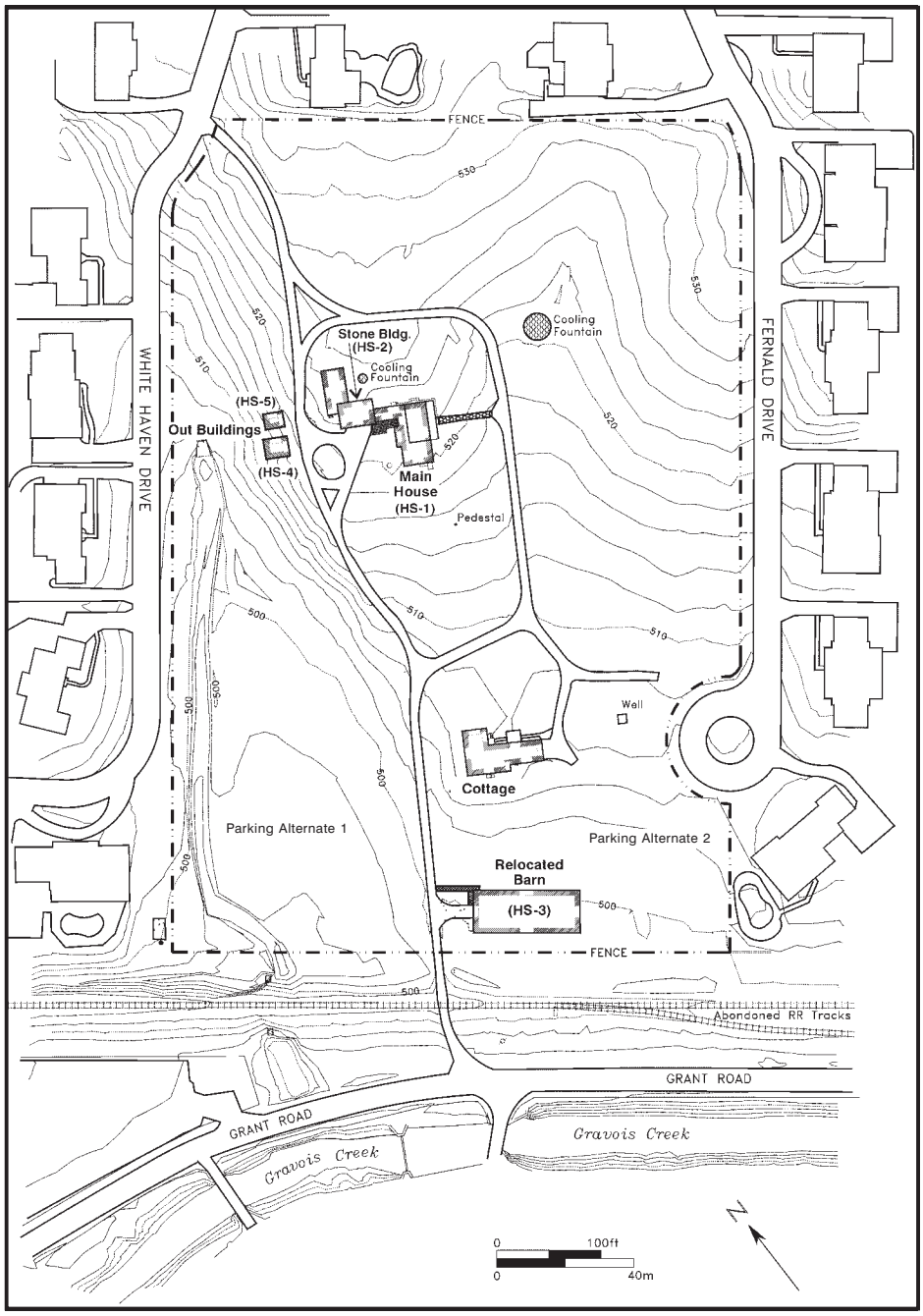
Archeological Investigations for the Barn Relocation at Ulysses S. Grant National Historic Site, St. Louis, Missouri



National Park Service - Midwest Archeological Center

Archeological Investigations for the Barn Relocation at Ulysses S. Grant National Historic Site, St. Louis, Missouri

By

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Making the report available meets the criteria of 43CFR Part 7, Subpart A, Section 7.18 (a) (1).

Abstract

Archeological investigations were undertaken in August of 2000 in the area proposed for relocating a barn at Ulysses S. Grant National Historic Site. The excavations were undertaken as part of compliance activities to determine the effect that the proposed barn relocation might have on the site. Geophysical techniques, traditional shovel testing, and limited test excavations located a substantial stone foundation and a series of piers or footers believed to be remains of an 1818 barn. The foundations were damaged during the early 20th century by various construction activities. A separate search for remains of a board fence alignment were undertaken near the Main House. This effort proved unsuccessful.

Acknowledgments

The archeological investigations at U. S. Grant were facilitated by a number of people. Site Manager Randy Webster, Facilities Manager Mike Ward, and Historical Architect Alan O'Bright were our gracious hosts during the field investigations. They did all they could to ensure that we had all the support necessary. Collections Manager Karen Miller volunteered to dig on her day off, and she assisted us in answering many questions and locating various references and photographs. To each of these people, and to the entire staff of Grant, we owe a special debt of gratitude for their assistance and the warm reception given the crew.

The hard work of the archeological crew; Thomas Thiessen and Anne Kern made the excavation and recording work go smoothly.

Harold Roeker ably cleaned, analyzed, and cataloged the artifacts from the fieldwork. Mark Lynott and Tom Thiessen provided overall project guidance and support for which I am grateful. A sincere thanks is extended to Vergil Noble for sharing his knowledge of the site, and to Karin Roberts for sharing her knowledge of the site. Carrol Moxham and John Andresen did their usual wonders with the manuscript turning it into a final, edited report.

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Introduction

A team from the National Park Service's Midwest Archeological Center (MWAC) carried out remote sensing investigations and test excavations at three locations in Ulysses S. Grant National Historic Site (ULSG) between August 14 and 25, 2000. ULSG is located in the extreme southwestern part of metropolitan St. Louis, Missouri (Figure 1). The geophysical and archeological investigations were undertaken to assess the potential for buried cultural deposits in the impact area designated for the relocation of the 1868 barn and expanded administrative facilities. Testing was also done in two locations in an attempt to locate the line of an historic board fence.

Known by the name White Haven, and more recently as the Grant–Dent house, the park lands once were part of the property of Frederick Dent, father-in-law to Ulysses S. Grant. The Dent farmstead was a large property encompassing hundreds of acres at its zenith, now about 9.5 ac (3.8 ha). White Haven, including the Main House (HS-1) and several associated outbuildings, are undergoing a long-term process of architectural documentation and building restoration (Figures 2 and 3).

This report presents the methods and results of the two-week field project. Excavations are described individually or where more appropriate as elements of a larger analytical unit. The description of particular artifacts is included where it contributes information that furthers interpretation of a feature or of the area under investigation. The park-assigned accession number is 29, and the MWAC-assigned accession number is 916.

Historical Background [1]

Early Occupation

Under terms of a 1796 Spanish land grant, a Hugh Graham acquired a tract of nearly 800 arpents (680 ac) on Gravois Creek in what is now east-central Missouri but then a part of Spanish Upper Louisiana. Soon thereafter, Graham exchanged the land to James Mackay (spellings and pronunciations vary) in return for some of the latter's holdings along the Missouri River. Mackay, it should be noted, was a prominent trader and entrepreneur of the 18th-century West.

Born in Scotland in 1759, Mackay emigrated to America in 1776 and spent the next 15 years as a trader with the North West Company in Canada. He then moved to Missouri in about 1793 and soon returned to trading through the Spanish Commercial Company, sometimes known as the Missouri Company, making trade expeditions from 1795 to 1797. Afterwards he took appointment as commandant of the settlement of San Andres, located in the northwest part of what is now St. Louis County. In 1800 he married Isabella Long, a union that produced a great many descendants, many of whom achieved some historical prominence of their own. In later years, after transfer of the territory to the United States, Mackay served as a judge and also as a representative to the Territorial Legislature. He died at St. Louis in 1822 (Quaif 1916:187–188).

In 1808, Mackay sold some of his acreage on Gravois Creek to his brother-in-law, William Long. Long built a two-story frame house on the land, which he later would sell with improvements to Theodore Hunt in 1818. Frederick Dent, Grant's future father-in-law, bought the property from Hunt in 1820.

Dent–Grant Occupancy

Dent used the place primarily as a country retreat from the often stifling summer heat of St. Louis, where he maintained his permanent residence. Despite its initial limited function, he made a number of improvements to the property, making it more suitable for his large family and eventually transforming it into a working plantation. Moreover, it was there at White Haven, as it became known, that an interesting chain of events brought his daughter Julia together with the future Civil War hero and U. S. president.

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[1] The historical sketch in this section is drawn primarily from Noble (1997) and O'Bright and Marolf (1999).

Grant's roommate at West Point, as it happens, was Dent's son Frederick (Fred). Upon graduation from the military academy in 1843, Grant's first assignment was at Jefferson Barracks, then well south of St. Louis but now surrounded by its urban sprawl. While there, he left the Barracks to call on the Dent family out of his high regard for young Frederick, a trip that would have taken him northwest 5 miles. It would appear that Grant was almost immediately taken with Fred's sister, Julia, for when his military company was to be transferred out in 1844 he proposed marriage. For her part, Julia doubtless was equally taken with the young soldier (Grant then aged but 22 years). But it would be 1848 before Grant was able to win the hand of young Julia.

After their marriage, the Grants were stationed at posts in New York and then Michigan. They returned there periodically, though, and it was at White Haven that their first son, Frederick Dent Grant, was born in 1850. When Grant received transfer orders for the West Coast in 1852, Julia and their sons returned to White Haven. She did travel to the Ohio home of Grant's parents during that period, however, giving birth to their second son, Ulysses, there.

Ultimately, the separation from his family over such great distances moved Grant to resign his military commission in 1854. He then returned to White Haven and lived for a while with his young family in the main White Haven house. Soon thereafter they moved into Wish-ton-Wish, which was the house belonging to Julia's brother located elsewhere on the plantation.

While residing at Wish-ton-Wish, Grant began to farm 80 acres of White Haven land given to his wife, Julia, by her father. This, at last, provided Grant with the opportunity to build his very own domicile, a log structure he named Hardscrabble. Only a few months after its completion, Julia's mother died and they moved back to the White Haven house.

Grant left the farm in 1859 because of a depressed farm market, an early June frost, and sickness among family and slaves. Dent and Grant agreed to sell 400 acres of the estate, including the land on which Hardscrabble stood. The Grant family then moved into the city where Ulysses formed a brief real estate partnership with Julia's cousin, Harry Boggs. As it turned out, Grant's end of the partnership was collecting delinquent accounts, a task that he found distasteful and difficult. Accordingly, with the nation heading toward civil war, Grant headed to Galena, Illinois, where he worked for a time in his father's store.

Grant did not hesitate to return to military service when the war came. During the opening years of the war he rose through the ranks, and his distinguished service eventually caught the eye of President Lincoln. Having struggled with one incompetent general after another, Lincoln appointed Grant to lead all the Union armies after approving his nomination to the rank of Lieutenant General, and Grant singularly honored the President's trust by leading the Union Army to victory over the Confederacy.

Grant's Acquisition and Loss of White Haven

During this period, Grant reaffirmed his devotion to his wife's family home, White Haven. Throughout the war years, whenever he had put aside sufficient funds, Grant would buy parcels of the Dent property to save it from creditors. Grant continued that practice after the war, and through his presidency, eventually accumulating the entire estate and several neighboring tracts. At its largest, White Haven covered over 750 acres.

As perhaps the greatest American war hero since Washington, Republican political brokers quickly seized upon him as the ideal person to pick up the torch from the fallen Lincoln, who was assassinated within a few days after the Confederate surrender. Certainly in their minds he had the makings of a formidable presidential candidate for the 1868 elections, more so at least than the incumbent, Andrew Johnson, who after all was a border state Democrat soon to be impeached.

However, Grant's two terms as the nation's 18th president were hardly distinguished. The sad fact is that the Grant administration was rife with scandal, though Grant himself tended to remain above the fray. He was, in essence, an honest man ill-served by his advisors and political cronies.

During his presidential years, Grant continued to acquire land and make improvements on the White Haven grounds. These activities suggest Grant intended to ready the place for his retirement from public life. At the end of his second term, Grant left the country on a world tour lasting two and a half years.

Grant's last venture into the private sector proved to be unsuccessful. Indeed, the unscrupulous practices of his partner led to financial ruin for the firm, and Grant was left with a mountain of debt when his associate left the country. Grant would spend the rest of his remaining days trying to make good on those debts, selling off White Haven and completing his still important memoirs shortly before his death in 1885. The latter effort was particularly crucial in providing a steady income for his widow in a time before presidential pensions.

Over the next 100 years, occasional land sales pared away the property Grant had amassed about the main White Haven house. Furthermore, during the last 50 years developers subdivided much of what was then left of the estate for residential construction. Thus, the remaining 9.65-ac plot is now bordered on three sides by modern single-family dwellings. To the west, across Gravois Creek, lies the former August Busch estate, now known as Grant's Farm, and a popular tourist attraction run by the Busch Foundation on lands also formerly owned by Grant. Interestingly, a log structure, which is claimed to be Grant's relocated Hardscrabble, is prominently displayed at Grant's Farm.

Site Description

White Haven is located in part of Section 16, Township 44N, Range 6E, as well as all of Survey 9. The latter tract is retained from early Spanish claims platted in the area and does not conform to the township and range system established by the Northwest Ordinance of 1796. As depicted on the 1979 USGS 7.5-minute Webster Groves Quadrangle map (Figure 2), UTM coordinates for the property are Northing 4270020 to 4270200, Easting 730800 to 730660 (Zone 15). The site covers approximately 9.5 ac (3.8 ha). White Haven is referred to as "Grant's Home" in the files of the Archaeological Survey of Missouri, which assigned it site number 23SL857.

The site lies largely between 510 ft and 520 ft amsl, though the western limits fall to the 500-ft contour. The site can be characterized as a dissected uplands hilltop. Gravois Creek, which drains from the northwest toward the southeast through this area, is the major source of fresh water for White Haven, the center of which lies approximately 200 m east (Figure 3). A small ephemeral stream skirts the current northwest boundary of White Haven and empties into the perennial Gravois Creek. Furthermore, a spring that was exploited by the Dent family exists on the property.

The Main House (HS-1) is a two-story frame structure on the crest of the hill (Figure 3). About 8 m (30 ft) to the north[2] of the Main House is a massive structure known as the Stone Building (HS-2), which served as a summer kitchen and possibly as slave quarters (Scott 2000). A large room added to the Stone Building in the 1950s extended eastward off the rear of the structure. This addition served as a workshop for the last private residents of White Haven until it was removed in October 1999 during restoration of the Stone Building.

Behind the Main House, generally toward the north, are two outbuildings standing side-by-side on the slope leading down to the ephemeral stream that demarcates the north property line. One is designated the Ice House (HS-4), which might have been used as a smokehouse; the other is designated the Chicken House (HS-5). The areas to be affected by the current project are described below; they include the Barn (HS-3), the Cottage, a potential cow barn site, and a potential shed site.

Cottage

The Cottage, also known as the caretaker's house and currently serving as the park administrative headquarters (Figures 3 and 4), was constructed about 1914 (O'Bright:1999:7.7). It is a bungalow with

[2] Architectural north. The White Haven property is not oriented due north, rather northwest to southeast. The park has defined an architectural north, which is 320 degrees. Throughout this report, compass directions are given in relation to architectural north, except when referring to magnetometer grids, which are oriented to magnetic north.

one and a half stories and a north-facing porch. Fire destroyed the top floor during World War II. The house was later remodeled as a one-story dwelling and converted to rental property. During the remodeling, during or just after World War II, a breezeway and garage were added to the building. A bedroom wing was also added in the 1970s. The Cottage is slated for demolition during the barn relocation project. A cistern exists on the east side of the Cottage that is thought to date to the 19th century based on construction style (O'Bright 1999:7.9). It was used as a water source until the early part of the 20th century.

Barn

The Barn (HS-3), which currently houses the visitor contact station and library, was constructed for Ulysses Grant in the late 1860s as a horse stable and barn (O'Bright 1999:4.12–4.14). The Barn (Figure 5) originally stood well south of the Cottage, near what is now a cul-de-sac. A brick-lined Barn Well (HS-9) was located nearby (Figure 3). The Barn was moved to its present location in 1962 to allow for better use of the adjacent housing development. The Barn is scheduled to be moved, once again, to a site now occupied by the Cottage. The Barn will be further adaptively restored to become the visitor contact station and interpretive center for the park.

Cow Barn

The Cottage is believed to sit on the location of a hipped-roof cow barn. Little is known about the cow barn. Only two references to it are known, and one engraving (Figure 5) shows it as part of the background. O'Bright (1999:7.9–7.10) believes the cow barn predates construction of HS-3, the Grant Barn. The earliest known reference to the cow barn is found in an 1818 letter from Ann Lucas Hunt (O'Bright 1999:7.10) to her father "… a new hewn log Barn 26 feet by 20' with sheds all around, 14 feet wide…". The other possible reference is in an 1846 real estate sale advertisement. The advertisement mentions a large stable among the structures included on the property.

The only know depiction of the cow barn is an engraving of White Haven published on October 16, 1875, in *Frank Leslie's Illustrated Newspaper* (Figure 5). It shows a hipped-roofed structure with what may be vertical log walls. Two doors and a window are depicted on the west façade and a single door can be seen on the north façade. A cupola tops the structure's roof. The pitch of the roof and lines in the engraving suggest that the north side had shed-like extensions along that face.

O'Bright (1999:7.10) reports that stone foundation remains were once visible about the present location of the Cottage garage and driveway. Former Cottage occupants, James and Charles Davis, in a March 18, 1993, interview with O'Bright, recalled the stone was visible at the ground surface before the garage was built. They recalled the foundations as being about 20 feet square.

Shed

The 1875 *Frank Leslie's Illustrated Newspaper* engraving shows a small building immediately north of the cow barn (Figure 5). Its function is unknown, but its configuration is very similar to the Chicken House, which may have been moved to its present location many years ago. The site of this shed is very near and most likely under the current Cottage site.

Fence

A wooden board fence once surrounded the Main House lot (Figure 6) and is scheduled for reconstruction as part of the pedestrian traffic management plan. Little is known about the historic fence or fences except that one version or another of it appears in several depictions of the house and its grounds. In at least three late engravings (O'Bright 1999:Figs. 2.1, 2.4, 2.9) it is shown as a picket-style fence. However, a circa-1860 photograph of White Haven (O'Bright 1999:Fig. 2.3) shows a board rail-type fence with supporting posts spaced approximately every five or six feet. An engraving from the *St. Louis Republican*, July 24, 1885 (O'Bright 1999:Fig. 2.10), also depicts a board rail fence, and Emerson (1896: 389, 392) contains two photographs presumably taken about 1895 that shows a decorative board and rail fence surrounding the grounds, with posts perhaps four or five feet apart.

Project Methods

The area of potential impact for the barn relocation project includes the Cottage and surrounding land. A review of the historic structures report (O'Bright and Marolf 1999) suggests that the site of a shed and an early cow barn could be within the impact zone. In 1991, Vergil Noble (1997) supervised the evaluation of impacts for the construction of a parking lot and one parking lot alternative. One of his inventory areas falls within the southern edge of the current project area. Noble employed remote sensing techniques consisting of proton magnetometer and electrical resistivity survey (Weymouth 1993), and he conducted shovel testing to determine the potential for subsurface archeological deposits. A portion of one of his magnetometer and shovel test grids (Resistance Grid 11) was within this project's impact zone (Figure 7), and it seemed reasonable to follow Noble's methods so that the results of the two projects would be comparable.

Geophysical Remote Sensing

Weymouth (1993) analyzed the data collected during the 1991 study of two parking lot alternatives. Three 20-m-square blocks (M9/R9, R10, and R11) were located between the current Barn site and the Cottage. The magnetometer failed to function properly in two grids (R10 and R11), so only resistance data was collected. The only significant anomaly noticed in any of the grids analyzed by Weymouth was in R10, the northeasternmost grid, which was located approximately 5 m south of the 2000 Grid 1. It turned out to be a piece of iron pipe.

The 2000 investigations laid out six remote sensing grid units. The units were oriented to magnetic north (in contrast, the park's architectural north is essentially northwest; refer to note 2, page 3). Grid 1 was a 20-m-square block laid out to the east[3] of the current paved park entrance road, which runs between the Cottage and a traffic island. The grid encompasses the portion of the island not tested by Noble (1997) and continues to approximately the edge of the cover of the old Barn Well (HS-9). Grid 2 is a 20-m-square block located north of Grid 1 and encompasses part of the park entrance road and the Cottage yard. Grid 3 is a 20-m-square block located north of Grid 2 that straddles the park entrance road and the area assumed to have evidence of the corner of the old board fence. Grid 4 is a block 20 m long (north–south) and 10 m wide; it was laid west of Grid 2 to encompass much of the remaining Cottage yard. Grid 5 is a block 20 m long (north–south) and 10 m wide; the grid was laid out on the east side of Grid 1. Grid 6 is an isolated 20-m-square block located between the Cottage and the relocated Barn. Grid 6's southeast quadrant overlaps Noble's (1997) R11 block.

The magnetic data was collected with a Geonics fluxgate magnetometer (Figure 8); the data was electronically processed and analyzed by Anne Kern, Ann Bauermeister, and William Volf using GeoScan software.

Mapping

Precise locational control of the magnetometer grids, shovel test locations, test excavations, and archeological features was maintained through the use of a total station transit and electronic data collector. The instrument was a Lietz SET4B total station transit with an SDR33 data recorder. Each transit shot was recorded on the data recorder and given a previously established identification code. At the completion of a given day's work, the recorded data was downloaded onto a laptop computer containing the Sokkia software program MAP. The raw file was processed by the computer and a map of that day's finds was then displayed. The MAP files were then transferred to AutoCAD, a software package used to refine and complete the basic illustrations created with MAP.

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[3] Directional relationships among grids are given with respect to magnetic north.

Shovel Tests

Shovel testing was done in each of the geophysical grids after field analysis of the results of the magnetometer work. Shovel tests were placed every 10 m in each grid, following Noble's (1997) methods. Where a shovel test fell on an inaccessible surface, such as a paved park road or at the location of the well, the test unit was moved to a nearby accessible location (Figure 9). Each shovel test was dug to sterile soil, ranging from 20 to 50 cm depending on location, or until a cultural feature was encountered. Each test unit was recorded on a standard shovel test form and the unit was plotted on the base map.

Test Excavations and Backhoe Trenching

When a cultural feature was encountered by shovel testing, the unit was expanded to determine the type and extent of the feature. Excavation unit size was usually 1 or 2 m square, but the unit was generally dug to determine the limits of the feature. Several magnetic anomalies were investigated using either test units or 0.5-m-wide trenches (Figure 9). In one case, a foundation was located that required the use of a backhoe to determine the extent and character of the feature.

Stripping

A front-end loader was used to strip the topsoil and ground cover from two areas near White Haven. The mechanical stripping was used in an attempt to find posts or post molds associated with an early board fence (Figure 10) that surrounded the house grounds and is scheduled for reconstruction.

Recording

Documentation of the field excavations followed standard operating procedures. Measured field drawings, for example, recorded all unit level floors and representative profile walls. Photographic images, using a digital camera, recorded the excavation progress. Units of special interest, features, or selected artifacts were recorded with close-up photography and on feature forms.

Results

Results of Remote Sensing Work

Several anomalies were observed in Grids 2, 3, 4, and 5 (Figure 11). One linear anomaly in Grids 3 and 5 is a water line leading to the Cottage. Each of the point anomalies proved to be a piece of ferrous metal, such as rebar, a piece of black iron pipe, and a 55-gallon drum cover that was designated Feature 6. All were late 20th century in origin and were recorded, but not collected.

A linear anomaly running through Grids 2, 3, and 5 was not defined by shovel testing and trenching. Two test trenches in Grid 5 were laid out over the anomaly in an attempt to determine its origin. No evidence of the linear anomaly was found in test trenches. It may have been compacted soil associated with an old footpath that could not be discerned archeologically, or it may have been soils mineralized to the point of increased magnetic susceptibility as part of water runoff pattern. We suspect it may be the remains of a compacted path or roadway leading to the original Grant Barn site from the architectural east.

A linear anomaly was also noted in Grid 6 (Figure 11), located between the Cottage and the Barn. The anomaly aligns with a compacted dirt path that leads across the yard from the Barn to the Cottage. Several small point anomalies were also noted and shovel tests were laid out over those locations. Shovel testing followed with no features being found and only late 19th- and 20th-century artifacts.

Shovel Testing

Shovel testing in Grid 1 produced two features in the first two shovel test units. Feature 1 proved to be a 45-cm (18-in) wide limestone foundation. Feature 2, a group of limestone blocks, appeared to be a footing or pier. A field decision was made to employ a backhoe to open up the foundation area (Figure 9) to determine its extent and age. The foundation location is consistent with the site of a vertical log barn mentioned in an 1818 letter.

The backhoe stripped the east-to-west and north-to-south wall alignment within the traffic island adjacent to the Cottage. The north-to-south wall was uncovered for over 3 m (10 ft) of its length (Figure 12) with the remainder running under the public access drive between the island and the Cottage. The foundation was consistently located at a depth of about 30 cm (1 ft) below present ground surface. The east-west alignment was found to be over 8.83 m (29 ft) long from the southwest corner to its artificial termination (Figure 13) as a broken end near the site of a removed large tree.

Further backhoe trenching to the east, north, and west failed to find any additional wall segments although a cache of late-19th- and early-20th-century bottles was found. The materials were in association with badly rotted roots of a large tree that had been removed some years earlier. The bottle cache yielded two cut nail fragments, eight pieces of coal, a whiteware fragment, a brown salt-glazed stoneware fragment, a flat glass fragment, and six intact glass bottles, one bottle base, six bottle necks and finishes, and 58 bottle fragments.

The bottles are all crown cap variety. One is a soda bottle. The flat base is unmarked, but the body is marked in an oval panel with / H. Wetter / South St. Louis / for Herman Wetter, who bottled soda from 1875 to 1900 (Foland 1971:4). One brown bottle base is marked with an ‘I’ in a circle. The maker is unidentified. The remaining bottles are clear or aqua in color and are a beer-type. There are two bases marked ABGM Co/E26 or K26 for Adolphus Busch Glass Manufacturing Company. This mark was used from 1886 to 1928 (Toulouse 1971:26–27). One base is marked ‘B’ and is unidentified as to maker. The final base is marked P … Co/21. This is probably a bottle made by Parke, Davis and Company. They have been in business since 1875 (Toulouse 197:417–418). The artifacts in the cache suggest a date of deposition around 1900 based on manufacturer’s marks and bottle finish types.

The backhoe was used to follow the foundation to north across the drive toward the Cottage. The wall continued uninterrupted from the island north for another 3 m (10 ft). At that point a 20th-century pit or trench was encountered (filled with 20th-century artifacts) that disrupted the wall (Figure 14). Further

trenching north to the north edge of the road encountered a disturbed segment of the wall, about 60 cm (24 in) long, running up to the asphalt paved drive and Cottage garage entrance.

Tests of the foundation thickness were made in three locations, at the outside southwest corner (Figure 15), at the approximate center of the south wall on the inside (Figure 16), and at the east end of the south wall where it was broken and terminated (Figure 17). The testing showed the foundation to be made of cut limestone block well-laid with lime and sand mortar. The foundation was located at 30 to 35 cm (10 to 12 in) below present ground surface and extended to a depth of 60 to 90 cm (24 to 30 in) below present ground surface. The remaining foundation was 39 to 45 cm (14 to 18 in) thick. The foundation is somewhat uneven giving the excavators the impression it was not at full height, and quite likely had been robbed of the upper stones in the not too recent past, as some well-preserved mortar was present in a number of locations on the surface of the foundation.

Features 2–5, probable foundation piers for an attached shed, were located 10 to 15 cm (4 to 6 in) below ground surface suggesting that about 15 cm (6 in) or perhaps one course of stone had been removed from the Feature 1 foundation. Very few artifacts were seen or recovered in the Feature 1 excavation. Most were of recent origin although some heavily oxidized cut or forged nails were found. Although heavily oxidized, they appear to be consistent with large timber framing sized nails.

The limestone foundation, designated Feature 1, is 29 ft 1 in long east to west and 14 to 18 in thick. The disrupted north-to-south wall at the western end is or was at least 30 ft 2 in long. The location and linear measurements roughly correspond with the 1818 description of the site of the vertical log barn and attached sheds as well as with an 1875 *Frank Leslie's Illustrated Newspaper* sketch of the Grant–Dent home and outbuildings.

Features 2, 3, 4, and 5 (Figures 18, 19, 20) were all located on the south side of the foundation. Each proved to be a group of limestone blocks laid as a footer or foundation pier. They are only one or two stones thick and are from center of the foundation to center of the pier from 3.3 to 3.4 m (11 ft to 11 ft 2 in) from the foundation. They are spaced from 2.3 to 2.2 m (7 ft 6½ in to 7 ft 4½ in) apart. No corresponding stone piers or foundations were located on the west side, although a disturbed pile of limestone was designated Feature 7. This pile of stone may be the remains of the wall stone removed during the cutting of the pit or trench that currently lies under the drive between the Cottage and the traffic island. Extensive probing with a tile probe failed to reveal any other concentrations of stone.

Feature 2 is a roughly rectangular group of limestone rocks located about 10 cm (4 in) below present ground surface and about 45 cm square (18 in). It is located 2.3 m (7 ft 6½ in) east of Feature 3 and 3.35 m (11 ft 1 in) south of Feature 1 (measured center of the pier to center of the wall).

Feature 3 is the westernmost roughly rectangular group of limestone rocks located about 15 cm (6 in) below present ground surface (Figure 21). It is about 45 cm square (18 in) and is located 3.4 m (11 ft 2 in) south of Feature 1 (measured center of the pier to center of the wall). Feature 3 aligns roughly with the southwest corner of Feature 1.

Feature 4 is another rectangular group of limestone rocks located about 15 cm (6 in) below present ground surface and about 45 cm square (18 in). It is located 2.3 m (7 ft 6 in) east of Feature 2 and 3.4 m (11 ft 2 in) south of Feature 1 (measured center of the pier to center of the wall).

Feature 5 is a single limestone rock found by probing and testing at the edge of the driveway. Other rocks may be present, but they are under the drive. Feature 5 is located about 15 cm (6 in) below present ground surface and is about 20 cm square (8 in). It is located 2.25 m (7 ft 4½ in) east of Feature 4 and 3.2 m (10 ft 11 in) south of Feature 1 (measured center of the pier to center of the wall).

The remaining shovel tests in Grids 1, 2, 4, 5, and 6 were essentially negative. No shovel testing was done in Grid 3 as it was determined to be beyond the limits of the project impact. All shovel tests were dug to sterile soil, which varied from a few centimeters below present ground surface to 50 cm below present ground surface. The deepest shovel tests were located in the yard of the Cottage, encompassing all of Grid 4 and parts of Grids 1 and 2. There, recent fill was used to level the surface of the yard. Artifacts

were found in most shovel tests. The artifacts consisted of small bits of glass bottles, window glass, lamp chimney glass, brown and gray stonewares, ironstone and whiteware ceramics, red unglazed flowerpot fragments, coal, cinders, cut and wire nails, and plastic. Most items were not precisely datable, but fell in the range of the late-19th and early-20th centuries. Few, if any, artifacts date to the Dent or Grant occupations. A strong anomaly in Grid 5 was tested and determined to be the lid to a 55-gallon iron drum. It was designated Feature 6 (Figure 21), recorded, and left in place.

Grid 6, in the west yard of the Cottage, yielded several pieces of melted glass and whiteware ceramics. A mother-of-pearl and a prosser-molded button, both shirt-sized, exhibited evidence of being exposed to heat. These items are 20th century in origin and are likely associated with the early 1940s fire at the Cottage. One group of whiteware fragments included a makers mark on a plate. The mark / Greenwoo … / Trenton / is for Greenwood China of Trenton, New Jersey. The mark was used from 1886 to 1933 (Lehner 1988:180).

Mechanical Stripping and Test Excavations

At the request of the park staff the MWAC team attempted to locate the board fence that once surrounded the White Haven house and its immediate grounds. The fence alignment is clearly evident in a series of 1860 and later photographs. The park's front-end loader was used to strip two areas about 2.4 m (8 ft) wide. The first area was located east and north of the main drive. This area should have been the southwest corner of the board fence. We expected to find post molds of the fence posts. A sterile yellow clay was encountered at surface to a depth of 12 cm (5 in). No evidence of post molds or posts was evident. A few 6 to 8 penny cut sized nails were recovered that are consistent with nail sizes that may have been used to fasten horizontal boards to the posts.

A second area east of the Main House and near the southeast fence corner was stripped next (Figure 22). This area is higher ground, but similar soil conditions exist there as well. The ground slopes away from the house to the asphalt road, and the only cultural material found was a series of limestone rocks in a rough alignment near the toe of the slope. Found among the rocks were a number of late-19th-century bottle and ceramic fragments, as well as some cut nails and a piece of cast-iron hardware that may be part of a gate hinge (Bealer 1969:210) or possibly a wagon endgate hinge. A nearly intact glass cup-like item was also recovered. It is flat on one side with an integral glass lug. It is marked / Tulip Cup / O. L. N. Y. / . It appears to be a tulip cup for a buggy or early automobile. The maker is as yet unidentified. The only other diagnostic piece is a flat patent neck applied finish clear glass bottle fragment. The applied finish indicates a 19th-century date, although an early 20th-century date cannot be ruled out.

One feature was found during the north-to-south stripping. Feature 8 is an irregular pit about 75 cm (23 in) north to south and 48 cm (14.5 in) east to west (Figure 23). It was about 20 cm (8 in) deep. The pit contained literally hundreds of fragments of window glass, including some that were melted and some with Parisian Green paint adhering to glazing lines, eight pieces of wire, many fragments of wire nails, 65 fragments of cut nails, a plastic fragment, an 8-in double-cut file, a bottle glass fragment, a brass cover for a metal harness buckle, four whiteware ceramic fragments, two animal bone fragments, a metal spacer, 20 pieces of mortar and plaster, two stoneware fragments, bits of carbonized wood trim and pieces of charcoal, a roofing nail with zinc flashing, a lamp chimney fragment, and three pieces of mica. The pit appears to be an expediently dug hole where window frames, architectural items, and other debris from White Haven were burned in the early 20th century. It is possible the pit dates to a remodeling effort carried out by Delbert Wenzlick in 1940 (O'Bright 1999:2.98–2.99).

The presence of the burn pit, Feature 8, shows that soil staining does show up in the subsoil. Thus, it appears that the absence of posts or post molds associated with the fence is due to some other factor than simply missing the evidence. The absence of a well-developed topsoil and an A or B soil horizon suggests that the site's topsoils are gone, either eroded away or graded away, leaving only the subsoils. Direct evidence of the fence line, in the form of posts or post molds, may very well have been eroded or graded away over the years.

Conclusions

The geophysical and archeological investigation of the proposed barn relocation area had one surprising result, the finding of the foundations probably associated with a circa-1818 barn. Geophysical investigations of six grids located several anomalies. These all proved to be of recent origin, with one possible exception, a linear anomaly in Grids 1, 2, and 5. This linear anomaly could not be located or defined with archeological testing. It may well be a runoff area that has a higher magnetic susceptibility than surrounding soils, or it may be a compacted zone outlining an old path or roadway to the original Grant Barn site. Regardless, the proposed barn relocation and associated construction activities will have no real impact on this area. The proposed construction work will not affect any historic or prehistoric sites or features, except as noted below.

The substantial limestone foundation located in Grid 1 is likely associated with the 1818-era barn or cow shed. The two wall segments are relatively intact and quite substantial, but at least one course of stone is gone from the foundation, and its integrity is compromised by the fact the remaining wall segments are not complete in either height or length. Backhoe trenching in the interior area found no intact floors or early-19th-century deposits. The earth in the interior appears to be imported fill used to level the area for construction of the nearby garage and driveway. Four limestone footings or piers were located south of the foundation and probably represent footings for sills associated with sheds that were attached to the cow barn at sometime in the past. Other than cut nails, no artifacts dating to the early 19th century were found in association with the limestone footings or piers.

The cow barn's west wall segment was severely impacted by a pit or trench cut through it during the early 20th century. Some foundation elements might remain intact under the Cottage garage. With the exception of a few cut nails, the majority of artifacts recovered during the shovel testing and backhoe operations dated to the late 19th century and to the 20th century. There was essentially no material found during this work that dates to the Dent or Grant occupation exclusive of the architectural features themselves.

Upon demolition of the Cottage and removal of the asphalt driveway as part of the barn relocation project, it would be appropriate to archeologically monitor the area to determine if other elements of the Barn foundation are still extant. The Cottage may also cover the site of the shed as well. This area should also be archeologically monitored to determine if any elements remain intact.

The effort to locate posts or post molds associated with the board fence that once surrounded White Haven was essentially a failure. The ground surface appears to have been modified over the years to such an extent that all indications of the fence line location, at least in the area investigated, were destroyed. One feature probably dating to 1940 was located. It is an expediently dug pit used to burn windows and other debris from the 1940 White Haven remodeling episode. The presence of Parisian Green paint on several of the window pane fragments helps support the house paint scheme.

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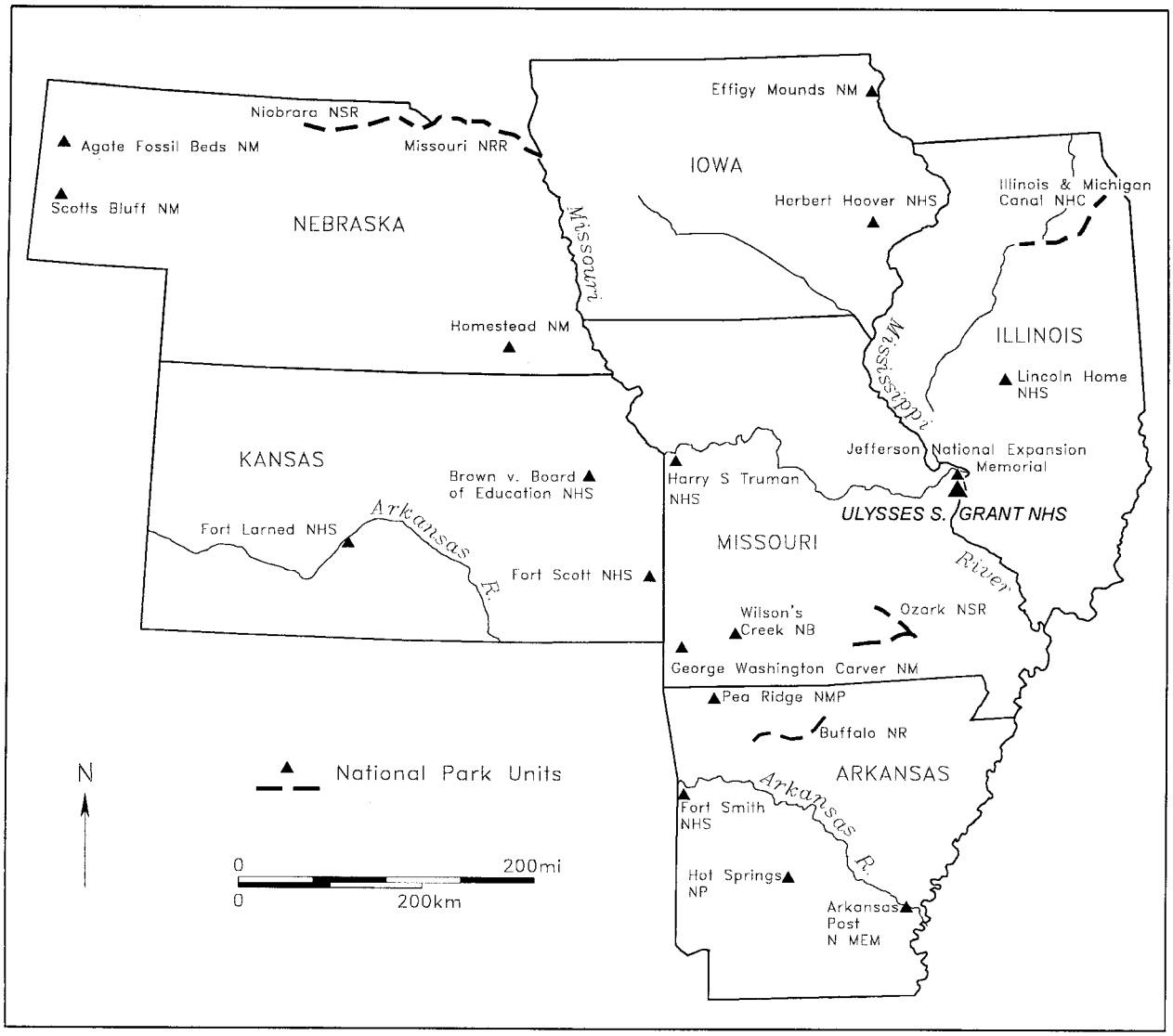

Figure 1. Location of Ulysses S. Grant National Historic Site.

Figure 2. A portion of the Webster Groves USGS 7.5-minute quadrangle showing Ulysses S. Grant National Historic Site and its main features.

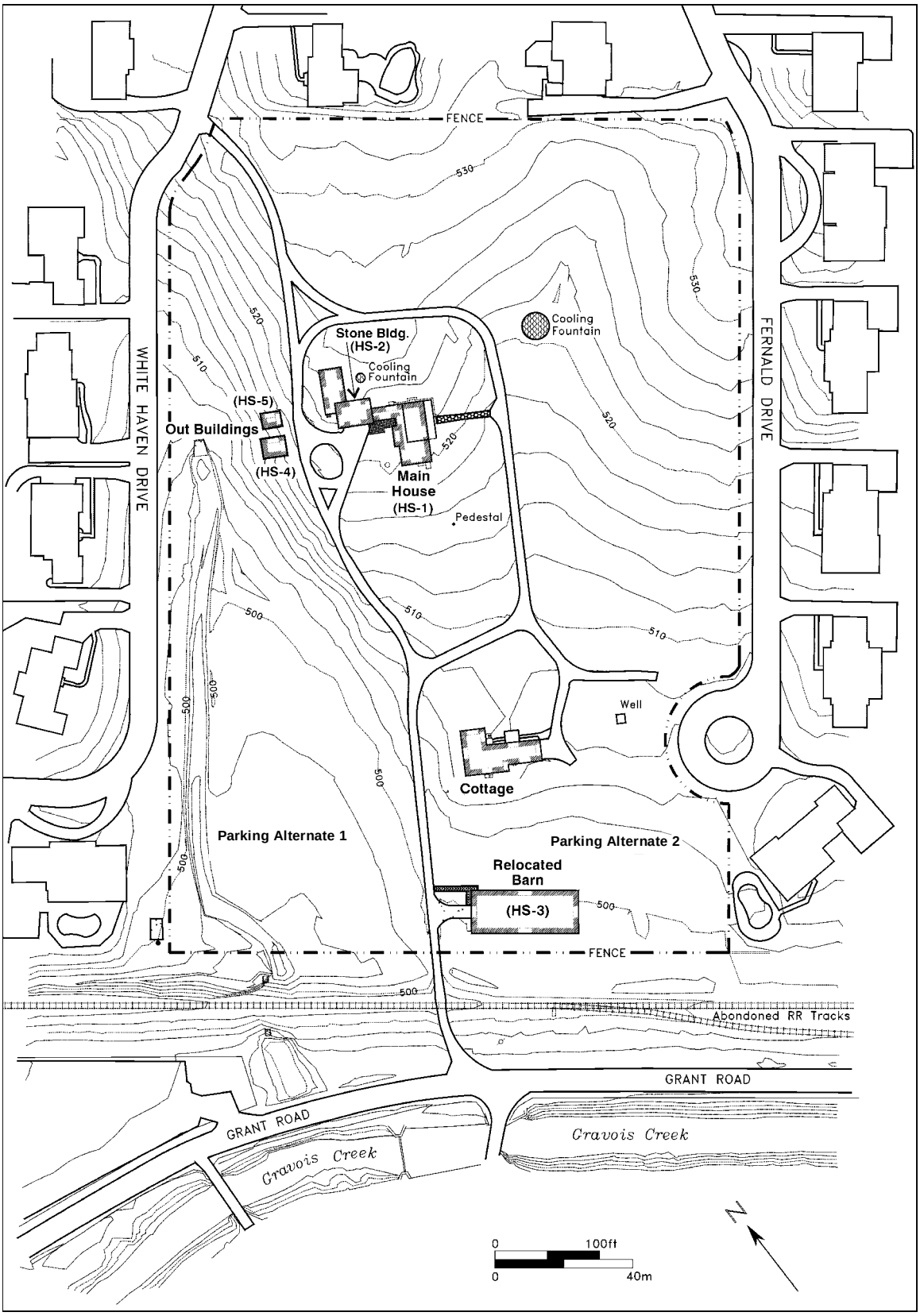

Figure 3. Ulysses S. Grant National Historic Site; the project focused around the Cottage (caretaker's house).

Figure 4. The proposed barn relocation site, looking architectural northwest. The Barn Well (HS-9) is in the foreground and the Cottage is in the background.

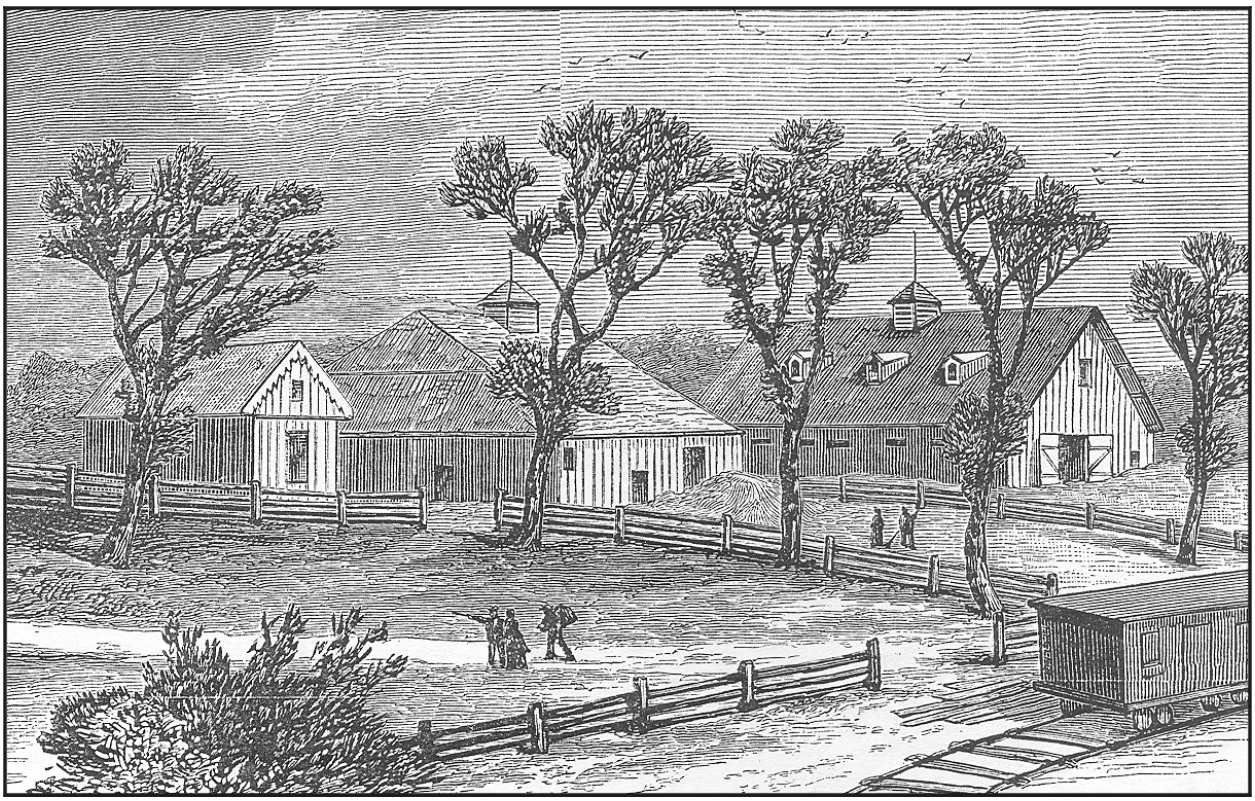

Figure 5. The October 16, 1875, issue of *Frank Leslie's Illustrated Newspaper* depicts from right to left the original location of the Grant Barn, the hipped-roof cow barn, and the shed.

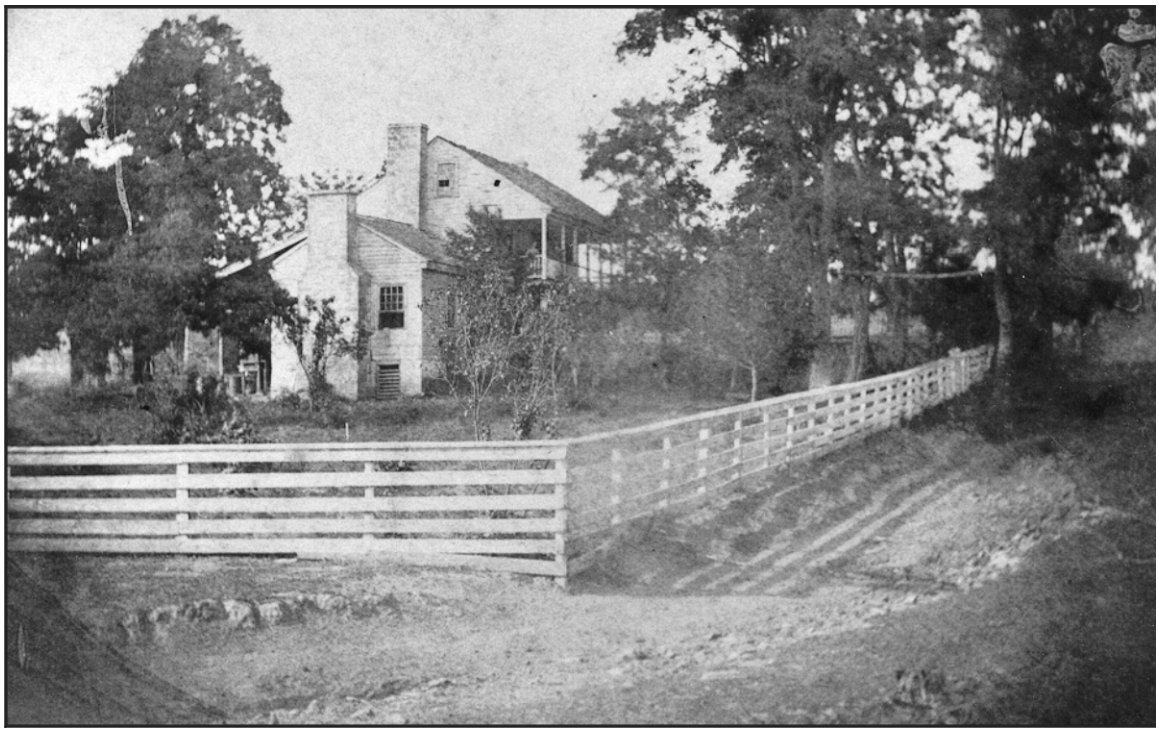

Figure 6. White Haven, circa 1865, showing the board fence around the lot, looking architectural northeast.

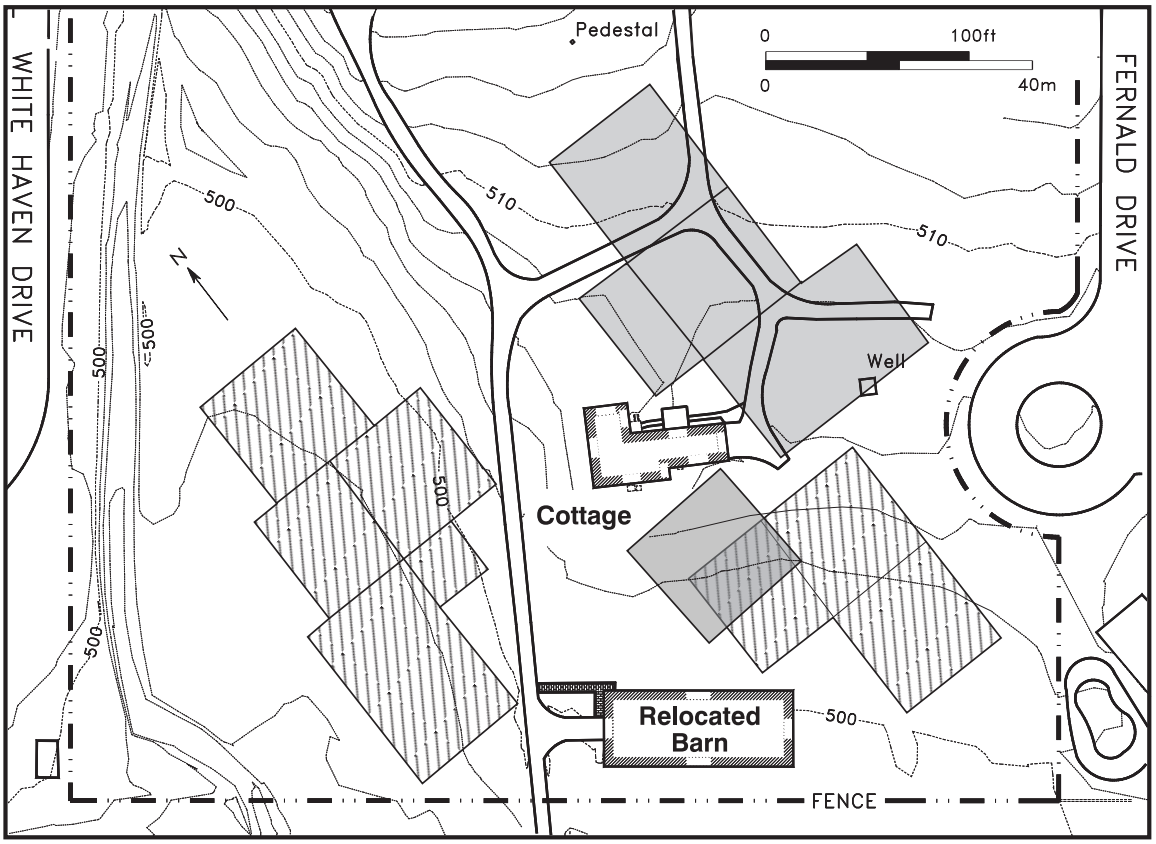

Figure 7. The 1991 remote sensing grids and shovel test grids (hatched) relative to the 2000 remote sensing and shovel test grids (shaded).

Figure 8. Anne Kern beginning a transect with the Geonics fluxgate magnetometer near the Barn Well (HS-9).

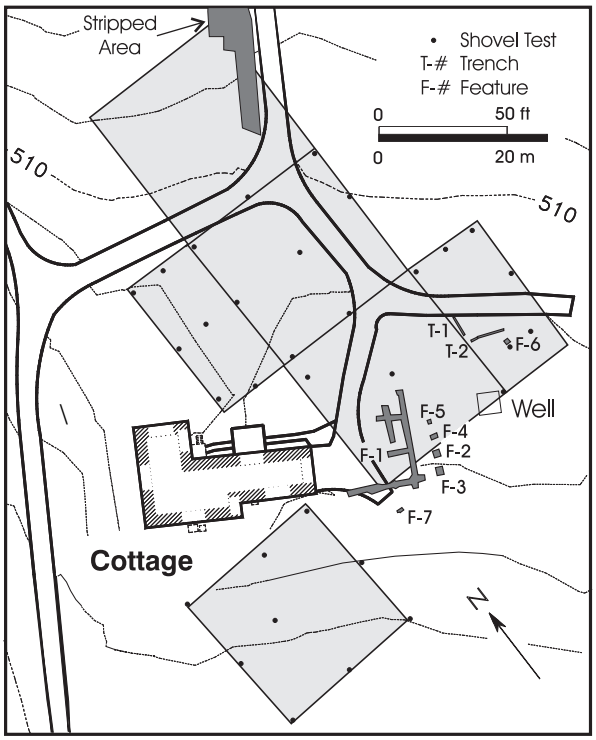

Figure 9. Locations of shovel tests, test trenches, and features in Grids 1– 6.

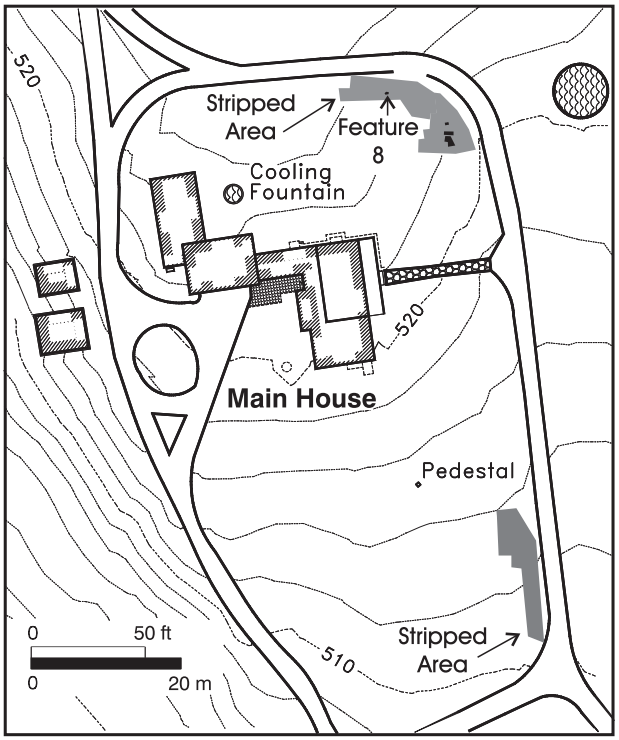

Figure 10. Areas mechanically stripped in an attempt to locate fence posts or post molds.

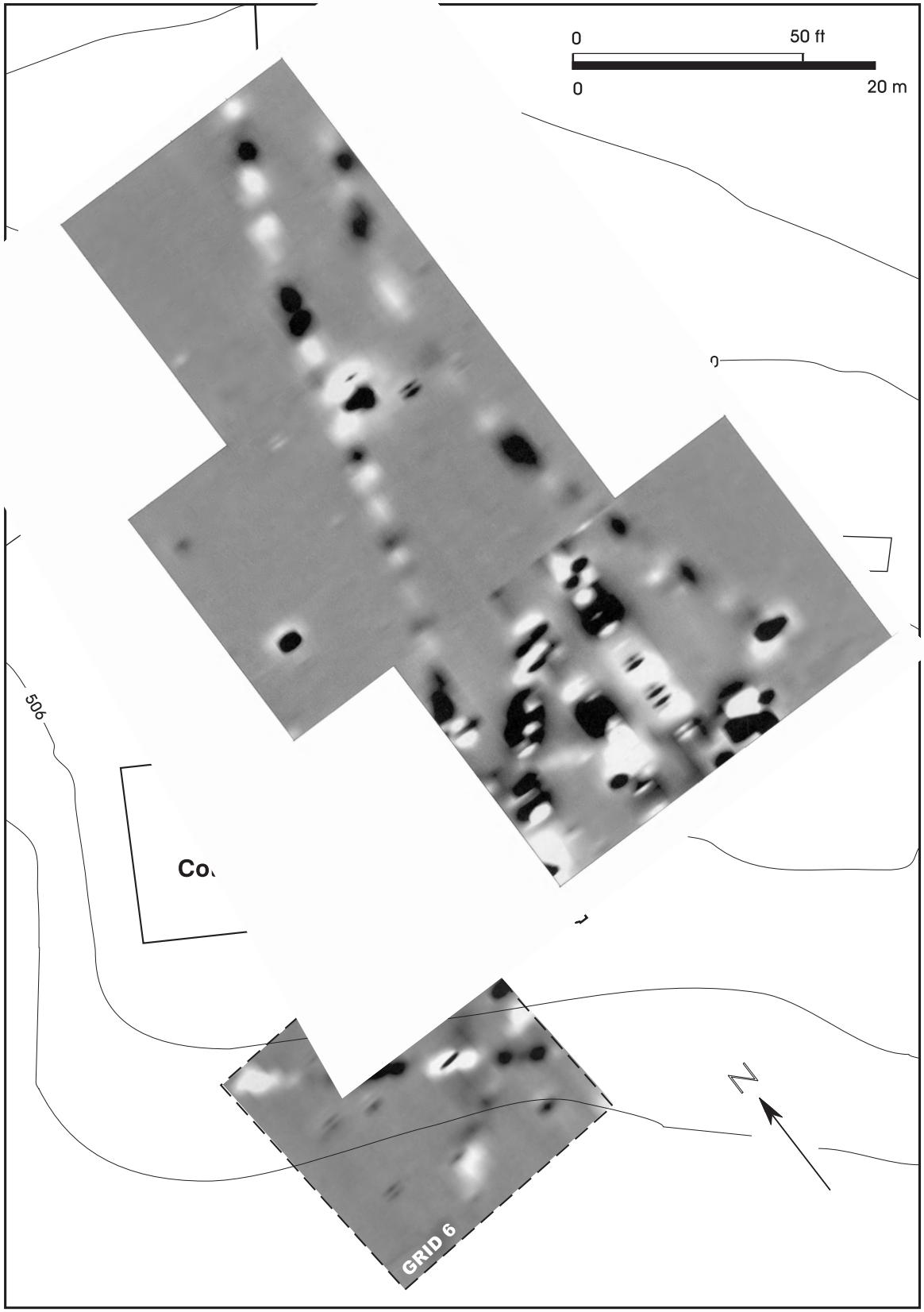

Figure 11. Magnetic anomalies in Grids 1–6 (grayscale) and current site features and roads. The intense anomalies in Grid 1 are iron rebar pins in the wood edging around the traffic island. The linear anomaly in Grids 2–4 is a modern water line, but the linear anomaly in Grid 5 is unidentified. The linear anomaly in Grid 6 is a footpath.

Figure 12. The west wall of Feature 1, looking architectural north; arrow points to magnetic north.

Figure 13. The south wall of Feature 1, looking architectural east; arrow points to magnetic north.

Figure 14. A 20th-century pit cut through the west wall of Feature 1, looking architectural north.

Figure 15. Remaining foundation thickness at the southwest corner of Feature 1, looking architectural north; arrow points to magnetic north.

Figure 16. Remaining foundation thickness of Feature 1 on the interior of the south wall, looking architectural south; arrow points to magnetic north.

Figure 17. The broken foundation wall of Feature 1 at its eastern end, looking architectural west; arrow points to magnetic north.

Figure 18. Feature 2, the footings or pier to a structure associated with Feature 1, looking architectural east; arrow points to magnetic north.

Figure 19. Features 3, 4, and 5, footings or piers to a structure or shed associated with Feature 1, looking architectural east; arrow points to magnetic north.

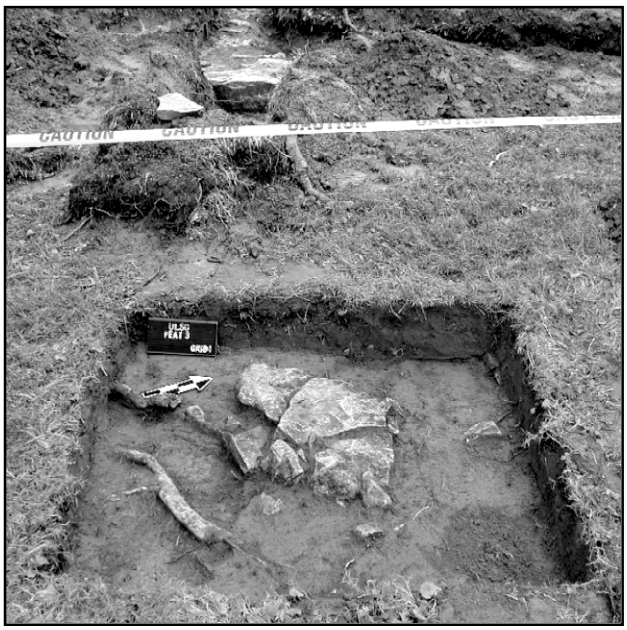

Figure 20. Feature 3, a footing or pier associated with the Feature 1 foundation, looking architectural north; arrow points to magnetic north.

Figure 21. Feature 6, a 20th-century 55-gallon drum lid, looking architectural south; arrow points to magnetic north.

Figure 22. Mechanical stripping and testing along the fence line east of the Cottage.

Figure 23. Feature 8, a 20th-century burn pit, under excavation, looking architectural north.