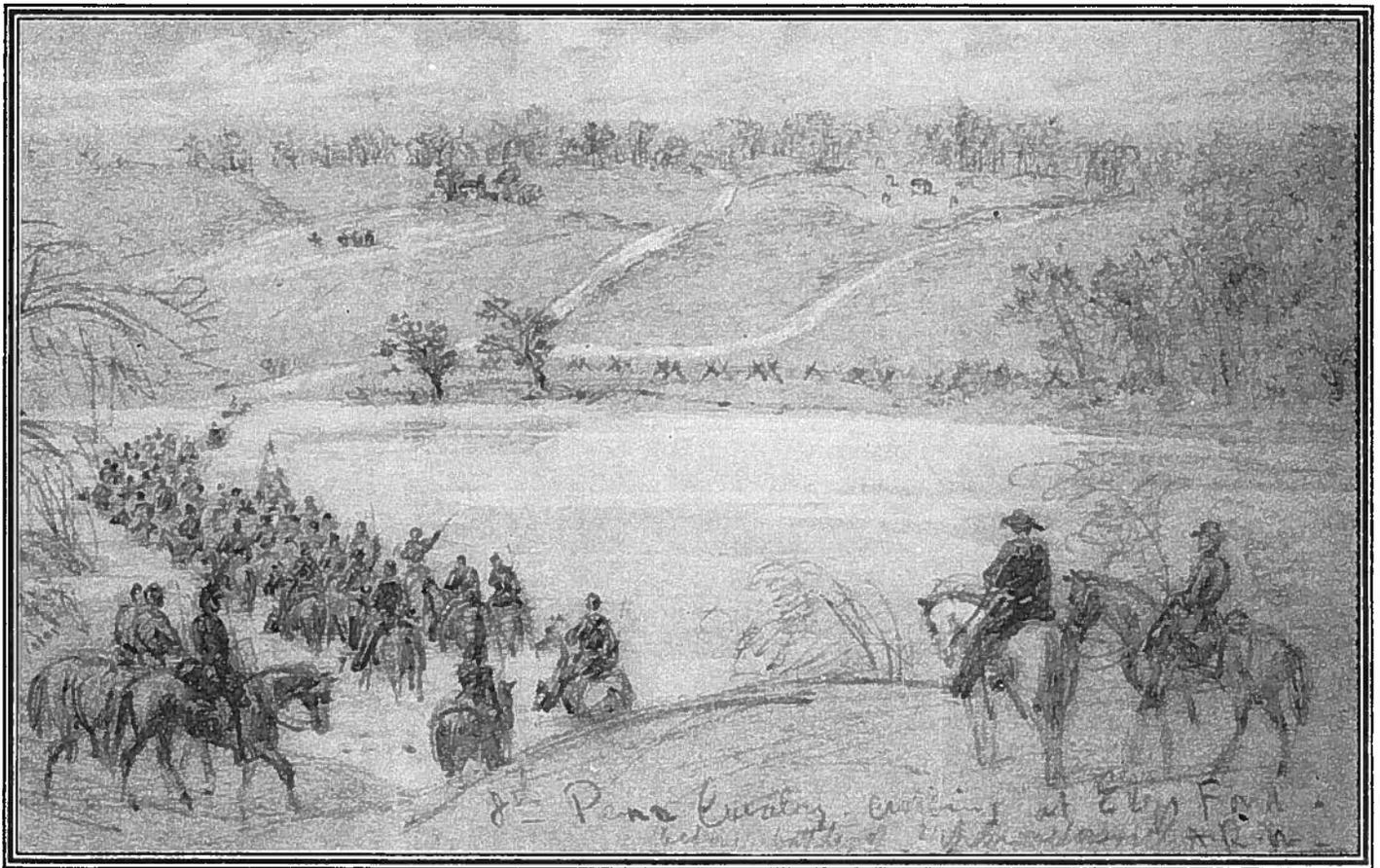




HISTORIC RESOURCES ALONG THE RAPPAHANNOCK AND RAPIDAN RIVERS



City of Fredericksburg, Virginia

Prepared by: Office of Planning and Community Development
and the Graphics Department

September 1997

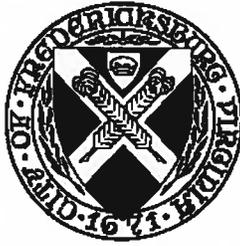
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COVER: Wartime sketch by: A.R. Waud. Caption reads, "8th Penn Cavalry crossing at Ely's Ford before battle of Chancellorsville." Original in Library of Congress. Cover design by Studio 2, Inc.



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Prepared by: Office of Planning & Community Development
and the Graphics Department

SEPTEMBER 1997



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along the
Rappahannock and Rapidan Rivers

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INTRODUCTION

The Rappahannock River has been marked by human activity for thousands of years. As a result, this corridor includes a wide range of resources that reflect vividly on many eras. The river valley is dotted with pre-Columbian settlement sites, early American industrial enterprises, a nineteenth century canal and locks, the scars of intensive gold mining, the remnants of mills both small and large, military entrenchments of the Civil War period, battlefield landscapes, road traces, and centuries old river crossings.

Though various, these resources are inextricably linked. They collectively reflect the evolution of the Rappahannock valley from backwater wilderness to a corridor of commerce and war to, once again, a protected wilderness and recreational area. The river itself is the most obvious unifying force of these resources, for it powered or influenced or provided access to virtually every activity that has occurred in the valley. The Rappahannock Canal likewise links many resources, having spurred some of the economic activity now reflected by the ruins and archaeological sites on the banks of the river.

The final link for all these resources has the most important implications for their future management: common ownership. The City of Fredericksburg owns 5,000 acres in five upriver counties, extending nearly 25 miles upstream from the city itself. The bulk of this property is located above Interstate 95 and below Kelly's Ford on the Rappahannock and Germanna Ford (Route 3) on the Rapidan. As a result, the integrity of these resources (and the ecosystem that surrounds them) is high, and the prospect for their long-term preservation is outstanding — despite their location in one of the fastest growing regions in America. The preservation of this corridor by the city will be a great gift to the generations who follow us.

The waterway that springs out of the Blue Ridge and courses across the Piedmont to the fall line constitutes the spine that connected and shaped these historic resources. The river valley has forever been a transportation route. Its natural resources (which remain largely intact) provided food and raw materials to aboriginal and industrial cultures alike. Its flow powered dozens of industrial complexes. Its waters also acted as an important barrier — one that shaped most of the military activity in central Virginia during the Civil War. The roads across the Rappahannock led to fields where more than 100,000 Americans fell.

The different layers of occupation and activity are also interrelated. The Rappahannock Canal — with its extensive locks and dams — encouraged the growth of milling and gold mining activity. Earlier, iron mining had required huge amounts of timber that left much of adjacent Spotsylvania County denuded of trees, which grew back as a tangled secondary growth that became known as “the Wilderness.” The antebellum built environment often influenced the location of war-time crossings. For example, a segment of navigational canal determined where Union engineers located the pontoon crossings at United States Ford in May 1863.

In short, the Rappahannock valley was a changing, evolving, and devolving community. The city-owned riparian lands amount to a time-capsule spanning centuries and cultures. In July of 1996, the City of Fredericksburg and the National Park Service entered into a cooperative agreement, through the American Battlefield Protection Program, to locate and identify these historic resources. City and Park Service staff subsequently engaged in comprehensive field work as well as archival research to produce this report and atlas. The traces of human occupation discovered along the Rappahannock illustrate a rich and diverse history and invite the interested enthusiast or scholar to explore them further. This document will also serve as a basis for the preservation of these many resources.

The scope of this joint project was limited to properties within the City of Fredericksburg’s extensive watershed holdings. Consequently, the identified resources are predominantly industrial and military in nature. Few domestic resources were noted, primarily because suitable dwelling sites have typically not been transferred to city ownership. Many additional resources are located on private property, though, including numerous historic dwellings where families still reside. The sites identified in this river corridor, while impressive, are but a portion of the cultural treasures that remain within the community.

THE RAPPAHANNOCK VALLEY

PHYSIOGRAPHY

The Rappahannock River flows 184 miles from the mountain spring that is its source to the waters of the Chesapeake Bay. It drains a watershed of 2,848 square miles. The river is crossed by few roads, lacks significant shoreline development, and endures only a few impoundments of its free flowing tributaries. Its reputation as a relatively unspoiled river is well deserved.

The river's headwaters are found 1,720 feet above sea level, in a mountain spring below Chester Gap, in the Shenandoah National Park. The resulting stream rapidly descends the eastern slope of the Blue Ridge Mountains then flows as a quiet pastoral river across the Piedmont Plateau. Between Chester Gap and Kelly's Ford the river is narrow and slightly entrenched. At Kelly's Ford, however, the Rappahannock crosses the first of a series of erosion-resistant rock formations and its character subsequently changes from a slow moving stream with a mud bottom to an entrenched river with pools, rapids, and riffles.

Between Kelly's Ford and the confluence of the Rappahannock and Rapidan Rivers, the terrain becomes increasingly rugged. The pastoral farmlands give way to steep, heavily wooded hillsides. The river courses over a bed of sand, gravel, and boulders. Rapids and islands become more frequent. The riverscape is dominated by rock outcroppings and steep valley walls that gradually level off into the broad flat upland surface.

From the confluence, the Rappahannock is similar to its middle reaches but much larger as a consequence of the added flow from the Rapidan. The Rapidan (originally named the Rapid Ann in honor of the Queen of England) also originates as a mountain stream on the eastern slopes of the Blue Ridge Mountains. Its headwaters are 4,600 feet above sea level, considerably higher than those of the Rappahannock. In the Piedmont, the Rapidan's shoreline is predominantly farms and forest land which results in large amounts of sediment running into the river, especially during and following storms. Around the confluence and beyond, the river runs through a heavily wooded valley, its long deep pools occasionally interrupted by erosion-resistant rock ledges that traverse the riverbed.

At the fall line, the Rappahannock River becomes tidal as it passes out of the

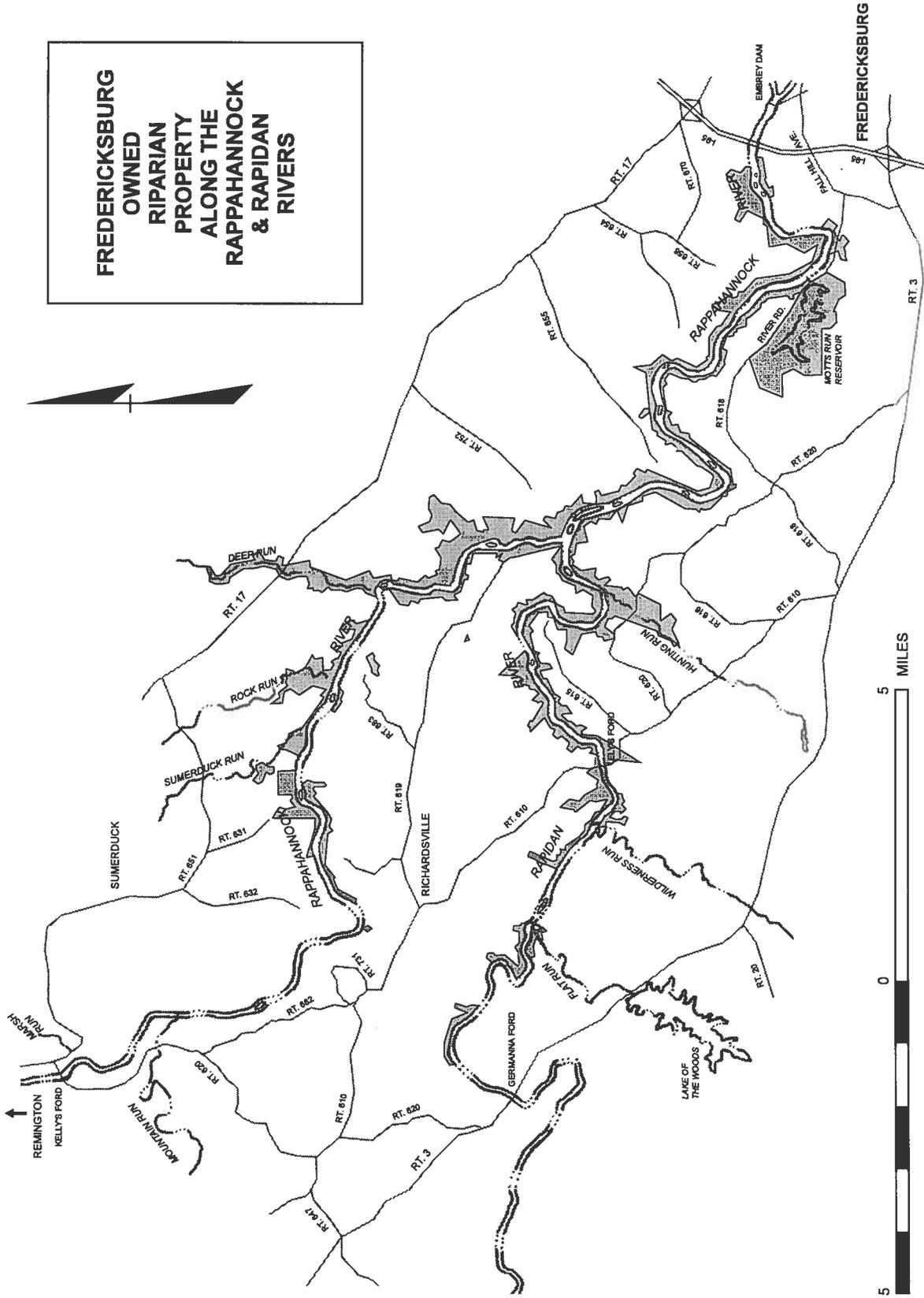
Piedmont Plateau. Fredericksburg is located in this transition zone where the river encounters the less resistant beds of sand and clay of the Coastal Plain sediments.

FREDERICKSBURG'S RIPARIAN HOLDINGS

In 1969, the City of Fredericksburg acquired nearly 5,000 acres of land along the Rappahannock and Rapidan Rivers from the Virginia Electric Power Company (VEPCO). VEPCO had acquired this land from the Fredericksburg Power Company which, in the early twentieth century, had envisioned a series of three dams on the river to generate electrical power. Nuclear powered generators on the North Anna River, however, replaced hydroelectric power in the Rappahannock valley after only one dam (Embrey) had been built. The city took possession of the power company's land in anticipation of a proposed flood control dam (Salem Church), to be built by the U.S. Army Corps of Engineers. The Corps was hard-pressed to financially justify this latter dam, though, and this proposed project was eventually removed from further consideration by the federal government. At this time, even the Embrey Dam is being evaluated for removal which would restore the Rappahannock River to a free-flowing waterway for its entire length.

Fredericksburg's riparian property is located primarily in Spotsylvania, Stafford and Culpeper Counties, but additional holdings exist in Fauquier and Orange Counties as well. In 1991, the city adopted a Watershed Property Management Policy for this acreage (see Appendix A). This policy formalized existing practices and provided guidelines for the public use of these lands. At present, the city allows low-impact recreation that will not harm the River corridor's many resources. By extension, city policy also protects the integrity of cultural resources, whether or not they are identified in this report. Removal of artifacts or otherwise disturbing these sites is prohibited without written permission from the City of Fredericksburg.

**FREDERICKSBURG
OWNED
RIPARIAN
PROPERTY
ALONG THE
RAPPAHANNOCK
& RAPIDAN
RIVERS**



GRAPHICS SCALE

THE HISTORIC SITES

OVERVIEW

The Rappahannock valley is characterized by several distinct periods of human occupation. Evidence of their passing is still visible on the land and ranges from the faint traces of an aboriginal culture to the more enduring remnants of early industrial activity.

The first inhabitants were Native Americans. The sites of their camps and villages have revealed archaeological finds that show tribal groups in the Rappahannock basin as early as 7000 B.C. These occupants, known as Mannahoaks, encountered Captain John Smith in 1608 but were gone by the time settlers pushed into the Virginia Piedmont in the 1670s. The minimal European/Mannahoak contact holds great promise for the archaeological significance of any Native American sites.

The next phase of occupation was the European influx that began in the late seventeenth and early eighteenth centuries. There is a clear and dramatic break between these two eras because of only limited contact between the two peoples. This latter period was dominated by Governor Alexander Spotswood's iron industry which had enormous implications for the founding of Fredericksburg and its prominence in national affairs up through the American Revolution.

Following independence from Britain, the new national government did not authorize Fredericksburg to continue to serve as a port-of-entry for overseas trade. As a consequence, local officials and commercial interests tried to stimulate regional commerce by improving navigation on the Rappahannock with a canal. Spotswood's iron industry was apparently closed by 1792, but in the river valley remained an active area, characterized by farming, milling, extraction of gold, and construction of a canal to try to link everything together.

Developments in the mid-nineteenth century had profound impacts on the Rappahannock valley. The California gold strikes in 1849, for instance, caused most of the area miners to head west. Railroad technology doomed the canal enterprise as tracks advanced into upriver markets. Finally, the Civil War decisively interrupted most other industrial efforts. In fact, a north-south railway brought the contending armies to Fredericksburg with a deadly inevitability. During the period 1862-1864, the river acted as a barrier to military operations and control by one side or the other of the critical crossings determined whether troops fought across open farmlands or

in the hellish tangle of trees and shrubs called the Wilderness. This vegetation had grown up after Spotswood's tree cutters had denuded the countryside to feed his insatiable iron furnace. During quieter periods between active operations, soldiers picketed the crossing places and endured the harsh winter weather in semi-permanent encampments as they awaited the next campaign.

River-related industries came back after the Civil War, and some gold mining recurred, but new north-south transportation routes refocused human activity away from the east-west orientation of the river. These developments included the Richmond, Fredericksburg and Potomac Railroad (completed between Richmond and Washington by 1872), State Route 1, and eventually Interstate-95. During the twentieth century, the Rappahannock River never saw the level of use that had occurred during its peak period of activity the century before.

METHODOLOGY

The historic method used to produce this document included a combination of archival and field research. Historic maps and other data provided the basis for the field work, but historians still examined every acre of Fredericksburg's riparian holdings. The result was an extremely comprehensive field phase that turned up many more areas of historic interest than anticipated. Follow-up archival research was often successful, but some of the described resources appear to be documented here for the first time.

Some sections of this study benefitted from extensive previous research. Most Native American sites, for instance, were identified during a survey done in the 1930s. More recently, in-depth archaeological investigations by Mary Washington College have revealed additional clues to these early cultures. Iron industry sites were similarly identified before this survey, although this project has been able to present the diverse sites in context as well as show how they were impacted by later activities. Canals and dams have also been carefully mapped during earlier field investigations. In addition, many of these sites have been identified by the Virginia Department of Historic Resources. Again, though, this study presents additional canal sections and clarifies the function of others.

Other study sections build on less available data and research. Gold mines, for instance, have been plotted on various maps, in the 1830s as well as in the 1980s. The extensive trenches that miners dug in following the quartz veins, however, have not been identified until now. Mill sites have also been pinpointed on various types of maps, but little documentation is otherwise available. The Civil War period fills some of these gaps in the historic record because the armies that campaigned in central Virginia were representative of a tremendously literate society. In addition to the wealth of maps and official reports and correspondence produced by the different levels of command, there are numerous soldier accounts, letters, and diaries that describe the countryside and its features - such as mills and houses. As a consequence, much of the data available on mills relates to how they looked during the war years.

The Civil War is an extremely well documented and well researched struggle. This project does not purport to duplicate the work of skilled historians, but focuses on the barrier to military operations that the Rappahannock River represented. The various crossing points were often decisive terrain in the context of the overall campaigns and their defense or use were key factors in the events that followed. A combination of official reports and maps, wartime sketches, and soldier accounts

were used to supplement the field research that identified the resources associated with the campaigns in the Rappahannock valley.

The maps show the property line of the city-owned property, but this is an approximation based on best available information. The city's riparian holdings have not been comprehensively surveyed. Instead, the boundary lines shown on the maps are based on deed records superimposed on USGS topographic maps. Resources not located on city property are mapped as fully as possible, to ensure the appropriate context can be made apparent. Persons seeking to explore these sites, however, should respect private property rights and not trespass beyond city property without permission.

Finally, there is no specific section on roads in this study. Persons familiar with local history will know about the various types of roads that either followed ridge lines (rolling roads) or were routed otherwise, depending on their purpose. The linear character of the city's riparian property cuts any of the roads that approached fords on the Rappahannock River and its tributaries. The river was its own transportation corridor, though, and the extant road traces are fragmented. They are noted, where applicable, in the various sections that follow.

The study team of historians and map makers worked extremely well together. Each shared generously of their talents and expertise in the best tradition of historic inquiry. The quality of this study is a direct reflection of their professionalism and skill.

NATIVE AMERICAN SITES: THE MANNAHOAKS

In the summer of 1608, Captain John Smith worked a vessel upstream to the falls of the Rappahannock, while exploring the Chesapeake Bay. He and his crew came across a people called the Mannahoaks, but the encounter was hostile and after a short skirmish, the Englishmen withdrew. Historic knowledge related to these Native Americans is limited to the information John Smith was able to glean in a few hours from a captured Mannahoak warrior. This information is probably somewhat obscured, though, for having passed through an Algonquian interpreter the Englishmen had picked up before ascending the Rappahannock. Archaeological information has also been limited because flooding has eroded some sites while alluvial depositions have buried others. Further, most archaeological investigations have been at a reconnaissance level only, although Mary Washington College has recently done more extensive work in the Hunting Run area of Spotsylvania County.

In 1624, John Smith charted a map based on his interrogation of the Mannahoak he had captured in 1608. This map shows five sites which subsequent field investigation three hundred years later were shown to have been surprisingly accurate. The first Native American site, indicated by a cross on the south bank of the river above a large island at the Falls of the Rappahannock, is a hunting camp called Mahaskahod. The village sites, depicted by houses, include Hassuiuga and Tanxsnitania on the Rappahannock and Shackaconia and Stegara on the Rapidan. Three other names appear in Captain Smith's written account although there is no indication of their location on his map. These latter names include Outponcas, Tegoneaes, and Whonkentyaes. Further confusion is inevitable because it is not known whether these eight names apply to specific settlements or whether they are the names of individual chiefs whose people occupied the areas shown on the 1624 map.

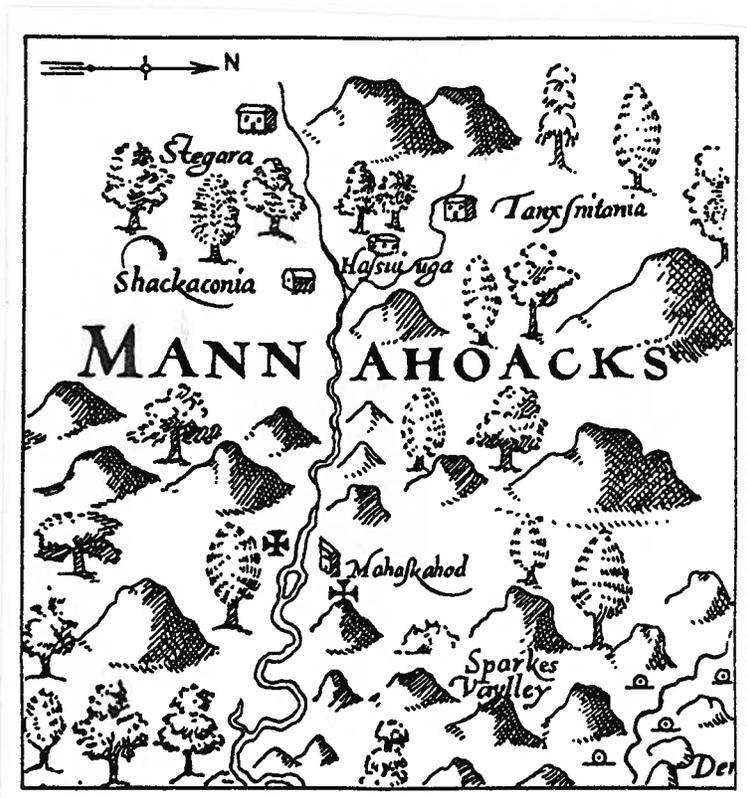
Following John Smith's experience in 1608, there was no further contact between the Mannahoaks and Europeans in the Rappahannock valley. This isolation was the result of a powerful Native American confederation under Powhatan and Opechancanough which blocked the English from Virginia's interior reaches. In 1670, after this confederation had been defeated, John Lederer traveled up the Rappahannock valley with John Catlett, but these explorers encountered no Mannahoaks. These early inhabitants had likely been dispersed by enemy tribes from the north or had succumbed to disease. There is documentary evidence that some Mannahoaks ended up on the James River, joining the Monacans, with whom they had traditionally been friendly.

While the Mannahoaks had disappeared, other Native American tribes remained a powerful presence on the Virginia frontier. Iroquois hunting trails coursed along the north-south mountain chains and other Native Americans still inhabited the mountains themselves. In 1676, Nathaniel Bacon led a group of colonists in revolt against Governor William Berkeley because they perceived that the colonial government was not sufficiently active in controlling the Native American tribes. Civil order was certainly maintained when Bacon was captured and hanged, but the colonists still needed to exercise caution as they encroached on Native American lands. In 1676, Governor Berkeley awarded a land grant along the Rappahannock to Lawrence Smith, for his assistance in suppressing Bacon's Rebellion. A palisaded fort was the construction of choice on this tract, probably in the vicinity of the Fredericksburg Country Club, as these men explored the area for subsequent exploitation and settlement.

The Native American presence has long passed, but the evidence of their earlier occupation can be found in numerous locations along the banks of the Rappahannock and Rapidan Rivers. Prehistoric sites in eastern North America are typically divided into three cultural periods: Paleo-Indian, Archaic, and Woodland. The Paleo-Indian period is defined from circa. 12000 - 8000 B.C. and was characterized by small mobile hunting groups living in the cool environment of the postglacial period. Archaeologists have recovered very few artifacts from this time in the Virginia Piedmont section of the Chesapeake Drainage. Instead, the earliest known Native American presence in the Rappahannock basin occurred during the Early Archaic period (8000-6000 B.C.).

Current research indicates no strong distinctions between the Paleo-Indian and Archaic periods except for an increase in the number and size of sites and different types of tools and projectile points. Aboriginal groups began to use locally available rocks, for instance, to develop chipped-stone tools rather than relying on distant cryptocrystalline lithic sources that had previously been so important. Ground stone tools also appeared during this period, such as axes and grinding stones.

The Middle Archaic (6000-3000 B.C.) and the Late Archaic (3000-1500 B.C.) periods also exhibit great continuity with one another, although there were different adaptations to climate and continued development of more efficient projectile points and other tools. During the Middle Archaic period the climate continued to change from the cool Pleistocene environment to the warmer and drier climates we experience today. Settlement occurred along streams and rivers as well as in upland areas where expanding hardwood forests provided shelter and sustenance. During the Late Archaic period, populations continued to increase as tribal groups exploited



Map 2. John Smith's 1624 Map (portion).

the well-established oak-dominated forests of the Piedmont.

The transitional period between the Archaic and Woodland periods, called the Terminal Archaic period (1500-800 B.C.), is characterized by dramatic changes in climate. As the great glaciers receded, sea levels rose, submerging large portions of the Atlantic coast which created great estuaries and tidal wetlands. Native American groups located increasingly in river valleys, perhaps to take advantage of extended runs of anadromous fish.

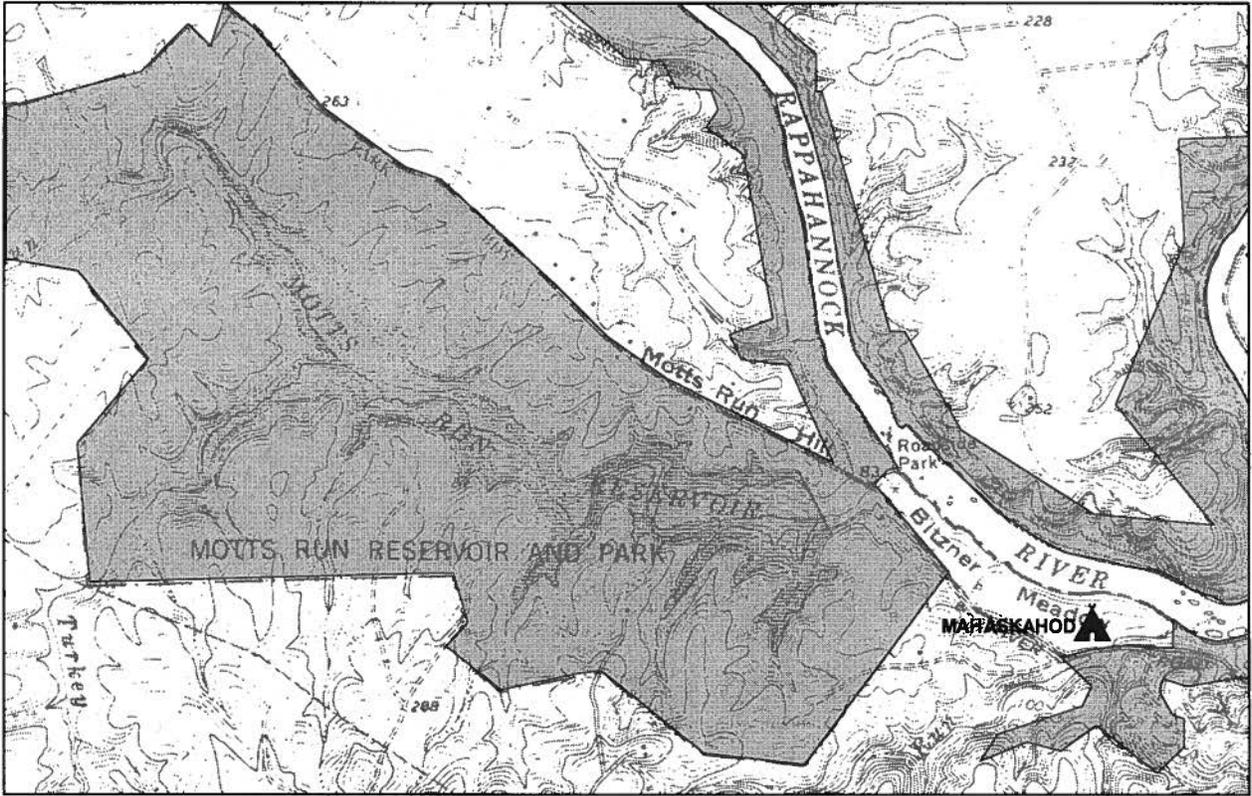
Early Woodland period (1000-300 B.C.) excavations suggest increased use of floodplains for horticulture, a trend that continued through the Middle Woodland (300 B.C. -1000 A.D.) and Late Woodland (1000 A.D. - European Contact) periods. These eras are characterized by increasingly secure subsistence economies that allowed groups to remain in one place on a seasonal basis. Other developments included long-distance trade and construction of earthen mounds for burials.

The Late Woodland Period saw the settlement of large villages and the formation of strong regional identities, as tribes became less nomadic. Some of the identified Mannahoak sites were undoubtedly occupied in 1608 when John Smith made contact, but it is not possible to firmly establish the location of villages by name. Archaeologists at the University of Virginia and Mary Washington College (MWC) have indicated that the upper Rappahannock's Native American sites remain significant because of the Mannahoak's limited contact with Europeans. Recent work by MWC at Hunting Run has revealed the wealth of information that remains to be recovered by more intense archaeological investigations.

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Hunting Camp at Falls of the Rappahannock - Scholars have suggested that the south bank of the Rappahannock River, between Mott's Run and Embrey Run (the area shown as Bitzner Meadow on USGS topographical maps) may be the Mannahoak hunting camp called Mahaskahod. This assertion is based on the incidence of pottery, projectile points, and stone implements recovered in this area by David I. Bushnell, Jr. in 1934. This area also exhibits a large quantity of broken pebbles and stone flakes, indicating that this site was used to make a variety of tools and projectile points. Similar items have been found on the riverbanks downstream, especially the area on and around Hunter's Island. In fact, the high ground of Hunter's Island was likely a fishing camp, based on the artifacts located there, and because it is high enough to avoid being disturbed by most spring floods. The stone fish traps, still visible from the Falmouth Bridge, are the type used by Native Americans although their origins are unknowable.



Map 3. Mannahoak Hunting Camp - Mahaskahod (site).

Settlement Site on Rappahannock below the Confluence - The south bank of the Rappahannock, approximately one mile below its confluence with the Rapidan River, has also yielded numerous artifacts. This area may have been a Mannahoak settlement site in 1608. Recovered artifacts also suggest more than one period of occupation based on the types of tools recovered. The City of Fredericksburg owns the riverfront in this area, but any significant Native American artifacts are more likely to be found on the privately owned upland plateau.

Settlement Site on Rappahannock above the Confluence - The area above the confluence around Richard's Ford has the characteristics of a desirable settlement. These advantages include the stream junction, which to this day is an excellent fishing area, and the wide low ground along the river backed up by a plateau that is safe from flooding. Many artifacts have been recovered in this area, including fabric impressed ceramics, which would indicate a Middle or Late Woodland period site.

This area corresponds with the name Hassuiuga shown on Smith's 1624 map. John Lederer is also believed to have traveled through this site in 1670, on his way west to the Appalachian Mountains (based on his own map and account of his travels). Much of this area is within the City of Fredericksburg's riparian holdings.

Settlement Site on Rapidan above the Confluence - Above a bend in the Rapidan River (approximately two miles from the confluence) is an area that flattens out on both sides of the river. In 1934, Bushnell was able to determine from local residents that a large burial mound had stood on the north bank but that it had been partially destroyed by a flood in the 1890s. Human remains and pottery were reported to have been recovered at that time, but these were lost by the time of Bushnell's visit. Bushnell did find many pottery shards and noticed a slight rise that may be the undisturbed lower portion of the reported burial mound. According to Smith's 1624 map, Shackaconia was the first settlement on the Rapidan in 1608. This area may have been occupied in 1608 and may, in fact, correspond to the historic map. Much of this area is within the City of Fredericksburg's riparian holdings.

Settlement Sites at Hunting Run - Mary Washington College had the opportunity to excavate two Native American sites, to mitigate the effects of eventual inundation by the Hunting Run Reservoir.

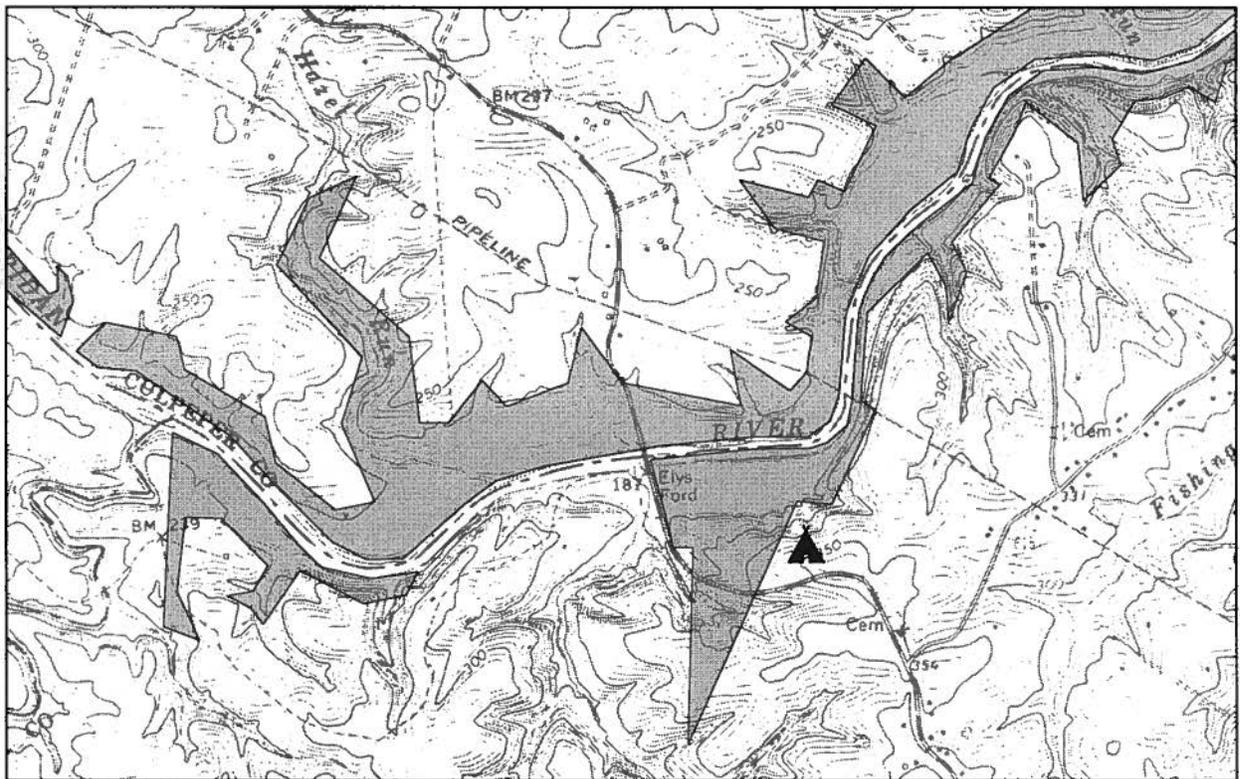
The first site contained evidence of use from the Late Archaic through the Late Woodland periods, circa 2500 B.C. to 1600 A.D. The archaeological evidence points to three to four different occupations during this period, the intensity and function of each shifting over time. The early and later uses of the site, for instance, are characterized by small scatters and concentrations of stone tools and flakes of a limited variety. These finds indicate short-term activities and camping by small, mobile groups. Stone tools and diagnostic ceramics, however, suggest the predominant period of occupation occurred during the Early Woodland to Middle Woodland periods, circa 1000 B.C. to 500 A.D. The more intense and longer occupations also show evidence of a greater variety of activities, such as processing of nuts and seeds, hunting, retooling, cutting, and scraping.

The second excavated site has a similar date range (about 3,000 years), but has a contrasting pattern of use. During the Late Archaic period (circa 2500 to 1000 B.C.), hunting bands used the site for short periods of time for camping, resharpening, and tool production. Only a small Early Woodland period occupation is evident. In contrast, evidence of a relatively large and extended encampment indicates that the most substantial use of the site occurred between 300 and 1600 A.D. (representing the Middle and Late Woodland periods). Most significant was the discovery of postmolds and other features that suggest a structure. This apparent house may be the first one recorded in the upland Piedmont region of Virginia (as contrasted to house patterns found at large village sites on river floodplains). The house measured about two to three meters across.

The City of Fredericksburg has deeded the land upon which these sites are located to Spotsylvania County.

24

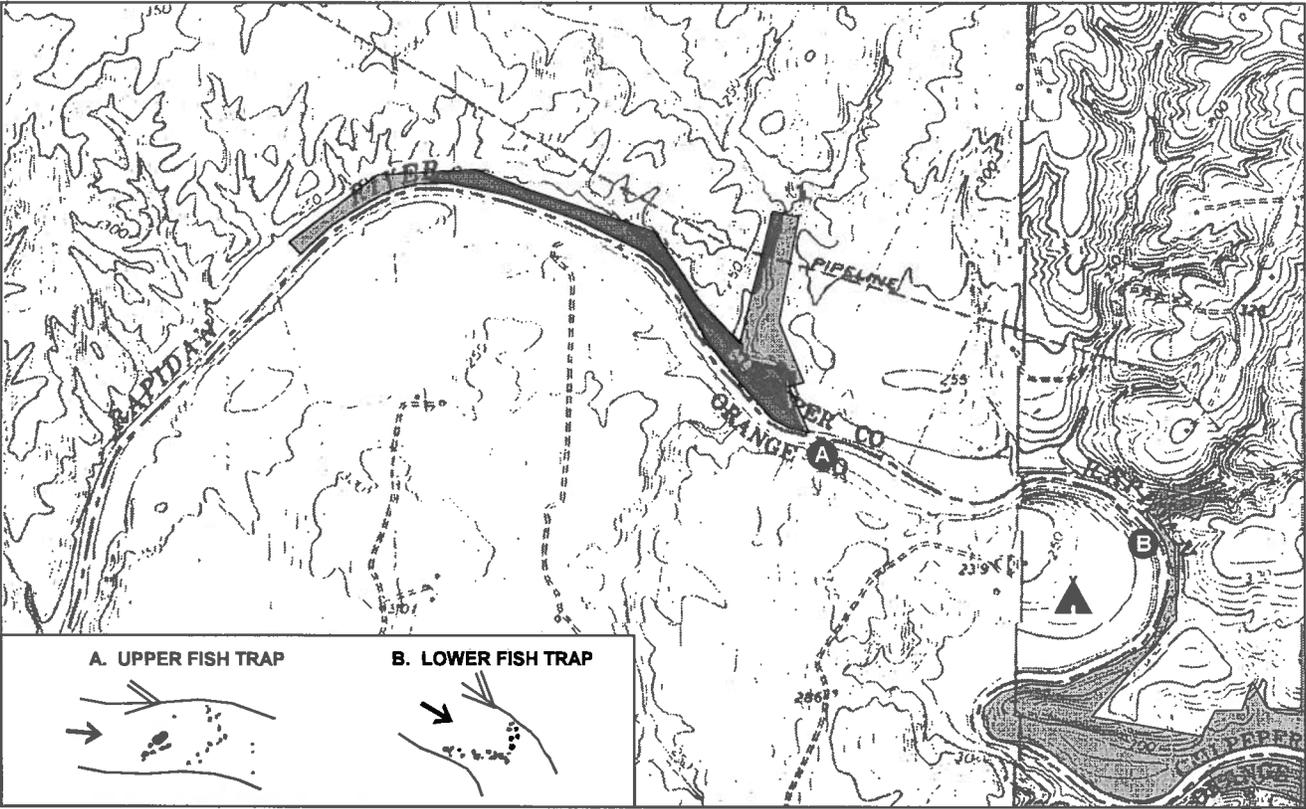
Settlement Site on Rapidan at Ely's Ford - This historic river crossing was part of a Native American trail long before the European arrival in North America. Evidence of occupation has been recovered in the form of tools, stone flakes, and pottery. The artifacts recovered in this location are few but suggest a very ancient settlement. Of additional interest is a highly specialized projectile point from an early culture that Bushnell discovered on the high ground north of the ford. This point was similar to identified Folsom points which have been found in widely scattered sites east of the Mississippi River, but not in great quantities in any one site. Upstream of Ely's Ford is a v-shaped fish dam. Much of this area is within the City of Fredericksburg's riparian holdings, although any settlements were probably located on the upland plateau that is privately owned.



Map 5. Settlement Site at Ely's Ford.

25

Settlement Site on Rapidan at Skinker's Ford - Strong evidence suggests an extensive Native American settlement occurred at Skinker's Ford. Recovered artifacts include tools, flakes, projectile points, and some pottery. This site may also have been occupied in 1608. The City of Fredericksburg owns very little property in this vicinity. Of interest, though, are what may be two fish traps that extend across the river. These features are similar to the type used by Native Americans but the origins of these specific traps may not be able to be determined.



Map 6. Skinker's Ford Fish Traps.

26

FRONTIER INDUSTRY: SPOTSWOOD'S IRON

The Mannahoaks were the last aboriginal culture in the Rappahannock valley. The Europeans who followed them represented the early rumblings of the Industrial Revolution in America. In 1728, when the Virginia House of Burgesses ordered the town of Fredericksburg built on land leased from the Buckner - Royston land patent, former Governor Alexander Spotswood had already spent several years developing an iron ore smelting operation nearby.

The iron industry in Virginia held great promise, but had initially foundered. In the early seventeenth century, English iron makers were using up the forests of that island nation at an alarming rate. Enormous quantities of wood were needed to provide the charcoal that fired blast furnaces. Shortly after the Jamestown settlement had been established, the investors of the London Company tried to establish an iron furnace in Virginia where mature hardwood trees were to be found in notable abundance. Company workers carefully built a furnace at what was to be the Falling Creek Iron Works, and anticipated beginning production in 1622. A Native American uprising in that year, however, changed everything.

Tribes of the Powhatan confederation, under the leadership of Opechancanough, massacred many of the Europeans living in Virginia in 1622, including all of the skilled iron workers at Falling Creek. The London Company never recovered from this catastrophe and was dissolved shortly thereafter. Agricultural enterprises flourished instead, encouraged by vast tracts of land granted by the Crown and by available unskilled labor (slaves had been introduced to the New World as early as 1619). In 1662, the English Parliament further encouraged agriculture (and protection of English iron industries from competition) by prohibiting iron production in their colonies, a policy it reaffirmed in 1682. To meet its growing demand for iron, England turned to Sweden to supplement its domestic production.

The eventual defeat of Opechancanough's confederacy, as well as the disappearance of the Mannahoaks, uncovered the mineral rich Piedmont to Europeans and renewed interest in Virginia iron production. In 1710, Spotswood sought permission from the London Board of Trade to establish an iron industry in Virginia. This request was flatly denied, but Spotswood pressed his case with the Crown and also proceeded to acquire considerable property that included timber, water, ore deposits, and access to a port - all the ingredients needed to support an iron-making enterprise.

At this time, other European investors were receiving permission to settle skilled workers in other parts of America. In 1714, a group of nine German iron workers and their families (42 persons altogether) arrived in England for one such enterprise in North Carolina. Upon learning that the settlement to which they were destined had been wiped out during a frontier war, a well meaning investor in London, who fancied himself one of Spotswood's partners, diverted this group of Germans to Virginia. When they arrived, Spotswood was probably aghast to learn he was responsible for their travel expenses, but quickly took advantage of these immigrants with the critical ironmaking skills he needed. He moved them upriver to a bend in the Rapidan River and had them construct a fort to help secure the frontier against raiding Iroquois (the Mannahoaks were long gone). This area became known as Germanna. Spotswood instructed the newly settled Germans to search for workable iron deposits while he awaited permission to produce iron. These trained iron workers probably also opened mines and prepared to build a furnace because when the Iron Mine Company was authorized to be formed in 1719, Spotswood's iron furnace was able to become operational as early as 1720.

Spotswood's iron is historically significant for several reasons. First, this enterprise reveals that slave labor was a critical component of early industries in Virginia. Spotswood's Germans, for example, departed as soon as any financial obligation to the former governor had been satisfied. While other skilled iron workers were probably recruited from Europe, the former governor turned increasingly to slave labor. Iron production is an extremely labor intensive industry requiring workers to mine ore, quarry limestone (used as flux to remove impurities in the molten iron), cart raw materials to the furnace, and cart the iron to market. Fully half of the work force engaged in charcoal production. This process entailed cutting trees, stacking the wood in piles 30-40 feet in diameter, smoldering it into nearly pure carbon, and then hauling the charcoal to the furnace. By the time Fredericksburg was founded in 1728, Spotswood had more than 160 workers engaged at what was called the Tubal Furnace. By 1739, the only hired employees at Tubal were a founder and a general overseer.

Spotswood also engaged in a plantation type of organization that typifies the somewhat isolated iron production enterprises in the South. The features of this system included slave labor (as described above), a self sufficient operation (providing food and shelter to the workers), and export to an overseas market. This isolation, however, eventually led to the demise of Chesapeake iron production. Timber supplies diminished and the inadequate overland transportation system proved unable to compete with western furnaces able to obtain anthracite coal and linked to ports via canal and eventually rail.

The iron industry in Spotsylvania County is also important because the volume of iron production was instrumental in bringing Fredericksburg to prominence during the American Revolution. Statistics for Colonial iron production in 1750 show that Virginia and Maryland exported 2,460 tons of pig iron to England that year. Spotswood's Tubal Furnace produced 410 tons of that figure, or nearly 17 percent. The availability of local industries became critical as the American Colonies sought to arm themselves to stand against the British Empire.

James Hunter had established an iron works in Falmouth, circa 1750. When the revolutionary government authorized gun manufacturing to occur in Fredericksburg, in 1775, he expanded his operation, while Charles Dick and Fielding Lewis established another gun manufactory just south of Fredericksburg. During the American Revolution, Hunter's complex included mills for making iron; producing arms and tools; slitting and plating iron; and making wire. The diverse products of these industries included small arms, machinery for grinding and boring weapons, bridle bits, swords (based on a British sword captured at Guilford Court House), stove pipes, camp kettles, traveling forges, and anchors.

In 1781, Governor Thomas Jefferson ordered General George Weedon (of the Fredericksburg militia) to protect these important facilities from the far-ranging Lieutenant Colonel Banastre Tarleton and his Loyalist cavalry. Tarleton disrupted the Virginia General Assembly, then in session in Charlottesville, but did not venture through Fredericksburg when he rejoined the British Army on its way to Yorktown. He did, however, destroy several thousand weapons enroute from the American field forces to where they could be repaired and made serviceable. The militia had come together at Falmouth as a contingency force, but went home without seeing action. One of many post-war claims made to the new government came from an Anthony McKettrick for payment for 114 gallons of rum provided this militia when it had been "on duty at Hunter's Forge."

Instead of succumbing to an enemy raid, the Fredericksburg iron industries were severely hurt by a misguided change in government policy that made previously exempt iron workers subject to service in the army. The industries were further crippled after independence had been achieved when the newly established federal government did not designate the town of Fredericksburg as a port-of-entry. Further, the available forests had become exhausted and production waned for lack of wood. The furnace that Alexander Spotswood had built in the Rappahannock valley wilderness had ceased production by 1792. Hunter's works continued to operate with iron from the Accokeek Furnace in Stafford County, but even this long established enterprise was eventually put up for sale in 1798. Richmond soon

became the Commonwealth's leading industrial center because it was able to combine the availability of coal and iron ore (by way of the James River Navigation) with the all-critical maritime access to world markets.

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Maps

- ▶ Herndon, John M. Map of Fredericksburg and Falmouth Canals and Mills. Fredericksburg District Court Law Order Book, 1806-1807.
- ▶ Jackson, W.A. "Map of the Mining District of Virginia," 1836.
- ▶ Woods, John. "Stafford County." 1820.

Charcoalmaking site near Hunting Run - Iron furnace operations were an involved and intricate evolution, requiring enormous amounts of fuel and generating great quantities of by-products. Approximately 5 cords of wood were needed to provide enough charcoal to produce 1 ton of iron. The charcoal making process resulted in large areas of Spotsylvania County becoming absolutely denuded of trees. In 1732, William Byrd described the area around Spotswood's Furnace as consisting of "poisoned fields, with nothing but saplings growing on them." The secondary growth that grew up on this sterile landscape became a battleground in 1863 and 1864. The tangled vegetation contributed to the horror of combat by limiting visibility and communications as well as by sometimes catching fire and burning wounded men unable to crawl clear of the flames.

During their investigation of a Native American site at Hunting Run, archaeologists from Mary Washington College encountered a dense layer of charcoal. This feature occurred in the upper portion of the site and because there were no other modern disturbances or materials, may correspond to an eighteenth- or nineteenth-century charcoal hearth. Thousands of acres of trees were timbered in Spotsylvania County and charcoal hearths burned in hundreds of locations. This particular site, however, is apparently the first one recorded in the Rappahannock valley. Past archaeological work has concentrated on the furnace complexes themselves rather than these more common features of the eighteenth-century iron plantations. This site is situated on land the City of Fredericksburg transferred to Spotsylvania County for that jurisdiction's Hunting Run Reservoir.

Hunter's Iron Works Site - Hunter's Iron Works (also called the Rappahannock Forge) was built on the north bank of the Rappahannock River, above the town of Falmouth. An advertisement in the 18 May 1798 "Fredericksburg Herald" gives a description of this complex at that time.

The Iron Works and Mills ... consisting of a Forge 128 feet by 51 feet, eight fires and 4 hammers, a coal house 80 feet by 40 feet, a merchant mill 70 feet by 36 feet with two pairs of French burnstones (burstones)... a grist mill 20 feet by 18 feet... a saw mill 55 feet by 27 feet... a nailery, a tanyard, coopers, carpenters, and wheelwright shops... and houses for the managers and workmen.

No walls remain above ground at this site, but there are several intact stone foundations (16'x20', 20'x27', 20'x40', and 40'x84'). Further, the walls of the larger foundation (which correspond to the dimensions of the coal house described in the newspaper) are 27 inches thick. The Fredericksburg District Court Law Order Book from 1806-1807 contains a map showing the Stafford canals. This document

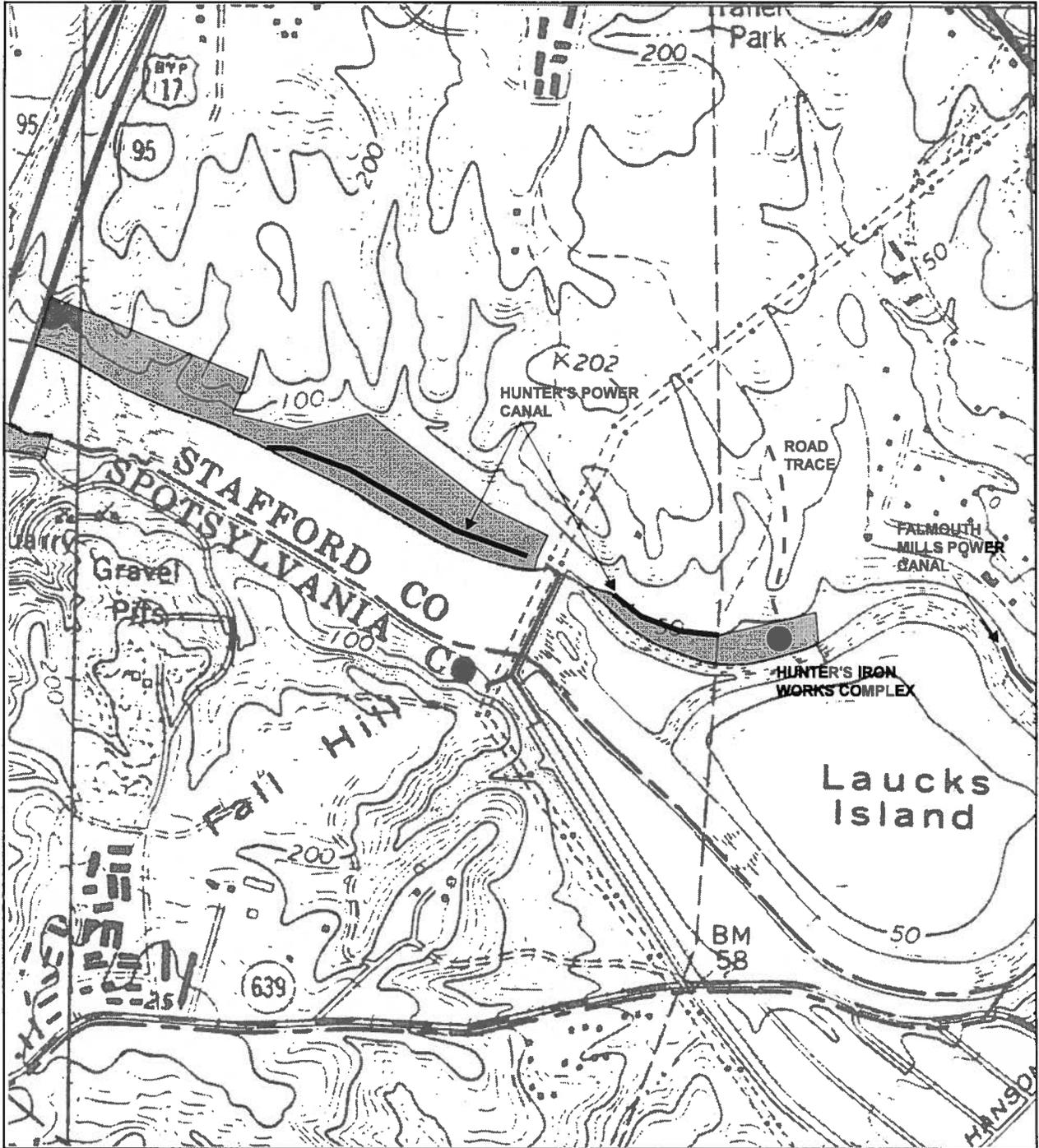
shows the "Canal to the Old Forge Mills" as well as "a small grist mill", a "saw mill,"and "the Forge Mill" along the above-referenced power canal. A site labeled as "Forge Mill" is also shown in this location on an 1820 map of Stafford County.

The mill race that powered this complex is evident on the Stafford shore, although the area where it branched off from the river (approximately 2,000 feet above the Embrey Dam) appears to have been inundated by the backed up reservoir. Still, this power canal becomes visible as it extends downriver. It is interrupted where the 1854 crib dam and the 1907 Embrey Dam obliterated its path, but becomes visible again below these dams where it runs into what remains of Hunter's industrial complex. The power canal is within the City of Fredericksburg's riparian holdings as are some of the above foundations. Other sites just outside the city's property include additional foundations as well as at least two road traces, one of which rises out of the bottom to eventually tie in with a gravel road which extends to the modern Old Forge Drive.

A letter from James Mercer to Governor Thomas Jefferson (14 April 1781) indicates the type of activity that occurred in Fredericksburg during the Revolution, due to its location as well as its industries:

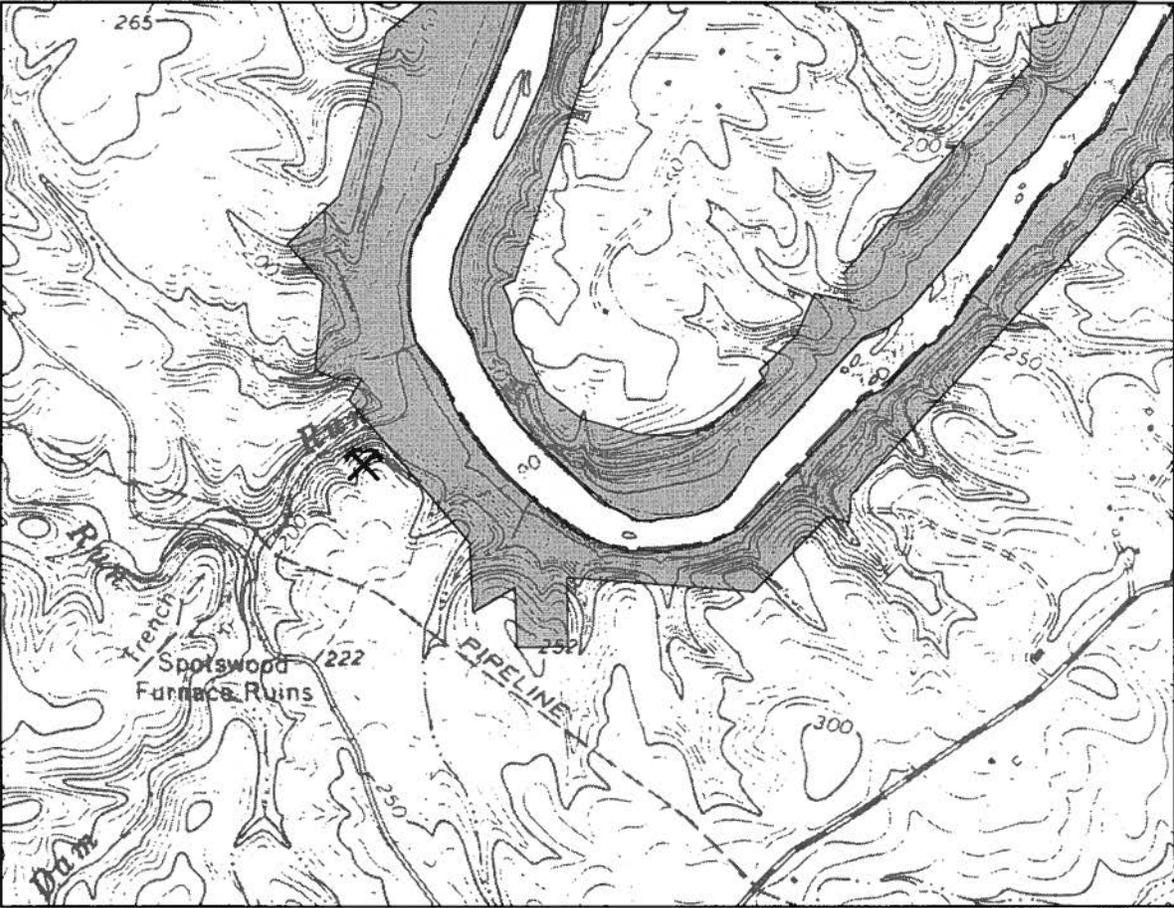
there is not in this State a place more deserving of public attention than this Town and its appendage Mr. Hunter's Iron Works - I am sure I need not tell you that it is from Mr. Hunter's Works that every Camp Kettle has been supplied for the continental and all other Troops employed in this State & to the Southward this year past - that all the anchors for this State & Maryland & some for continent have been procured from the same works; and that without these works we have no other resource for these articles, and that without the assistance of the Bar Iron made there, even the planters hereabouts & to the Southward of this place wou'd not be able to make Bread to eat - As to the Town itself I need not inform you that the public manufactory of Arms is here - that without it, all our Arms, however so little injured wou'd be useless to us; besides the number of new muskets & bayonets made there.... To this however, I may add that there is not one spot in the State so generally useful in our military operations...; all the Troops from North to South & South to North must pass through this Town where wagons are repaired, horses shoed and many other &cas which they cou'd not proceed on without....

William and Mary Quarterly
27 (Oct 1918) p. 82.



Map 7. Hunter's Iron Works (site).

Iron Furnace Site on Pipe Dam Run - Spotswood's blast furnace is not located within the City of Fredericksburg's riparian property. There is evidence of mining activity, however, on city-owned property further downstream, on the east side of Pipe Dam Run. There is also evidence of numerous road traces. Both the mining cuts and the roads are consistent with iron mines, shown in this area on the 1836 Map of the Mining District of Virginia, by W.A. Jackson.



Map 8. Possible Iron Mine Near Spotswood's Furnace.

34

CANALS AND DAMS: THE RAPPAHANNOCK NAVIGATION

Following independence from Britain, the new American nation expended tremendous energy to develop a commercial infrastructure to support its growing industrial capacity. In 1784, for instance, the Virginia legislature chartered both the James River and the Patowmack Companies to link the Shenandoah Valley to the ports of Richmond (via the James) and Alexandria (via the Potomac).

In 1785, both enterprises moved forward. By 1799, the Patowmack Company had constructed a canal on the Virginia side of the Potomac River. This canal ceased functioning in 1830, however, because the system relied on use of the riverbed and was only usable during a portion of the year as a result. The more elaborate Chesapeake and Ohio Canal, constructed on the Maryland side of the Potomac, eventually supplanted this early effort and extended 182 miles from Georgetown to Cumberland. On the James, two canal sections had been completed around the falls of that river by 1805. Other sections of this canal system also relied on the riverbed, with wing dams diverting water to provide passable channels for bateaux. In 1835, the James River and Kanawha Company established private ownership of this latter canal and commenced many needed improvements. By 1840, the canal linked Richmond to Lynchburg. By 1851, the James River navigation system extended 197 miles to Buchanan, 37 miles of which relied on slackwater on the riverbed.

Canal-related activity began in the Fredericksburg area in 1811 when the Virginia Assembly responded to a local petition and authorized a stock subscription to capitalize the Rappahannock Navigation Company. Under the new federal government, Fredericksburg was no longer designated a port-of-entry for overseas trade. The river became the focus for maintaining at least a regional trade network. A canal could provide the means to bring timber and bulk farm goods from the upper reaches of the watershed to the Fredericksburg wharves. Sufficient shares were not sold in the allotted time, though, and the General Assembly had to reauthorize stock subscriptions in 1816, in response to another petition. At that time, the legislature also created the Fund for Internal Improvements and the Board for Public Works, to assist in building roads and canals in the Commonwealth.

The new board's engineer, Laomi Baldwin, soon came to Fredericksburg to examine the Rappahannock River. His 1817 survey called for a canal to run from Carter's Run to Fredericksburg, a drop of 323 feet over 50 miles. Total estimated cost was \$357,680. Still, sufficient funds remained unavailable to allow work to commence. The entire nation was then experiencing an economic depression, so this financial difficulty is certainly understandable.

In 1825, the Erie Canal was completed, providing significant commercial benefits to New York and renewing interest in other canal systems. In 1826, the Virginia

Assembly once again authorized the Board of Public Works to assist in funding an improved waterway project on the Rappahannock, although with some modifications to make it less expensive. When stock subscriptions were still too slow, the Common Council of the Corporation of Fredericksburg subscribed for \$10,000 in shares and the Rappahannock Company finally had enough funds to formally incorporate. Another state engineer, Claudius Crozet, conducted a new river survey in 1828 to change the construction plans from the long canals originally envisioned to a lock and dam system that used more of the riverbed.

In 1829, after decades of trying to raise funds, the Rappahannock Company began work to make the river above Fredericksburg more conducive for moving bulk cargo. Laborers constructed a canal system upriver toward the confluence, but by 1831, the cost-cutting measures kept the new waterway from being very successful. Wooden locks instead of stone, for example, needed constant maintenance, and excessive reliance on the riverbed made use of the system difficult at times of low water, much like the Patowmack Company had experienced.

The Common Council of Fredericksburg stepped in twice more to financially assist the faltering enterprise, once in 1832 and again in 1836. Some of the problems with the canal building effort are suggested by the conditions under which the Fredericksburg Council invested its funds. The Mayor was instructed to influence the Rappahannock Company to employ a civil engineer to ensure the work was accomplished by competent contractors. Still, by 1844, the canal had not been extended far enough to be of benefit to upriver farmers and the company quietly ceased to exist for lack of capital.

In 1845, with yet another infusion of funds from bonds subscribed by Fredericksburg's Common Council, the Rappahannock Company renewed its charter as well as its efforts. With additional funds borrowed from the state, the company systematically rebuilt all of the locks and dams and by 1849 navigation had been provided from Fredericksburg to Carter's Run at Waterloo. Total costs exceeded \$400,000 and did not include improvements to navigation on the Rapidan. This latter stretch had been dropped from the plans in 1826, to make the project financially possible. There are mill sites and mill races along the Rapidan, but no indication that there was ever a passage for boats along that river.

When completed, the Rappahannock navigation system had 33 locks (18 stone and 15 wooden), 20 dams - 14 of which had guard locks (7 stone), and 14 canal sections totaling 15 miles. The dams were constructed as cribs of criss-crossed timbers filled with stone and made watertight with planking. These dams resulted in a series of navigable ponds. Each dam had either a lock for the passage of boats or a canal with a guard lock to protect the canal from floods as well as one or more locks at the lower end of the canal to allow boats to reenter the river. By the end of 1849, 25

boats were carrying cargo on the new system.

Records are scarce for cargo carried on the Rappahannock Navigation. The engineer Crozet described boats 65 feet in length with a capacity of 200 barrels. Another engineer noted that the locks he inspected were capable of handling boats carrying 25 tons. Only the records for the period September 1849 to September 1850 are sufficiently complete to reveal the nature of canal boat activity. During that 12 month span, the following traffic was reported:

Descending

25,859 barrels of flour
34,356 bushels of wheat
2,748 bushels of corn
348,221 feet of lumber
1,183 cords of wood
300 bushels of oats
616,649 pounds of merchandise
39,516 pieces of barrel timber

Ascending

931,965 pounds of merchandise
1,700 tons of plaster
1,015 bushels of clover seed
137 barrels of fish
1,188 sacks of salt
174,539 pounds of guano
84,122 pounds of lime
154 barrels of whiskey
58 barrels of tar
48,800 bricks
13 tons of agriculture salts

The Rappahannock Canal, however, never proved profitable. Even as it was being laboriously constructed, the Little River Turnpike was already available to serve farmers in Loudoun and Fauquier Counties. The advance of the railroad also ensured its imminent demise. Steam technology, first used in the late seventeenth and early eighteenth century to pump water from mines, had evolved to self-propelled engines by the end of the eighteenth century. Steamboats held promise for canals, including one that was tried on the Rappahannock Canal, but innovations in laying tracks and

making wheels that could stay on those tracks brought railways into more general use during the early nineteenth century. By 1852, the Orange and Alexandria Railroad, incorporated in 1849, had already been built through Manassas, had crossed the Rappahannock River, and was reaching toward Gordonsville. The turnpikes and railways effectively undercut the canal company's market, and the state foreclosed on the Rappahannock Company in 1853 for unpaid debts. Subsequent owners were equally unsuccessful and the company issued a final pitiful report in 1860.

While the canals fell into disuse, the river's water power continued to support various riverfront industries. In 1855, for instance, John Chase, of the Rappahannock Navigation Company, built a crib dam across the Rappahannock (just above Hunter's Island) for the Fredericksburg Water Power Company. This dam's function shifted the primary emphasis of the town's canal system from transportation to water power. A number of new mills were constructed in the upper end of town to join the older milling enterprises already there.

Most of the remains of the Rappahannock Canal that are still visible date from the 1846-1849 construction period. Most of the stone locks are below Kelly's Ford, built under the supervision of an engineer named John Couty who went on to build locks for the Rivanna Navigation. Locks above Kelly's Ford were primarily of wood construction. There are no towpaths in the Rappahannock system, the canal bateaux having been propelled by poles or oars. The specific sites identified below are within the City of Fredericksburg's riparian property. The numerous additional sites outside these boundaries are not shown.

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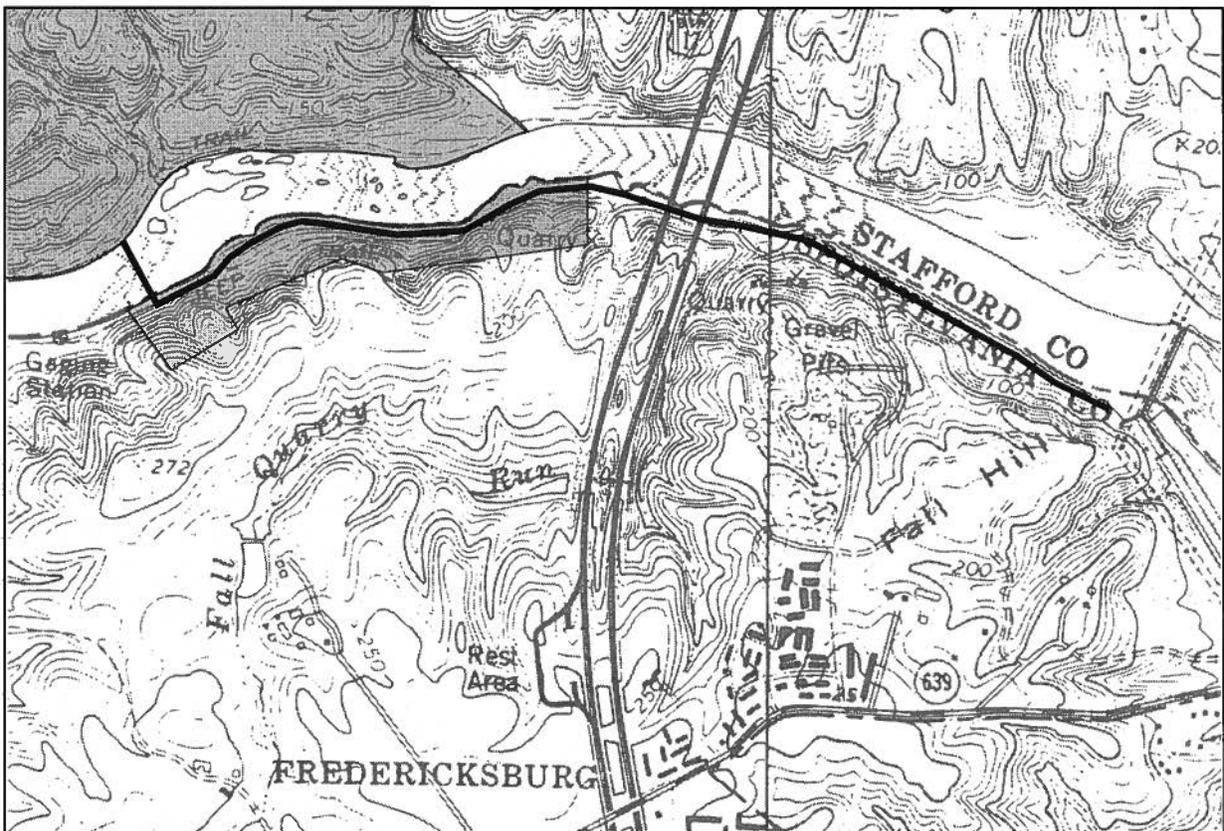
Maps

- ▶ "Map and Profile of the Rappahannock River and Its Improvements," 1848.
- ▶ Braxton, Carter and Stewart Chase. "Map of the City of Fredericksburg Water Power Company's Dam, Canals and Mill Sites," 1853/54.



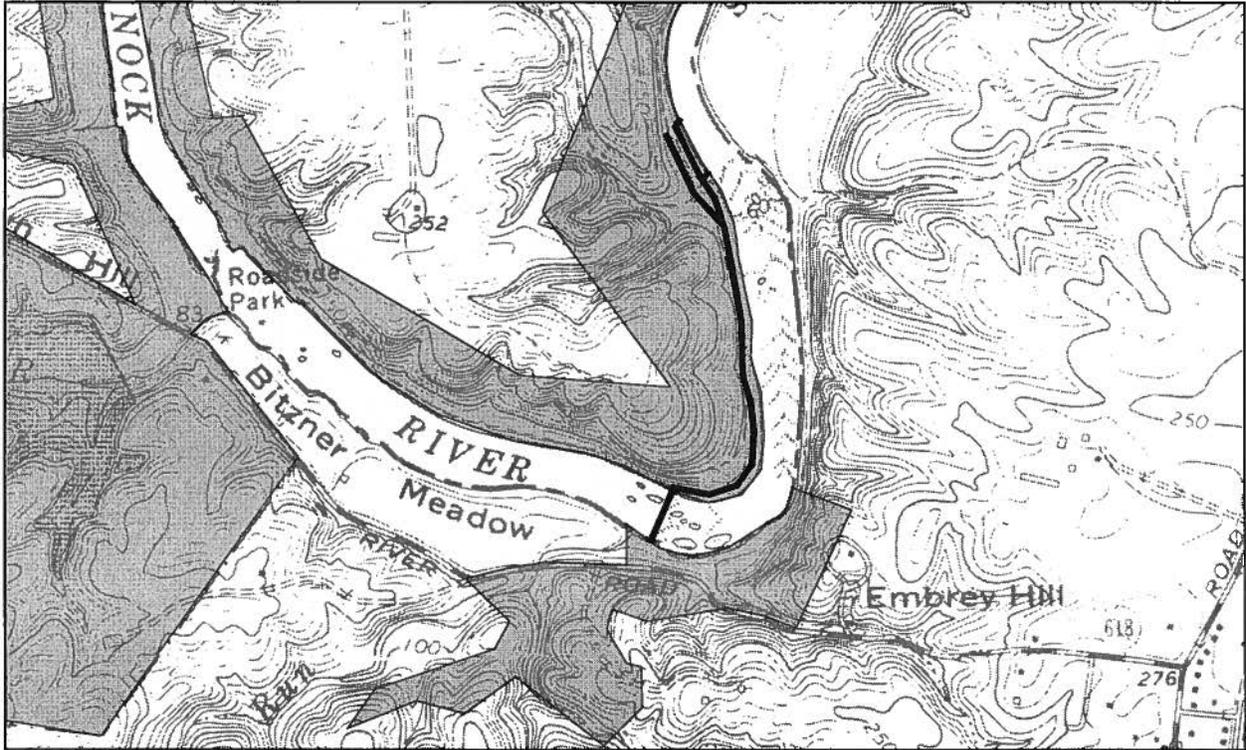
Though hidden in the woods, many portions of the Rappahannock Navigation are clearly evident. Shown here is Lock 7, in Spotsylvania County. View is north to south. Note the cut stone construction.

Taylor's Dam and Canal - Taylor's Dam extended across the Rappahannock River just downstream from an area that is called Butzner Flats. The dam is now in ruins, but the stone guard lock on the Fredericksburg shore is in excellent condition. The canal, from this point, extended all the way to Fredericksburg, passing through Lock 1 (Minor's) where the Interstate-95 bridge is now located. Minor's Lock was removed to accommodate construction of one of the Interstate bridge abutments. The lower end of the canal was partially flooded out when the 1855 crib dam was constructed by the Fredericksburg Water Power Company. Most of Taylor's Canal upstream of the Interstate-95 bridge is within the City of Fredericksburg's riparian holdings.



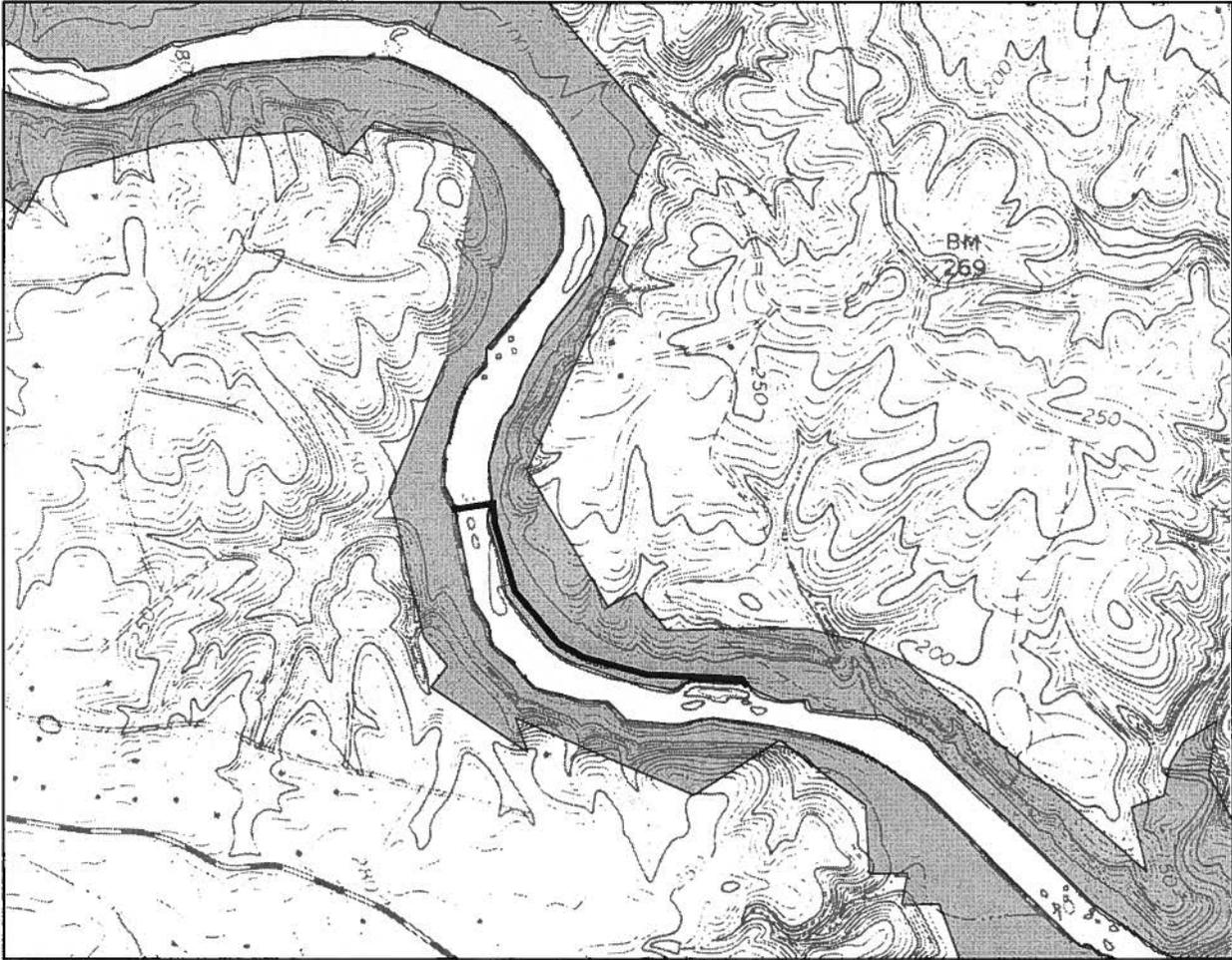
Map 9. Taylor's Dam and Canal.

Bank's Dam and Canal - The canal builders constructed Bank's Dam at the bend in the river where River Road drops down into the stream valley. There is a solid stone dam abutment on the Spotsylvania shore and a fairly intact stone guard lock on the Stafford side. Some remaining timbers are still visible in the river at times of low water, although the crib dam has long since collapsed. The canal extends downstream along the Stafford shore, approximately 3,200 feet, to locks 2 and 3. Both locks are stone and in a good state of repair. The canal also included a branch at its downstream end that powered Scott's Mill. Portions of this branch canal are still evident. Bank's Canal is entirely within the City of Fredericksburg's riparian holdings.



Map 10. Bank's Dam and Canal.

Ballard's Dam and Canal - The ruins of Ballard's Dam are located roughly midway between Horsepen Run and Rocky Pen Run. A stone guard lock, standing on the Stafford shore, remains in excellent condition. One side of the lock consists of the natural rock bluffs. The canal extends approximately 2,500 feet downstream to Lock 4, where another dam once stood (also called Ballard's). Lock 4 is of stone construction and remains intact. Ballard's Canal is entirely within the City of Fredericksburg's riparian holdings.

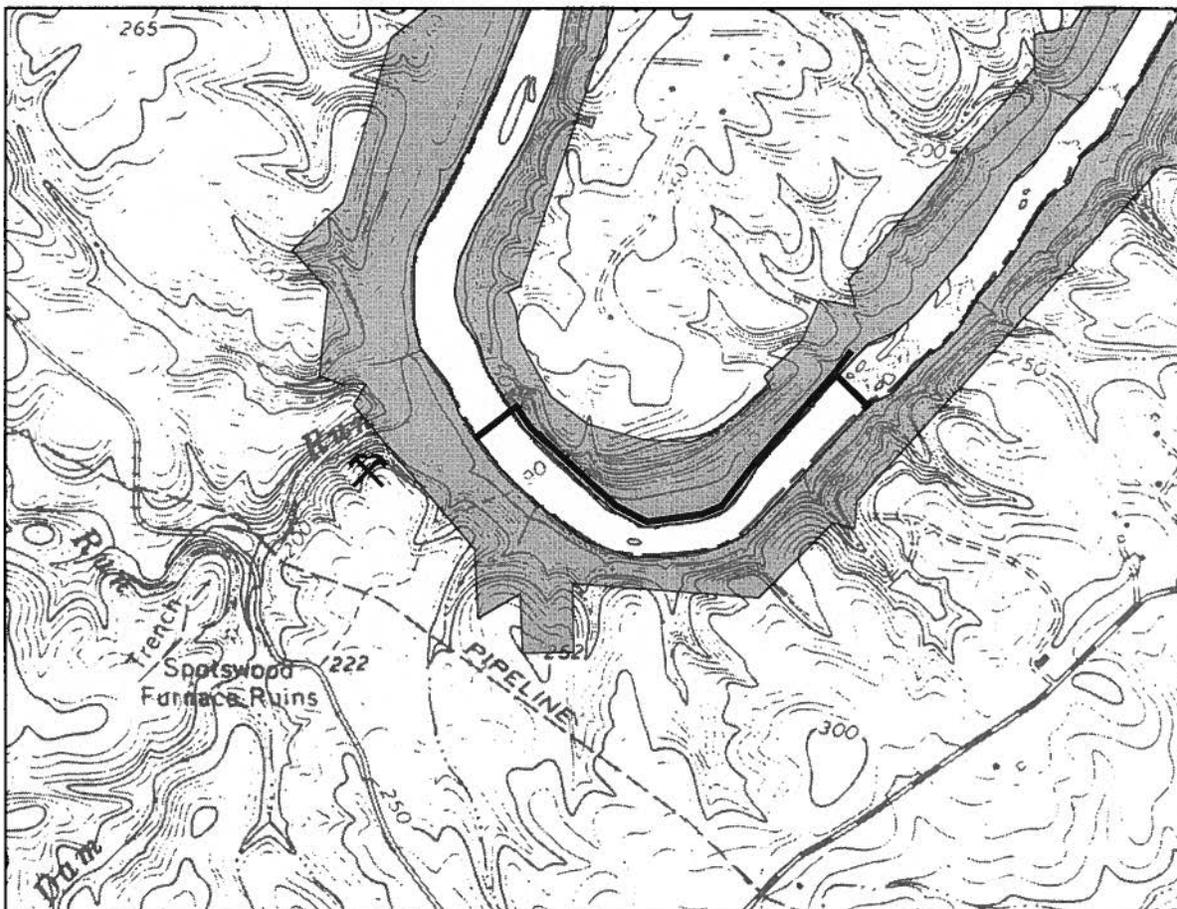


Map 11. Ballard's Dam and Canal.

Scott's Dam and Canal - Scott's Dam was located approximately 800 feet downstream of Pipe Dam Run. The guard lock stood on the Stafford shore and was of a different construction than the downstream locks. The ends were cut stone (which remain intact) while the lock walls were a timber crib filled with stones (which have collapsed).

Porch's Lock (Lock 5) is located at the downstream end of Scott's Canal which is approximately 3,200 feet long. It is a stone lock which remains in excellent condition. The canal apparently washed out, however, and navigation was restored by constructing Porch's Dam at Porch's Lock. The remnants of Scott's Canal and its intact locks are entirely within the City of Fredericksburg's riparian holdings.

B.L. Blackford's 1863 map of Stafford County shows the Porch House within this peninsula and shows a road descending toward the river. This road may have provided access to Scott's Dam, but this is not shown on the above referenced map. Field research did not uncover evidence of this road trace on the city's property.



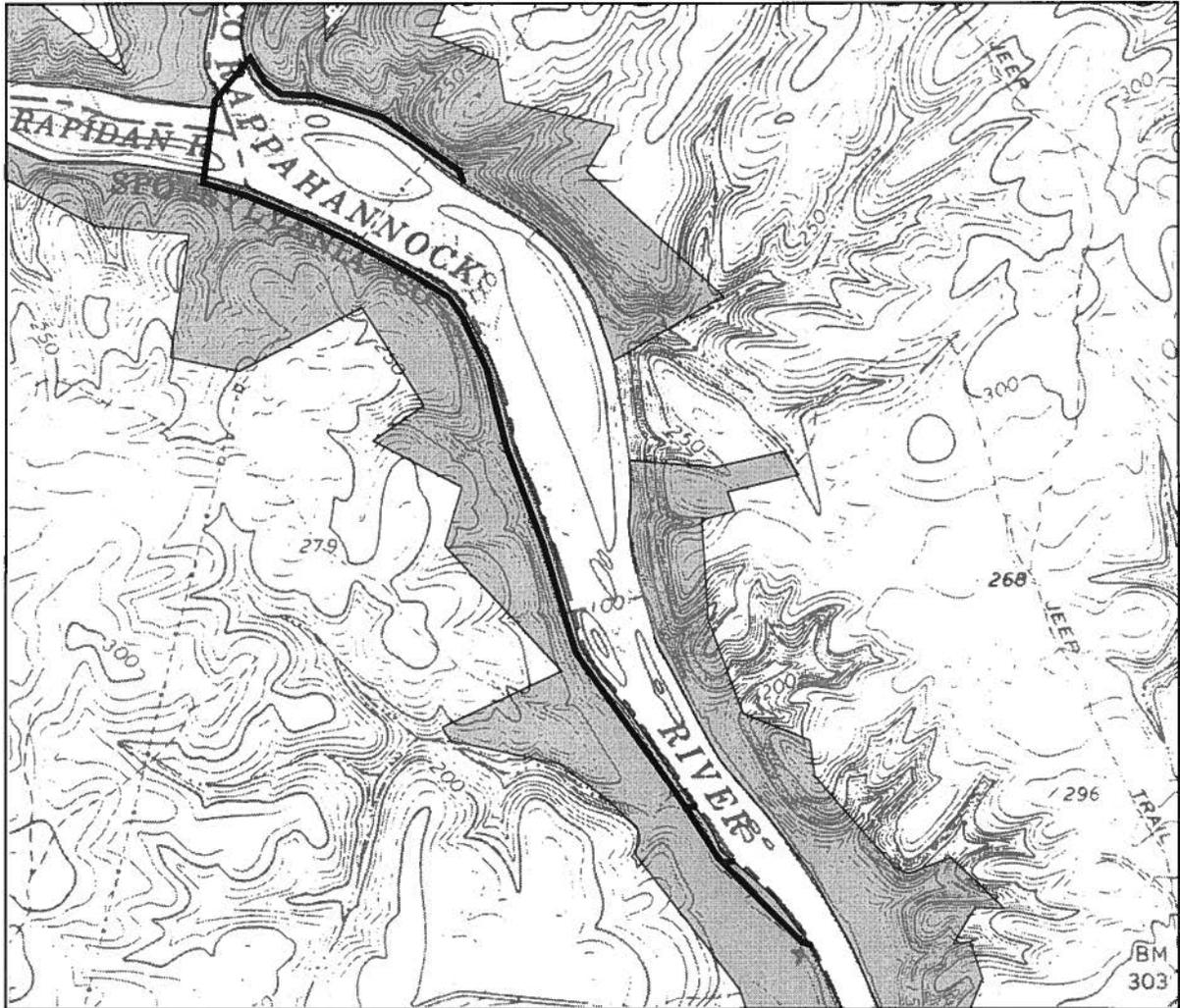
Map 12. Scott's Dam and Canal.

The Confluence Dams and Canals - The confluence of the Rappahannock and Rapidan Rivers is the scene of an intriguing variety of canal remnants. A dam in this area extended across both rivers and some of the spikes that anchored timbers to the bedrock are still visible at low water. Also in this area, on the Stafford shore, is a remaining portion of the earlier canal, built in the 1830s. It extends from the confluence to what is now a power line crossing, where two wooden locks were located. The timbers used to construct these locks are long gone, leaving only some long piles of stone. Approximately 3,400 feet downstream of the wooden lock remnants are the ruins of the wooden U.S. Ford dam. Dr. William Trout, of the Virginia Canals & Navigations Society, thought this remnant may have either been part of the 1830s navigation effort or used for placer gold mining.

On the Spotsylvania side is a substantial section of the Rappahannock Canal. A stone guard lock stands at the head of this canal and once anchored the crib dam across both rivers. The canal itself extends approximately 8,000 feet and includes four locks and three spillways. Lock 6, in the U.S. Ford area, is silted over, but is of flagstone construction and should be well preserved as it is almost entirely encapsulated. In close proximity are Locks 7 and 8, both of which are in excellent condition. Lock 7 is of stone construction while Lock 8 is also constructed of flagstone.

Several hundred feet above Lock 8 are stone abutments from a road bridge where the U.S. Mine Ford Road crossed the Rappahannock Canal. Like Locks 6 and 8, these abutments are of flagstone construction. The old road is still extant as it ascends the hill, but has disappeared where it crossed over the canal into the river floodplain. On the section of the canal between the bridge abutments and Lock 9 are three spillways. One of these is constructed of dressed stones to provide a 5-foot wide gate in the canal wall. Two other spillways are the more typical depression in the canal wall, although these consist of piled stones rather than the more elaborate spillways made of cut stone that are found on other canal sections. Finally, at the power line crossing is Lock 9, where one side of the lock chamber consists of the natural bedrock, much like Ballard's Dam. Also of note is the large stone wall that constituted the canal bank and which extends from the guard lock to a point approximately 500 feet below the power line. Where the stone wall ends, the canal wall becomes a simpler pile of stones (perhaps the remnant of crib construction).

There is evidence of numerous quarries along the length of this canal section. The Rappahannock Scenic River Atlas indicates gold mines are located in the canal, but the field investigation associated with this study did not find these excavations into the bedrock to be consistent with other gold mining areas. Without definitive documentation, this feature must remain a question. The historic resources in this area are entirely within the City of Fredericksburg's riparian holdings.



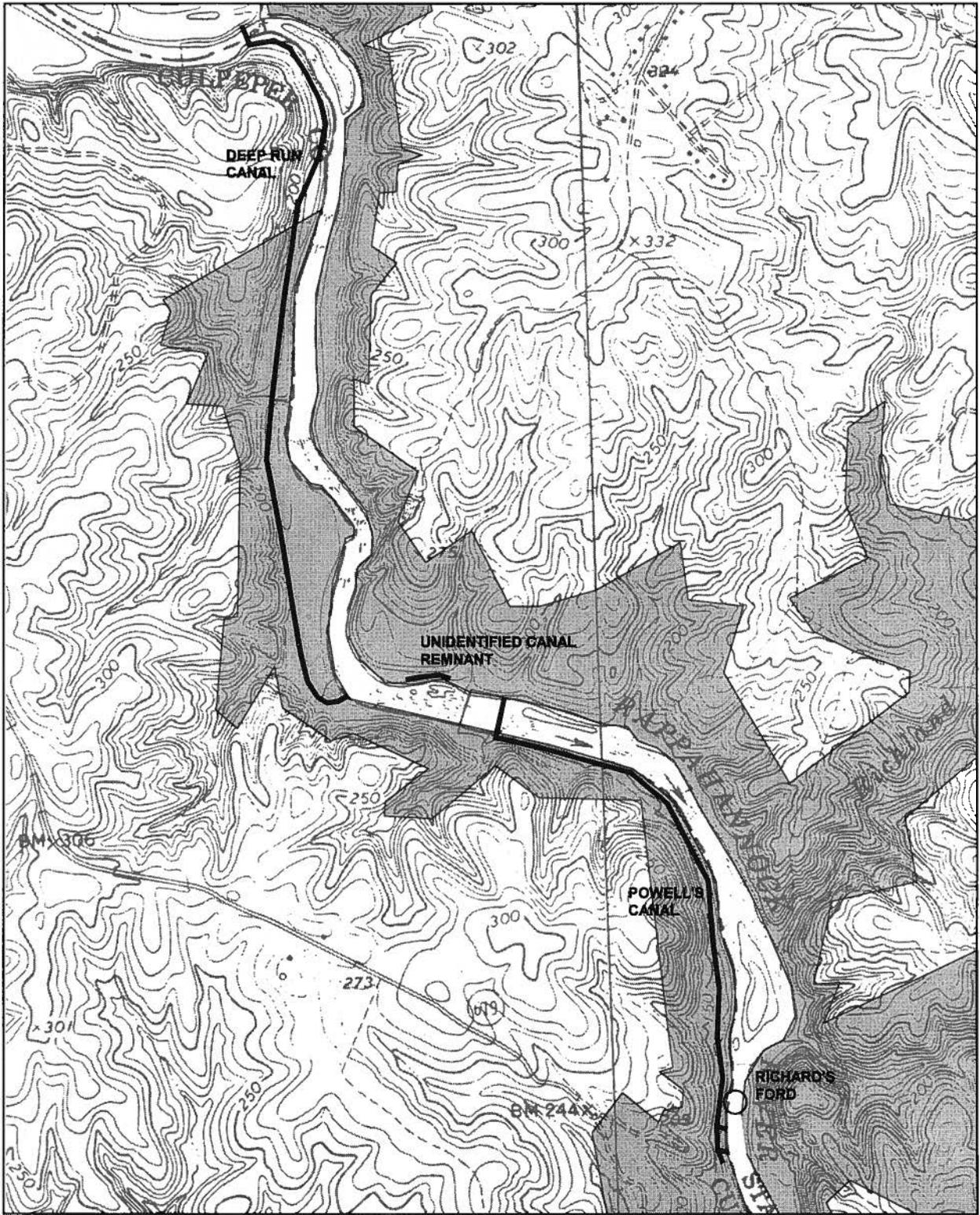
Map 13. Confluence Dams and Canals.

45

Powell's Dam and Canal - Powell's Dam extended across the Rappahannock below a bend in the river that is approximately 1.75 miles (by water) above the confluence. The stone guard lock on the Culpeper shore is much battered, but still visible. The canal extends approximately 4,500 feet to the Richard's Ford area. There are three locks at the lower end of the canal. Lock 10 (wooden) is silted over. Locks 11 and 12 are of stone construction and in excellent condition. Of note is the double configuration of the canal in this area. Deed records label one of these as the "old boat canal" and the other as the "old mill canal." There is also evidence of numerous quarries in the hillsides adjacent to the canal. Powell's Canal and the mill race are entirely within the City of Fredericksburg's riparian holdings.

Of additional interest is a canal section on the Stafford shore where the Rappahannock River takes a sharp bend to the east. A linear depression in this area appears to have a water power function. There are remnants of stone construction at its upriver end, suggesting a guard lock and dam. There are also stone remnants at its terminus. This canal may be part of the unsuccessful 1830s navigational canal effort or it could be a mill site. This site, which is entirely within the City of Fredericksburg's riparian holdings, merits additional field investigation and archival research. It does not appear in Dr. Trout's Rappahannock Scenic River Atlas.

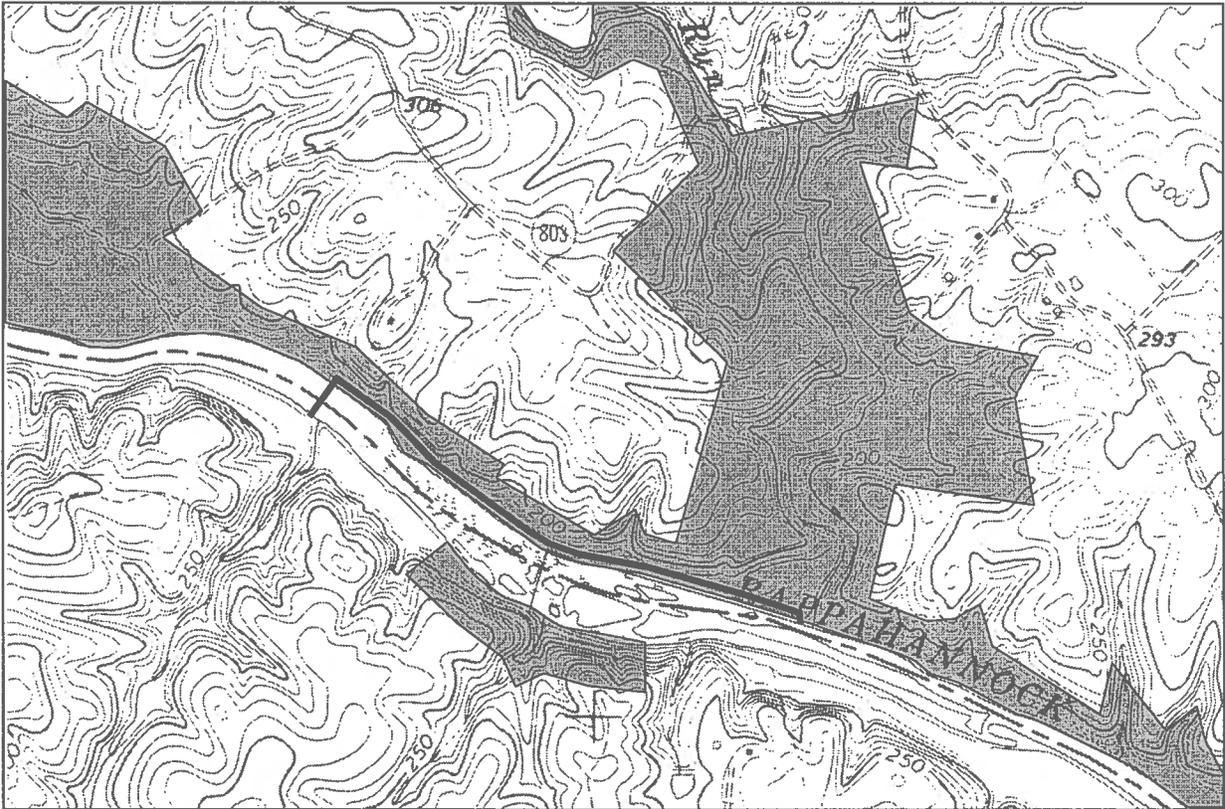
Deep Run Dam and Canal - Deep Run Dam was constructed just upstream of Deep Run. The guard lock, on the Culpeper shore, is silted in. The canal extends approximately 6,800 feet downstream where it is separated from Powell's Canal by two short rapids. The canal sections could not be connected because a steep bluff comes up to the river's edge. The lower end of the Deep Run Canal is anchored by Lock 13, the largest and most impressive lock in the Rappahannock navigation system. It is of stone construction and had an impressive 12-foot lift. Midway along this canal section is a stone aqueduct that carried the canal over a small stream while accommodating the stream passage through a culvert underneath. This stone feature also includes a spillway. The lower two-thirds of this navigation canal are within the City of Fredericksburg's riparian holdings.



Map 14. Powell's Dam and Canal; Deep Run Dam and Canal.

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Skinker's Dam and Canal - Skinker's Dam extended across the river downstream of Sumerduck Run. The guard lock (on the Fauquier shore) was of wooden construction and only some cut stone and linear piles of loose stone remain. The combination navigation and power canal extends approximately 3,800 feet downstream to an area just above Rock Run. The lock at the lower end of the canal (Lock 14) is of stone construction and beautifully intact. Portions of the canal are obscure, but other sections consist of intact stone walls, particularly near Skinker's Mill (site). Between the millsite and Lock 14 is a cut stone spillway. Several rock quarries are also evident along the canal. Skinker's Canal is entirely within the City of Fredericksburg's riparian holdings.



Map 15. Skinker's Dam and Canal.

48

Snake Castle Dam and Canal - Snake Castle Dam was built at a place called Snake Castle Rock. A wooden guard lock stood at the head of the navigation canal, on the Culpeper shore, but this structure has since washed away. The canal itself extends approximately 3,900 feet to Ellis's Ford. Lock 15, at the lower end of the canal, was planking over stone, but this structure is currently covered in silt. Lock 16 was also a wood lock, but had cut stone ends which remain in excellent condition. The upper two thirds of Snake Castle Canal are within the City of Fredericksburg's riparian holdings. A smaller power canal on the Fauquier shore extended from Snake Castle Dam to Ellis's Mill.



Map 16. Snake Castle Dam and Canal.

MINERAL EXTRACTION: GOLD!

The mineral deposits along the southeast front of the Appalachian Mountains is called the Southern Appalachian gold district. It was formed when molten rock intruded out of a north-south fault, extending from what is now Maryland to Alabama, and spread to the east. The iron oxides later dug into by Spotswood's miners, cooled on the leading edge of this eruption. Other minerals moved more slowly and eventually cooled in a narrow strip that in geologic parlance has come to be called the gold-pyrite belt.

Iron came out of area mines during much of the eighteenth century, but this activity faded by the 1790s. When mining recommenced during the nineteenth century, the new activity centered around gold. The first recorded gold mine in Virginia is considered to be Spotsylvania's Whitehall Mine, operating as early as 1806. The first persons to find gold, however, were probably the farmers working in the lowlands near creeks and streams. Soil formed over millions of years included some of the gold released when the quartz in which it was embedded broke down. After a heavy rain, these gold particles become visible, and their discovery led to a local gold rush of sorts.

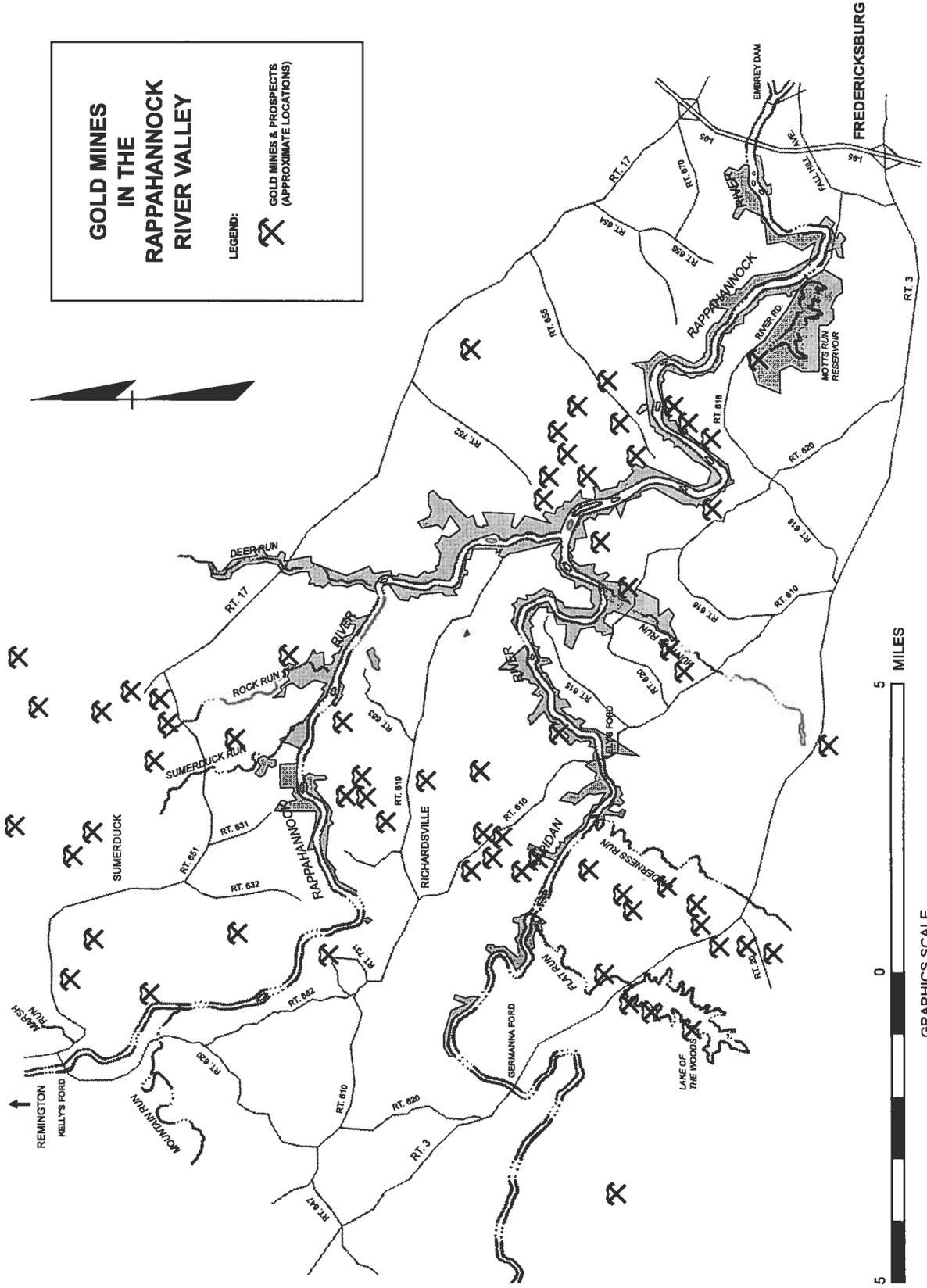
Panning along a creekbed, or placer mining, was the most readily accomplished extraction method, especially by individuals. Rocker boxes were constructed to help separate the gold particles from sand quartz, but placer mining is an extremely crude operation. Deposits washed once will often yield additional gold if washed again. A more ambitious extraction effort entailed use of picks and shovels to follow the quartz veins up the hillsides. The mined quartz could then be crushed to a powdery consistency and treated with mercury (called quicksilver) to extract the gold through amalgamation. Crushing stones required additional machinery, though, such as stamp mills (a pile driving arrangement) for larger rocks and what was called a Chilean mill (mill stone arrangement) for smaller ones. These machines could be steam driven, water powered, or even horsepowered if the mine operation was a poor one.

Sinking shafts into the bedrock was an evolution that required a considerable capital investment for equipment and workers. The United States Mine in Spotsylvania County, for example, was owned and operated by the well-financed United States Mining Company. This operation commenced as early as 1835 and included multiple shafts (the Virginia Division of Mineral Resources eventually located 15 caved-in pits). Other features included a mill (erected in 1865), various types of equipment to crush the quartz and separate the gold, and pumps to keep water out of the shafts.

Despite the intense work required, gold extraction proved to be profitable in Virginia and annual production between 1840 and 1849 averaged 3,000 troy ounces. The following map shows the approximate locations of gold mines in the Rappahannock

**GOLD MINES
IN THE
RAPPAHANNOCK
RIVER VALLEY**

LEGEND:
 **GOLD MINES & PROSPECTS
(APPROXIMATE LOCATIONS)**



GRAPHICS SCALE

valley. The pattern also reveals the north-south orientation of the gold pyrite deposits. Local newspaper accounts sometimes refer to the thousands of prospectors and miners in the area, but these legions quickly disappeared after the California strikes in 1849. Virginia mining declined as the experienced miners headed west where gold was more plentiful and more readily extracted from the earth. In 1849, U.S. mints received \$129,382 in Virginia gold. In comparison, the mints received \$5.5 million in gold from California. During the decade 1850-1859, gold production in Virginia declined to an annual average of 1,700 troy ounces.

In time, some of the Virginians who participated in the California gold rush drifted back home. Virginia gold mining also increased slightly toward the end of the 1850s as interest in Piedmont gold was renewed by the vast quantities of gold coming out of the West. The Civil War interrupted further efforts, however, and post-war production remained low from a scarcity of capital as well as a dearth of trained miners. Mining in various parts of the West maintained a strong pull and was usually more productive than extracting gold from Virginia quartz. In addition to having to mine and crush quartz, the sulfurous deposits of the gold-pyrite belt often precluded entrapment of the gold by mercury. Production reached a consistent level from 1870 to 1910 but never attained pre-war levels.

Still, gold extraction continued locally after World War One. Work proceeded at the United States Mine in Spotsylvania County, for instance, and at several mines in Orange County. Placer mining also remained attractive in areas such as the confluence of Wilderness Run and the Rapidan River. While some private individuals still tramp area streams in search of this noble metal, no commercial production has been reported in Virginia since 1947.

Today, the result of this gold mining activity is seen in trenches that extend up hillsides, from the stream bottoms to the upland plateau, evidence of the quartz veins that miners followed in search of the mother lode. On the hilltops can be found the open pits and piles of debris, while flattened areas adjacent to streams suggest where the mills were located to operate the required machinery. The Virginia Division of Mineral Resources has located and mapped many mines, but there is physical evidence of much more activity in the Rappahannock valley related to the long ago search for gold.

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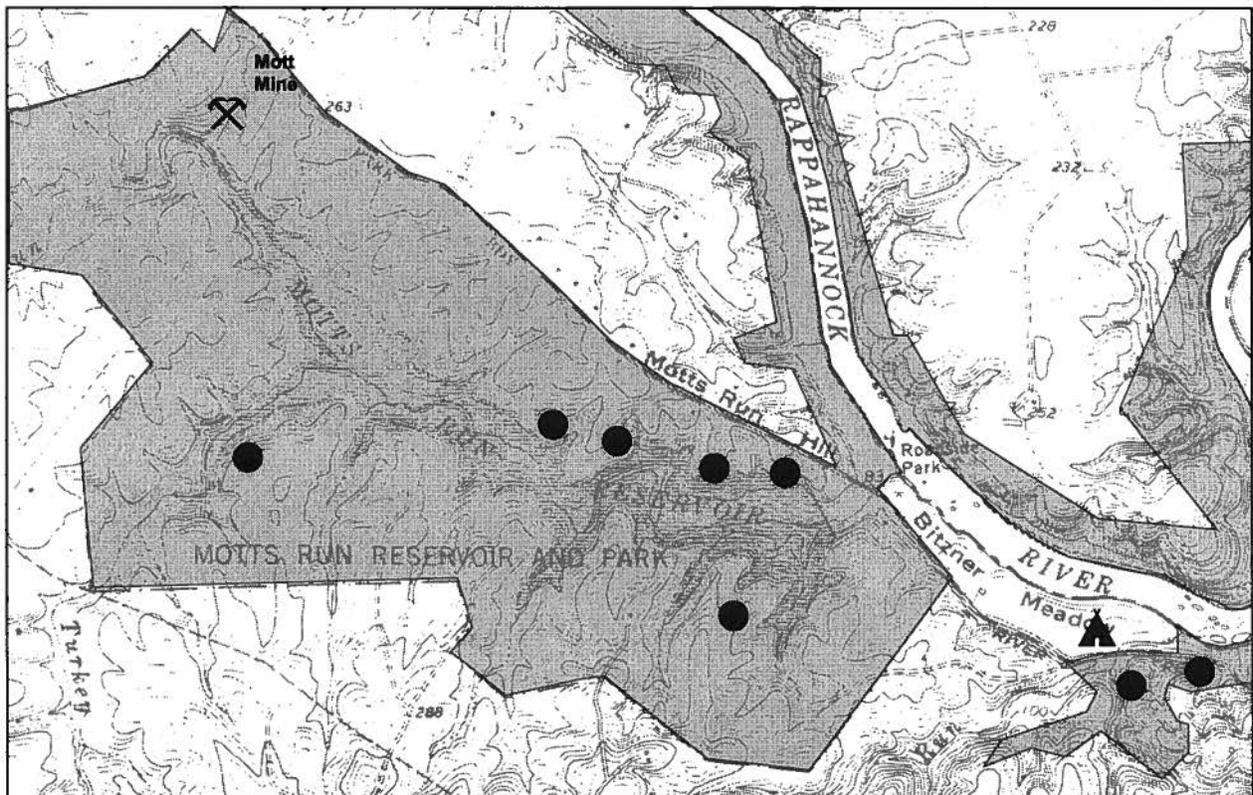
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The tell-tale signs of gold mining in the Rappahannock valley include areas where miners dug into quartz veins, following them from placer deposits along waterways. If the prospect looked promising, shafts may have been sunk on the hilltops. The trenches shown here are located north of Mott's Run Reservoir.

Mott Mine and Environs - The Virginia Division of Mineral Resources has plotted the Mott Mine near the northwest edge of the Mott's Run Reservoir, in Spotsylvania County. This property is now owned by the City of Fredericksburg. Gold was extracted from this mine before the Civil War, but it was apparently not reopened after 1865. The visible remnants include caved-in pits and dumps.

While this mine is the one shown on the state maps, there is much evidence of additional mining efforts in the Mott's Run area. Hillside trenches (depicted on the map by large dots) are located at various points around the reservoir as well as near Golin Run and River Road. Interspersed among these mining remnants are encampment sites. Logically, one would expect these campsites to have been occupied by Confederate troops during the winter of 1863-64, but they could also have been related to this earlier mining activity.



Map 18. Mott Mine and Environs.

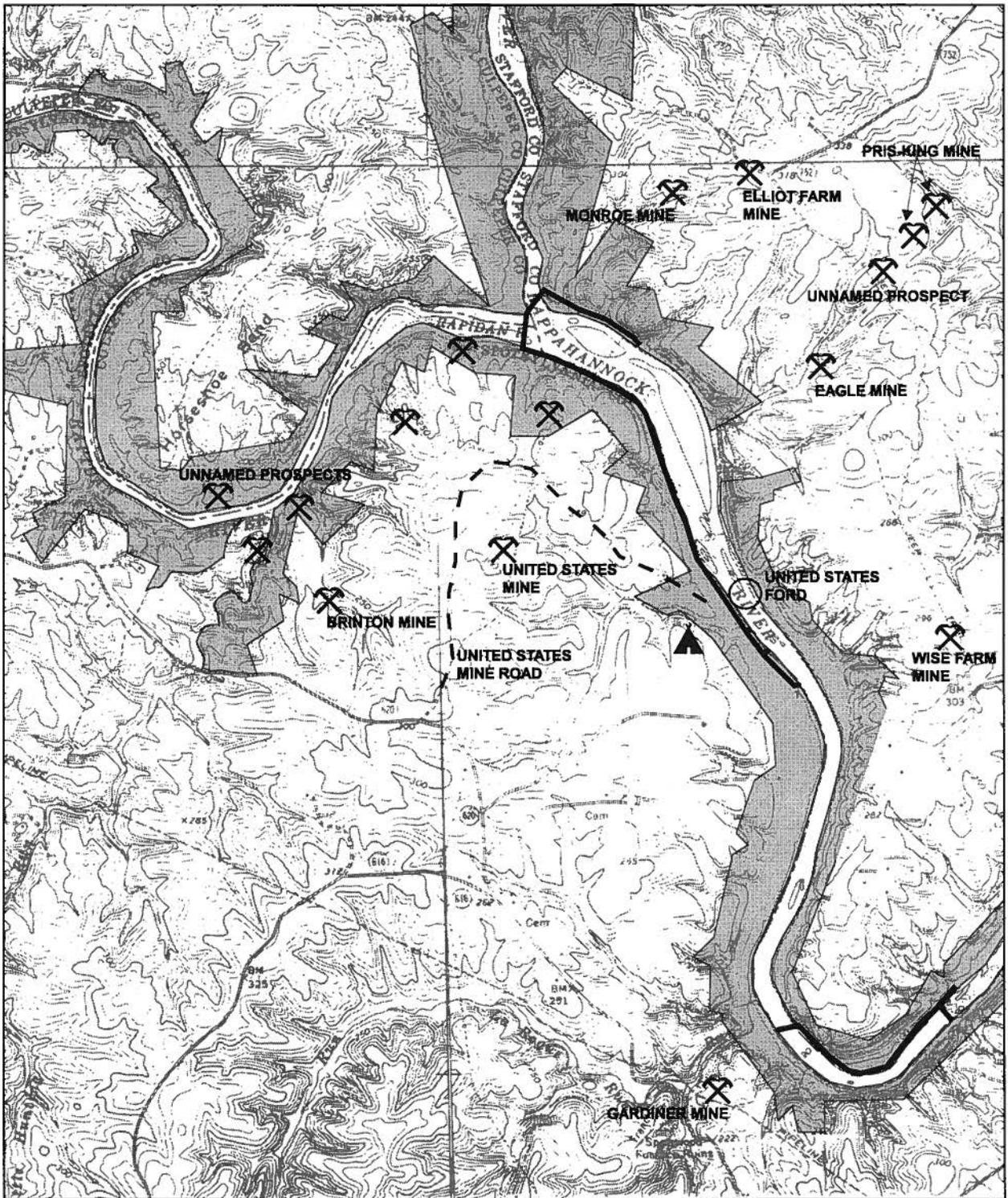
United States Mine and Environs - One of the most extensive mining operations in Spotsylvania County was the United States Mine (sometimes called the Welford Mine). The United States Mining Company discovered gold-bearing quartz veins in the early 1830s and established their mine shortly thereafter. While the Virginia Division of Mineral Resources shows a single site on their maps, they in fact located fifteen caved-in pits and their related dumps. Some of these features are located within the City of Fredericksburg's riparian holdings. Also on city property is a significant portion of the U.S. Mine Ford Road, including flagstone bridge abutments where this road crossed a portion of the Rappahannock navigation system. Also of interest are the well-preserved Civil War entrenchments that once guarded the United States Ford and its approach road.

As an aside, Matthew Fontaine Maury was promoted to lieutenant in the United States Navy in 1836, but did not receive any corresponding orders to sea duty. With time available ashore, Lt. Maury agreed to serve as the temporary superintendent of the United States Mine. With the acumen of the true scientist that he was, Maury carefully studied the gold extraction process and sought to improve the entire operation.

The Civil War interrupted gold mining at the U.S. Mine, as it did at every other mine in the area. In 1865, however, the U.S. Mining Company quickly resumed operations. Miners reopened and deepened the shafts while other workers erected a mill to grind the gold-bearing quartz and separate the gold through amalgamation.

In addition to the many mining pits, this area includes numerous hillside trenches coming up from the waterways. In the Horseshoe Bend area of Culpeper County, for example, is an elaborate series of cuts that extend uphill from the Rapidan River. Field research, identified at least six different veins in this area. These cuts, which are within the City of Fredericksburg's riparian holdings, are very deep, but the hilltop is on private property and was not investigated to determine if a shaft was ever sunk. There are no mines shown in this area on W.A. Jackson's 1836 map of the Virginia Mining District. The Virginia Division of Mineral Resources has also not identified any mining in this part of Culpeper County. Of additional interest, though, is a road trace to the east of the mining cuts that leads down to the vicinity of Todd's Ford.

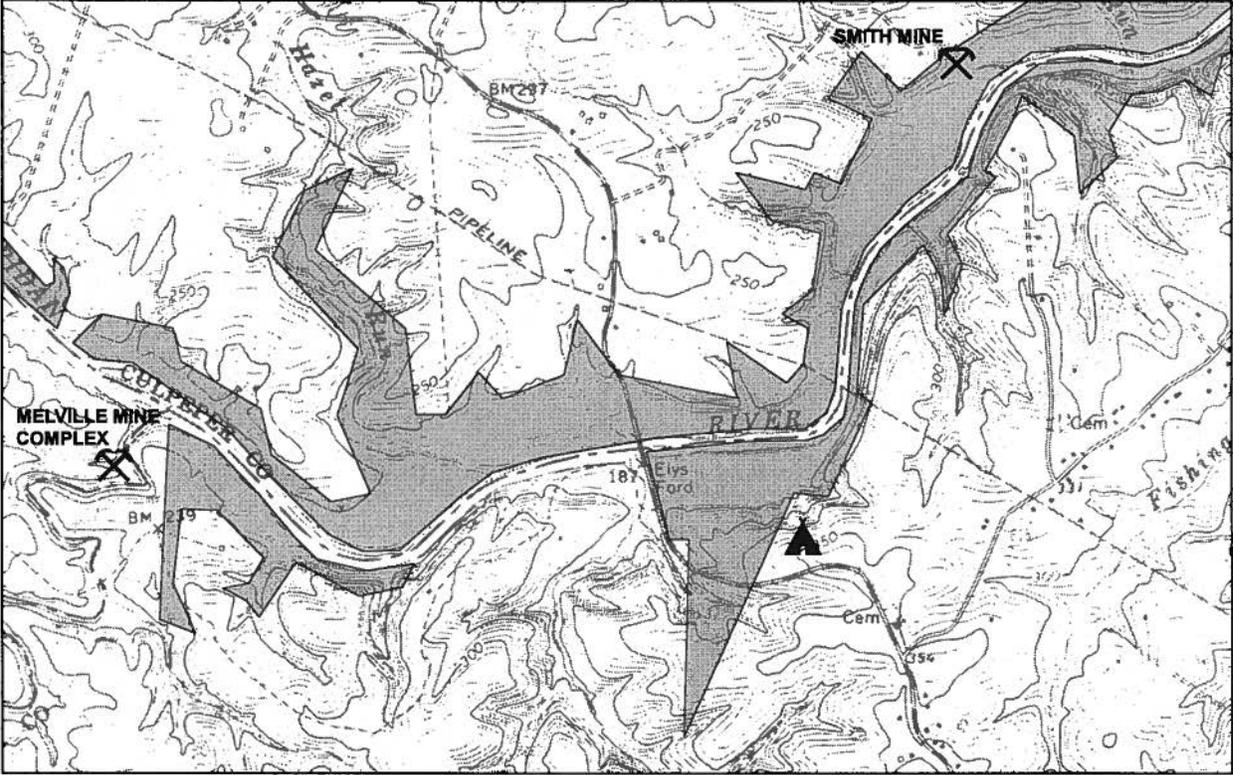
Along Hunting Run, in Spotsylvania County, are also numerous mining cuts as well as an unidentified mine shaft on a hilltop overlooking the Rapidan, on the east side of Hunting Run. The cuts along Hunting Run are on property the city once owned but has since deeded to Spotsylvania County. They are very likely related to the Brinton Prospect previously mapped by the Virginia Division of Mineral Resources.



Map 19. United States Mine and Environs.

Ely's Ford area - Mining activity is evident both upstream as well as down from Ely's Ford. A hillside cut that represents the Smith Mine, in Culpeper County, for example, may be partially within Fredericksburg's riparian holdings. Downstream of the Smith Mine, below Middle Run (still in Culpeper County), are numerous hillside trenches where long ago miners followed quartz veins up from the river. In the midst of these mining trenches, above an unnamed run, is a flat area carved out of the hillside. Deed records identify this feature, which may have been related to the mining operations, as part of the "Garnett Harding Mill Tract."

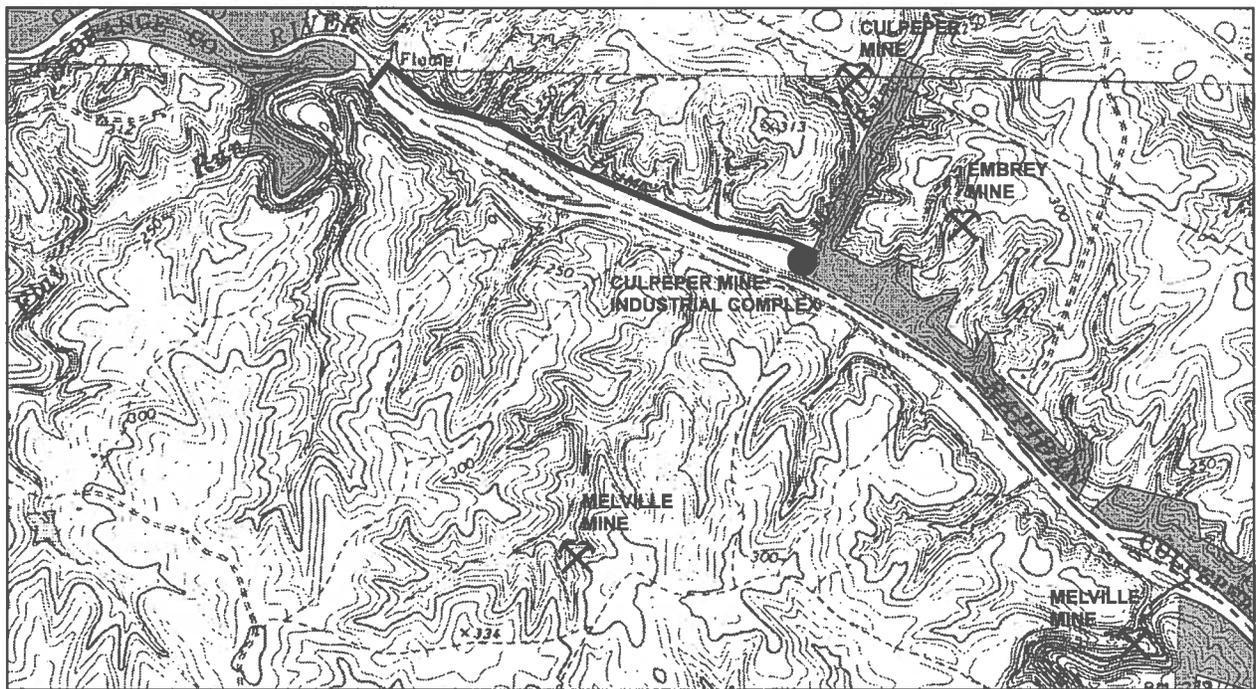
Extensive placer mining took place where Wilderness Run enters the Rapidan, but the most impressive evidence of gold mining in this area is just west of the city's holdings. At the first bend in Wilderness Run, just south of where it enters the Rapidan, is a complex that includes a stone foundation, road traces, a sluiceway, and a chimney that stands close to four stories high. Nathaniel Michler's 1867 map of the Wilderness battlefield labels this site as a portion of the "Melville Mine." It should be noted that there is another elaborate complex approximately one mile to the west that also carries the name Melville.



Map 20. Ely's Ford area.

Culpeper Mine Industrial Complex - The Culpeper Gold Mine, located along a tributary of Mine Run, in Culpeper County, likely opened in 1834 when the Culpeper Mining Company was chartered. The shear zone that made this area so lucrative is probably the same as that of the nearby Embrey Mine and the Melville Mine (across the river in Orange County). Although this mine remained operational until 1905, its peak period of activity occurred prior to the Civil War. The federal census shows 31 workers and 7 miners working the Culpeper Mine in 1850.

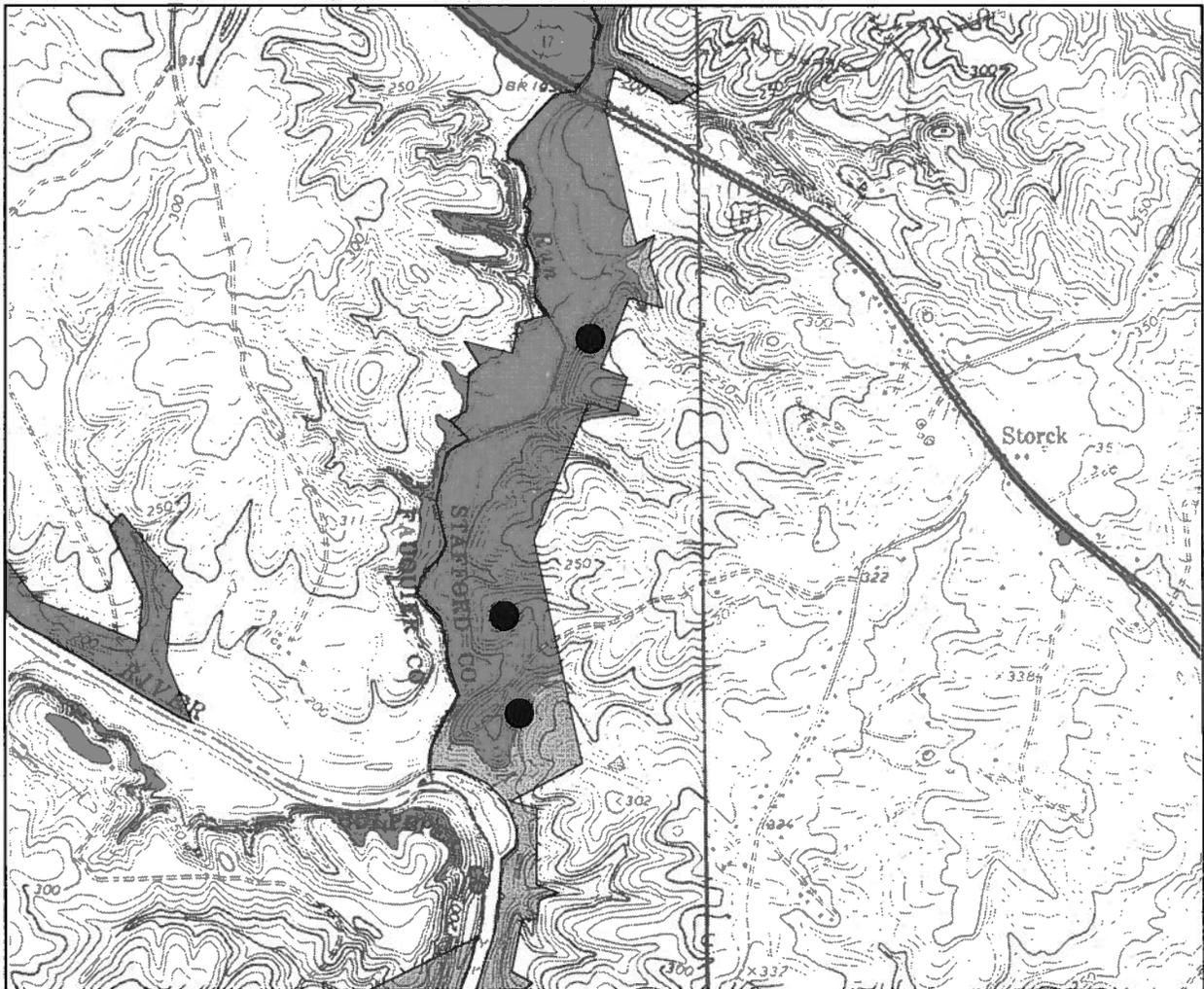
The visible remnants of this extensive mining operation include caved in pits and dumps. There is also a mill race along the Culpeper side of the Rapidan that extends approximately 5,400 feet from the area just below Flat Run to the mill's industrial functions near Mine Run (labeled "flume" on USGS topo maps). The portion of this operation on the City of Fredericksburg's riparian property is limited to the mill sites along the Rapidan River and Mine Run where the stamping and amalgamating mills were located, as well as a blacksmith shop, a sawmill, and a powder magazine. Unfortunately, any visual remnants of these resources have been obliterated. Archaeological investigations are needed to learn anything more from this site.



Map 21. Culpeper Mine Industrial Complex.

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Deep Run - The Virginia Division of Mineral Resources does not show any mines near Deep Run. Instead, the identified mines occur along a rough north-south axis west of Goldvein, in Fauquier County, and in a cluster below the confluence, in Stafford County. Similarly, W.A. Jackson's 1836 Map of the Mining District of Virginia does not show any mining activity in this area. Still, there is evidence of some mining efforts along Deep Run. These remnants consist of hillside trenches along this waterway between Route 17 and the Rappahannock River.



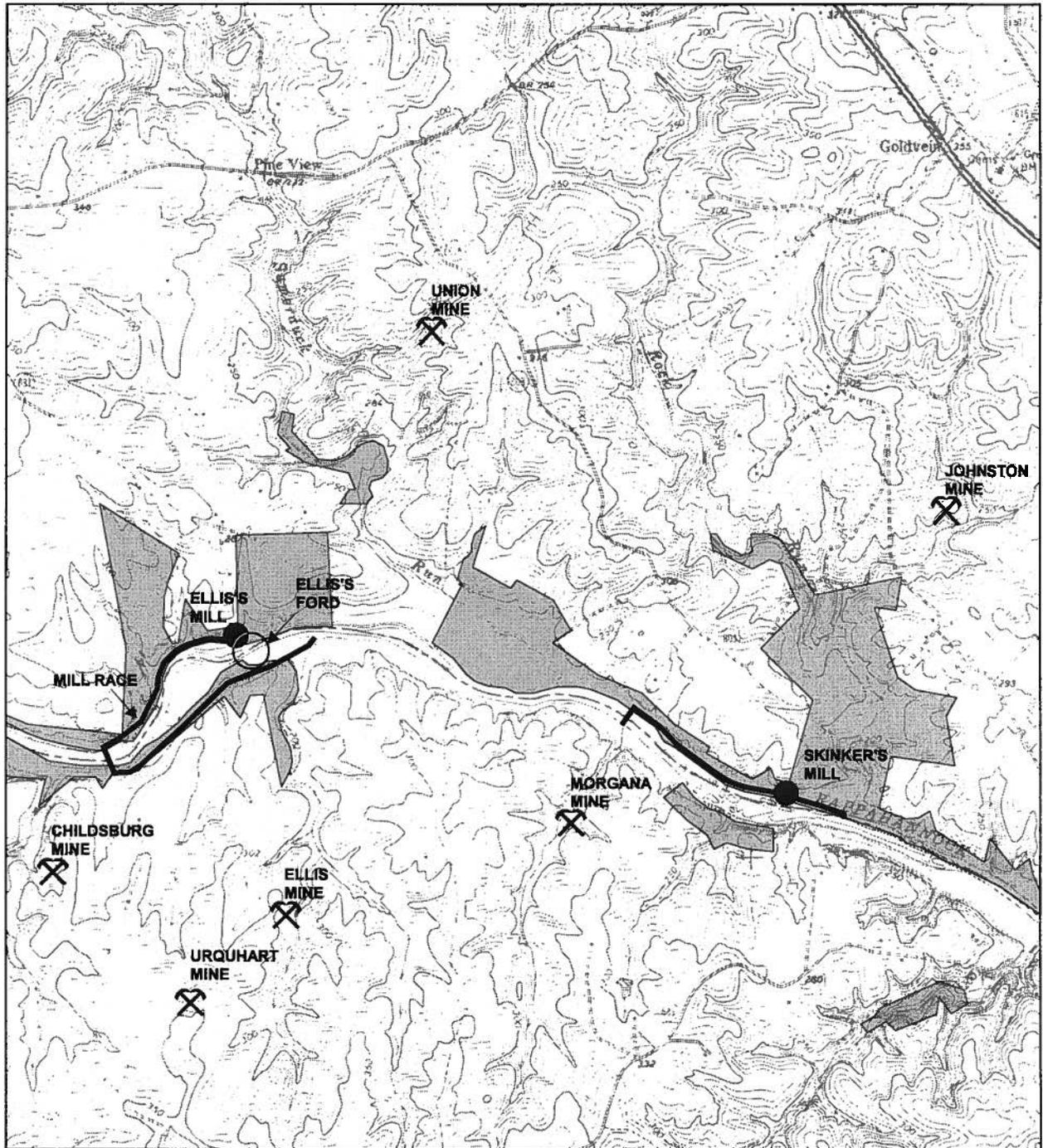
Map 22. - Deep Run Prospects.

Ellis's Ford area - In the Ellis's Ford area are several prominent mines - including the Childsburg, Ellis, and Urquhart Mines in Culpeper County and the Union Mine in Fauquier County. None of these mines is remotely near the City of Fredericksburg's riparian property, although the city does own the Ellis's Ford area, through which some of the extracted gold evidently passed. A New York soldier whose unit occupied this crossing in the summer of 1863 described this area in his memoirs.

Ellis's Ford is in the center of the gold region of Virginia, and many works still remained which were formerly used in obtaining that mineral. Mr. Ellis... was in his younger days extensively engaged in that business and made wealth by it... On the south bank of the river was an indenture in the soil which he said marked the site of a former canal used by him in forwarding products from the gold mines, and from his plantation, to the navigable waters of the Rappahannock.

*Collins, George K.
Memoirs of the 149th Regiment.
New York Volunteer Infantry.
Syracuse, 1891. pp. 176-177*

The "indenture in the soil" is a portion of the Rappahannock Navigation Canal in Culpeper, which remains evident today (Ellis's Mill itself was in Fauquier County). Also of interest on the Culpeper side is a flattened and excavated hilltop situated above the Rappahannock Canal. This area could have been related to mining activity that occurred after the Civil War (deed records show ownership, at one time, by the Powhatan Mining Company). On the other hand, it could be a site related to the old Barnett house. The 1817 "Plan and Profile of a Survey and Level of the Rappahannock River," shows several structures on the river opposite "Barnett's Mill and Ford" and labels them as "Barnett's house" (the name Ellis does not appear until a map drawn in 1848). The scale of the 1817 map, however, makes a definitive identification of this site difficult from that document alone.



Map 23. Ellis's Ford area.

WATER POWER: MILLS AND OTHER INDUSTRIES

The most extensive and sustained activities along the Rappahannock River were the milling enterprises. Water-powered flour and grist mills provided the means for local farmers to convert their crops to usable commodities, for themselves as well as for easier transport to market. Other mills were industrial concerns in their own right, powering saw mills, gold mining equipment, and other machinery. These processing plants were typically built where roads and streams converged. The roads, however crude, provided overland access while the streams provided the energy to turn the mechanical works. Mills established in Fredericksburg also processed local agricultural product, but as that urban center grew newer mills produced textiles, fertilizer, and eventually electricity.

Mills in the Rappahannock valley also illustrate how the land was used during its various phases of occupation. Timber interests, for instance, acquired much of the property that had supported the eighteenth century iron industry. After the iron furnaces shut down, the deforestation so aggressively begun by Alexander Spotswood continued, as investors extracted timber. Water-powered saw mills supported this activity although there were tenant farmers on the land as well.

Not until the early nineteenth century were the large landholdings the timber merchants had acquired from the ironmasters broken up and independent farms and plantations established in the region east of Fredericksburg. The Chancellor family, for instance, did not settle in the area until 1809. The loss of so much timber, however, had resulted in severe erosion and destruction of the soil's natural fertility. Further, fast growing trees such as scrub-oak and cedars sprang up before hardwoods could reestablish themselves and vines and bushes choked out larger growths. The farmsteads worked and developed during the ante-bellum period and the tangled woodlands surrounding them became the landscape across which Civil War armies fought in 1863-64.

Mills that were established in support of these farms were typically small grist mills that operated on shares. By law, the miller received a specific portion of whatever he processed. The standard toll for wheat was 1/8 of the amount of flour processed. The standard for grinding corn was 1/6 of the amount of corn meal. Most of these mills had several grinding stones to handle the different grains that farmers produced.

Mill owners typically needed land on both sides of a waterway. Only then could they construct a dam that would back up the water and create the necessary head pressure. Mills were so important to local economies that if a property owner across a river or stream did not desire to sell the small amount of acreage needed, the jurisdiction would often exercise its right of eminent domain. Then, as now, property boundaries usually ran along the streams, which made such property issues

inevitable. The resulting court records that have survived, however, are an invaluable historic resource.

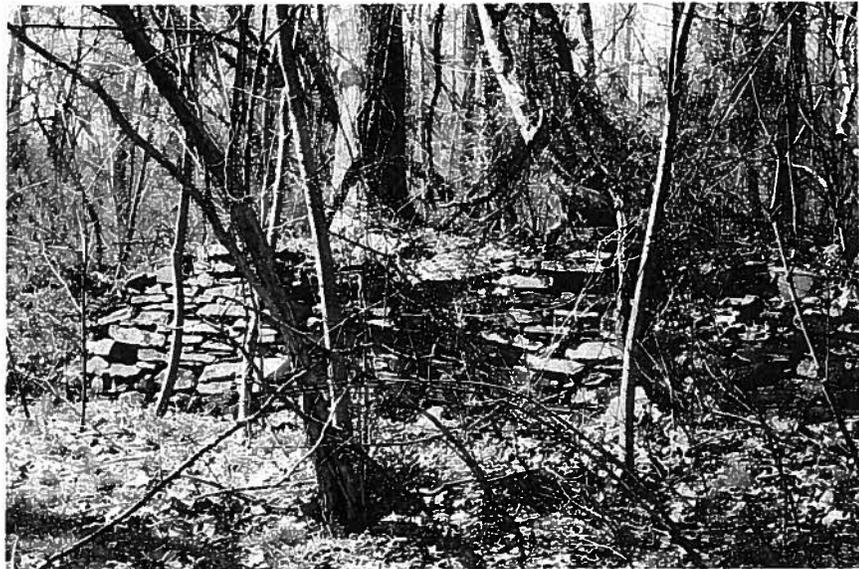
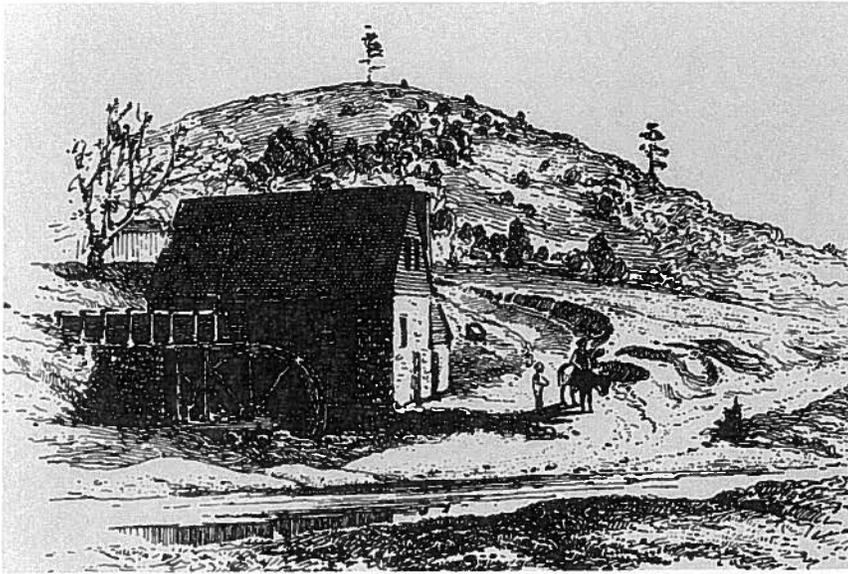
While millers provided many benefits to a local economy, their enterprises had negative impacts as well. Dams interfered with the passage of anadromous fish, such as herring and shad, seeking to reach their spawning areas. Upriver farmers and residents noted the drop in the available fish and complained to their elected representatives. In 1759, the General Assembly ordered mill owners to provide fishways through their respective barriers. Passage over dams was to consist of an opening or slope in the dam that was a least ten feet wide. This solution appears to have been satisfactory, at least for a while, but over time such standards were applied with decreased care. The last dam to remain intact on the Rappahannock River is the concrete Embrey Dam, built in 1910. There is absolutely no provision for fish passage through this structure.

The introduction of electricity in the late nineteenth century allowed industries to begin to locate in places other than along waterways. Early hydroelectric enterprises had only limited capabilities, though, and required a period of growth to attain significance. The first electric generating plant in the Fredericksburg area was the Rappahannock Electric Light & Power Company which was set up in a former sumac mill across from Falmouth. Electricity first lit the city streets in November of 1887. Most of these power plants were relatively minor concerns, but construction of the Embrey Dam in the early twentieth century soon brought electric power to the area in quantities sufficient to power growing manufacturing enterprises. It channeled water into the city's main canal which directed it through the turbines of a power plant on Caroline Street. This dam is extant as is the concrete power station, which ceased operations in the early 1960s. By that time, the demand for electricity had grown beyond the capacity of local water power to provide.

Today, the Rappahannock valley is no longer a commercial corridor dotted with industrial enterprises. Instead, north-south rails and roadways transect the river, part of a transportation network that supports land development and commercial activity beyond this waterway. Enormous quantities of electricity are provided by a nuclear power plant on the North Anna River. The once active mills have quietly deteriorated back into the landscape, only the stone foundations retaining their original form.

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Images of intact Rappahannock valley mills are elusive. The mill shown above is Welford's Mill on Hazel Run (from Battles and Leaders of the Civil War) and is representative. Note the overshot wheel and the proximity of the road. The surviving visible portions of these old mills typically include their stone foundations. Shown below are the remnants of Richard's Mill, on the Rappahannock River in Culpeper County.

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The Fredericksburg Mills - Situated at the falls of the Rappahannock River, Fredericksburg and Falmouth saw numerous entrepreneurs seek to harness the tremendous energy in water falling more than 25 feet over a distance of approximately one mile. Thornton's Mill is believed to have been one of the area's first milling enterprises (established around 1720 by Francis Thornton, Sr.). This site is located on the Fredericksburg shore, just below Hunter's Island, and was powered by water diverted by a dam running across the current between Hunter's Island and a smaller island near the opposite shore. A mill race was readily diverted from the subsequently flooded channel. This dam was improved several times, including the addition of concrete, and remains very evident today as a result. The dam at the head of the raceway was rebuilt in 1907 by the Bridgewater Milling Corporation and this concrete structure remains intact.

Below Thornton's Mill, the raceway powered several other enterprises. Just above the current Falmouth Bridge, Thomas F. Knox established a grist mill. After the Civil War, his sons, operating under the name R.T. Knox & Brother, converted the grist mill into a sumac and bone mill. The Knox brothers actually had three mills in operation, and in 1887, this particular mill was converted to an electric generating plant for the Rappahannock Electric Light and Power Company. In 1923, the Spotsylvania Power Company took over this company and its customers. All that remains of this activity are concrete and brick remnants adjacent to an old abutment that supported an earlier bridge to Falmouth.

The raceway is obliterated beyond the Knox/Power Co. mill site (as a result of construction of the existing Falmouth Bridge in the 1940s) until it reaches the site of the Bridgewater Mill. Originally built in 1822 by Joseph B. Ficklen, the Bridgewater structure consisted of a two-story masonry grist mill. The mill was expanded in 1850, rebuilt after a fire in 1858, and was the source of an award-winning display at the Paris Exposition of 1878. By the late nineteenth century, this enterprise included a flour mill, a corn mill, a warehouse, a grain elevator, cooper shops, housing, and an office. The Bridgewater Milling Corporation improved the mill race and its dam in 1907, but by 1912 the mill had been closed down, its once thriving buildings used to house electrical equipment for the Rappahannock Electric Light and Power Company. Only a few stone remnants remain.

Below the Bridgewater Mill, along the still visible raceway, were located the Fredericksburg Wood Working Plant as well as the additional mills of the R.T. Knox & Brother enterprise. The wood working plant was established in 1896 but closed by 1904. During its brief tenure it milled lumber and house trim, the necessary machinery powered by a belt connected to the wheel house of the Bridgewater Mill. The Knox Mills processed sumac as well as ground bones for fertilizer. An 1806 map related to a court case of that year shows Hollingsworth's Mill at the end of the raceway, where it turned to reenter the River. The Fredericksburg Water Power

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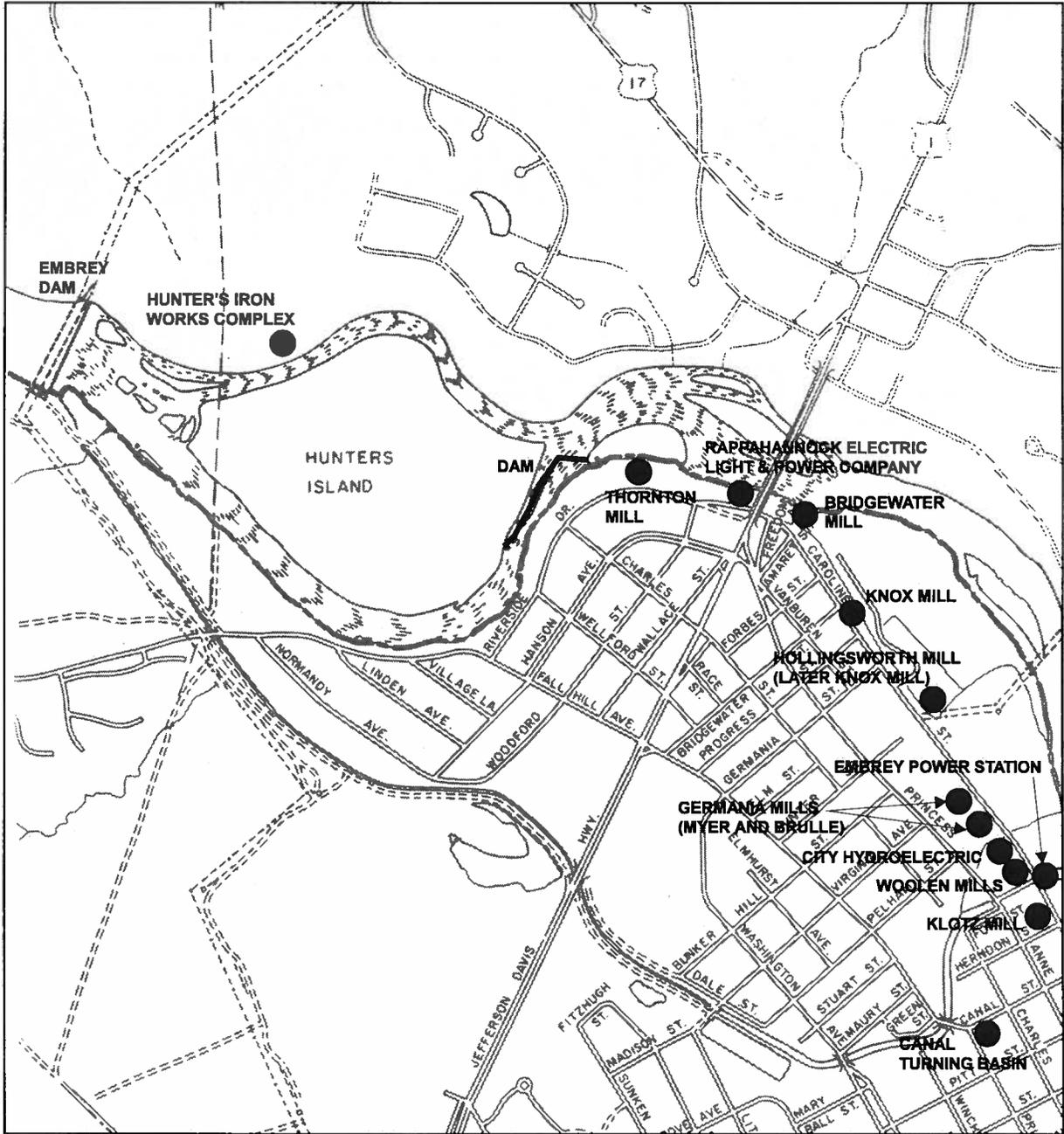
Company's map also shows Hollingsworth's in this location. The second Knox mill was apparently situated between Bridgewater and Hollingsworth, while the third Knox mill may have occupied the Hollingsworth site.

The Rappahannock Navigation Company began construction of a navigation canal from Fredericksburg to the upper Rappahannock basin in 1829. The first canal section extended 3 ½ miles upstream, but in 1854 the Fredericksburg Water Power Company constructed a crib dam across the river that preempted its navigation function to the provision of water power. Canal boats were apparently still able to use the lower two miles of the canal to bring cargo to a turning basin (where the present day Canal and Prince Edward Streets intersect), but the canal's primary purpose had shifted to generating energy.

The Fredericksburg Water Power Company canal flowed into the turning basin and then ran under Princess Anne Street to provide water to several raceways. The Germania Flour Mill was the farthest north of the upper-level mills that used this water power, and was situated approximately 1/4 mile from the Bridgewater Mills. Its owners, J.H. Myer and F. Brulle, eventually built a four-story brick mill that had eight runs of mill stones able to produce 150 barrels of flour and 200 bushels of meal per day. By the late nineteenth century, the mill stones had been replaced by newer rollers and flour continued to be produced into the twentieth century. In 1917, the owners erected a concrete grain elevator to provide storage capacity for 45,000 bushels of grain. Portions of the brick mill remain, notably the outer walls of the lower levels, but the upper stories are gone and the rest is rapidly deteriorating. The concrete grain elevator remains intact, but is overgrown.

South of the Germania Mill stood a municipal electric generating plant. The City of Fredericksburg completed this plant in 1901 and used the power for its street lights. Evidently, a public utility company was not tremendously competitive because it closed by 1919. The remains of this operation include a stone foundation and a concrete pit where an overshot wheel turned.

South of the City's electric plant, the Washington Woolen Mills had been in operation since at least 1859-60. It too was fed by the Fredericksburg Water Power Company canal. The textile-producing machinery was housed in a four-story brick building and powered by a great iron overshot wheel. It remained in operation until destroyed by fire in 1910. An associated pants factory escaped the fire and because it was powered by electricity, was able to operate for several more years. The portions of the Washington Woolen Mills remaining include its stone wheel pit, the headrace tunnel, and a large portion of the old structure (currently used by the Dowling Sign Company).



Map 24. The Fredericksburg Mills.

The southernmost water-powered enterprise in this area was the C.W. Wilder and Company Silk Mill. It was a single-story brick structure whose water wheel turned overhead shafts to operate the mill machinery. This mill opened in 1890 and was sold to the Klotz Throwing Company (another silk processing operation) in 1900. A fire in 1934 brought an end to its use as a mill. Large portions of this brick structure also remain intact and in use for other purposes, at the corner of Caroline and Herndon Streets.

As electricity replaced water power, larger generating plants were needed to meet the growing demand. In 1909, the Fredericksburg Water Power Company completed the Embrey Dam, a reinforced concrete structure that could provide an enormous amount of energy (approximately 8,000 horse power). In 1910, Frank Gay Gould, son of the financier Jay Gould, purchased the Fredericksburg Water Power Company and established the Spotsylvania Power Company. He produced electricity at a reinforced concrete power house where the canal now reenters the river. The branch in the power canal where water diverted to the new power plant is evident just west of Princess Anne Street. The branch to the upper mills is now dry but clearly evident on both sides of Princess Anne Street. The Virginia Electric Power Company (VEPCO) acquired this plant in 1926 and kept it operational until the early 1960s. The City of Fredericksburg acquired the power plant, which remains relatively intact, in 1968 when it purchased its riparian property from the electric company. This structure has since been sold, however, to a private individual.

The lower mills and their power canal remain under the City of Fredericksburg's ownership. Much of this area is included in a public recreational facility called Old Mill Park. The Rappahannock Canal also belongs to the City of Fredericksburg and currently routes raw water to its municipal treatment plant. The canal turning basin has been covered and is now the site of homes and a community center. Another raceway once branched off the main canal, where the water treatment plant is now located, and flowed south to power other mills at the lower end of town. This raceway is also covered over and now provides drainage to a portion of the city. A paper mill (constructed in 1860) was operated by this branch raceway, but burned in 1877. Its remains are located on city property adjacent to the treatment plant. The upper mills, once powered by the Rappahannock Canal, are privately owned, but were included in the City of Fredericksburg's Old Mills Historic District in 1993, along with the lower mills and their associated canal.

The Falmouth mill sites are every bit as diverse as the Fredericksburg mills. In addition, the power canal dramatically commences where a stone cliff was blasted open to provide a channel. These sites are not within the City of Fredericksburg's riparian holdings, though, and are not explored in this study.

The 1854 Crib Dam; the 1910 Embrey Dam - The Fredericksburg Water Power Company dam extended approximately 572 feet across the Rappahannock River. Its construction consisted of large timber cribs filled with stone and the upriver side angled back so its base was wider (36 feet) than the top (18 feet). The upriver side was planked to be watertight although the gathering silt also aided in this regard. A stone lock on the southern end controlled the water flow into the canal as well as allowed passage for the occasional canal boat. A 1910 technical journal, in an article about the Embrey Dam construction, described this earlier dam's characteristics:

the old wooden dam had a spillway of 560 ft. and a large rubble masonry abutment extended back to the hill at the northern end. This abutment was built because proper foundation could not be found for a wooden dam and was protected only by a wing wall, which extended down the river about 20 ft., and a small wooden fish ladder which broke the force of any undertow which existed. During a freshet in 1889 the abutment gave way and the water scoured the river bottom at that point to a considerable depth.

"Engineering Record."
February 12, 1910, p. 197.

The Stafford shore still shows the tremendous erosion that resulted from the 1889 flood described above. The damaged section was subsequently repaired, but the 1850s structure still had limitations. By 1910, as the article in "Engineering Record" noted, the old dam "had deteriorated greatly" and "during the dry seasons the amount of water diverted by the crib dam was insufficient for the needs of the mills."

To provide for additional water-powered development, the Fredericksburg Power Company constructed a masonry dam downstream of the old dam:

After making soundings across the river at the site of the dam it was decided to locate the new structure about 35 ft. downstream from the old one. The soundings showed that the entire foundation would be of very hard granite and that the northern end would have to be carried to a considerable depth on account of the scouring which removed all of the soft rock in 1889 and left in this washout very large boulders and pieces of the old abutment.

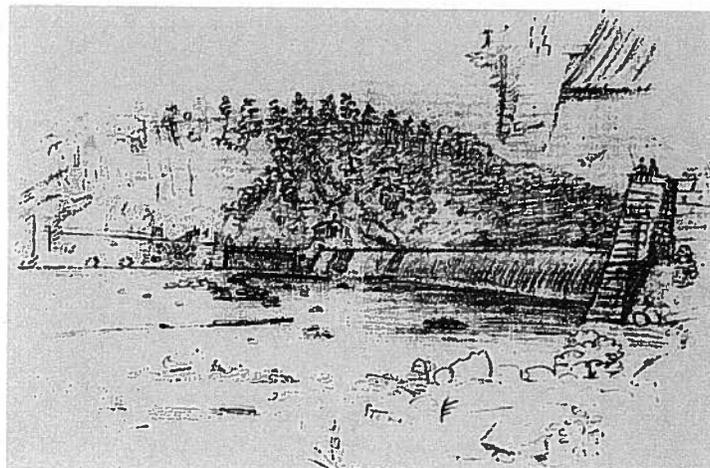
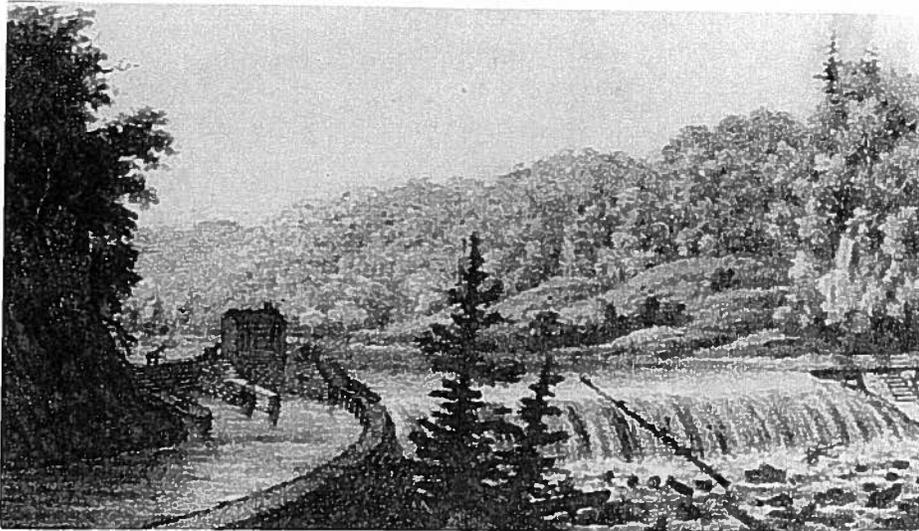
"Engineering Record."
February 12, 1910, p. 197.

This new dam was constructed of reinforced concrete with buttressed piers every 14 feet, on center. At the north end, boulders and debris had to be excavated to a suitable foundation and resulted in portions of the dam being as high as 43 feet. When completed, the Embrey Dam (as it was called) was over 800 feet long, with a 768-foot long spillway. Its upriver side sloped at a 38 degree angle. The engineers also retrofitted the old 1850s canal lock to divert water to the power canal.

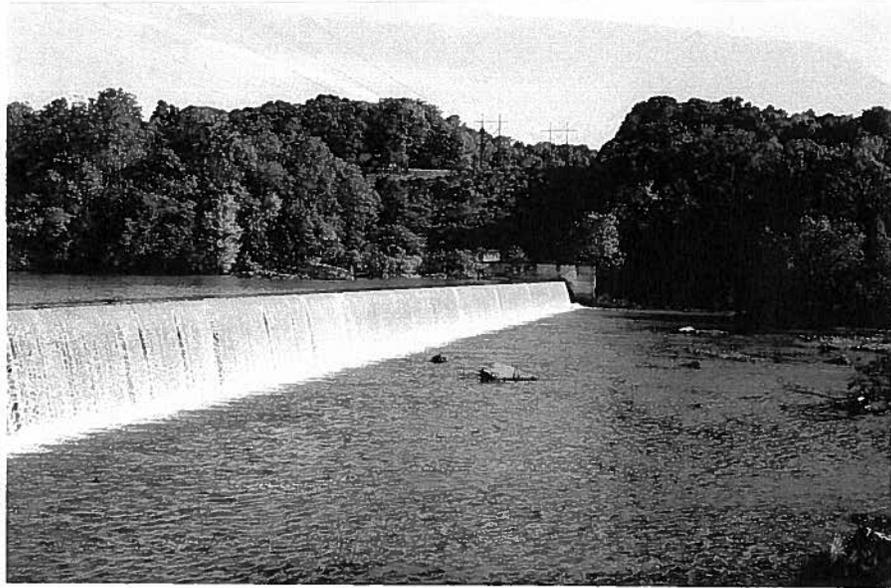
The 1910 Embrey Dam shows signs of decay although its gravity type construction keeps it intact. The 1854 crib dam remains in place behind the masonry dam,

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although it should be remembered that this wooden stucture was already deteriorated when the newer dam was being planned.



The top image is a detail of an 1856 lithograph showing the 1854 crib dam (courtesy of the James Monroe Museum and Memorial Library). Scenes like this were meant to entice investors by showing, among other things, the area's industrial potential. The lower image is an 1863 Civil War sketch of the same dam by J.G. Keyser (courtesy of Cumberland County Historical Society, Greenwich, New Jersey).



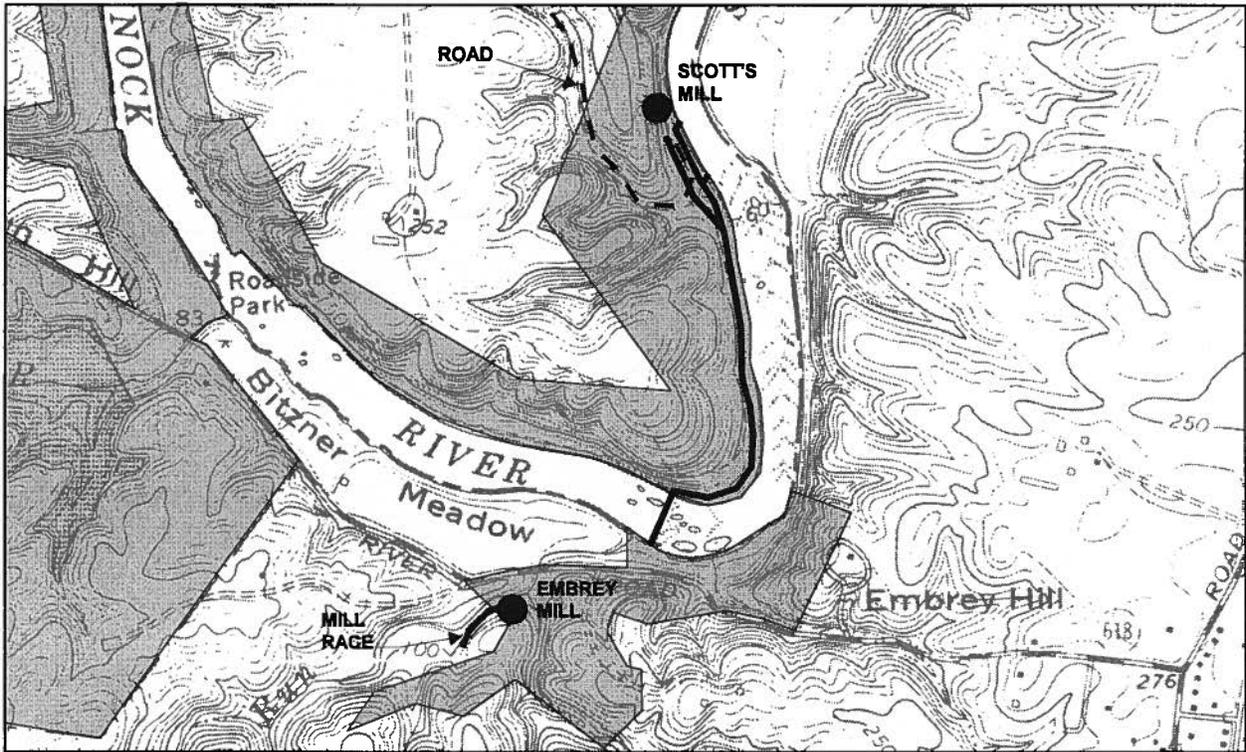
In 1910, the larger Embrey Dam was constructed just downstream of the earlier crib dam. The photo at top is a view looking north, toward Stafford County. At times of low water, the 1850s crib dam becomes visible, as seen in the 1966 photo at bottom. This view is toward Fredericksburg, from the Stafford side of the river.

Scott's Mill (Stafford County) - References to Scott's Mill are found in documents dating from the Civil War. Stonewall Jackson's topographical engineer Jedediah Hotchkiss prepared a map of the Chancellorsville battlefield to accompany General Robert E. Lee's report of that campaign. This map shows a building in this location labeled "Scott's." The requisition book of Lieutenant Lemuel B. Norton, a signal officer in the Army of the Potomac also provides a reference to this site. He described Scott's Ford and placed it "near Scott's Mill." According to Noel Harrison, in his Chancellorsville Battlefield Sites, this enterprise was a sawmill in 1860. It processed timber that was rafted down the river into the navigation canal and then diverted to the power canal that led to the mill.

The remnants of this mill and its mill race are entirely within the City of Fredericksburg's riparian holdings. These consist of a stone foundation and portions of the old canal.

Embrey Mill (Spotsylvania County) - There are several map references to this mill on Golin Run. Jedediah Hotchkiss plotted a mill of this name on his initial Chancellorsville battle map although this site was not included on the finished map that accompanied Lee's Chancellorsville report. The 1836 Map of the Mining District of Virginia plots a grain mill on or very near this site although there is no corresponding name on that document. Finally, the 1863 map of Spotsylvania County prepared by military engineers in the Department of Northern Virginia shows a site called "Embrey's," although Nathaniel Michler, in his 1867 map of the Chancellorsville battlefield, only identified this site as "Mill."

The remnants of the Embrey Mill are evident on a small hill above Golin Run where it meets a small tributary from the east. There is a large flattened area cut into the hillside and a mill race that enters the site from the west. There is also a narrow stone-lined pit that looks very much like it may have once held an overshot wheel. The Embrey Mill site and a portion of its millrace are located within the City of Fredericksburg's riparian holdings.



Map 25. Scotts Mill (site) in Stafford County; Embrey Mill (site).

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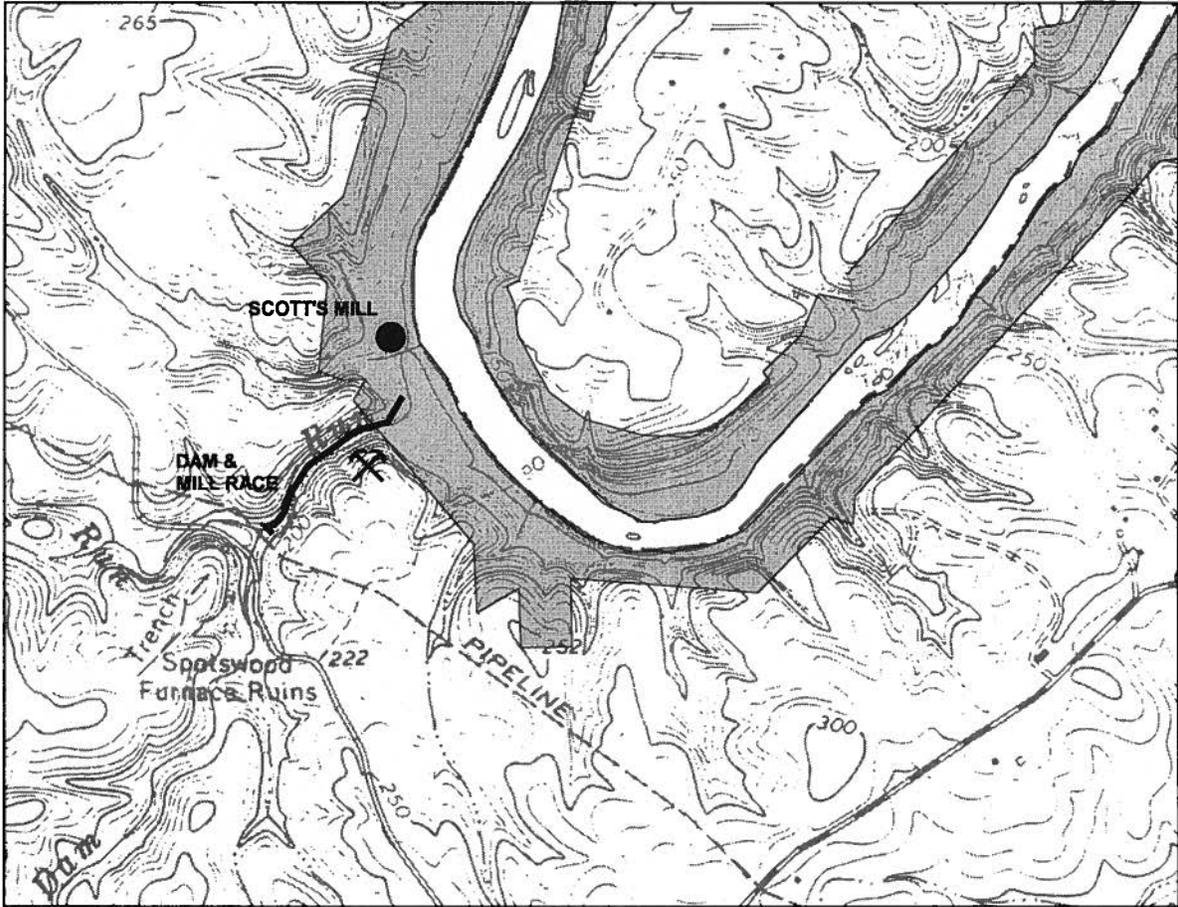
Scott's Mill (Spotsylvania County) - The 1836 Map of the Mining District of Virginia shows a mill on the north side of the immediate junction of Pipe Dam Run and the Rappahannock River. The site is one of three identified as "Company Mills," which refers to the Rappahannock Navigation Company. Various Civil War accounts refer to this structure as Scott's Mill (not to be confused with the mill of the same name near Bank's Ford in Stafford County). The 1860 census for St. George's Parish (Spotsylvania County) enumerates a "Bark and Sumack mill" owned by a Francis E. Leroque which may refer to this site (a stream called La Roque Run is nearby). This entry, however, could also refer to the mill located near United States Ford, which was also known as Bark Mill Ford.

This area constituted the extreme left of the Union line from 1-4 May 1863, during the Chancellorsville Campaign. As a consequence, there are soldier references to this once prominent feature of the landscape. Elements of the Irish Brigade (2nd Brigade, 1st Division, 2nd Corps), for example, moved into this area, as described in a contemporary memoir.

On the 30th (the regiment) crossed United States Ford on a pontoon bridge and continued the march. On May 1st they marched to a place called Scotts Mills and arrived there about ten o'clock that night. Immediately on arrival they set about fortifying the position. They threw out pickets, loopholed the walls of the mill, dug trenches, cut down trees and erected abatis (sic) and did everything possible to ensure a first class defense....

*Memoir of Kenneth H. Powers
unpublished manuscript (courtesy
of National Park Service)*

There is no longer any visible evidence of Scott's Mill although there are likely to be archaeological resources under the silt that covers this area. An elaborate stone-lined raceway can be seen on the west side of Pipe Dam Run, extending upstream to where remnants of a dam are evident just below its confluence with LaRoque Run. Wooden sluices likely bridged the gullies and other gaps along the steep hillside. On the east side of Pipe Dam Run are some quarries which surely provided stone for the mill and its power canal. Scott's Mill and a portion of its stone-lined mill race are located within the City of Fredericksburg's riparian holdings.

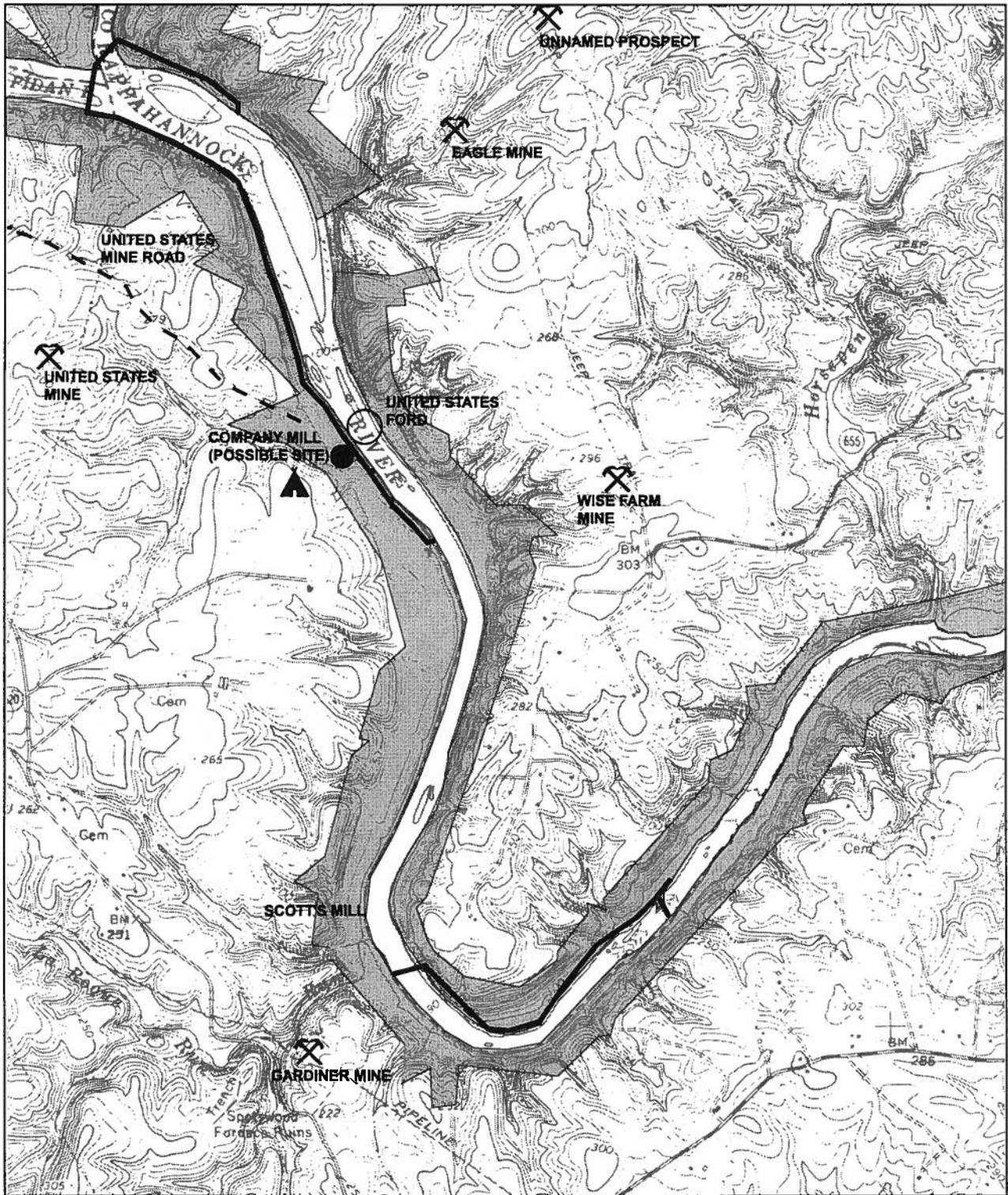


Map 26. Scott's Mill (site) in Spotsylvania County.

Company's Mills (Spotsylvania County) - The United States Ford was a prominent river crossing during the Chancellorsville Campaign, and was also known as Bark Mill Ford prior to the war. The U.S. Mine Road, described in the section on mining can be traced to at least 1836, as it appears on the Map of the Mining District of Virginia, of that date. This map also shows one of three sites labeled as "Company's Mills" in this area. Further, a 1907 property deed refers to the "Old Mill Tract."

As noted under Scott's Mill (in Spotsylvania County), there is a reference to a "Bark and Sumack Mill" in the 1860 Census for St. George's Parish (a portion of Spotsylvania County). The earlier appellation of the United States Ford as Bark Mill Ford suggests this was the location of the mill identified in the Census. The mill owner is listed as Francis E. Leroque, though, which would suggest the Census entry may refer to the Scott's Mill site, which is near the creek named La Rogue Run.

Consistent with its obscure name, there are very few clues to this mill's precise location on the ground. Along a creek, just below the road bridge abutments, where the Ford Road crossed the Rappahannock Canal, is a stone wall that may be the correct site. On the other hand these stones could have been part of a bridge on the road to the ford. The floodplain where the mill is likely to have been located is within the City of Fredericksburg's riparian holdings. The siltation, however, makes it difficult to pinpoint the millsite.



Map 27. United States Ford area.

Richard's Mill (Culpeper County) - Richard's Ford was a significant crossing of the Rappahannock River for centuries. It shows signs of Native American occupation from the European contact period, was probably traversed by John Lederer during his explorations in 1670, had a ferry during the early European settlement period, and became fordable after the Rappahannock Navigation Company dammed the river upstream to provide slackwater for canal bateaux.

In 1817, an engineer named Laomi Baldwin surveyed the Rappahannock River for the Virginia Board of Public Works in anticipation of canal construction. He noted "Richard's House, mill, and Ferry" in this location. At the time of the Civil War, the canal had fallen into disuse, but the crossing remained fordable as Lieutenant Lemuel B. Norton, signal officer in the Army of the Potomac, noted in his requisition book. This conscientious officer wrote that this area was "formerly a ferry now forded at low water, slackwater navigation having changed the character" of the crossing. Confederate cartographer Jedediah Hotchkiss, however, labeled the crossing as Richard's Ferry on his Chancellorsville battle map and noted the house as "Miss Richard's." An 1864 United States Army map also used these latter designations.

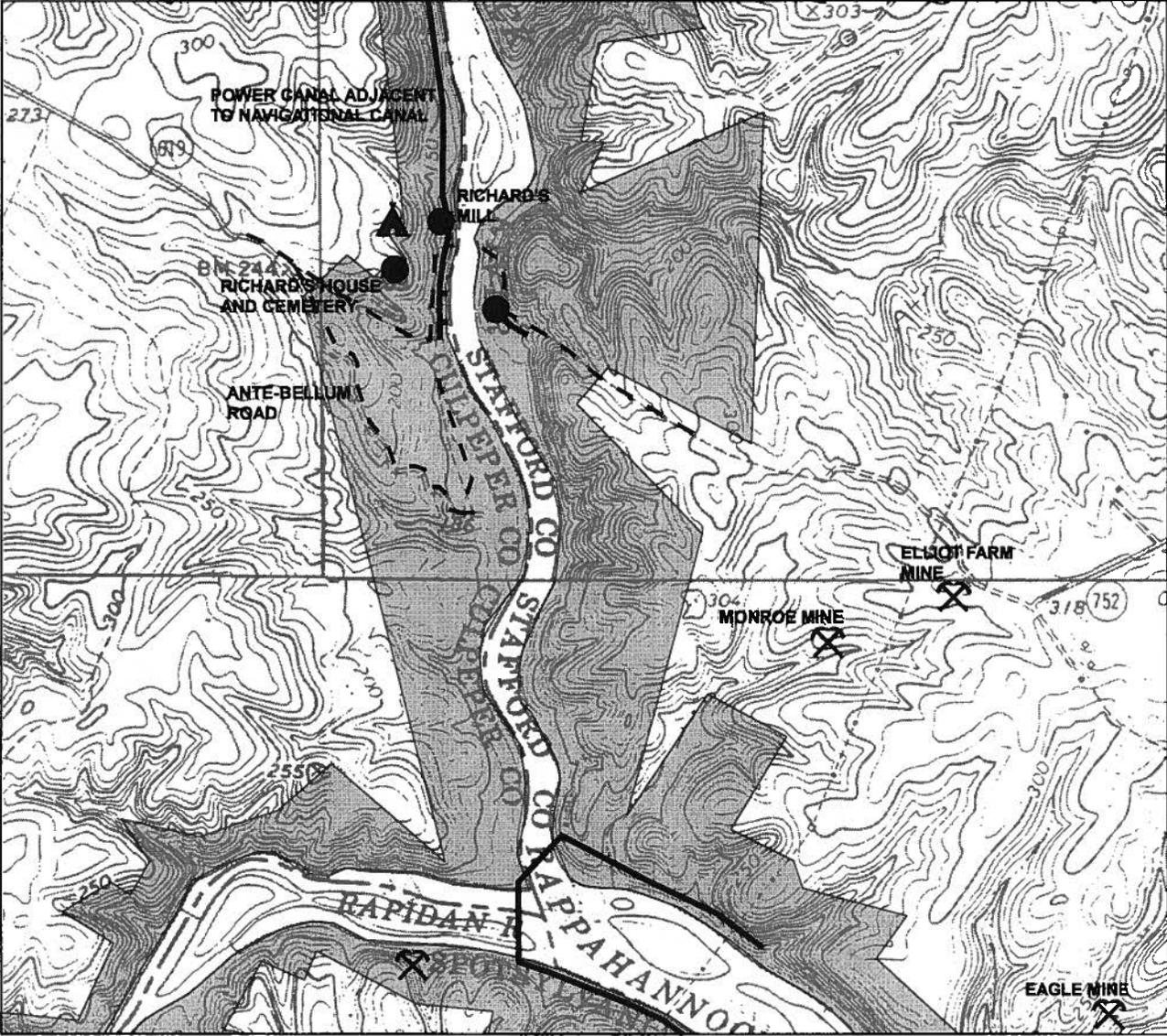
Richard's Mill appears to have been located between the mill race (close to the river) and the navigation canal (inshore of the power canal) where a stone foundation is evident. On the ridge to the north of the mill are the remnants of the Richard's House. These consist of a stone foundation and a 2-story stone chimney. A well is also evident to the southeast of the house and beyond that a rather large cemetery. Most of the graves are marked with crude field stones, but several have carved stones with legends. A Pennsylvania soldier described this house, as he saw it during a reconnaissance in December 1862.

Just on the edge of the ford stood a fine old Virginia mansion, occupied by a farmer and his three daughters. From the windows, the enemy had replied to the (Union) sharpshooters. In passing one of the windows, in search of a place of safety, one of the daughters was severely wounded in the thigh.

Smith, J.L. History of the 118th Pennsylvania Volunteers. Philadelphia, 1905. p.154

Field research has also located road traces on both sides of the river that lead to the ferry/ford. These traces correspond with historic maps and the 1907 property deeds for this area. On the Stafford shore are two sections of stone wall along the old road, as high as 8 feet in some places and approximately 75 feet and 115 feet in length. More dramatic, though, is a 15x15 foot stone foundation, on the Stafford side, ranging in height from 2 to 7 feet, with all four corners intact. The purpose of this structure is unknown.

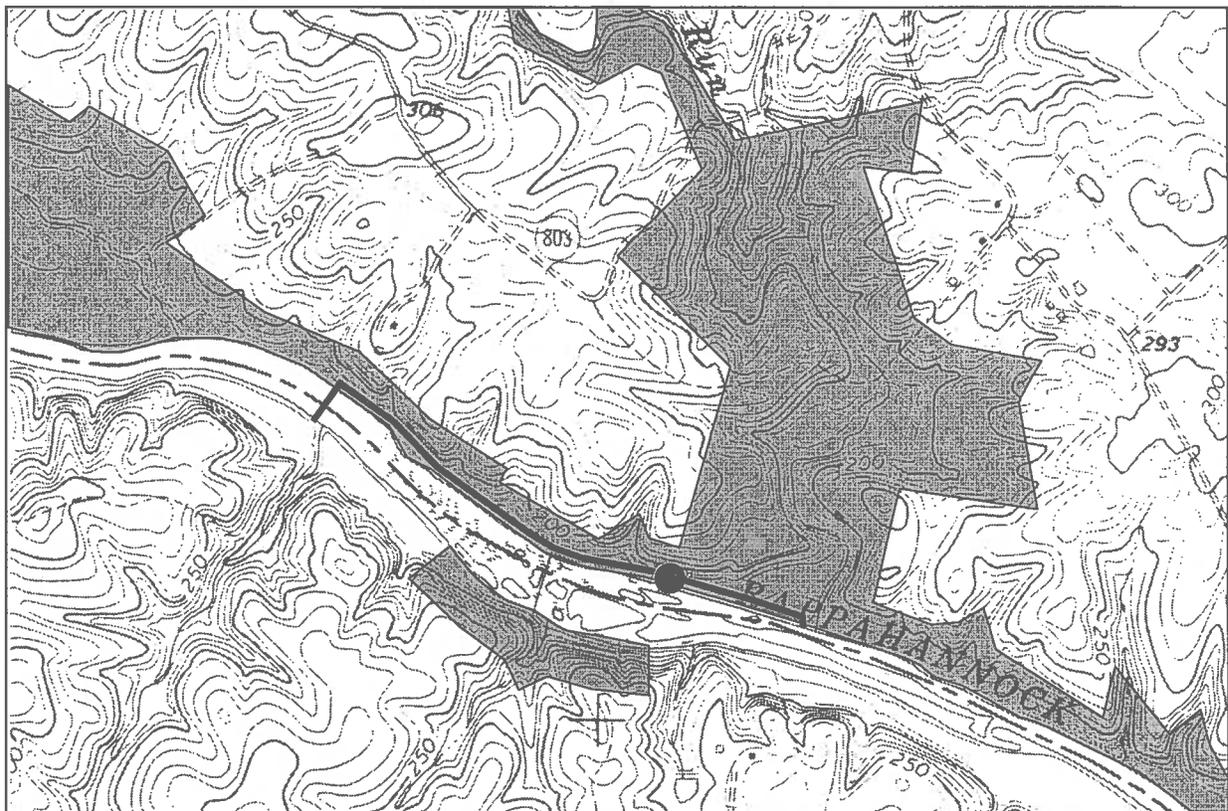
The mill site and the mill race, in Culpeper County, as well as the stone-lined road and foundations on the Stafford side, are within the City of Fredericksburg's riparian holdings. The Richard's House site and its cemetery are on private property.



Map 28. Richard's Mill (site).

Skinker's Mill (Fauquier County) - Approximately midway along Skinker's Canal, at Skinker's Ford, are the remnants of Skinker's Mill. This mill appears on the 1848 "Map and Profile of the Rappahannock River and Its Improvement," related to the Rappahannock navigation system. The remains of this site are rather impressive and include a stone structure, approximately 20x24 feet, with each corner intact. The stone walls are as high as 20 feet in places and consist of cut stone and mortared joints. The mill was situated between the canal and the river.

There are some road traces that lead to the ford. There are also a few places along the canal where many large stones have fallen in the waterway, suggesting collapsed abutments where an old road would have crossed the canal to reach the ford. Locating the old roads with any precision is extremely difficult though. Much of the area above the floodplain has been logged, for instance, making any earlier roads difficult to discern. Further, recreational off-road vehicles continue to use trails along the canal, obscuring evidence of previous occupations.



Map 29. Skinker's Mill (site).

Ellis's Mill (Fauquier County) - This river crossing shows up on an 1817 map developed by State engineer Laomi Baldwin (in anticipation of canal improvements) as "Barnett's Mill and Ford." On an 1848 map showing the completed Rappahannock navigation system, however, the crossing is shown as "Ellis's." The April 9, 1855 edition of the Fredericksburg Virginia Herald indicated that Lewis Ellis rebuilt this mill following a fire.

In August of 1863, the 149th New York Volunteer Infantry (3rd Brigade, 2nd Division, 12th Army Corps) was posted in this area. One of its members penned a memoir that contains an excellent description of the crossing as well as a drawing of the mill.

The river at this point is not more than sixty feet wide, the highway leads down to it on either side, and people riding on horse-back or in wagons ford the stream.... Immediately at the ford there is considerable cleared land on both sides of the river, and rows of bushes and trees stand on the margins of the stream and in the gulfs where the brooks run down the hillside. The course of the river is somewhat tortuous, adding beauty to the scenery.

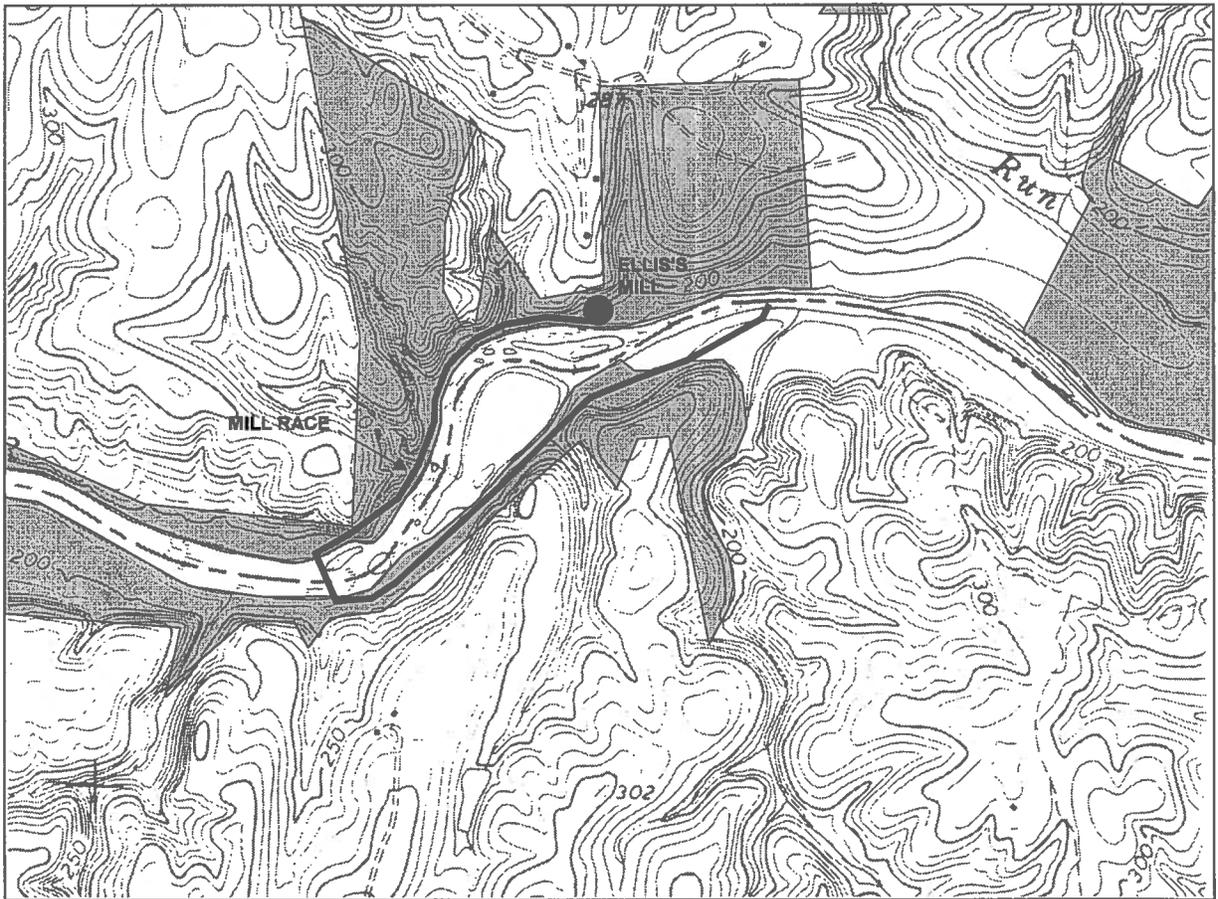
An old man by the name of Ellis had his residence on the road... where it approaches the river. Just above, on the same side, were several buildings, shops and a grist mill, belonging to old man Ellis.

Collins, George K. Memoirs of the 149th Regiment, New York Volunteer Infantry. Syracuse, 1891. p. 172.

The remains of Ellis's Mill consist of a three sided 42 x 42 foot stone foundation along a mill race that extended upstream to where Snake Castle Dam was located (also called Ellis's Dam). The foundation walls range from 2-5 feet high. The hillside north of the mill has obviously been quarried. The mill race is intact upstream from the mill for approximately half its length, but is then washed away in sections and increasingly obscure until it reaches the dam site, where a deep cut is still evident through Snake Castle Rock.

Also evident are three more stone foundations to the east of the mill and a deep, stone-lined road that extends up a ravine. Another stone foundation is situated to the east and adjacent to the road. Another road appears to have traversed the hillside above the structures as well as the quarry.

Ellis's mill (site) and its raceway, as well as the additional stone foundations and the stone-lined road are entirely within the City of Fredericksburg's riparian holdings.



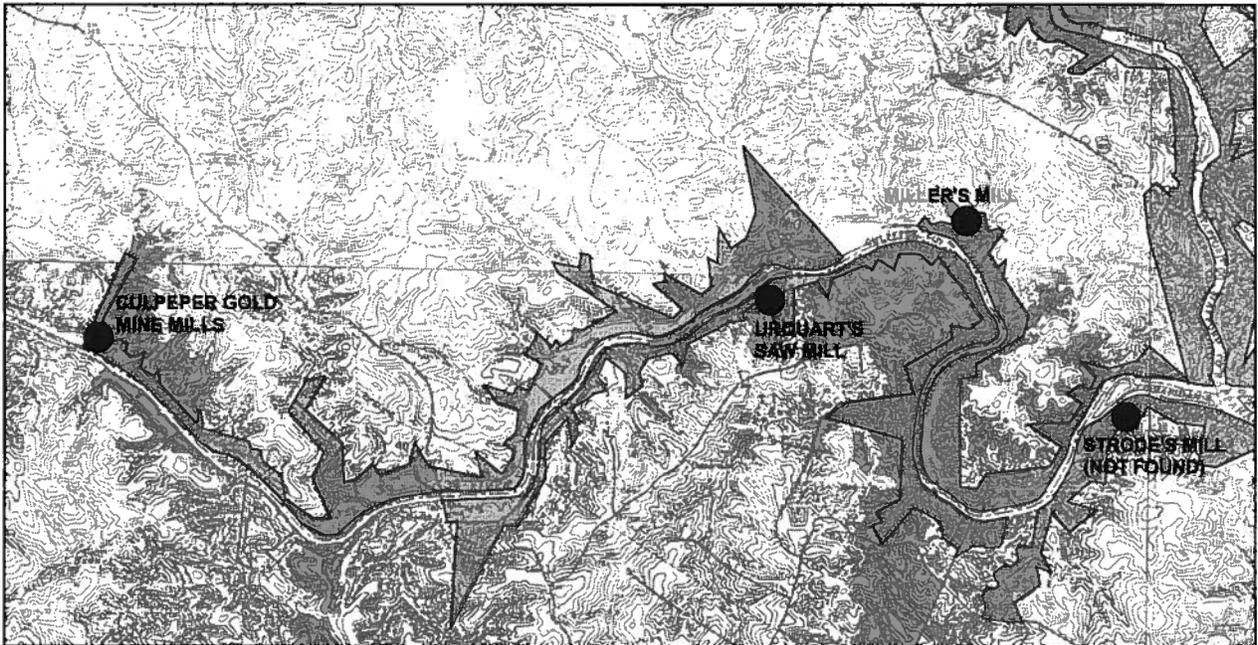
Map 30. Ellis's Mill (site).

Strode's Mill (Spotsylvania County) - The Rappahannock Scenic River Atlas identifies a dam on the Rapidan, approximately 3/4 of a mile above the confluence, but specifies that its related mill has not been located. During field research for this project, historians discovered a rather confusing site in this general vicinity that exhibited traces of gold mining, military trenches, and possibly a portion of a millrace. No trace, however, was found of the mill itself. The above site includes three large pits on top of a hill, running roughly north to south. A mining trench runs up the hillside from the river to the hilltop. At the base of the hill is a short ditch that may be a portion of Strode's millrace. The hill also had military significance because there are a series of trenches that wrap around the crest, perhaps to cover the crossing at Blind Ford. This busy area is entirely within the City of Fredericksburg's riparian holdings.

Miller's Mill (Culpeper County) - There is no visible evidence of Miller's Mill although a portion of the crib dam that diverted water to its millrace remains intact. Its timbers and rocks can be seen at times of low water. The millrace itself is also evident for some of its distance, but becomes obscure as it nears the mill site. The millrace and mill site are entirely within the City of Fredericksburg's riparian holdings.

Urquhart's Saw Mill (Spotsylvania County) - Field research did not locate this mill site in the area shown in Dr. Trout's Rappahannock Scenic River Atlas. This site dates to the timber extraction period (following the iron industry period), but is likely silted over.

Culpeper Gold Mine Mills (Culpeper County) - The Culpeper Mining Company developed an entire industrial complex along the Rapidan River at Mine Run. Various types of machinery were needed to cut the lumber that lined the mine shafts and to crush the gold bearing quartz. A 412-foot dam across the Rapidan (9 feet high) diverted water to a 5,400-foot long canal to provide the necessary power. The industrial site at the end of this impressive canal included a stamping and amalgamating mill, a sawmill, a blacksmith shop, an ore house, and a powder magazine. Only a small portion of this area is within the City of Fredericksburg's riparian holdings.



Map 31. Rapidan Millsites.

DECISIVE TERRAIN: THE CIVIL WAR

The Civil War spilled into the Rappahannock valley in the Spring of 1862. In March of that year, Major General George B. McClellan moved his Army of the Potomac to the peninsula between the York and James Rivers. His intent was to capture Richmond and end the war. Confederate General Joseph E. Johnston hurried his army south to meet this threat. Into this void arrived a Union corps, under Major General Irvin McDowell, which occupied Falmouth in April.

The armies inevitably gravitated to the north-south corridor through Fredericksburg as it was the most direct route between the two warring capitals. The Richmond, Fredericksburg, and Potomac Railroad also served as the logical conduit for the logistics necessary to sustain concentrated armies in the field.

McDowell's Federal force occupied Fredericksburg briefly, but was soon drawn to the west to help crush Major General Thomas J. "Stonewall" Jackson's forces in the Shenandoah Valley. During a 30-day period in May-June, Jackson outmarched and outfought his several adversaries there. He then brought his troops to Richmond to assist the renamed Army of Northern Virginia, under its new commander General Robert E. Lee. Together they would push McClellan back from Richmond's doorstep.

McDowell's corps was eventually merged into the newly created Army of Virginia commanded by Major General John Pope. In July, while Lee and McClellan faced each other on the Virginia Peninsula, elements of this new army probed toward Culpeper, Orange, and Madison Court Houses. Pope then advanced further south toward the Rapidan, planning to capture Gordonsville. Lee, in the meantime, had neutralized McClellan's massive force and sent Stonewall Jackson back to the Rappahannock Valley to counter Pope's movements. Of critical concern was the rail junction at Gordonsville which connected to Richmond via the Virginia Central Railroad. In August, after some initial sparring, Jackson attacked one of Pope's brigades, under Major General Nathaniel P. Banks, at Cedar Mountain.

Jackson was soon followed by the rest of Lee's forces and the Army of Northern Virginia soon opened what became the Second Manassas Campaign. The contending armies moved away from the Rappahannock basin, fought at Manassas and met again along Antietam Creek near Sharpsburg, Maryland. The Army of the Potomac, having absorbed Pope's Army of Virginia, moved south from Maryland in pursuit of Lee's Army of Northern Virginia. The corridor of operations was once again along a rail corridor, the Orange and Alexandria Railroad. McClellan was extremely reluctant to bring on a battle, however, and on November 7th, President Abraham Lincoln appointed Major General Ambrose E. Burnside to command the Army of the Potomac.

Burnside soon abandoned the Union advance along the Orange & Alexandria. On 15 November, he began to move his operations to Fredericksburg where his troops could be supplied by ships at Aquia Landing and then by the U.S. Military Railroad, using the Richmond, Fredericksburg and Potomac right of way to Fredericksburg. In December, Burnside forced a crossing of the Rappahannock at Fredericksburg and laid pontoon bridges at three locations. The subsequent battle proved catastrophic to Union forces, though, and a few days later the Army of the Potomac retreated from the wrecked town.

In January 1863, Burnside sought to redeem himself and ordered a march upstream to flank the Confederates out of their Fredericksburg position by crossing at Bank's Ford. This movement began on January 19th, but a cold rain soon turned the roads to mud and the Union advance stalled. The troops struggled to extract themselves from the quagmire, to the taunts of Confederate soldiers on the other side of the river, and this ill-fated movement soon collapsed. Burnside was relieved of command shortly thereafter and his successor, Major General Joseph T. Hooker, began the process of rebuilding the demoralized troops into a fighting force for further campaigns in the spring.

During the long winter months, the contending cavalry remained active. In February, Confederate Brigadier General Fitzhugh Lee raided Union cavalry outposts near Hartwood Church. Hooker authorized his cavalry commander Major General George Stoneman to respond, and in March one of Stoneman's divisions forced a crossing of the Rappahannock at Kelly's Ford to confront the southern horse soldiers at Culpeper Court House. During a fluid battle that rolled across the landscape, the Union cavalrymen held their own against General J.E.B. Stuart's superb Confederate horsemen. It was during this engagement that the young artilleryist John Pelham was mortally wounded.

While cavalry operations became increasingly aggressive, the Union Army worked to revise its logistics doctrine to enhance its capability to operate beyond a supply depot fed by a railroad. By carefully specifying the equipment and rations to be carried by wagons, by the troops themselves, as well as by mules, the Federals planned to increase their tactical mobility and range of operations. During the ensuing Chancellorsville Campaign, Hooker proved the utility of the new doctrine. In late April, he sent several corps far upstream to cross the Rappahannock River at Kelly's Ford. These units then swung south to cross the Rapidan at Germanna and Ely's Fords, placing a formidable Federal force on the same side of the River as Lee. Federal columns subsequently moved south along the River and uncovered U.S. Ford, across which additional troops poured. Another column advanced along River Road toward Bank's Ford.

While Hooker had been able to effectively rebuild the Army of the Potomac and

improve its operational capabilities, he mismanaged this potent force once he had brought it to battle. The capable Lee exploited this weakness and boldly maneuvered to destroy the invading force. His success in doing so is all the more impressive because he had only a portion of his army present. Confederate logistic constraints had forced Lee to detach two divisions of General James Longstreet's corps so they could find adequate subsistence near Suffolk. By the time the entire Army of Northern Virginia was on hand, Hooker had fled back across the Rappahannock.

Following his overwhelming though costly victory at Chancellorsville (casualties included Stonewall Jackson), Lee made plans to take his Army of Northern Virginia into Maryland and Pennsylvania. He sought to obtain supplies, horses, and transport outside of Virginia while also maneuvering for military gain. Hooker heard rumors that such an offensive was imminent and alerted his cavalry to the need for additional reconnaissance. The Army of the Potomac's mounted arm, now under the command of Major General Alfred Pleasonton, moved out of Falmouth on 8 June and headed upstream toward Culpeper. The next day, the blue-clad troopers splashed across both Beverly's and Kelly's Fords and initiated an action that became known as the Battle of Brandy Station. Once again, the Union horse soldiers held their own against Stuart's troopers. They also confirmed that the Confederates had abandoned their lines at Fredericksburg and were moving north. The scene of action again shifted away from the Rappahannock valley, this time to roads that eventually led to Gettysburg.

A new Union commander, Major General George G. Meade achieved victory at Gettysburg, but fighting in Virginia did not immediately resume. After Lee's retreat from Pennsylvania, the two armies paused to recover from their ordeal. Lee had moved back to Culpeper while Meade followed, but remained north of the Rappahannock. In September, however, Lee sent Longstreet with two divisions to Tennessee. Meade learned of this reduction in strength and soon advanced on Culpeper. Lee withdrew behind the Rapidan, but in early October two of Meade's corps were ordered to Chattanooga, Tennessee, following the Union defeat at Chickamauga (where Longstreet and his divisions had helped attain victory). Lee responded to the loss in Union strength by advancing back into Culpeper. Meade withdrew north, followed by Lee, but soundly thrashed one of Lee's corps at Bristoe Station on 14 October 1863. This brief campaign ended with Lee still north of the Rapidan, though south of the Rappahannock.

Meade renewed his offensive in order to retake the ground between the Rappahannock and Rapidan Rivers. On 7 November, he forced a crossing at Kelly's Ford and also neatly captured a Confederate detachment at Rappahannock Station, through a rare night assault. Lee crossed to the area south of the Rapidan.

Meade consolidated his gains and established a supply depot at Brandy Station. He

then maneuvered to turn Lee's flank in what would come to be called the Mine Run Campaign. On November 26, Meade crossed the Rapidan at Jacob's, Germanna, and Culpeper Mine Fords and turned his columns to the west. Lee countered by taking up a strong position along Mine Run and waiting for the Union columns to attack. Rather than engage in a frontal assault whose success appeared dubious, however, Meade had the moral fortitude to call off the attack, and seek battle another day.

Following this season of maneuver, the two armies settled into winter quarters. The Union Army maintained its massive supply depot at Brandy Station to support its encampments around Culpeper. The Orange and Alexandria Railroad served the Federal forces well that winter and the Army of the Potomac gained strength for 1864. Lee also maintained a rail supplied depot at Gordonsville, but the Confederate supply system could not meet his needs. Once again, Lee had to disperse his army so its components could find adequate subsistence. The danger of this necessity was that the Army of the Potomac could initiate action in the spring before the Army of Northern Virginia could concentrate. This eventuality had occurred at Chancellorsville and would occur again in the spring of 1864. Only the last minute arrival of Longstreet's Corps on May 6, 1864 would avert disaster to Lee's Army in the Wilderness.

During this winter, Ulysses S. Grant, newly promoted to lieutenant general, came east to assume command of all Union armies. He made his headquarters with Meade's Army of the Potomac. The Union Army's logistics capabilities had continued to evolve and Grant planned for Meade to cut loose from his supply base at Brandy Station when he once again took the field. Rather than advancing along a rail line, the Army of the Potomac would benefit from a series of temporary depots established as circumstances dictated. The first of these depots would be established at Fredericksburg, as Grant and Meade advanced on Spotsylvania Court House, following the Battle of the Wilderness. As operations moved south, other depots would be established along the coast, supported by the U.S. Navy. Previously established depots, such as Fredericksburg, would then be evacuated and abandoned. On May 4, 1864, the Army of the Potomac advanced out of Culpeper and crossed the Rapidan River at Germanna and Ely's Fords. At Germanna, Grant watched as his powerful columns crossed on several pontoon bridges and snaked into the Wilderness, initiating the last military campaign that would be fought in the Rappahannock valley.

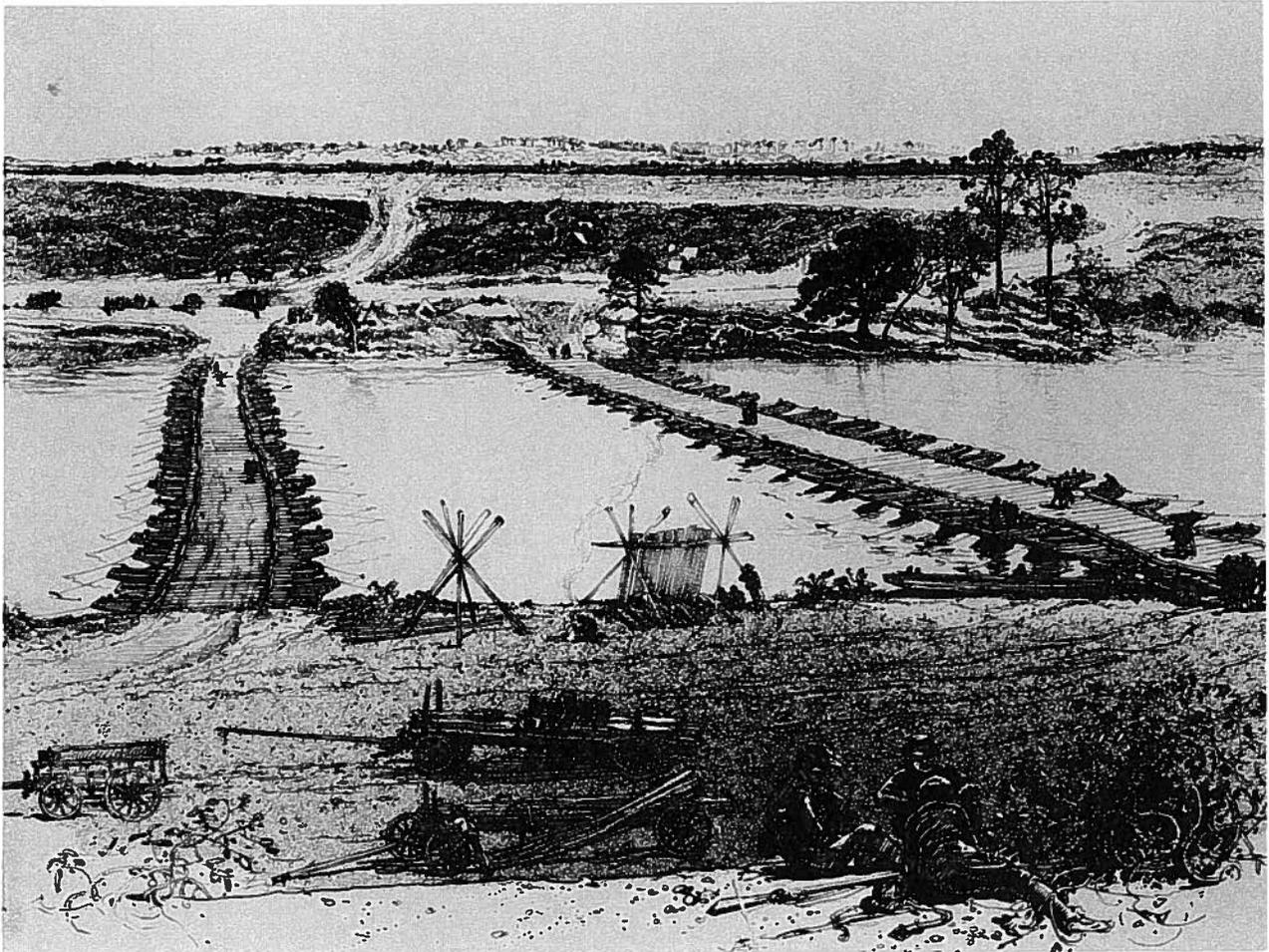
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During the Civil War, military engineers readily bridged river barriers with pontoons. This operational capability had great implications for the campaigns fought in the Rappahannock valley. The scene here, from the American Heritage Century Collection, shows two such bridges downstream of Fredericksburg, during the Chancellorsville Campaign. Note the necessary approach roads that also had to be prepared to allow the rapid movement of men and materiel.

Fredericksburg - When civil war broke out, Fredericksburg was destined to feel its full impact. Over the course of the war years, the town was occupied, looted, and shelled; its streets bloodied by intense combat; its buildings used as hospitals; and any available open ground dug up to accommodate graves. This section will remain focused on this project's scope however, and describe only the Civil War activity in and around the river-related mills and sites referenced in the section on **Mills and Other Industries**.

Because of its numerous water-powered industries, Fredericksburg had immediate significance to Confederate logistic needs. During the war's early months, local enterprises processed and produced many supplies, including blankets from the (Washington) Woolen Mills, for Confederate forces in Northern Virginia. As the Union waterborne invasion converged on the Richmond peninsula, however, Fredericksburg came under Federal occupation as Confederate forces moved south to confront this offensive. The employees of the Woolen Mills evacuated their machinery at this time, to prevent its loss.

Federal troops occupied Falmouth and Fredericksburg from April through August 1862, but then abandoned the town as other campaigns drew them elsewhere. By November of that year, though, the Army of the Potomac was back. In anticipation of a threatened crossing on 17 November 1862, some Mississippi troops were ordered to occupy the Bridgewater Mill and its millrace. These soldiers opened fire as the Union troops occupied the opposite shore, but no crossing developed. General Robert E. Lee used this time to concentrate his Army of Northern Virginia and prepare for battle. Not until 11 December 1862 did the Union army force the Rappahannock. Once across, the Union commander, Major General Ambrose E. Burnside, encountered the Fredericksburg Water Power Company's canal and on 13 December 1862, he funneled his attacks in Fredericksburg to a narrow front to avoid this barrier.

During this December battle, Federal signalmen apparently used the cupola of the Woolen Mills as a signal station. Federal infantry also loopholed this upper mill for musketry. The lower mill (Bridgewater) was not militarily useful to Union forces, but had been shelled by Union artillery while it was in use by Confederate pickets. The Paper Mill, located where a canal ditch branched off from the larger power canal, was also a prominent landmark in December 1862. It too was shelled from afar and eventually loopholed by occupying infantry pickets. Burnside thought he had avoided having to assault across a canal, but the canal ditch that extended south from the Paper Mill proved to be an unexpected obstacle. The account of a Union staff officer is instructive:

I well remember on the 12th of December... carrying a message to (Major General Ambrose) Burnside..., saying that so far as (Major General Darius Couch) could judge from the reports of citizens, contraband, and deserters, a deep trench or canal ran around the town, between it and the hills, which would prove

a serious obstacle to the passage of troops, and I never shall forget how indignantly and even angrily Burnside rejected the suggestion.

Bigelow, p. 388.

This millrace was apparently bridged at only three locations - Hanover Street, Prussia Street (Lafayette Boulevard), and the Fredericksburg and Valley Plank Road (William Street). To try to make this barrier more passable, Union troops closed the gate at the Paper Mill and opened its exit at a mill in the lower end of town. This effort had some effect, but the canal ditch remained a hazardous feature to overcome. A Connecticut soldier described his experience at one of the inevitable bottlenecks:

The command filed to right and moved out... one block... until the dreaded canal was reached and the bridge touched - then the storm burst upon them. The rebel gunners had the exact range.... as the regiment could go but slowly over the bridge the missiles did murderous work.

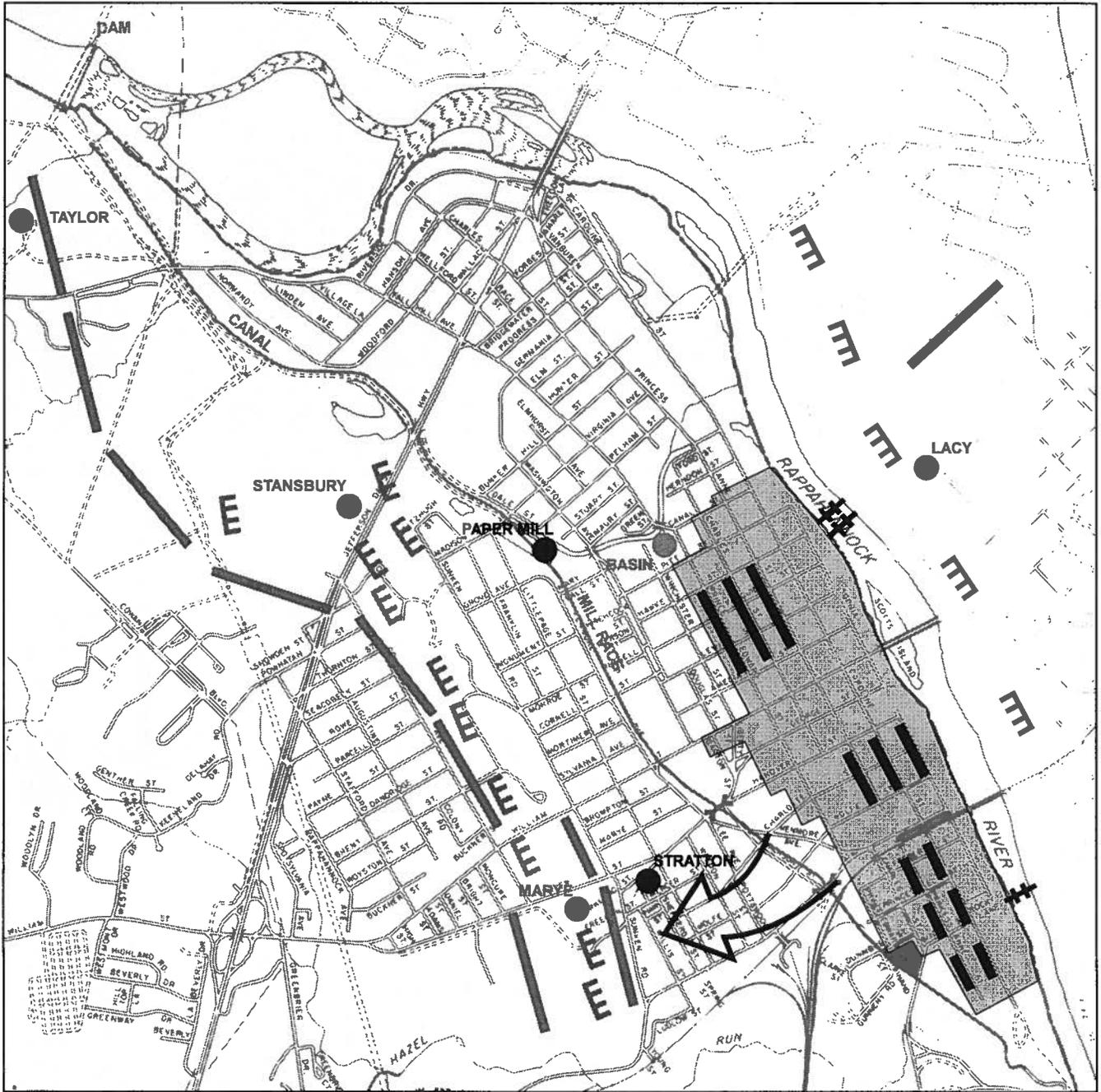
Stevens, Henry S.
Souvenir of Excursion to
Battlefield by the Society
of the Fourteenth
Connecticut Regiment.
Washington, 1893, p. 82.

In the Spring of 1863, during the Chancellorsville Campaign, Union forces left to operate at Fredericksburg encountered these same obstacles in seeking to attack the Confederate-held heights behind the town. The Union 6th Corps, Major General John Sedgwick commanding, attacked where the Union assaults in December had failed so miserably, but also attempted to cross the main power canal farther to the west. Major General Gouverneur K. Warren later described his actions of 3 May 1863 as a Federal column hurried forward:

I galloped to the front to reconnoiter for a point to assault. Our object then became apparent to the enemy (and a Confederate) gun was limbered up --- and sent at a run to command the nearest bridge over the second canal. Not a man or gun was at that moment there to resist us. I found the plank only taken up from the bridge, and, ... directed the pioneers to pull boards from the siding of the nearest house as rapidly as possible to replace the planks.

While this was being done, the single gun opened upon us with shrapnel.... Soon another gun was added to it, and before we could get ready to cross the bridge a regiment of the enemy's infantry filed into the rifle-pits at double quick time, and the opportunity was lost. General Gibbon had rapidly brought up artillery to reply to the enemy, but only to suffer itself without doing any damage in return, as those on the hill were completely sheltered by epaulments. General Gibbon also moved his other brigade rapidly to the right, to attempt the passage of the second canal by the bridge near Falmouth, but this movement was also anticipated by the enemy's infantry extending themselves to our right.

O.R. XXV, pt.1, p. 202.

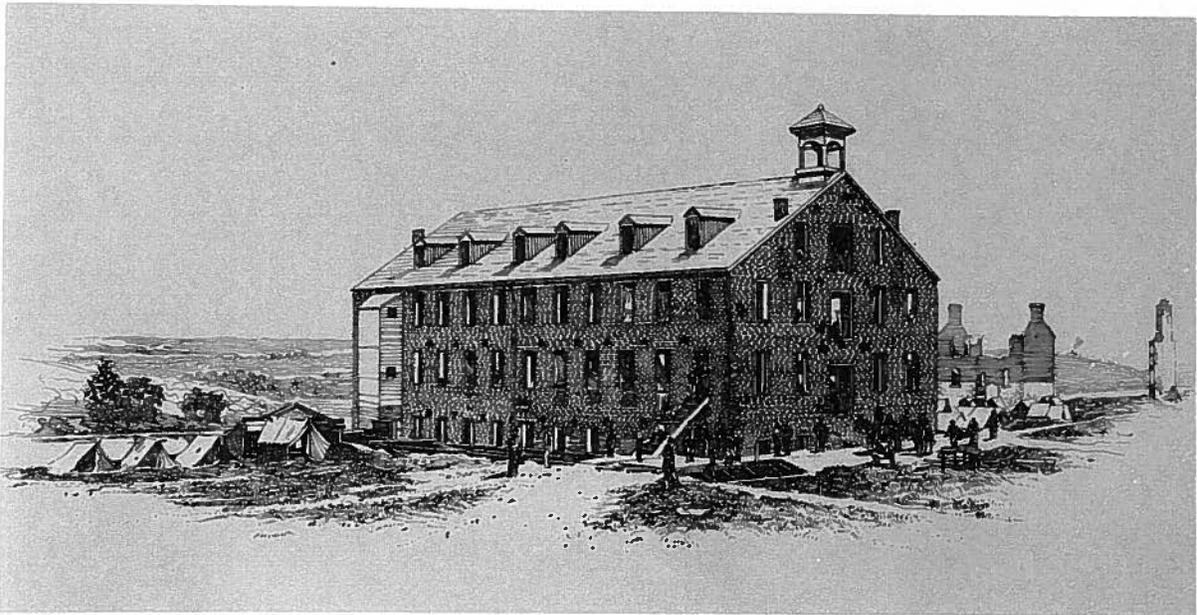


Map 32. The 1862 Battle of Fredericksburg. The shaded area denotes the extent of the built environment at that time.

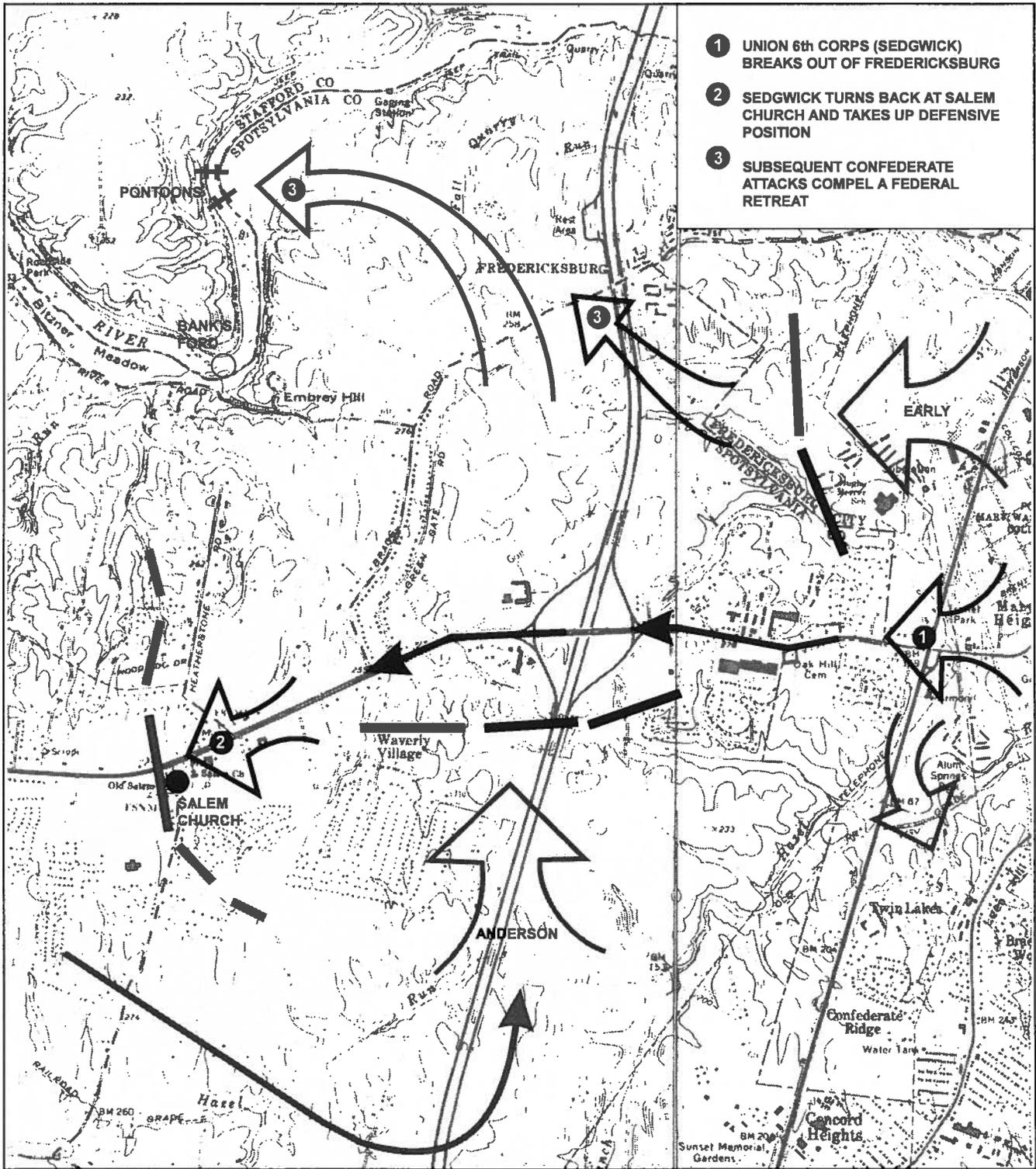
25

The first bridge where General Gibbon tried to attack is where the Route 1 Bypass now crosses the Rappahannock Canal (which Warren called "the second canal"). A portion of a stone bridge abutment is still visible adjacent to, and upstream of, the modern bridge. Gibbon's demonstrations on the left, though unsuccessful, strained the Confederate's extended line. A renewed Federal assault on the thinned Confederate right was subsequently successful, and Sedgwick's corps broke out of Fredericksburg, and formed to march west toward Chancellorsville. Lee's Confederates countered Sedgwick's advancing column at Salem Church, however, and the Federals eventually withdrew across the Rappahannock at Scott's Ford, during the night of 4/5 May 1863.

In the Spring of 1864, the armies clashed to the west and south, in the Wilderness and at Spotsylvania Court House. The Federal wounded from these fields were brought to many of the large buildings in Fredericksburg, including the mills, to receive medical attention before being transferred north. In May 1864, for instance, the Woolen Mills building served as a hospital for elements of the Union 5th Corps. Not all of the wounded soldiers were evacuated however. Following the war, the remains of 139 soldiers were disinterred from this mill tract alone, for transfer to the National Cemetery, atop Willis Hill. A fire in 1875 revealed another relic of the war - an artillery projectile that had remained hidden in the structure and which subsequently exploded from the heat.



The Woolen Mills in use as a Union hospital in 1864 (American Heritage Century Collection).



Map 33. The 1863 Battle of Fredericksburg.

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Bank's Ford - During military operations, rivers have always represented an obstacle - to be overcome by an attacking force or used as a barrier for defense. Bank's Ford took on great importance during the Civil War because it was the first place above Fredericksburg where the terrain gave way to allow a river crossing to be effected.

In *The U.S. Army War College Guide to the Battles of Chancellorsville and Fredericksburg*, Dr. Jay Luvaas points out that Bank's Ford was "decisive terrain" during military operations in this area. This term is defined by the U.S. Army as a position that has a significant impact on how a commander pursues his mission. During the Chancellorsville Campaign, General Robert E. Lee controlled Bank's Ford until 3 May 1863 and could operate without interference between his two wings. Major General Joseph T. Hooker, on the other hand, had to contend with more lengthy communications, from Fredericksburg, across United States Ford to the Chancellor House. As a result he found coordination of his divided forces cumbersome and sometimes ineffective.

The 1861 Military Dictionary describes where fords were typically located, what features were needed for the passage of troops, and what types of preparations might be necessary:

Fords are generally to be found above or below a bend, and often lie in lines diagonally across the river; small gravel forms the best bottom; and rock, on the contrary, the most dangerous, unless perfectly regular and not slippery.... The approaches should also be levelled, and where the soil is soft, rendered firm by covering them with fascines, etc., so that the troops may advance with a broad front, and rapidly mount the further bank.

Military Dictionary, pp. 309-310.

Bank's Ford is actually two crossing sites. The old ford occurred at the bend of the river, just below Bank's Dam which diverted water to Bank's Canal. A crossing farther downstream, at Scott's Mill was called Scott's Ferry. The ferry probably became necessary after a navigation dam (Taylor's) downriver raised the water level and made this crossing unfordable. After his debacle in Fredericksburg, Major General Ambrose E. Burnside sought to regain the initiative by using upriver crossings to outflank his opponents. He subsequently assigned troops to quietly prepare the approaches to both Bank's and United States Fords. A soldier in the 154th New York Volunteer Infantry (1st Brigade, 2nd Division, 11th Corps.) recounted his experience. Although the 154th worked at United States Ford, it illustrates the type of work necessary to prepare a crossing point:

We marched up the river eight or ten miles and laid on our arms to rest until daylight. The point at which we stopped was United States Ford.... From near our bivouac a gulch or gully ran diagonally down to the riverbank,... (our mission) was no less than the construction of a wagon road down the gulch to the river, and we were required to work as quietly as possible.

Army wagons brought tools and we cut the small trees into lengths about eight feet long, then digging out the side hill laid the logs across the roadway and thus made, put a light covering of dirt on top. This was called a corduroy road, one the army become quite accustomed to making, for whenever we struck low ground where it was necessary to move artillery or wagon trains, the corduroy had to be used as the quickest means of producing a solid foundation. After three days work we completed a pretty good road from the plateau above to the water's edge. We then returned to camp at Falmouth.

McKay, Charles W. "Three years or during the war." National Tribune Scrapbook, p. 125.

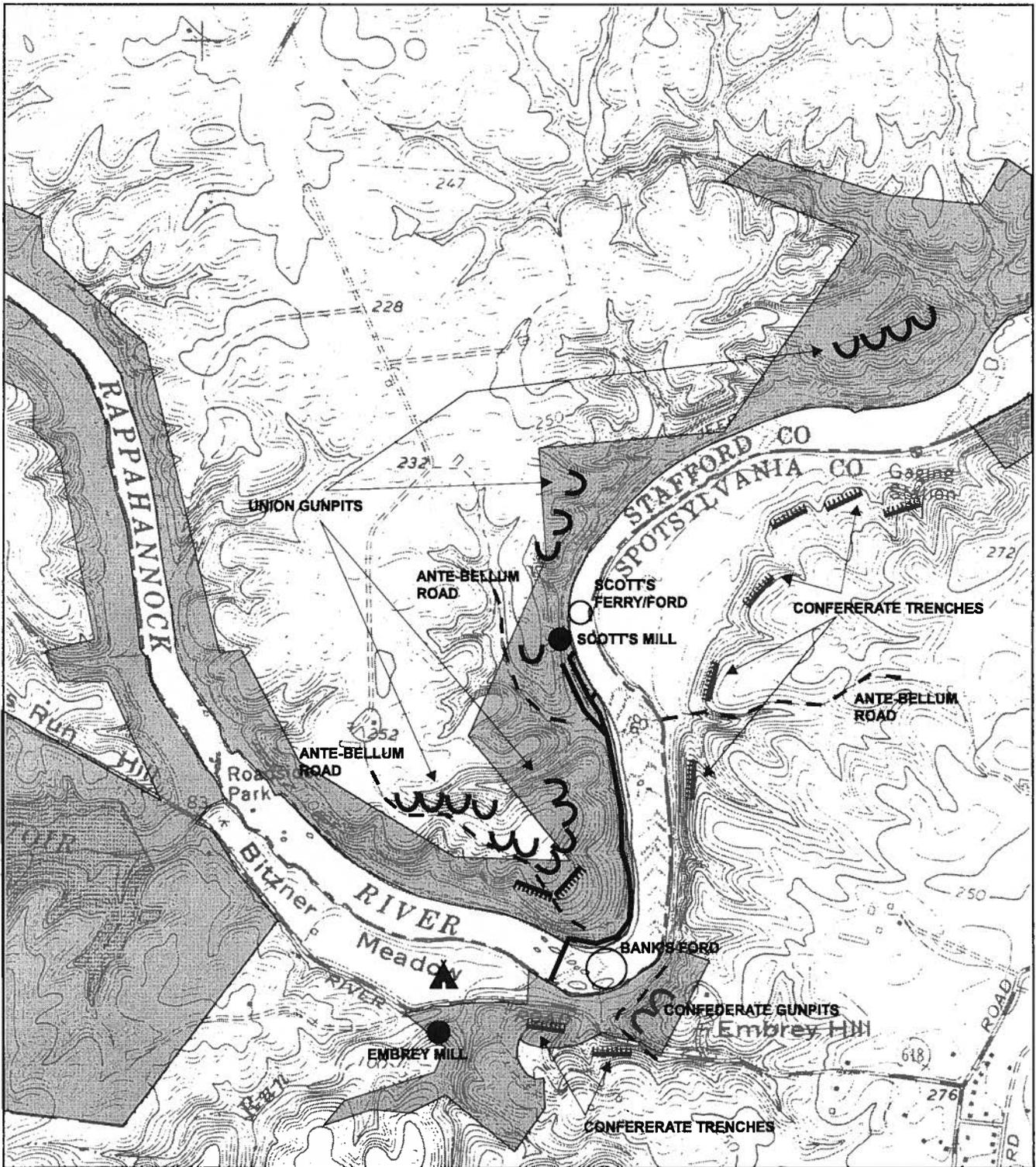
In January 1863, one month after his disastrous defeat at Fredericksburg, Burnside put his army on the road to Bank's Ford to try to get on Lee's flank. As units took up the march, though, the weather turned brutal. A cold rain pelted the blue columns, the roads quickly became impassable, adjoining fields flooded, and wagons and artillery sank to their axles. Advance elements of the Federal army reached the crossing but the Union force had literally ground to a halt in the mud. The Mud March, as it came to be known in the Army of the Potomac, never threatened Lee's Army of Northern Virginia. Still, this Federal effort impressed upon the Confederate command the need to ensure the vulnerable fords remained well protected. On 28 January 1863 a Confederate infantryman of the 56th Virginia (Garnett's Brigade, Pickett's Division, Lonstreet's Corps) wrote his wife from the Bank's Ford area:

We have come up here for the purpose of throwing up breastworks as it is believed the Yankees intend trying to cross the river above Fredericksburg.... I am writing this under four little picket tents while the snow is pouring down in torrents but the ground is so wet that it dont stick much.

I Wrote You Word: The Poignant Letters of Private Holt. H.E. Howard, Inc. 1993, p. 124.

Both Union and Confederate troops threw up earthworks at Bank's Ford. The dates of construction are difficult to define, but the overall result was a series of infantry trenches and artillery epaulments to cover both crossings. River-oriented defensive positions, however, lose their utility if an opposing force is already across the river. At the onset of the Chancellorsville Campaign, Hooker launched his columns - consisting of the 5th, 11th and 12th Corps - on a wide swing to the west. These advance forces crossed the Rappahannock far upstream at Kelly's Ford and then swung down to cross the Rapidan at Germanna and Ely's Fords. A division of Major General George Meade's Union 5th Corps then uncovered United States Ford on 30 April 1863 and Union engineers immediately began building pontoon bridges. When completed, two divisions of the Union 2nd Corps poured across into Spotsylvania without having to follow the flanking column's lengthy route. The following day, Meade moved along the River Road toward Bank's Ford. He noted in his report:

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Map 34. Military Preparations at Bank's/Scott's Ford.

The next day (May 1),... the corps was put en route to take a position to uncover Bank's Ford,.... Griffin was ordered to move down the River or Mott road....

the column of Griffin and Humphreys proceeded on the River road, and had reached Decker's house, within view of Bank's Ford, without any opposition from the enemy, when the order of recall was received, and the column returned to Chancellorsville.

OR XXV pt. 1 p. 507.

That day, Hooker's offensive had run into Confederate resistance on the Plank Road and the Orange Turnpike. Though the Union 3rd Corps had crossed United States Ford that morning, adding to the growing concentration of Union strength at Chancellorsville, Hooker hesitated to force the issue. Lee had left a force at Fredericksburg to cover the Union presence there and turned to the area upriver where the bulk of the Union army was gathering. General T.J. "Stonewall" Jackson took command of the available Confederate units and moved to attack. His aggressive response caused Hooker to recall his offensive probes, including Meade's, then approaching Bank's Ford.

During the next few days Lee maintained control of Bank's Ford. As a consequence, he was able to shift forces, as needed between the Chancellorsville field and areas of developing action such as Salem Church and Fredericksburg. Brigadier General Cadmus M. Wilcox (commanding a brigade, McLaw's Division, Lonstreet's Corps) kept a watchful eye on this critical crossing:

orders came to return to Bank's Ford, and to hold it at all hazards, it being reported that the enemy were in force there and threatened to cross.

the brigade remained near Bank's Ford. Large bodies of the enemy's infantry and artillery were seen moving up on the opposite side of the river. Artillery was also heard in the direction of Chancellorsville. Strong pickets were kept up during the night near the ford.

OR XXV p.t 1. p. 855.

There is no question that the Federal command anticipated uncovering Bank's Ford in order to shorten its lines of communication. As Hooker's chief of staff wrote on 30 April to Major General G.K. Warren, then constructing pontoon bridges at United States Ford:

Until Banks' Ford is uncovered, the route by the United States Ford must be understood as our line of operations.

OR XXV, pt. 2, p. 305.

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Major General John Sedgwick, commanding the Union 6th Corps at Fredericksburg, also received notification that day of what the main army proposed to accomplish:

the army now at (Chancellorsville) will assume the initiative to-morrow morning and will advance along the line of the Plank road, uncovering what is called Bank's Ford, where bridges will be at once thrown across the river, which route will then become the shortest line of communication between the two wings of the army.

OR XXV, pt. 2, p. 306.

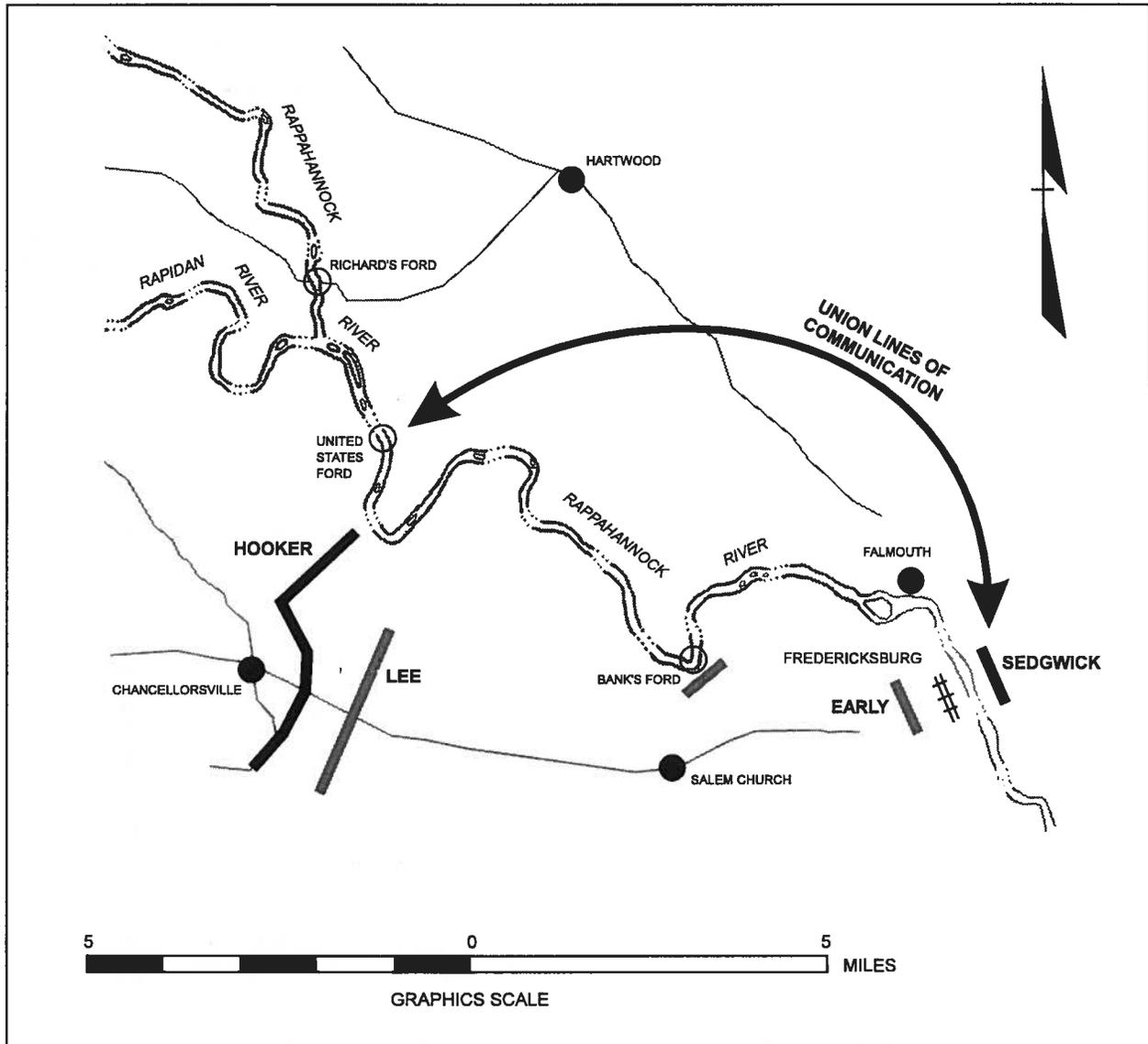
By May 1st, the Federals had moved a brigade of infantry, 32 cannon, and pontoon bridging equipment to the Stafford side of the Bank's/Scott's Ford area. As soon as a Union column uncovered the ford in Spotsylvania, the pontoon bridge could be laid. When confronted by Stonewall Jackson's determined Confederates, however, Hooker had gone over to the defensive and subsequently recalled the force moving along the River Road. On May 2nd, Major General Reynolds had been told he could cross his 1st Corps at Bank's, but was diverted upriver as Lee still controlled that crossing. The troops Wilcox observed moving upstream were the men of the Union 1st Corps marching toward the United States Ford crossing.

By 3 May 1863 Lee had flanked and devastated Hooker's right at Chancellorsville and forced the Army of the Potomac back against the Rappahannock River. Before he could renew his attacks, however, he received news that the Union 6th Corps had punched through General Jubal Early's small Confederate force left to cover that front and was moving west on the Plank Road. Wilcox had already decided there was no imminent Union threat at Bank's Ford and had committed his Alabama troops to delay the Federal column emerging from Fredericksburg. Lee thus gained time to detach several brigades at Chancellorsville and send them swinging down the Plank Road toward Fredericksburg. These additional troops consisting of four brigades under General Lafayette McLaws, joined Wilcox to halt the Federals at Salem Church.

The Federals observed the departure of the Confederate force at Bank's Ford and responded very quickly. As Union Brigadier General Henry J. Hunt wrote:

On the afternoon of the 3rd, he abandoned his rifle-pits opposite us. Major-General Sedgwick having carried the heights above Fredericksburg, and being then on the advance along the Chancellorsville road, I sent Major Doull across (swimming his horse) to communicate with General Sedgwick and report his progress. In the meantime General Benham laid the bridges, and I crossed to inspect the different works of the enemy.

OR XXV pt. 1, p. 248.



Map 35. Tactical Implications of Bank's Ford. As long as the Confederate army controlled Bank's Ford, Hooker's lines of communication were necessarily extended and cumbersome.

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While Bank's Ford was finally in the process of being bridged (at Scott's crossing), the disaster at Chancellorsville caused the federal command to divert critical equipment elsewhere. The Federal engineer, Brigadier General H.W. Benham, was directed to send the pontoons he planned to use for the second bridge at Bank's/Scott's up to United States Ford, to provide a third bridge there.

Sedgwick withdrew from Salem Church and established a defensive position closer to Fredericksburg. He reestablished his communications with Hooker across the single floating bridge at Bank's/Scott's Ford. On 4 May, the gathering Confederate force probed the Union lines while Federal engineers busily gathered the necessary equipment and finally laid a second pontoon bridge at Bank's/Scott's Ford.

On the Chancellorsville field, Hooker showed little inclination to move beyond his entrenchments to do battle. As a consequence, Lee detached General Richard H. Anderson and his division with impunity and ordered it to join Early and McLaws as they concentrated against Sedgwick's isolated corps. Skirmish fire punctuated the remainder of 4 May, as Confederate forces moved into position. Because a portion of Sedgwick's line straddled the Plank Road, these preparations took longer than anticipated as the troops maneuvered over rough terrain and along an unfinished railway. In addition, the deploying troops were extremely fatigued, having already been engaged at Chancellorsville and Salem Church. The Confederate assaults against the Union 6th Corps commenced late in the afternoon. The Federals held firm, for a while, but eventually pulled back in a retrograde movement toward their pontoon bridges at Scott's Ford.

A Rhode Island soldier in the 6th Corps recalled the crossing during the night of 4/5 May.

At dark we left our lines, and marching in mud up hill and down we reached the Rappahannock River sometime in the night. Pontoon bridges were laid and the troops passed over. Straw and earth was packed upon the bridges to deaden the sound of the wagons and artillery. Our Regiment was left to guard the rear and finally we crossed with the Rebels dropping shell onto the bridge in our rear. The connections on the other side of the bridge were out, and the boats floated over to the north side.

Rhodes, Robert H. ed.
All for the Union: The Civil
War Diary and Letters
of Elisha Hunt Rhodes. New York
1985, p. 107.

The side of Bank's/Scott's Ford controlled by the Federals still has numerous gun pits along the heights. These positions were established primarily during the Chancellorsville Campaign and some of them show up on B.L. Blackford's 1863 map.

The works oriented to the south, overlooking the old Bank's Ford were dug by elements of General Darius Couch's 2nd Corps during the night of 28 April, in anticipation of a crossing once Union columns had moved to uncover the ford from the Spotsylvania side of the river. The works directed toward the east were established to cover the withdrawal of General John Sedgwick's 6th Corps at Scott's Ford/Ferry.

Confederate earthworks also occur at both crossings and some of them are also shown on Jedediah Hotchkiss's Chancellorsville map. The positions along the bluffs overlooking Scott's Ford/Ferry are presently on private property, but some of these may be situated on property to be deeded to the City of Fredericksburg, through rezoning proffers. The Confederate trenches and gun pits covering Bank's Ford are already located within the City of Fredericksburg's riparian holdings. Of interest is a road trace to the north of River Road that climbs up Embrey Hill, overlooking Bank's Ford, and then descends toward the river on the opposite side. A small gun pit has been dug where the road passes over the nose of the hill and a section of the road on the opposite (river) side appears to have been converted to serve as Confederate rifle-pits. Further up the hill are two more gun pits overlooking the river.

Road traces leading to the old Bank's Ford can also be found south of River Road near the Embrey Mill (site) on Golin Run. On the Stafford side, there is also a road trace that descends to the ford from the plateau above. Road traces are also clearly evident on both sides of Scott's Ford/Ferry crossing. No doubt these were improved by Federal engineers on 4 May 1863 to prepare for the 6th Corps' withdrawal.

The preceding maps show the Civil War related resources that are within the City of Fredericksburg's riparian holdings.



This detail from a sketch by Civil War artist Alfred Waud shows the miserable conditions that characterized the Army of the Potomac's Mud March in January 1863. Note the frame of some sort of industrial building in the background. Original is in the Library of Congress.

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Hooker's Last Line - On 3 May 1863, as Major General John Sedgwick fought his way out of Fredericksburg, General Robert E. Lee closed in on the main force of the Army of the Potomac at Chancellorsville. During a day of intense fighting, Major General Joseph Hooker pulled back to a defensive position, its apex at the crossroads of the Bullock and Ely's Ford Roads (approximately 3/4 of a mile from Chancellorsville) and its ends anchored on the Rappahannock River. Federal communications were maintained across pontoon bridges at United States Ford.

An extensive series of earthworks that comprised Hooker's line is still evident today, coursing through the woods in Spotsylvania County. Both flanks extend into the City's riparian corridor. Hooker's right consisted of Major General John Reynolds' 1st Corps which took position along Hunting Run. The earthworks in this area are not very elaborate. On the crest of the first hill east of Hunting Run, where it enters the Rapidan, is a mining pit as well as ditches that extend up the hillside. This mining complex could have been readily occupied by Union troops. On the virtual crest of the ridge begin the military works. The northernmost line runs from the knoll on top of the ridge for 45 feet. The trench then continues, from a point 60 feet to the west, extending approximately 240 feet until it disappears into the fringe of a ravine. The second line of works is well defined, with easily recognizable traverses and a slightly refused southern terminus.

The line on this right flank is very simple compared with the works on the left flank, although this area includes additional resources of interest. Approximately 60 feet east of the southernmost end of the trench are several hut sites, marking a camp. The square, level depressions measure approximately 15x18 feet. The remainder of the hill has been bulldozed, however, and anything else has been obliterated.

The Union right flank, at Hunting Run, was held only briefly, by troops that had recently arrived on the Chancellorsville field. The left flank, at Scott's Mill, on the other hand, was occupied by a variety of units over several days. These troops spent considerable time improving their position, with the result that it became quite formidable. Elements of the Irish Brigade were probably the first to begin adapting the stone-lined millrace along Pipe Dam Run to protect a line of infantry. This work likely began late on 1 May or early 2 May. A physical connection to a parallel rifle pit that extends around the nose of the ridge confirms conversion of the millrace by soldiers. A second line of trenches extends along the crest of the ridge and is backed up by a line of 14 gun pits, evenly spaced and in excellent condition.

The sequence of events at this location was probably as follows. The Irish Brigade (2nd Brigade, 1st Division, 2nd Corps) took position late on 1 May and worked to prepare this area for defense through the 2nd. At the same time, the Pennsylvania troops of Brigadier General A.A. Humphrey's Division (3rd Division, 5th Corps) began work on an additional line of rifle pits. The artillery emplacements had to have been

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constructed by the gunners of a 30-gun provisional grand battery, commanded by Captain Alanson Randol, which occupied this height. Randol began assembling cannon here late on 1 May and remained in position until ordered to withdraw, on the night of 5 May.

On 2 May, General T. J. "Stonewall" Jackson conducted his famous flank march and exploded out of the Wilderness onto the hapless Union 11th Corps. On 3 May, Major General Carl Schurz's Division (3rd Division, 11th Corps) was ordered into this relatively quiet sector where his troops could recover from their ordeal on the 2nd. As Schurz wrote:

Early on the morning of May 3, I was ordered to relieve General Humphrey's division, on the extreme left of the army, near Scott's Mills. Nothing happened on my front except a little skirmishing.

OR XXV pt. 1, p. 657.

That night, the troops were shuffled once again and Brigadier General Alpheus Williams' Division (1st Division, 12th Corps) moved into these works. One of his brigade commanders, Brigadier General Joseph Knipe, wrote of another spasm of fortifying by his troops:

about dark (we) took up a position on the hill at Scott's dam, relieving a portion of the Eleventh Corps, and forming the extreme left of our line.

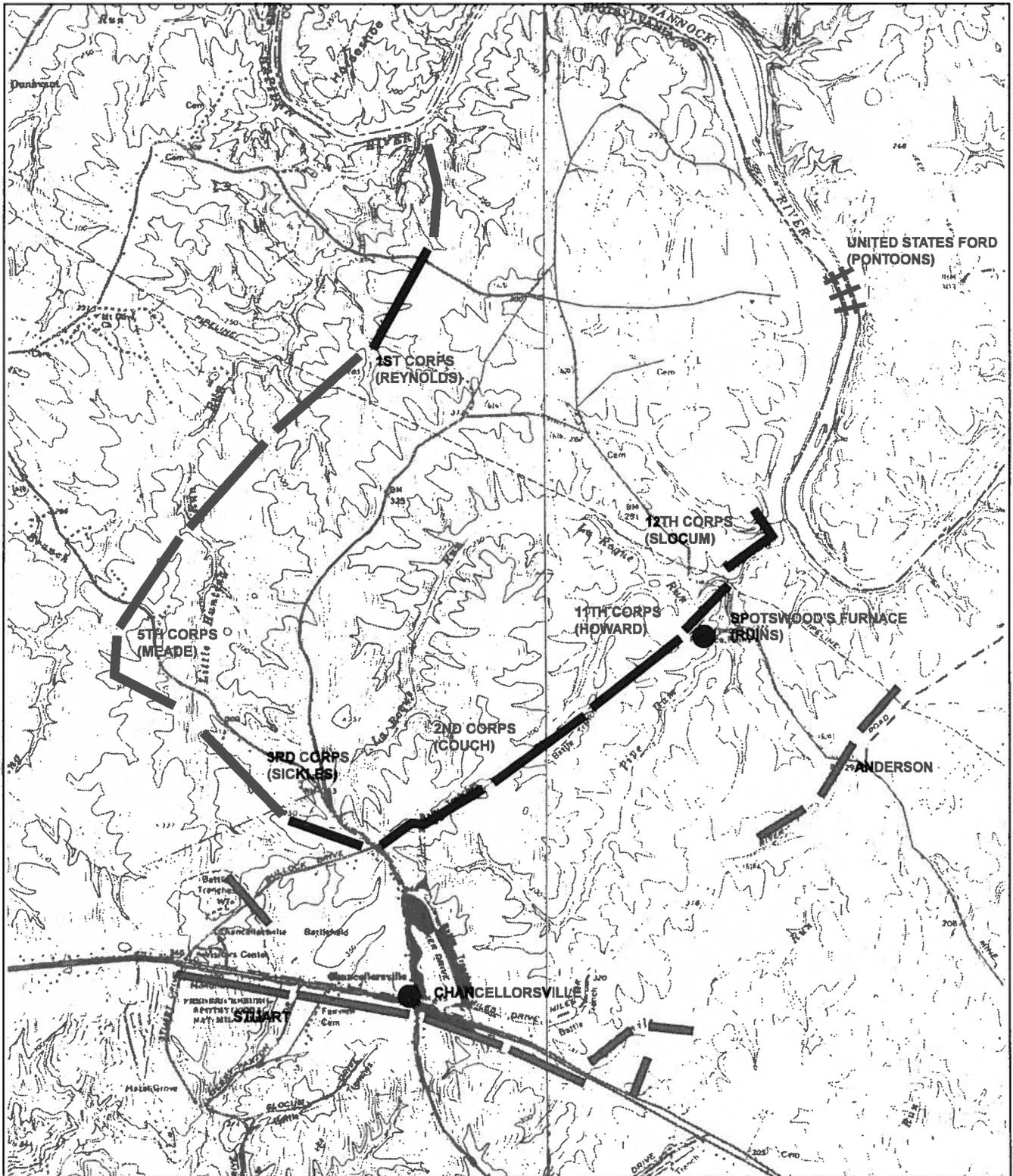
This position we occupied during May 4 and 5, the men being constantly employed in constructing traverses for our artillery and throwing up rifle-pits.

On the morning of the 6th instant, I received orders to recross the river....

OR XXV, pt. 1, p. 688.

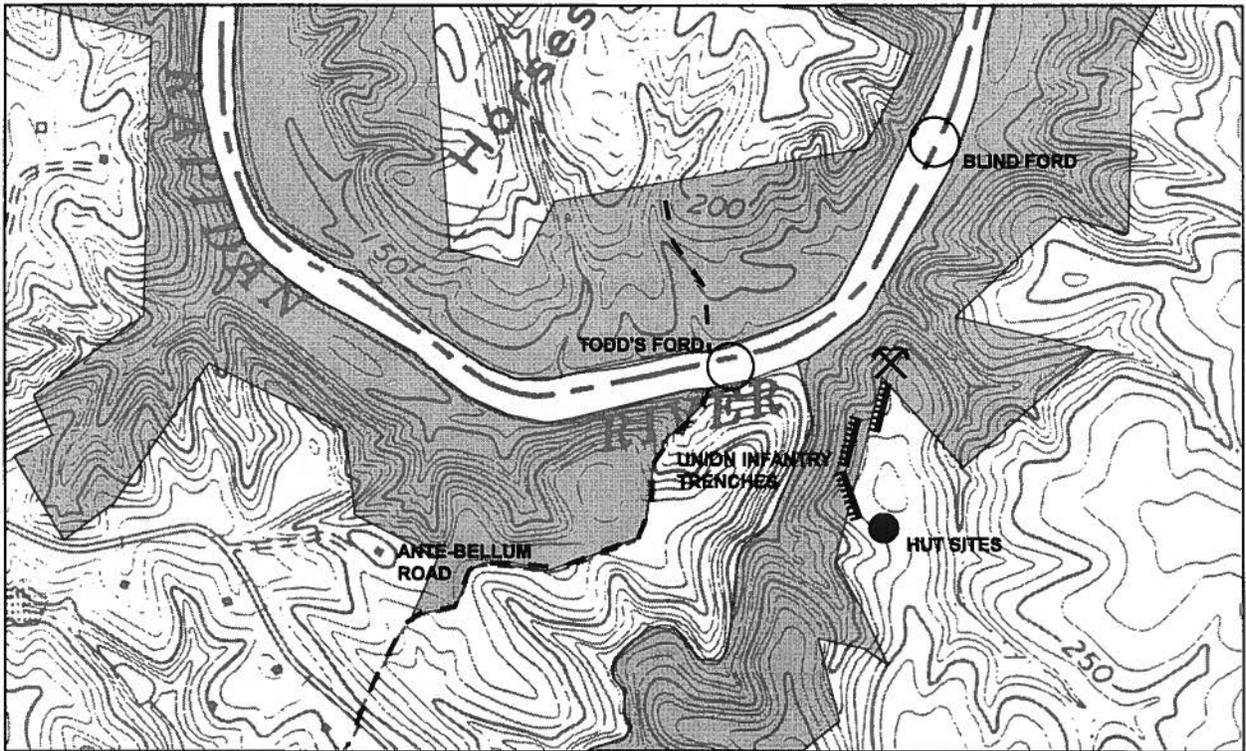
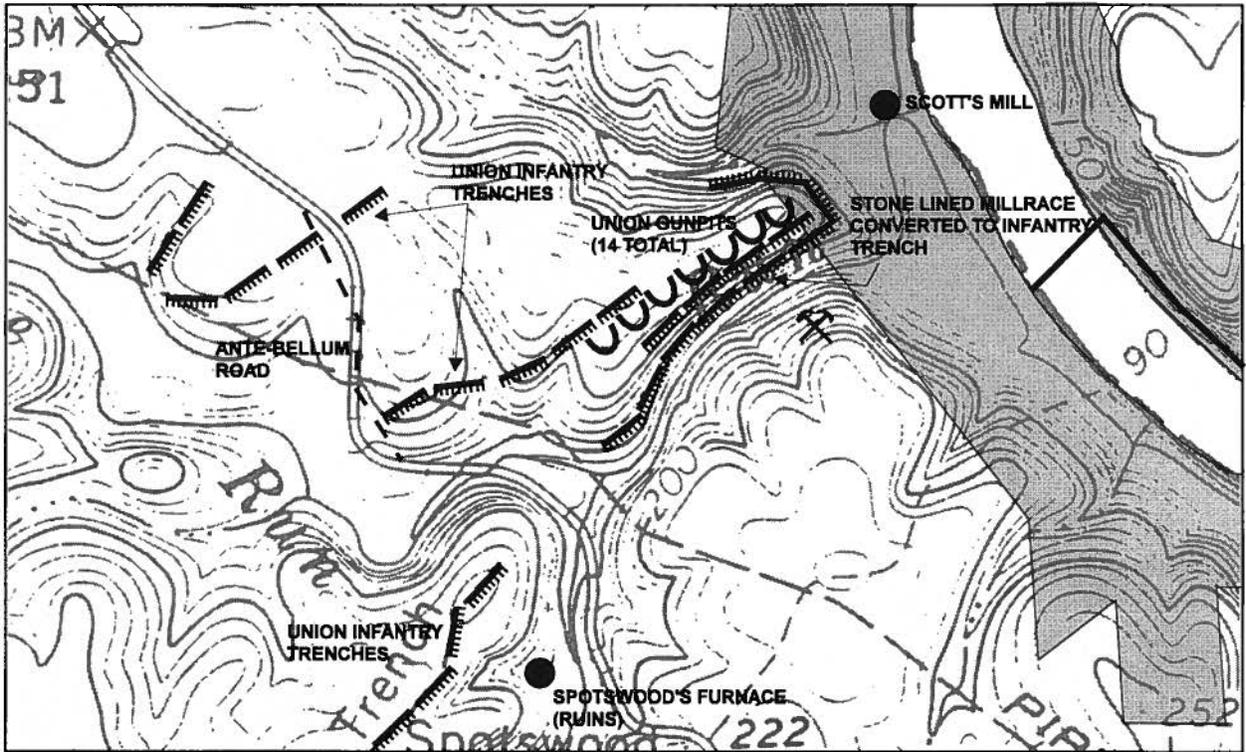
An account by a Colonel Charles S. Wainwright provides an interesting postscript to the Battle of Chancellorsville. This artillery officer observed elements of the 11th Corps, after they had been so roughly handled during Jackson's flank attack. Rather than seeing a demoralized body of men, they exhibited an integrity and professionalism that may be attributable to the many European officers within its command structure. Colonel Wainwright wrote about his ride with Major General O.O. Howard along the 11th Corps lines on 4 May:

(The 11th Corps) seemed to be all here in line now; their organization in no way disturbed. While I was with Howard I noticed one thing I have not seen in any other command in our army: a division staff officer rode up and reported that a certain order had been carried out. In these really essential military points our army is very remiss. Staff officers generally do not even consider it necessary



Map 36. Hooker's Last Line.

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Map 37. Anchoring The Union Flanks.

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to report that they have delivered an order with which they have been sent; much less do the subordinate commanders report when the order has been executed; so that the General cannot know with certainty how things stand.

Nevins, Allan, ed. A Diary of Battle:
The Personal Journals of Colonel
Charles S. Wainwright 1861-1865.
New York, 1962, p. 195.

The entrenchments of Hooker's last line are instructive in many respects, but only the extreme flanks are within the City of Fredericksburg's riparian holdings.

E.P. Alexander's Overlook - On the 4th and 5th of May, portions of Major General Joseph T. Hooker's army held their defensive lines while other elements withdrew across pontoon bridges at United States Ford. By then, General Robert E. Lee had shifted his forces to try to destroy the Union 6th Corps at Fredericksburg. Consequently, the front along Hooker's last line remained relatively quiet. Brigadier General Alpheus Williams, (commanding 1st Division, 12th Corps), wrote:

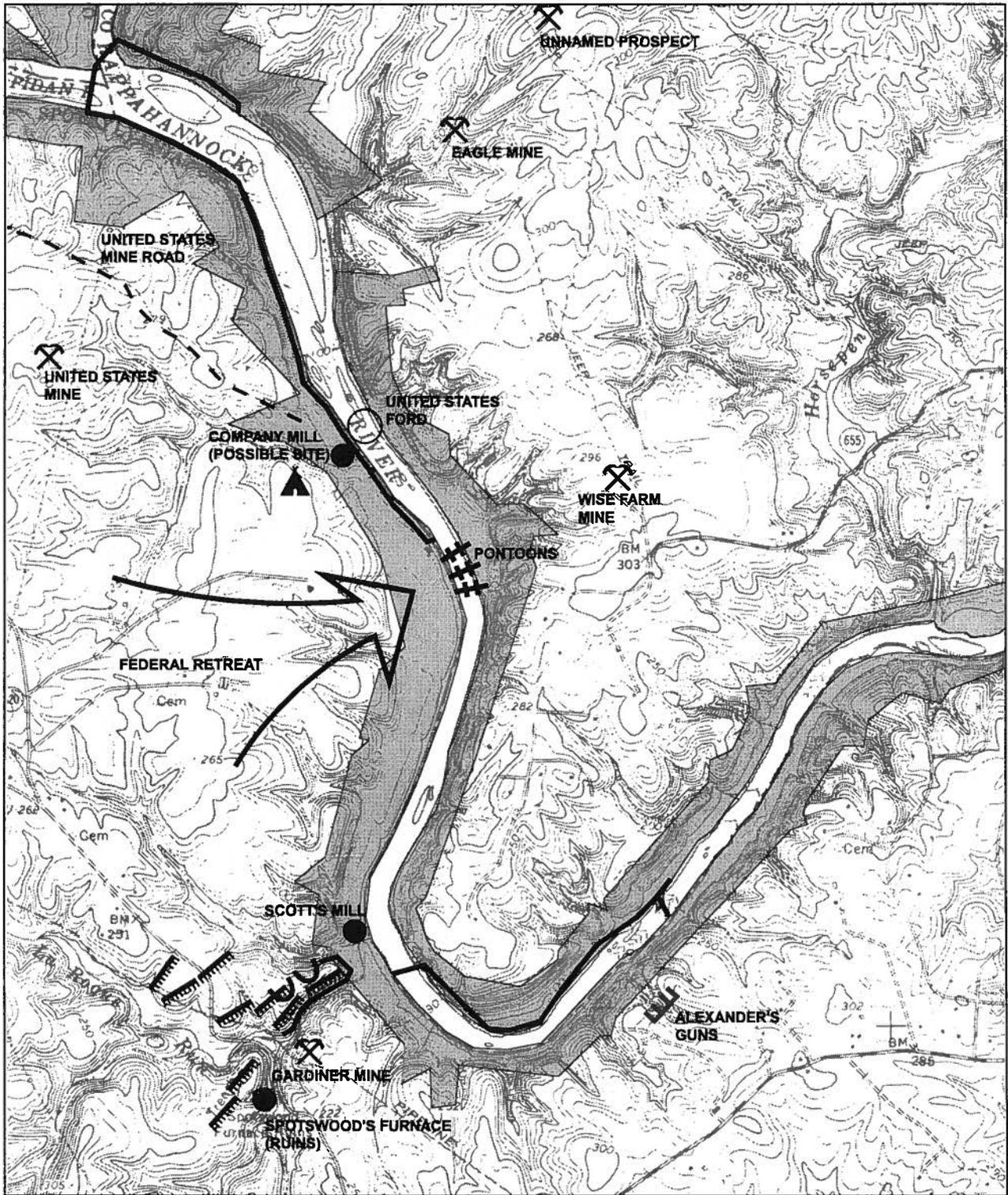
May 4th: Another warm, sunshiny day. The men were put at work strengthening the rifle pits, partly made before, and making traverses for our artillery guns, of which we had sixteen pieces on the two bluffs.... Nothing was seen of the enemy except a few cavalry and infantry pickets, with which ours exchanged occasional shots.

Early in the morning some artillery had opened fire from a high point formed by a short bend of the river.... It turned out afterwards that they had the range of our train camp on the other side of the river, and pretty effectually stampeded all our non-combatant staff and made several wounded officers, who could only move on litters the day before, take to their legs with the speed of a scared Indian.

Quaife, Milo M., ed. From the Cannon's Mouth: The Civil War Letters of General Alpheus S. Williams. Detroit, 1959, p. 200.

The Confederate guns Williams heard were those of the capable Edward Porter Alexander. Colonel Alexander was General James Longstreet's Chief of Artillery, but was then acting directly under Lee, as Longstreet was not on the Chancellorsville field. During the Battle of Fredericksburg, he had commanded the guns that devastated the Union assault columns. After Hooker retreated into the defensive works that constituted his last line, Alexander sought a way to bring artillery to bear on the Union flank that rested on the river at Scott's Mill:

The next day, Tuesday, May 5th, I received orders to go & reconnoiter the place where the enemy's left flank rested on the river below U.S. Ford, & to move my battalion up to that vicinity. Gen. Lee intended to attack Hooker in his intrenchments the next day, & wanted me if possible to get a bit of enfilade fire upon his line.... I found locations for some half dozen guns, which would have an oblique fire on his line, but it had been too well located to give us a chance for effective enfilade. And when I saw how the enemy had been throwing up dirt & strengthening himself; & reflected how easy it was in that Wilderness thicket to make a line impregnable by abatis in front, it made me very unhappy to think of seeing our infantry sent to charge such a tremendous force in those intrenchments.... as soon as it was dark enough to hide me, I was on the ground where the pits were to be, with a hundred of my men; & we set to work to build them.... Before daylight we had all the pits ready for occupation, & we moved in the guns, & the ammunition chests, & sent off the horses. As it became light enough to see we were putting on the last touches, when, suddenly, there was a volley fired at us by a battery, not on the line we had made ready to attack, but on the opposite side of the river, on our right flank, & not over six hundred yards off.



Map 38. E. P. Alexander's Overlook.

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And that volley was followed by others until there were two or three batteries apparently making it warm for us. As I did not know exactly what it meant I would not reply at all at first, but just made everybody keep under cover in the pits, & went off to our infantry line on the left to find out what was the matter.

Ah! What good news it was! The enemy had gone! During the night he had vacated his lines! He had crossed the river, & was on his way back to his encampments! The campaign was over! There was to be no bloody assault on those strong intrenchments. The guns which were firing at my pits were guns placed to protect the retreat of his wagon trains at a point where the road on the north side might have been shelled from our side.... I took some two or three of my batteries to a point whence I could reach the enemy's position, but without being in sight, & for about ten minutes I gave him a hot fire as a retaliation for his fire on my pits.... I also found a place where I could see his wagon trains passing, over a mile away, on the other side, & I also found the Washington, Georgia, company of artillery, Lane's, who had a Whitworth rifle & I put it to practising on the wagons, & made them go at a gallop.

Alexander, pp. 214-215.

The bluffs where E.P. Alexander placed his guns still affords a commanding view, but have been much altered. Residential development is pushing up close to the city's riparian property. A single gun pit may remain on the edge of a ravine just below the bend in the river. No other traces of this Confederate position appear to be extant.

United States Ford - On 27 April 1863, Major General Joseph T. Hooker launched three corps upriver from Fredericksburg on a wide swing to cross both the Rappahannock and Rapidan Rivers and bring them in behind General Robert E. Lee's Army of Northern Virginia. To distract the Confederates from this turning movement, two divisions of Major General Darius Couch's 2nd Corps moved to Bank's Ford while Federal pioneer troops repaired the road to United States Ford, a crossing site approximately 1½ miles below the confluence of the Rappahannock and Rapidan Rivers. By 30 April, the Union flanking columns had crossed the Rappahannock at Kelly's Ford, the Rapidan at Germanna and Ely's Fords, and elements of Major General George G. Meade's Corps had uncovered United States Ford. Major General Gouverneur K. Warren, waiting on the opposite bank, described his preparations at the proposed military crossing point, approximately 1/4 mile below the peacetime ford. The speed with which the Federal engineers were able to bring their pontoon bridging equipment down to the river was no doubt due to the military road building that had occurred in preparation for the Army of the Potomac's brief campaign in January:

On the morning of the 30th, I reconnoitered the approaches to the crossing-place, and found that to make any one of them practicable was a difficult undertaking. General Couch detailed 500 men under my direction, and this force went to work in earnest, (preparing roads) right down to the bank of the river. The mist in the morning so obscured the view that we could not ascertain whether the enemy, who had occupied the opposite bank on the preceding night, had withdrawn or not;.... about 9 a.m. the appearance of some cavalymen from General Meade's column showed us that he had, and that the grand flanking movement had succeeded. The work on the road was pushed with all possible dispatch, the men working with the greatest spirit, and by 1 p.m. was made practicable for artillery and pontoon wagons.

By 3 p.m. the (first) bridge) was laid and (two divisions of) the Second Corps (were) crossing the river. The road up the opposite bank was soon completed, and great was the enthusiasm of the men as they found we had turned these formidable intrenchments without losing a man....

OR XXV, pt. 1, pp. 196-197.

The Confederate entrenchments that Federal troops marched over unopposed had been constructed earlier that year by General A.R. Wright's Georgia Brigade (Anderson's Division, Longstreet's Corps). During January and February 1863, these troops endured harsh weather, short rations, and otherwise miserable working conditions as Federal cavalry on the opposite shore observed their work:

Jan. 23d. - On picket at U.S. Ford. Could see the enemy entrenching; a long line of rifle-pits extended the entire length of the hillside, and field-pieces were being placed in the rear to rake our point of crossing.

History of the Sixth New York Cavalry,
Worcester, Mass. 1908, p. 90.



Map 39. Opening Moves of the Chancellorsville Campaign. The Union army's wide swing to the west effectively flanked the Confederate army's Rappahannock River defenses.

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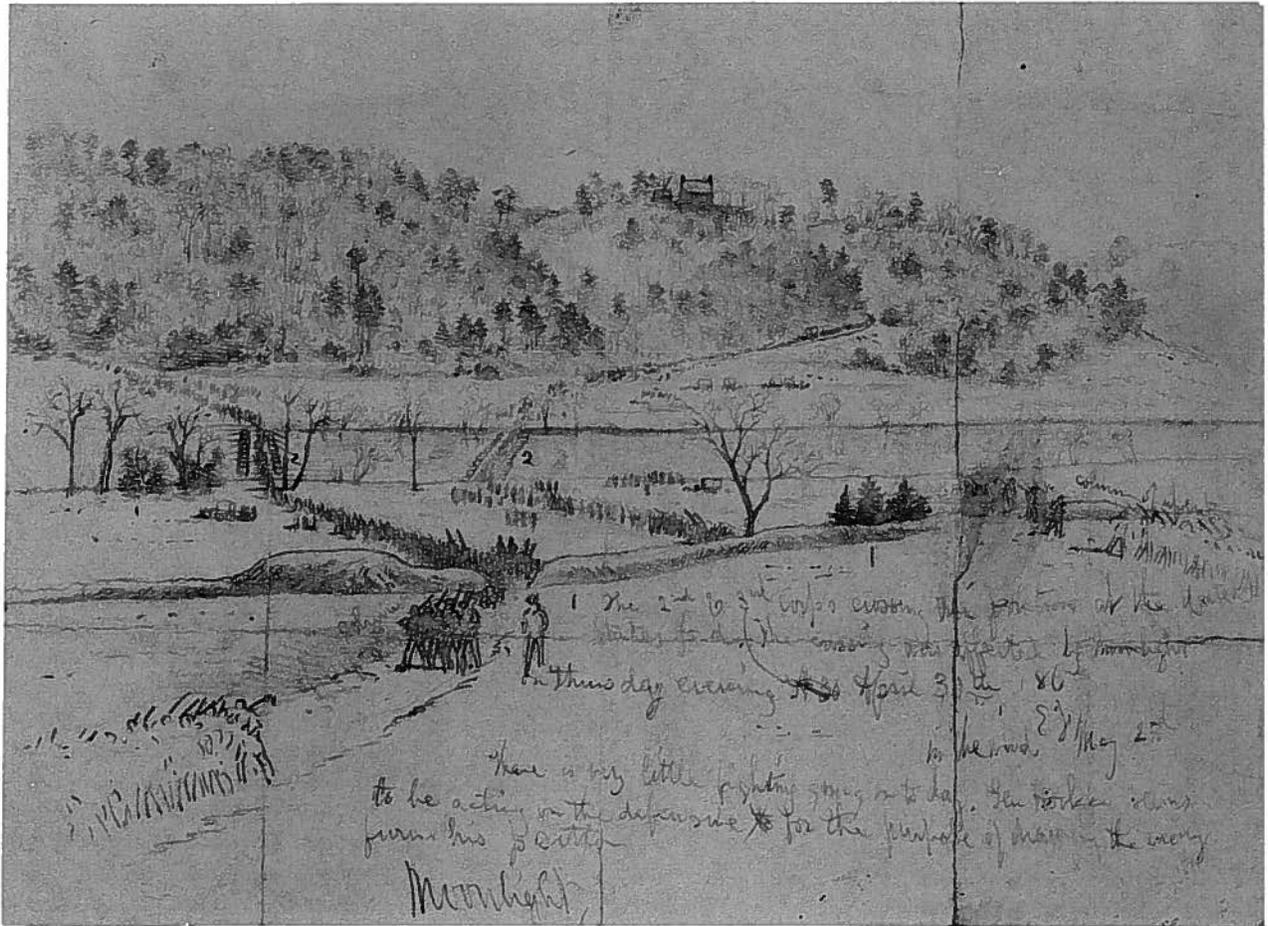
The resulting line of entrenchments is impressive, although additional work could have been accomplished between subsequent campaigns. A set of trenches, still visible, extends along the hills fronting the river starting at a creek above Lock 8 of the Rappahannock Navigation, which is just below the point where the U.S. Mine Ford Road crossed the canal. The trenches extend southeast for approximately 3,000 feet. They are unusual in that there are several very large traverses at intervals along their length. The continuity of the trench is maintained around the base of these large mounds of earth, to their rear. These features would appear to have precluded an enfilade fire by artillery from the heights in Stafford. Some of the described artillery lunettes remain extant although these were dug behind the infantry works, closer to the upland plateau. Many of them appear to have disappeared as the land reverted from military to agricultural uses.

Also evident are the roads that Federal pioneer troops prepared, to effect as rapid a crossing as possible. The road Warren cut on the Stafford shore remains visible in places although it was much altered during installation of a transcontinental oil pipeline. The original ford road, to the south of the above-referenced military road, is intact as it climbs out of the floodplain to the plateau above. It is a dramatic cut into the shale that may have provided an almost naturally macadamized surface. On the Spotsylvania shore there is a washed out ditch along a dirt road that leads to the pontoon crossing point. This feature is likely the location of the old military road. This area is also where Union pioneers leveled a portion of the Confederate works to allow rapid passage by the advancing army. As a Union soldier recounted:

The fifty-seventh (New York Infantry) began the 29th day of April by levelling the rebel breastworks on the west side of the ford.

Cole, Jacob Henry. Under Five Commanders. Patterson, N.J. 1906, p. 136.

The Federal columns did not use the peacetime U.S. Mine Ford Road, as that road bottlenecked at the bridge over the Rappahannock navigation canal. The Federal engineers had avoided the canal obstacle by placing their pontoons just below Lock 6, that section's downriver terminus. In anticipation of such an eventuality, though, the Confederates had prepared additional works on the crest of this hill, consisting of a line approximately 1,400 feet long. This trench is anchored on a hill above the Rappahannock by an extremely well preserved gunpit whose embrasure points directly to United States Ford. Another gunpit along this trench is located adjacent to the U.S. Mine Ford Road and pointed down its approach from the river. The infantry trench continues on the other side of the road and wraps around to parallel this approach, creating a killing zone. Within these works is a pit from the old U.S. Gold Mine operation.



This sketch by Civil War artist Edwin Forbes shows Federal troops crossing the Rappahannock River on pontoons at United States Ford. The view is looking toward Stafford County. Note the two approach roads and the Confederate earthworks that have been flattened to allow troops to pass. The notes read, in part, "The 2nd & 3rd Corps crossing the pontoons at the United States ford. The crossing was effected by moonlight, Thursday evening, April 30th, 1863." Original in the Library of Congress.

Later on 30 April, General Hooker and his staff crossed the Rappahannock at United States Ford and joined the gathering Union host at Chancellorsville. He ordered Major General Daniel Sickles to detach his 3rd Corps from the Fredericksburg front and join the main force of the Army of the Potomac. This corps crossed the United States Ford pontoons on the morning of 1 May and brought the Union concentration at Chancellorsville to nearly five corps. As the campaign unfolded, Hooker also ordered Major General John Reynolds' 1st Corps to march from Fredericksburg to join the main force as well. On 2 May, while Reynolds' troops tramped west on the north side of the Rappahannock, General T. J. "Stonewall" Jackson flanked the Army of the Potomac and sent the Union 11th Corps reeling back to Hooker's headquarters. As Jackson's assault lost momentum, due to darkness and the tangled vegetation that had grown up on the countryside previously denuded by Spotswood's iron industry, the Union 1st Corps reached United States Ford and crossed into Spotsylvania.

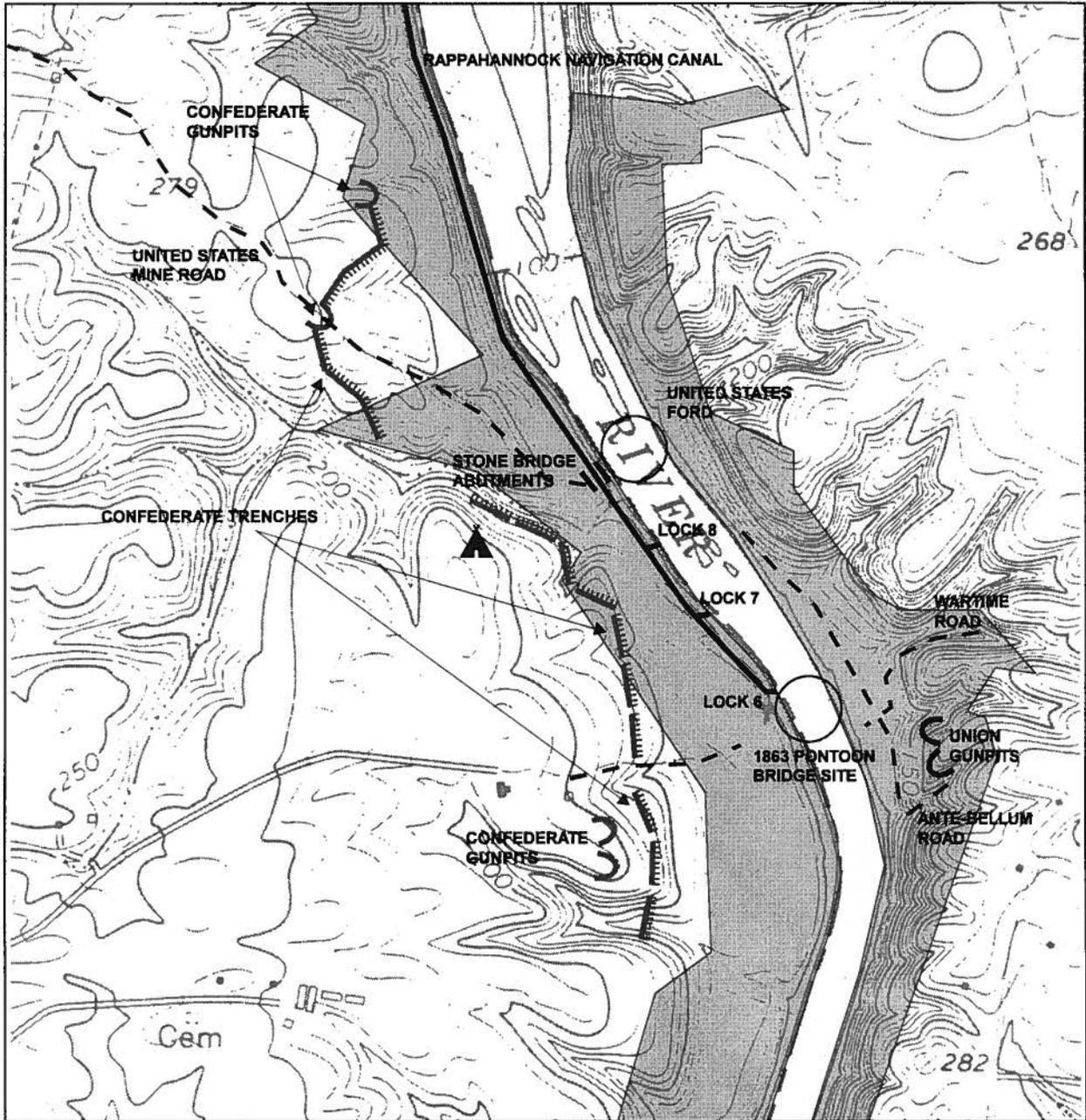
Though the Army of the Potomac outnumbered Lee's available forces and occupied a strong position, Hooker was a beaten man. He pulled his lines back to a defensive position, maintaining United States Ford as his escape route. Logistics were becoming an issue, because the supplies the Union forces had brought with them were nearly used up. The three corps that had constituted Hooker's flanking column, for instance, had departed the Fredericksburg area on 27 April with supplies for eight days. Through its improved logistics doctrine, the Union army had attained an improved mobility and increased its range of operations, but resupply still remained necessary. As Major General Dan Butterfield, acting as the Army of the Potomac's chief of staff, reminded Hooker on 2 May:

Supplies of Howard's Slocum's, and Meade's infantry expire a.m. of Monday (4 May), unless replenished from their trains.

OR XXV, pt. 2, p. 354.

The critical supply trains were subsequently brought to the north side of the United States Ford crossing and brought into the army's area of operations, as needed.

Although the Army of the Potomac remained a formidable force, Hooker decided to withdraw from the south side of the Rappahannock. He had called on Major General John Sedgwick and his 6th Corps to come to the aid of his five corps at Chancellorsville, but Sedgwick's efforts had been unsuccessful. By 5 May, the 6th Corps had recrossed the river at Bank's/Scott's Ford. Hooker ordered a withdrawal from Chancellorsville and the Army of the Potomac proceeded to collapse its line as the troops crossed the pontoon bridges to the north side of the river.



Map 40. Military Preparations at United States Ford.

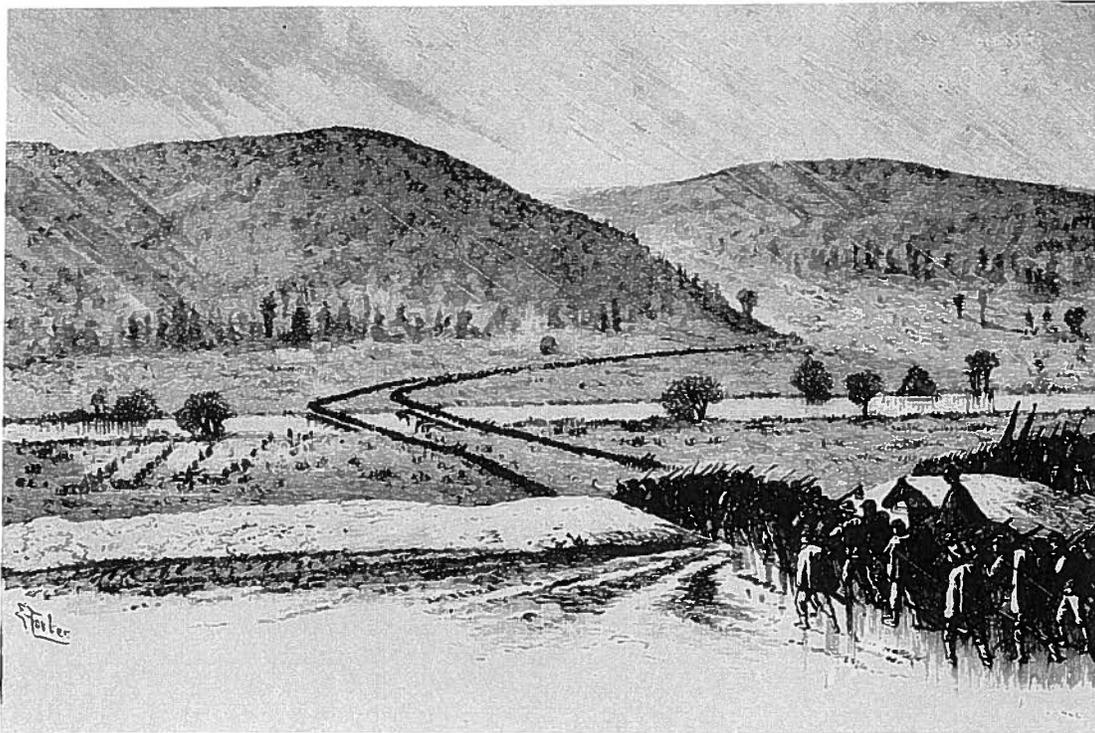
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A final, grim episode at United States Ford illustrates how brutal the war had become by 1864. As armies maneuvered, far-ranging cavalry often operated at their fringes, seeking intelligence and maintaining security. A Virginia cavalryman recounted an episode that occurred during the opening weeks of Lieutenant General U.S. Grant's Wilderness/Spotsylvania Court House Campaign:

I went down into Stafford - while the Yankees were fighting on the Spottsylvania side. On this expedition I reached the United States Ford where I had once done picket duty - the year before. The Yankees had a picket there, and with some dozen other scouts with whom I met in my wanderings it was agreed that we should cross the river in a boat and capture those pickets.... three or four trips of the boat put us across. Each man had a double barreled shot gun charged with buckshot, and a pistol or two to boot, and we were confident of cleaning up our supposed three dozen adversaries before they got awake. Going well back into the hills - we went clear around the objects of our attack and approached them from above. We got into the bed of the old Canal and quietly crept down until we were abreast of the picket camp - which was situated on a little plateau between the canal and the river.... I being familiar with the ground - took one man and passed down beyond the camp to take possession of the road by which the Yankees would have to escape if they tried. It was agreed that the main body of our party would spring over the canal bank and rushing on the camp demand its surrender. If the surrender was made without firing, we would take them all prisoners and quietly cross the river again - but if a shot was fired we were to kill them all. This was rendered necessary by the proximity of a cavalry camp up on the hill - and the difficulty anticipated in recrossing the river which was swollen.... our men... leaped into the camp and called for a surrender. No doubt all the Yankees would have complied and some of them did. But we had a cold blooded fellow with us by the name of R___ who had done service with General Walker in Nicaragua.... He... killed the first Yankee he came to. Another remonstrated that the man had surrendered - whereupon R___ shot him also. A fusilade ensued in which all the Yankees except two were killed, but the whole party turned out to be only thirteen.... The sentinel tried to escape down the road I was guarding. I shot at him and he went down. Another Yankee came running down the same way. I fired my other barrel at him (and) he fell on his hands and knees. I drew my pistol but he was finished by some one else before I could use it.

Unpublished manuscript, 1891.
Memoirs of J.Z.H. Scott.
Courtesy of National Park Service.

In Spotsylvania County, the City of Fredericksburg's riparian holdings include the Rappahannock navigation canal, a portion of the U.S. Mine Ford Road, large sections of Confederate entrenchments, and the 1864 massacre site. In Stafford County, the City of Fredericksburg owns a significant portion of both the ante-bellum and the war-time roads rising out of the floodplain, one altered by the pipeline but the other intact and quite vivid.



The Union Army of the Potomac in retreat, crossing the Rappahannock at United States Ford (as depicted in *Battles and Leaders of the Civil War*). Note the flattened Confederate earthworks, the rain, and the road that snakes around the hill on the Stafford shore.

Richard's Ford - This Rappahannock crossing, approximately one mile above the confluence, was never as important to military operations as the United States Ford, or Ely's and Germanna Fords. Still, it could have provided an avenue for major troop movements and was guarded accordingly. Lieutenant Lemuel B. Norton, a Federal signal officer, described it as "Formerly a ferry now forded at low water, slackwater navigation having changed the character."

Military activity at Richard's Ford first occurred in December 1862. At that time, a Federal reconnaissance, under Colonel James Barnes (commanding 1st Division, 5th Corps), was undertaken as a diversion for a cavalry raid. Although the raid was later aborted, the Union column forced the river on the morning of 31 December 1862, scattered a detachment of the First South Carolina Cavalry, and advanced into Culpeper County. A Union infantryman later wrote of the rather harsh conditions:

The ford was waist deep. There was much splashing and floundering in the hurry to reach the other side, the intense cold accelerating progress.... The troops were scarcely out of the water, before all their clothing was frozen stiff and became a weight to carry.

Smith, J.L. History of the 118th Pennsylvania Volunteers. Philadelphia, 1905, p. 154.

When the ford had been secured, Colonel Barnes left a brigade on the Stafford side and headed toward Ellis's Ford with the remainder of his force. He was accompanied by a detachment of the Third Pennsylvania Cavalry and a regiment of Berdan's United States Sharpshooters. The Sharpshooters had covered the crossing from the heights overlooking the ford and it was probably their fire that wounded a member of the Richards household (described in **Water Power: Mills and Other Industries**).

The Federal column reached Ellis's Ford later that day. The Pennsylvania cavalry approached another detachment of the First South Carolina Cavalry from behind, their attention having been diverted by a Federal force on the opposite side of the river. Caught between two fires, the South Carolinians fled and the Federal force forded the Rappahannock into Fauquier County (OR XXI, pp. 742-744).

During the Chancellorsville Campaign (April/May 1863), Major General George G. Meade's 5th Corps marched from Kelly's Ford on the Rappahannock to Ely's Ford on the Rapidan, as part of Major General Joseph T. Hooker's initial flank movement. When this force reached Richardsville, a squadron of cavalry was detached to both Ellis' and Richard's Fords to ensure the column's flank remained secure. At Richard's Ford, the Union cavalry surprised the Confederate pickets there and captured approximately three dozen soldiers (OR XXV, pt. 1, p. 506).

The Chancellorsville Campaign came to an end as Hooker withdrew to the north side of the Rappahannock. Flank security remained important, though, and units were

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detailed to cover the crossings to the west of the line of retreat at United States Ford. Major General John Reynolds was ordered to send a regiment of infantry and a battery of guns to the Stafford side of Richard's Ford. Further, they were to entrench. Federal cavalry was also dispatched to guard and obstruct all possible river crossings as far upstream as Rappahannock Station (Remington).

Evidence of a military presence at Richard's Ford consists of the Federal rifle pits along the forward slope of the ridge just north of the old road, on the Stafford side of the river. This trench is approximately 350 feet long and was probably constructed by Reynolds' 1st Corps troops (based on their orders). Berdan's Sharpshooters make no reference to digging and during their foray in December had used natural cover instead. Farther back along an old road trace is another short trench, on the south side of the road (approximately 70 feet long).

These works could also have been dug by soldiers of the 146th New York Infantry (3rd Brigade, 2nd Division, 5th Corps). During the period between the Battle of Chancellorsville and the opening of what would become the Gettysburg Campaign, these troops picketed the Rappahannock River in this area. As one of its members wrote:

our life at Richard's Ford was extremely wearing. While we were in camp we were kept busy building redoubts, rifle pits, and abatis, and were ready, at five minutes' notice, to repel any attack against the ford or to march to any point on the river. Each man was compelled to be out on picket duty every other day because of the great distance our regiment was patrolling. The pickets would lie back in the woods the greater part of the day, coming down to the river front at night. It rained frequently, rendering picket work doubly discomforting....

Brainard, Mary Genevieve Green, e.d.
Campaign of the One Hundred and
Forty-Sixth Regiment New York State
Volunteers. New York, 1915, p. 95.

Another incident occurred after the Gettysburg Campaign when elements of the Union 2nd Corps were detached to cover the river fords. The 148th Pennsylvania Infantry stood picket at Richard's Ford when it was attacked by Confederate cavalry in September 1863. As one of its members remembered:

September 1st: It was midnight; the 148th at Richardson's Ford, lay soundly sleeping in bivouac, with a heavy picket guard at the crossing supported by a strong reserve....

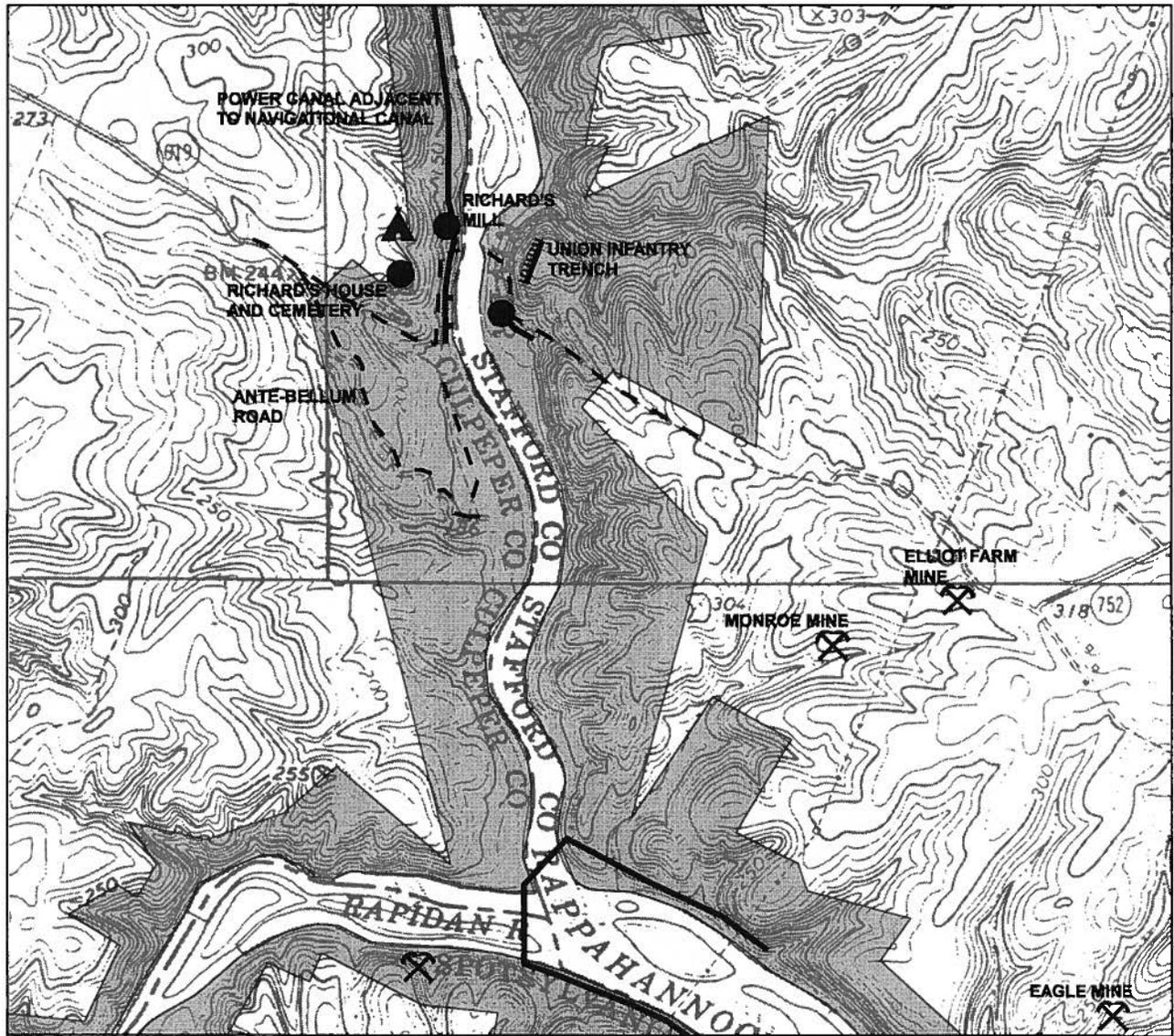
Suddenly, a volley of small arms was fired into our pickets from across the river, killing one of our men. Simultaneously a considerable force of Confederate cavalry dashed across the ford. In less than five minutes the 148th was in battle order and moving rapidly forward...; but they remained not to fight; they had galloped into the country east of us.

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Muffly, Joseph Wendel, ed. The
Story of our Regiment. A History
of the 148th Pennsylvania Volunteers.
Des Moines, 1904, p. 478.

Confederate cavalry reports for this period describe raids to disrupt Federal communications and to capture remounts. The Confederate horsemen the Pennsylvania infantrymen encountered briefly on 1 September 1863 were likely engaged in such pursuits.

The Civil War earthworks at Richard's Ford as well as the ante-bellum roads are within the City of Fredericksburg's riparian holdings.



Map 41. Military Preparations at Richard's Ford/Ferry.

Embrey's Ford - Embrey's Ford is located approximately one mile above Richard's Ford, between Powell's Dam and Lock 13 at the end of the Deep Run Canal. On the south side of the Rappahannock, in Culpeper County, the riverbank consists of steep cliffs. There is evidence of a road trace that travels out of the bottom, to the west of the cliffs. On the north side of the river, in Stafford County, the road trace extends up a ravine to the east of the bend in the river. This road also parallels the north bank of the mill canal. A stone retaining wall can be seen where the road crosses a small tributary.

Farther to the east, the canal ends where the river turns to the south, but the road continues to the east and zig-zags up the ridge. At a T-intersection, a clearly defined ante-bellum road continues to the southeast toward Richland Run. This road has been subjected to use by four-wheel drive recreational vehicles. Such activity has resulted in the straightening out of bends in the original road, leaving portions of the historic road intact. As a consequence, sections of the old road remain quite evident even as others have been obliterated.

Lieutenant Lemuel B. Norton, a signal officer in the Union Army of the Potomac, carefully described each of the Rappahannock and Rapidan River fords. He had an entry for "Embury's Old Ford," but left out any description, suggesting it may no longer have been a viable crossing. At that time, Powell's Dam may have still backed up the river at this location, precluding its use. There is also no evidence of Civil War earthworks, to support picket posts. The road trace on the upland plateau could have been used by military detachments travelling to Richard's or United States Fords from points farther upriver, although there were better and more direct routes through Hartwood.

The Embrey's Ford area is within the City of Fredericksburg's riparian holdings.

Deep Run - The area along Deep Run, which separates Stafford County from Fauquier County, was picketed by Federal units during the winter of 1862/63 to cover the western approaches to the Army of the Potomac's encampments around Fredericksburg. B.L. Blackford's 1863 map labels Deep Run as "Deep Creek." Blackford also shows the road that roughly corresponds to Route 17 as "Marsh Road." The road branching north northwest (Route 612), from Hartwood, was called the "Falmouth and Warrenton Road."

In November 1862, when Major General Ambrose E. Burnside brought his army along the Rappahannock, from Culpeper to Fredericksburg, he sent a brigade of cavalry to guard against any Confederate crossing that could threaten his right flank. Brigadier General Alfred Pleasonton established his headquarters on the west side of Deep Run. On 21 November, he reported his observations to army headquarters.

There has been no signs of the enemy in our rear, and only a few cavalry pickets at the fords. On several of the roads leading to the fords the enemy has felled timber across, showing they feared us more than we have thought....

The road from Hartwood to this place is now almost impassable for wagons, and it is absolutely necessary to remove this command nearer to a depot of supply.... This creek (Deep Run), I am told, is swimming after heavy rains, so I shall cross it as soon as I can. I do not think it is necessary to keep pickets at the fords above this creek; a strong picket here is sufficient.

OR XXI, pp. 781-782.

The critical need for pickets to remain alert was driven home a week later. On the night of 28 November 1862, Brigadier General Wade Hampton crossed to the north side of the Rappahannock, with just over 200 Confederate cavalymen, to probe the Union force. He noted the Union pickets extended to Deep Run but brought his column through the woods between the two roads (Marsh Road and the Falmouth and Warrenton Road) that crossed Deep Run and converged on Hartwood. Hampton successfully eluded the Federal cavalry pickets and surprised and captured their reserve squadron near Hartwood. He returned along both roads and captured the respective picket forces at Deep Run from behind. With 92 prisoners and about 100 horses, the jubilant Confederates returned to the south side of the Rappahannock.

Upon taking command of the Army of the Potomac, Major General Joseph Hooker reorganized the cavalry in an effort to mold it into a powerful striking force. In February 1863, he created an independent cavalry corps, under the command of Brigadier General George Stoneman. He sought to make it into a more effective force and one that would no longer be embarrassed by Confederate raids such as Hampton's of the previous November. The new organization was tested almost immediately when Brigadier General Fitzhugh Lee crossed the Rappahannock at Kelly's Ford on 24 February with a force of 400 cavalymen. He drove in the Union

pickets the next day and attacked the main force at Hartwood Church. Stoneman directed two Union cavalry columns to close in on the Confederate raiding force, trying to cut it off at Deep Run, but Lee's horse soldiers made good their escape.

The Fourth Virginia Cavalry (Lee's Brigade), posted in Spotsylvania County, crossed the Rappahannock at United States Ford during Fitz Lee's foray, to provide the raiders a potential escape route, if needed. As one of its members recalled after the war:

I had no idea that we would be compelled to ford the river on such a cold night (I learned better afterward), but after sitting on our horses, shivering with the cold for an hour, an order was given: "Fall in by fours: march," and into the water we plunged up to over our saddle skirts. About a mile beyond we charged a Yankee picket post and ran them back to the old Berea church....

We remained on that side of the river all day and night, and many of us were on picket duty at night.... from the sound of cannon a few miles above us, we knew that a cavalry fight had taken place.

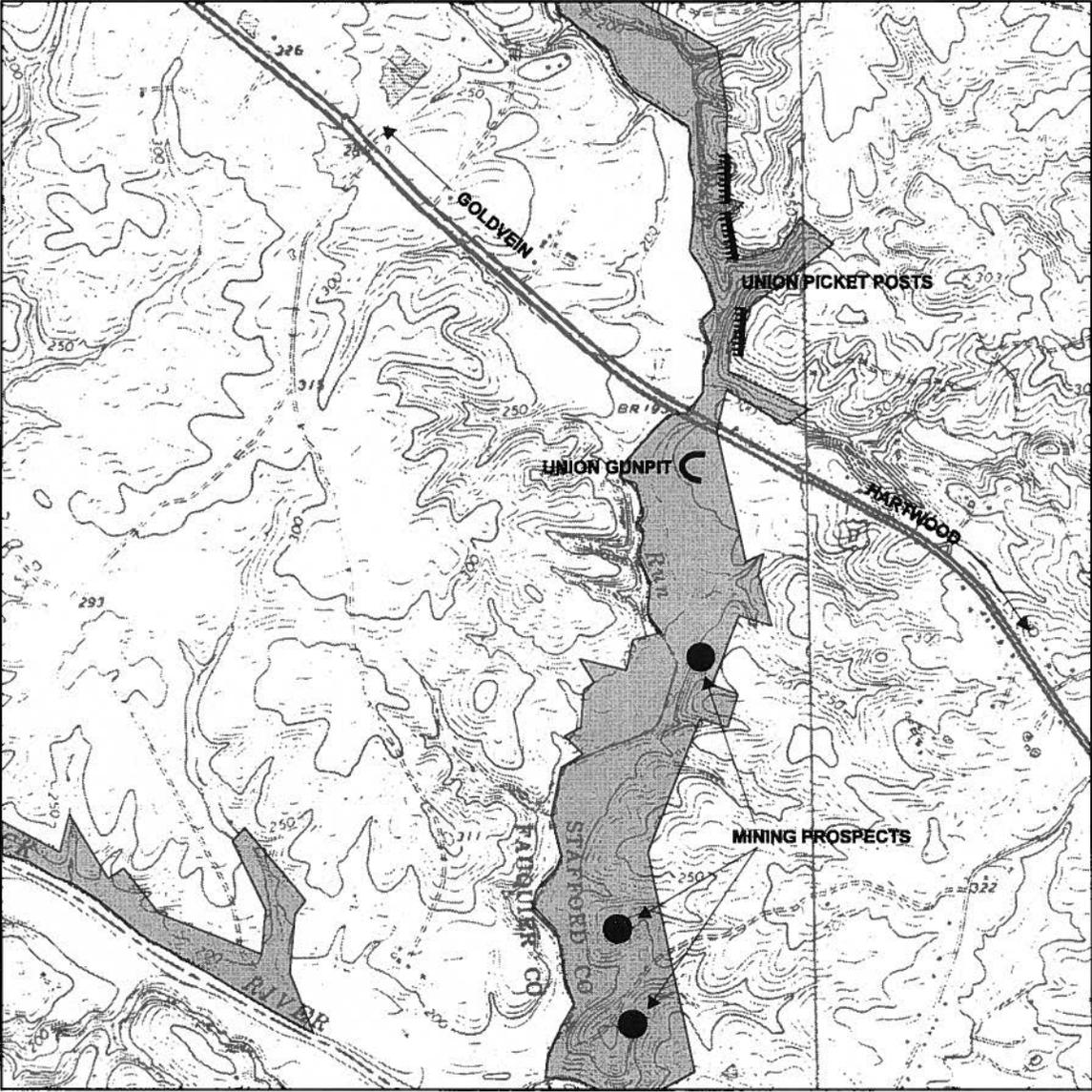
Conway, William R. "Above
Fredericksburg, Va., During the
Winter of 1862-3." Atlanta
Journal, January 4, 1902.

The ground to the east of Deep Run dominates the terrain to the west along which Route 17 (Marsh Road) approaches. Pickets posted in this area could readily keep watch in that direction and subsequent field research confirmed the presence of soldiers there during the Civil War. On the crest of the first dominant hill north of Route 17 (Marsh Road), for instance, is what appears to be a picket post. It consists of three shallow pits, evenly spaced, as well as nearby squared-off depressions that could have been shelter sites.

On the next hill to the north are five more pits. These are just to the east of the crest, revealing a clear view of Route 17 (Marsh Road) to the west yet remaining quite hidden from that direction. These pits are substantially deeper than the three on the hill to the south. The next hill to the north also exhibits the remains of a picket post and shelter sites. Much of the ground on top of these hills, however, has been previously logged or bulldozed to prepare for residential development. No other historic resources are evident above these picket posts or further upstream on the property above Deep Run.

South of the road, the terrain is not as commanding. In addition, the gentle slope to the east of the waterway has been heavily plowed. There is evidence of a lone gun pit guarding the southern exposure of Route 17 (Marsh Road) at Deep Run. Further downstream along Deep Run is faint evidence of hut sites among evidence of gold prospecting. Whether these sites are related to the Civil War or the earlier mining activity, however, is not known.

An examination of archival data for the Deep Run area provided very little information. Civil War maps do not show anything on these tracts either. In addition, the 1836 map of mining and milling sites is blank for the tracts in city ownership. Still, the City of Fredericksburg's riparian holdings include the commanding terrain as well as the few picket posts discovered during field research. Also within city ownership is the gun pit south of Route 17 and the numerous cuts related to gold mining.



Map 42. Military Preparations at Deep Run.

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Skinker's Ford (Rappahannock) - Skinker's Ford is located at Skinker's Mill, below Sumerduck Run but upstream from Rock Run. Lieutenant Norton described this crossing as "Rocky" and able to be "crossed by Cavalry." This distinction is important because infantry could not typically use a ford if it was over a certain depth. Horse mounted troops had more flexibility in this regard. According to the 1861 Military Dictionary:

In examining and reporting upon a ford, the main points to be considered are the firmness and regularity of the bottom, its length, width, and direction; the depth,... the rapidity of the current, the facilities of access, security from attack, and the means of rendering it impassable.... The depth of fords for cavalry should not be more than 4 feet 4 inches, and for infantry 3 feet 3 inches.... Should the stream be very rapid, however, depths much less than these could not be considered fordable, particularly if the bottom is uneven....

Military Dictionary, pp. 309-310.

A reference to troops at this location is contained in the 2 August 1863 report of Brigadier General George Greene, (commanding the 3rd Brigade, 2nd Division, 12th Corps). He wrote from Ellis's Ford as follows:

A force of 50 men is stationed at Ellis' Ford. At Mr. Royal's, one mile and a half below, is posted a detachment of 30 men, guarding a ford and dam (Skinker's); and the One hundred and thirty-seventh New York Volunteers, Colonial Ireland, is stationed at Kemper's Ford, 3 miles above here.

OR XXVII, pt. 3, p. 829.

On the south approach to the ford, in Culpeper County, is an ante-bellum road trace. This historic road should not be confused with the more recent road cut bulldozed into the ridge to the east. On the other side of the river, in Fauquier County, there are additional traces of roads that pass by Skinker's Mill. On a knob above Skinker's Mill is also a short line of military trenches, measuring approximately 40-50 feet in length. Evidence of any other military presence is no longer discernible as the area was subsequently logged and anything from an earlier time has been obliterated. Skinker's Ford and portions of its various approach roads are contained within the City of Fredericksburg's riparian holdings.

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Map 43. Military Preparations at Skinker's Ford.

Ellis's Ford - Ellis's Ford, also called Barnett's Ford, lies almost directly north of Ely's Ford on the Rapidan and on a road connecting the two crossings. This north-south avenue was cut by an east-west road between Richardsville and Richard's Ford/Ferry. Modern bridges elsewhere have caused this crossing to become rather obscure, but it was once a busy location.

During the Civil War, there were two periods when the war in Virginia spilled into the region between the Rappahannock and Rapidan Rivers. It was during these times that Ellis's Ford gained some importance. The first time was in the summer of 1862 when Major General John Pope maneuvered his Union Army of Virginia against two Confederate divisions under General T. J. "Stonewall" Jackson and eventually the rest of General Robert E. Lee's Army of Northern Virginia. The second time was the summer and fall of 1863, after Gettysburg, when the Union Army of the Potomac, under Major General George G. Meade, confronted Lee's army. in a campaign of maneuver. There were other times when the Ellis Ford crossing was used, but the above two periods are when it took on military significance.

The Federal earthworks that remain evident at Ellis's Mill were constructed very early on. In May 1862, Major General George B. McClellan operated against Lee on the Richmond Peninsula. Stonewall Jackson was busy fighting Union forces in the Shenandoah Valley. In between, at Fredericksburg, was a Federal corps commanded by Major General Irvin McDowell. In late May, the Federal command responded to Jackson's offensive in the Shenandoah Valley by dispatching several columns to converge on the Confederate force. Brigadier General Rufus King, for instance, was ordered to move his division from the Fredericksburg area toward Warrenton and then to Front Royal. Flank security for these columns was provided at the Rappahannock River, as a soldier in the Ninth Massachusetts Volunteer Infantry remembered:

Our 1st division was ordered to hold the fords on the Rappahannock river, and prevent the enemy from crossing. The division was furnished with a supply train and intrenching implements, and it was accompanied by two batteries of artillery.... The regiment bivouacked at Hartwood Church on the night of the 28th, and near the Rappahannock on the night of the 29th. On the 30th we encamped in a belt of woods on the bank of the river, in the vicinity of Ellis' Ford. Our pickets were posted along the river. We found the enemy's pickets on duty on the opposite bank. Our fatigue party dug rifle-pits and threw up intrenchments. On the night of June 2, while engaged in work on a rifle-pit near the ford, the enemy opened fire from a piece of artillery with grapeshot. They fortunately fired too high to kill, and our men escaped injury.

McNamara, Daniel George. The History of the Ninth Regiment Massachusetts Volunteer Infantry. Boston, 1899, p. 307.

In June, Jackson overcame the various Federal forces in the Shenandoah Valley and then marched to Lee's aid in front of Richmond. Later that month, Federal authorities

brought the various forces under one overall army, and assigned General Pope to command this effort. In July 1862, Pope moved south, advancing from the area around Culpeper toward Gordonsville. In his report on these operations, Pope described the disposition of his advance elements.

The Cavalry forces covering the front of the army on that day (7 August 1862) were distributed as follows: General Buford, with five regiments, was posted at Madison Court-House with his pickets along the line of the Rapidan from Barnett's Ford as far west as the Blue Ridge.

OR XII, pt. 2, p. 24.

On 9 August, Stonewall Jackson (recently returned from in front of Richmond) fought a battle at Cedar Mountain against a portion of Pope's Army of Virginia. Jackson subsequently withdrew behind the Rapidan, but Lee soon dispatched the bulk of his Army of Northern Virginia toward Gordonsville. Even as Pope took command of the newly organized Army of Virginia, Lee had forced McCellan's Army of the Potomac back from Richmond to its base on the James River. McCellan was soon ordered to withdraw from the Peninsula and the Confederates were quick to respond. Southern columns initiated several actions that caused Pope to withdraw behind the Rappahannock. Elements of the Union Army of the Potomac began to arrive in the Rappahannock valley, however, just transferred from the Peninsula. As a consequence, Lee and Jackson launched what became the Second Manassas Campaign in an attempt to destroy Pope before he could be more substantially reinforced. A member of the famed Black Horse Cavalry recalled one of these early actions:

The Fourth Regiment crossed the Rappahannock at Wallis' ford, and, marching through farms, regardless of roads, came into the main road from Culpepper Court-House to Fredericksburg, and turning to the right, attacked the cavalry protecting Pope's extreme left and drove it across the Rappahannock at Ellis' mill.

Scott, John. "The Black Horse Cavalry," in the Philadelphia Weekly Times, 1879.

Second Manassas was followed by a campaign in Maryland that culminated in the Battle of Antietam, or Sharpsburg. In November of 1862, Major General Ambrose E. Burnside assumed command of the Army of the Potomac and shifted his operations from Culpeper to Fredericksburg. Still, the upriver fords remained potential approaches and were carefully guarded. While the main armies fought at Fredericksburg in December 1862, for instance, units such as the Sixth New York Cavalry patrolled the river. Their unit history describes a "dash over Barnett's Ford" (Ellis's) to reconnoiter that crossing. The entry for 14 December 1862 (the day after Burnside's futile attacks at Fredericksburg), states the "Sixth New York continued to hold the fords along the river and to patrol the roads in the vicinity (History of the

Sixth New York Cavalry. Worcester, Mass., 1908, p. 87)." Colonel Barnes' reconnaissance (described under the section on Richard's Ford) also emerged at Ellis's Ford on 31 December 1862.

Confederate troops at this crossing also prepared earthworks on their side of the river. Reference to these entrenchments is made in a Federal cavalry commander's report of 28 April 1863:

made a reconnaissance in person (after halting and feeding horses and men) to Ellis' Ford. Woke up their infantry, who came down into the rifle-pits and drew bead on us. They sent one shot at a picket I left.... Picketed near Ellis's, Kemper's, and Field's....

OR XXV, pt. 2, p. 276.

In the summer of 1863, the main armies confronted each other once again in the area between the Rappahannock and Rapidan Rivers. A cavalry action had occurred at Brandy Station in the spring, but in late July, the Union Army of the Potomac, now commanded by Major General George G. Meade, followed Lee's Confederate force back from Gettysburg. Meade soon advanced to the Rappahannock and on 1 August, a Union brigade commander reported from Ellis's Ford, a place that had clearly been picketed before:

I found the ford high and impassable to infantry. One large flat-boat, used at the ferry, was sunk by my orders, and a small boat removed and placed under guard. The mill commanding the ford I find to have been loopholed for musketry and strengthened with railroad iron. A rifle pit is also dug on the hill above the mill. These preparations for defense were made by our troops during last spring.

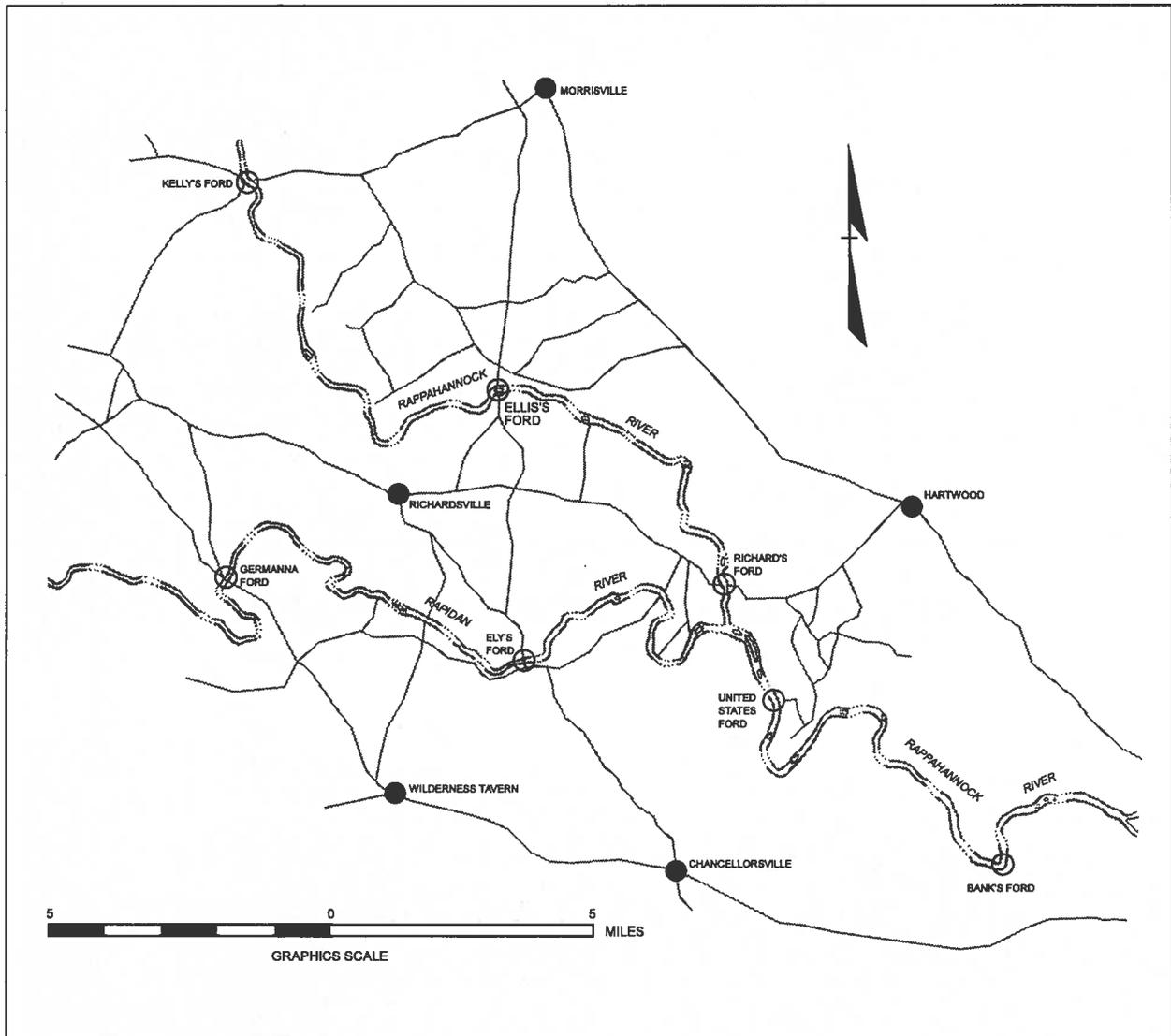
No enemy has been seen at this point since our arrival. One horseman and two armed men of the rebel service crossed yesterday to this side by boat, and are still on this side.

OR, XXVII, pt. 3, p. 822.

Along the Rappahannock, August was punctuated by some skirmishing, but no serious threats to either army. In September, the Confederate command detached General James Longstreet's Corps from the Army of Northern Virginia and sent it to join the Confederate army in Tennessee. Within days of Longstreet's departure, Meade advanced his Army of the Potomac to Culpeper Court House and pushed toward the Rapidan. Fighting occurred at Brandy Station, Culpeper Court House and elsewhere.

On 19-20 September 1863, a battle was fought in Tennessee along a creek called Chickamauga. Longstreet's detached corps was instrumental in achieving a Confederate victory. Federal authorities in Washington subsequently detached two corps from the Army of the Potomac and sent them to Tennessee to provide relief to

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Map 44. Military Importance of Ellis's Ford. As the historic road network shows, this ford provided another route across the Rappahannock, downstream of Kelly's Ford.

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the recently defeated Union army at Chattanooga.

With troops detached from both armies in the Rappahannock valley, Lee took the initiative. On 9 October, he began a movement to try to turn Meade's flank. Meade withdrew north, but Lee's effort ended badly at Bristoe Station. Unable to gain advantage, Lee had withdrawn behind the Rappahannock by 22 October. On 7 November, Meade resumed active operations and pushed back across the Rappahannock, establishing a base of supply at Brandy Station.

In late November, Meade advanced again, this time across the Rapidan, in what became known as the Mine Run Campaign. The main army crossed the Rapidan at Germanna Ford and at the Culpeper Mine Ford. The far ranging cavalry, however, crossed further out on the army's flanks. The First Maine Cavalry crossed at Ellis's.

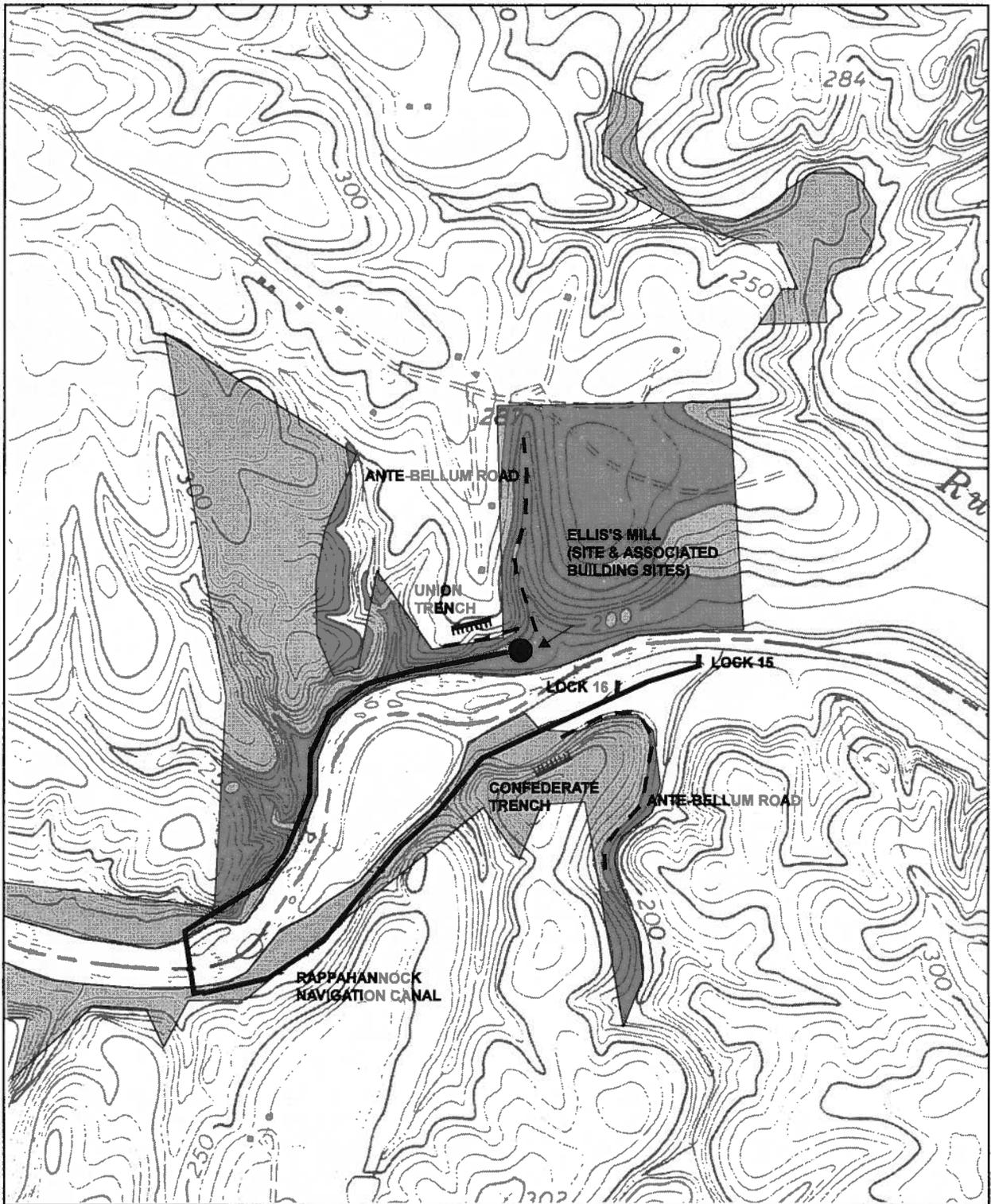
On the twenty-fourth of November a forward movement of the whole army was commenced, with the intention of trying once more to whip the rebel forces before going into winter quarters.... The First Maine crossed the Rappahannock at Ellis' ford, and marching to the Rapidan, a portion stood picket that night and the next day at Ely's ford, while the rest went into camp near Richardsville. On the twenty-sixth the Rapidan was crossed, and the division took the left of the army.

Tobie, Edward P. History of the
First Maine Cavalry, 1861-1865.
Boston, 1887, p. 210.

On the ridge north of Ellis's Mill is a line of military trenches dug by soldiers of the Ninth Massachusetts Regiment. This line is situated above a stone wall which likely marks the edge of an old road. These works extend for approximately 200 feet, its western end wrapping around the crest of the hill, facing from south to west.

On the opposite shore, in Culpeper County, there is evidence of a road that crosses the Rappahannock Canal. This road has seen much modern use, but has ante-bellum antecedents (according to wartime maps as well as the 1848 "Map and Profile of the Rappahannock River and Its Improvements"). The hilltops have been heavily bulldozed and timbered, making identification of any anomalies problematic. Still, a short line of trenches (approximately 65 feet long) has survived along the military crest of a steep hill overlooking the ford.

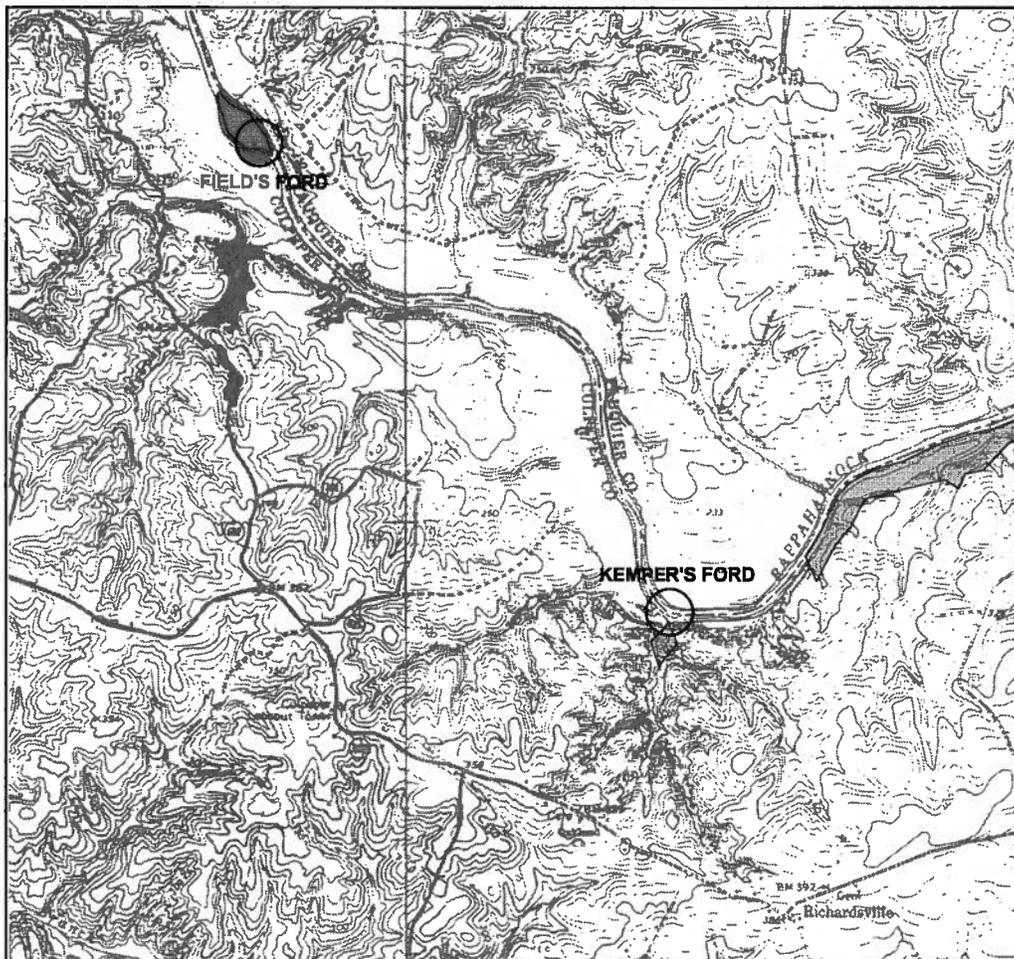
The map on the following page shows the resources at Ellis's Mill that are within the City of Fredericksburg's riparian holdings.



Map 45. Military Preparations at Ellis's Ford.

Kemper's Ford and Field's Ford - There are two additional fords above Ellis' where the City of Fredericksburg owns riparian property. The city's public holdings are extremely limited in these areas, though, and do not include any significant historic resources. For reference, Lieutenant L.B. Norton, Union signal officer, described these fords in his requisition book. Kemper's Ford is described as "Good but steep approaches." Field's Ford is called "Sandy now impassable."

There are Civil War references to Kemper's Ford in Union reports, but the city does not own any of the nearby property where earthworks are likely to be located.



Map 46. Kemper's and Field's Fords.

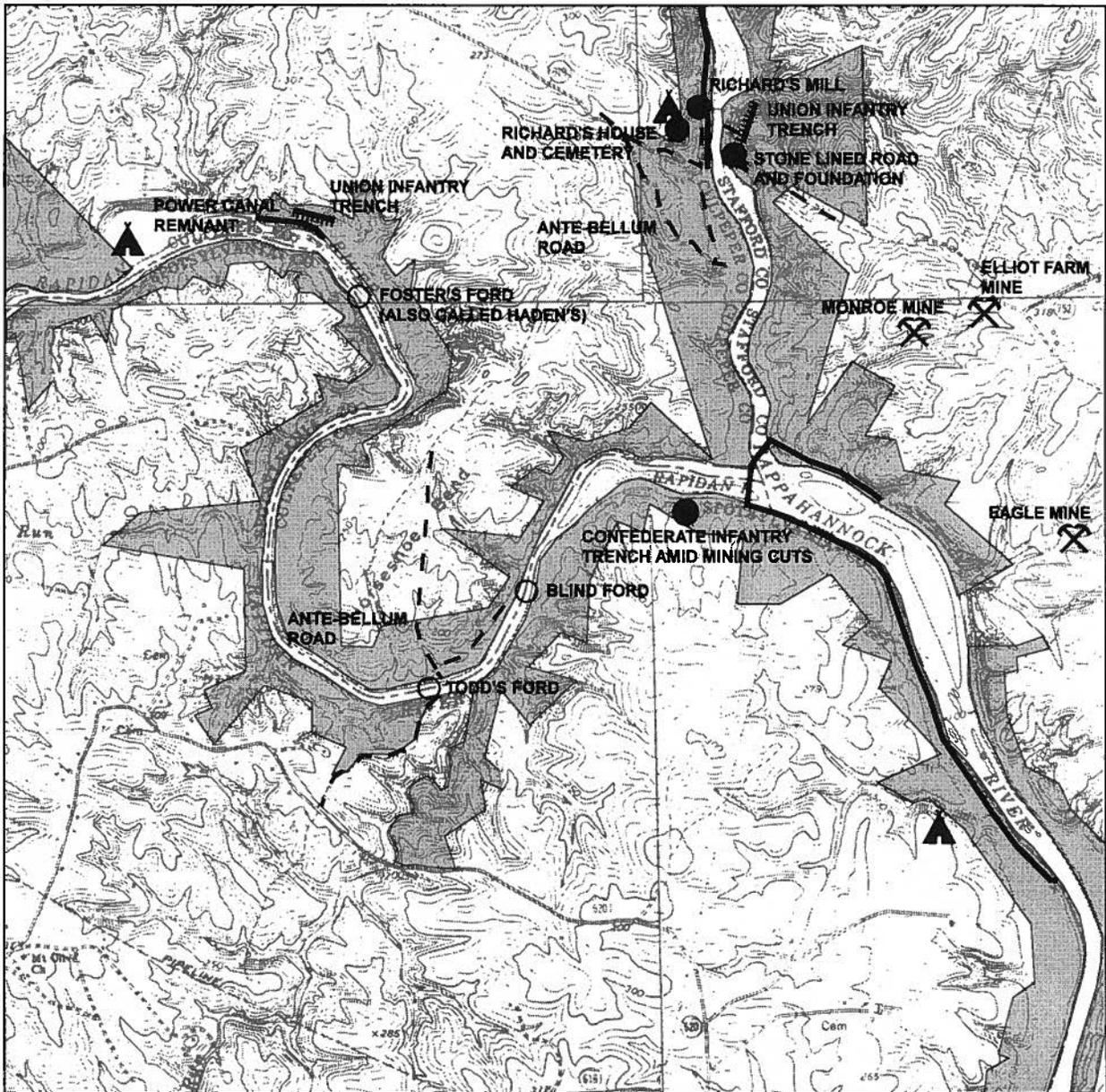
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Blind Ford, Todd's Ford, and Foster's Ford - There are three fords between the confluence of the Rappahannock and Rapidan Rivers and Ely's Ford, approximately six miles upstream on the Rapidan. Blind Ford appears in Jedediah Hotchkiss's map of Chancellorsville that he prepared to accompany General Robert E. Lee's report of that campaign. On the map prepared to accompany Lee's report on the Mine Run Campaign, this stretch of the Rapidan is shown with Blind Ford as well as Todd's and Haden's (Foster's) Ford. The Federal map for this campaign, however, shows only Blind and Todd's Ford.

The thorough Lieutenant Norton, Union signal officer, described Blind Ford as "very bad." There is no evidence of military works at the crossing point although Confederate trenches are located slightly downstream on a hill just above the confluence. These works consist of earthworks across the northern face of a steep slope and around an earlier gold mining site. Additional works are located to the west and to the south of this hilltop. These works may have been manned to observe any units approaching Richard's Ford, approximately one mile to the north, or coming into the Horseshoe Bend area toward Blind or Todd's Fords.

At Todd's Ford, near Hunting Run in Spotsylvania County, there is also evidence of Confederate works. These are also located on an earlier gold mining site, but the military works are quite different from the industrial cuts. While some of the area has been altered by post-war activity (bulldozing) there are several intact trenches covering the old ford road. On the north side of the Rapidan are numerous gold mining cuts (described previously) and a distinct road trace descending the ridge fronting a ravine to the east of the mining activity.

Forster's Ford appears as "Haden's Ford" on the Confederate map of the Mine Run Campaign. There is evidence of a road trace on the south side of the Rapidan, but the north shore opposite is privately owned. The City of Fredericksburg's riparian property resumes less than 1,000 feet downstream of the ford, where a millrace is located. On a ridge above the power canal is a short line of trenches that may have been part of a larger network of Federal works covering this crossing.



Map 47. Blind, Todd's and Foster's Fords.

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Ely's Ford - Ely's Ford has been in use for thousands of years. Its environs were previously occupied by aboriginal tribes and the crossing remains in use today through a contemporary roadway bridge, located just to the west of the old ford. This river crossing derived the name still used today from a Spotsylvania family that lived nearby as early as the late eighteenth century.

The ford appears in historic records from the American Revolution. In 1781, General George Washington shifted the Continental Army, reinforced by a French expeditionary force, from New York to Virginia. As the armies moved south, to eventually confront the British at Yorktown, the militia officer George Weedon reported to the Marquis de Lafayette from Fredericksburg:

The Waggon with such Supplies as can be furnished shall be sent on tomorrow from this place. Have wrote to Dumfries and Alexandria to forward a second Brigade, who are Directed to Cross at Elies Ford and fall down on your rear unless the movements of the two Armies makes a different rout more Eligable....

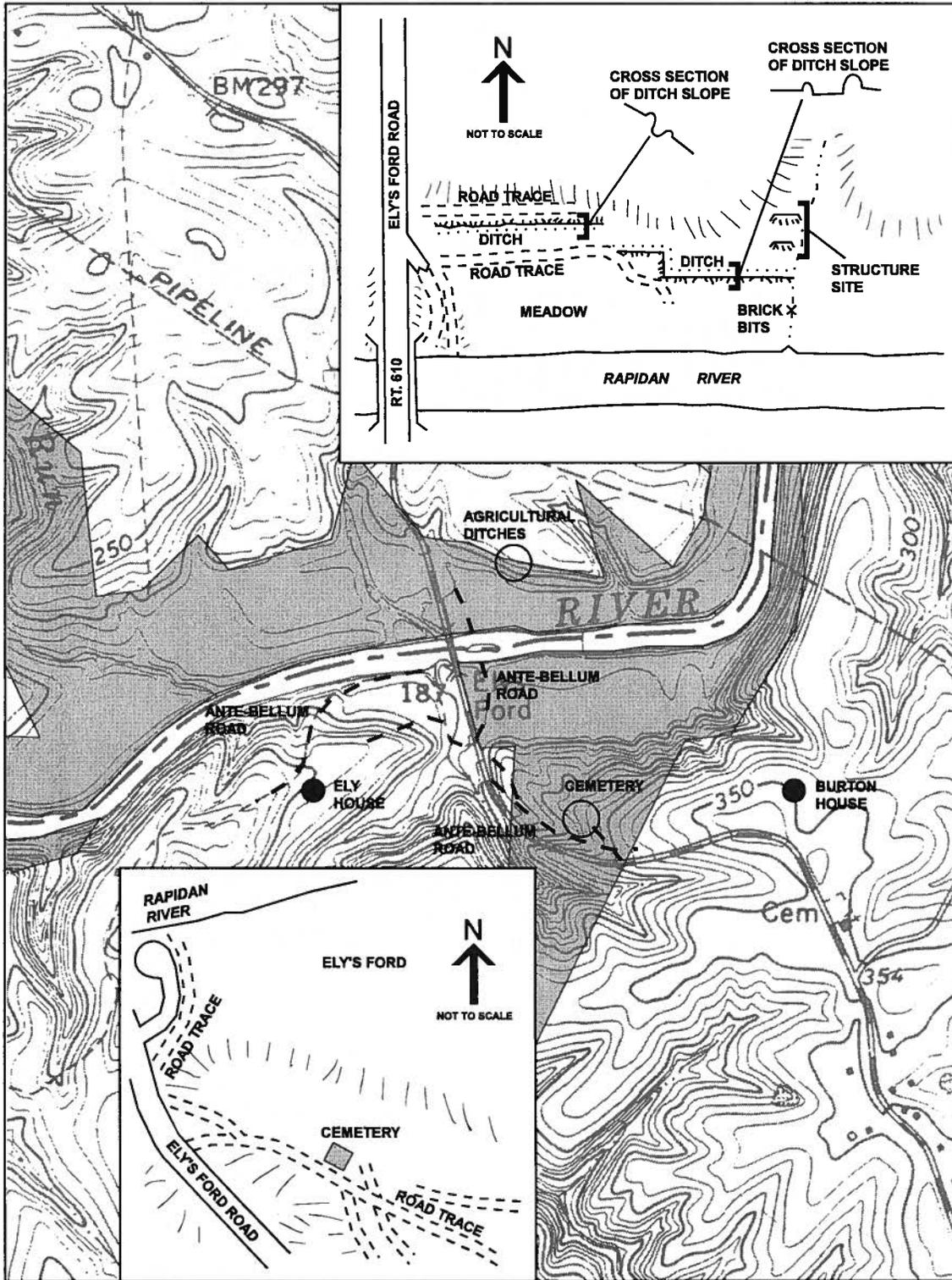
Weedon to Lafayette, 17 June 1781.

The ford attained military significance again during the period 1862-1864. It shows up on both Union and Confederate maps as "Ely's Ford" (Hotchkiss and Michler maps of Chancellorsville). Both maps also clearly show the "Ely's Ford Road" that runs from the ford to the Chancellorsville crossroads as well as the north-south trace from the ford to the area just west of Wilderness Church. Lieutenant L.B. Norton, a Union signal officer, described the ford as "Tolerably good (much used)." Union troops appear to have first used Ely's Ford in August 1862, in response to General T.J. "Stonewall" Jackson's advance from Gordonsville to Culpeper. At that time Federal columns were sent from the Fredericksburg area to the west. As Brigadier General Marsena Patrick wrote in his diary:

We took the road to Chancellorsville & thence to Ely's Ford, on the Rapidan - It is a fine ford & we crossed without difficulty - From there we went on about 4 or 5 miles, to the junction of this road with that from Falmouth,.... After wating a long while, sending messages both ways, to Doubleday in my rear, & Hatch on my right, an Officer of McDowell's Staff ... arrived, to hurry up Gen. King, saying that Jackson had taken a strong position on Slaughter's (Cedar) Mountain & was cutting Banks to pieces....

Sparks, David S., ed. Inside Lincoln's Army: The Diary of Marsena Rudolph Patrick. New York, 1964, p. 118.

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Map 48. Ely's Ford.

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Union troops are shown crossing the Rapidan River at Ely's Ford without the benefit of pontoons. The view is from Spotsylvania County, looking across the river into Culpeper County (from Battles and Leaders of the Civil War).

In April and May 1863, during the Chancellorsville Campaign, Ely's Ford saw more activity. On 29 April, for example, Major General George Meade's Union 5th Corps crossed here as part of a flanking column descending on the Confederate army in Spotsylvania.

Several days after the Federal infantry had passed, a division of Union cavalry, Brigadier General William Averell commanding, approached the ford from the west, returning from a rather unsuccessful raid. By then the Battle of Chancellorsville was in progress, as a member of the 3rd Pennsylvania Cavalry remembered:

After nightfall on May 2, the head of the column turned the hill sloping down to the Rapidan River, the Third Pennsylvania in front.

A night battle scene, of intense interest, opened to our view. Before us, beyond the valley, the road led to Chancellorsville; over the tree tops in the distance, the shells were bursting in air or with fiery trail falling and exploding in the woods; the volleys of musketry, the shouts of the combatants, thrilling in the extreme, filled us with apprehension. Which army would first secure possession of the road beyond the ford was the question in our minds. When within about a hundred yards of Ely's Ford, one of the advance guard came back and reported... that they were halted by a strong force at the ford and could see picket fires burning.

History of the Third Pennsylvania Cavalry.
Philadelphia, 1905, pp. 232-233.

The force at the ford turned out to be a regiment of New York infantry and the horse soldiers soon went into bivouac on the north side of the river, taking care of their horses, and otherwise resting. General J.E.B. Stuart, however, had approached the Ely's Ford Road as Stonewall Jackson's corps attacked the Union 11th Corps on 2 May. He moved into position opposite the Federal soldiers and prepared to attack, but soon received word that both Jackson and General A.P. Hill had been wounded and that he had been ordered to take command of Jackson's Corps. Stuart hurried away to his new duties, but ordered the Sixteenth North Carolina Infantry (Pender's Brigade, A.P. Hill's Division, Jackson's Corps), which had already deployed, to fire three volleys at the Federals on the Culpeper shore and then withdraw. The Pennsylvania trooper continued:

Some of the men had already lain down to sleep, when suddenly a volley was poured in upon us from the hills on the opposite side of the river. The sparks flew in every direction; wounded horses galloped over and among the men, creating much disorder.... soon many of the Third opened fire upon the Confederates, who retired after firing several more volleys.

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Hundreds of horses were found the next morning grazing in the adjoining fields, and the men were out at daybreak, looking for mounts. Many were never recovered, and much disputing followed as to the ownership of animals.

History of the Third Pennsylvania Cavalry.
Philadelphia, 1905, pp. 233-234

A soldier in one of Averell's other units recalled the cavalry column's movements the next day:

May 3, 1863 Sunday. Hot & clear - We hear heavy cannonading and musketry about Chancellorsville - We rest all A.M. - P.M. ordered out cross the Rapidan at Ealys Ford - and passed between the contending forces - i.e. where they had been fighting - Saw many dead, and wounded soldiers - we crossed the U.S. Ford on pontoons and went on picket near Richards Ford - Awful is result of Battle.

Mohr, James C., ed. The Cormany Diaries.
Pittsburgh, 1982, p. 309.

During the Mine Run Campaign, Ely's Ford was bridged with pontoons again. As a soldier in the Fifteenth Massachusetts Volunteer Infantry remembered:

We marched to Ely's Ford, on the Rapidan, and crossed on the pontoon bridge at nine a.m. on the 2nd instant (of December); halted at eleven a.m. and made coffee, and moved again at one P.M.; arrived at our old camp near Brandy Station about eight P.M.

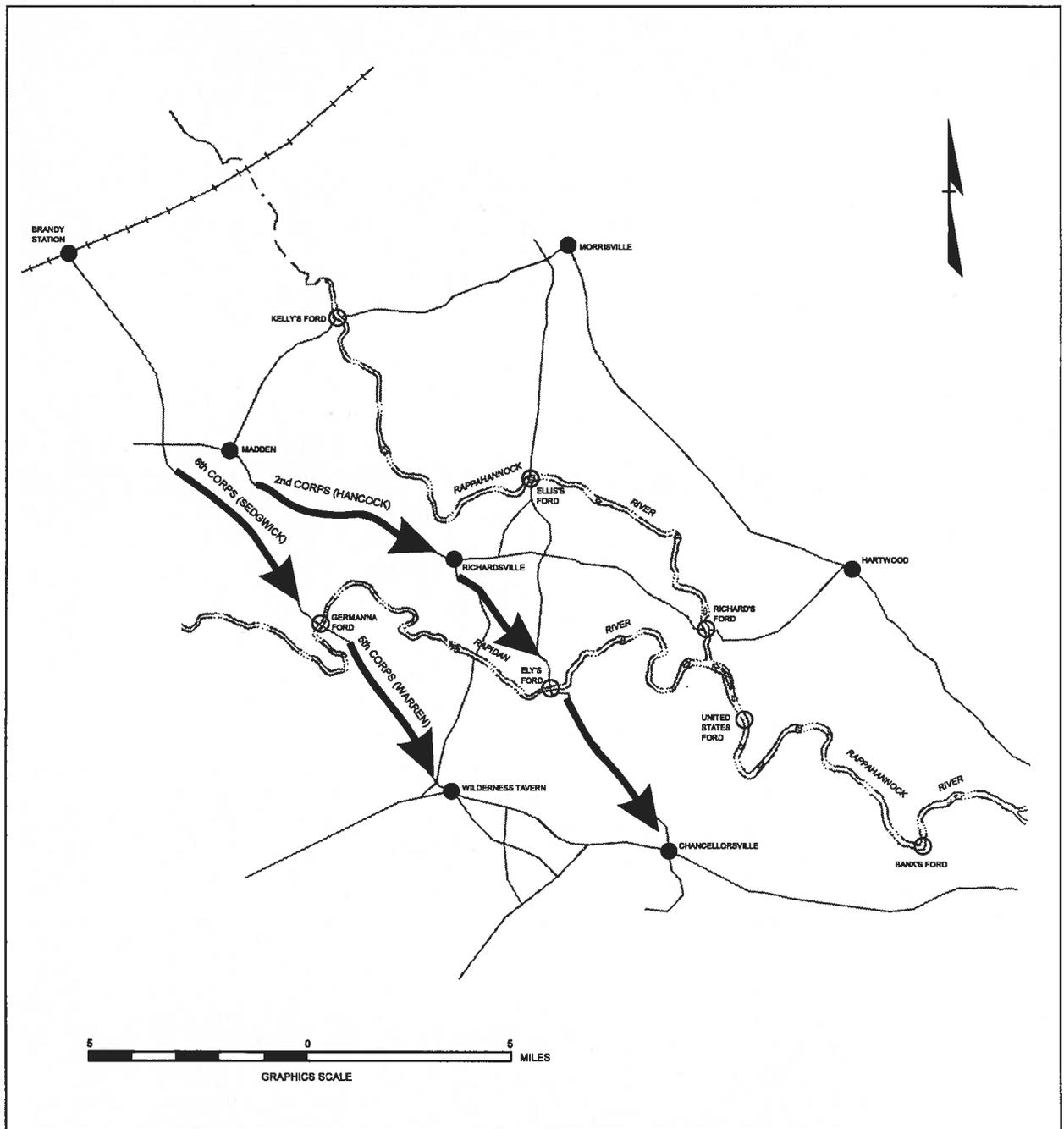
Ford, Andrew Elmer.
The Story of the
Fifteenth Regiment Massachusetts
Volunteer Infantry. Clinton, 1898, p. 308.

The bulk of the Union Army of the Potomac wintered near Brandy Station, which served as a railhead depot. From Brandy Station, General Meade ordered his cavalry to launch what became known as the Kilpatrick - Dahlgren Raid to liberate Union prisoners being held in the Confederate capital at Richmond. While another force diverted attention to the west, the raiders headed toward Ely's Ford. Although this raid proved unsuccessful, its opening moves went exceedingly well. A Confederate lieutenant wrote of the action at the Rapidan crossing:

Whether because of the treacherous conduct of a citizen in conducting the advance guard of Dahlgren's (Union) force over the river so as to get behind the detachment... on picket at Ely's Ford, or because of the rapidity of their dash across the stream, the sixteen men were of the Confederate picket captured, and none escaped to give warning of the advance.

Beale, G. W. A Lieutenant of Cavalry
in Lee's Army. Boston, 1918, p. 135.

A Federal cavalryman recalled that night's action somewhat differently:



Map 49. Ely's Ford During the Wilderness Campaign. The Union 2nd Corps crossed the Rapidan at Ely's Ford, while the other two Union corps crossed at Germanna Ford, to the west.

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We proceeded to within two miles of the ford and halted until dark, when Lieut. Merritt, with fifteen dismounted men and two scouts sent from headquarters, waded the river about one mile above the ford, and, aided by the darkness, the night being stormy, succeeded in approaching and securing the two videttes guarding the ford, and, after much difficulty, ascertained the position of the reserve. A large fire built in a ravine on the banks of the river some distance below the ford, evidently intended to deceive us, caused some delay; but we finally discovered that their picket reserve were in a house (either the Ely House or, more likely, the Burton House) some distance back from the river. We proceeded silently to this house, surrounded it, and, rushing in, after a brief struggle, captured the whole party, sixteen men, a lieutenant, and the officer of the day, who had halted for the night on his tour of inspection. His report of the vigilance and efficiency of his picket was probably never made.

Beaudry, Louis N. Records of the Fifth New York Cavalry. Albany, 1874, pp. 95-96.

In the spring of 1864, Ely's Ford served a military purpose for the last time. In early May, Meade's Army of the Potomac departed its winter encampments near Culpeper. His right wing headed toward the Germanna crossing, a division of cavalry (Wilson's) in the van and the 5th Corps (Warren's) and 6th Corps (Sedgwick's) close behind. The Federal left wing marched toward Ely's Ford, a cavalry division (Gregg's) in front and Major General Winfield Scott Hancock's 2nd Corps following. Meade's orders of 2 May indicate how the column was to avoid disclosing the movement to the Confederates who were able to survey the valley from atop Clark's Mountain:

Major-General Sheridan, commanding Cavalry Corps, will move Gregg's cavalry division to the vicinity of Richardsville. It will be accompanied by one-half the canvas pontoon train, the engineer troops with which will repair the road to Ely's Ford as far as practicable without exposing their work to the observation of the enemy. Guards will be placed on all occupied houses on or in the vicinity of the route of the cavalry and in advance toward the Rapidan, so as to prevent any communication with the enemy by the inhabitants.

OR XXXVI, pt. 2, p. 331.

The Federal crossing actually went very well. The night of 3/4 May 1864 was cold and dark, providing cover for a company of Union cavalrymen who quietly waded the river to surprise the Confederate pickets. The Federal engineers began work on the first bridge as soon as they could get their equipment in place and float pontoons. They were nearly done when the Union infantry swung into site at dawn. The first bridge was completed shortly thereafter and the Union 2nd Corps began to cross into Spotsylvania as the engineers began construction of a second pontoon bridge. Hancock kept Meade apprised of his progress:

The head of my column arrived here at 5:30, and has just commenced crossing the canvas bridge. The wooden bridge is being laid. General Gregg is moving to

There are a great number of road traces around Ely's Ford. Downstream of the crossing on the Spotsylvania shore, for example, is a road that parallels the river for approximately 1,500 feet below the pipeline crossing. Its heavy embankments denote long and hard use. Portions of the old Ely's Ford Road are also evident just to the east of the modern Route 610, clearly visible between well defined dirt walls.

Also in Spotsylvania is another road leading away from the ford upstream. It extends up the slope of a ridge along the river and runs adjacent to an abandoned house with a stone foundation and chimney. This structure is likely the Ely House, but this area is beyond the City of Fredericksburg's riparian holdings.

On the Culpeper side of the ford there is a road trace to the east of the Route 610 bridge that lines up with the oldest trace on the Spotsylvania side. There are also a series of ditches and road traces that cut parallel to the river at the base of the bluff. The road traces extend downriver, possibly having served the Smith Gold Mine. The ditches have an unusual profile and may be remnants of Virginia ditch-fences that once kept livestock out of particular areas.

On the first creek to east of the ford, in Culpeper County, is a structure site. It sits above one of the ditches, measures approximately 35 by 25 feet, and abuts the creek. Pieces of brick were found in the creek below this site. This site near a watercourse, in the proximity of several man-made features, suggests a potential millsite. Because this feature does not show up on any nineteenth century maps and because the Ely's Ford area has had such long use, its vintage could be late eighteenth or early nineteenth century.

Other evidence of human occupation on city-owned property occurs on the Spotsylvania side. On a ridge above the river, along the old Ely's Ford Road, is a small untended cemetery. It has three identifiable graves with crude headstones and footstones. The stones are primitive and have no legend on them. There is a 1940s-50s vintage wire fence enclosing the site. Margaret C. Klein's Tombstone Inscriptions of Spotsylvania County, Virginia, makes no mention of a burial ground in this location. Though this work is not definitive, it does not list Elys, Elleys, or Ellies buried elsewhere, suggesting this is one of the Ely family plots.

Evidence of Civil War earthworks is nearly non-existent. The floodplain has been altered by the river while the crests of the hills, where military works would likely be found, have been altered by bulldozers preparing residential construction sites. Still, field research uncovered a single gun pit on the extreme southwest corner of a ridge that is oriented toward the ford.

Although not located on City of Fredericksburg property, the numerous structure sites reflect the potential wealth of archaeological resources at Ely's Ford. Given the ford's antiquity, the layers of habitation (including known Native American occupation) may also contain evidence of frontier period occupation.

Culpeper Mine Ford, Hall's Ford, and Skinker's Ford (Rapidan) - There are three fords on the Rapidan River between Ely's Ford and Germanna. The first of these is the Culpeper Mine Ford, that saw use during the Civil War. The other two are Hall's (sometimes called McNeill's) and Skinker's Fords. This latter crossing should not be confused with the ford of the same name on the Rappahannock.

A Union signal officer, Lieutenant L.B. Norton described the Culpeper Mine Ford as "Tolerably good." He listed only one other ford, between what he called the "Culpepper Ford" and Germanna, but labelled it as "Ford near Vauclose Mine - Crossed by Cavalry." In fact, the Vaucluse Mines are approximately two-thirds of a mile to the south/southwest of the Melville Mine. Neither of these complexes is near Hall's or Skinker's Fords. Norton's reference is likely applicable to Hall's Ford. First, it is the next ford upriver from the Culpeper Mine Ford and closest to any mining activity. Second, it was in use as late as the early twentieth century, according to a Mrs. Hall who still lives nearby and remembers crossing the river there in a horse-drawn buggy. Finally, there are several gun pits opposite this ford in Orange County that overlook the crossing site, indicating recognized utility.

As the Wilderness campaign opened in early May 1864, the Union Army of the Potomac used Germanna and Ely's Fords to cross their striking columns. The necessary supply and ammunition trains, however, were routed primarily across pontoon bridges at the Culpeper Mine Ford. Major General George G. Meade's orders of 2 May 1864 were very explicit in how the supply trains would coordinate with the combat arms:

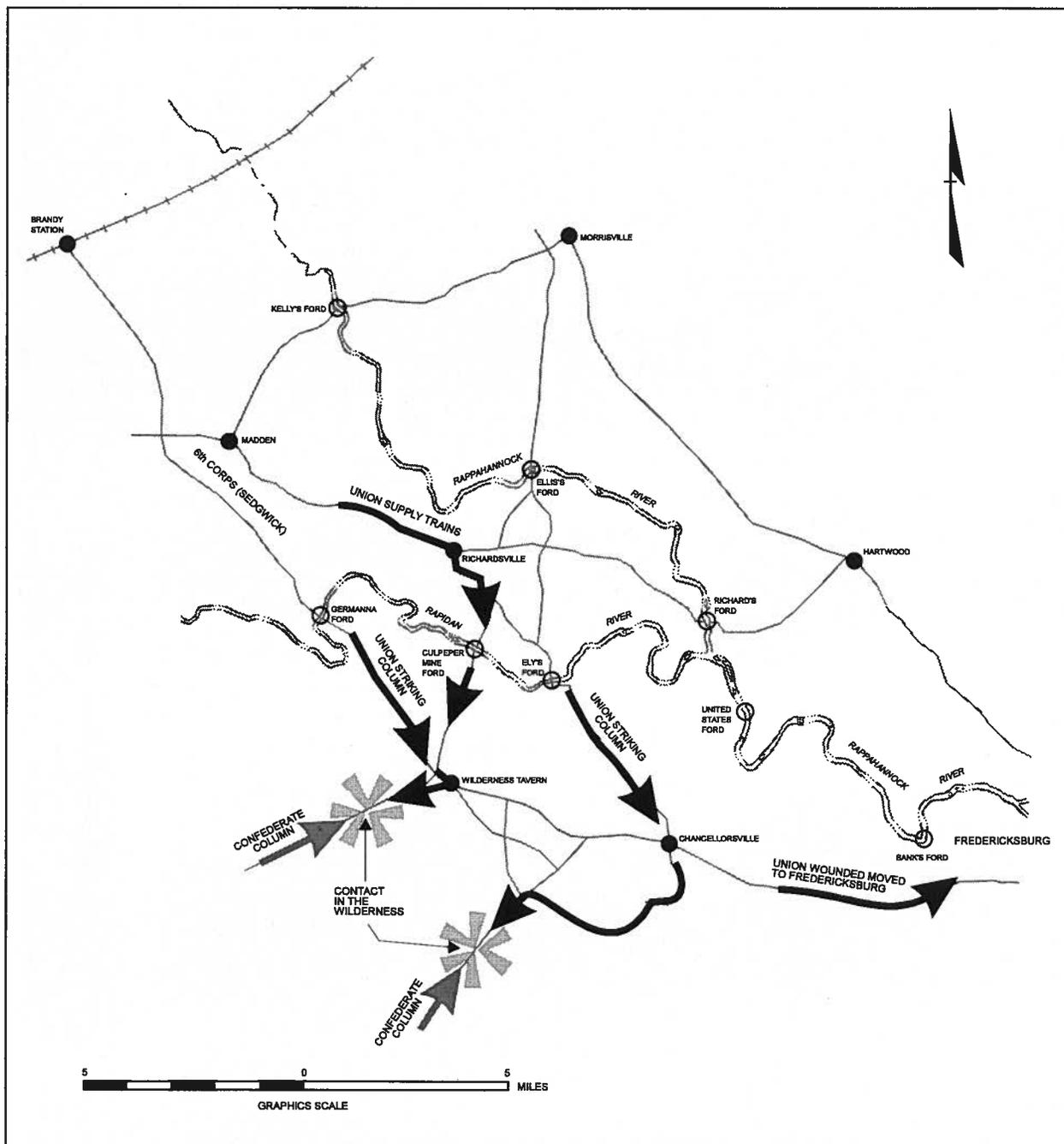
So much of the bridge train of the Sixth Corps as may be necessary to bridge the Rapidan at Culpeper Mine Ford will proceed to Richardsville in rear of the Reserve Artillery, and, as soon as it is ascertained that the Reserve Artillery are crossing, it will move to Culpeper Mine Ford, where the bridge will be established. The engineers of this bridge train will at once open a road from Culpeper Mine Ford direct to Richardsville.

OR XXXVI. pt. 2, p. 332.

Evidence of any Civil War activity at the Culpeper Mine Ford has been obliterated by subsequent ground disturbing activity. Further, the City of Fredericksburg owns very little property in this vicinity. All three fords appear on General N. Michler's 1867 Map of the Battlefield of the Wilderness, Va., but there is no evidence of either Hall's or Skinker's having been used during active operations during the Civil War.

The City of Fredericksburg owns only a slight amount of property in this vicinity. The Confederate gun pits overlooking Hall's Ford appear to be on private property. Any earthworks at Skinker's Ford must necessarily be on private property as the City owns only a small amount of property there.

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Map 50. Military Use of Culpeper Mine Ford. In the opening moves of the Wilderness Campaign, Grant's supply trains crossed at the Culpeper Mine Ford, between his two striking columns. As the campaign progressed, Grant shifted his base of supply to Fredericksburg, where hospitals were also set up to handle casualties.

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SITES PRESERVATION RECOMMENDATIONS

The City of Fredericksburg has traditionally sought to preserve its historic and cultural resources, recognizing that those who live in special places have been entrusted with their protection and preservation. Fortunately, the City's policy of maintaining a forest cover on its riparian property (to enhance water quality) is also the most effective means to preserve the historic and cultural resources in those same areas. The following recommendations are made to further enhance historic resource protection:

1. Maintain an inventory of historic resources and update, as appropriate, to ensure it remains an accurate database for planning and policy development.
2. Provide educational materials to the public so they can fully appreciate their protected heritage yet understand their responsibility to care for them by leaving historic resources undisturbed.
3. Ensure viewsheds and historic vistas retain their integrity and scenic value by carefully evaluating any proposed intrusions for visual impact.
4. Monitor proposed and existing development on lands adjacent to City-owned property (as specified in the City's Watershed Property Management Policy) to avoid adverse impacts to the City's natural and historic resources.
5. Identify and track the condition of key resources that are near or adjacent to private land use, to ensure these sites are not degraded as a consequence of such activity. Areas subject to such pressure include (but are not limited to) Bank's Ford; the area around United States Ford, including the confluence; and the Ely's Ford area.
6. Consider establishment of a Rappahannock River Historic District to provide an increased measure of identified significance.
7. Emphasize the Rappahannock River's historic values during development of Fredericksburg's urban riverwalk.
8. Evaluate the potential for long term protection of significant resources through easements or transfer of selected riparian property to appropriate organizations.
9. Follow the principle of "economy of intervention" to minimize any work that is accomplished within the City's riparian holdings. Clearing woodlands, for example, may be deemed necessary to maintain some areas, but may also

initiate erosion and other negative impacts.

CAUTION

Many areas along the Rappahannock and Rapidan Rivers were once battlefields or were subjected to artillery bombardment. Unexploded ordnance from this period could still function. In the event such a hazard is encountered, evacuate the site without disturbing the unexploded ordnance and notify the proper authority.

APPENDIX A

CITY OF FREDERICKSBURG WATERSHED PROPERTY MANAGEMENT POLICY.

CITY ADMINISTRATIVE MANUAL

Section 2-207. CITY WATERSHED PROPERTY MANAGEMENT POLICY

A. Purpose.

The City owns approximately four thousand eight hundred (4,800) acres of land along the Rappahannock and Rapidan Rivers and their tributaries and roughly eight hundred eighty (880) acres at the Motts Run Reservoir. This land constitutes a significant portion of the Rappahannock watershed that serves as a source of the City's raw water supply. The protection of these water resources is essential to the health, safety, and welfare of the City and its citizens. Most of the land is undeveloped and much is inaccessible except by water. It performs a vital water quality function by restricting nonpoint source pollution, retarding erosion and sedimentation, and protecting the riverine ecosystem.

This watershed is increasingly vulnerable to pollution and destruction as a result of increased population and development. The purpose of the City Watershed Property Management Policy is to formalize existing City policies on the management of this property and to provide the City Manager with explicit guidelines for the appropriate use and management of these public lands in the future. This policy, however, does not constitute a comprehensive plan for the use or protection of the City's watershed. On the contrary, it is a rudimentary property management plan designed to provide minimum safeguards against unauthorized use of City property and to ensure that the City is kept informed of key land use decisions that affect the City's watershed.

B. Applicability.

This Section shall apply to the City's watershed property, which shall consist of the following lands, buildings, and facilities:

- (1) Motts Run Reservoir, consisting of roughly eight hundred eighty (880) acres located off State Route 688 in Spotsylvania County, Virginia;
- (2) all City-owned lands located along the banks of the Rappahannock River, the Rapidan River, Deep Run, and all other tributaries of such waters located in the City, Spotsylvania County, Stafford County, Orange County, Fauquier County, and Culpeper County upstream of the Embrey Dam. Said property, consisting of roughly four thousand eight hundred (4,800) acres, is more fully described in a deed dated March 19, 1969, from the

Virginia Electric & Power Company to the City of
Fredericksburg and recorded in Deed Book 137 at Page 360
among the land records of the Clerk of the Circuit Court
of the City of Fredericksburg

C General Policy.

The City watershed property shall be open and available to the public for general recreational uses, except as otherwise provided by this section, City Code Section 16-17.1, or other applicable laws, ordinances and regulations. Such recreational uses shall include hiking, camping, hunting, fishing, birdwatching, boating, and swimming. Nothing in this policy, however, shall prohibit the City Manager from limiting the aforementioned recreational uses in certain areas or placing other restrictions on the use of the City watershed property if he determines that such restrictions are necessary to effectuate the purposes of this Section.

D. Special Permission to Use Watershed Property.

1. The City Manager shall have the authority to grant special permission or licenses to persons seeking to use the City watershed property for purposes not granted to the public generally, provided such licenses are consistent with the terms of this Section and with City Code Section 16-17.1.

2. The City Manager shall not grant any special permission or license to any person to use the City watershed property unless such license

- a. is in writing and signed by the City Manager and the licensee;
- b. is revocable at the convenience of the City;
- c. provides the City with indemnification for all damages or losses suffered by the licensee or any third party as a result of the licensee's use of the property;
- d. involves no cost of liability for the City; and
- e. requires that the licensee use the property in a manner consistent with applicable provisions of the Chesapeake Bay Preservation Ordinance of the City of Fredericksburg.

3. Any proposed use not meeting the requirements set forth in paragraph (D)(2) above shall require a formal lease agreement approved by City Council in accordance with the requirements of Virginia Code Section 15.1-307, et seq.

4. Any person currently using City watershed property without the benefit of a written license or lease agreement as of the date of

adoption of this Section shall enter into such an agreement no later than December 31, 1991.

E. Posting of Property.

The City Manager shall have the authority to post any portion of the City watershed property which, in his opinion, requires posting in order to prevent trespassing, or violations of this Section, or City Code Section 16-17.1. In addition, the City Manager shall have the authority to erect barriers or barricades on such property to ensure compliance with such ordinances and regulations.

F. Watershed Property Manager; Duties.

The City Manager shall designate a City employee as the Watershed Property Manager. Such person shall have the authority and responsibility to:

1. administer the provisions of this Section;
2. refer suspected violations of this Section and City Code Section 16-17.1 to the City Police Department or the City Attorney;
3. conduct regular inspections of the City watershed property by water, land, and air;
4. serve as liaison between the City and the Counties of Stafford, Spotsylvania, Culpeper, Orange, and Fauquier on all matters related to the City watershed property; and
5. make reports and recommendations periodically to the City Manager and City Council on the state of the City watershed property.

G. Regional Cooperation.

1. The City Manager shall periodically communicate with the County Administrators of Stafford, Spotsylvania, Culpeper, Orange and Fauquier Counties to advise them of the provisions of this Section, City Code Section 16-17.1, and the extent and location of City-owned lands in their respective jurisdictions. Upon the appointment of a new County Administrator in any such county, the City Manager shall promptly communicate the contents of this Section to such person. The City Manager shall solicit the assistance of such Administrators and their governing bodies in (1) enforcing City and county ordinances and regulations regarding the use of such property, (2) protecting the City watershed property from unauthorized or inappropriate uses, and (3) encouraging general recreational uses of the City watershed property by county residents.

2. The City Manager shall periodically request each Zoning Administrator of each of the five counties listed above to notify the City of all rezoning and subdivision applications filed by the owners

of properties adjacent to the City watershed property and all other land use applications which are likely to impact the City's property. Whenever the City Manager receives notice of such an application, the Watershed Property Manager shall immediately review such application and determine whether the proposed use or subdivision could adversely affect the City watershed property. If the City Manager determines that the City should comment or actively participate in proceedings related to such application, he shall take whatever action he deems appropriate and forward copies of any formal response or comments to the City Council.

H. Enforcement.

1. The City Manager shall take whatever action he deems appropriate to secure the eventual removal of all encroachments (e.g. docks, roads) by private property owners on the City watershed property that currently exist or that may exist in the future.

2. The City Manager is authorized to seek all appropriate legal action, including civil, criminal, or injunctive relief, to enforce the terms of this Section and City Code Section 16-17.1. For example, the City Manager shall consider service of trespass notices upon all known violators, their beneficiaries, and successors-in-interest, by the recordation of such notices in the Clerk's Office of the Circuit Court of the jurisdiction in which the affected watershed property is located.

3. The City Manager shall publicize the name and phone number of the Watershed Property Manager in order to encourage public inquiries and reports of violation of this Section and City Code Section 16-17.1.

Date of Adoption: September 10, 1991

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APPENDIX B

The following is a portion of the Requisition Book of Lieutenant (later Captain) Lemuel B. Norton, a signal officer in the Army of the Potomac. A copy of the original is on file at the Fredericksburg-Spotsylvania National Military Park. Lt. Norton's spelling has been maintained.

Fords of the Rappahannock River

Opposite Falmouth crossing a mill race and winding diagonally across	Rocky and Crooked
Scotts Ford near Scotts Mill	Just above the mill not very good, not crossed by trains
Banks Old Ford	Crossed at low stages of water, tolerably good
Barrows Old Ford	Obstructions by a dam, disused
United States Ford	Obstructed by a canal on south side of river - good
Richards Ferry	Formerly a ferry now forded at low water, slackwater navigation having changed the character
Embury's Old Ford	
Skinker's Ford	Rocky, crossed by Cavalry

Ellis Ferry or Barnetts Ford and Ferry	At low stages of water very good, ferry just above ford good. Steep approaches
Kempers Ford	Good, but steep approaches
Fields Ford	Sandy now impassable, Smith says passable
Kellys Ford	Good Ford
Wheatleys Ford	Rough
South Dam or Mt. Run Dam	Can ford just below
Cow Ford just below the O&A RR	Ford used in August by General Pope
Normands ford	Used in low stages of water only
Beverly Ford above RR crossing 2 miles	Good, crossed by roads Liberty and Rapp. station to Berryville
Freemans Ford	Best on the River
Col. Fauts Mill Ford	Good
Foxville Ford	Good
Sulphur Springs Ford	Bad ford
Waterloo Bridge	250 feet long

Fords
on the
Rapidan River

Blind Ford	Very bad ford
Ballards Ford	Good for Cavalry, rather deep
Ellys Ford	Tolerably good (much used)
Culpepper Ford	Tolerably good
Ford near Vaucluse Mine	Crossed by Cavalry
Germana Bridge Ford	200 feet long
Mitchells Ford	Good road south - rough
Tobaccostic Ford String Fellows Ford on Skinkers place	Good
Mortons Ford	River fordable in many places above here
Gordon's Ford 3/4 mile below Germana Bridge	Good ford
Raccoon Ford	Very good
Somerville Ford	Good
Downes Ford	
Willis Ford at Holladays near Rapidan Station	Good

Barnetts Ford
Walkers Ford

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