to discern the correct approach,

arrival, and site sequence. Signage and other visual clues to support wayfinding are currently inadequate to the task.

- 1 There is insufficient classroom space to support the needs of school groups.
- 1 There is insufficient storage space for the existing needs of staff.
- 1 Universal accessibility of pedestrian paths is difficult with the existing topography.

Historic Mill Pond Area

Opportunities

- 1 A section of Colvin Run and its associated drainageways within park boundaries are within a Chesapeake Bay Restoration Act Resource Protection Area (RPA). The significance of these environmentally important areas could be interpreted for educational purposes along the trail system that is in the south portion of the site.
- 1 This area contains the remnants of two dams and associated millraces that served Colvin Run Mill, and two rock quarries—all of which offer new opportunities for interpretation in the Historic Mill Pond Area.
- 1 There is access to the Historic Mill Pond Area from neighboring subdivisions; however, these access points are difficult to find and parking would be on subdivision streets or cul-de-sacs.

Constraints and Challenges

- 1 Due to steep topography, some of the access points and trail system in this area are not universally accessible. Limited accessibility and enhanced interpretation would be required to accommodate the broader range of visitors.

Basis of Design Narrative

The Visitor Services Complex encompasses more than half the land area in the site parcel that is north of Route 7. This area is envisioned as a zone that could accommodate the majority of the new improvements necessary to support visitor access and orientation to the site. The existing barn is to be demolished and replaced by a new visitor center

facility built as a banked structure overlooking the picnic area and mill pond (*figure 6-4*). During the meeting held to review the 50% draft of this document, alternative locations for the proposed visitor center were presented to representatives of the Park Authority. Alternative D was chosen for further development as the Schematic Design.

Constraints and opportunities for the site within the Visitor Services Complex were the following:

- 1 There is a 40-foot setback from the site boundary that must remain free of buildings based on the site zoning
- 1 VDOT has strict requirements for ingress and egress to state highways, so any movement of the current entrance would have to be approved by them.
- 1 If the identified RPA line on the base maps was based on a perennial stream or situation, there would be no development allowed within it. The RPA on the current base maps is theoretical and based on the race and could probably be removed as a constraint to development. The floodplain would be the true marker for no development. If there is no perennial stream, then the default is to the floodplain map.
- 1 Low-impact development would be important for the site, and introduction of pervious surfaces including a building roof would have to be monitored and studied. Sustainable practices and low-impact development will be part of any site design and development of building alternatives.
- 1 Park Authority and staff of the Colvin Run Mill Historic Site expressed the desire to keep the present number of parking spaces and maybe reconfigure the lot to gain a few spaces. The overflow parking area is hard to reach and there are potential conflicts with archeological resources in that area.

The alternatives consisted of four concept diagrams that presented a range of possible locations for the new facility. The alternatives are:

Alternative A

This alternative (*figure 6-1*) retains the existing barn and adds a new facility directly adjacent to the barn and to the south of the existing parking, creating a

“cluster” of buildings. Parking configuration would remain the same and the store would remain in the same location. Site circulation would remain in the same configuration as it is today.

Park Authority Response:

This alternative was discussed and it was determined that placing the new building in that location would add significant “cluster” to the building group and

diminish the historical character and feel of the site.

Alternative B

This alternative (*figure 6-2*) removes the existing barn and proposes a new visitor center facility incorporating part of the barn site and the existing entrance to the historic site. Parking configuration

ALTERNATIVE A

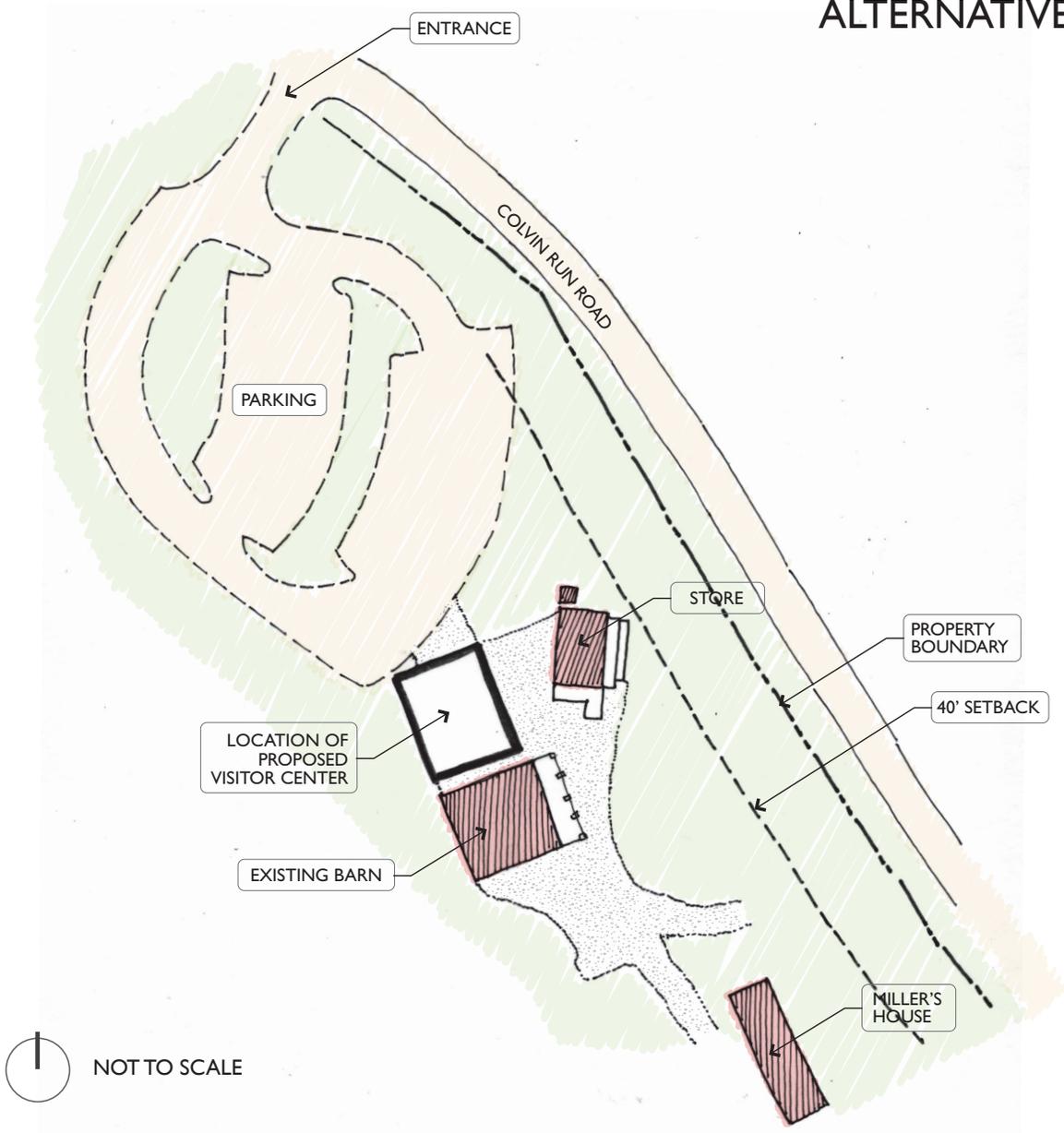


Figure 6-1. Alternative A, in which the existing barn is retained and proposed visitor center is placed on its north side. JMA, 2010.

would remain the same. This single new building would have a large footprint on the site in order to accommodate program requirements. Site circulation would remain essentially the same south of the new building.

Park Authority Response:

There was similar concern with this concept and the potential to diminish the historical landscape character.

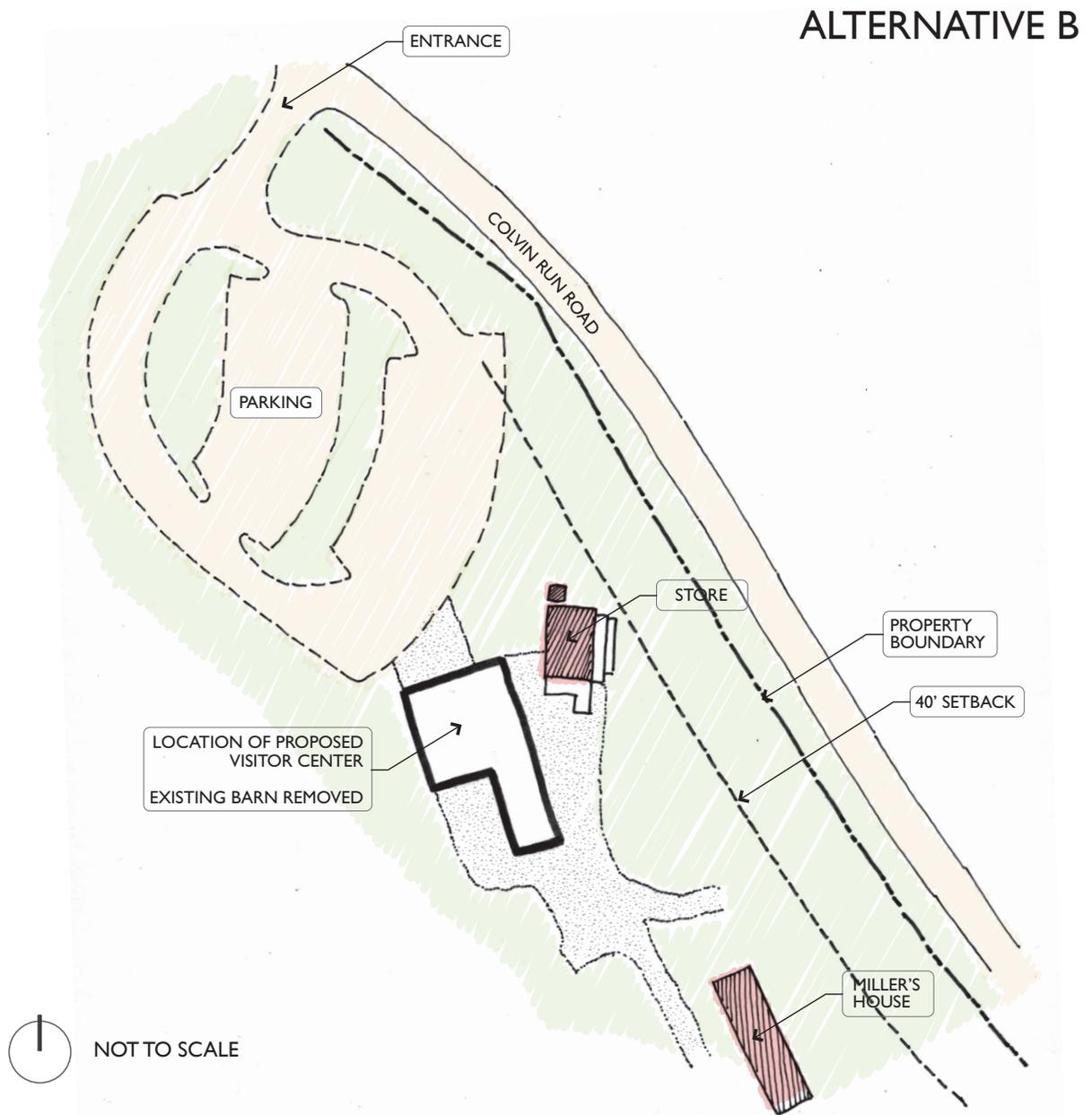


Figure 6-2. Alternative B, in which the existing barn is demolished and the proposed visitor center built in its approximate location. JMA, 2010.

Alternative C

This alternative (figure 6-3) proposes a new visitor facility in the east section of the parking lot, behind the 40-foot setback requirement. This location would force a reconfiguration of the parking lot, bus parking and drop off, and the addition of new parking in order to retain the existing number of spaces. This alternative would require visitors to go through the facility first and then exit and walk to the existing entrance to the historic site. The existing barn remains on the site. This alternative was also

based on aerial photos of building locations during the site's history. Site circulation south of the General Store would remain essentially the same.

Park Authority Response:

There was concern about this alternative due to the loss of parking, disruption of the parking configuration, the location of the building near utilities, and a general feeling of major change for the site.

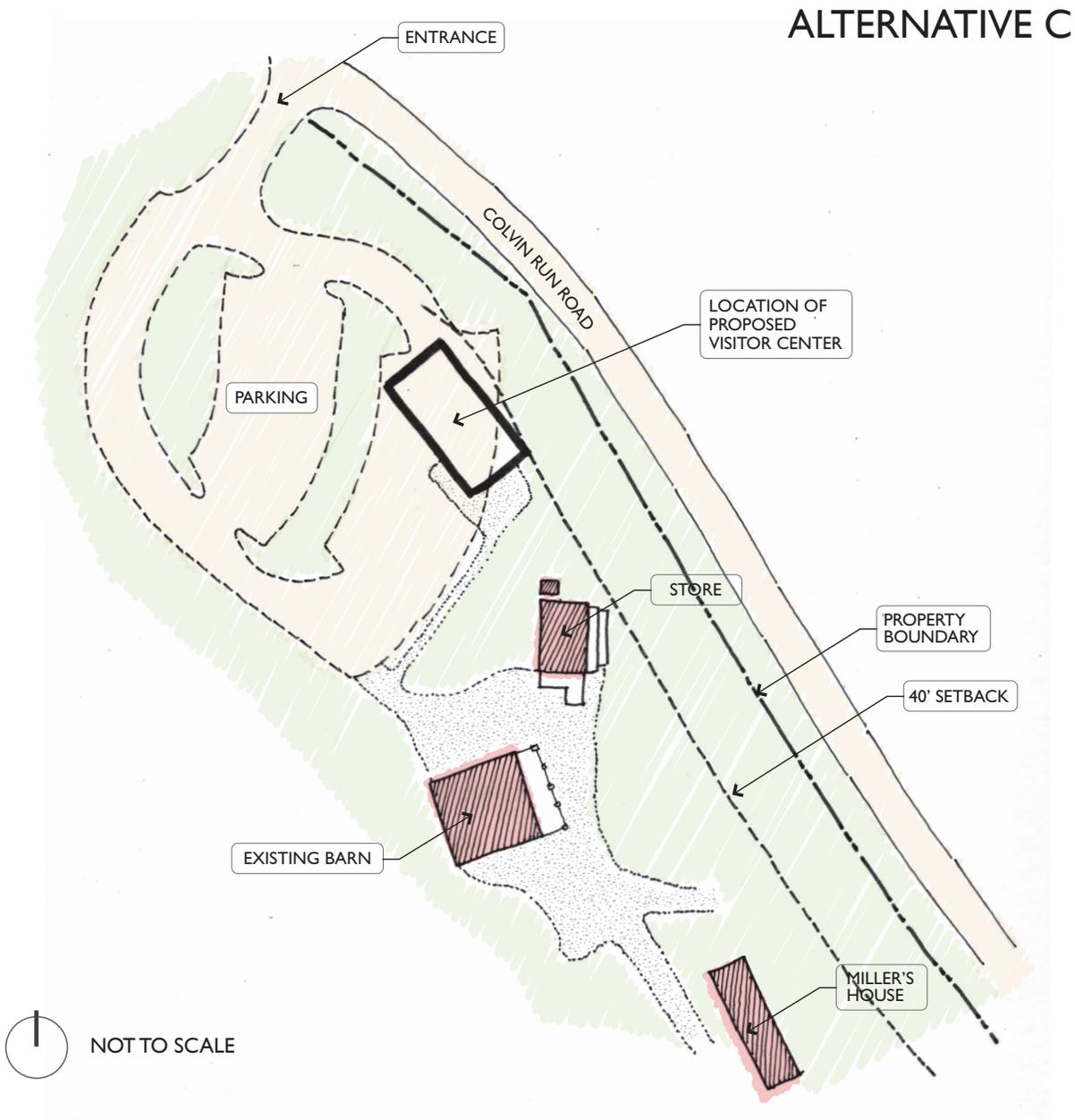


Figure 6-3. Alternative C, in which the existing barn is retained and the proposed visitor center located within space of existing parking lot. JMA, 2010.

Alternative D (Preferred Alternative)

This alternative (figure 6-4) proposes a new facility in the southwest corner of the parking lot, with the front facade of the building facing east. It was suggested that the building could be a two-story, "banked" building, creating a smaller footprint on the site and working with existing topography. This gives a good opportunity for views from the rear of the facility to the pond and the race. This alternative gives much more flexibility to the pedestrian outdoor areas for orientation and interpretation

and is in keeping with the historical scale of the site. It will be necessary to reconfigure the parking for this alternative to maintain the existing number of spaces. The existing barn would be removed in this alternative.

Park Authority Response:

This was the preferred alternative because the proposed building would be closer to the location of the original barn on the site and out of the RPA.



Figure 6-4. Alternative D, the Preferred Alternative, in which the existing barn is demolished and the visitor center built as a partial banked structure overlooking the picnic area and mill pond. JMA, 2010.

Visitor Center Design

Map 6-1. Schematic Design

The preferred alternative was further developed under separate contract into a schematic design for a new visitor center, including architectural plans, elevations, sectional drawings, outline specifications, and a cost estimate. The schematic design documents are included in Appendix D.¹

The visitor center design tilted the building footprint from Alternative D and expanded it to the northeast, towards the General Store. The parking lot and site circulation in that area were reconfigured to accommodate the building and its entrance plaza, and the overflow parking area formalized.

Sustainable design elements affecting the site included possible locations for bioretention ponds or rain gardens, pervious paving for parking spaces and the overflow lot, and additional trees to reduce the heat island effect in the parking lot.

A schematic design cost estimate was developed for the visitor center and associated site work, which totaled \$2,790,373.00.

1 John Milner Associates, Inc., "Visitor Center for Colvin Run Mill Historic Site, Great Falls, Virginia, Fairfax County, Outline Specification, Sustainable Design Elements, Cost Estimate, Appendix A--ARB Comments and Next Steps" (Fairfax County Park Authority, 2012).

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Appendix A

Resource Inventory and Analysis Table

**Colvin Run Mill Park Cultural Landscape Report
Resource Inventory and Analysis Table**

Current Name	Contributing	Non-Contributing	Missing	Date of Origin or Relocation to CRMHS	Modification	Condition	Notes
Patterns of Spatial Organization							
Historic Core	✓			ca. 1811	1940s, 1968-1975		construction of Route 7 following WWII disrupted historic patterns of spatial organization, so that areas have varying degrees of integrity.
Visitor Services Complex		✓					
Historic Mill Pond Area	✓						
Natural Systems and Features							
Colvin Run stream valley (floodplain and ridge topography)	✓			pre-settlement		fair	modified almost continuously since settlement in the early 1800s; currently the stream valley shows substantial evidence of erosion
Rock outcrops	✓			pre-settlement		N/A	
Colvin Run (formerly called Bridge Branch and Colville's Branch)	✓			pre-settlement	1940s	poor	culverted as it passes under Route 7; substantial evidence of erosion, heavily impacted by nearby development
Tributaries				not determined		poor	feeder creeks also show substantial evidence of erosion and are similarly impacted by nearby development
Wetland areas	✓			by 19th century		unknown	
Spring flowing into Colvin Run	✓			not determined		unknown	
Colonies of invasive species		✓		20th century		N/A	invasives are damaging to natural vegetation communities
Successional forest stand dominated by black locust, black cherry, black walnut, red maple		✓		20th century		fair	invasives present
Mature upland forest				not determined		good	
Early/mid succession upland forest				not determined		fair	invasives present
Upland field				not determined		fair	invasives present
Mature bottomland forest				not determined		fair	invasives present
Early/mid succession bottomland forest				not determined		fair	invasives present
Wetland plants				not determined		fair	invasives present
Responses to Natural Resources							
Siting of the mill along Colvin Run to operate the water wheel	✓			ca. 1811			

Current Name	Contributing	Non-Contributing	Missing	Date of Origin or Relocation to CRMHS	Modification	Condition	Notes
Stabilization of local non-structural soils to support the mill structure	✓			ca.1811	1968-1974		re-stabilized as part of mill restoration
Establishment of a headrace to reroute water to mill		✓		ca.1811	1968		headrace lined with stone as part of mill restoration
Establishment of a tailrace to allow water to rejoin natural drainage systems		✓		ca.1811	1940s		tailrace realigned following construction of Route 7; culverted as it passes under Colvin Run Road
Pump system		✓		post 1972			
Two quarry sites along Colvin Run in area with shallow bedrock	✓			19th century			
Topographic Modifications							
Damming of Colvin Run to supply the headrace			✓	ca.1811		N/A	
Excavation of earthen terrace on which to build mill	✓			ca.1811	1968		modified as part of the mill restoration
Grading of area in front of mill graded to accommodate mill-related activities	✓			ca.1811	1968-1974	fair	modified as part of the mill restoration; erosion due to stormwater run-off from Colvin Run Road
First mill pond dam			✓	19th century		N/A	
Second mill pond dam			✓	19th century		N/A	
Third mill pond dam			✓	ca. 1880s		N/A	
Excavation of earthen ditch as the headrace			✓	ca.1811		N/A	
Grading and excavation to create roads		✓	✓	various		good	grading and alignment of mill lane is considered contributing
Grading for the installation of Route 7		✓		1940s		good	
Grading and leveling to create the parking lot		✓		1974		good	
Excavation for current Mill Pond, headrace and tailrace		✓		1968-1969		fair	tailrace edges eroded and widened
Views and Vistas							
Dynamic views into the site from Colvin Run Road	✓			ca.1811	1940s; 1968-1974	fair	vegetation obscurs views of the mill and tailrace
Screened views into the site from Route 7		✓		1940s		fair	
Limited views within the woodland in the southern portion of the site		✓		20th century		good	
Directed view of mill down mill lane	✓			ca.1811		fair	ornamental vegetation intrudes on the historic view

Current Name	Contributing	Non-Contributing	Missing	Date of Origin or Relocation to CRMHS	Modification	Condition	Notes
Exchange of views between mill and Miller's House	✓			ca.1811-1820		fair	ornamental vegetation intrudes on the historic view
Views of adjacent developments		✓		20th century		poor	very visible and intrusive from some areas of the site
Views to Route 7		✓		1940s			screened as much as possible, but visible and intrusive from some areas of the site
Open views of the headrace and riparian meadow			✓	18th-19th century		N/A	
Views to Cockerill's Store			✓	ca.1880	1974	N/A	Store relocated in 1974
Land Uses and Activities							
Industrial	✓			ca.1811	1972	N/A	this use ceased for a time but was renewed after the mill restoration
Commercial	✓			ca.1811	1972; 1974	N/A	this use ceased for a time but was renewed after the mill restoration and relocation of Cockerill's store
Museum/Interpretive/Educational		✓		1972		N/A	
Natural Resource Protection		✓		post 1972		N/A	
Administrative/Operational/Maintenance		✓		1972		N/A	
Recreational		✓		1972		N/A	
Equestrian		✓		post 1972		N/A	
Agricultural			✓	ca.1811		N/A	
Residential			✓	ca. 1811-1820		N/A	Miller's House no longer occupied
Circulation							
Colvin Run Road	✓			ca.1740; 1826	1940s	good	formerly part of the Alexandria-Leesburg Turnpike, until the road was realigned in the 1940s
Route 7 (Leesburg Pike)		✓		1940s		good	divides the site into two discrete units
Adjacent residential streets		✓		20th century		N/A	
Visitor entrance along Colvin Run Road		✓		1973			
Gravel drive leading to overflow parking		✓		post 1972			
Secondary entrance at mill	✓			ca.1811	1969-1975		exhibits signs of erosion
Mill lane	✓			ca.1811	1969-1975	fair	only signs of road are remnants of fence posts and barbed wire
Road trace along north part of site	✓					poor	gravel loss, wet areas, service vehicles
Gravel and hard-packed earth service road		✓				fair/poor	must ford Colvin Run to reach the pump

Current Name	Contributing	Non-Contributing	Missing	Date of Origin or Relocation to CRMHS	Modification	Condition	Notes
Visitor parking area		✓		1969-1975			
Gravel overflow parking area		✓		post 1973			
Mill yard	✓			ca.1811	1969-1975	fair	reconfigured during mill restoration; exhibits signs of erosion
Gravel area along Carper's Farm Way		✓					
Concrete paver path		✓					
Gravel visitor gathering area		✓		post 1972			
Asphalt path to Barn and Miller's House		✓		post 1972			
Wooden ramp to restrooms		✓		post 1974		good	
Ramp to Miller's House		✓				good	
Concrete ramps into the Barn		✓		post 1972			
Stone-lined gravel path leading to Miller's House and mill		✓		post 1972		fair	some erosion, gravel loss
Wood bridge over tailrace		✓		post 1972		good	
Wood bridge over headrace		✓		post 1972		good	
Stone-lined gravel path on northeast side of Miller's House		✓		post 1972		poor	erosion, organic growth, gravel loss, branches lying in path.
Stone path at Miller's House		✓		post 1972		good	
Stone stairways		✓		post 1972		good	
Rails-to-River Trail		✓				fair	some areas of standing water not maintained by CRMHS
Secondary neighborhood trail		✓				N/A	mowed grass, difficult to discern from street
Tertiary trail connections		✓				fair	
Plank bridges across tributaries		✓				good	poorly maintained, features not interpreted, log edges rotting
Nature Trail		✓		post 1972		poor	northern portion removed for relocation of Cockerill's Store and installation of parking lot; southern portion altered from original configuration
Northern and southern portions of the mill lane connecting to Colvin Run Road			✓			N/A	
Open farm yard			✓			N/A	
Paths to outbuildings			✓			N/A	
Farm roads			✓			N/A	
Bridge west of the cattle barn			✓			N/A	
Quarry/headrace access road			✓			N/A	
Cultural Vegetation							
Mowed turf		✓		post 1972		good/fair	some loss of turf in shaded areas
Ornamental plantings in parking lot and site entrance		✓		post 1974			

Current Name	Contributing	Non-Contributing	Missing	Date of Origin or Relocation to CRMHS	Modification	Condition	Notes
Ornamental plantings adjacent to entrance path		✓		post 1972			
Ornamental garden adjacent to the Miller's House		✓		post 1972			
Butterfly garden west of the Barn		✓		post 1972			
Ornamental plantings around the mill		✓		post 1972			
Skunk cabbages at possible site of springhouse	✓						contributing if a springhouse existed in this location
Farm gardens			✓			N/A	
Row of deciduous trees lining the north property line			✓			N/A	
Peach orchard			✓			N/A	location unknown
Constructed Water Features							
Mill Pond		✓					
Current headrace		✓			1969		lined with stone during restoration of the mill
Current tailrace		✓			1969		tailrace rerouted due to construction of Route 7 and restoration of the mill
Steel culverts under Route 7		✓		1968			
Remnant portion of original headrace on south side of Route 7	✓			ca.1811	1940s		
original 30-acre mill pond			✓	ca.1802-1809			
original mill race			✓	ca.1802-1809			
Buildings and Structures							
Colvin Run Mill	✓			ca.1811	restored 1968-1974		Alternately known as "Carper's Mill," "Powell's Mill," "Millard's Mill," and "The Brick Mill"
possible earlier mill			✓				presence of an earlier mill is unconfirmed
Carpentry Shop		✓					
Miller's House	✓			ca.1811-1820	renovated in 1968		Unknown if this is the same "mill house" located on the property that appears in the 1811 deed to Carper
Colvin Run General Store (formerly called Cockerill's Store)		✓		ca.1880; moved to site 1974	reconstructed 1933		Originally located on an adjacent parcel; the store was rebuilt following a 1933 fire
Barn				1970s			
Springhouse along Colvin Run			✓				not confirmed
Stone headrace channel and overflow		✓		1969			

Current Name	Contributing	Non-Contributing	Missing	Date of Origin or Relocation to CRMHS	Modification	Condition	Notes
Stone foundation of a farm building	✓						
Maintenance shed		✓					
Storage building		✓					structure is on the property, but used by an adjacent property owner
Wooden stage		✓					schedule to be removed?
Wood bridges across headrace and tailrace		✓		post 1972			
Tailrace overflow structure		✓					
Headrace terracing	✓			ca.1811	1940s		
Wood plank bridges across tributaries		✓					
Icehouse in hill below Miller's House			✓				structure has not been located
Small-scale Features							
Commemorative Markers							
Virginia Department of Historic Resources marker in parking lot		✓		1999			
Daughters of the American Revolution marker		✓		1987			
Fences							
Remnant fencelines in the woods	✓					poor	line is barely discernable; most posts that survive have rot, most of wire is detached, rusted, or missing
Wooden worm fence throughout park		✓		post 1972			
Wooden post and rail fence throughout park		✓		post 1972			
Metal post and rope fence along entry walk		✓		post 1972			
Wooden screen fence surrounding dumpster		✓		post 1972			
Wooden fencing surrounding apiary		✓		post 1972			
Metal pipe railings at Blacksmith Forge		✓		post 1972			
Metal guardrail with wooden posts along Leesburg Pike		✓		post 1972			
White post and rail fence along Carper's Farm Way		✓		post 1972			
Wooden post and rail fence at pumping station		✓		post 1972			

Current Name	Contributing	Non-Contributing	Missing	Date of Origin or Relocation to CRMHS	Modification	Condition	Notes
Edging							
Boulders in parking lot		✓		post 1974			
Stone lining gravel paths		✓					
Timber edging picnic table pads		✓					
Steel edging on entrance walk		✓					
Millstones lining base of hill along mill lane	✓						If these are original millstones, they may be contributing, even though relocated
Signs							
Park identity signs along Colvin Run Road		✓					
Informational signs		✓					
Metal arched kiosk at entry		✓					
Wooden regulatory signs		✓					
Metal bollards marking Rails to River Trail		✓					
Wood bollards along Rails to River Trail		✓					
Traffic signs along Colvin Run Road		✓					
Lighting							
Metal spotlights at Mill		✓					
Single-arm streetlight in parking lot		✓					
Exterior lights on General Store porch		✓					
Site Furnishings							
Wood and metal picnic tables in picnic area and adjacent to Miller's House		✓					
Backless wooden benches		✓					
Backed wooden benches		✓					
Wood barrels utilized as trash receptacles		✓					
Wood panel trash receptacles in picnic area		✓					
Concrete wheelstops in parking lot		✓					
Wood arbor adjacent to Miller's House		✓					
Metal water fountain post		✓				poor	no longer in use
PVC tubes used as speaker posts adjacent to stage		✓					

Current Name	Contributing	Non-Contributing	Missing	Date of Origin or Relocation to CRMHS	Modification	Condition	Notes
Wooden beehives		✓					
Rainbarrel		✓					
Old mill wheel shaft in mill yard		✓		constructed 1968	removed to this location in 2001		
Utilities							
Culverts and other drainage structures		✓					
Trench drains		✓					
Plastic corrugated pipe drainage		✓					
Overhead utility wires		✓					
Water supply lines		✓					
Sanitary sewer lines		✓					
Dumpster in parking area		✓					
Pumping system		✓					
Pump control panel		✓					
Wooden utility poles		✓					
Concrete and metal structure in southern portion of the property				undetermined			
Archeological Resources							
Stone foundation adjacent to parking lot	✓						
Quarry sites along Colvin Run	✓						
Privy locations			✓				
Fencing along Colvin Run Road and within the site			✓				
Sites of other outbuildings associated with the Mill property			✓				
Headrace and mill pond dam sites			✓				
Ice house site in slope below Miller's House			✓				
Garden sites in the northern section of the site			✓				
Site of springhouse along Colvin Run							undetermined
American Indian sites			✓	pre-contact			unconfirmed

Appendix B

Glossary of Acronyms

AD	Anno Domini (or Common Era)
BC	Before Christ (or Before Common Era)
CCT	Cross County Trail
CLR	Cultural Landscape Report
CRMHS	Colvin Run Mill Historic Site
FCCA	Fairfax County Park Authority
GIS	Geographic Information Systems
JMA	John Milner Associates, Inc.
RPA	Resource Protection Area
VDOT	Virginia Department of Transportation

Appendix C

Guide to Trail Surfaces for Historic Sites

A Guide to Trail Surfaces for Historic Sites

Paths, walks, and trails are the means by which visitors access and experience historic sites and natural areas. The visual appearance of circulation systems within historic sites can affect their character as well as the visitor experience. They are a necessary component of historic sites that should be designed as an asset that blends seamlessly into their surroundings. Inappropriate surface materials, poor alignments, and deferred maintenance of walks and trails can detract from historic and natural settings, can lead to safety concerns, and are to be avoided in the design and management of circulation systems.

This guide provides information to support informed decision-making when planning for and designing trails, walks, and paths within historic sites and natural areas. The range of options available is broad and varied; Trails, walks, and paths can be carefully added to almost any site, providing accessibility for all visitors, and contributing to a rewarding visitor experience.

The guide contains four sections. The first summarizes planning considerations related to trail development. The second presents guidelines for the design and construction of the trail types that are appropriate for consideration within historic and natural sites. The third section is a table of trail surfaces appropriate for use within historic settings. The table provides a quick comparison of their aesthetic and structural qualities, as well as their installation requirements and maintenance costs. The final section is a glossary of trail surface stabilization products.

2009, John Milner Associates, Inc.



Planning Considerations

When planning for the establishment of new trails or the rehabilitation of existing circulation routes, there are numerous factors important to consider. These factors include aesthetics; reversibility; anticipated use; site engineering; availability of materials; initial capital costs; maintenance; and universal accessibility. A discussion of the trail types and surfacing materials to be considered follow these planning considerations.

Aesthetics

Trail surfaces have varied aesthetic traits that can contribute to the overall design concept for a site. Trails should be designed to be consistent in character with their setting.

Reversibility

Many historic sites endeavor to retain the integrity of resources by avoiding contemporary changes that cannot be removed later. An important planning consideration may be the reversibility of the proposed trail, meaning that it could be installed and removed without impacting historic resources.



Anticipated Use

The needs of anticipated users determine trail designs to a great degree and are a critical planning consideration. Equestrians, wheelchairs, maintenance vehicles, road or mountain bicycles, strollers, and in-line skates can each require different trail surface materials and levels of maintenance. Multiple-use trails attempt to meet the needs of various anticipated users. Sometimes, a single trail surface is not sufficient to accommodate all anticipated users, and several parallel systems need to be considered. In-line skates for example, require a smooth and hard surface, but the trail shoulder can be designed to accommodate those who prefer to walk on a softer material.

Within historic sites and natural areas, repeat visitors are becoming an important user group. Some repeat visitors are local residents who like to use the trails for walks or recreation. Others may be bringing new visitors to the site. Both groups appreciate the opportunity to experience different trails with a range of difficulty levels and lengths. Providing a range of trails can meet the needs of a broad cross-section of visitors and increase the duration of their stay.

Site Engineering

The underlying soil conditions of the proposed trail play a critical role in the selection of a surfacing material. Engineering properties of soils affect the amount of intervention required to establish a stable base for the surface, while environmental conditions affect the performance of a trail.



Availability of Materials

Costs associated with trail development are affected by the availability of selected surfacing materials. Those that are not native to the trail's region may be prohibitively expensive. Furthermore, some experimental or new materials under consideration for their environmental benefits or sustainability properties may not be readily available on the market, and finding a source for a desired surface material may prove difficult.

Initial Capital Cost

Trail surface costs vary dramatically. They relate to trail prism excavation, subbase preparation, base placement, and application of the selected trail surface. These costs can range from \$1 or \$2 per square foot to \$12 or \$13 per square foot, with some systems such as boardwalks potentially exceeding \$100 per square foot to construct.

Maintenance

Trail surfaces have an anticipated lifespan that can vary from one to more than twenty-five years. The maintenance regimes associated with different trail surfaces vary from regular inspection to expected follow-up repairs. Some of these repairs need to be administered by skilled professionals.

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Universal Accessibility

All sites should offer a universally accessible trail for at least a portion of their system. The federal government has developed guidelines for universally-accessible trails. In particular, surfaces must be “measurably firm and stable.” The Forest Service Trail Accessibility Guidelines (FSTAG) define a firm surface as one that is “not noticeably distorted or compressed by the passage of a device that simulates a person who uses a wheelchair.” The FSTAG define a stable surface as “one that is not permanently affected by normally-occurring weather conditions but is able to sustain wear and tear produced by normal use between planned maintenance cycles.” There are special dispensations for historic sites. For example, where compliance with the Americans with Disabilities Act Accessibility Guidelines (ADAAG) would cause substantial harm to cultural, historic, religious, or significant natural features or characteristics, some exceptions and deviations from technical provisions are often permissible.



Trail Types

Evaluating anticipated use will help determine the type of trail that is needed. The range of trail types to consider include:

No Trail. Avoid building trails within areas with sensitive natural or archeological resources that could be damaged by visitor access and associated systems.

Backcountry Trail. Backcountry trails are generally narrow hard-packed earth-surfaced routes that are not graded or machine compacted. Only limited interventions such as waterbars are typically associated with backcountry trails. They are used within areas that are remote, are relatively sensitive, have limited existing development, have an anticipated low-impact use, and will be used by a relatively small number of pedestrians.

Pedestrian Trail. Pedestrian trails are more developed than backcountry trails for higher traffic areas. They can be designed to be universally accessible. They are typically wider than backcountry trails and involve additional interventions, such as site grading, subbase installation, and other improvements such as wayfinding and/or interpretive signage. Establishment of this type of trail typically requires the use of construction equipment that can result in a limited degree of disturbance to the trail prism and its surroundings.

Unpaved Multi-use Trail. These trails are designed to accommodate moderate use by pedestrians; users of wheeled vehicles such as bicycles that do not require a completely firm and stable surface, and potentially equestrians. This type of trail can accommodate a moderate-use level.



Installation of this trail type requires moderate site disturbance, including grading and surfacing, and should thus be designed to avoid impacting historic resources. It can be made accessible in conformance with Americans with Disabilities Act (ADA) standards using stabilizers.

Paved Multi-use Trail. This trail type is intended to accommodate a wide variety of users and typically involves the highest degree of intervention within a site. It is appropriate for high-use areas, such as the primary visitor interpretive experience or intensive recreation. This trail type should not be established on historic road traces or corridors as their construction requires a high level of disturbance and is preferred for universal accessibility.

Trail Widths

Trail designs should include a desirable width to accommodate the anticipated user. Trails that are too narrow, uneven, or poorly-drained can result in trampled vegetation, compacted and eroded soil, damage to the surrounding ecosystem or hazards. Wider trails, however, are more costly to construct and maintain and more visually obtrusive.

A Guide to Trail Surfaces for Historic Sites

Design Guidelines

General Trail Guidelines

Trails within historic settings and natural areas should be considered for their aesthetic and environmental impacts, as well as their affect on historic resources. For example, surfaces of brown hues are preferable to blue-colored materials. Petroleum-based surfaces or those that may leach undesirable chemicals into the ground or water systems should be avoided.

With the exception of backcountry trails, most prisms should be constructed by removing several inches of the existing soil to compact the base material and help prevent subsurface failure of the trail. After compacting the base, a geotextile filter should be installed. It is necessary to bring in enough aggregate to be sure that the finished compacted surface will not be lower than the surrounding grade. Grading should be used to ensure proper drainage along trails. It will likely include crowning or sloping of the trail surface for drainage and the establishment of swales to convey stormwater along trail margins

Backcountry Trail Guidelines

- Backcountry trails should be designed as narrow (3 to 4 feet wide), hard-packed earth-surfaced well-drained treadways that require minimal grading and erosion control methods to establish and maintain. It should be possible for these trails to be established without

construction equipment. Backcountry trails are generally not universally accessible.

- Trail slopes should not exceed 15 percent grades.
- Trails should serve as spurs leading from more developed or major trails.
- Trailhead developments should include minimal signage at intersections with larger trails.
- Stepping stones, stone boxes, or a treadway of large stones should be used when trails pass through wet areas to allow drainage and water to move freely and prevent erosion and compaction. In remote areas, locally collected stepping stones should be used.

Pedestrian Trail Guidelines

- Pedestrian trails should be designed as well-drained, earth, mulch, or crushed-stone treadways that may require some grading to establish. Excavation for the establishment of a sub-base may be appropriate. These trails can accommodate universal accessibility requirements when stabilizing compounds are added to the crushed-stone surfacing.
- Trail slopes should not exceed 10 percent grades. Cross-slopes should not exceed 2 percent slopes. Universally-accessible trail slopes should not exceed 5 percent.
- Signage associated with pedestrian trails should be limited to trailheads,



interpretive signs, and wayfinding at intersections with other trails.

- Low-profile boardwalks should be used for crossing wet areas.
- Railings are required if boardwalks exceed 3 feet in height.

Unpaved Multi-use Trail Guidelines

- Trails of this type should have a minimum 10-foot-wide firm surface with 3-foot-wide soft shoulders to either side to allow passing. These trails should be surfaced with crushed stone, and have shoulders of grass or mulch.
- This type of trail should not be used within historic road traces.
- Trail slopes should not exceed 10 percent grades. Cross-slopes should not exceed 2 percent slopes.
- Signage should be used at trailheads, for orientation, and to post regulations and warnings, and universal accessibility information.

A Guide to Trail Surfaces for Historic Sites

Paved Multi-use Trail Guidelines

- Trails of this type require the greatest site intervention and should be avoided within historic settings, particularly in association with historic road traces.
- Trail slopes should not exceed 5 percent grades, conforming to universal accessibility trail slope requirements.
- Surfacing material used on paved multi-use trails will generally be considered for firmness and stability, and will be compatible with universal-accessibility requirements.

Universally-Accessible Trail Guidelines

- Universal-accessibility is an important consideration within historic and natural sites. Primary interpretive elements should be made accessible to all visitors along universally-accessible routes. Other resources can be interpreted through alternative means if trail establishment will negatively affect historic or natural resources.
- Universally-accessible trails should have a measurably firm and stable surface to accommodate usage without degrading the tread surface. Trail runs should not exceed a 5 percent grade, with cross slopes that do not exceed a 2 percent grade. Five to 10 percent cross slopes are allowable if they occur within the bottom of drainage structures. Trails may reach 8.33 percent for up to 200 feet, 10 percent for 30 feet, 12 percent for 10 feet, and 14 percent for 5 feet within the bottom of a drainage structure.

- Prepared single-direction tread surfaces need to be at least 32 inches in width within historic sites, although the beaten path width may be narrower. Thirty-two inches is an exception to the ADAAG guideline of 36 inches.

- For more information, see the United States Forest Service Trail Accessibility Guidelines (FSTAG).

Guidelines for Adapting Historic Road Traces as Trails

- Historic circulation routes can be incorporated into pedestrian trail systems after the potential impacts of the new system have been assessed for the visual impact of trail on important viewsheds; potential impact on sensitive natural and archeological resources; accessibility issues; and overall interpretive value. Only low-tire-pressure vehicles should be used when working along historic road traces.

- New trails that follow or traverse historic road traces should be designed in such a way as to avoid cutting into the ground in order to preserve archeological resources. Regrading that might damage historic road traces should be avoided. Whenever regrading is necessary, use fill to achieve positive drainage rather than cutting, which will destroy the resource.

- Grading improvements should promote sheet flow rather than concentrated flow into swales, channels, or pipes whenever possible.



- Local materials, such as wood and stone, should be considered for trail-related structures including water bottle stepping stones, signage, fences, stone treads, stream crossings, stone boxes or treadways crossing marshy areas, retaining walls, trail markers, and shelters. Design of these features should be clearly a product of their own time and not an attempt to depict a historic condition that never existed.

Trail Surfaces

Interest in permeability and requirements for accessibility have resulted in the development of new trail surfacing technologies. All trail surfaces vary in cost, environmental impact and maintenance requirements. Trail surface options described here are recommended for historic sites, but should be evaluated for their applicability to specific site conditions. Trail surface materials also vary in their permeability, sustainability, and impact on the environment. The following pages provide a comparative chart of trail surface alternatives.

Concrete

Concrete is a durable and readily available material that is firm and stable and meets universal accessibility requirements. It is highly impermeable however, and has a high run-off rate that can increase the erosive capability of water. Concrete is expensive to install and requires subbase preparation that may cause an unacceptable level of ground disturbance within sensitive archeological areas. Concrete is also a relatively modern material that may be inconsistent with the character of a historic site. There are many treatments that can be applied to concrete, such as color, tinting, scoring and the use of warm-colored aggregates to render it more visually compatible with a historic setting.

Asphalt

Asphalt pavements provide firm and stable surfaces that meet universal accessibility standards. If applied correctly, asphalt is durable and readily available. It is not porous, and stormwater will run off its surface,

contributing to an increase in the volume and speed of stormwater and erosion problems. It is also a petroleum-based product that may leach volatile inorganic compounds and heavy metals into the ground and water resources. Though cost-effective and highly functional, asphalt is commonly associated with contemporary urban environments and is rarely compatible with historic sites. Treatments that can diminish its visual incompatibility with historic sites include the use of brown-colored aggregate, or the application of a two-shot brownstone finish.

Crushed Stone

Crushed stone, particularly warm-hued material, is visually compatible with historic settings. Crushed stone makes a good trail surface material when composed of particles that are irregular and angular and range in size from fine dust to 3/8". Over time, the particles should bind together in a consolidated slab which is porous yet sheds water falling on the surface. Crushed stone trails can be easily maintained if properly graded for drainage and placed atop an appropriate subbase. Often, crushed stone trails are not smooth or hard enough to meet the "firm and stable" requirements of a universally-accessible trail. To make the surface harder and smoother, a chemical stabilizing agent can be added so that the fines will set up harder and remain that way for longer periods of time. The success of crushed stone as a surface material depends on the skill of its application by the contractor. Underlying soils need to be analyzed to determine the need for geotextiles. If a crusher fine trail surface becomes loose and uncompacted over time, it can often be reshaped, rewetted, and compacted again.

Stabilized Soil

Hard-packed earth is often used as a backcountry trail surface, but is not appropriate for use as a surface for more intensive uses. Soil can be stabilized using chemical binding agents to render it more stable and firm. Hard-packed earth surfacing may be visually compatible within a historic site to interpret older road or path corridors. Stabilization products need to be targeted to site-specific soil conditions. This surface treatment does not meet universal accessibility standards.

Grass

Mown grass as a trail surface may be compatible with many historic sites. This surface treatment, however, does not meet universal accessibility standards.

Mulch

Although the color and texture of mulch applications are generally compatible with natural and historic areas, and this surface material is relatively inexpensive and reversible, it does not meet universal accessibility standards.

Rubberized Surfaces

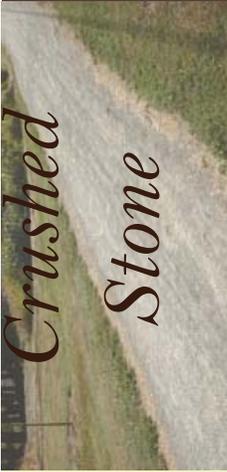
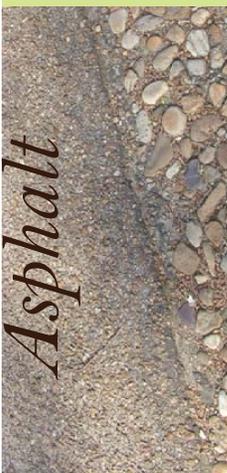
Rubberized surfaces are generally not compatible with historic settings, but crumb rubber can be tinted brown, which may help it blend in with its surroundings.

Boardwalks

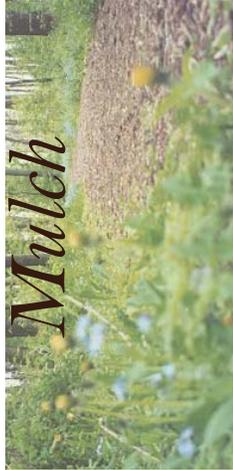
Boardwalks have a natural appearance that complements historic settings and protects below-ground resources. However, they are expensive to install. Wood is also slippery when wet or icy and may require surface treatments for visitor safety.

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Installation	Maintenance	Cost	Recycling	Permeability	Accessibility	Compatibility
	Prepared subbase, geotextile, 6" aggregate base, 2" of < 1/4" crushed stone over base, rolled and compacted. Sweep to fill voids from dislodged fines. Reapply top course every 2-5 years.	\$\$	Recycled decomposed concrete is a possible substitute for crushed stone.	This surface treatment is permeable.	ADA-accessible if very fine and compacted. Larger stones are not stable.	Natural stone is more historically compatible than contemporary concrete and asphalt applications.
	Prepared subbase, geotextile, 6" aggregate base, 2" asphalt. Pothole patching. Permeable asphalt should be vacuum swept and pressure washed four times a year.	\$\$	Reground asphalt chips and Glassphalt (asphalt that uses recycled, ground glass as an aggregate) are available.	Conventional applications are impermeable. Permeable asphalt is a porous formula that requires a 12" aggregate base for drainage and has a lower load-bearing capacity.	ADA accessible. Suitable for bicycles and wheelchairs as well as pedestrian uses.	Though cost-effective and highly functional, asphalt is commonly associated with contemporary urban environments and is rarely compatible with historic sites.
	Prepared subbase, geotextile, 6" aggregate base, 4" Portland Cement (with or without aggregate). Periodic inspection for uplift and settlement. Repair as needed.	\$\$	Decomposed concrete can be used as a loose or bonded aggregate material.	Conventional applications are impermeable. Permeable concrete requires a 12" aggregate base for drainage. Pervious pavers are another option for decreasing run-off.	ADA accessible. Suitable for bicycles and wheelchairs as well as pedestrian uses.	Concrete is associated with contemporary urban environments and can be incompatible and glaring. Tinting, scoring and the use of aggregates can be helpful.

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<p><i>Installation</i></p> 	<p><i>Maintenance</i></p> 	<p><i>Cost</i></p> 	<p><i>Recycling</i></p> 	<p><i>Permeability</i></p> 	<p><i>Accessibility</i></p> 	<p><i>Compatibility</i></p> 	
<p>Stabilized Soil</p> 	<p>Excavate top 2-3" of native material prior to preparing subgrade. Amend with fine aggregate, underlay geotextile and return and shape/compact topsoil before applying soil stabilizer.</p>	<p>Reapplication of soil stabilizer may be necessary every 2-3 years.</p>	<p>\$\$\$</p>	<p>This is not a recycled material, although some stabilization products are made from natural materials such as pine resins.</p>	<p>This is not a permeable surface treatment.</p>	<p>ADA-accessible. Stabilized soil is firm, stable and slip resistant.</p>	<p><i>Stabilized soil is the simplest and least obtrusive of surfacing options and is highly compatible with historic sites, as it makes use of the native material.</i></p>
<p>Grass</p> 	<p>Grade trail base, seed.</p>	<p>Periodic mowing and possible fertilization required.</p>	<p>\$</p>	<p>N/A</p>	<p>Vegetative surfaces are permeable.</p>	<p>Moderately firm and stable but not slip resistant.</p>	<p><i>Mown grass is associated with 20th-century landscapes but its natural appearance may be compatible.</i></p>
<p>Mulch</p> 	<p>Prepared subbase, geotextile, 4" aggregate base, 3" layer mulch raked and shaped, second 3" layer applied after compaction and settlement.</p>	<p>Top dress annually. Lasts 1-3 years. Some agricultural byproducts, such as filbert shells, may last as long as 7 years. Rubber mulch does not decompose.</p>	<p>\$</p>	<p>Recycled materials such as shredded rubber can be used. Reclaimed agricultural and industrial byproducts such as wood planer shavings and filbert shells are also available.</p>	<p>This trail surface application is permeable.</p>	<p>NOT ADA accessible. Only suitable for pedestrian and equestrian use.</p>	<p><i>The color and texture of mulch applications are most compatible with natural areas. This treatment is inexpensive and removable but does not provide a stable surface.</i></p>

A Guide to Trail Surfaces for Historic Sites

<p><i>Installation</i></p> 	<p><i>Maintenance</i></p> 	<p><i>Cost</i></p> 	<p><i>Recycling</i></p> 	<p><i>Permeability</i></p> 	<p><i>Accessibility</i></p> 	<p><i>Compatibility</i></p> 
<h2>Resin-based Pavement</h2>						
<p>Non-petroleum based resins bind any color aggregate into a hard-surfaced pavement. Installation method is similar to asphalt.</p>						
<p>This is a relatively new and experimental technique. Ongoing studies are determining maintenance demands.</p>						
<p>\$\$\$</p>						
<p>The resins material, while environmentally sound, is not made from recycled products.</p>						
<p>Both permeable and impermeable applications are available. Formulas like Polypave involve a topcoat and are impermeable. Other kinds of bound aggregate systems are permeable.</p>						
<p>This treatment is universally accessible. It is firm, stable and slip-resistance.</p>						
<p><i>Historic trail surfaces can be made universally accessible with this technique, but it is costly and only feasible in limited applications.</i></p>						
<h2>Rubberized Surfaces</h2>						
<p>Prepared subbase, geotextile, 6" aggregate base, poured concrete or asphalt base, poured recycled rubber topcoat.</p>						
<p>Replace topcoat every 10 years.</p>						
<p>\$\$\$</p>						
<p>This pavement material has evolved out of the need to create usable materials from waste tires and is a recycled option.</p>						
<p>No if poured in place and sealed; shredded rubber mulch applications are permeable.</p>						
<p>Yes if poured in place and sealed; no if used in a shredded mulch application. Rubber surface also provides shock absorption which is desired on exercise paths.</p>						
<p><i>Crumb rubber can be tinted brown, which may help this surface to blend in, but otherwise its appearance is very similar to asphalt.</i></p>						
<h2>Boardwalks</h2>						
<p>Boardwalk installation involves construction techniques dependent on the material chosen, and their width and length. All boardwalks need curbing, but where 30" or more above grade should also have a handrail.</p>						
<p>Repairs as needed. Periodic washing may be necessary.</p>						
<p>\$\$\$\$</p>						
<p>Boardwalks can be constructed from planks composed of recycled plastic.</p>						
<p>Boardwalks are permeable surfaces and are also effective for protecting wetland areas. They do not interfere with natural drainage patterns.</p>						
<p>Boardwalks provide a universally-accessible surface and also help to steer visitors along a pre-determined route.</p>						
<p><i>The natural wood appearance of boardwalks complement natural settings and protect below-ground resources. However, they are more obtrusive than at-grade trails.</i></p>						

Glossary of Trail Surface Stabilization Products and Terminology

Bentonite Clay

An absorbent aluminum silicate clay formed from volcanic ash and used in various adhesives, cements, and ceramic fillers.

Binder

An agent that creates uniform consistency, solidification, or cohesion.

Bioenzymes

Bioenzymes create a reaction that stabilizes soil materials. Clay content of 10-15 percent in the aggregate material is necessary for the reaction to take place, and must be amended if necessary. Earth Materials Catalyst (EMC2) is a proprietary formula that contains biocatalytic proteins. It is a trademark of Soil Stabilization Products, Inc. There are several companies that provide similar proprietary enzyme formulas for soil stabilization. Two other names are "Permazyme" and "Eco-Crete."

Chameleon Ways

Natural aggregate bound surfaces.

Adaset

Paving systems suitable for foot or bike paths, entranceways and driveways.

Chemical Binding

Chemical binding is generally used to form smooth, firm treads from small soil particles on level or low tread grades in reasonably well-drained sites for low and medium displacement uses. Chemical binding tends to be a very specialized approach to trail hardening, and requires specific products and installation techniques. Each application requires independent evaluation to ensure that the product is suitable to accommodate the need of the trail type and proposed surface. Chemical binding is useful for crusher fines, recycled asphalt, and soil.

Flyash

Flyash is a byproduct obtained from the stacks of coal-burning power plants. Flyash contains varying percentages of quicklime depending on the type of coal burned at the plant. Flyash is mixed with fine and coarse aggregates to pave trail surfaces. Unfortunately it does not hold up well with changes in moisture and frost heaves. This product did not noticeably stabilize aggregate materials.

Ground seed hulls

"Stabilizer" is a patented, organic and non-toxic product manufactured from the seed hulls of the Plantago plant. The product is a light brown color and is ground to a very fine texture. This product will not stabilize materials over 3/8 inch in diameter, and the material needs to consist mostly of fines. Water will penetrate the surface of this product. It works best in shade where the surface does not get as dried out. It is very easy to apply. Trails treated with Stabilizer have significantly

more vegetation growing through the surface than other options since the surface is not impenetrable and seeds can get established. This product works best in dry climates.

Latex polymer

"Soil Cement" is a latex polymer that is a by-product of the paint industry. Latex polymers are not considered to be long-term stabilizers. When used to stabilize a road with heavy vehicle traffic, it may be necessary to frequently spray a maintenance application coat over the road surface to help hold the fines on the surface and eliminate dust. Even with low use roads or trails it is necessary to do a maintenance application coat every two to three years because of the product will breakdown because of environmental conditions. Latex polymers do not do well in aggregate containing clays. These are generally one of the more successful surfacing products. Second best rated stabilizer product.

Mechanical Stabilization

Mechanical stability of a trail surface or tread is achieved due to four interacting factors: aggregate thickness, particle size, compaction and drainage, and lateral stability. Aggregates spread loads throughout their structure. When particles are tightly packed with no voids, the weight of a point-source load is distributed through an aggregate layer like a pyramid, reducing the per-unit-area force at the base. Increasing the aggregate thickness spreads the load over an increasingly wide area. Downward force is greatest below the load point, with diminishing distribution outward. Various sizes of angular particles mechanically interlock into a solid matrix with no voids. Ungraded, unwashed crushed stone

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Psyllium

Psyllium is a powder made from a desert plant called Plantago. This binder can be mixed with crushed stone, clay, and sand to create a trail that is compatible with historic settings. The resulting texture is similar to a baseball infield mix. The stabilizer allows the trail to withstand the wear and tear associated with use by bicycles, strollers, wheelchairs, and pedestrians.

Sulfuric acid

“Roadbond Et-1” is a patented liquid road base stabilizer that is mainly a diluted sulfuric acid. It should only be handled when correctly protected with gloves, respirator, goggles, and protective apron as it is corrosive. It is supposed to work well with aggregate containing clay. In studies, it has not held up well through wet and cold seasons and has not noticeably stabilized aggregate materials.

contains the original rock binders (natural cements) in the rock dust. The binders in the dust help rebind the crushed aggregate into a solid, compact mass.

To prevent particles from shifting under a load, all voids must be filled. This is achieved by compacting the particles. Larger particles act as the skeleton of the structure, transmitting and spreading forces, while compacted dust and small particles act as binders and a medium to transmit force from one large particle to the next. The particles of the various sizes up to a specified maximum need to be thoroughly mixed to insure that larger particles are embedded in a matrix of smaller ones during compaction.

In any compacted aggregate tread, drainage is essential to long-term stability. If properly graded and compacted, aggregate treads should not hold water. Lateral stability can be increased if a geotextile or geocell soil stabilizer is used, or the width of the trail is contained within an edging material.

Pine tree resin

Formulas such as “Road Oyl” are petroleum-free emulsions formulated with pine tree resin solids in suspension. They are designed to applied cold and work best as a pavement binder when mixed with dense graded aggregate materials. As the water evaporates from the emulsion, the surface will become very hard and will resemble an asphalt surface except for the color, which will usually be a darker shade of brown than the aggregate with which it is mixed. This is the best-rated stabilizer product for universal accessibility. It is also the most expensive and the most difficult to apply.

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Appendix D

Visitor Center Schematic Design 1



Visitor Center for
Colvin Run Mill Historic Site

10017 Colvin Run Road
Great Falls, Virginia 222066

for the
Fairfax County Park Authority
Fairfax County, Virginia

SCHEMATIC
DRAWINGS
January 2012



DRAWINGS

A101 Site Plan
A102 Floor Plan
A103 Reflected Ceiling Plan
A104 Roof Plan
A201 Elevations
A202 Alternate Elevations
A301 Sections

S1 First Floor/Foundation Plan
S2 Roof Framing Plan

M1 Mechanical Plan
E1 Lighting Plan
E2 Power Plan

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Charlottesville, Virginia 22902
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F: 434-977-1862

Visitor Center for
Colvin Run Mill

1000 Colvin Run Road
Great Falls, Virginia 22066

For Sale
Fairfax County Park
Authority
Fairfax County, Virginia

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F: 644-977-1664

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NOT FOR
CONSTRUCTION**

Project: **CRONMILLVC**
Client: **JMA**
Architect: **JMA**
Phase: **preliminary design**
Date: **January 2005**
Revised:

Site Plan
A101

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ASSUMPTIONS:

1. All dimensions are approximate unless otherwise indicated.
2. All dimensions are approximate unless otherwise indicated.
3. All dimensions are approximate unless otherwise indicated.
4. All dimensions are approximate unless otherwise indicated.
5. All dimensions are approximate unless otherwise indicated.
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11. All dimensions are approximate unless otherwise indicated.

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1/8"	1/8" = 1'-0"	1/8" = 1'-0"	1/8" = 1'-0"	1/8" = 1'-0"	1/8" = 1'-0"	1/8" = 1'-0"	1/8" = 1'-0"
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1/32"	1/32" = 1'-0"	1/32" = 1'-0"	1/32" = 1'-0"	1/32" = 1'-0"	1/32" = 1'-0"	1/32" = 1'-0"	1/32" = 1'-0"
1/64"	1/64" = 1'-0"	1/64" = 1'-0"	1/64" = 1'-0"	1/64" = 1'-0"	1/64" = 1'-0"	1/64" = 1'-0"	1/64" = 1'-0"
1/128"	1/128" = 1'-0"	1/128" = 1'-0"	1/128" = 1'-0"	1/128" = 1'-0"	1/128" = 1'-0"	1/128" = 1'-0"	1/128" = 1'-0"
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Visitor Center for
Colvin Run Mill
 1007 Colvin Run Road
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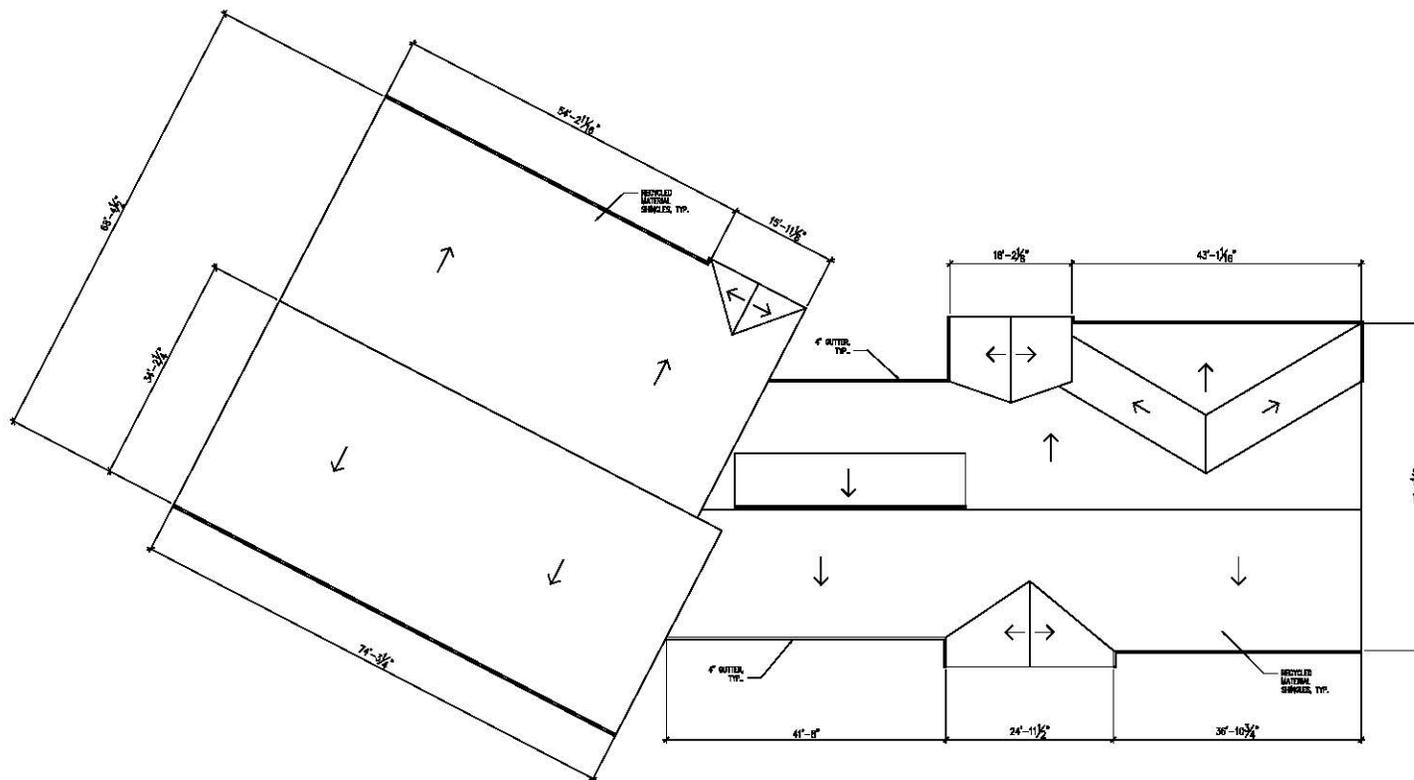
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project: CRUNMILLVC
 drawing: AH
 checked: AH
 phase: schematic design
 date: January 2022
 revised:

Roof Plan

A104

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1 ROOF PLAN
 A104 SCALE: 1/8" = 1'-0"



1/16/22 10:43 AM C:\Users\jgordon\OneDrive\Documents\Projects\CRUNMILLVC\A104.dwg

Visitor Center for

Colvin Run Mill

nearby Colvin Run Road
Great Falls, Virginia 22066

see the
Fairfax County Park
Authority
Fairfax County, Virginia



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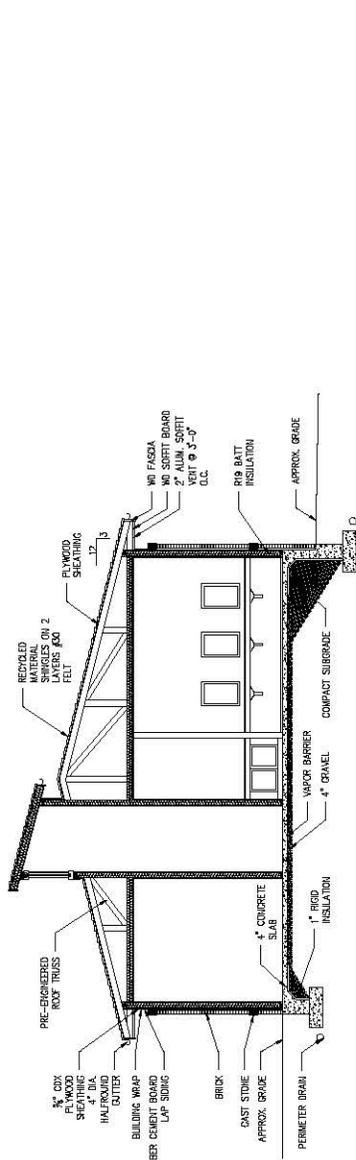
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date: January 2008
verified:

Structures

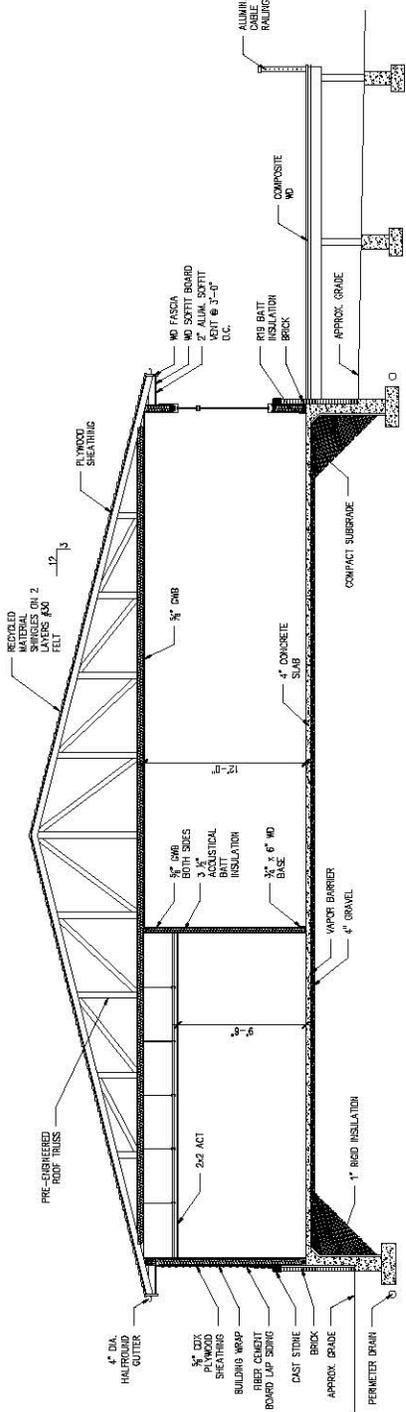
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01234 8



2 SECTION
SCALE: 1/4" = 1'-0"



1 SECTION
SCALE: 1/4" = 1'-0"

Visitor Center for
Colvin Run Mill

10007 Colvin Run Road
 Great Falls, Virginia 22066

for the
 Fairfax County Park
 Authority
 Fairfax County, Virginia

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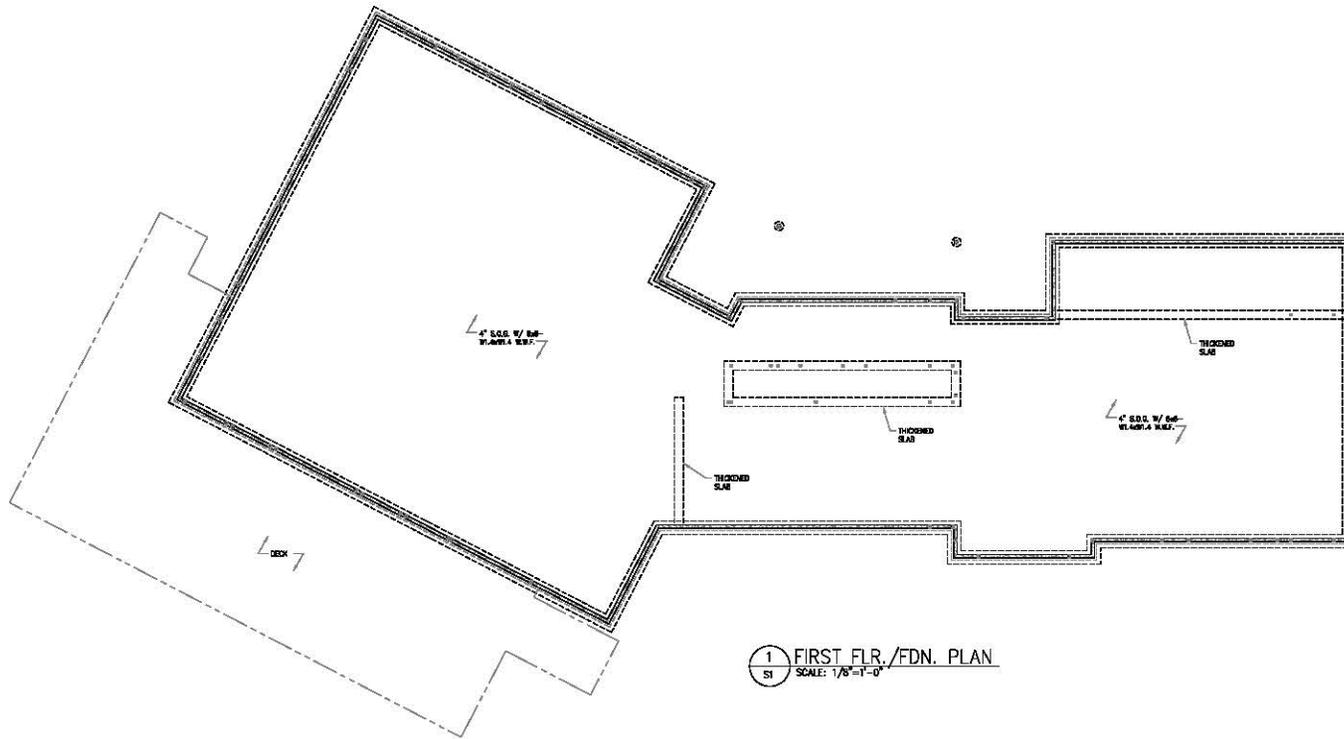
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project: CRUMMILLVC
 drawn: GK
 checked: DL
 phase: schematic design
 date: January 2013
 revised:

FIRST FLOOR/FDN. PLAN

SI

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1 FIRST FLR./FDN. PLAN
 SI SCALE: 1/8"=1'-0"

Visitor Center for
Colvin Run Mill

nearby Colvin Run Road
 Great Falls, Virginia 22066

for the
 Fairfax County Park
 Authority
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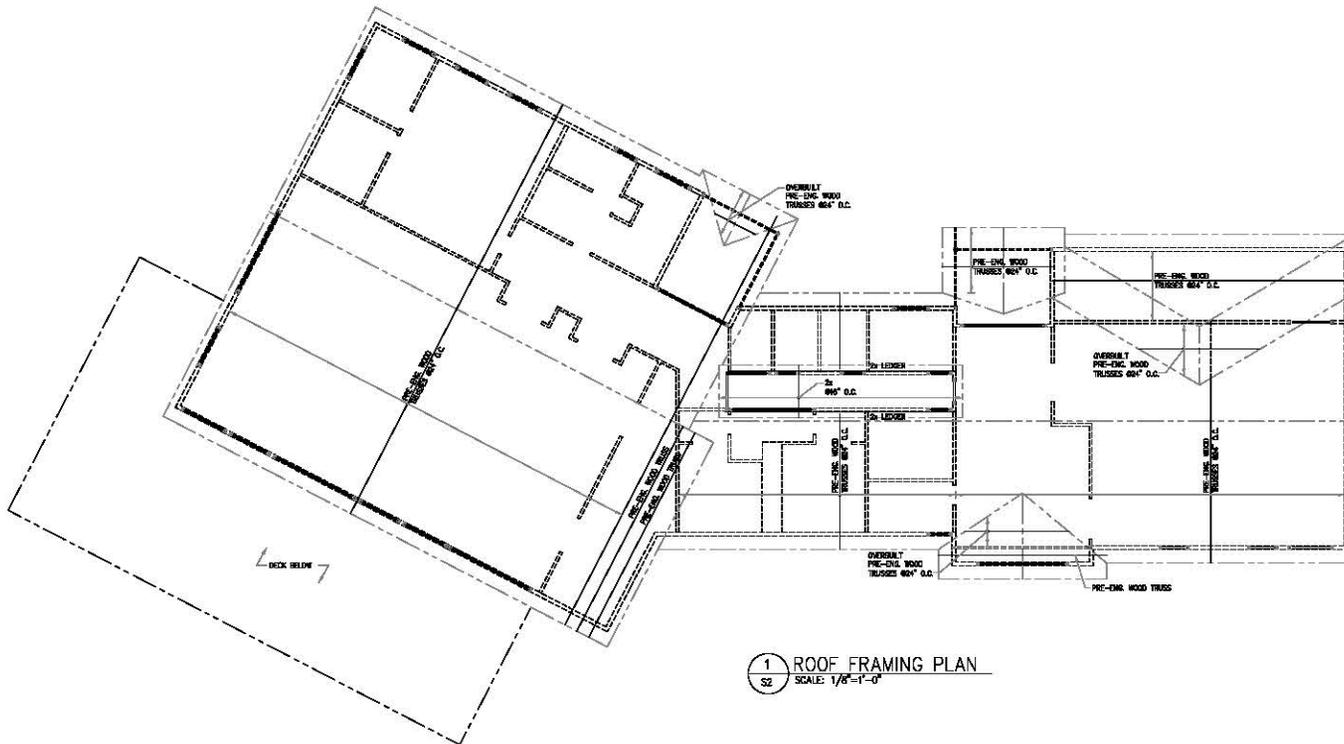
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project: CRUMMILLVC
 drawn: GK
 checked: DL
 phase: schematic design
 date: January 2013
 revised:

ROOF FRAMING PLAN

S2

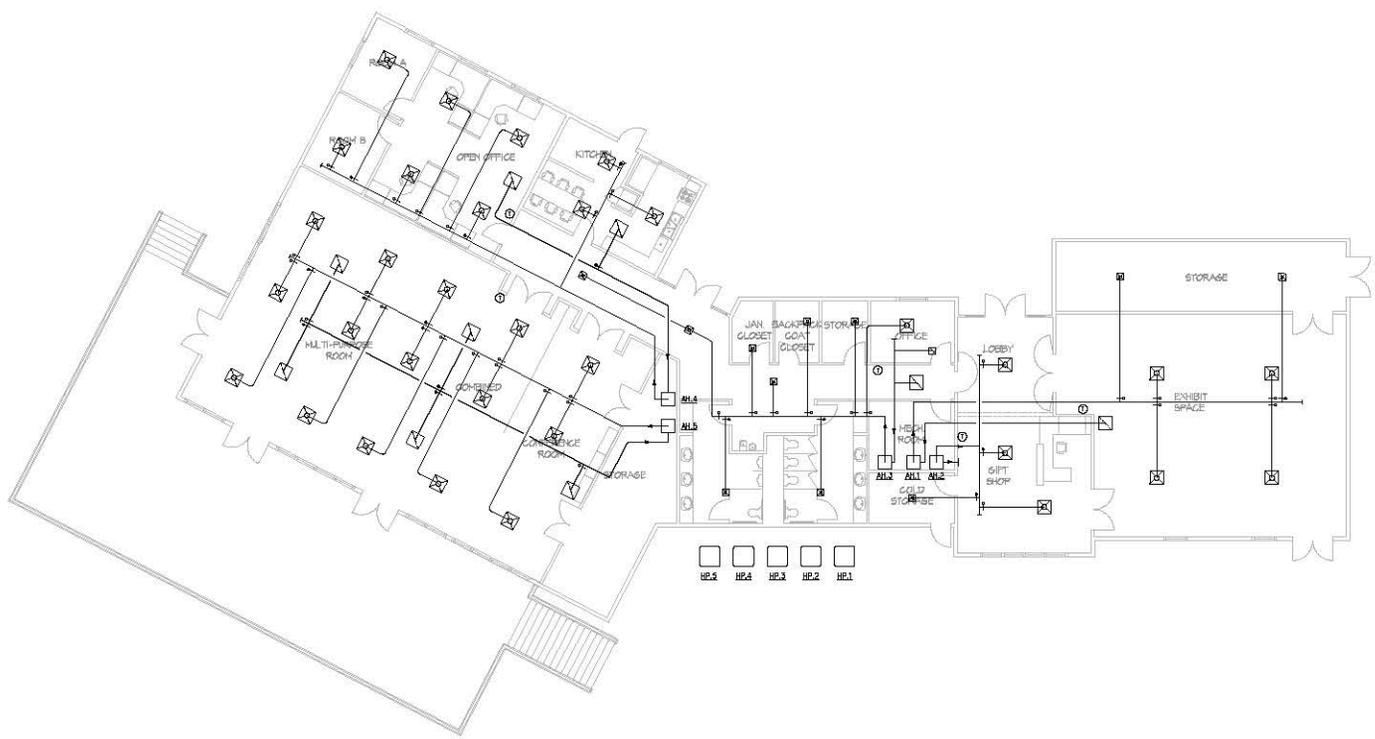
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1 ROOF FRAMING PLAN
 S2 SCALE: 1/8"=1'-0"

MECHANICAL LEGEND

- ⊙ THERMOSTAT
- ⊠ RECTANGULAR CEILING SUPPLY DIFFUSER, ROUND CONNECTION, TYPE AS INDICATED
- ⊞ RETURN GRILLE, TYPE AS INDICATED
- || → SIDEWALL RETURN GRILLE
- HP.X □ HEAT PUMP OUTDOOR UNIT
- HLX □ HEAT PUMP AIR HANDLER



HP.5 HP.4 HP.3 HP.2 HP.1
HL.5 HL.4 HL.3 HL.2 HL.1

1 FLOOR PLAN
SCALE: 1/8" = 1'-0"
0 2' 4' 8' 16'

Visitor Center for
Colvin Run Mill
1807 Colvin Run Road
Great Falls, Virginia 22066

for the
Fairfax County Park
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Fairfax County, Virginia

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checked: mo
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date: January 2012
revised:

**MECHANICAL
PLAN**

M1.0

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ELECTRICAL LEGEND

WIRING DEVICES

- SW WALL SWITCH AT 48" AFF. UNID. SUBSCRIPTS INDICATE THE FOLLOWING: (NONE) SINGLE POLE, 2 THREE-WAY, 3D THREE-WAY DIMMER, 4 FOUR-WAY, o (LOWER CASE LETTER) SWITCHING PATTERN, T TURNER, V VIBRACY SENSOR
- OC CEILING MOUNTED OCCUPANCY SENSOR
- ⊕ DUPLEX RECEPTACLE AT 18" AFF. OR GRADE. UNID. SUBSCRIPTS INDICATE THE FOLLOWING: GF GROUND FAULT CIRCUIT INTERRUPTER, WP WEATHERPROOF AND GFD TYPE
- ⊕ DUPLEX RECEPTACLE MOUNTED ABOVE BACKSPASH 2" FROM TOP OF BACKSPASH TO BOTTOM EDGE OF FACEPLATE.
- ⊕ QUAD RECEPTACLE AT 18" AFF. UNID.
- ⊕ JUNCTION BOX
- ⊕ VOICE/DATA OUTLET WITH COVER FLUSH W/ WALL. MOUNTED AT 18" AFF. UNID. PROVIDE 1" O.D. WITH PULL CORN AND RUSHED SIDES TO REACH AN ACCESSIBLE CEILING. MINIMUM BOX SIZE 4M INCH X 2.1" DEEP WITH SINGLE GANG OUTDOOR/IND. FACEPLATE, PORTS AND CABLES BY OTHERS. OUTLETS SHALL BE AT SAME HEIGHT AS HORIZONTAL RECEPTABLES, UNLESS OTHER THAN 18" AFF. W-WALL MTD AT 48" AFF.

- METER
- PANELBOARD, SURFACE MOUNTED, 120/200V
- FUSED DISCONNECT SWITCH, 30A, UNID.
- FIRE ALARM SYSTEMS
 - FA FIRE ALARM MANUAL FULL STATION AT 48" AFF (UNID) CEILING MOUNTED
 - FA FIRE ALARM AUDIBLE/VISUAL INDICATOR MOUNTED SUCH THAT LENS IS BETWEEN 80" & 88" AFF. ALL WALL MOUNTED TO BE AT SAME HEIGHT. I=CANDELA LEVEL, D=CEILING WTD
 - FA FIRE ALARM VISUAL INDICATOR MOUNTED SUCH THAT LENS IS BETWEEN 80" & 88" AFF. ALL WALL MOUNTED TO BE AT SAME HEIGHT. I=CANDELA LEVEL, D=CEILING WTD
 - FA FIRE ALARM CONTROL PANEL

- LIGHT FIXTURES**
- 2' X 4' FLORESCENT DIRECT-INDIRECT
 - 2' X 4' FLORESCENT DIRECT-INDIRECT WITH EMERGENCY BATTERY BALLAST
 - 1' X 4' FLORESCENT SURFACE MOUNTING
 - FLORESCENT RECESSED PERIMETER
 - 2-CIRCUIT TRACK WITH LED TRACK HEADS
 - LED RECESSED DOWNLIGHT
 - LED RECESSED DOWNLIGHT WITH EMERGENCY BATTERY BALLAST
 - COMPACT FLORESCENT WALL FIXTURE
 - COMPACT FLORESCENT WALL FIXTURE WITH EMERGENCY BATTERY BALLAST
 - LED EXIT SIGN WITH EMERGENCY BATTERY BALLAST



1 FLOOR PLAN - LIGHTING
SCALE 1/8" = 1'-0"

Visitor Center for
Colvin Run Mill

1007 Colvin Run Road
Great Falls, Virginia 22066

for the
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Fairfax County, Virginia

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date: January 2012
revised:

LIGHTING PLAN

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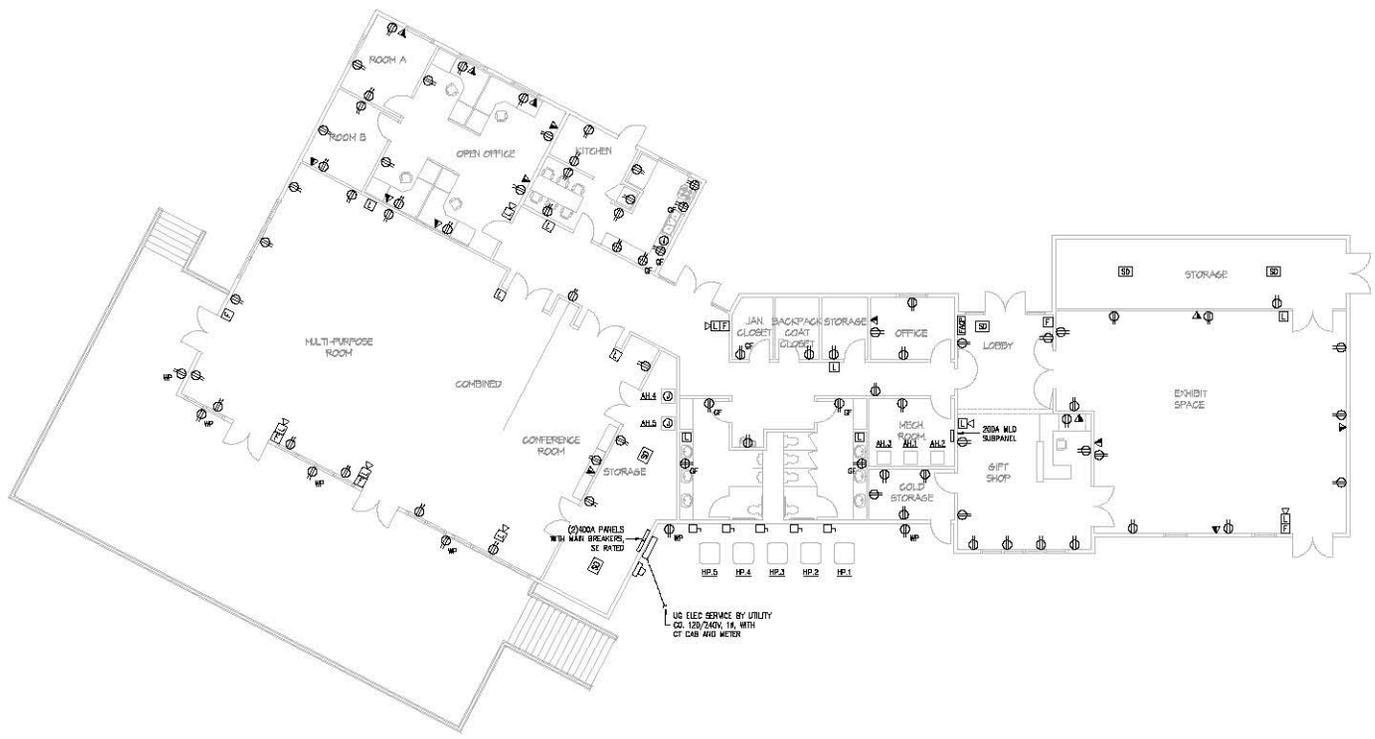
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 date: January 2012
 revised:

**POWER
 PLAN**

E2.0

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1 FLOOR PLAN - POWER
 SCALE 1/8" = 1'-0"

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Visitor Center for Colvin Run Mill
Historic Site
Great Falls, Virginia
Fairfax County

Outline Specifications
Sustainable Design Elements
Cost Estimate
Appendix A – ARB Comments and Next Steps
January 6, 2012

Schematic Design Submission
Not for Construction

prepared by

John Milner Associates, Inc.
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Alexandria, Virginia 22312

Visitor Center for Colvin Run Mill Historic Site

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Visitor Center for Colvin Run Mill Historic Site

Outline Specifications

DIVISION 1: GENERAL REQUIREMENTS

01110 SUMMARY OF THE WORK

- A. The project consists of the general construction of a visitor center and museum with new pervious walkways, utilities, associated grading, landscaping and modifications to the parking lot.
- B. Description of the site as having historic significance and required sensitivity to be accorded to each building.
- C. Interface with park Operations:
 - 1. Coordination of the work will be the responsibility of the Contractor.
 - 2. Description of staff access and park operations.
- D. Parking Areas: Description of parking restrictions and availability.
- E. Work Restrictions:
 - 1. Description of limitations on work hours including weekends and holidays. Work shall be planned during normal park operational hours unless work at other times is required for proper work sequencing or for unforeseen scheduling conflicts.
 - 2. Schedules for work outside normal working hours, etc., shall be submitted to the County for approval a minimum of three working days prior to proposed schedule change.
- F. Security:
 - 1. Protection of the Contractor's work and property shall be the responsibility of the Contractor.
 - 2. Protection of County property during the contract period shall remain park responsibility.

DIVISION 2: SITEWORK

02050 REMOVAL OF PAVEMENTS AND STRUCTURES

- A. General removal and recycling of pavement.
- B. Demolish and remove from the site designated building, and miscellaneous debris.

02110 CLEARING, GRUBBING, SELECTIVE THINNING AND TREE REMOVAL

- A. Clear grub stumps and undergrowth. Dispose of debris.

02300 EARTHWORK

- A. General Site Preparation – Proofroll entire building site after clearing.

- B. Excavate for foundation and concrete slab on grade. After placement of foundation, backfill and compact excavated area utilizing original soil.
- C. Soil density quality control: 95%
- D. Waterproofing: EPDM membrane

02270 EROSION CONTROL

- A. Furnish and implement an erosion control plan.

02501 PAVEMENT AND DRAINAGE IMPROVEMENTS

- A. General construction or reconstruction of parking lot, walks and curbs, including drainage improvements.
- B. Provide pervious paving in the parking stalls and overflow parking.
- C. Provide sustainable soil stabilization products for natural looking accessible walkways.
 - 1. NaturalPAVE XL Resin Pavement

02630 STORM DRAINAGE

- A. Storm drainage collection and conveyance system.
 - 1. Piping and inlet installations.

02780 UNIT PAVERS

- A. Provide concrete pavers that have been manufactured within 500 miles of the Project site from aggregates and cement that have been extracted, harvested, or recovered, as well as manufactured, within 500 miles of Project site.
- B. Provide standard interlocking paving units complying with ASTM C 936 .
- C. Size and Shape: 9” square by 2-3/8” thick.
- D. SRI: 29 minimum

02795 CRUSHED GRAVEL PATH

- A. Removal of any on-grade obstructions, debris, plant material or growth that conflict with the construction of the path.
- B. Provision and installation of CORE6 permeable paving system with COREgravel.

02870 SITE FURNISHINGS

- A. Powder coated steel trash receptacles with top to prevent rain from entering trash bin, including plastic bin.

02920 LAWNS AND GRASSES

- A. Seed, fertilize, and mulch landscape areas and slopes. Sod lawn areas.

02930 EXTERIOR PLANTS

- A. Install shrubs and trees in planting pits with prepared soil amendments.

DIVISION 3: CONCRETE

03300 CAST-IN-PLACE CONCRETE

- A. Use 3,500 psi concrete for all footings and foundation walls with a maximum slump of 4". A 4-grade supported slab reinforced with welded wire fabric will be used at the first floor grade supported areas.
- B. Reinforcing ASTM A615, Grade 60.
- C. Contractor responsible for all concrete testing (strength, slump, and air content).
- D. Actual type and size of footing and foundation system used will be based on the allowable soil bearing pressure.

DIVISION 4: MASONRY

04720 CAST STONE

- A. ASTM C 1364
- B. Regional Materials: Cast stone units shall be manufactured within 500 miles of Project site from aggregates and cement that have been extracted, harvested, or recovered, as well as manufactured, within 500 miles of Project site

04810 UNIT MASONRY ASSEMBLIES

- A. ASTM C90, normal weight, Type 1, concrete masonry units.
- B. Mortar ASTM C270, Grout ASTM C476, 2000 psi.
- C. Brick: ASTM C216 and C652.

04815 BRICK MASONRY ASSEMBLIES

- A. Brick masonry over solid masonry or poured in place concrete where shown.
 - 1. Full-range red, sand molded.
 - 2. Regional materials: brick shall be manufactured within 500 miles of Project site from materials that have been extracted, harvested, or recovered, as well as manufactured, within 500 miles of Project site.
- B. Mortar ASTM C270.

DIVISION 5: METALS

05120 STRUCTURAL STEEL

- A. Structural steel frame and miscellaneous members to conform to ASTM A992, 50 ksi.
- B. Bolts to conform to ASTM A307.
- C. Painting to consist of 1-coat of rust-inhibitive primer.

05500 MISCELLANEOUS METALS

- A. Handrails, gratings, anchor bolts and other special metal accessories and fabrications.
 - 1. Ultra-tec cable railing system containing at least 65% recycled content. Full-range red, sand molded.
- B. Non-shrink setting grout.

DIVISION 6: WOOD AND PLASTICS

06100 ROUGH CARPENTRY

- A. Wood framing, furring, sheathing, blocking, and nailers for the top of all roof-framing members.
- B. Minimum 5/8-inch thick structural grade plywood for roof sheathing. Minimum 1/2-inch thick structural grade plywood for wall sheathing

06200 FINISH CARPENTRY

- A. Painted wood casework at kitchen.
- B. Solid wood standing and running trim.
- C. Kirei Board (manufactured from reclaimed sorghum straw with no-added-formaldehyde adhesive) at the lobby desk.
- D. Solid surface (corian) countertops with backsplash, 1/2-inch, in the bathrooms and kitchen.

06160 SHEATHING

- A. Fiber cement vertical siding (HardiePanel Smooth) with batten boards (HardieTrim Batten Boards Smooth), horizontal lap siding (HardiePlank Select Cedarmill with 8-inch exposure), and trim (HardieTrim 4/4 Boards Smooth).
- B. Minimum 3/4-inch thick Structural grade plywood sheathing with “E” or “E0” (low formaldehyde emissions) rating meeting FSC and LEED standards for floor sheathing.

DIVISION 7: THERMAL AND MOISTURE PROTECTION

07190 VAPOR RETARDER

- A. 4 mil thick polyethylene under slab-on-grade and on walls.

07210 BUILDING INSULATION

- A. 2-1/2-inch thick (R-11+) extruded polystyrene board perimeter insulation at foundations.
- B. R-19 batt insulation for exterior walls.
- C. R-30 batt insulation in attic.
- D. R-11 batt insulation for walls.

07620 SHEET METAL FLASHING AND TRIM

- A. Galvanized sheet metal, painted where exposed.

07700 ROOF ACCESSORIES

- A. Continuous metal gravity ridge and fascia ventilators.

07920 SEALANTS

- A. Interior vertical surfaces and Horizontal Surfaces: Urethane. ASTM C920, Type S, Grade NS, Class 25.
- B. Interior Mildew-Resistant horizontal and vertical surfaces: Acid-Curing Silicone. ASTM C920, Type S, Grade NS, Class 25, for Use NT.
- C. Exterior vertical and horizontal joints: Neutral curing silicone. ASTM C920, Type S, Grade NS, Class 25, for Use NT.

073130 RECYCLED MATERIAL ROOF SHINGLES

- A. 100% recycled material, reinforced vinyl and cellulose fiber designed to resemble wood shake shingles.
- B. Class A fire rating
- C. Class 4 impact rating
- D. UV protected
- E. Passes 110mph Wind Driven Rain Testing
- F. 50 year warranty
- G. Random widths of 5, 7, and 12 inches, and 22 inches in length
- H. Color solid throughout with a minimum SRI of 29.

07710 MANUFACTURED ROOF SPECIALTIES

- A. Description of gutters and downspouts:
 - 1. Gutters: Half round copper with cast hangers.
 - 2. Downspouts: Round copper downspouts, modifying to connect to new drainage pipe.
- B. Description of flexible, breathable flashing:
 - 1. Grace Rain and Ice Shield at roof eaves and ridge.

DIVISION 8: DOORS AND WINDOWS

08100 WOOD DOORS

- A. Paneled oak and glass entrance doors with oak frames.
- B. On interior, use oak wood veneer solid core wood doors with oak wood frames.

08200 METAL DOORS AND FRAMES

- A. Hollow metal doors and frames at mechanical room, cold storage, and exterior kitchen door.

08334 OVERHEAD COILING GRILLES

- A. Aluminum open grille curtain with brick pattern, alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated.
- B. Guides finished to match grille recessed into wall.
- C. Manual grille operator. Counterbalance mechanism installed above the ceiling.
- D. Push/pull handles
- E. Lock cylinder incorporated into the bottom bar.

08520 WINDOWS

- A. Ultrex® clad wood fixed and double hung windows by Marvin Windows. Windows shall include hardware, glazing, weather strip, insect screen, simulated divided lite, jamb extension, and standard anchors, trim and attachments.
 - 1. Interior frame and sash: clear pine interior surfaces, moisture content 12% max.
 - 2. Exterior frame and sash: fiberglass reinforced (Ultrex®), 0.075 inch thick.
 - 3. Composite sash thickness: 1-9/16 inches.
 - 4. Finish: factory baked on acrylic urethane on the exterior and treated bare wood on the interior.

08710 DOOR HARDWARE

- A. Latch sets, hinges, stops, plates, pulls in oil rubbed and oxidized satin bronze (BHMA 613 or US10B) finish. Use levers on all latch and locksets.
- B. Master key all locks.

08800 GLAZING

- A. Window and Door Glazing: Provide ¾ inch insulated glass. Glass is laminated insulated Low EII with Argon, consisting of annealed or tempered glass to the exterior and laminates glass to the interior. The laminated glass is made up of glass with either a SGP or PVB laminate layer between.

DIVISION 9: FINISHES

09250 GYPSUM BOARD

- A. Provide 5/8" regular gypsum board on all designated interior walls and ceilings.
- B. Provide 5/8" water resistant gypsum board in wet areas such as the bathrooms and kitchen.
- C. Use cementitious glass mesh mortar units on walls designated to have ceramic tile applied
- D. Use Type X gypsum board on partitions requiring fire rating.

09310 CERAMIC TILE

- A. Ceramic mosaic tile walls and quarry tile floors in Restrooms and Kitchen.

09512 ACOUSTIC TILE CEILINGS

- A. This Section includes acoustical panels and exposed suspension systems for ceilings.
 - 1. Basis-of-Design Product: Subject to compliance with requirements, provide Armstrong Ultima Lay-In, tegular with 9/16-inch grid, 24 X 24 and sizes cut to fit the ceiling layout, minimum NRC of 0.70 and minimum CAC of 35, or approved equal.
 - 2. 2% post consumer and 68% preconsumer recycled, highlight reflectance, age resistance, anti-microbial additives and no added formaldehyde low VOC emissions.

09640 WOOD FLOORING

- A. Reclaimed wood flooring, Character White Oak by Mountain Lumber Co. in lobby, gift shop and exhibit space.

09652 RESILIENT SHEET FLOORING

- A. Description of resilient flooring and rubber base:
- B. Materials:
 - 1. Linoleum: Equal to Forbo Flooring, Marmoleum Real Authentic, roll material.
 - 2. Rubber Base: ASTM F 1861, Type TS (rubber, vulcanized thermoset), Group I (solid, homogeneous), cove style, 0.125 inch thick, 4 inches high.

09680 CARPET

- A. Low E nylon broadloom carpet containing a minimum of 25% recycled content such as Eco Solution Q by Shaw Contract Group.
- B. 100% PVC-free sustainable carpet backing such as EcoWorx Tile by Shaw Contract Group.

09910 PAINTING

- A. Low odor and zero VOCs latex paint such as American Pride or Sherwin Williams.
- B. Typical walls painted with eggshell finish.
- C. Painted wood to have gloss finish.
- D. Gypsum walls in kitchen and restrooms to have semi-gloss finish.
- E. Use clear stain in interior and exterior wood trim.

DIVISION 10: SPECIALTIES

10155 TOILET COMPARTMENTS

- A. Toilet enclosure and urinal screen: Solid, high-density polyethylene (HDPE) panel material, not less than 1 inch thick, seamless, with eased edges, and with homogenous color and pattern throughout thickness of material.
- B. Toilet enclosure style: floor mounted

10432 SIGNAGE

- A. Room Identification Signs: Plaque material shall be Special Purpose SP125 decorative thermosetting high pressure laminate. Material to be 1/8" thick laminate with a melamine resin surface and a phenolic resin core which provides resistance to abrasion, stains, alcohol, solvents, boiling water, and heat. The material shall be NEMA rated.
 - 1. All text shall be accompanied by Grade 2 braille. Braille shall be separated 1/2" from the corresponding raised characters or symbols. Grade 2 braille translation to be provided by sign manufacturer.
 - 2. All letters, numbers and/or symbols shall contrast with their background, either light characters on a dark background or dark characters on a light background. Characters and background shall have a non-glare finish.

10523 FIRE EXTINGUISHERS AND CABINETS

- A. Project includes:
 - 1. Portable fire extinguishers.
 - 2. Fire extinguisher mounting brackets.
 - 3. Fire extinguisher cabinets.
- B. Fire Extinguishers:
 - 1. Type: Dry chemical type.
 - 2. Rating: Sized for project requirements.
 - 3. Public Area Mounting: Cabinet mounted.
 - 4. Service Area Mounting: Metal brackets.
- C. Cabinets:
 - 1. Mounting: Semi-recessed.
 - 2. Trim: Trimless
 - 3. Doors: Stainless steel, AISI No. 4 polish.
 - 4. Door Style: Full glass panel.

10651 OPERABLE PARTITIONS

- A. Acoustics: 45 STC
- B. Panel Thickness: 3.06 inches
- C. Operation: Manual
- D. Frame and Hinges: Steel

- E. Finish: Fabric
- F. Height:
- G. Opening: 38'-4"
- H. Pass Through Door: Single matching construction: 12'-8"

10801 TOILET AND BATH ACCESSORIES

- A. Stainless Steel
 - 1. Toilet Tissue Dispenser
 - 2. Combination Towel(Folded) Dispenser/Waste Receptacle
 - 3. Grab Bars
 - a. Straight 36"
 - b. Straight 42"
 - 4. Sanitary Napkin Disposal Unit
 - 5. Mirror
 - 6. Seat Cover Dispenser Unit
- B. Warm Air Dryer
- C. Diaper Changing Station
- D. Underlavatory guard

DIVISION 11: EQUIPMENT

11132 PROJECTOR AND PROJECTION SCREEN

- A. Electrically Operated Front Projection Screen
 - 1. Multipurpose reflective viewing surface
 - 2. Material: Vinyl-coated, glass-fiber fabric
 - 3. Most screen materials are mildew resistant. Before retaining first paragraph below, verify that products selected comply with requirements.
 - 4. Mildew-Resistance Rating: 0 or 1 when tested according to ASTM G 21.
 - 5. Flame Resistance: Passes NFPA 701.
 - 6. Flame-Spread Index: Not greater than 75 when tested according to ASTM E 84.
- A. Ceiling Mounted Projector
 - 1. LCD
 - 2. Resolution: XGA
 - 3. Contrast: 800
 - 4. Brightness: 7,000
 - 5. Weight: 25 lbs.

11400 FOOD SERVICE EQUIPMENT

- A. EnergyStar equipment including:

1. Dishwasher
2. Commercial Refrigerator
3. Residential Oven/Stove
4. Commercial Microwave
5. Under-counter refrigerator
6. Stackable washer/dryer

DIVISION 12: FURNISHINGS

12494 ROLLER SHADES

- A. Ecoveil by Mecho Shade: pvc-free roller shade cloth

DIVISION 13: SPECIAL CONSTRUCTION

13851 FIRE ALARM

- A. Addressable system consisting of main Fire Alarm Control Panel, integral batteries with charger, smoke/heat detectors, manual pulls, and indicating devices.
- B. Provide elevator recall interface.
- C. Fire alarm system wiring shall be run in conduit or be type FPLP MC cable.

13910 BASIC FIRE SUPPRESSOIN MATERIALS AND METHODS

- A. No fire suppression systems are required.

DIVISION 14: CONVEYING SYSTEMS

Not Used

DIVISION 15: MECHANICAL

15010 MECHANICAL GENERAL PROVISIONS

- A. Work shall comply with VUSBC 2009 and IMC 2009.

15060 HANGERS AND SUPPORTS

- D. Hangers and supports shall comply with VUSBC 2009, IMC 2009 and IPC 2009.

15070 MECHANICAL SOUND, VIBRATION AND SEISMIC CONTROL

- A. Spring hangers for suspended motor-driven equipment and neoprene pads for floor mounted motor-driven equipment.

15075 MECHANICAL IDENTIFICATION

- A. Nameplates for equipment, plastic tags for valves.

15080 MECHANICAL INSULATION

- A. Flexible mineral wool with ASJ for supply and return ducts.
- B. Elastomeric cellular foam for refrigerant piping.

15140 DOMESTIC WATER PIPING

- A. Type K copper for below-grade domestic water.
- B. Type L copper for above-grade domestic water.
 - 1. Water pressure reducing valve, RPZ backflow preventer and pressure gage at water service entrance.
 - 2. Ball valves for isolation.
- C. Freezeless wall hydrants spaced not to exceed 50-ft along outside walls.
- D. Recessed valve box for refrigerator ice maker.

15150 SANITARY WASTE AND VENT PIPING

- A. PVC or cast iron no-hub.

15150 SANITARY WASTE AND VENT PIPING

- A. PVC or cast iron no-hub.
- B. Specialties include cleanouts, floor drains.

15180 HEATING AND COOLING PIPING

- A. PVC for equipment condensate drains.
- B. Type ACR copper for refrigerant.

15410 PLUMBING FIXTURES

- A. ADA accessible where required.
- B. Water closets: Elongated tank type, vitreous china, wall mounted, manual flush valve, open front seat with no cover, 1.28 gpf.
- C. Urinals: Wall hung, vitreous china, manual flush valve, 1/8 gpf.
- D. Lavatories: Counter mounted, vitreous china, deck-mounted single-lever faucet, 0.5 gpm aerator, thermostatic mixing valve, grid strainer.
- E. Sinks: Stainless steel, deck-mounted swing spout faucet with single-lever mixing valve, 1.0 gpm aerator, basket strainers.
- F. Mop Sink: Floor mounted, molded stone, 24x24 inch, wall mounted faucet with pail hook and integral stops, 5-ft rubber hose, mop hanger, stainless steel wall plates.
- G. Water Cooler: Electric, dual height, surface mounted, stainless steel body.

15480 DOMESTIC WATER HEATERS

- A. Domestic water heater will be electric vertical storage type, 40 gallon, located in the Janitor's Closet.

15740 HEAT PUMPS

- A. Base Case: Space conditioning systems will consist of high-efficiency split system heat pumps (SEER 20 or higher) with electric secondary heater.
- B. Alternate: Space conditioning systems will consist of geothermal heat pumps (GHP) and vertical bore field. Underground, closed loops of water piping will serve as the "central plant" for heating and cooling the building. The major components of the GHP system include vertical bore well fields, flow centers for each GHP, and water-to-air heat pump units.
- C. Each zone will be provided with an electronic programmable thermostat.
- D. Heat pumps will be configured to provide dehumidification through sub-cooling and reheat.
- E. The system serving the Exhibit Space and associated Storage will be equipped with an electric steam generator with duct dispersion tube and humidistat.
- F. Fresh air will be introduced through packaged energy recovery units consisting of supply/exhaust fans and total energy wheels.
- G. Heat pumps will be provided with electronic programmable controls
- H. Zones:
 - 1. Exhibit Space and associated Storage (approx 3 tons)
 - 2. Gift Shop, Lobby, Cold Storage (approx 2 tons)
 - 3. Hallway, Restrooms and Office (approx 2.5 tons)
 - 4. Office area, Kitchen (approx 2 tons)
 - 5. Multi-Purpose Room, Conference Room and associated Storage (approx 5 tons)

15810 DUCTS

- A. Galvanized steel, insulated with fiberglass blanket.
- B. Turning vanes in all rectangular elbows.
- C. Manual volume dampers at all branch duct take-offs from mains.

15850 AIR OUTLETS AND INLETS

- A. Aluminum with baked off-white finish.
- B. Supply air devices will have integral volume dampers.
- C. Ceiling diffusers will be extruded aluminum.
- D. Sidewall supply grilles will be double deflection type.
- E. Return grilles will be stationary blades, 3/4-inch deep on 3/4-inch spacing.

- F. Louvers will be extruded aluminum, storm-proof and drainable, and have painted factory finish.

15860 AIR CLEANING DEVICES

- A. MERV 13 filters in air handlers and energy recovery unit.

15860 AIR CLEANING DEVICES

- A. Provide complete testing, adjusting and balancing of HVAC systems. TAB work shall be performed for air and water systems, and control systems.
- B. Provide pre-commissioning checklist and complete air / water balancing reports, as well as functional performance testing for all mechanical systems.

DIVISION 16: ELECTRICAL

16010 ELECTRICAL GENERAL PROVISIONS

- A. Work shall comply with VUSBC 2009 and NEC 2008.

16050 BASIC MATERIALS AND METHODS

- A. Grounding rod electrode.
- B. Nameplates for panelboards and disconnect switches.
- C. Wire markers in panelboard gutters, pull boxes, junction boxes and outlet boxes.
- A. Insulated ground wires in all feeder and branch circuits.

16123 BUILDING WIRE AND CABLE

- A. Conductors: Copper. Type THHN/THWN conductors in conduit or MC cable.

16130 RACEWAY AND BOXES

- A. Interior conduit: EMT.
- B. Below grade or slab conduit: PVC.
- C. Conduit and cabling will be run concealed in interior finished spaces, and parallel or at right angles to the building structure.
- D. Security, access control and fire alarm conduits: EMT.

16140 WIRING DEVICES

- A. Heavy duty, specification grade.
- B. Wall switches: 120/277V, single-pole, 3-way, 4-way or pilot light.
- C. Wall occupancy / vacancy sensors: Dual-technology type, with On-Off-Auto switch.
- D. Wall dimmers: Slide type, for fluorescent loads as required.

- E. Receptacles: 5-20R; GFCI where required.
- F. Wall plates: Thermoplastic.

16141 FLOOR BOXES

- A. Semi-adjustable, formed steel, rectangular.
- B. Brushed stainless steel, flush covers with flaps.

16210 ELECTRICAL UTILITY SERVICE

- A. Underground service entrance: 120/240V, single phase.
- B. Utility meter on exterior of building.

16411 ENCLOSED SWITCHES

- A. Heavy duty, fused, for equipment disconnects. NEMA 1 or 3R as required. Provide fuses.

16423 ENCLOSED CONTACTORS

- A. Electrically-held enclosed lighting contactors for site lighting, interfaced with photosensors.

16442 PANELBOARDS

- A. Copper busses, molded case circuit breakers. Surface or flush mount, NEMA 1 or 3R and service entrance rated as required, with hinged lockable doors. Provide transient voltage surge suppression device at service entrance panel.

16510 INTERIOR LUMINAIRES

- A. Lighting predominantly will be fluorescent or LED.
- B. Fluorescent will utilize T8, T5 or compact lamps and electronic ballasts. Fluorescent fixtures with 3- and 4-lamps will be provided with dual ballasts to allow dual switching. Dimmable fluorescent ballasts will be provided where appropriate, compatible with wall dimmers. Fluorescent lamps shall be 3500K, minimum CRI of 82.
- C. Where possible, light fixtures that utilize LED lamp sources will be selected.
- D. Exit signs will be LED with integral emergency ballasts, edge-lit type, with integral emergency power supplies.
- E. Provide fluorescent lamp emergency power supplies in interior luminaires for emergency egress lighting and at exit discharges.
- F. Light Fixtures:
 - 1. Multi-circuit track – Exhibit, Gift Shop
 - 2. 1x4 fluorescent surface wrap-around – All Storage rooms, Mech Rm, Backpack Coat Closet, Jan Closet
 - 3. Fluorescent recessed perimeter – Above Restroom lavatories and toilets/urinals

4. LED downlights, open reflector – Restroom entries, Hallway, Lobby
5. Fluorescent downlights, damp location, lensed – In roof eaves at exterior doors
6. Fluorescent wall packs, damp location – Wall mounted at exterior doors
7. 2x4 fluorescent recessed volumetric – Offices, Kitchen, Multi-Purpose, Conference
8. LED “rope” light – Along deck railings

16520 EXTERIOR LUMINAIRES

- A. Light fixtures that utilize LED lamp sources will be selected.
- B. Controlled by photosensor.

END OF OUTLINE SPECIFICATIONS

Visitor Center for Colvin Run Mill Historic Site

Sustainable Design Elements

Located at 10017 Colvin Run Road in Great Falls, Virginia, the Colvin Run Mill property is the centerpiece of the Colvin Run Mill Historic District of Fairfax County. This 67-acre park is owned by the Fairfax County Park Authority (FCPA) and features a restored, operational 19th-century water-powered mill; miller's house, general store, and interpretive barn. Colvin Run Mill is located within the Colvin Run Mill Historic District and is listed on both the Fairfax County Virginia Landmark Register and the National Register of Historic Places. In 2001, it was designated a Historic Mechanical Engineering Landmark by the American Society of Mechanical Engineers.

In September of 2008, the FCPA Board approved the Master Plan Revision for Colvin Run Mill Historic Site that included designing a Visitor Center with improved exhibit space, demonstration space, staff offices, restrooms, and support facilities. During the programming of the Visitor Center, the need for a 150-person multi-purpose room and gift shop were added to the requirements.

FCPA requested that the design of the Visitor Center incorporate sustainable design elements. The schematic design includes solutions such as recycled materials, resource efficiencies, optimized energy usage, and sustainable site concepts. By efficiently using natural resources, the project will make a positive impact on our planet. The majority of the items listed below have been incorporated into the schematic design. A few items will need to be further evaluated and incorporated into the documents after careful consideration.

Sustainable Sites

Construction Activity Pollution Prevention:

- Create an erosion and sediment control plan that employs such strategies as silt fencing, mulching, and temporary and permanent seeding.

Protect or Restore Habitat:

- Select native plants that require minimal or no irrigation, do not require active maintenance, and provide habitat value.
- Use vegetation to stabilize/prevent erosion

Maximize Open Space:

- Building was sited to minimize site disruption and maintain as much open space as possible. Parking area was not increased but made more efficient.

Stormwater Design:

- Capture storm water run-off, design for storm water retention using bioretention ponds or rain gardens.
 - o Stormwater Benefits:
 - Runoff quantity control
 - Runoff quality control
 - Pollutant removal
 - Groundwater recharge
 - o Other Benefits:

- Cost savings
- Wildlife habitat
- Attractive landscape
- Educational potential
- Use pervious paving materials for the parking stalls, overflow parking, trails and site walkways. It is anticipated that the increase in impervious areas included in the schematic design will need to be addressed from a water quantity perspective. Section 118-3-2 (d) of the Fairfax County Code stipulates that redevelopment of land in Chesapeake Bay Preservation Areas shall minimize impervious cover consistent with the use or redevelopment proposed.
- Use low-impact designs including bioretention ponds and pervious pavements to ensure that the projected phosphorus runoff pollution load after redevelopment does not exceed the existing phosphorus runoff pollution load.

Heat Island Effect:

- Provide new and maintain existing shade trees in the parking area to reduce runoff and improve the surrounding environment (e.g., shading or parking).
 - o Ensure proper tree selection, with native and wildlife benefits, and proper tree preservation to maximize survival of the new plantings and the existing trees in the islands.
 - o Continue to utilize wheel stops to protect existing and proposed trees from vehicles.
- Roof shingles and plaza paving shall have a minimum Solar Reflective Index (SRI) of 29.
- Maximize daylight where feasible by adding windows including the raised area over the interior corridor.
- Maximize use of existing trees and other vegetation to shade building, walkways, and parking lot.
 - o Plan selective clearing for proposed trails in order to maximize tree preservation. From a Crime Prevention Through Environmental Design (CPTED) perspective, recommend understory vegetation be removed or selectively cleared to allow 20' visibility on either side of the trail in order to avoid hiding places.
- Finish roof in light colored recycled shingles to reduce energy loads and extend the life of the roof.

Light Pollution Reduction:

- Exterior lighting provided to maintain safe light levels without adding off-site lighting.

Water Efficiency

Water Use Reduction:

- Low-consumption plumbing fixtures

Water Efficient Landscaping:

- Use native plants in any new landscaping to reduce or eliminate irrigation requirements.

Energy and Atmosphere

Commissioning:

- Develop and maintain a commissioning plan for use during design and construction.

Optimize Energy Use:

- Insulated windows
- High-performance building envelope
- Employ renewable or high-efficiency energy source such as daylighting and geothermal
- High-efficiency heat pumps with programmable thermostats

- Energy recovery units for fresh air
- High-efficiency lighting and occupancy controls
- Use Energy Star approved products

On-Site Renewable Energy:

- Consider using geothermal

Materials and Resources

- Designated area in the kitchen for collection and storage of recyclables.
- Require the development and implementation of a plan for sorting construction waste for recycling.
- Use existing or reconditioned office furniture.
- Reuse existing barn concrete slab for outdoor/interpretation area.
- Use EPA designated recycled content products to the maximum extent practicable.
- Within an acceptable category of products, use materials and assemblies with the highest percentage available of post consumer or post-industrial recycled content.
- Use locally produced products to reduce transportation burdens and to stimulate local economies to maximum extent practicable.
- Use rapidly renewable materials that regenerate in 10 years or less, such as linoleum for the kitchen, storage rooms, and janitor's closet floors.
- Use timber products from sustainably managed forests.
- Use materials and assemblies that require minimum embodied energy for raw materials acquisition, manufacture, transport, installation, and use to maximum extent practicable.

Indoor Environmental Quality

- Commission HVAC systems to ensure they operate and perform as designed.
- Ventilation systems shall meet or exceed ASHRAE requirements.
- Detail building to prevent moisture infiltration (ASHRAE IAQ guide)
- Limit the use of volatile organic compounds (VOCs) in such products as cleaners, paints, sealants, coatings, and adhesives.
- Created a janitor's closet to safely and securely store housekeeping chemicals.
- Supplement natural light with integrated, high performance light fixtures and controls.
- Prohibit smoking
- Within an acceptable category of product, use materials and assemblies with the lowest level of volatile organic compounds (VOCs).
- Avoid the use of asbestos, lead, and PCBs in all products and assemblies.
- Avoid the use of chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs) as refrigerants in all HVAC systems.
- Provide occupant controls for lighting.
- Provide operable windows and thermostats for occupant thermal comfort control.
- Maximize interior daylighting to extent possible while meeting program requirements. (Daylighting is not desired in exhibit space and back-of-house spaces.)
- Maximize views toward the Mill and Headrace area from the multi-purpose room, deck and exhibit space to provide a connection to the outdoors and the core interpretive area.

Protect and Conserve Water

- Use low or ultra-low water efficient plumbing fixtures
- Design landscape for water efficiency through the use of native plants that are tolerant to local soil and rainfall conditions.
- Meter water usage.

- Eliminate leaks, caulk around pipes and plumbing fixtures and conduct annual checks of pipes and hoses.
- Commission water and sewer systems as part of the project quality assurance process.

Visitor Center for Colvin Run Mill Historic Site

Schematic Design Cost Estimate

The following information must be considered and used in conjunction with the Construction Cost Estimate.

1. Information used in the preparation of this Estimate includes:
 - A. John Milner Associates, Inc. Schematic Drawings, dated November 2011.
 - B. John Milner Associates, Inc. Project Outline Specifications, November 2011.
2. This Estimate is based on 8,140 sf of gross building areas.
3. This Estimate is developed and documented according to the Construction Specification Institute's (CSI) Code of Accounts.
4. This Estimate is based on fourth quarter, 2011 construction unit prices. No escalation has been included. Once a construction period has been established, the appropriate escalation factor, based on four percent (4%) per year must be added.
5. The general contractor's overhead and profit are included in Section 1.0 General Requirements.
6. No architectural, engineering, or project management fees are included in this Estimate.
7. The purpose of this Estimate is to establish a Schematic Budget for the described work. Once more detailed investigations and design have been completed, this Estimate should be revised and updated.

JOHN MILNER ASSOCIATES, INC.
FAIRFAX COUNTY PARK AUTHORITY
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FAIRFAX COUNTY, VIRGINIA

ICI #: 210652-2
 Prep: mcf/lpj
 Date: 11/15/2011
 Revised:

SUMMARY - SCHEMATIC DESIGN COST ESTIMATE

Account	Description		Cost/SF 8,140	Amount
1.0	General Requirements (% of Accounts 2.0 through 16.0)	15%	\$ 44.71	\$ 363,962
2.0	Sitework / Demolition		\$ 57.41	467,352
3.0	Concrete		\$ 18.44	150,068
4.0	Masonry		\$ 13.23	107,679
5.0	Metals		\$ 9.22	75,075
6.0	Woods & Plastics		\$ 45.26	368,431
7.0	Moisture Protection		\$ 35.09	285,632
8.0	Doors & Windows		\$ 19.14	155,815
9.0	Finishes		\$ 30.19	245,758
10.0	Specialties		\$ 5.64	45,947
11.0	Equipment		\$ 2.59	21,065
12.0	Furnishings		\$ 1.17	9,488
13.0	Special Construction		\$ -	-
14.0	Conveying Systems		\$ -	-
15.0	Plumbing		\$ 7.23	58,812
15.5	HVAC		\$ 30.80	250,712
16.0	Electrical		\$ 22.68	184,580
	Subtotal		\$ 342.80	\$ 2,790,373
	Escalation	0%		-
TOTAL ESTIMATED CONSTRUCTION COST			\$ 342.80	\$ 2,790,373

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DETAILS - SCHEMATIC DESIGN COST ESTIMATE

Account	Description	Quantity	Unit	Unit Cost	Amount
2.0	<u>SITEWORK / DEMOLITION</u>				
	Temporary Protection/Barriers	1	LS	\$ 10,000.00	\$ 10,000
	Erosion Control	1	LS	12,500.00	12,500
	Site Grading at Building, Demolished Barn	2,150	SY	6.00	12,900
	Bulk Excavation/Haul at Building	265	CY	15.00	3,975
	Excavation at Foundations	290	CY	20.00	5,800
	- at Concrete Piers/Spread Footings	27	CY	20.00	540
	Backfill at Foundations/Piers/Spread Footings	157	CY	25.00	3,925
	Remove Barn - Foundation Remains - 44' x 56'	1	LS	12,500.00	12,500
	Relocate Maintenance Shed - 14' x 20'	1	EA	7,500.00	7,500
	Unit Pavers at Plaza	1,540	SF	15.00	23,100
	Re-Grade Path to Miller House	1,700	SF	3.00	5,100
	Realign Entrance to Overflow Parking	145	SY	25.00	3,625
	Expand Overflow Parking Area - Gravel Paving	1,195	SY	25.00	29,875
	Pervious Pavement at Parking Stalls	1,090	SY	35.00	38,150
	Extend Gravel Path from Parking to Visitor Center	9,620	SF	4.00	38,480
	Reconfigure Existing Parking, Remove Islands as Required	1	LS	10,000.00	10,000
	Landscaping/Patch Existing Grass	1	LS	15,000.00	15,000
	Clean Vegetation Around Pond Perimeter	1,050	LF	10.00	10,500
	Bioretention Area with Excavation/Grading	571	SY	45.00	25,695
	Extend Utilities to Building with Excavation/Patching:				
	- Water Service	380	LF	90.00	34,200
	- Sanitary Service	150	LF	85.00	12,750
	- Stormwater	730	LF	50.00	36,500
	- Connection to Existing Service at Street	2	EA	2,000.00	4,000
	Fire Hydrants	2	EA	4,250.00	8,500
	Manholes	4	EA	2,750.00	11,000
	Inlets	3	EA	2,250.00	6,750
	Yard Drains	4	EA	1,750.00	7,000
	Site Lighting/Wiring	1	LS	15,000.00	15,000
	New Electrical Service to Building with Connection to Existing	1	LS	20,000.00	20,000
	Subtotal				\$ 424,865
	Contingency	10%			42,487
	TOTAL				\$ 467,352

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Account	Description	Quantity	Unit	Unit Cost	Amount
3.0	<u>CONCRETE</u>				
	Continuous Concrete Footings	56	CY	\$ 385.00	\$ 21,560
	Thickened Concrete Slab	11	CY	385.00	4,235
	Concrete Piers/Spread Footings at Exterior Deck	20	CY	425.00	8,500
	Concrete Foundation Wall	86	CY	525.00	45,150
	Slab on Grade - 4" Thick	8,140	SF	7.00	56,980
	Subtotal				\$ 136,425
	Contingency	10%			13,643
	TOTAL				\$ 150,068
4.0	<u>MASONRY</u>				
	Brick Veneer	3,195	SF	\$ 22.00	\$ 70,290
	Cast Stone Sill/Cap	690	LF	40.00	27,600
	Subtotal				\$ 97,890
	Contingency	10%			9,789
	TOTAL				\$ 107,679
5.0	<u>METALS</u>				
	Steel Framing at Operable Partition	38	LF	\$ 125.00	\$ 4,750
	Aluminum Cable Railing at Exterior Deck	200	LF	285.00	57,000
	Attic Access Ladder	1	EA	1,500.00	1,500
	Miscellaneous Metals - Lintels, Etc	1	LS	5,000.00	5,000
	Subtotal				\$ 68,250
	Contingency	10%			6,825
	TOTAL				\$ 75,075

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DETAILS - SCHEMATIC DESIGN COST ESTIMATE

Account	Description	Quantity	Unit	Unit Cost	Amount
6.0	<u>WOODS & PLASTICS</u>				
	Rough Carpentry/Blocking	1	LS	\$ 10,000.00	\$ 10,000
	Pre-Fab Roof Truss w/ 5/8" Thick Plywd Sheathing	9,325	SF	12.50	116,563
	- Truss Overbuilt	365	SF	10.00	3,650
	- Roof Framing at Clerestory	280	SF	10.00	2,800
	- Ledger	90	LF	12.00	1,080
	Exterior Wall Framing w/ 1/2" Thick Plywd Sheathing	5,660	SF	9.50	53,770
	3/4" Thick Plywd Sheathing at Attic - 75% of Floor Area	6,100	SF	5.00	30,500
	Exterior Composite Wood Deck, Framing	2,145	SF	30.00	64,350
	- Composite Steps	176	LFN	75.00	13,200
	- Decking Posts	20	EA	175.00	3,500
	Bathroom Counter	34	LF	225.00	7,650
	Reception/Cashier Desk	17	LF	550.00	9,350
	Kitchen Base Cabinet	23	LF	325.00	7,475
	Shelving/Cabinet at Conference Room	12	LF	400.00	4,800
	Pantry Door/Shelving	1	EA	1,250.00	1,250
	Miscellaneous Millwork/Trim	1	LS	5,000.00	5,000
	Subtotal				\$ 334,938
	Contingency	10%			33,494
	TOTAL				\$ 368,431
7.0	<u>MOISTURE PROTECTION</u>				
	Recycled Material Roof Shingles	10,825	SF	\$ 12.50	\$ 135,313
	Insulation at Foundation Wall - Rigid - 2-1/2" Thick	4,735	SF	2.00	9,470
	- at Exterior Wall - R-19 Batt	5,660	SF	2.00	11,320
	- at Roof - R-30 Batt	9,325	SF	2.50	23,313
	Fiber-Cement Vertical Siding w/ Trim	275	SF	8.00	2,200
	- Horizontal Siding	3,425	SF	8.00	27,400
	Wood Fascia	500	LF	10.00	5,000
	Wood Soffit Board w/ Framing	1,250	SF	12.00	15,000
	- Aluminum Soffit Vent - 3' OC	170	EA	15.00	2,550
	Metal Gravity Ridge Vent	215	LF	20.00	4,300
	Copper Gutter - 4" Half-Round	300	LF	25.00	7,500
	- Downspout	210	LF	30.00	6,300
	Caulking/Flashing/Sealants	1	LS	10,000.00	10,000
	Subtotal				\$ 259,665
	Contingency	10%			25,967
	TOTAL				\$ 285,632

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DETAILS - SCHEMATIC DESIGN COST ESTIMATE

Account	Description	Quantity	Unit	Unit Cost	Amount
10.0	<u>SPECIALTIES</u>				
	Bathroom Accessories	1	LS	\$ 4,500.00	\$ 4,500
	Toilet Partition	5	EA	850.00	4,250
	Urinal Screen	1	EA	450.00	450
	Operable Partition - Manual Type	475	SF	60.00	28,500
	Miscellaneous Specialties, Signage, Corner Guards	8,140	SF	0.50	4,070
	Subtotal				\$ 41,770
	Contingency	10%			4,177
	TOTAL				\$ 45,947
11.0	<u>EQUIPMENT</u>				
	Kitchen Equipment - Dishwasher/Refrigerator/Oven/Etc	1	LS	\$ 3,500.00	\$ 3,500
	Stackable Washer/Dryer	1	EA	1,700.00	1,700
	Undercounter Refrigerator	1	EA	450.00	450
	Projector at Multi-Purpose Room	1	EA	8,500.00	8,500
	- Projection Screen at Multi-Purpose Room	1	EA	5,000.00	5,000
	Subtotal				\$ 19,150
	Contingency	10%			1,915
	TOTAL				\$ 21,065
12.0	<u>FURNISHINGS</u>				
	Window Treatments	1,150	SF	\$ 7.50	\$ 8,625
	Office Furniture				N.I.C.
	Subtotal				\$ 8,625
	Contingency	10%			863
	TOTAL				\$ 9,488

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Account	Description	Quantity	Unit	Unit Cost	Amount
15.0	<u>PLUMBING</u>				
	Toilet	5	EA	\$ 1,100.00	\$ 5,500
	Lavatory	6	EA	925.00	5,550
	Urinal	2	EA	1,000.00	2,000
	Kitchen Sink - Triple Basin	1	EA	975.00	975
	Mop Sink - Molded Stone - 24x24	1	EA	1,200.00	1,200
	Electric Water Cooler - Double	1	PR	1,350.00	1,350
	Electric Domestic Water Heater - 40 Gallon	1	EA	1,850.00	1,850
	Floor Drains at Toilet Rooms/Kitchen/Janitor's Closet	4	EA	450.00	1,800
	Exterior Hose Bib	10	EA	225.00	2,250
	Water Service Back Flow Preventer, Pressure Reducing Valve	1	LS	2,500.00	2,500
	Piping/Valves/Connections	8,140	SF	3.50	28,490
	Sprinkler System				N.I.C.
				Subtotal	\$ 53,465
				Contingency 10%	5,347
				TOTAL	\$ 58,812
15.5	<u>HVAC</u>				
	Split System Heat Pumps with Electric Heat Throughout	8,140	SF	\$ 7.50	\$ 61,050
	Energy Recovery	8,140	SF	3.00	24,420
	Air Distribution with Exhaust Fans	8,140	SF	13.50	109,890
	Testing/Balancing/Controls	8,140	SF	4.00	32,560
				Subtotal	\$ 227,920
				Contingency 10%	22,792
				TOTAL	\$ 250,712
16.0	<u>ELECTRICAL</u>				
	Panels, Feeders	8,140	SF	\$ 2.00	\$ 16,280
	Wiring/Devices	8,140	SF	9.00	73,260
	Lighting	8,140	SF	6.00	48,840
	Exterior Lighting	1	LS	5,000.00	5,000
	Fire Alarm, Special Systems	8,140	SF	3.00	24,420
				Subtotal	\$ 167,800
				Contingency 10%	16,780
				TOTAL	\$ 184,580

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DETAILS - SCHEMATIC DESIGN COST ESTIMATE

Account	Description	Quantity	Unit	Unit Cost	Amount
<u>HVAC ALTERNATE - GEOTHERMAL HEAT PUMPS IN LIEU OF SPLIT SYSTEM</u>					
	Delete Split System Heat Pumps w/ Electric Heater	(8,140)	SF	\$ 7.50	\$ (61,050)
	Add Geothermal Well Field, Piping to Building, Pump	1	LS	50,000.00	50,000
	Add Geothermal Heat Pumps - Water to Air	8,140	SF	8.00	65,120
	Subtotal				\$ 54,070
	Contingency	10%			5,407
	TOTAL - NET ADD				\$ 59,477

Visitor Center for Colvin Run Mill Historic Site

Appendix A

Fairfax County Park Authority (FCPA) presented Concept 3 drawings to the Architectural Review Board (ARB) on November 10, 2011. ARB's comments on the conceptual design include:

- Work with topo – Try to find ways to lower building into the ground/ hide parts of the building
- Break the massing
- Break building into two levels - (This was one of our previous concepts; didn't work as well for our programming needs as the one level concept.)
- Rotate 90 degrees such that part of the building is on top of the area where the barn is located today
- Lower pitch, lower roof (**modified as part of the schematic design**)
- The ARB had concerns with the size of the deck and the visibility of the deck from other parts of the site such as from the head race, millers house, route 7, etc., especially during the winter
- Materials:
 - Explore other options (some ARB members did not like the materials shown on the drawings)
 - Make the building lighter
 - Bring more natural light
- The ARB felt we had not reviewed and considered the design guidelines for this historic overlay in our concept, a copy is available at http://www.fairfaxcounty.gov/dpz/historic/overlaydistricts/colvin_run_mill_dg.pdf
 - Size scale (should fit on the site rather than dominating the site), siting, roof pitch, view of mill from rt. 7 w/o intrusions, etc.

Next Steps:

The next steps to be taken by Fairfax County Park Authority (FCPA) include the Phase I Archeological Study and the Resource Protection Area (RPA) delineation study. The Resource Management Division (RMD) of FCPA is to identify funding for the two studies.

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