



Melrose Servants' Barn

Historic Structure Report

Cultural Resources, Partnerships and Science Division
Southeast Region

Melrose Servants' Barn

Natchez National Historical Park

Natchez, Mississippi

Historic Structure Report

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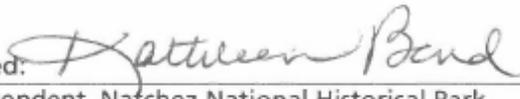
About the front cover: View of the Servants' Barn looking northeast, March 2018. Source: Wiss, Janney, Elstner Associates, Inc.

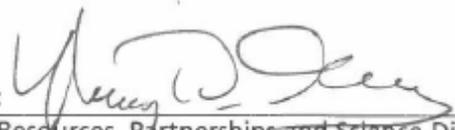
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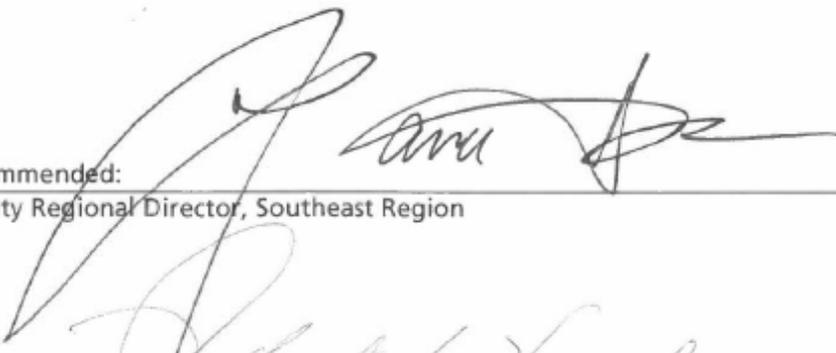
Melrose Servants' Barn Natchez National Historical Park

Natchez, Mississippi

Historic Structure Report

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Chief, Cultural Resources, Partnerships and Science Division, Southeast Region Date

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Foreword

We are pleased to make available this Historic Structure Report of the Melrose Servants' Barn, part of the ongoing effort to provide comprehensive documentation for the historic structures and cultural landscapes of Melrose, a component of the Natchez National Historical Park.

A number of individuals and institutions contributed to the successful completion of this work. We would particularly like to thank the staff at Natchez National Historical Park and the Historic Natchez Foundation for their assistance throughout this project. We also thank the staff of the Southern Regional Office of the National Park Service.

We hope that this study will prove valuable to park management team in ongoing efforts to preserve the historic structure and to everyone in understanding and interpreting this unique resource.

Kathleen Bond
Superintendent
Natchez National Historical Park
National Park Service

Management Summary

At the request of the National Park Service (NPS), Panamerican Consultants, Inc. and its subconsultants, Wiss, Janney, Elstner Associates, Inc. (WJE) and WFT Architects (WFTA), have developed this Historic Structure Report (HSR) for the Servants' Barn at the Melrose estate in Natchez National Historical Park, Natchez, Mississippi. Figure 1 is a map of Mississippi showing the location of the park and Natchez. Figure 2 is an aerial photograph of Natchez showing the location of the Melrose estate. Figure 3 is an aerial image showing the location of various structures within the Melrose estate.

On May 30, 1974, Melrose was designated a National Historic Landmark, and thus automatically listed in the National Register of Historic Places. Draft additional documentation developed in 1996 for Melrose estate addresses the entire estate as a historic district.¹

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1. Paul Goeldner, Architect, Historic Sites Survey, Division of Historic and Architectural Surveys, National Park Service, *Melrose National Register Nomination* (Washington, DC: National Park Service, January 7, 1974); Melrose was designated as a National Historic Landmark, May 30, 1974. The 1974 nomination addressed Melrose, the main house, rather than the overall estate. In 1996, additional documentation was prepared to address Melrose estate and its various resources. See Mary Warren Miller, *Historic Natchez Foundation, Melrose National Register Nomination Additional Documentation* (Natchez, Mississippi: February 20, 1996); note that this documentation is unsigned and apparently was not formally accepted by the Keeper of the National Register. The National Register and National

The Servants' Barn was constructed on the Melrose estate property prior to 1908, possibly during the 1890s, approximately fifty years after the construction of the main house, and it is a contributing resource to the historic district. As a supporting structure for the estate, it is associated with development of the property and its preservation.

The draft 1996 additional documentation states that Melrose estate is significant under Criteria A and C. (Although the property is a National Historic Landmark, the National Register form was used for the additional documentation, thus National Register criteria were cited.) It is significant for its associations with important events in the history of the United States during the period 1841 to 1865, as well as for its architecture and landscape. The property is an important, well-preserved, and detailed example of a suburban estate in the South. The additional documentation also notes the significance of the property in the area of historic preservation through the work of stewardship and rehabilitation undertaken by the Davis-Kelly family during their ownership of the property, and the development of the historic preservation movement in Natchez.²

Historical Data

The purpose of Natchez National Historical Park is to preserve and interpret the complex history and material culture of all of the peoples of Natchez, Mississippi, emphasizing European

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- Historic Landmark reference number is 74002253.
 2. Miller, Section 8, 12.

settlement, African enslavement, the American cotton economy, and the civil rights struggle on the lower Mississippi River.³ The Melrose Servants' Barn (LCS #091786 / HS-23) is associated with Melrose estate, an antebellum suburban estate, now part of Natchez National Historical Park.⁴ The barn, located southeast of the house at what is now a wooded verge, has been referred to by different names including: "servant's stable," "barn in lower yard," "Aunt Alice's Barn," and "Jane's Barn."⁵ The barn is believed to have been constructed in the late nineteenth century or early twentieth century for use by the employees at Melrose.⁶

The history of Melrose estate has typically been divided into periods defined by its owners or occupants. As a result, the periods are identified as: Pre-Melrose Period, McMurrans Occupancy, 1841-1865; Davis-Kelly Period, 1865-1901; Kelly Occupancy, 1901-1975; Callon Occupancy, 1976-1990; and National Park Service Period, 1990 - present.

In 1834, the estate of Robert Moore sold a 132.91-acre portion of Mount Pleasant Plantation to Henry Turner. In 1841, Turner sold the property to John T. McMurrans was married to Turner's niece. The land comprising Melrose had been

previously used for cotton production, but had been planted with trees. McMurrans, a successful lawyer who was later elected to the Mississippi House of Representatives, and his wife, Mary Louisa Turner, completed their house, Melrose, outside of Natchez by 1847. At that time, Melrose included such dependencies as a privy, a smoke house, a barn, and a carriage house. By 1851, Melrose was an established property and considered an estate of great beauty. However, the Civil War brought hard times to the McMurrans, who were forced to sell Melrose to George Malin Davis and Elizabeth Shunk Davis in 1865.

In 1877, Davis's daughter, Julia, inherited the estate, and she and her husband, Dr. Stephen Kelly, occasionally lived there. George Malin Davis Kelly, the Kellys' only child, inherited a portion of Melrose and several other Natchez and Louisiana plantations from his mother upon her death. He was only seven years old at that time. Stephen and his son, George, visited Melrose twice in George's youth. Upon George's marriage in 1901, Stephen Kelly deeded his one-quarter inheritance in Melrose to George, who became the full owner.

During the Davis-Kelly period, the estate was maintained primarily through a caretaker. Almost nothing is known about the actual running of the estate during this period except that it was accomplished primarily through legal agents and the on-site care of two African-American women who were formerly enslaved, Jane Johnson and Alice Sims. Johnson and Sims lived at Melrose with their families after they gained their freedom and maintained the property.

The longest period of ownership / occupancy of Melrose was by George and Ethel Kelly. A survey of the estate was prepared in 1908 by J. W. Babbitt, which depicted the layout of the structures on the estate. The map of this survey is the first historical textual reference for the servants' barn. The Babbitt map shows the barn sitting in isolation within a fenced yard southeast of the house.

When the Kellys permanently moved to Melrose in 1910, they essentially maintained the house and its grounds as it had been during the antebellum

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3. National Park Service, *Foundation Document Overview Natchez National Historical Park, Mississippi* (N.P.: National Park Service, n.d.), 2.
 4. Although NPS editorial protocols indicate that the name of the building should be "Servants's Barn," the List of Classified Structures identified the building "Servants' Stable."
 5. Ann Beha Associates, Inc. (Suzanne Turner and Ian Firth), *Melrose Estate, Natchez National Historical Park, Natchez Mississippi, Cultural Landscape Report* (Boston: Ann Beha Associates, 1996); National Park Service and The Jaeger Company, *Cultural Landscape Inventory, Melrose Estate, Natchez National Historical Park* (Atlanta: National Park Service Southeast Regional Office, 2013); and Mrs. Mimi Miller, Director, Historic Natchez Foundation, discussion February 22, 2018, start-up meeting.
 6. *Cultural Landscape Report*, 119-120.

period. Jane Johnson and Alice Sims helped to guide the work on the grounds of the property by describing the original layout and look of the paths and roads, gardens, and plants to Ethel Kelly. While maintaining many of the estate's original landscapes, the Kellys added dairy cows and dairying activities, turkey and other fowl pens, pens for hunting dogs, new farm buildings, a large new pond, and probably the servants' barn with the enclosed barn yard.

George Kelly died in 1946 leaving the property to Ethel. She died in 1975, with Melrose, the house and the grounds, in a state of decline. John and Betty Callon purchased Melrose in 1976. The Callons were not agriculturalists, and they viewed the estate as a place to entertain friends and clients. The house was open all year to visitors, and paying guests were accommodated in the main house and its dependencies. An antique store was operated in the basement at one time.

Since the Callons did not have an interest in maintaining any of Melrose's past agricultural activities and the landscape that accommodated these activities, the agricultural buildings constructed by the Kellys were torn down, and all fencing that created separate and discrete yards was removed. The grounds were essentially treated as a single, large ornamental (meaning decorative rather than useful) space. The servants' barn was spared destruction.

The barn, a rectangular, gable-roofed building with double doors on its front, northeast façade, and side, east façade, is constructed of recycled, most likely "found," materials. Full-length lean-to sheds have been added to the east and southeast sides of the barn. The gable roof is corrugated metal. The floor is poured concrete. The interior shows various levels of electrification, but the structure does not currently have electricity.

The servants' barn was constructed by 1908, as indicated by the J. W. Babbitt survey of Melrose, and used by Jane Johnson's and Alice Sims's livestock. Johnson was instrumental in the restoration of Melrose by George and Ethel Kelly. A 2013 Cultural Landscapes Inventory alleged that the "servant's barn" was constructed during the

McMurrin years (1843-1850) without explanation.⁷ It is more likely that the barn was constructed during the period immediately after the Civil War when Johnson and Sims were serving as caretakers of the property. Fred Page, the last caretaker of Melrose, who served well into the National Park Service period, remembered the servants' barn and the area around the barn as enclosed and serving as a place for the employees to keep their animals.

In 1990, Melrose came under the care of the National Park Service. At that time, the house and all dependencies were photographed. Under the NPS, the barn is used as a storage building, and it holds various items including mantels from nineteenth-century houses, no longer extant, that stood on the Fort Rosalie site.⁸

Treatment and Use

The Melrose Servants' Barn is an example of local vernacular construction that was present on the site by 1908. It is currently used for storage and interpretation of Melrose estate. It is anticipated that its use for interpretation will continue. The recommended overarching treatment for the building is, therefore, *Rehabilitation* to support ongoing use of the structure as part of the park's interpretive program, while retaining and protecting historic character-defining features.

The building is generally in fair condition, with repairs required to address weathering-related deterioration. Repair needs are related to deterioration of exterior wood cladding, doors, and roofing, as well as clean-up to remove bird, insect, and rodent droppings and nesting materials. In addition, the roof is partially collapsed at one area, and it requires repair to prevent further deterioration. These repairs should be implemented to retain historic fabric to the greatest extent possible. Where selective

7. National Park Service and The Jaeger Company, 35.

8. Information on the mantels from Jeff Mansell, Historian, Natchez National Historical Park, February 28, 2018.

replacement is needed, materials matching the historic components should be used.

Administrative Data

Locational Data

Building Name: Servants' Barn

Location: Melrose estate, Natchez National Historical Park, Natchez, Mississippi

UTM Coordinates: 15N 3490835N 653640 E

Latitude/Longitude Coordinates: 31.54225° north, 91.38150° west

LCS Number: 091786

Related Studies

Ann Beha Associates (Suzanne Turner and Ian Firth). *Cultural Landscape Report, Melrose Estate, Natchez National Historical Park*. Boston: Ann Beha Associates, Inc., 1996.

Ann Beha Associates. *Historic Resource Study, Natchez National Historical Park*. Boston: Ann Beha Associates, Inc., 1997.

Ann Beha Associates. *Historic Structure Report, Melrose Estate, Natchez National Historical Park*. Three volumes. Boston: Ann Beha Associates, Inc., 1997.

Ronald L. F. Davis. *The Black Experience in Natchez, 1720–1880: Special History Study*. Denver: National Park Service, Denver Service Center, 1993.

Coleman, J. W., ed. *Final General Management Plan / Development Concept Plan / Environmental Impact Statement, Natchez National Historical Park*. Atlanta: National Park Service, Southeast Regional Office, 1994.

National Park Service and The Jaeger Company. *Cultural Landscapes Inventory, Melrose Estate, Natchez National Historical Park*. Atlanta: National Park Service Southeast Regional Office, 2013.

Cultural Resources Data

Natchez National Historical Park consists of four discontinuous sites: the former Fort Rosalie site along the Mississippi River, north of the Natchez and NPS Visitor Centers; Melrose estate; and the William Johnson House. Ownership of the Forks of the Road site, which contains the Forks of the Road Bridge over Spanish Bayou, is anticipated to be transferred to the NPS in 2020. While all four sites are listed in the National Register of Historic Places due to their presence within the National Historical Park, National Register documentation only exists for Melrose estate, the William Johnson House, and the Fort Rosalie site, which is included in the Natchez Bluffs and Under-the-Hill Historic District.

Natchez National Historical Park was established on October 7, 1988. The legislation called for the park to consist of Melrose estate as well as the lands associated with Fort Rosalie.⁹

On September 28, 1990, the park boundaries were expanded to include the William Johnson House at 210 State Street in Natchez.¹⁰

On May 5, 2017, legislation was signed into law authorizing the Secretary of the Interior to acquire by donation or purchase, any lands at the site of the historic Forks of the Road slave market.¹¹

The Servants' Barn is a contributing structure to Melrose estate. Melrose was designated a National Historic Landmark in 1974. The 1974 National Historic Landmark documentation focused on Melrose, the main house, as an individual building, and briefly noted the kitchen and other outbuildings, although it did not specifically

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9. "An Act to Create a National Park at Natchez, Mississippi," Public Law 100-479. October 7, 1988.
 10. "To provide for the acquisition of the William Johnson House and its addition to the Natchez National Historical Park, and for other purposes." Public Law No: 101-399. September 28, 1990.
 11. "Consolidated Appropriations Act, 2017" Public Law No: 115-31. May 5, 2017.

mention the servants' barn.¹² The 1996 additional documentation identified the barn as a contributing resource; however, this documentation was not signed or accepted by the Keeper of the National Register.¹³ Thus, the barn is managed by the park as a contributing resource to the site.

Period of Significance: circa 1908. (The National Historic Landmark documentation for Melrose estate identifies periods of significance of nineteenth century, with a specific date of 1845 noted. The draft additional documentation prepared in 1996 for Melrose estate cites a period of significance of 1866–1946.)

Proposed Treatment: Rehabilitation

Project Scope and Methodology

The goal of the Historic Structure Report is to develop planning information for use in the repair, maintenance, and preservation of historically significant buildings and structures. First developed by the National Park Service in the 1930s, HSRs are documents prepared for a building, structure, or group of buildings and structures of recognized significance. They are developed to record and analyze the property's initial construction and subsequent alterations through historical, physical, and pictorial evidence; to document the performance and condition of the structure's materials and overall physical stability; to identify an appropriate course of treatment; and, following implementation of the recommended work, to document alterations made through that treatment.¹⁴

This HSR addresses key issues specific to the Servants' Barn, including the history and construction chronology of the building (as

possible based on available archival documentation); the existing physical condition of the exterior and interior materials; and the historic significance and integrity of the structure.

The following project methodology was used to prepare this study.

Research and Document Review. Archival research was performed to gather information about the original construction and past modifications and repairs for use in assessing existing conditions and developing treatment recommendations for the building. Documents reviewed included maps, historic photographs, and other written and illustrative documentation about the history, construction, evolution, and repairs to the building. The research for this study built upon prior historical and archival research completed by the NPS and others, as outlined in the bibliography provided with this report. Primary reference material for this study was obtained from the related studies listed above, and through research conducted at the park and in local archives during the site visit.

Condition Assessment and Documentation. Concurrent with the historical research, a condition survey of the building was performed and observations were documented with digital photographs, field notes, and annotations on sketch drawings prepared by the project team while on site. The condition assessment addressed the exterior and interior spaces and features of the building, as well as the building structure. In addition, field notes and measurements were taken for use in development of measured drawings, which are provided as an appendix to this report. Drawings were prepared generally following Historic American Buildings Survey (HABS) guidelines, to a level of detail established for measured drawing documentation prepared by the project team for previous Historic Structure Reports for the National Park Service Southeast Region. Photographs and drawings provided with this report will be submitted in electronic format, together with the report files, to the National Park Service on archival CD upon completion of the Historic Structure Report.

12. Goeldner.

13. Miller.

14. Deborah Slaton, *Preservation Brief 43: The Preparation and Use of Historic Structure Reports* (Washington, DC: National Park Service, Technical Preservation Services, 2005).

Development of History, Chronology of Construction, and Evaluation of

Significance. Based on historical documentation and physical evidence gathered during the study, a context history and a chronology of design and construction were developed. An evaluation of the significance was also prepared, taking into consideration guidelines provided by *National Register Bulletin: How to Apply the National Register Criteria for Evaluation*.¹⁵ This evaluation of history and significance provided the basis for the development of treatment recommendations.

Treatment Recommendations. The Secretary of the Interior’s Standards for the Treatment of Historic Properties guided the development of treatment recommendations for the building. The park has designated a treatment approach of *Rehabilitation* for this structure. Following the overall treatment approach of *rehabilitation*, which ensures preservation of character-defining features while allowing new and continued use of the building, specific recommendations were developed to address observed existing distress conditions as well as long-term preservation objectives.¹⁶

Preparation of a Historic Structure Report.

Following completion of research, site work, and analysis, a narrative report was prepared summarizing the results of the research and inspection and presenting recommendations for treatment. The HSR was compiled following the organizational guidelines of NPS *Preservation Brief 43: The Preparation and Use of Historic Structure Reports*, with modifications made to the

organizational structure as needed to meet the purposes of this project.¹⁷

15. National Park Service, *National Register Bulletin: How to Apply the National Register Criteria for Evaluation* (Washington, DC: National Park Service, National Register of Historic Places, 1997).

16. Anne E. Grimmer, *The Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring & Reconstructing Historic Buildings* (Washington, DC: National Park Service, Historic Preservation Services, 2017).

17. Slaton.

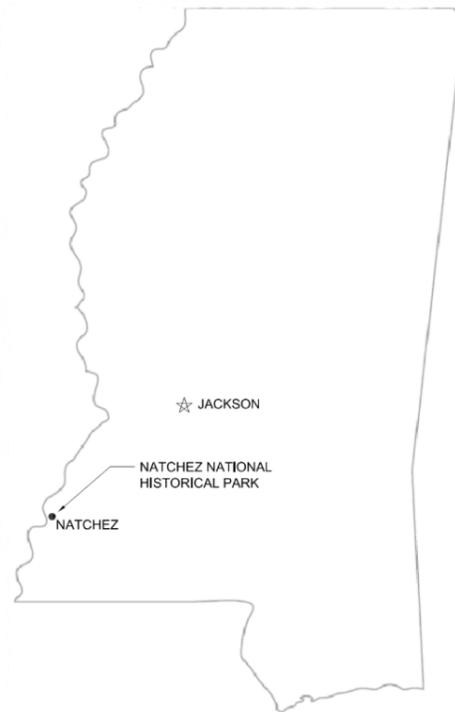


FIGURE 1. A map of Mississippi showing the location Natchez and Natchez National Historical Park. (Source: US Census Bureau, modified by the authors)

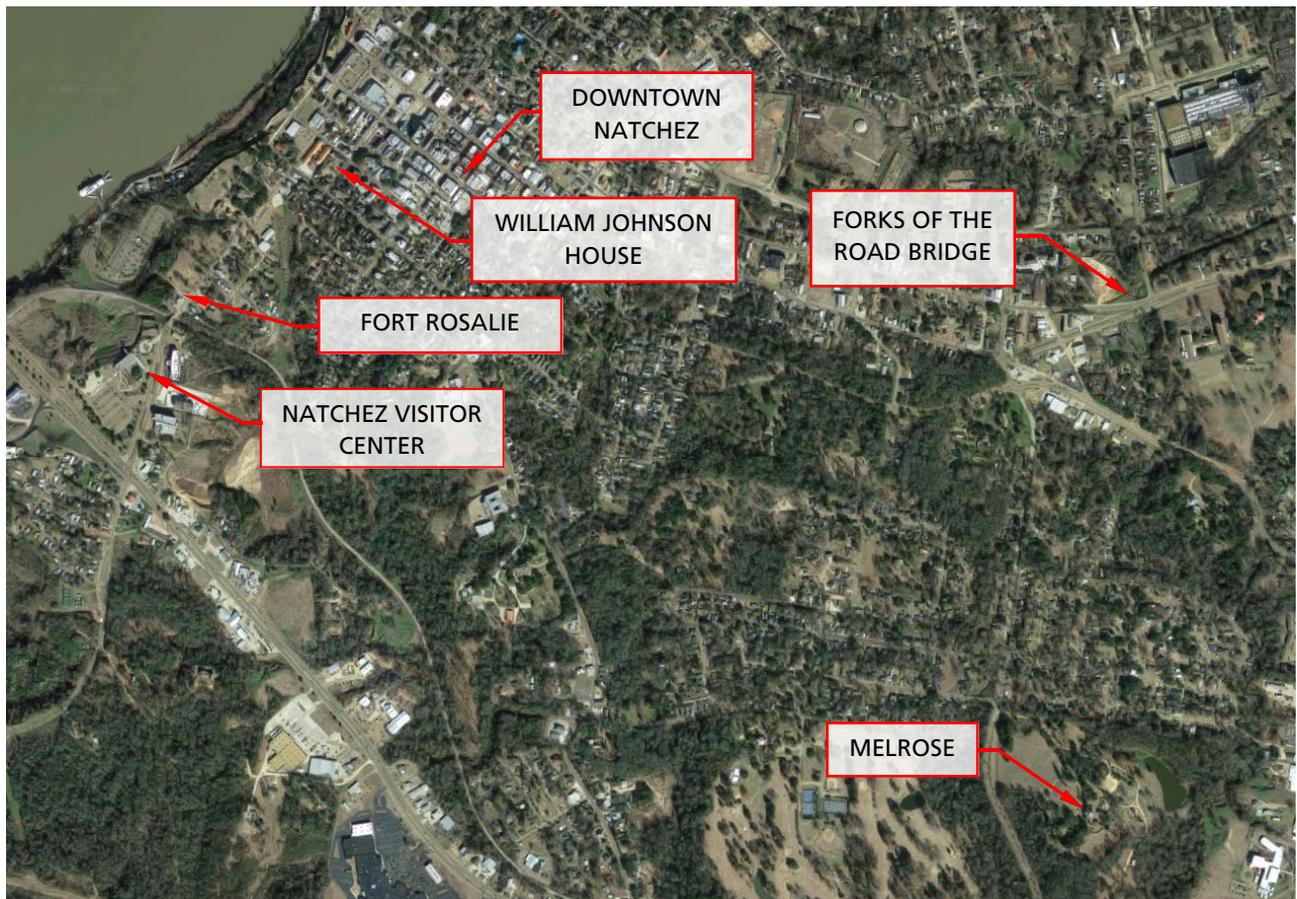


FIGURE 2. An aerial view of Natchez, Mississippi. (Source: Google Earth, annotated by the authors)



FIGURE 3. An aerial view of the Melrose estate. For the purpose of this narrative, façades are titled northwest, northeast, southwest, and southeast. North, as indicated in this report at Figure 3 and on the measured drawings provided in Appendix A was confirmed on site and corresponds to the north indication on the HABS Melrose Site Plan. (North is incorrectly indicated on the HABS Melrose, Barn Plan.) (Source: Google Earth, annotated by the authors)

Developmental History

Historical Background and Context

The Melrose Servants' Barn is located southeast of the Melrose main house on Melrose estate, Natchez National Historical Park, Natchez, Mississippi (Figure 4). The Melrose estate house was completed by 1847 by John McMurrin, and it included several dependencies. Melrose was designed as a suburban villa on the outskirts of the City of Natchez.¹⁸



FIGURE 4. Melrose Servants' Barn, front, northwest, façade, and west lean-to shed addition, looking southeast. (Source: All photographs by the authors unless otherwise noted)

Natchez National Historical Park includes Melrose, “one of the great houses of the American South, distinguished by its Greek Revival architecture, original furnishings, decorative arts, landscape, and outbuildings;” the William Johnson House, which “provides a window into the life of a free man of color whose published

diary and personal papers provide a detailed account of daily life in the antebellum south;” and the former Fort Rosalie site along the Mississippi River, north of the Natchez and NPS Visitor Centers. Other historic properties in the National Historical Park include Old Fort Rosalie Gift Shop, a log cabin which is the last remaining building of a fort-related Natchez tourist attraction built in the late 1930s; John McCallum House, a contributing building to the Natchez On-Top-of-The-Hill Historic District; the Stietenroth House, associated with the development of the emergent, post-bellum merchant class of Natchez; the Spanish Bayou bridge at Washington Road at the Forks of the Road Slave Market site; and the Forks of the Road Slave Market site, all within the corporate limits of the City of Natchez. Ownership of the Forks of the Road site, which contains the Forks of the Road Bridge over Spanish Bayou, is anticipated to be transferred to the NPS in 2020.

The purpose of Natchez National Historical Park is to preserve and interpret the complex history and material culture of all the peoples of Natchez, Mississippi, emphasizing European settlement, African enslavement, the American cotton economy, and the civil rights struggle on the lower Mississippi River.¹⁹

Brief History of Melrose

The history of Melrose has typically been divided into periods defined by its owners or occupants. As a result, the periods are Pre-Melrose Period, McMurrin Occupancy, 1841-1865; Davis-Kelly Period, 1865-1901; Kelly Occupancy, 1901-1975;

18. National Park Service and The Jaeger Company, 22.

19. *Foundation Document Natchez National Historical Park*, 2.

Callon Occupancy, 1976-1990; and the National Park Service Period, 1990 -present.

Pre-Melrose Period. The land upon which Melrose was constructed had been previously used for cotton production and had been planted in “forest trees.”²⁰ In 1834, the estate of Robert Moore sold 132.91 acres of Mount Pleasant Plantation, a portion of that farm, to Henry Turner, who in turn sold it to John T. McMurrin in 1841.²¹ McMurrin was married Henry Turner’s niece, Mary Louisa Turner.²²

McMurrin Occupancy, 1841-1865. When John T. McMurrin married Mary Louisa Turner, a southern child of wealth and privilege, they were given houses, land, and enslaved people. McMurrin, a lawyer by profession, was later elected to the Mississippi House of Representatives. He was successful enough to be able to purchase land outside of Natchez near his former law partner, John Quitman, to build a new house. It is believed that the McMurrins began building their house in 1846 and probably completed it by 1848. The dependencies at Melrose formed a U-shape behind the house and included a privy, a smoke house, a stable, and a carriage house.²³

By 1851, Melrose was an established property and considered an estate of great beauty.²⁴ However, further development of Melrose was cut short by the intrusion of the Civil War. The City of Natchez

surrendered to the Union Navy on May 13, 1862, without a shot being fired, and was occupied by the Union Army on July 13, 1863, for the remainder of the war.²⁵ At the end of the war, the McMurrin family suffered a series of tragic family deaths from dysentery, accidents, and unknown illnesses, and Melrose and most of its furnishings were sold to Elizabeth Davis in 1865.

Davis-Kelly Period, 1865-1901. George Malin Davis and Elizabeth Shunk Davis lived in Natchez and occasionally used Melrose until 1869, when they closed the house and returned to Choctaw, their downtown home, which had been commandeered by the Union Army during its occupation of Natchez. In 1877, Davis’s daughter, Julia, inherited the estate, and she and her husband, Dr. Stephen Kelly, occasionally lived at Melrose. Seven-year-old George Malin Davis Kelly, the Kellys’ only child, inherited a portion of Melrose and several other Natchez and Louisiana estates upon his mother’s death in 1883. Stephen and his son, George, visited Melrose at least twice in George’s youth. Upon George’s marriage in 1901, Stephen deeded his one-quarter inheritance in Melrose to George, who became the full owner.²⁶

During the Davis-Kelly period, the estate was maintained primarily through a caretaker. Almost nothing is known about the actual running of the estate during this period except that it was occurred primarily through legal agents and the on-site care of two freed African-American, Jane Johnson and Alice Sims and their families. Johnson and Sims lived at Melrose and maintained the site, practicing agriculture in the outer fields of the estate.²⁷

20. *Cultural Landscape Report*, 68. Although this comment would seem to indicate that the site had been randomly planted in forest trees, the NPS is “relatively confident” that McMurrin began transplanting trees while he constructed the house in accordance with a planned landscape.

21. *Ibid.*, 67.

22. Although NPS documentation has long indicated that McMurrin and Henry Turner were nephew and uncle, recent NPS communications indicate that the family connections between the two are through McMurrin’s wife, Mary Louisa Turner, who is Henry Turner, Jr.’s first cousin.

23. *Ibid.*, 68-69.

24. *Ibid.*, 78.

25. Ronald L. F. Davis, *The Black Experience in Natchez, 1720-1880* (Denver: National Park Service, Denver Service Center, 1993), 145 and 146.

26. *Cultural Landscape Report*, 86-87.

27. According to Mimi Miller’s census research, Alice Sims was probably living at Melrose during the 1880s - 1890s, but Jane Johnson was living on Canal Street in 1880. This research is on file with the park.

Kelly Occupancy, 1901-1975. The longest period of ownership / occupancy of Melrose occurred under George and Ethel Kelly. Shortly after their marriage in 1901, the Kellys traveled to Natchez to inspect their property, and they became enamored with Melrose. Kelly had the property surveyed in 1903 and 1908 by J. W. Babbitt. In 1908, the survey was accompanied by a map that Babbitt created to reflect the findings of that survey. This map is the first historical textual reference for the servants' barn (Figure 5).²⁸ The Babbitt map shows the barn sitting in isolation within a fenced yard southeast of the house.

Although the estate was built as a suburban villa, it had many of the spatial qualities of a plantation. When the Kelly family permanently moved to Melrose in 1910, they essentially maintained the house and its grounds as it had been during the antebellum period. The work on the grounds was guided by Jane Johnson and Alice Sims, who walked around the grounds with Ethel Kelly and described how the paths and roads, gardens and plants, and layouts originally looked.²⁹ While maintaining many of the estate's original landscapes, the Kellys added a dairy operation, turkey and other fowl pens, pens for hunting dogs, new farm buildings, a large new pond, and probably the servants' barn and enclosed barn yard.³⁰

George Kelly died in 1946 leaving the property to Ethel. As she aged, Ethel was less able to handle the daily requirements of a large estate. When she died in 1975, Melrose, the house and the grounds, were in a state of decline.³¹

Callon Occupancy, 1976-1990. When John and Betty Callon purchased Melrose in 1976, they came to the property with ideas about its use very different from those of the Kellys. John Callon was actively engaged in the energy business, which was booming at the time, and the couple viewed the estate as a place to entertain their many friends

and clients of Callon Petroleum. Several movies were filmed at the house, and the Callons became known for throwing lavish parties at the house, attended by the social and political elite of the community and those who wanted to know them. The house was open all year to visitors, and paying guests were accommodated in the main house and its dependencies. An antique store was operated in the basement at one time.³²

The Callons had no interest in maintaining any of Melrose's past agricultural activities, and the landscape that accommodated these activities was changed during their occupancy. The agricultural buildings constructed by the Kellys were torn down, and all fencing that created separate and discrete yards was removed. The grounds were essentially treated as a single large ornamented space.³³ Although the servants' barn was a superfluous Kelly agricultural building, it survived all these changes and was not torn down.

Melrose Servants' Barn (LCS #091786; HS-23)

The Melrose Servants' Barn (LCS HS-23) is associated with Melrose estate, an antebellum suburban estate, now part of the Natchez National Historical Park (Figure 6). The barn, located southeast of the house at what is now a wooded verge, is called a number of different names including: "servant's barn," "barn in lower yard," "small barn," "Melrose Barn," "Jane's Barn," "Aunt Alice's Stable," and "Aunt Alice's Barn."³⁴ The barn is believed to have been built in the late nineteenth century or early twentieth century for use by the employees at Melrose.³⁵

28. *Cultural Landscape Report*, 89

29. *Ibid.*, 106.

30. *Ibid.*, 108-124.

31. *Ibid.*, 125.

32. *Ibid.*

33. *Ibid.*, 132.

34. *Cultural Landscape Report*; National Park Service and The Jaeger Company; HABS 1936, and Letters of George M. D. Kelly to Marian Kelly (July 30 1922) and to Ethel Kelly (July 2, 1924 and September 8, 1924), collection of Historic Natchez Foundation (Natchez); the NPS decided in October 2019 to call the building the "Servants' Barn."

35. *Cultural Landscape Report*, 119-120.

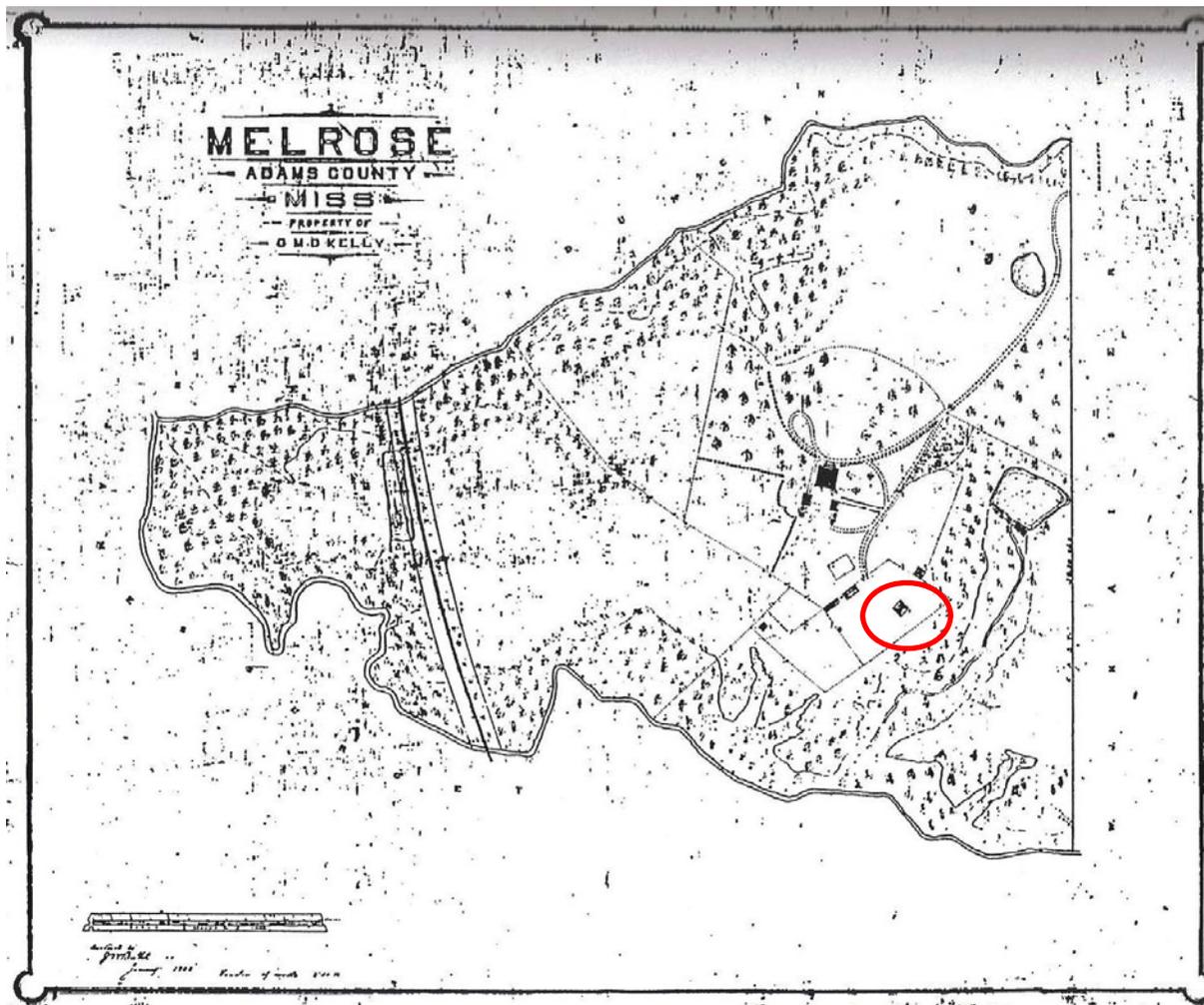


FIGURE 5. Map showing property of G. M. D. Kelly, Melrose, Adams County, Mississippi, by J. W. Babbitt, 1908. (Source: *Cultural Landscape Report*, 89)



FIGURE 6. Servants' Barn, east side and rear lean-to shed addition, looking southwest.

The barn, a rectangular, gable-roofed building with double doors on its front, northeast façade, and side, east façade, is constructed of recycled, most likely “found,” materials. The building still

shows hints of various colors on the boards used in its construction (Figure 7). Full-length lean-to sheds have been added to the east side and southeast side, rear, of the barn. The gable roof is corrugated metal. The floor is poured concrete, probably completed by George Kelly about 1910 when he poured concrete floors throughout the entire Melrose complex of buildings.³⁶ The interior shows various levels of electrification, but the structure does not now have electricity. The house was famously electrified in 1920 for the filming of the *Heart of Maryland*.³⁷ It is not known if the servants' barn was electrified at that time.

36. Miller.

37. National Park Service and The Jaeger Company, 41.



FIGURE 7. East side double door showing the various colors of the found materials used for the construction of the Servants' Barn.

The Servants' Barn was constructed by 1908, as indicated by the Babbitt survey of Melrose, for use by Jane Johnson's and Alice Sims's livestock (refer to Figure 5). Johnson and Sims were formerly enslaved persons who became servants at Melrose (Figure 8). Johnson, in particular, was instrumental in the restoration of Melrose by George and Ethel Kelly. Sims lived in a room upstairs in the dairy building, and Johnson lived in a former slave cabin.³⁸ After the war, when Melrose was not occupied by its owners, it is assumed that Sims and Johnson used some parts of the house grounds for themselves raising chickens and gardening, since it is known that Johnson sold vegetables, eggs, and butter at the farmer's market in Natchez during the latter part of the nineteenth century, and growing cotton in the front field.³⁹ This may be when the barn was constructed.

The 2013 Cultural Landscapes Inventory (CLI) indicates that the "servant's stable" was constructed during the McMurrin years – 1843-1850 – of Melrose.⁴⁰ There is no explanation or footnote providing support for this assertion. It is highly unlikely that a "servant's stable" was constructed at Melrose during a period in which

38. *Ibid.*, 58.

39. *Cultural Landscape Report*, 87; according to NPS communications, tax records for Dr. Stephen Kelly indicated that cotton was being raised in the front field at Melrose, although Dr. Kelly was not always in residence.

40. National Park Service and The Jaeger Company, 35.

enslaved labor was predominantly used. It is likely that the barn was constructed during the period immediately after the war when Johnson and Sims were serving as caretakers of the property.



FIGURE 8. Jane Johnson, before 1905, from the 1974 National Register of Historic Places nomination of Melrose. (Source: Paul Goeldner, NPS)

Fred Page, the last butler at Melrose, who served well into the NPS period, remembered the servants' barn and the area around the barn as enclosed and serving as a place for the employees to keep their animals. The employee animal enclosure was called "Aunt Alice's barnyard." Within the enclosure was a small barn where Johnson kept her horses and buggy. Page recalled,

She had to have a buggy and horses, and you didn't keep your horses and livestock in with Mrs. Kelly's. Everything was separate in the old days. The black[-owned] horses were in one section, and the white[-owned] ones were in another lot. If you were a black person and you had horses, you didn't put them in with the white people's horses to graze. Everything was separate.⁴¹

Page also indicated that individuals renting fields at Melrose during the Kelly Occupancy sometimes had access to the servants' barn.⁴²

41. Fred Page, interview, September 27 and 28, 1995, tape #2, side A in *Cultural Landscape Report*, 119-120.

42. *Cultural Landscape Report*, 121.

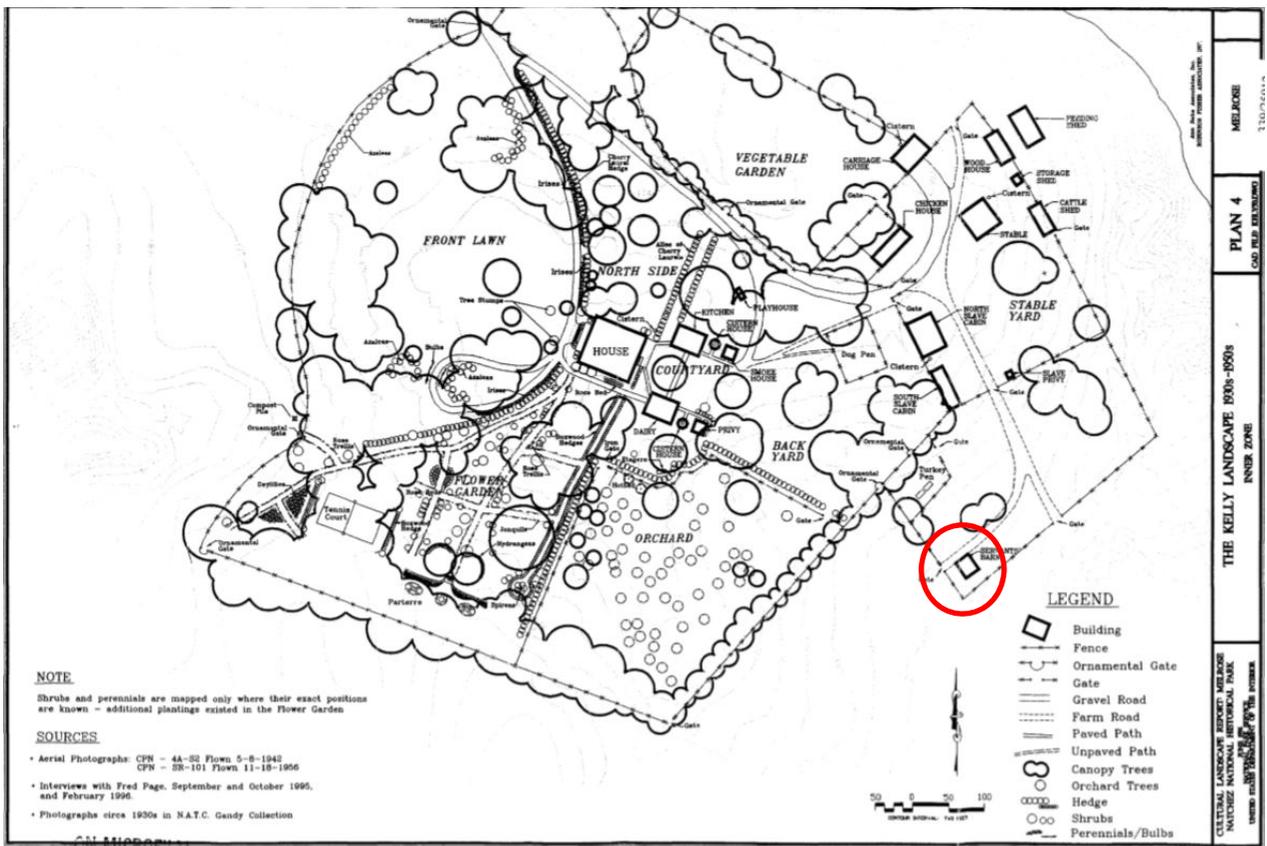


FIGURE 9. "The Kelly Landscape 1930s-1950s." (Source: *Cultural Landscape Report*, VI. Appendices, Plan 4)

The area surrounding the servants’ barn and Aunt Alice’s barnyard is located at the rear of the house abutting the Back Yard and the Stable Yard. This area was separated from the Back Yard during the Kelly period by the Turkey Pen (Figure 9). The area was accessed at that time by an internal farm road that passed through the Stable Yard and into Aunt Alice’s barnyard. This road was later improved and expanded during the Callon period, and ultimately extended off the property creating the current road.⁴³ The barnyard could also be accessed by several “walking gates.”

Aunt Alice’s barnyard probably originally looked much like any barnyard: as a grassy area.⁴⁴ The barnyard was edged on the southeast side by a forested area. The forested areas during the Kelly period were important areas for cattle grazing, and the underbrush was probably not as thick as today.⁴⁵ Native and invasive exotic vegetation have

now reclaimed previously open fields around the Melrose property.

In 1976 when Melrose was sold to John and Betty Callon, the property had undergone years of diminished maintenance as a result of Ethel Kelly’s failing health. The Callons’s approach to the property and their lifestyle was decidedly different than that of the Kellys. The Callons did not farm and were not interested in maintaining the estate as an agricultural site. In their refurbishment of Melrose, they tore down all the redundant farm buildings added by the Kellys except the servants’ barn.⁴⁶ The fences also were removed from the various yards, such as Alice’s barnyard. The yards lost their spatial identity and were treated as ornamental grounds around the house.⁴⁷

By 1977, the Servants’ Barn was surrounded by trees and the whole area that once been Aunt

43. *Ibid.*, 129.
 44. *Ibid.*, 172.
 45. *Ibid.*, 121.

46. *Ibid.*, 128-129.
 47. *Ibid.*, 132.

Alice's barnyard was now wooded. The Callon's repaired the barn and used it as a storage shed.⁴⁸

In 1990, Melrose came under the care of the National Park Service. At that time, two past employees of the Callon's, Clarence Brown and James Davis, continued working with the NPS. Brown and Davis used the Servants' Barn for their workshop, tool storage, and for parking small tractors. After their employment, the men used the Servants' Barn as a maintenance shed for the park until about 1993 when the new Chief of Facilities, Kim Fuller, moved the maintenance operation to the carriage house. Since that time, the Servants' Barn has been used as storage.⁴⁹

In 1990, when the NPS assumed responsibility for the house and all its dependencies, the buildings were photographed. The two photographs taken of the Servants' Barn show the building much as it appears today, edged by woods along the former internal farm road (Figure 10 and Figure 11). Under the care of the NPS, the barn is still used as a storage building. Various items are held inside, including mantels from nineteenth-century houses, no longer extant, that stood on the Fort Rosalie site.⁵⁰ The lean-to porch on the south side of the building holds scaffolding pieces (Figure 12). The west lean-to porch holds NPS museum-accessioned farm equipment and 55-gallon drums (Figure 13). The 1997 Cultural Landscape Report (CLR) suggests that much of this equipment is draft animal-operated equipment from the Kelly era that was piled up alongside the collection's storage building during the writing of that report. It was recommended at that time that the equipment be moved back to the Carriage House which was originally used for the storage of farm equipment.⁵¹



FIGURE 10. Servants' Barn, east side, 1990, looking southwest down the NPS service road. (Source: Dale L. Smith, NPS, 1990, No. 12)



FIGURE 11. Servants' Barn, east and northwest sides, 1990, looking southwest; note rear lean-to addition. (Source: Dale L. Smith, NPS, 1990, No. 12)



FIGURE 12. Servants' Barn southwest lean-to addition filled with scaffolding, looking west at rear.

48. Beha, 132,

49. NPS communications based on Clarence Brown recollections.

50. Information on the mantels provided by Jeff Mansell, Historian, Natchez National Historical Park, February 28, 2018.

51. *Cultural Landscape Report*, 172.



FIGURE 13. Servants' Barn, looking east into west lean-to shed addition. Note the accession tags on the draft animal-operated farm equipment.

Natchez National Historical Park

Natchez National Historical Park was established on October 7, 1988, by Public Law 100-479 “to preserve and interpret the history of Natchez,” Mississippi.⁵² The National Historical Park is in the City of Natchez on the bank of the Mississippi River in southwestern Mississippi. The resources of the National Historical Park include: Melrose estate, the William Johnson house, Fort Rosalie Site, and the visitor center, museum collections, and heritage gardens.⁵³ The Forks of the Road Slave Market Site and the Spanish Bayou bridge at Washington Road is anticipated to be transferred to the NPS in 2020.

However, prior to the creation of the National Historical Park, Melrose underwent various historical documentations. Melrose has undergone Historic American Buildings Survey (HABS) recordation and updates at various times. The earliest recordation was in the 1930s, and it was revised in 1936. This recordation consisted of photographs of the house alone. The HABS recordation was subsequently updated in 2000, with drawings and large format photographs of its

52. *Foundation Document Natchez National Historical Park*, 4.

53. *Ibid.*

dependencies.⁵⁴ These dependencies included the Servants' Barn, which was simply called the “Melrose Barn.” Two drawings (refer to Appendix B) and two photographs (Figure 14 and Figure 15) from this documentation have been included. By this time the forested area has crept up to the barn.



FIGURE 14. HABS photograph, Melrose Barn [Servants' Barn], MS-61-0, view looking north. (Source: James W. Rosenthal, 2006)

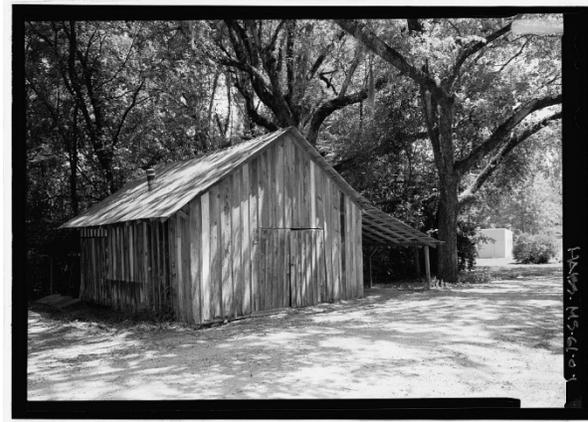


FIGURE 15. HABS photograph, Melrose Barn [Servants' Barn], MS-61-0, view looking southeast. (Source: James W. Rosenthal, 2006)

As part of a 1973 thematic study of nineteenth-century American architecture undertaken by the NPS, Melrose was designated a National Historic Landmark on May 30, 1974, and automatically listed on the National Register of Historic Places. According to the designation, the property has

54. Photographs of the Servants' Barn (Melrose barn) were taken in the year 2006 according to the photographic addendum page. The drawings were created in 2000.

national significance as an example of a nineteenth-century residence in the area of architecture.⁵⁵ This designation did not include the Servants' Barn.

In 1996, a draft National Register of Historic Places nomination was completed on the entire Natchez National Historical Park, but it was not submitted. This nomination recommended including Melrose and fourteen dependencies into a separate historic district;⁵⁶ it is not clear if the Servants' Barn was one of the fourteen structures selected for inclusion.⁵⁷ In 2000-2001, History Branch Staff from the Southeast Region of the NPS reviewed both the 1996 draft nomination and 1974 NHL designation for Melrose and produced a Determination of Eligibility (DOE) that included the roles of African Americans at Melrose.⁵⁸

55. National Park Service and The Jaeger Company, 27.

56. *Ibid.*

57. According to recent NPS communications, then-curator Thom Rosenbloom made the decision not to include the Servants' Barn as part of the documentations during the 1990s because "it was not an element of the pre-1866 landscape at Melrose". . . and he did not . . . "view it as architecturally significant for inclusion." It was "simply a judgment call made by Mr. Rosenbloom" not to include the building.

58. *Ibid.*, 27-28.

Melrose Servants' Barn Timeline

- 1841 Land acquired by John T. McMurrin to build a house.
- 1846-1847 Construction of Melrose begins and is completed by John and his wife, Mary Louisa Turner McMurrin.
- 1863, July City of Natchez surrenders to the Union Navy and the city is occupied July 13, 1864, for the rest of the Civil War.
- 1865 Melrose is sold to George Malin Davis and Elizabeth Shunk Davis.
- 1877 Julia Davis, daughter of George and Elizabeth, inherits Melrose.
- 1883 Upon Julia Davis' death, George Malin Davis Kelly inherits his mother's portion of Melrose and several other estates in Mississippi and Louisiana.
- Post 1883
- Melrose is not continually occupied by its owners. Upkeep is overseen by lawyers and two servants, Jane Johnson and Alice Sims, formerly enslaved black women, who had been brought the estate at the time of the Davis' purchase at the end of 1865.
- 1900 George Kelly is given his father's one-quarter portion of Melrose as a gift, thereby becoming the sole owner of Melrose.
- 1903 Kelly has Melrose surveyed.
- 1908 Kelly has Melrose surveyed again, and a map of the estate is created showing the Servants' Barn.
- 1910 George Kelly and his wife, Ethel, move into Melrose and begin a major rehabilitation of the house, dependencies, and grounds.
- Kelly pours concrete floors in the estate's dependencies, which was probably when the Servants' Barn floor was poured.
- 1920 House receives electricity.
- Servants' Barn may have also been electrified at this date.
- Circa 1930 Earliest HABS recordation of house; does not include Servants' Barn.
- 1936 Updated HABS recordation; does not include Servants' Barn.
- 1946 George Kelly dies leaving Melrose to Ethel.
- 1973 Thematic study of American architecture undertaken by the NPS includes Melrose.
- 1974 As a result of the thematic study, Melrose is designated a National Historic Landmark and placed on the National Register of Historic Places; designation did not include the Servants' Barn.

- 1975 Ethel Kelly dies leaving Melrose in decline; Melrose is inherited by three grandchildren.
- 1976 Melrose is sold to Betty and John Callon, who rehabilitate the house, change the grounds, and abandon use of the estate for agricultural pursuits. Most Kelly agricultural buildings are torn down, but the Servants' Barn is spared.
- 1988 Natchez National Historical Park established.
- 1990 The NPS purchases the Melrose estate working through The Trust for Public Land.
- 1996 National Register nomination completed as part of the park's Special Resources Study.
- 1997 Cultural Landscape Report completed which indicates the "servant's stable" ("barn in lower yard" or "small barn") was completed during the period after the Civil War for use by Jane Johnson.
- 2000-2001 Determination of Eligibility completed for Melrose by History Branch staff, Southeast Region, NPS.
- 2006 HABS photographic addendum includes Melrose Barn (Servants' Barn). The added HABS drawings of the Melrose Barn date from 2000.
- 2013 Cultural Landscape Inventory completed, indicates the "servant's barn" was constructed during the McMurrin years – 1843-1850 – of Melrose.

Physical Description and Condition Assessment

Site

The Melrose Servants' Barn is part of a cluster of service buildings located on the Melrose estate at the Natchez National Historical Park in Natchez, Mississippi. Located east of the Mississippi River, Natchez is in Adams County. The Natchez National Historical Park is dispersed within the current municipal boundaries of the city, and Melrose estate, an 80-acre property along the Melrose Montebello Parkway, is part of the National Historical Park.

The structures of Melrose estate share a lush, wooded site. The Melrose Mansion is a nineteenth-century Greek Revival-style mansion that is located on a knoll at the center of the estate. Gardens and symmetrically arranged out-buildings extend to the southeast from the rear of the mansion. Some of the structures surrounding the Melrose Mansion include a carriage house and slave quarters (**Error! Reference source not found.**). Located southeast of the Melrose Mansion is the Servants' Barn (Figure 17).⁵⁹ Surrounding the barn are large deciduous trees, a few cedars, and natural undergrowth including invasive species such as privet hedge. A meandering, 10-foot-wide service road of compacted soil and gravel passes by the Servants' Barn about 5 feet from the northwest wall (Figure 18). The topography of the site surrounding the

barn is gently sloping, and water drains across this portion of the estate generally to the east and northeast toward Spanish Bayou. Near the barn to the southwest, the flow of water is augmented by tandem drainpipes under the service road. The roadbed was obviously raised to pass over the stormwater drain pipes. As a result, the elevation of the service road is above the barn floor as the grade along the edge of the road slopes sharply toward the northwest side of structure.



FIGURE 16. The nearby service buildings north of the Servants' Barn at the Melrose Estate, as seen from the Melrose Servants' Barn.

On the other three sides of the structure, the topography of the wooded site slopes gently away from the barn. The pair of drain pipes carries stormwater under the road to a drainage swale that generally runs parallel to the barn along its southwest side (refer to Figure 18).

59. For purposes of this narrative, façade are described as northwest, northeast, southwest, and southeast. North as indicated on the measured drawings provided in Appendix A represents north as verified on site, matching that correctly indicated on the HABS site plan (Figure 17). (North is incorrectly indicated on the HABS floor plan.)

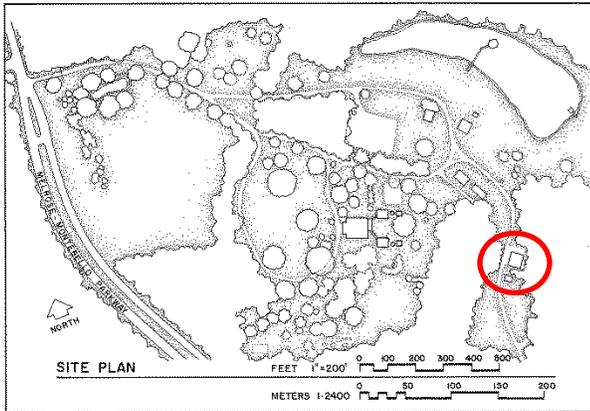


FIGURE 17. Site Plan of Melrose and location of the Servants' Barn. (Source: Historic American Buildings Survey, *Melrose [MS-61]*. John P. White, Delineator, National Park Service, 1992)



FIGURE 18. Partial view of the Servants' Barn showing the attached, shed-roofed storage area on the southwest side. Tandem storm drainage pipes and concrete bulkhead are in the foreground.

Exterior Description

Measured drawings of the existing structure are provided in Appendix A.

The Servants' Barn is a one-story, vernacular structure with board and batten siding, and a gable roof (Figure 19). The asymmetrical roof slopes from the main ridge to the southwest and then wraps around the southeast side of the barn to cover an open yet protected storage area (Figure 20 and Figure 21). The structure is typical of vernacular, wood-frame agricultural buildings built throughout the rural south in the late nineteenth century and early twentieth century.



FIGURE 19. The Melrose Servants' Barn, looking northeast. Note the gravel service road in front of the building.



FIGURE 20. The Servants' Barn, looking east. Note the covered storage area.



FIGURE 21. The Melrose Servants' Barn, looking southwest. The covered storage area is visible at the left.

According to field measurements, the barn has a rectangular plan measuring approximately 24 feet long and 20 feet wide. Overall the structure is approximately 36 feet 11 inches long by 31 feet 9 inches wide including the open, shed-roofed storage area. The structure is oriented with its end gables on a northwest–southeast axis. The peak of the gable is approximately 16 feet 2 inches above the top of the concrete floor slab on the northwest side of the structure (refer to Figure 19).

There are two entrances into the structure with the main entrance centered on the northwest elevation. A second pair of doors on the northeast elevation provides access to a separate interior space at the rear. A covered storage area wraps around the southwest and southeast sides of the structure (refer to Figure 20). The concrete slab of the covered storage area appears to be a later addition to the structure in comparison to the concrete slab and the brick-pier foundation under the northeast part of the barn.

Foundation

The barn has a concrete slab foundation that is visible above grade on the northeast and northwest elevations and a brick pier foundation supporting the raised wood floor of a smaller storage room to the east. The concrete slab of the covered storage area appears to be a later addition to the structure, as evidenced by a cold joint where the slab of the covered storage area abuts the concrete foundation under the barn and the condition of the slab placed around the posts at the perimeter of the covered storage area where the wood posts that support the roof simply extended to grade (Figure 22). This area under roof likely had an uneven dirt floor until the concrete slab was poured.

Further investigation of the barn’s masonry and concrete foundations, including their mortar and cement composition, aggregate type and size, reinforcing materials and finishing techniques, may serve to date the construction of the barn in relation to other masonry and concrete foundations on the property and to techniques and materials known to be available in Natchez.



FIGURE 22. The concrete slab at the wraparound open storage area.



FIGURE 23. Edge of concrete ramp at the covered storage area, abutting an original brick pier at the rear corner of the northeast elevation.

The rear portion of the structure under the gable roof is supported by 8-inch-square brick piers that are only visible at the northeast elevation (**Error! Reference source not found.**). These piers support by 4 inch by 6 inch perimeter beams that span between piers and carry 2x6 floor joists. The flooring on top of the joists is composed of 1 inch by 8 inch boards and a top layer of 1/2 inch plywood (Figure 24). At this end of the structure, the top of the raised floor is approximately 14-3/8 inches above grade when measured at the exterior doors. The other two-thirds of the space under the gable roof have a concrete slab-on-grade that is 12 inches lower than the raised wood floor. This

interior slab is 1-1/2 inches above grade at the pair of doors that face the road. It was not possible to determine the thickness of this slab-on-grade.



FIGURE 24. Brick pier at the northeast corner of the barn. Floor framing and exposed edges of the flooring are also visible.

The top surface of the concrete slab of the covered storage area appears to be about even with the bottom edge of the 6 inch by 4 inch perimeter beams that span between brick piers. A short, steeply sloped concrete ramp makes the 15-inch transition from grade to the top of the slab at the east corner (Figure 25). From this point, the height of the slab above grade varies from 15 inches to 12 inches at the south corner and to barely above grade at the west corner next to the road.



FIGURE 25. The edge of the concrete slab slopes to grade at the covered storage area at the northeast corner of the barn.

Walls

Wall framing consists of 4x6 bottom plates, top plates, and headers. Between 4x4 corner posts,

there are 2x4 studs at approximately 4 feet on center. At mid-height between the bottom and top plates there are horizontal 2x4s that complete the structural frame.

The exterior walls are sheathed with wood board and batten siding that has acquired a weathered patina (Figure 26 and Figure 27). The vertical siding boards were field-measured and found to have face dimensions of 10-1/2 inches to 14 inches. The dimensions of the battens are 2-3/4 inches wide and 5/8 inches thick and 3-5/8 inches wide and 1/8 inches thick. Siding boards are fastened directly to these structural framing members. There is no sheathing or moisture barrier between the siding and framing, leaving the back faces of the vertical siding boards exposed on the interior.

In addition to the weathered patina of the bare wood, the siding exhibits remnants of blue, gray, brown, and white finishes. A historic paint analysis, completed as part of this Historic Structure Report and included as Appendix D, concludes that the building may have been constructed of repurposed wooden boards then finished with a thin whitewash (possibly limewash with a carbohydrate and/or protein additive) to unify the appearance of the exterior walls. Biological growth may have targeted (i.e., eaten) the thin layer of whitewash and/or weathering may have washed away the very thin paint layer, leaving the mismatched boards visible (refer to Figure 27).



FIGURE 26. Wood board and batten siding on the northwest elevation.



FIGURE 27. Weathered siding with remains of gray and white finishes.

Covered Storage Area

A covered storage area wraps around the southwest and southeast sides of the small gable structure (Figure 28). The storage area extends from the building approximately 11 feet 6 inches to the southwest and approximately 12 feet 9 inches to the southeast. On the southwest elevation, the shed roof over this storage area engages the main roof along the eave and returns along the barn's gable-end wall with a hipped ridge.

The shed roof of the covered storage area is supported by 2-inch by 6-inch roof joists which bear on a continuous 2x4 ledger attached to the barn walls (Figure 29). At the eave, the roof joists are notched to bear on a continuous 4x4 wood beam supported by a series of 4x4 posts that are roughly 9 feet on center on the southwest elevation (Figure 30). Post spacing on the southeast elevation varies from 9 feet 10 inches to 10 feet, and then to 11 feet 7 inches. The posts have two 4x4 diagonal struts, one on each side, which transfer the roof load on the 4x4 beam to the post and laterally brace the connection (refer to Figure 30).



FIGURE 28. The covered storage area along the southwest elevation of the barn.



FIGURE 29. Roof joists above opens storage area bear on continuous ledger along the wall of the barn.



FIGURE 30. Frame supported wood columns.

Roof

The gable roof of the Melrose Servants' Barn has a slope of approximately 8:12 that transitions to 4:12 over the open storage area (Figure 31). Exposed 2x4 roof joists extend 25 inches past the wall as an eave overhang. Every joist end is braced by a diagonal 2x4 strut that ties back to the wall (Figure 32). At the gable ends of the barn, the rake overhang is roughly 12-1/2 inches. The eaves of the open storage area are low, at about 5 feet above the concrete slab, and the overhang is approximately 18 to 22 inches.



FIGURE 31. The gable and shed portion of the roof.



FIGURE 32. Open eave overhang at gable roof.

The roofs are sheathed with a 24-inch-wide, 5-V galvanized roofing panels which are fastened with lead-headed nails at the exterior overlapping rib (Figure 33). Although the 5-V profile has been commonly available since the early part of the twentieth century, the rolled crimps observed on the building are characteristic of earlier panels.

Currently available panels are typically formed with a tight V-crimp that does not accommodate a fastener at the top of the rib. The difference was observed at a patch location where a 4-foot-wide section of contemporary 5-V panel has been installed over the older material using new wood nailers and screws in the flat face of the panel (Figure 34Error! Reference source not found.Error! Reference source not found.). Although the age of the typical panel could not be confirmed in the field, the rolled crimps suggest that the primary panels may be original to the structure. Galvanized metal roofing panels are commonly available with a 32 or 29 gauge thickness; however, early panels were available in 22 gauge. The gauge of the panels was not confirmed in the field; however, the patch material appears to be of a thinner gauge than the original panel. The original roofing panels exhibit a dark red finish coat applied over a white primer (refer to Figure 33).



FIGURE 33. Rolled crimp at 5V panel. Note lead-headed nail at top of rib.



FIGURE 34. Contemporary 5-V roof panels used to repair the northeast side of the gable roof.



FIGURE 36. Metal roofing on the gable roof of the barn and the covered storage area. Note the missing metal hip ridge cap in the foreground.



FIGURE 35. New wood nailing strips where roof was repaired.

Typical of vernacular agricultural structures like the Servants' Barn, the metal roofing fastened to 1x4 wood nailing strips that are equally spaced across the roof joists. The only roofing accessory is a preformed, galvanized metal ridge roll cap on the gable roof and on the hip ridge above the open storage area (refer to Figure 36). Also, on the northeast side of the gable roof, there is an apparent repair.

The roof structure is composed of timber framing. The wood roof joists are 2-1/2 inches thick at 24 inches on center.

The roof structure of the attached shed roof at the porch is 1x8 timber rafters with cross bracing at 16 inches on center. The height of the shed portion of the roof is approximately 9 feet 3-1/2 inches.

Doors

There are two sets of carriage doors. One set of carriage doors is centered on the northwest elevation facing the road and is at the main entrance into the barn (Figure 37). The second set of carriage doors is located on the east end of the northeast elevation, serving the secondary storage area. Each individual door is constructed of conventional Z-framing on the interior side and vertical boards and battens on the exterior side, similar to the surrounding walls (Figure 38). The doors swing open on two strap hinges that are screwed to the jambs and the exterior face of each door. Each set of wood doors has a hasp, so they can be secured with a padlock.



FIGURE 37. Carriage door centered on the northwest elevation of the Melrose Servants' Barn.



FIGURE 38. The interior side of a carriage door.



FIGURE 39. The main carriage doors. Note strap hinges and hasp with a padlock.

Exterior Condition Assessment

The following notable conditions were observed at the exterior of Melrose Servants' Barn.

- On the southwest side of the covered storage area, the concrete slab is undermined (Figure 40).
- Spalled brick and deteriorated mortar joints were observed in the masonry piers that support the enclosed rear section of the barn (Figure 41 and Figure 42).
- As a result of inadequate consolidation, there are voids and exposed coarse aggregate in the edge of the concrete slab of the covered storage area (Figure 43).



FIGURE 40. Concrete is undermined in the southwest corner.



FIGURE 41. A visible portion of a masonry pier on the northeast elevation.



FIGURE 42. Spalled brick and deteriorated mortar at a pier and the edge of the adjacent concrete slab.



FIGURE 43. Voids and exposed aggregate at the concrete slab edge.

- Organic growth, including mildew, was observed at the base of wood posts at the perimeter of the covered storage area (Figure 44).

- There is heavy decay and organic growth at the base of the wood siding, because it is in direct contact with the ground (Figure 45).
- In addition to decay, there is staining and organic growth at the base of the walls under the covered storage area where water collects and cannot drain away. This condition occurs on the southwest side of the structure where the bottom of the wall is visible, but it is also likely to occur on the southeast-facing wall (Figure 46).



FIGURE 44. Organic growth, including mildew, at the base of exterior walls.



FIGURE 45. Heavy decay at the base of the walls



FIGURE 46. Staining and rot along the base of the board and batten walls.

- Moist conditions plus wood in contact with the ground and concrete and masonry foundations are attractive to termites and other destructive insects.
- Protective finishes on the exterior wood walls have almost entirely deteriorated (Figure 47). This leaves the wood vulnerable to moisture, organic growth, deterioration, and decay (Figure 48 and Figure 49).
- There is decay at the base of the 4x4 wood posts that support the roof of the covered storage area. These posts sit on the ground and not on the concrete slab, and are in contact with moist soil and wet leaves from the surrounding vegetation (Figure 50 and Figure 51).



FIGURE 47. Deteriorated paint or whitewash finish on the exterior walls.



FIGURE 48. Organic growth and deterioration at the base of the barn walls.



FIGURE 49. Staining, organic growth, and deterioration on the main carriage door at the northwest elevation.



FIGURE 50. Decay at the base of the post at the south corner of the covered storage area.



FIGURE 51. Decay at the base of the post at the east corner of the covered storage area.

- The wood post at the south corner of the covered storage area has also separated from the edge of the slab probably because the concrete slab was poured around the post and there is no mechanical connection of the post to the slab (Figure 52 and Figure 53). Eventually, the end of the post will rot, and the post and the beams it supports will drop down accordingly.
- Corrosion and rust are prevalent on the galvanized steel roofing that has been in place for a long period of time (Figure 54).



FIGURE 52. Deterioration of the wood post and the lack of a connection to the concrete foundation resulted in a gap between the post and the slab.



FIGURE 53. A concrete slab was poured around the wood posts leaving the posts bearing directly on the ground.



FIGURE 54. Corrosion on the roof panels and open joint along the hip ridge.

- Some of the metal roofing panels have signs of a red paint coating that has deteriorated and delaminated from the galvanized steel substrate. Exposure to ultraviolet (UV) radiation and environmental pollutants may be the cause (Figure 55).
- At the south corner of the open storage area, the hip ridge cap is missing, and the roof panels are corroding (refer to Figure 36). The open seam along the hip ridge channels rain water to the wood framing and concrete slab below. Consequently, the wood framing has deteriorated and failed leaving a hole in the roof (Figure 56).



FIGURE 55. Red paint coating on some of the metal roofing panels.



FIGURE 57. Deformation of wood framing members along the southeast elevation of the building.



FIGURE 56. Failure of the wood roof framing and metal roof panel. Note sagging perimeter beam to the left of the roof opening.



FIGURE 58. A fractured joist was noted at the hip ridge, at the south corner of the shed roof.

- Decaying wood structural members at the east and west ends of the covered storage area have resulted in sagging beams and joist failures that also contribute to deformation of the metal roof panels, particularly along the eave (Figure 57 and Figure 58).
- Generally, deterioration of wood structural components was observed throughout the structure, especially where the wood has the most exposure to exterior environmental conditions (Figure 59 and Figure 60).



FIGURE 59. Decay at the ends of the gable roof rafters.



FIGURE 60. Decay in the ends of support beams, roof joists and nailing strips.

- Numerous rotted siding boards and battens were observed. Most of the decay occurs at the base of the siding where it is close to or in contact with the ground (Figure 61 and Figure 62). A number of gaps and openings in the siding in and the doors, because of rotten wood and missing battens, contributes infestation by rodents, birds and insects.
- The strap hinges and hasps on the carriage doors have corroded, and the screws fastening them to deteriorating wood will eventually fail (Figure 63).
- Some battens are missing on the carriage doors (Figure 64).
- The grade of the wooded area to the south of the barn flattens and appears to hold water between the uphill culvert at the road (Figure 65) and the inlet of a concrete headwall further in the woods to the east (Figure 66).



FIGURE 61. Rotten boards on the carriage door that faces the road. Also note corroding strap hinge.



FIGURE 62. Rotten siding boards in contact with the ground.



FIGURE 63. Strap hinges have corroded.



FIGURE 64. View of missing battens on the carriage door.



FIGURE 65. Concrete headwalls at culvert.



FIGURE 66. Inlet at concrete headwall in wooded area behind barn.

Interior Description

The nearly square floor plan of the barn is divided into two spaces. The larger, main space has a concrete floor and an area of approximately 304 square feet, which is two-thirds of the entire 480 square feet of interior space. A smaller, secondary space at the rear of the barn has a raised wood floor and an area of 176 square feet. The spaces are accessed from outside by carriage doors. An 8-foot-wide pair of equal-width doors centered on the northwest elevation opens out toward the road from the main space. On the northeast elevation, a 7-foot-9-inch-wide pair of unequal width doors opens outward from the smaller space. The spaces are connected on the interior by a single 3-foot-4-inch-wide door (refer to drawings in Appendix A).

The utilitarian character of this vernacular agricultural building is clearly visible inside. The larger volume of the main space expands upward, over the ceiling of the secondary space, to the pitched roof joists and the underside of the galvanized metal roofing (Figure 67). Horizontal collar beams connect each pair of joists approximately 3 feet below the ridge of the gable roof. Structural elements are visible, including the wood wall framing, roof joist, nailing strips, and the backside of the wall cladding.

A wall clad with wood boards and battens separates the larger space from the smaller secondary space. The ceiling of the secondary space supports an open storage loft (Refer to Figure 67).



FIGURE 67. The interior toward the storage loft.

Brick piers, described earlier in this chapter, support the raised plywood floor of the smaller space. A step up of about 12 inches is required to access the space from either inside or outside the barn. Although this space is cluttered with discarded building materials, the structural components and wall cladding are discernible.

The ceiling (or floor of storage loft above) is framed with 2x8 joists that run across the 20-foot width of the barn. Five ceiling joists are supported at both ends by ledger strips nailed to the northeast and southwest walls of the barn and by a double 2x8 beam placed under the joists 12 feet from the southwest wall. Boards, 10 to 12 inches wide like the exterior siding, are fastened to the top of the ceiling joists as the floor of a storage loft. A few randomly spaced lengths of bead board were attached perpendicular to the ceiling joist. Visual evidence could not confirm the use of the boards as part of a continuous finished ceiling; rather, they may have been employed as support for items stored within the joist space. Two 1x6 boards fastened to the bead board along the west side of the room appear to have served as a storage shelf (Figure 68).



FIGURE 68. Interior view of secondary space at the rear of the barn looking toward the southwest wall. Note the raised floor covered with plywood and the widely spaced bead board at the underside of the joists framing the loft.

On the northeast exterior wall of the secondary space, a 24-inch-wide by 20-inch-high opening in the siding is covered on the interior with an expanded metal screen. An adjacent electrical receptacle suggests that the opening may have supported a through-wall, window-type, air-conditioning unit.

The main space in the barn is currently used to store salvaged architectural items including mantelpieces, a bathtub, light posts, tools, and miscellaneous construction materials. Like the smaller space of the barn, the wood framing of the walls and the gable roof are exposed along with the exterior siding boards. Opposite the main carriage door, a wall separates the two spaces. A wide door in the dividing wall provides access to the smaller space beyond (Figure 69 and Figure 70).



FIGURE 69. Interior view of the barn looking toward the door to the smaller space at the rear. Structural framing and wall cladding are exposed.



FIGURE 70. Interior view of the barn looking up toward the storage loft. Wood roof joists, collar beams, and nailing strips are clearly visible. Note the siding boards on the rear wall that are coated with whitewash or paint.

The concrete slab is barely discernable because of the clutter and a layer of moist dirt (Figure 71). Dust, dirt, spider webs, and rodent droppings are prevalent in both spaces. The carriage doors do not close properly, leaving wide gaps along their perimeter and where they meet. Also refer to the above description of the doors.



FIGURE 71. Interior view. Note the floor covered with a layer of dirt and wet cardboard.

Electrical System and Lighting

Electrical service to the building was observed to be from underground conduit rising from below the plywood floor of the secondary storage space to an uncovered electrical subpanel at the interior of the southeast wall. Adjacent to the panel is an abandoned conduit with exposed primary conductors (Figure 72). The grounding of the panel could not be confirmed. No disconnect for the incoming service was observed before the subpanel. The source and functionality of the underground service feeding the barn could not be confirmed during the site visit.



FIGURE 72. Electrical panel at southeast wall.

Leaving the panel are circuits of metal clad (MC) cabling that continue to electrical devices such as receptacles and light fixtures. Several conductors were observed to be disconnected from the busbar at the panel. The metal clad cabling appears to have been installed concurrent with the panel and fixtures such as the fluorescent light at the ceiling of the barn (Figure 73) and receptacles in metallic junction boxes throughout the structure (Figure 74). An opening in the southeast wall with an adjacent receptacle may have served a window-type air conditioning unit (Figure 75). No exterior light fixtures were found.



FIGURE 73. Fluorescent strip light fixtures mounted on the collar beam. Also note the smoke and fire sensor on the beam to the left of the light fixture.



FIGURE 74. A disconnected switch (left) and receptacle with metal clad (MC) electrical cable (right) mounted to the wall.

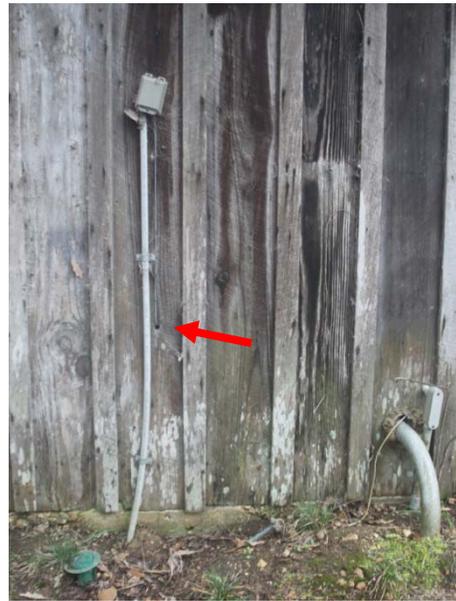


FIGURE 76. Underground communications cabling entering the building at the northeast wall through a PVC elbow an LB fitting (right) and PVC conduit rising to a plastic junction box on left. A single cable leaves the plastic box and enters the building at the location indicated.



FIGURE 75. Opening at southeast wall with expanded metal protection at interior.

Communications, Fire Protection, and Security

Low-voltage communications cabling enters the building from below grade at the northeast elevation and continues to an indoor building entrance terminal mounted on the interior of the wall (Figure 76 and Figure 77Error! Reference source not found.). The panel is of a type suitable for runs between buildings in a campus environment. A single smoke detector, mounted to one of the collar beams inside the barn was observed to be connected to the panel (refer to Figure 73)Error! Reference source not found..



FIGURE 77. Communications panel at interior of northeast wall.

Plumbing

Only one plumbing fixture was found. It is a white, high back, utility sink mounted in a wood cabinet that is in the smaller, secondary space just inside the pair of doors. A polyvinyl chloride (PVC) drain line goes through the raised floor into the crawl space underneath. The condition of the drain line

and its connection to a sanitary sewer system could not be observed below the plywood floor. Removal of the plywood to expose the drain line would be destructive and outside the scope of this investigation. (See recommendations for further research and investigation in the Treatment chapter of this report.)



FIGURE 78. A utility sink mounted in a wood cabinet in the small secondary space. Note the debris from rodent nest in the sink cabinet.

Interior Condition Assessment

Due to the age of the Servants' Barn and the use of salvaged materials for repairs and rehabilitation after the period of significance, it is difficult to discern the amount of original materials that remain. It is logical to assume that lumber and wood material with full nominal dimensions that do not correspond to contemporary nominal sizes predate 1924 when the first national size standard was adopted. Until then, a full 2 inches was the customary thickness for studs, joists, and rafters; boards, like the barn's siding, were typically 1-inch thick. Lumber and board widths were also full size, for example the full 2 inches by 4 inches. These construction materials were milled locally from green lumber (not dried), so broader standardization was not a problem. Random measurements of extant materials taken during the on-site work for this report indicate that there is material with full nominal dimensions present, and

it is likely to be original or date from the period of significance. In contrast, on-site measurements and observations also showed that there is contemporary (post-1964), standard nominal-size wood throughout the structure that is obviously much newer and not from the period of significance.

Original or historically significant materials that do remain should be preserved. Observations suggest that repairs and past rehabilitation efforts attempted to incorporate salvaged materials that matched or were close to matching original ones. The following items represent conditions that need periodic monitoring and cyclic maintenance or conditions of localized distress that warrant prompt corrective action.

- The Servants' Barn is currently being used for storage of building materials, mantelpieces, agricultural equipment and implements, a clawfoot bathtub, scaffolding, lampposts, and other miscellaneous items. Currently, it is nearly full of haphazardly stored materials, hindering observation of existing interior conditions (refer to Figure 69Error! Reference source not found.). Stored materials include some items that may be valuable for future exhibits or rehabilitation projects at Melrose; however, they did not appear to be catalogued or organized for that purpose.
- The barn is cluttered and dirty, and it has copious amounts of spider webs, insect and rodent droppings, and the remains of nests (Figure 79 and refer to Figure 78). It will require thorough cleaning before a final determination of which materials are historically significant, and to confirm which are to be retained in rehabilitation of the structure.



FIGURE 79. Remains of a nest in the corner and some of the spider webs in the upper right.



FIGURE 80. Framing and vertical boards on interior wall. Door opening between the two spaces is at the right.

- There are almost no interior finishes, except for the 1-inch-thick vertical boards on one side of the wall separating the main space from the smaller secondary space (Figure 80). The other interior materials are the wood framing members, roof joists, and nailing strips which appear to be in fair condition, generally (refer to Figure 67 through Figure 71).
- Framing members such as roof joist and nailing strips that are partially exposed on the exterior have deteriorated even though the shielded, interior portions appear sound.
- Sill plates that sit on the concrete slab have water stains and are subject to decay because of water that enters the barn and puddles on the slab (Figure 81) and along the base of the walls at the covered storage area (Figure 82). It was not raining at the time of the site visit for this report, so it was not clear if stormwater was entering under the carriage doors or if there are roof leaks or perhaps both. Nevertheless, historic and non-historic materials are and will continue to be adversely affected by moisture.



FIGURE 81. Dark area of moisture under stored materials on the interior concrete slab.



FIGURE 82. Dark area of wet dirt on the slab along the board-and-batten wall of the covered storage area.

- The electrical and lighting system and the fire and smoke detection system appear to be incomplete and not in compliance with current codes. Electrical devices, light fixtures, and the smoke and fire sensors need updating.
- The electrical subpanel located in the secondary storage space was observed to be uncovered. Exposed primary conductors were unprotected at the termination of an abandoned conduit adjacent to the panel.
- Plumbing was limited to one utility sink that was not in use. Connections to potable water and to a public sewerage system or a septic system are unknown. Additional research and investigation into the water and sewer systems are discussed in the Treatment chapter.
- Two fire extinguisher brackets are mounted to the interior of the jamb of the large doors in the main storage area. No fire extinguishers were present.

Finishes Analysis – Summary of Findings

As part of this HSR scope of services, Longevity Art Preservation (an affiliated consultant to WJE) carried out a historic finishes analysis for the Melrose Servants' Barn. (Refer to Appendix D for the complete finishes analysis, which is summarized here.) Five samples were taken from representative locations on the exterior of the building to help identify any potential finishes that remain on the building. Sample locations included two on the southwest elevation at the exterior wall along the covered storage area, one from the southeast elevation, one on the northeast elevation at the door to the secondary space at the rear of the building, and one on the northwest elevation adjacent to the main door into the building. The samples were analyzed by Longevity to identify the paint layer stratigraphy. The analysis found very little continuity across the samples, other than the multiple layers of paint applied to the wood surface on each sample. No distinct layer followed across all samples.

In four of the five samples, at least one distinct white layer of paint was included in the stratigraphy. The other sample included what could possibly be a discontinuous layer of white paint. Biological growth was present on all samples, isolated to the finish layers and on the surface. The biological growth does not appear to have harmed the wood substrate.

Based on the findings of the analysis, it is possible the building was constructed of repurposed wooden boards that were subsequently finished with a thin whitewash. Biological growth likely targeted the whitewash, while weathering may have also led to the current mismatched appearance of the boards.

Significance and Integrity

National Register of Historic Places and National Historic Landmarks

The National Register of Historic Places is the official list of the nation's historic places worthy of preservation. Authorized by the National Historic Preservation Act of 1966, the National Register of Historic Places is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect America's historic and archeological resources.⁶⁰ National Historic Landmarks are historic properties that are nationally significant and illustrate the heritage of the United States. Today, nearly 2,600 properties are designated National Historic Landmarks.⁶¹

The significance evaluation identifies the important historical associations of the property, and comments on its architectural, archeological, and social value as they relate to National Historic Landmark criteria for evaluation. A property's significance is tied to a discrete period of time in which its important contributions were made and to relevant national, state, and local historic contexts.

Significance Criteria

In order for a property to be eligible for designation as a National Historic Landmark, it must possess significance under one of six criteria. The National Historic Landmarks Criteria state:

The quality of national significance is ascribed to districts, sites, buildings, structures, and objects that possess exceptional value or quality in illustrating or interpreting the heritage of the United States in history, architecture, archeology, engineering, and culture and that possess a high degree of integrity of location, design, setting, materials, workmanship, feeling, and association, and:

1. That are associated with events that have made a significant contribution to, and are identified with, or that outstandingly represent, the broad national patterns of United States history and from which an understanding and appreciation of those patterns may be gained; or
2. That are associated importantly with the lives of persons nationally significant in the history of the United States; or
3. That represent some great idea or ideal of the American people; or
4. That embody the distinguishing characteristics or an architectural type specimen exceptionally valuable for the study of a period, style, or method of construction, or that represent a significant, distinctive, and exceptional entity whose components may lack individual distinction; or
5. That are composed of integral parts of the environment not sufficiently significant by reason of historical association or artistic

60. National Park Service, "National Register of Historic Places," <https://www.nps.gov/subjects/nationalregister/index.htm>, accessed May 2019.

61. National Park Service, "National Historic Landmarks," <https://www.nps.gov/subjects/nationalhistoriclandmarks/index.htm>, accessed October 2019.

merit to warrant individual recognition but collectively compose an entity or exceptional historical or artistic significance, or outstandingly commemorate or illustrate a way of life or culture; or

6. That have yielded or may be likely to yield information of major scientific importance by revealing new cultures, or by shedding light upon periods of occupation of large areas of the United States. Such sites are those which have yielded, or which may reasonably be expected to yield, data affecting theories, concepts, and ideas to a major degree.

Ordinarily, cemeteries, birthplaces, graves of historical figures, properties owned by religious institutions or used for religious purposes, structures have been moved from their original locations, reconstructed historic buildings and properties that have achieved significance within the past fifty years are not eligible for designation. If such properties fall within the following categories they may, nevertheless, be found to qualify:

1. A religious property deriving its primary national significance from architectural or artistic distinction or historical importance; or
2. A building removed from its original location but which is nationally significant primarily for its architectural merit, or for association with persons or events of transcendent importance in the nation's history and the association consequential; or
3. A site of a building or structure no longer standing but the person or event associated with it is of transcendent importance in the nation's history and the association consequential; or
4. A birthplace, grave or burial if it is of a historical figure of transcendent national significance and no other appropriate site, building, or structure directly associated with the productive life of that person exists; or

5. A cemetery that derives its primary national significance from graves of persons of transcendent importance, or from an exceptionally distinctive design or an exceptionally significant event; or
6. A reconstructed building or ensemble of buildings of extraordinary national significance when accurately executed in a suitable environment and presented in a dignified manner as part of a restoration master plan, and when no other buildings or structures with the same association have survived; or
7. A property primarily commemorative in intent if design, age, tradition, or symbolic value has invested it with its own national historical significance; or
8. A property achieving national significance within the past 50 years if it is of extraordinary national importance.⁶²

National Historic Landmark Status of the Melrose Servants' Barn

Melrose was designated a National Historic Landmark, and thus automatically listed in the National Register of Historic Places, on May 30, 1974.⁶³ The 1974 documentation focuses on Melrose, the main house, as an individual building, and briefly notes the kitchen and other outbuildings (but does not specifically mention the barn). The documentation states:

Melrose is most remarkable for the quality of the preservation and maintenance of the house, outbuildings and grounds. To the rear of the house is a symmetrical service yard; a two-story

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62. Code of Federal Regulations. Title 36, Part 65, "National historic Landmarks Program."
 63. Goeldner. The National Historic Landmark reference number is 74002253. The kitchen and a collection of ancillary buildings are briefly mentioned in the documentation, but the focus of the nomination is on the main house. (At the time the documentation was prepared, the National Historic Landmark program used the National Register of Historic Places form.)

kitchen, latticed octagonal cistern house and square brick privy on the left are balanced by a two-story dairy and identical cistern house and privy on the right. Slave cabins, a barn, carriage house, and poultry house are more distant.⁶⁴

The documentation further states, “The lawns and outbuildings complete a complex designed and executed as a whole and never compromised by unsympathetic accretions or encroachments.”⁶⁵

The area of significance is cited in the National Historic Landmark documentation as Architecture.⁶⁶

Draft additional documentation developed in 1996 for Melrose addresses the entire estate. The estate is noted in the documentation as significant under Criteria A and C, as further discussed below. (Although the property is a National Historic Landmark, the National Register form was used for the additional documentation, thus National Register criteria are cited therein.) The additional documentation notes that the Melrose estate is eligible for National Historic Landmark status for its architectural significance and for its associations with important events in the history of the United States during the period 1841 to 1865. The documentation notes the area of significance for the estate as Historic Preservation, associated with a later period of significance as discussed below.⁶⁷

In assessing the significance of the estate architecturally, the 1996 documentation notes that “Melrose is one of the best preserved and most significant historic sites in the entire South, unusually complete and well detailed, with a full complement of outbuildings, a landscaped park, and a formal garden.”⁶⁸ The documentation further notes that historically:

... Melrose is significant under the theme “American Ways of Life: Occupational and Economic Classes,” as outlined in *History and Prehistory in the National Park System and National Historic Landmarks Program* (1987), because it represents a significant economic, social, occupational, and regional group. The original owners of Melrose, John T. and Mary Louisa Turner McMurrin, were members of the South's planter aristocracy. Melrose was not a working plantation but was the suburban residence of the McMurrin family and exemplifies the lifestyle of the Southern planter aristocracy from 1841, the year the McMurrins purchased the property, to 1865, the end of the Civil War.⁶⁹

The Cultural Landscape Inventory (2013) notes the estate and the buildings on the estate are complete, and many of the structures are intact and retain original furnishings. The CLI comments that the site is architecturally significant as a well preserved example of a suburban villa in Natchez. In addition, the CLI notes that the landscape is significant as it is an early example of “American Picturesque Landscape Design.”⁷⁰

The 1996 additional documentation further notes that Melrose is eligible for under Criterion A for statewide significance in the area of historic preservation. This aspect of its significance is associated with the stewardship and rehabilitation undertaken by the Davis-Kelly family during their ownership of the property, and the development of the historic preservation movement in Natchez.⁷¹

The 1996 additional documentation describes the structure as a “small barn / storage house,” identifies a date of construction of circa 1845—although further research including that conducted for this study indicate that the structure is of later construction—and assesses the structure

64. Goeldner.

65. Ibid.

66. Ibid.

67. Miller. Note that the 1996 documentation is unsigned and was not formally accepted by the Keeper of the National Register.

68. Ibid., Section 8-1.

69. Ibid.

70. National Park Service and The Jaeger Company, 35.

71. Miller, Section 8-12.

as contributing, as further discussed below.⁷² The documentation describes the structure as follows:

East of the main house and south of the slave cabins is a small board-and-batten, gable-front barn / storage house with cement foundation. The main (north) facade and the east elevation have double-leaf, board-and-batten carriage doors. The south and west elevations feature shed-roofed additions supported by plain posts with exposed rafter tails in the eaves. The building has undergone many changes but appears to date to the ante-bellum period. It appears on the 1908 map of the property.⁷³

The Servants' Barn was constructed on the Melrose estate property sometime prior to 1908, approximately fifty years after the construction of the main house. As a supporting structure for the estate, it is associated with development of the property and its preservation. The barn is a vernacular structure, constructed from materials salvaged from other wood-framed buildings located on the estate or nearby. Although not a designed structure in the refined architectural style represented by the main house, the barn is a part of the overall plan and evolution of the property. The 1996 additional documentation identifies the barn as a contributing resource; however, this documentation was not signed or accepted by the Keeper of the National Register. Thus, the barn is managed by the park as a contributing resource to the site.

Period of Significance

Based on the findings of this study, the period of significance for the Melrose Servants' Barn is circa 1908, the earliest known date by which the barn had been constructed. (The NPS List of Classified Structures [LCS] includes a construction date of circa 1890; however, a source for this date is not cited in the LCS, and documentation for this date has not been identified in research conducted for this study.)

72. The barn first appears on a map of the Kelly property dated 1908, and is also discussed in Kelly family letters. Refer to the history chapter of this report for further information.

73. Miller.

The 1974 National Historic Landmark documentation cited the period of significance of Melrose (the main house) as nineteenth century, with a specific date of 1845 also noted. The draft additional documentation prepared in 1996 for Melrose estate cites a period of significance of 1866–1946. The documentation narrative notes that Melrose is eligible for National Historic Landmark status for its architectural significance and associations with important events in the history of the United States during the period circa 1841–1865. This period includes the years in which Melrose estate was established and developed, as well as the years of transformation of the Southern plantation economy and society.⁷⁴ The documentation also notes that Melrose is eligible for the National Register of Historic Places at a statewide level in the area of historic preservation for the period 1866–1946. This period of significance coincides with the American Historic Preservation Movement.⁷⁵ The period of significance of circa 1908 for the barn is associated with the second period of significance noted in the additional documentation.

The 1996 Cultural Landscape Report identifies a primary period of significance for the Melrose landscape as the nineteenth century, noting that the most important documentation available for the landscape consists of records and photographs from the 1903–1908 period. The Cultural Landscape Report also cites a secondary period of significance 1910–1975, when the landscape was rehabilitated and managed by the Kelly family, especially the earlier decades of their occupancy and preservation efforts.

Character-Defining Features

The historic nature of significant buildings and structures is defined by their character, which is embodied in their identifying physical features. Character-defining features can include the shape of a building; its materials, craftsmanship, interior

74. Goeldner, 2.

75. *Ibid.*, 27.

spaces, and features; and the different components of its surroundings.⁷⁶

The following list identifies existing character-defining features found on the exterior and interior of the Melrose Servants' Barn:

- Overall configuration
- Gable roof and shed roof
- Covered porch on north and west sides of the structure
- Wood board and batten siding
- Wooden floors and brick piers
- Concrete foundation
- Two sets of carriage doors, one on the northwest elevation and one on the northeast elevation
- 29 gauge V-crimp metal panel roofing
- Wooden posts supporting the covered porch
- Exposed wood elements on the interior

Assessment of Integrity

Assessment of integrity is based on an evaluation of the existence and condition of the physical features that date to a property's period of significance, taking into consideration the degree to which the individual qualities of integrity are present. The seven aspects of integrity as defined in the National Register Criteria for Evaluation are location, design, setting, materials, workmanship, feeling, and association. As noted in the *National Register Bulletin: How to Apply the National Register Criteria for Evaluation*:

Location is the place where the historic property was constructed or the place where the historic event occurred. . . . Design is the combination of elements that create the form,

plan, space, structure, and style of a property. . . . Setting is the physical environment of a historic property. . . . Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property. . . . Workmanship is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory. . . . Feeling is a property's expression of the aesthetic or historic sense of a particular period of time. . . . Association is the direct link between an important historic event or person and a historic property.⁷⁷

The property must retain the essential physical features that enable it to convey its historical significance. The essential physical features are those features that define both why a property is significant (National Register criteria) and when it was significant (period of significance). The National Register Bulletin, *How to Apply the National Register Criteria for Evaluation*, defines integrity as "the ability of a property to convey its significance."⁷⁸

The historic integrity of the Melrose Servants' Barn has been assessed as follows:

Integrity of Location. The barn maintains its integrity of location, as it remains in the place of its original construction in the late nineteenth century.

Integrity of Design. The structure maintains integrity of design. Character-defining elements of the barn's design, such as the porch, posts, and gable and shed roof configuration, remain as originally designed and constructed.

Integrity of Setting. The barn maintains integrity of setting as a part of the Melrose estate. No significant change has been made to the property that would affect the integrity of setting for this structure, and the site retains its historic character.

76. Lee H. Nelson, FAIA, *Preservation Brief 17: Architectural Character: Identifying the Visual Aspects of Historic Buildings as an Aid to Preserving Their Character* (Washington, DC: National Park Service, Technical Preservation Services, 1988).

77. *National Register Bulletin: How to Apply the National Register Criteria for Evaluation*, 44–45.

78. *Ibid.*

Integrity of Materials and Workmanship.

The barn retains integrity of materials and workmanship. Integrity is slightly diminished by deterioration of the structure.

Integrity of Feeling. The barn retains integrity of feeling. The structure conveys its historic character and contributes to the sense of place of the plantation.

Integrity of Association. The barn maintains integrity of association. It retains its historical and physical relationship with Melrose estate.

Treatment and Use

Requirements for Treatment and Use

The National Register nomination additional documentation for Melrose, Natchez National Historical Park (1996), identifies the maintenance shed (now referred to as the Melrose Servants' Barn) as a contributing resource.⁷⁹ Although the exact date of construction of the barn was not well understood at the time the original National Register nomination and National Historic Landmark documentation were prepared, the structure appears on the 1908 property map.⁸⁰ The barn is considered significant as an example of late nineteenth-century vernacular agricultural structures and survives with sufficient integrity to convey its historic associations.

Therefore, treatment and use of the Melrose Servants' Barn should be considered within the context of the legal mandates and policy directives established by National Park Service Cultural Resources Management Guideline (Director's Order 28) for the protection of cultural resources. The Servants' Barn should be understood for the association of its location within the boundaries of the antebellum Melrose estate, and the barn itself interpreted as an example of a late nineteenth-century rural agricultural shed of a common vernacular style, and preserved as part of the story of the Melrose complex of nineteenth-century buildings.

Laws, Regulations, and Functional Requirements

Key laws, regulations, and functional requirements that apply to the recommended work include the following:

- National Park Service Cultural Resources Management Guideline (Director's Order 28), which requires planning for the protection of cultural resources on park property.
- Section 106 of the National Historic Preservation Act, which mandates that federal agencies, including the National Park Service, take into account the effects of their actions on properties listed or eligible for listing in the National Register of Historic Places and give the Advisory Council on Historic Preservation a reasonable opportunity to comment.

Treatment of the building and site are also to be guided by the following:

- *Secretary of Interior's Standards for the Treatment of Historic Properties*
- Architectural Barriers Act Accessibility Standards (ABAAS)
- International Building Code (IBC), 2018
- International Existing Building Code (IEBC), 2018
- International Plumbing Code (IPC)
- National Electrical Safety Code (NESC)

79. Goeldner; Miller.

80. Ibid.

Treatment and Use

- National Fire Protection Association (NFPA) 101: Life Safety Code (LSC), 2015 and NFPA 1 Uniform Fire Code
- NPS Guiding Principles of Sustainable Design

The State of Mississippi has not adopted a statewide building code. Individual jurisdictions have the authority to adopt codes, and the City of Natchez administers the 2009 IBC, the 2011 NESC, and the 2009 International Fire Code. The National Park Service is self-regulating in terms of enacting and enforcing building code standards. Melrose and Natchez National Historical Park are therefore not legally subject to local or state building code requirements. When undertaking repairs to buildings structures, the National Park Service endeavors to have the work comply with model building code standards. At this time, the 2018 International Building Code is the model building code used by the National Park Service for design and construction.

With historic structures, attempts to achieve strict conformance with model building code standards that are intended for new buildings can lead to destruction of the historic fabric. Alternative compliance procedures, such as Chapter 12 of the IEBC relating to historic buildings, should be referenced in determining code compliance. For the Melrose Servants' Barn, a storage structure, alternatives to full prescriptive legislative and code compliance should be considered where such compliance would compromise the integrity of the structure.

The 2018 IEBC includes the following statements in Section 408, Historic Buildings:

408.1 Historic buildings. The provisions of this code that require improvements relative to a building's existing condition or, in the case of repairs, that require improvements relative to a building's pre-damage condition, shall not be mandatory for *historic buildings* unless specifically required by this section.

408.2 Life safety hazards. The provisions of this code shall apply to historic buildings judged by the building official to constitute a distinct life safety hazard.

408.3 Flood hazard areas. Within flood hazard areas established in accordance with Section 1612.3 of the International Building Code, or Section R322 of the International Residential Code, as applicable, where the work proposed constitutes substantial improvement, the building shall be brought into compliance with Section 1612 of the International Building Code, or Section R322 of the International Residential Code, as applicable:

Exception: *Historic buildings* need not be brought into compliance that are:

1. Listed or preliminarily determined to be eligible for listing in the National Register of Historic Places;
2. Determined by the Secretary of the US Department of Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined to qualify as an historic district; or
3. Designated as historic under a state or local historic preservation program that is approved by the Department of Interior.⁸¹

The IEBC exceptions noted above pertain to the Natchez National Historical Park as a property listed in the National Register.

In addition, the National Park Service provides guidance on sustainability in work on historic structures, in terms of energy efficiency, technology, and sustainable preservation in practice, as described in *The Secretary of the Interior's Standards for Rehabilitation & Illustrated*

81. International Code Council, Inc., *International Existing Building Code 2018* (Country Club Hills, Illinois: International Code Council, 2017).

*Guidelines on Sustainability for Rehabilitating Historic Buildings.*⁸²

Also, newly installed electrical systems and components, including any significant alterations to existing electrical systems, should comply with applicable provisions of the NFPA 70: National Electrical Code (NEC).

Alternatives for Treatment and Use

The National Park Service has developed definitions for the four major treatments that may be applied to historic structures: preservation, rehabilitation, restoration, and reconstruction. The four definitions are as follows:

Preservation is defined as the act or process of applying measures necessary to sustain the existing form, integrity, and materials of an historic property. Work, including preliminary measures to protect and stabilize the property, generally focuses upon the ongoing maintenance and repair of historic materials and features rather than extensive replacement and new construction. New exterior additions are not within the scope of this treatment; however, the limited and sensitive upgrading of mechanical, electrical, and plumbing systems and other code-required work to make properties functional is appropriate within a preservation project.

Rehabilitation is defined as the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values.

Restoration is defined as the act or process of accurately depicting the form, features, and

character of a property as it appeared at a particular period of time by means of the removal of features from other periods in its history and reconstruction of missing features from the restoration period. The limited and sensitive upgrading of mechanical, electrical, and plumbing systems and other code-required work to make properties functional is appropriate within a restoration project.

Reconstruction is defined as the act or process of depicting, by means of new construction, the form, features, and detailing of a non-surviving site, landscape, building, structure, or object for the purpose of replicating its appearance at a specific period of time and in its historic location.⁸³

Of the four treatment approaches, *rehabilitation*, which involves making possible a compatible use through repair, alterations, or additions, is most appropriate for the Melrose Servants' Barn. This treatment would allow for the repairs necessary to stabilize and preserve the building, while permitting minor renovation to meet the needs of contemporary park visitation, interpretation, and National Park Service management needs.

Preservation, which involves sustaining the building in its existing form, is to some extent in progress as a result of ongoing repair and cyclical maintenance implemented by the park, and it is considered overly limiting for a contributing but not individually significant building within the historic district. Further, similar preservation efforts would be incorporated in the overarching rehabilitation treatment approach. *Restoration*, which would return the building to its appearance during the period of significance, is also considered overly limiting for a contributing but not individually significant structure. In addition, sufficient documentation has not been discovered to support accurate restoration of the barn.

Retention of original materials and character-defining features during rehabilitation work is practical and appropriate, and it will also assist in the use of the Servants' Barn to interpret the Melrose estate to the public.

82. Anne E. Grimmer with Jo Ellen Hensley, Liz Petrella, and Audrey T. Tepper, *The Secretary of the Interior's Standards for Rehabilitation & Illustrated Guidelines on Sustainability for Rehabilitating Historic Buildings* (Washington, DC: US Department of the Interior, National Park Service, Technical Preservation Services, 2011).

83. Grimmer.

Ultimate Treatment and Use

Guidelines for Treatment

Guidelines and recommendations for treatment for the Servants' Barn have been defined based on the preservation objectives and requirements for treatment and use outlined above. All treatment guidelines and recommendations were developed in accordance with the Secretary of Interior's Standards for Rehabilitation.

The Secretary of the Interior's Standards for Rehabilitation are as follows:

1. A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.
2. The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.
3. Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken.
4. Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.
5. Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a property shall be preserved.
6. Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.
7. Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.
8. Significant archeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.
9. New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.
10. New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.⁸⁴

Guidelines for implementing the treatment recommendations provided herein are as follows:

- Undertake all work on the structure in compliance with the Secretary of the Interior's Standards for Rehabilitation.
- Undertake all work on the surrounding landscape in compliance with the Secretary of the Interior's Standards for Rehabilitation.
- Retain the character of the historic structure and environs by protecting the structure and significant site features.
- Ensure that proposed new elements or construction are compatible with the historic character of the structure and its site.
- Protect adjacent natural resources during construction activities.

84. Ibid.

- Document through detailed as-built drawings, photographs, and written narrative all changes and treatments to the building and its immediate site. Maintain records of treatments and preserve documentation according to professional archival standards. Maintain a copy of records in NPS archives.
- Retain features and materials on both the exterior and interior of the building that survive from the period of significance to the greatest extent possible.
- Incorporate sustainable design principles in all future projects that respect the preservation principles listed above.

Recommendations

The following specific recommendations for treatment of the Melrose Servants' Barn respond to the overarching treatment approach *rehabilitation*.

Exterior

- Deteriorated brick units at foundation piers should be removed and replaced with matching brick, and open and deteriorated mortar joints should be repointed.
- A drainage system should be installed on the northwest and northeast sides of the barn to collect stormwater and prevent it from entering the building or pooling at the base of the walls.
- The barn should be inspected and treated regularly for termites and other insect pests that are endemic in the region.
- Deteriorated structural wood framing members should be repaired or replaced. Deteriorated wood framing should be sistered or removed and replaced with new wood framing members that match the size, shape, profile, material, and appearance of the original. Prior to repairs, potential sources of deterioration should be identified and addressed as possible.
- Deteriorated wood roof joists, nailing strips, beams, struts, and posts at the covered storage area should be repaired or replaced in kind. When repairing or replacing posts along the perimeter of slab, posts should not be set on the ground. For small areas of deterioration, deterioration should be removed, the repair location cut square, and new wood dutchman installed. For more extensive decay and deterioration, the wood element should be replaced in its entirety. Repairs and replacement elements should match the existing wood in profile. Pressure-treated wood should be used where it is in contact concrete, masonry or soil.
- Split, cracked, deteriorated, and warped wood siding boards and battens should be repaired where possible, or replaced with matching new boards.
- Split, cracked, deteriorated, and warped wood siding boards and battens on carriage doors should be repaired where possible, or replaced with matching new boards. The doors should be re-aligned to fit the openings and eliminate gaps that allow rodents and pests to enter.
- Consideration should be given to installing a concrete threshold at the carriage door on the northwest elevation (facing the road) to keep water and unwanted animals out.
- Rusted and malfunctioning door hardware should be replaced with new hardware to match the original.
- Deteriorated wood roof joists, eave ends, eave struts, and nailing strips at the gable roof at the covered storage area should be repaired or replaced in kind. Deteriorated wood framing should be sistered or removed and replaced with new wood framing members that match the size, shape, profile, material, and appearance of the original.
- Biological growth and mildew at structural wood framing members should be treated with a biocide.

Treatment and Use

- All exterior and interior wood should receive preservative treatment to extend the life of the wood and the maintenance / repair cycle of the material.
- The finishes analysis conducted as part of this study indicates that the building may have been constructed of repurposed wood boards, and then finished with a thin whitewash, possibly limewash with a carbohydrate and/or protein (refer to Appendix D). An overall whitewash would have provided a more uniform appearance. Archival photographs or other documentation have not been discovered to confirm that the building had this appearance during the period of significance. However, based on the finishes analysis, consideration could be given to this treatment. At a minimum, areas of wood siding and trim that experience heavy mildew or organic growth should be washed with a biocide to clean and remove the mildew and biological growth. This cleaning should be completed before a new finish is applied. Alternately, after washing with a biocide, the wood siding and trim can remain in their unfinished condition to retain the current appearance of the barn.
- The metal roof should be repaired with matching V-crimp panels. The hip ridge cap at the covered storage area should be replaced, and the open seam along the ridge should be completely capped. The metal roof should be maintained and periodically monitored for indications of water infiltration. Plant debris that accumulates on the roof should be removed and not allowed to accumulate and promote corrosion.
- Insect webs and nests should be removed from the exterior eaves and walls regularly.
- As determined by the National Park Service program, funding, and schedule for work on the Servants' Barn, plans should be developed for rehabilitation of the interior of the building. The planning process should start with an inventory of the stored materials inside to identify what items may be historically significant and salvageable. Also, all unusable materials and trash should be removed to permit a final evaluation of the interior prior to the development of final treatment recommendations and a rehabilitation strategy. Clean-up and possible abatement measures are required to remove insect and rodent droppings, and to treat insect and animal infestation inside the building.
- Future rehabilitation of the interior should not contribute to the loss of remaining character-defining features and materials.
- The current floor plan configuration, which appears to represent the period of significance, should be retained.
- The condition of the structure should be regularly monitored, and maintenance and repair issues promptly addressed to prevent the deterioration of the building's exterior envelope and the limited amount of significant interior materials.
- Holes in the exterior envelope should be sealed to prevent the intrusion of rodents and insects that have contaminated the interior.
- A functional plumbing system should be planned if it is determined that the one existing sink or other plumbing fixtures are needed. The domestic water and sanitary sewer systems should comply with current applicable codes.
- The condition of the fire / smoke alarm system should be evaluated and upgraded if needed to meet current NPS standards as applicable to the barn structure and its current condition as an unoccupied, not-sprinklered storage building of combustible-type construction. If

Interior

Guidelines and recommendations for interior conditions focus on sustained maintenance and repairs to prevent deterioration of the structure and its contributing features.

the building is used for interpretation allowing public access to the interior, the fire protection and life-safety features of the structure will require re-evaluation.

- New electrical service and new electrical power and interior and exterior lighting systems should be planned that comply with the applicable electrical code. New light fixtures should be historically appropriate and compatible with the period of significance.
- The functionality of the existing underground electrical service should be evaluated. If functional, all existing panels, junction boxes, devices, etc., must be closed and conductors protected per NEC requirements. Abandoned or non-compliant components should be removed.
- Consideration should be given to a wireless security system and monitoring service compatible other systems at Melrose.
- Provide portable fire extinguishers of the type and size required by NFPA 10 for the building type and hazard classification of the materials stored.
- A state-of-the-art smoke and fire detection and alarm system should be incorporated.
- Regulations governing the removal or encapsulation of lead-based paint should be complied with during rehabilitation work.

Current and forthcoming work

The park has not identified work in progress or planned to be completed at the Servants' Barn. However, we understand that the long-term goal for the building is to complete rehabilitation and return it to use, similar to NPS programming for other vernacular storage buildings at the Melrose estate.

Recommendations for Further Research

1. Conduct further research to understand the history and lives of people associated with the

estate, and their relationship with the property owners. For example, further research could be conducted in oral histories with Marian Kelly Ferry that are part of the park's museum collections.

2. Consider preparing additional documentation for the National Register nomination to include the Melrose Servants' Barn.
3. Review and coordinate dates related to the structure as presented in the Cultural Landscape Report (1996) and Cultural Landscape Inventory (2013). Update the CLI as appropriate, including information developed for this HSR.
4. Consider building upon documentation prepared for this HSR to create a supplement for the existing HABS documentation for the Melrose estate, which did not include this structure.
5. Consider conducting analysis of the composition of mortar and concrete foundations and a comparison to other structures whose construction dates are known in order to date the construction of slabs and foundations at the barn.
6. Consider conducting an archeological survey to inform understanding of the history and use of the barn as part of the estate, and potentially to provide information regarding the date of original construction.
7. Conduct an investigation and research into the presence and the condition of the water and sanitary sewer or septic systems that served the barn. This information would inform the Park's decision about restoring water and sewer / septic utilities to the Servants' Barn. (Note that the sink inside the barn is neither original nor a character-defining feature.)
8. In light of how the service road adversely affects drainage in proximity of the barn, consider engaging a civil engineer to study storm drainage in this portion of the estate. The study should include recommendations to

mitigate the accumulation of water at the northeast and northwest sides of the Servants' Barn. (See further discussion of a suggested treatment to address this condition, above.)

Resilience to Natural Hazards

Although Natchez Historical Park is located in the southeast United States along the Mississippi River, the site is still considered vulnerable to current and future threats associated with climate change.

Increasingly frequent strong storms and heavy rainfall have been noted for several years in the southeastern United States. Studies of effects of climate change on the Gulf of Mexico coast, the State of Mississippi, and the lower Mississippi River valley have also indicated a predicted significant rise in average temperatures and sustained humidity coupled with periods of intense rainfall and associated flooding.⁸⁵

Weather and climate-related threats to resources have already been felt in the Gulf Coast region. For example, in 2005 Hurricane Katrina caused extensive damage that cost at \$108 billion in the region, primarily from storm surge, flooding, and wind.

Although threats are more immediate to coastal historic sites, inland historic sites similarly require identification of the resources anticipated to be threatened—both buildings and landscapes—and planning for protection as well as mitigation in the face of increased storms resulting from climate change.

As loss of historic resource integrity may occur, suddenly or slowly, from conditions related to climate change, documentation is the first response to mitigate anticipated loss or diminishment, or to plan for the impacts associated with climate change. This Historic

85. Rebecca Beavers, Amanda Babson, and Courtney Schupp, National Park Service, *Coastal Adaptation Strategies Handbook* (N.P.: US Department of the Interior, National Park Service, 2016).

Structure Report, including the historical narrative condition assessment, and recommendations, together with photographs and measured drawings, is an important part of the documentation process.

As part of future efforts to build on and update the documentation provided in this Historic Structure Report, the National Park Service should consider such approaches as more detailed documentation resulting from new three-dimensional scanning technology, monitoring weather-related deterioration, updating emergency and disaster planning to address climate change-related issues, and strategic planning for mitigation of the effects of climate change on park resources. The latter may include special protection, documentation, and interpretation measures to address resources that are especially vulnerable to damage or loss due to climate change-related conditions.

In addition to threats to the historic resources, climate change will affect visitation patterns. A park-specific brief has been prepared on this issue, and notes the historical relationship between visitation and temperature, finding that temperature was a significant predictor of visitation. The brief further notes that understanding this relationship, and taking advantage of continued study, will help park management “adapt to the effects of climate change and remain effective resource stewards while promoting visitor experience.”⁸⁶

Efforts conducted for Melrose and Natchez Historical Park will benefit from coordination with other planning and documentation projects to address effects of climate change under consideration or in the process of being implemented by the National Park Service in the Southeast Region. Future severe weather events,

86. National Park Service, “Natchez National Historical Park: How might future warming affect visitation?” *Park Visitation and Climate Change, Park-Specific Brief* (N.P.: US Department of the Interior, National Park Service, Natural Resource Stewardship & Science, 2016).

rising sea levels, and other impacts related to climate change should be anticipated and considered in planning for protection and maintenance of the site and its resources.

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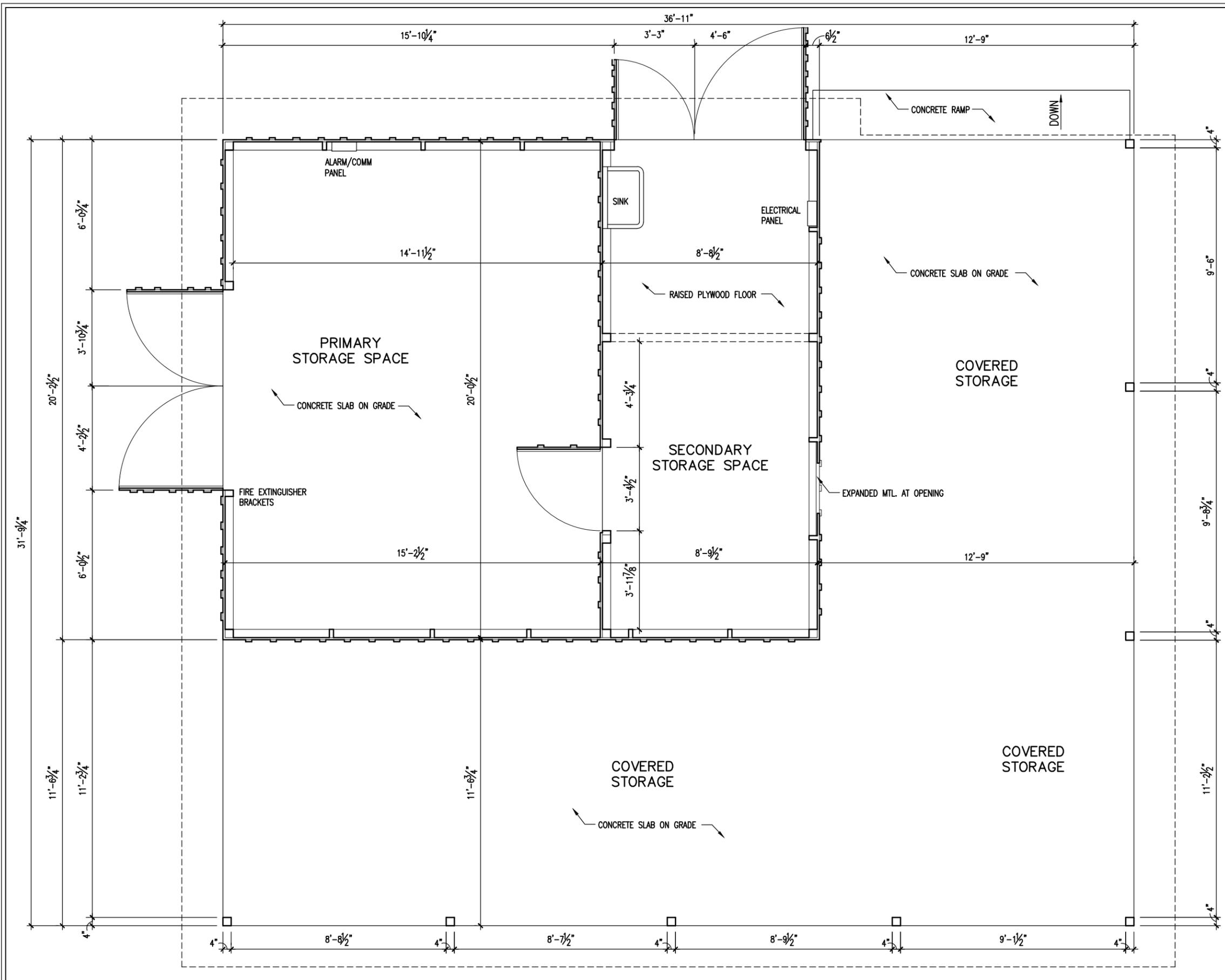
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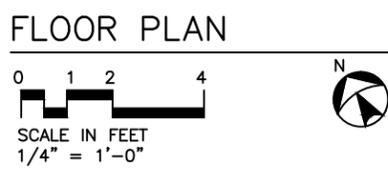
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- "To provide for the acquisition of the William Johnson House and its addition to the Natchez National Historical Park, and for other purposes." Public Law No: 101-399. September 28, 1990.
- White, John P., Delineator. *Historic American Buildings Survey, Melrose [MS-61]*. National Park Service, 1992.

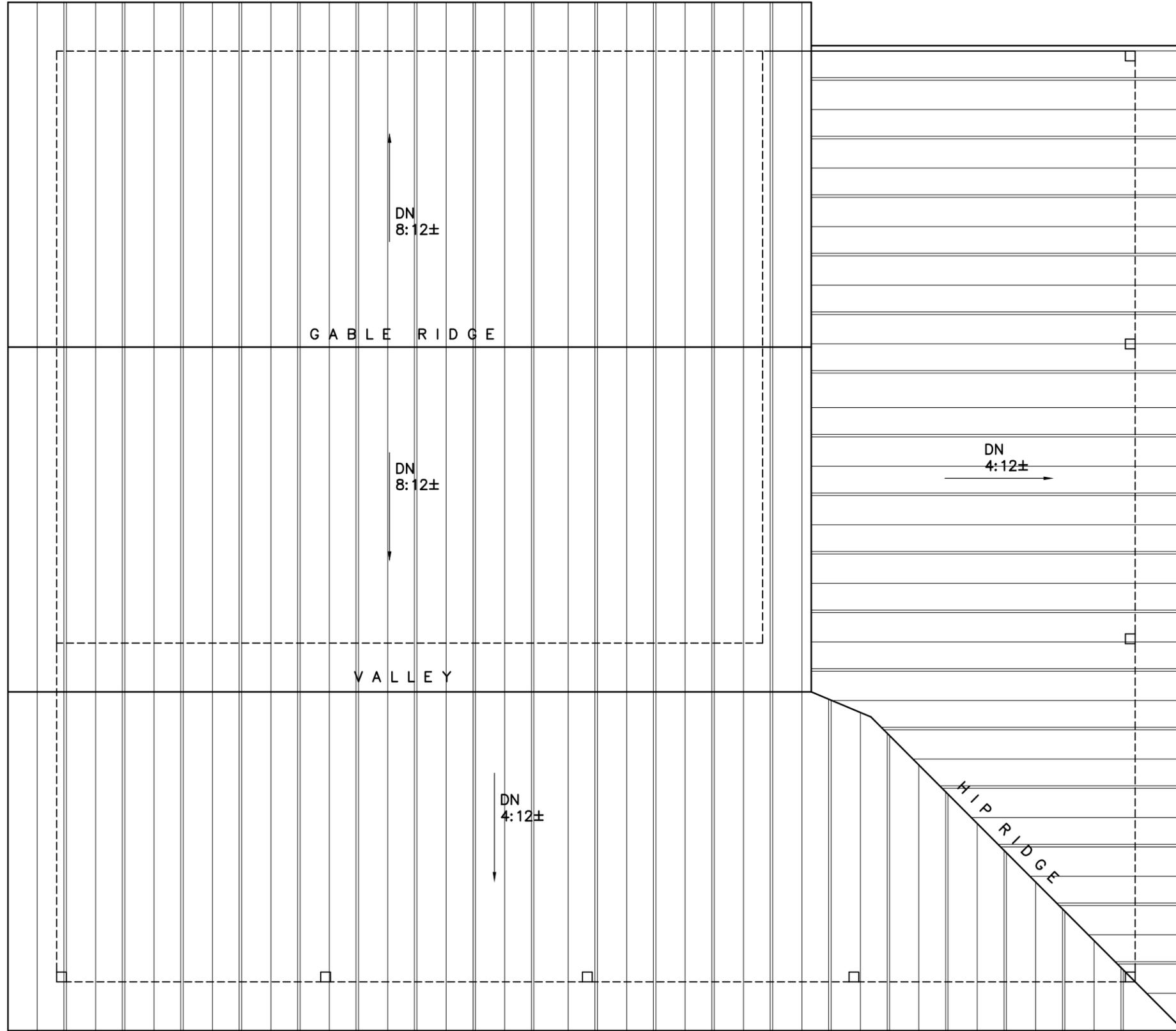
Appendix A: Measured Drawings



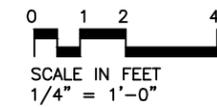
NOTE: NORTH INDICATED ON THESE DRAWINGS REPRESENTS NORTH AS VERIFIED ON SITE, MATCHING THAT CORRECTLY INDICATED ON HABS NO. MS-61, "MELROSE," SHEET 2, SITE PLAN. (NORTH IS INCORRECTLY INDICATED ON HABS NO. MS-61-0, "MELROSE, BARN," SHEET 1, PLAN.)

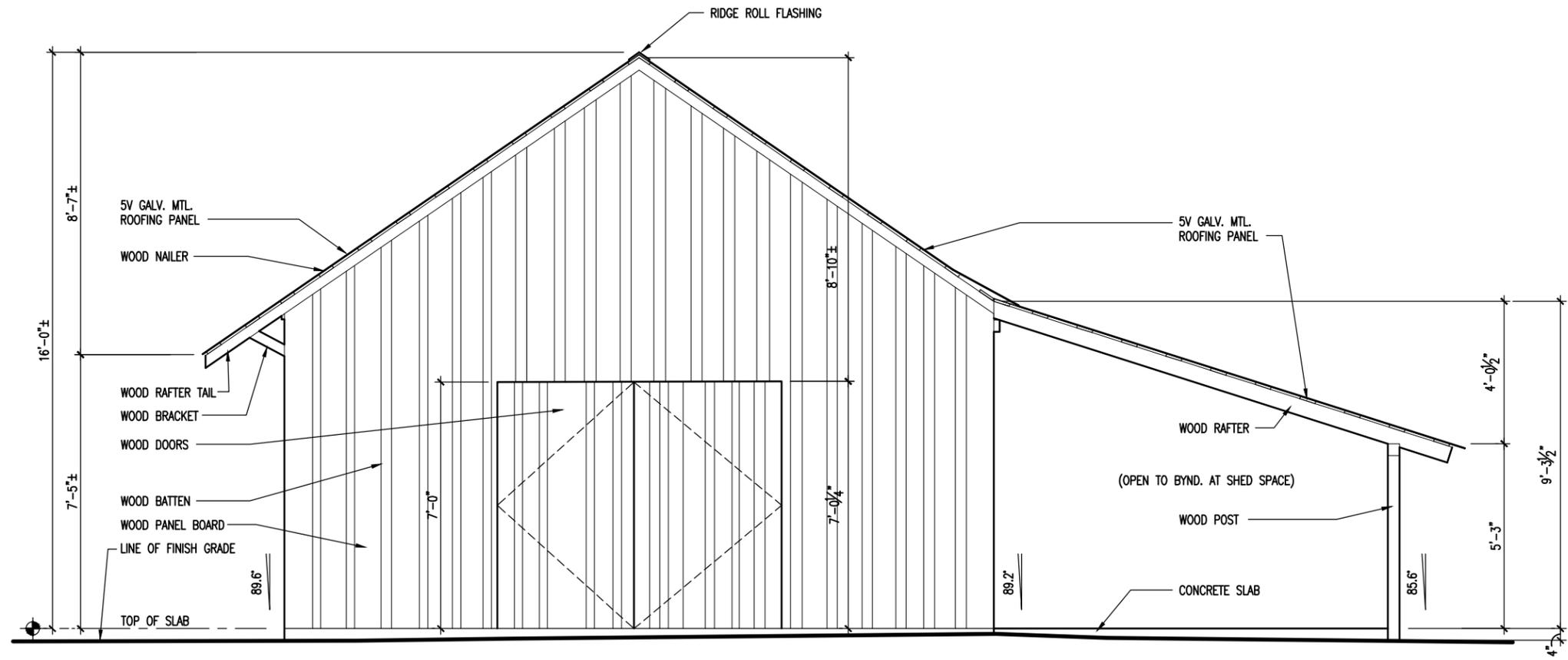
IN THESE DRAWINGS, ELEVATIONS ARE TITLED NORTHWEST, NORTHEAST, SOUTHWEST, AND SOUTHEAST. ELEVATION TITLES REFERENCE THE CARDINAL DIRECTIONS ALSO INDICATED ON HABS NO. MS-61-0, "MELROSE, BARN," SHEET 2, ELEVATIONS.





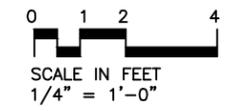
ROOF PLAN





NORTHWEST ELEVATION

HABS MS-61-0 "WEST ELEVATION"



DRAWN BY: WFTA, OCTOBER 2019
 NATIONAL PARK SERVICE
 U.S. DEPARTMENT OF THE INTERIOR
 SOUTHEAST REGIONAL OFFICE

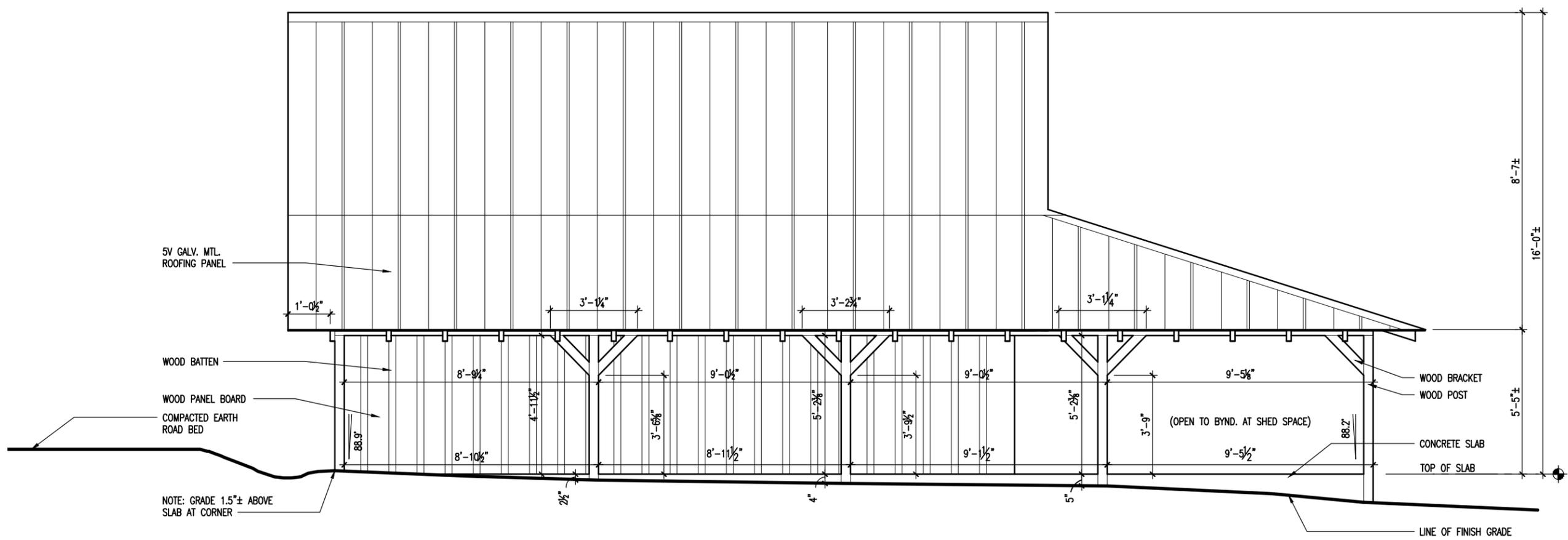
NATCHEZ

MELROSE SERVANTS' BARN
 NATCHEZ NATIONAL HISTORICAL PARK

MISSISSIPPI

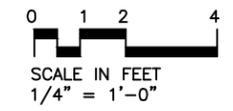
HISTORIC STRUCTURE REPORT

SHEET
 3 OF 6



SOUTHWEST ELEVATION

HABS MS-61-0 "SOUTH ELEVATION"



5V GALV. MTL.
ROOFING PANEL

WOOD BATTEN

WOOD PANEL BOARD
COMPACTED EARTH
ROAD BED

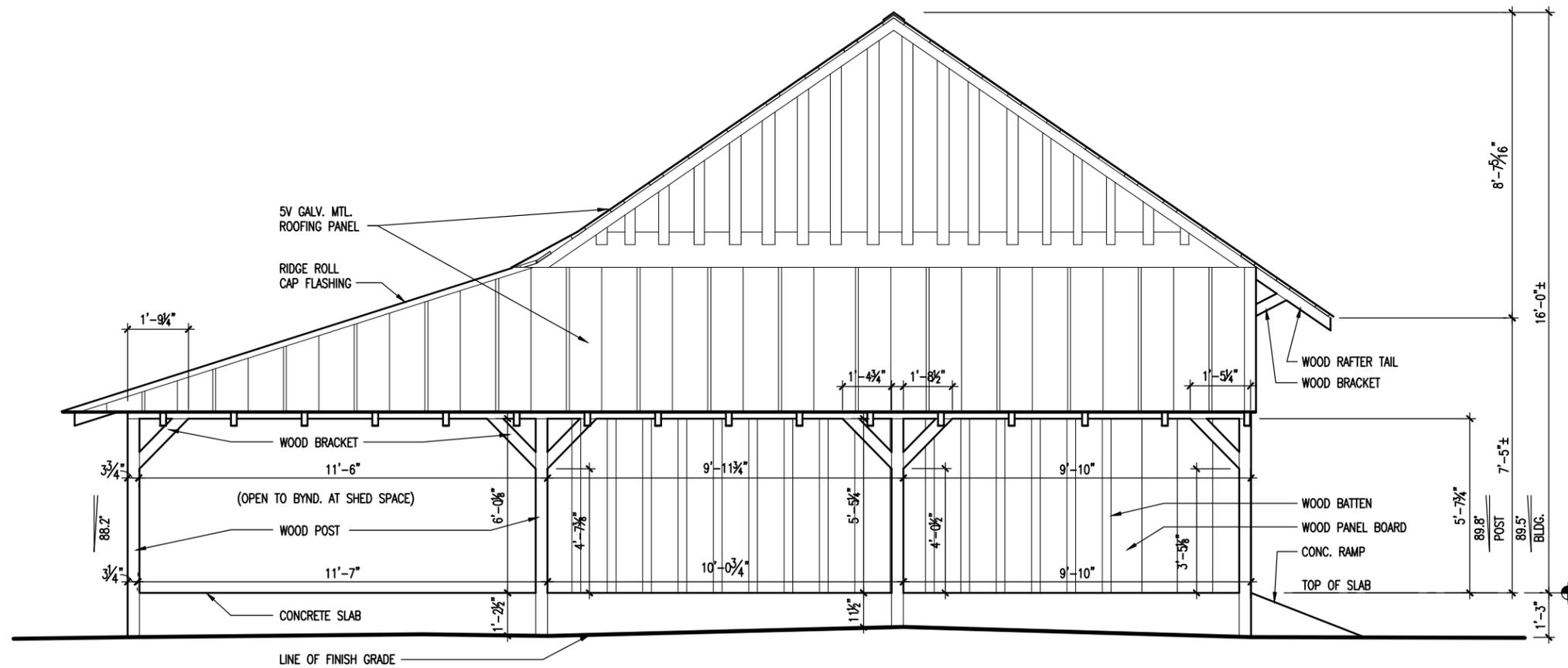
NOTE: GRADE 1.5"± ABOVE
SLAB AT CORNER

WOOD BRACKET
WOOD POST

CONCRETE SLAB
TOP OF SLAB

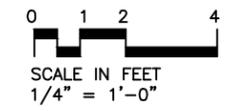
LINE OF FINISH GRADE

(OPEN TO BYND. AT SHED SPACE)



SOUTHEAST ELEVATION

HABS MS-61-0 "EAST ELEVATION"



DRAWN BY: WFTA, OCTOBER 2019
 NATIONAL PARK SERVICE
 U.S. DEPARTMENT OF THE INTERIOR
 SOUTHEAST REGIONAL OFFICE

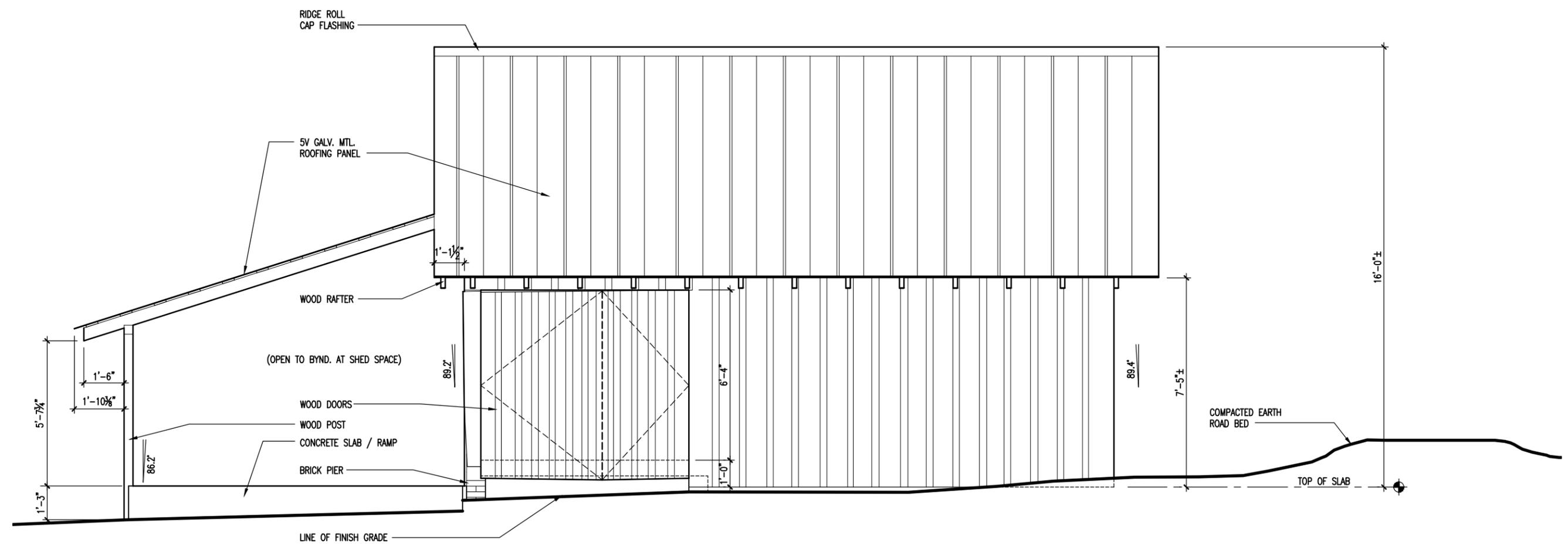
NATCHEZ

MELROSE SERVANTS' BARN
 NATCHEZ NATIONAL HISTORICAL PARK

MISSISSIPPI

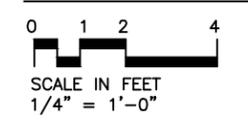
HISTORIC STRUCTURE REPORT

SHEET
 5 OF 6



NORTHEAST ELEVATION

HABS MS-61-0 "NORTH ELEVATION"



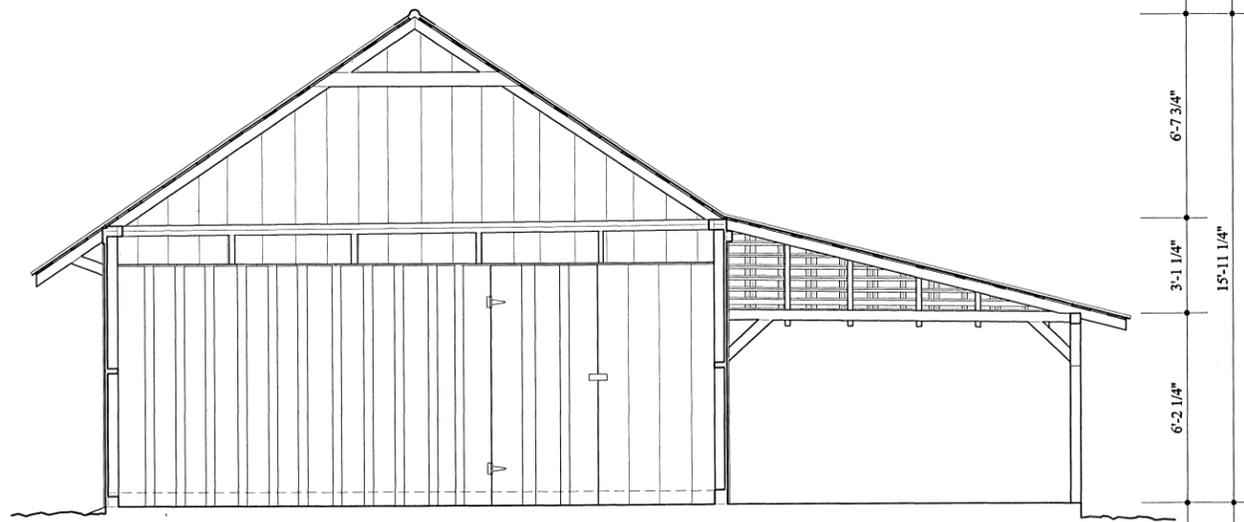
DRAWN BY: WFTA, OCTOBER 2019

Appendix B: Historic American Building Survey (HABS)
Drawings (2000)

MELROSE • BARN

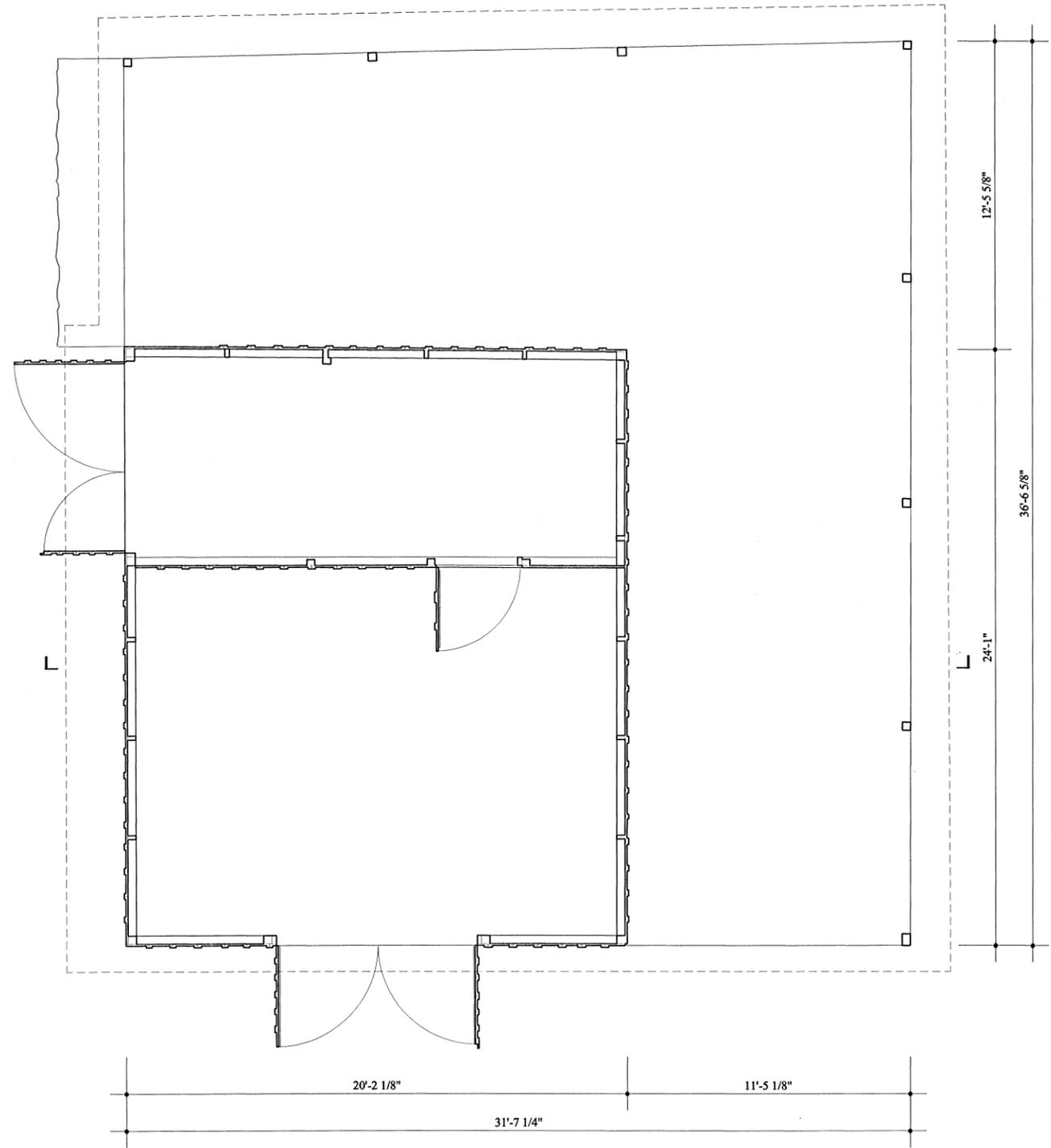
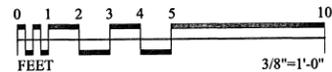
THE BARN AT MELROSE IS TYPICAL OF WOOD FRAME AGRICULTURAL BUILDINGS BUILT THROUGHTOUT THE RURAL SOUTH IN THE EARLY 20th CENTURY. APPROXIMATELY 20' x 24' IN PLAN, IT SITS ON A CONCRETE SLAB, WITH 4" SQUARE CORNER POSTS AND 2" x 4" STUDS AT 4 FEET ON CENTER. THE EXTERIOR WALLS ARE SHEATHED IN VERTICAL WOOD BOARD-AND-BATTEN SIDING AND THE BUILDING HAS A METAL STAND-ING SEAM GABLE ROOF. A SHED IS ATTACHED TO THE SIDE AND REAR OF THE BARN.

DOCUMENTATION OF THE MELROSE BARN WAS UNDERTAKEN BY THE HISTORIC AMERICAN BUILDINGS SURVEY / HISTORIC AMERICAN ENGI-NEERING RECORD (HABS/HAER) DIVISION OF THE NATIONAL PARK SERV-ICE (NPS), E. BLAINE CLIVER, CHIEF. THE PROJECT WAS SPONSORED BY THE NATCHEZ NATIONAL HISTORICAL PARK, NPS, BOB DODSON, SUPER-INTENDENT. PROJECT PLANNING WAS COORDINATED BY PAUL DOLINSKY, CHIEF, HABS; AND BY HABS ARCHITECT ROBERT ARZOLA. THE FIELD WORK WAS UNDERTAKEN AND THE DRAWINGS WERE PRODUCED BY PROJECT SUPERVISOR MARK SCHARA, HABS ARCHITECT; AND BY HABS ARCHITECTS NAOMI HERNANDEZ AND RAUL VAZQUEZ.



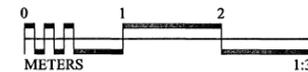
SECTION

3/8"=1'-0" 1:32



PLAN

3/8"=1'-0" 1:32



DRAWN BY: MARK SCHARA / RAUL VAZQUEZ
NATCHEZ NHP DOCUMENTATION PROJECT, 2000
NATCHEZ NATIONAL HISTORICAL PARK SERVICE
UNITED STATES DEPARTMENT OF THE INTERIOR

1 MELROSE-MONTEBELLO PARKWAY

NATCHEZ

MELROSE • BARN

ADAMS COUNTY

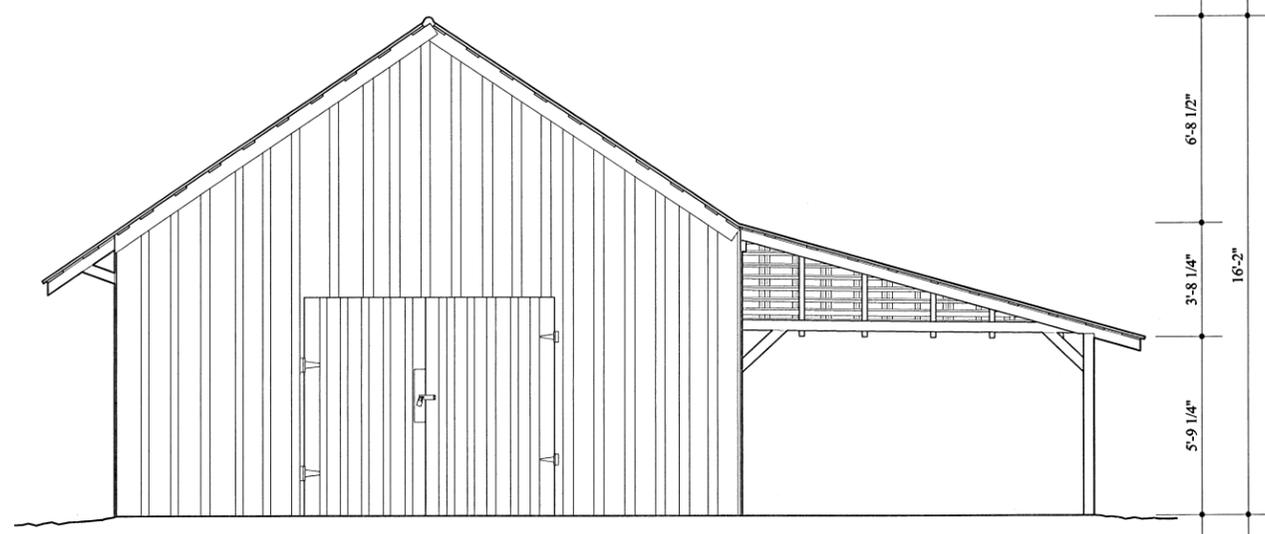
MISSISSIPPI

SURVEY NO. MS-61-O

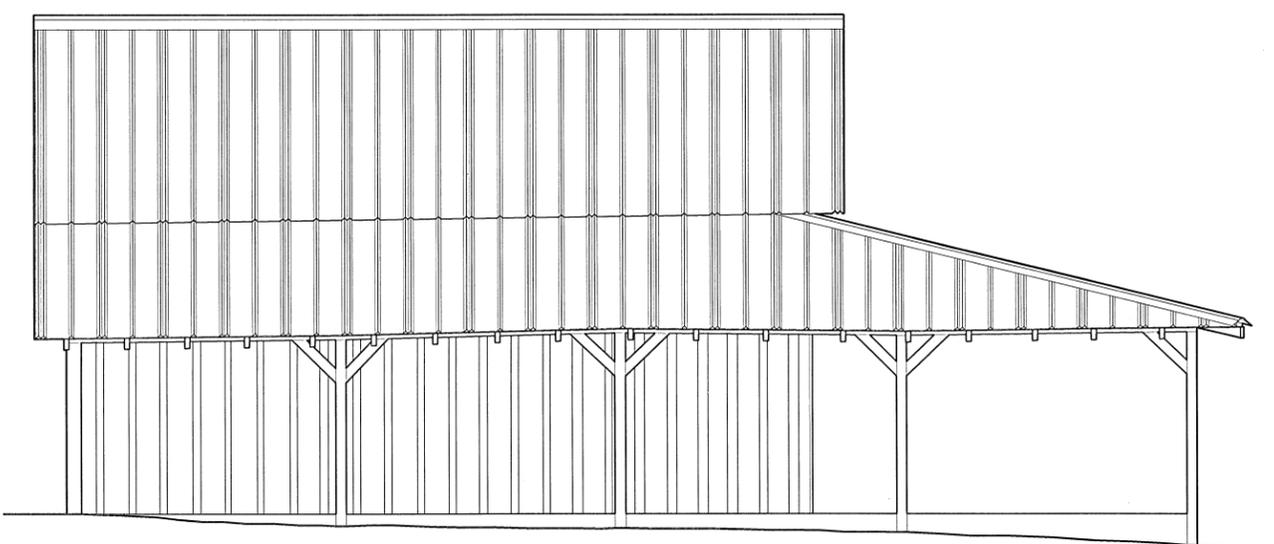
HISTORIC AMERICAN BUILDINGS SURVEY SHEET 1 OF 2 SHEETS

LIBRARY OF CONGRESS

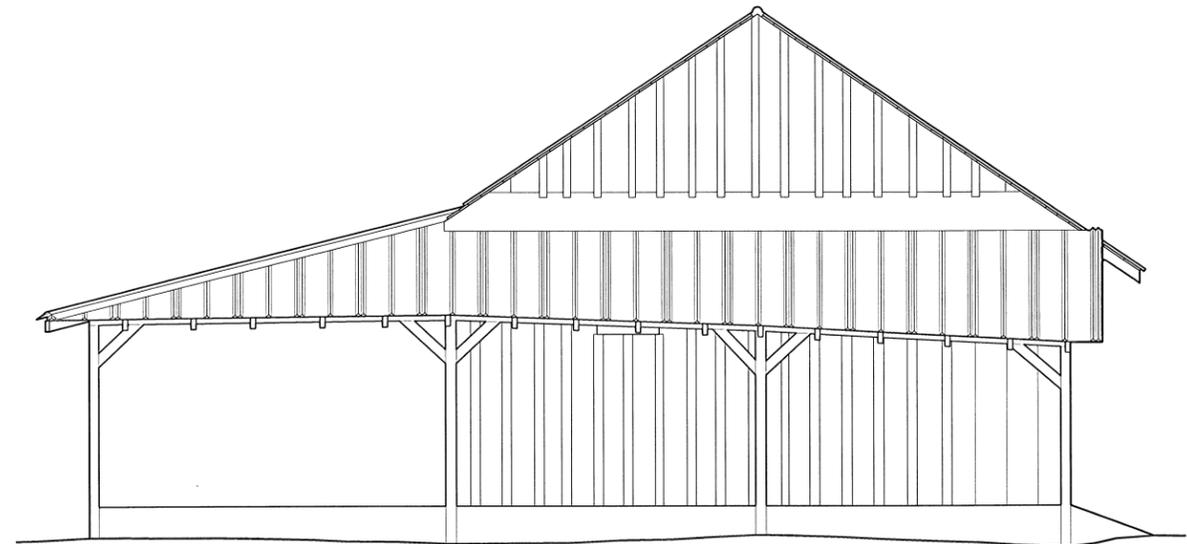
INDEX NUMBER



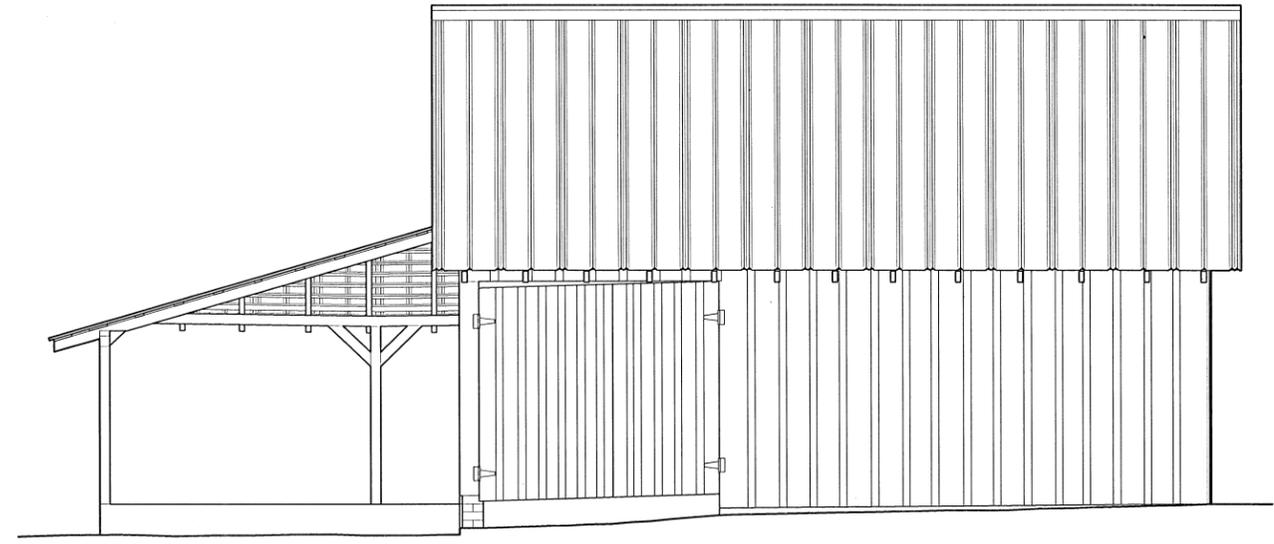
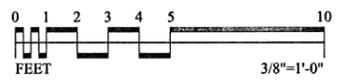
WEST ELEVATION
 3/8"=1'-0" 1:32



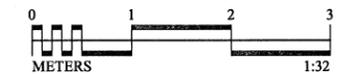
SOUTH ELEVATION
 3/8"=1'-0" 1:32



EAST ELEVATION
 3/8"=1'-0" 1:32



NORTH ELEVATION
 3/8"=1'-0" 1:32



DRAWN BY: RAUL VAZQUEZ
 NATCHEZ NHP DOCUMENTATION PROJECT, 2000
 NATIONAL PARK SERVICE
 UNITED STATES DEPARTMENT OF THE INTERIOR

1 MELROSE-MONTEBELLO PARKWAY
 NATCHEZ
 ADAMS COUNTY
 MISSISSIPPI
 SURVEY NO. MS-61-O
 HISTORIC AMERICAN BUILDINGS SURVEY
 SHEET 2 OF 2 SHEETS

LIBRARY OF CONGRESS
 BUILT NUMBER

MELROSE • BARN

IF REPRODUCED, PLEASE CREDIT THE HISTORIC AMERICAN BUILDINGS SURVEY, NATIONAL PARK SERVICE, NAME OF CONTRIBUTOR, DATE OF DRAWING

Appendix C: Hazardous Materials Survey Report

**A REPORT FOR A QUALITATIVE SURVEY
FOR
SUSPECT ASBESTOS-CONTAINING MATERIALS,
LEAD-CONTAINING MATERIALS
AND
HAZARDOUS MATERIALS AND UNIVERSAL WASTE AND OTHER
ENVIRONMENTAL CONDITIONS
OF
MELROSE SERVANTS' BARN
NATCHEZ NATIONAL HISTORICAL PARK
NATCHEZ MONTEBELLO PARKWAY
NATCHEZ, MISSISSIPPI**

CONTRACT: P17PD03381, PCI 39017

Requested by

**PANAMERICAN CONSULTANTS, INC.
149 NEEDLES COURT
NASHVILLE, TENNESSEE**

TELEPHONE NO. (615) 232-3963

Prepared by

HAZCLEAN ENVIRONMENTAL CONSULTANTS, INC.
P. O. Box 16485
Jackson, Mississippi 39236-6485
(601) 922-0766

**HAZCLEAN Report No. 18.1813.04
September 2018**

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Asbestos-Containing Materials

1.0 PURPOSE AND SCOPE OF SERVICES

HAZCLEAN ENVIRONMENTAL CONSULTANTS, INC. (HAZCLEAN) was retained by Panamerican Consultants, Inc., Nashville, Tennessee to conduct a facility Qualitative Survey to identify suspected Asbestos-Containing Materials (ACM) at the Melrose Servants' Barn, Natchez National Historical Park, Natchez, Mississippi.

Specifically, the scope of services rendered included the following:

Scope of Work:

1. Conduct a visual survey of the building interior spaces and exterior to identify suspect asbestos-containing building materials
2. Prepare a final report with observations and recommendations relating to the identified facilities' conditions.

2.0 SITE DESCRIPTION

HAZCLEAN, under the direction of Panamerican Consultants, Inc., Nashville, Tennessee conducted a site investigation on February 28, 2017, to identify suspected Asbestos-Containing Materials (ACM) at the Melrose Servants' Barn, Natchez National Historical Park, Natchez, Mississippi. This is a single-story structure approximately 350 square feet, with two rooms and a lean-to roof attached to the structure. The structure is a wood frame covered by wooden siding with a sheet metal pitched roof. The interior is also wood finished.

3.0 DISCUSSION OF OBSERVATIONS

HAZCLEAN only identified building materials that were suspect to be asbestos-containing materials (ACM). No sampling or laboratory analysis was conducted on these suspect materials. Any suspect building materials that were newly installed without documentation of being asbestos free or no listed asbestos in the safety data sheet (SDS) or manufactures data of specification will be considered Presumed Asbestos Containing Materials (PACM) until laboratory analysis confirms if asbestos is present or absent.

This is a public access building subject to compliance with the National Emission

Standards for Hazardous Air Pollutants (NESHAP) 40 CFR Part 61 Subpart M.

The following summary of findings is based on the results from the physical observation during the field investigation summarizing the results of the asbestos-containing materials (ACM) survey:

Material	Location	Comment
Roofing	Exterior Roof	Sheet Metal. Non-Asbestos
Drywall and associated joint compound	HAZCLEAN did not observe these materials installed	No Suspect material present
Heating Ventilation and Air-conditioning (HVAC) duct sealing mastic	HAZCLEAN did not observe these materials installed	No Suspect material present
Window Grazing	HAZCLEAN did not observe these materials installed	No Suspect material present

The building was constructed entirely of wood with no suspect asbestos containing materials observed installed on the structure. There were various materials stored within the interior, however there appeared to be no suspect asbestos containing items within these materials.

Inspection Report Limitations

This report shall not be used as a substitute for National Emission Standard for Hazardous Air Pollutant (NESHAP) thorough inspection prior to renovation of demolition activities (40 CFR Part 61 Subpart M). However, a NESHAP inspection sampling program does not appear to be required due to lack of suspect asbestos containing material within the physical structure of the building.

According to the Environmental Protection Agency (EPA) any material containing greater than one percent (>1%) asbestos is considered ACM.

4.0 SUMMARY OF RECOMMENDATIONS

Summary of Recommendations

The following recommendations are made concerning the suspect building materials located the Melrose Servants' Barn, Natchez National Historical Park, Natchez, Mississippi:

1. **HAZCLEAN** makes no recommendations at this time regarding the study site; however, **HAZCLEAN** reserves the right to modify our opinion should additional information, not available during the time of this investigation, be presented to **HAZCLEAN**.

Lead-Containing Materials

1.0 PURPOSE AND SCOPE OF SERVICES

HAZCLEAN ENVIRONMENTAL CONSULTANTS, INC. (HAZCLEAN) was retained by Panamerican Consultants, Inc., Nashville, Tennessee to conduct a facility survey to identify suspect lead-based paint and lead-containing materials at the Melrose Servants' Barn, Natchez National Historical Park, Natchez, Mississippi.

Specifically, the scope of services rendered included the following:

Scope of Work:

1. Conduct a visual survey of the building interior spaces and exterior for suspect lead-based paint and lead-containing materials.
2. Prepare a final report with observations and recommendations relating to the facility conditions identified.

2.0 DISCUSSION OF OBSERVATIONS

HAZCLEAN presents the following table based on the physical observation during the field investigation summarizing the results of the lead-based paint/lead-containing materials survey:

Component	Location	Comment
Window Components	No windows present	No Suspect lead-based painted surfaces
Doors	Exterior and Interior	Weathered paint on exterior side, with potential for Lead Based Paint residue.
Columns	Exterior: Lean-To	No Suspect lead-based painted surfaces
Walls	Exterior and Interior	Weathered paint on exterior side and center interior wall, with potential for Lead Based Paint residue.
Roof	Exterior	No Suspect lead-based painted surfaces regulations

The State of Mississippi has set 1.0 milligrams per square centimeter (mg/cm²) by X-ray Fluorescence (XRF) analysis as the definition of Lead-Based Paint. The Occupational Safety and Health Administration (OSHA) regulates Lead in Construction by 29 CFR 1926.62 for any detectable lead and is dependent on the task impacting components that have lead-containing materials.

3.0 SUMMARY OF RECOMMENDATIONS

The following recommendations are made concerning the building materials at the Melrose Servants' Barn, Natchez National Historical Park, Natchez, Mississippi.

1. **HAZCLEAN** recommends that prior to demolition or renovation of any of the listed suspect building materials that will be disturbed by these activities that an X-Ray Fluorescence (XRF) multi-spectrum analysis or laboratory paint-chip analysis confirm if lead is present or absent.
2. **HAZCLEAN** recommends that if any painted surfaces are confirmed to be LBP or LCM that all personnel performing work on the lead-containing materials be aware of the presence of lead and to implement the Occupational Safety and Health Administration (OSHA) safety measures. OSHA regulation 29 CFR 1910.1025 and 29 CFR 1926.62 establishes protection guidelines for workers who may be exposed to airborne lead, including a permissible exposure limit (PEL) for airborne lead particles averaged over an eight (8)-hour time-weighted average (TWA) period. OSHA has identified manual demolition of structures with lead content as a potential health hazard in the Construction Safety and Health Outreach Program.
3. **HAZCLEAN** makes no further recommendations at this time regarding the study site; however, **HAZCLEAN** reserves the right to modify our opinion should additional information, not available during the time of this investigation, be presented to **HAZCLEAN**.

Hazardous Materials and Universal Waste and Other Environmental Conditions

1.0 INTRODUCTION

HAZCLEAN ENVIRONMENTAL CONSULTANTS, INC. (HAZCLEAN) was retained by Panamerican Consultants, Inc., Nashville, Tennessee to conduct a Qualitative Survey for potentially hazardous waste and universal waste and environmental conditions identified at the Melrose Servants' Barn, Natchez National Historical Park, Natchez, Mississippi.

This report presents the Findings and Recommendations of the Qualitative Assessment for Hazardous Materials and Universal Waste and Environmental Conditions.

Background:

As background information and an introduction into the qualitative survey proposed for the subject facility, the following sections describe **Hazardous Materials and the Universal Waste Rule (UWR) and the relationship with hazardous waste typically handled by the Resource Conservation and Recovery Act (RCRA).**

1.1 Hazardous Materials

Hazardous materials pose hazards and risks to humans, animals, and the environment and can be any substance or material that could adversely affect the safety of the public, handlers or carriers. Hazardous material professionals are responsible for and properly qualified to manage such materials at any point in their life-cycle, from process planning and development of new products; through manufacture, distribution and use; and to disposal, cleanup and remediation. Hazardous materials are defined and regulated in the United States primarily by laws and regulations administered by the U.S. Environmental Protection Agency (EPA), the U.S. Occupational Safety and Health Administration (OSHA), the U.S. Department of Transportation (DOT), and the U.S. Nuclear Regulatory Commission (NRC). Each has its own definition of a "hazardous material."

OSHA's definition includes any substance or chemical which is a "health hazard" or "physical hazard," including: chemicals which are carcinogens, toxic agents, irritants, corrosives, sensitizers; agents which act on the hematopoietic system; agents which damage the lungs, skin, eyes, or mucous membranes; chemicals which are combustible, explosive, flammable, oxidizers, pyrophorics, unstable-reactive or water-reactive; and

chemicals which in the course of normal handling, use, or storage may produce or release dusts, gases, fumes, vapors, mists or smoke which may have any of the previously mentioned characteristics. (Full definitions can be found at 29 Code of Federal Regulations (CFR) 1910.1200.)

1.2 Universal Waste

The Universal Waste Rule (UWR) codified in Title 40 Code of Federal Regulations (CFR) Part 273, "Standards for Universal Waste Management," was promulgated by the Environmental Protection Agency (EPA) on 11 May 1995. The EPA developed the UWR to improve waste management practices of widely generated, low risk Resource Conservation and Recovery Act (RCRA) hazardous waste. Through streamlined RCRA waste management practices, the EPA intended to develop a system to separate "universal" hazardous waste from the municipal waste stream and ensure proper waste management.

The streamlined management established by the UWR provides relief from the full regulatory aspects of RCRA by simplifying collection and management requirements for universal waste. **In 1995, the EPA designated three types of hazardous waste as universal: batteries, pesticides, and thermostats. In 1999, the EPA added lamps to the list of universal waste and in 2005 EPA added Mercury-containing equipment which means a device or part of a device (including thermostats but excluding batteries and lamps) that contains elemental mercury integral to its function.**

Although the UWR is less stringent than RCRA, EPA believes the rule encourages resource conservation and improves the implementation of RCRA. EPA developed the rule to facilitate and expand collection of universal waste and hopes the rule will encourage unregulated entities to participate, further diverting these wastes from the municipal solid waste stream.

The following is the current list and definition of Universal Waste:

a. **Batteries**

A battery is defined in Title 40 CFR 273.9, "Definitions," as a device designed to receive, store, and deliver electric energy that consists of one or more electrically connected electrochemical cells. The term also includes an intact, unbroken battery from which the electrolyte has been removed. In short, many kinds/types of batteries are covered under the universal waste regulations as long as they are hazardous waste. Spent lead-acid batteries, which are managed under Title 40 CFR Part 266, Subpart G, "Spent Lead-Acid Batteries Being Reclaimed," are exempt from universal waste regulations. However, if

spent lead-acid batteries are not managed under Title 40 CFR Part 266, Subpart G, then they are subject to management under universal waste regulations.

b. Lamps

A lamp is defined as "the bulb or tube portion of an electric lighting device." Examples of common universal waste lamps include spent fluorescent, high intensity discharge, neon, mercury vapor, high pressure sodium, and metal halide lamps. As of 6 January 2000, any spent or waste lamp that is hazardous or exhibits one of the hazardous waste characteristics identified in Title 40 CFR Part 261, "Identification and Listing of Hazardous Wastes," is subject to regulation as a universal waste.

c. Pesticides

A pesticide means "any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest, or intended for use as a plant regulator, defoliant, or desiccant, other than animal drugs and feeds. Therefore, any unused pesticide products that are collected and managed as part of a waste pesticide collection/recall program mandated by the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), or a voluntary recall program, are subject to management under universal waste regulations. [Note: Recalled pesticides managed by farmers in compliance with Title 40 CFR Part 262, "Standards Applicable to Generators of Hazardous Wastes," Subpart G, "Farmers," are not subject to regulation as a universal waste.]

d. Mercury-Containing Equipment

Mercury-containing equipment means a device or part of a device (including thermostats but excluding batteries and lamps) that contains elemental mercury integral to its function. A thermostat means "a temperature control device that contains metallic mercury in an ampule attached to a bimetal sensing element, and mercury-containing ampules that have been removed from these temperature control devices." A thermostat becomes a solid waste on the date it is discarded, at which time the generator must determine if the thermostat exhibits any hazardous waste characteristic: ignitability, corrosivity, reactivity, or toxicity. If thermostats are not waste, or are not determined to be hazardous wastes, they are not subject to universal waste regulations.

2.0 PURPOSE AND SCOPE OF SERVICES

HAZCLEAN proposed to conduct a Qualitative Assessment for potentially hazardous waste, universal waste and environmental conditions located at the Melrose Servants' Barn, Natchez National Historical Park, Natchez, Mississippi.

Specifically, the scope of services rendered for this project included the following:

Scope of Work:

1. Conduct a Qualitative Assessment to identify potentially hazardous waste and universal waste and environmental conditions that may impact planned renovation and/or demolition activities.
2. Review all field, survey, and analytical data (if available) to provide a comprehensive facility assessment.
3. Prepare a final report with observations and recommendations relating to the qualitative assessment.

1.0 DISCUSSION OF FINDINGS

HAZCLEAN conducted a facility-wide Qualitative Survey to identify potential **Hazardous Materials, Universal Waste and Environmental Conditions** that may have an impact on planned renovation and/or demolition activities. The Findings are discussed below:

3.1 Hazardous Materials

HAZCLEAN conducted a limited survey to identify hazardous materials or areas with environmental concerns. The following materials and concerns were identified:

1. **HAZCLEAN** determined by site interview and site observation that no present underground storage tanks (UST) or above ground storage tanks were at the specific location of this building. However, a review of the Mississippi Department of Environmental Quality, Underground Storage Tanks records indicated that the National Park Service, Melrose Natchez National Historical Park, Facility 12739, had three (3) Permanently Out of Use Gasoline Underground Storage Tanks, listed for the property.
2. **HAZCLEAN** did observe areas of chemical/hazardous materials or waste storage in the form of one (1) fifty-five (55) gallon bulk container in the lean-to. This drum was labeled as PolyPavement an according to the manufacturer is an environmentally compliant soil stabilizer. (<https://www.poly pavement.com/environmental.php>).

3.2 Universal Waste

1. **HAZCLEAN** did not observe any batteries that would be subject to universal waste regulations as defined in Title 40 CFR 273.9.
2. **HAZCLEAN** did not observed lamps as defined as a universal waste.
3. **HAZCLEAN** did not observe any pesticides that would be subject to universal waste regulations as defined in Title 40 CFR 273.9.
4. **HAZCLEAN** did not observe thermostats that would be subject to universal waste regulations as defined in Title 40 CFR 273.9.

4.0 SUMMARY OF RECOMMENDATIONS

Summary of Recommendations:

The following recommendations are made concerning universal waste and environmental conditions identified at the Melrose Servants' Barn, Natchez National Historical Park, Natchez, Mississippi.

1. **HAZCLEAN** recommends the 55-gallon drum of PolyPavement be removed from the lean-to portion of the building and stored at a separate location.
2. **HAZCLEAN** makes no further recommendations at this time regarding the study site; however, **HAZCLEAN** reserves the right to modify our opinion should additional information, not available during the time of this investigation, be presented to **HAZCLEAN**.

QUALIFYING STATEMENT

HAZCLEAN has prepared this report for the exclusive use of the client. The report and its findings, conclusions, and recommendations either in part or in its entirety are not to be used or relied on by any other party without prior consent by **HAZCLEAN, the Client or assigns**. The report format is proprietary to **HAZCLEAN**, having been designed, developed, and prepared by **HAZCLEAN** at great expense and the information is secret, confidential, unique, and constitutes the exclusive property of **HAZCLEAN** and shall not be used by any third party without the prior written consent of **HAZCLEAN**. Any use thereof, other than the sole benefit of **HAZCLEAN** or the client, shall be deemed wrongful and will cause irreparable injury to **HAZCLEAN**.

HAZCLEAN presents the findings, conclusions and recommendations, therein, which are based solely on the conditions observed during the inspection and analytical results. The client should be aware that methodologies, results, conclusions, recommendations, and any remediation protocol to be written are based partially upon decisions made by the client concerning the extent of project work to be conducted, and are the results of a limited sampling program conducted on a specific date(s). A different sampling program or samples taken at another time may have resulted in different conclusions, recommendations, and protocols. Additionally, **HAZCLEAN** does not make any representation or projection as to past conditions or future exposures and does not extend its findings to areas outside of the statistical representation of the completed investigation.

Appendix D: Finishes Analysis

Natchez National Historic Park, Melrose Servants' Barn

Historic Paint Investigation Memo



Image 1. Melrose Servants' Barn, c. 1890s. Photo: WJE.

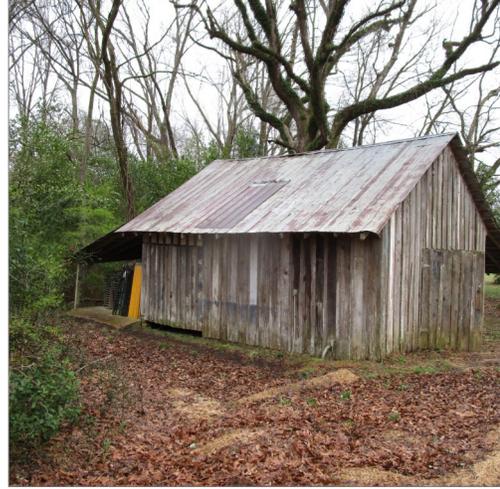


Image 2. Melrose Servants' Barn, c. 1890s. Photo: WJE.

Date: September 24, 2018

Prepared by: Emily MacDonald-Korth

Site: Natchez National Historical Park, 210 State Street, Natchez, MS 39120

Client: Wiss, Janney, Elstner Associates, Inc., 330 Pfingsten Road, Northbrook, Illinois 60062

Analyst: Emily MacDonald-Korth, President and Chief Analyst, Longevity Art Preservation,
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Notes

Longevity Art Preservation, via WJE Inc., carried out historic paint analysis for Melrose Servants' Barn in August 2018. Using cross-sectional optical microscopy, five samples taken from the exterior of the building were analyzed to identify the paint layer stratigraphy.

From the analysis of this sample set, very little stratigraphic continuity across the samples was observed beyond the general structure of a wood substrate with one or more paint layers applied to the surface. An estimated three to five types of wood were observed in the sample set.

While there was some correlation between samples, no distinct layer followed across all samples. Therefore, within the sample set, there was no intact layer that could be used as a reference for color recommendation.

In four of the five samples, at least one white layer was included in the stratigraphy. The other sample included brown paint and possibly a discontinuous layer of white paint; the sample location image shows the sample was taken from a board that appears to have been painted brown, possibly with traces of deteriorated white paint on the surface.

Biological growth was observed within the samples; the sampling location images also show areas of biological growth. Biological growth appears to be isolated to the finish layers and on the surface and does not appear to have affected the wood.

The building may have been constructed of repurposed wooden boards then finished with a thin whitewash (possibly limewash with a carbohydrate and/or protein additive) to unify the structure. Biological growth may have targeted (i.e. eaten) the thin layer of whitewash and/or weathering may have washed away the very thin paint layer, leaving the mismatched boards visible.

A possible treatment for the exterior of the building could be:

1. Biocide treatment to abate the biological growth
2. Whitewash the exterior

Procedure

In the summer of 2018, Emily MacDonald-Korth received five samples by mail. All samples were named by WJE and those sample names were retained. In the laboratory, the samples were examined with a stereomicroscope under low power magnification (20x) to identify the areas of sample with the most complete layering structure, therefore having the potential to give the most information during cross-sectional analysis while leaving a large remaining sample for possible subsequent microexposure steps. Samples aimed at studying the stratigraphy of the finishes were cast in resin cylinders, sanded, and polished to expose the cross-section surface; five samples were mounted and imaged. Once mounted, the cross-section samples were examined and digitally photographed in reflected visible and ultraviolet (UV) light at 40x – 100x. Cross-sectional optical microscopy provided information about paint layer stratigraphy and some characterization of binders and coatings, based on the morphology of layers and particles and autofluorescence of the layers under varying wavelengths. Analytical techniques can be found in Appendix I. Images collected during optical microscopy can be found in Appendix II.

Sample Table

Sample Number	Room	Wall	Location Description
1	Exterior	West	- [No notes]
2	Exterior	West	- [No notes]
3	Exterior	South	- [No notes]
4	Exterior	East	Door to back room
5	Exterior	North	Next to door

Sampling Locations, detail photos (images provided by WJE)

Sample number: 1



Sample number: 2



Sample number: 3



Sample number: 4



Sample number: 5



Appendix I: Analytical Techniques

Non-destructive macroscopic, microscopic, and spectroscopic techniques of examination and analysis were used as much as possible. The observations made through examination were recorded in writing, with digital photodocumentation, and with digital mapping. To obtain information about the stratigraphy and of the paint layers, pigments, binders, and plant fibers, minimally destructive methods of analysis were employed.

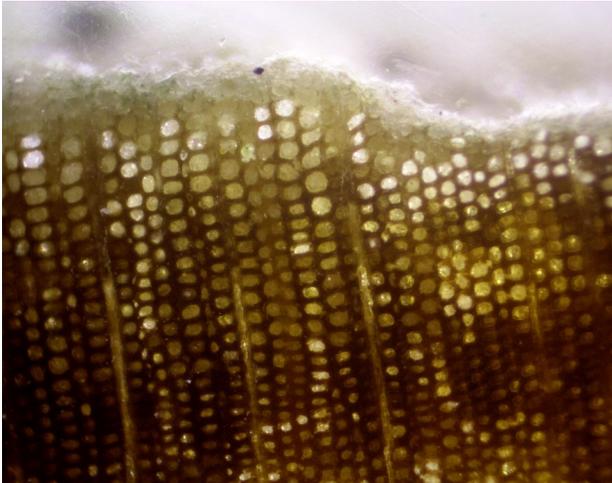
Cross-sectional optical microscopy (with fluorochrome binding media staining) provides information about paint layer stratigraphy and characterization of binders and coatings, based on the morphology of layers and particles and autofluorescence of the layers under varying wavelengths and in combination with biological stains. Samples were collected using a stereomicroscope and stainless steel micro scalpel. The samples were cast into cubes of acrylic resin with a under an ultraviolet bulb. After curing, the cubes were rough sanded using a rotary sander then fine-sanded and dry-polished using Micro-Mesh silicon carbide sandpaper in grits ranging from 1,500-12,000. A Nikon Optiphot II epi-fluorescent microscope (Nikon 4X, 10X, 20X, 40X objectives; 10X oculars), was used to examine the samples under high-powered magnification using a Nikon LH-M100C-1 Mercury light source. Digital images of the magnified samples were taken using the Amscope MU100 digital microscope camera in conjunction with the Amscope software for image capture. Charts displaying specifications for filter cubes and stains used in this study are listed below.

Filter cubes for the Nikon Optiphot II Microscope and their parameters

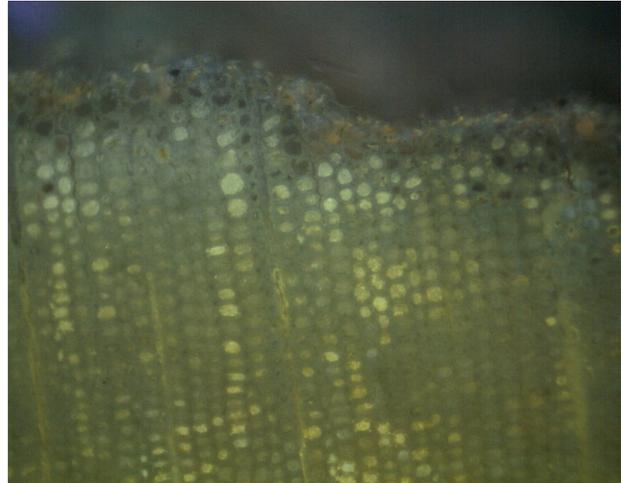
Excitation	Cube	Excitation Range (nm)	Barrier (nm)	Dichroic Mirror Wavelength (nm)
Violet	UV-2B	330-380	435	400

Appendix II: Photomicrographs

Sample number_magnification: 1_100x

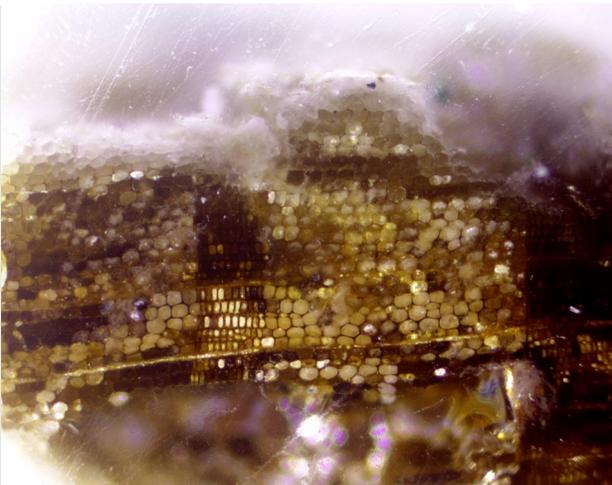


Visible light

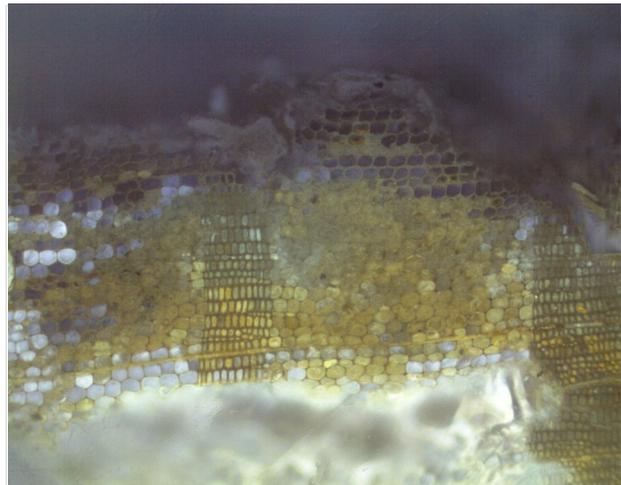


Ultraviolet light

Sample number_magnification: 2_40x

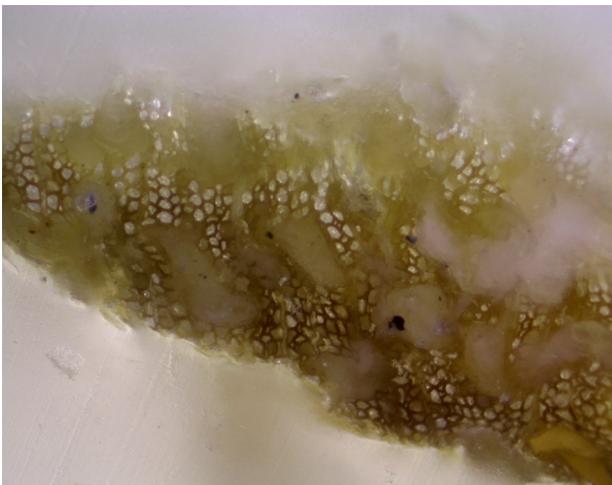


Visible light

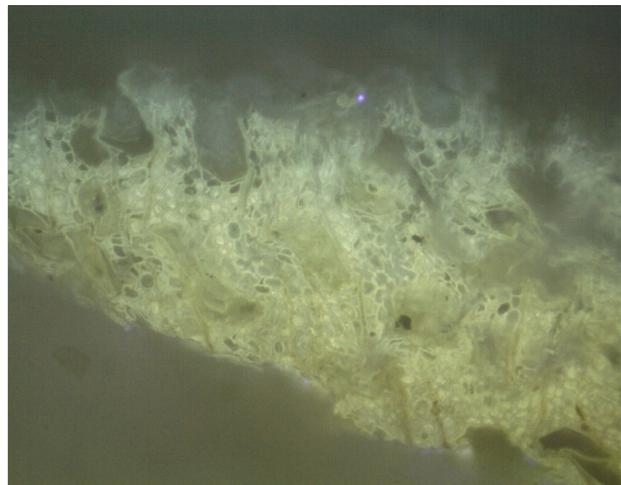


Ultraviolet light

Sample number_magnification: 3_100x

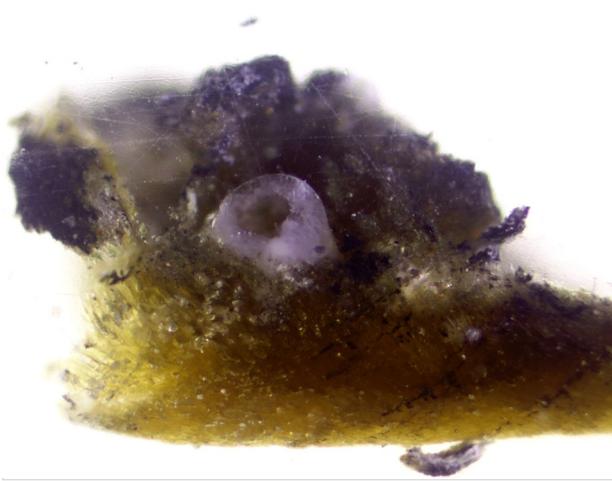


Visible light

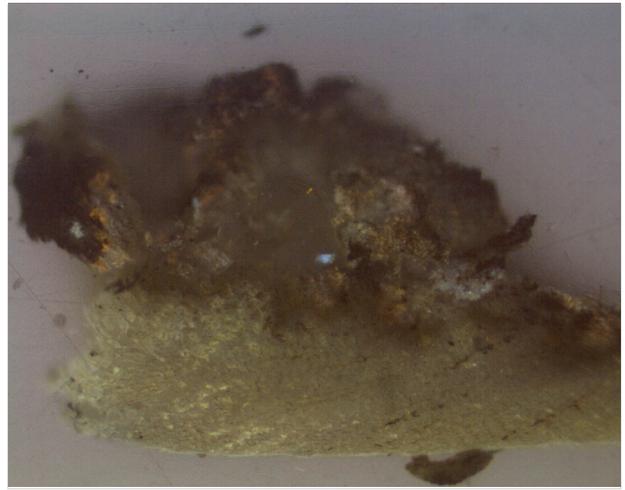


Ultraviolet light

Sample number_magnification: 4_40x

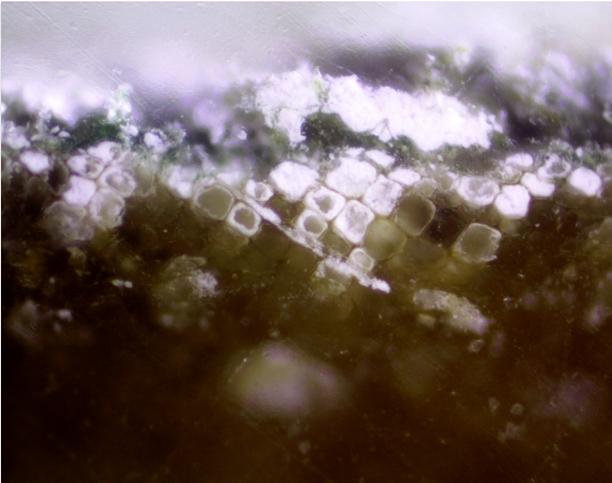


Visible light



Ultraviolet light

Sample number_magnification: 5_100x



Visible light



Ultraviolet light

National Park Service
U.S. Department of the Interior

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Natchez National Historical Park
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www.nps.gov/natc