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Manassas

INTERIOR FINISHES ANALYSIS (PAINT AND WALLPAPER):

THE HENRY HOUSE

Manassas National Battlefield Park
Manassas, Virginia



by Barbara A. Yocum
Architectural Conservator

Building Conservation Branch
Northeast Cultural Resources Center, National Park Service
U.S. Department of the Interior
Lowell, Massachusetts

January 2002

Color Scans
7-15-2002

United States Department of the Interior
NATIONAL PARK SERVICE
Historic Preservation Training Center
4801A Urbana Pike
Frederick, MD 21704

IN REPLY REFER TO:

HPTC H30

January 16, 2002

Memorandum

To: Superintendent, Manassas National Battlefield Park

From: Superintendent, Historic Preservation Training Center

Reference: Henry House Historic Structure Report Project

Subject: Transmittal of *Henry House Interior Finishes Analysis (Paint and Wallpaper)*

Enclosed please find three (3) copies of the subject report. It is part of the Historic Structure Report project being coordinated by HPTC Senior Historical Architect, Tom Vitanza. Architectural Conservator Barbara Yocum of the Building Conservation Branch, Northeast Cultural Resources Center (BCB/NCRC), prepared the Interior Finishes Analysis. This project was reimbursed using the project funds. A copy of the Project Agreement is included for your reference.

The Interior Finishes Analysis Report contains an Introduction and sections discussing Methodologies, Analysis Results for each room, Conclusions and Recommendations. Appendices are also included.

Paint and wallpaper samples removed from the Henry House are now archived at the BCB/NCRC. Further analysis and documentation of these samples as part of the larger rehabilitation package is highly recommended. This may include photomicroscopy of the samples to provide illustrated descriptions and color matching of the samples if a later period of significance is determined.

Appropriate sections of this report will be excerpted and interpreted in the HSR text. Please feel free to contact Tom Vitanza at 301/ 663-8206 x135 if you have any questions about the findings or recommendations of this report.

Douglas Hicks for

H. Thomas McGrath, Jr.

Enclosures (3 copies report and Project Agreement)

cc (w/o encl.):
MANA - Karen Cucurullo, Deputy Superintendent
MANA - Ray Brown, Cultural Resource Specialist
MANA - Jim Thompson, Chief of Maintenance
DSC – John Marsh, Project Manager

cc (w/c encl., report only, distributed by HPTC)
NCRO - Rebecca Stevens, Regional Historical Architect
NCRO - Regional Cultural Resources Library (c/o Stevens)
WASO - Randy Biallas, Chief Historical Architect
DSC-TIC, Chief ✓

United States Department of the Interior

NATIONAL PARK SERVICE
Northeast Cultural Resources Center
Boott Cotton Mills Museum
400 Foot of John Street
Lowell, Massachusetts 01852-1195

IN REPLY REFER TO:

Memorandum

January 9, 2002

To: Tom Vitanza, Senior Historical Architect, Historic Preservation Training Center (HPTC)

From: Stephen Spaulding, Chief, Building Conservation Branch, Northeast Cultural Resources Center (BCB/NCRC)

Subject: Transmittal of Henry House Interior Finishes Analysis, Manassas National Battlefield Park

Enclosed please find nine (9) copies of the above-referenced finishes-analysis report by Architectural Conservator Barbara Yocum, as specified in our project agreement signed in November 2001. Please feel free to contact Barbara directly at (978)970-5138 if you have any question about the findings and recommendations of this report..

Thank you for the opportunity to work with you at the historic Henry House.

Stephen Spaulding

enclosures (9 reports)

cc (w/o encl.):

Tom McGrath, Superintendent, HPTC
Peggy Albee, BCB/NCRC
Linda Conte Torrey, BCB/NCRC
Barbara Yocum, BCB/NCRC

TABLE OF CONTENTS

LIST OF ILLUSTRATIONS AND CREDITS v

INTRODUCTION 1

PROJECT SCOPE 3

BRIEF HISTORICAL BACKGROUND 3

METHODOLOGIES 5

DOCUMENTATION REVIEW 7

PAINT ANALYSIS 7

WALLPAPER ANALYSIS 8

ANALYSIS RESULTS 11

ROOM 101 (Kitchen) 13

ROOM 102 (Museum Room) 17

ROOM 103 (Entry-Stair Hall) 21

ROOM 104 (Bathroom) 25

ROOM 201 (North Room) 29

ROOM 202 (Middle Room) 33

ROOM 203 (South Hall) 37

ROOM 204 (South Room) 41

CONCLUSIONS 45

GENERAL OBSERVATIONS 47

HISTORIC FINISHES: 1896-96 48

RECOMMENDATIONS 49

APPENDICES

A. ANNOTATED FLOOR PLANS A-1

B. PAINT-SAMPLE CHROMOCHRONOLOGIES B-1

C. WALLPAPER DESCRIPTIONS C-1

LIST OF ILLUSTRATIONS AND CREDITS

Cover: Postcard view showing the south and east elevations of the Henry House at Henry Hill. Photograph by Ron and Linda Card, Cards Unlimited Inc., Fredericksburg, VA.

Figures

1. Room 101, view looking northwest. Photograph by Barbara Yocum, November 28, 2001. 15

2. Room 101, view looking southwest. Photograph by Barbara Yocum, November 28, 2001. 15

3. Room 102, view looking north. Photograph by Barbara Yocum, November 28, 2001. 19

4. Room 102, view looking southwest. Photograph by Barbara Yocum, November 28, 2001. 19

5. Room 103, view looking east up the stairs. Photograph by Barbara Yocum, November 28, 2001 23

6. Room 103, front doorway at west wall. Photograph by Barbara Yocum, November 28, 2001. 23

7. Room 104, as viewed through the partition doorway connecting Rooms 103 and 104. Photograph by Barbara Yocum, November 28, 2001. 27

8. Room 201, view looking northwest. Photograph by Barbara Yocum, November 28, 2001. 31

9. Room 201, view looking southeast. Photograph by Barbara Yocum, November 28, 2001. 31

10. Room 202, view looking northwest. Photograph by Barbara Yocum, November 28, 2001. 35

11. Room 202, view looking southeast. Photograph by Barbara Yocum, November 28, 2001. 35

12. Room 203, view looking south. Photograph by Barbara Yocum, November 28, 2001. 39

13. Room 204, view looking southeast. Photograph by Barbara Yocum, November 28, 2001. 43

14. Room 204, detail view of the southwest corner showing painted walls and ceiling beneath the existing wallpaper. Photograph by Barbara Yocum, November 28, 2001 43

Appendix A

First floor plan of the Henry House, annotated with paint-sample locations. Floor plan by Tom Vitanza, Senior Historical Architect, Historic Preservation Training Center, February 2001. Paint-sample locations added by Barbara Yocum, December 2001. ..... A-3

Second floor plan of the Henry House, annotated with paint-sample locations. Floor plan by Tom Vitanza, Senior Historical Architect, Historic Preservation Training Center, February 2001. Paint-sample locations added by Barbara Yocum, December 2001. ..... A-5

INTRODUCTION

PROJECT SCOPE

The scope of this interior finishes study for the Henry House at Manassas National Battlefield Park was described in a project agreement dated October 31, 2001, revised November 9, 2001, and signed November 13 and 14, 2001. This agreement between the Building Conservation Branch of the Northeast Cultural Resources Center (BCB/NCRC) of Lowell, Massachusetts, and the Historic Preservation Training Center (HPTC) of Frederick, Maryland, defined the project as follows:

Tasks to be Accomplished

> Several tasks are required to complete a finishes study for the ongoing HSR [historic structure report]. They include:
>
> (1) review of the draft HSR (in progress); (2) site visit for sample taking, collecting no more than 100 interior paint samples and 5 to 10 wallpaper fragments; (3) paint analysis at Lowell BCB laboratory, including color matching to the Munsell Color Notation System for circa 1896-98 time period; (4) report writing and selected chromochronology charts; (5) a cursory assessment of the extant wallpaper; and (6) compilation, copying, and distribution of nine original copies of the report.

BRIEF HISTORICAL BACKGROUND

The following historical description of the Henry House has been derived from the "Draft Historic Structure Report" by Senior Historical Architect Tom Vitanza.

The original house on Henry Hill, then known as Spring Hill, was constructed circa 1812 by Thomas King. This house was damaged by artillery fire during the first Battle of Manasses (also known as the Battle of Bull Run) in July 1861, which also mortally wounded elderly owner-occupant Judith C. Henry. The house was subsequently dismantled for its materials. It had been completely removed by June 1865, when a nearby monument to the "Memory of the Patriots who fell at Bull Run" was dedicated, based on two photographs of the event.

A new house was constructed on Henry Hill by schoolteacher Hugh F. Henry, the son of Judith C. Henry, circa 1870. This house was sited west of the 1865 monument, in the vicinity of an earlier structure that may have been the original Henry House, judging by stone foundations recently uncovered by archeologists. The house had been enlarged by 1883 with an addition to the north, according to a letter by Hugh Henry dated May of that year that described the house as then measuring its present size--40 feet by 16 feet. The earliest-known photograph of the house is an exterior view dated circa 1884. This shows an unpainted vernacular-style farmhouse of two stories with board siding, window shutters, six-over-six sashes, a single chimney, and a gable roof. The house was still unpainted as late as July 14, 1896, as seen in a photograph of that date showing Hugh Henry seated on the small porch of his house. Henry charged admission at the Henry House for access to the "Bull Run Battlefield" on his property, and an additional fee for maps of the battlefield. He died on

June 30, 1898, leaving the house to his three children. One son, Arthur Henry, is believed to have been the next occupant of the family abode.

The house was sold by the Henry family to the Sons of Confederate Veterans (SCV) in 1922. Alterations were made to the house by the SCV, including the enlargement of a window to a doorway in the south elevation, and the remodeling of the first-story center room as a Museum Room. Resident caretakers during this period included the Powell and Ebhardt families.

Acquisition of the Henry House and surrounding land by the National Park Service occurred in 1940. The house exterior appears to have remained unpainted as late as 1941, based on a description of the structure as a "simple frame residence weathered gray." The house was used as staff quarters from circa 1942 until 1964, and thereafter for storage. Improvements by NPS have included replacement of the original siding with the existing novelty siding, installation of the existing metal roof, and the introduction of indoor plumbing and electrical wiring (circa 1950). The house exterior was first painted white by NPS sometime after 1941. A park report dated October 1964 notes that "the interior of the Henry House was painted by the park labor force," although no details are given. Other general references to painting the Henry House (whether exterior or interior is not specified) appear in park reports dated 1978, 1982, 1986, and 1992. Recent repairs to the window sashes have resulted in the removal of all early paint from the sashes. Work to repair structural deficiencies and termite damage is currently in progress.

The interior of the Henry House has survived largely intact, according the "Draft Historic Structure Report," which notes the following:

> While the exterior has been subject to the greatest number of . . . alterations, the interior has retained much of its original appearance and fabric. . . . The interior, while modernized, has very few irreversible alterations and maintains a high degree of construction period integrity.

The Henry House on Henry Hill did not exist during the first Battle of Manassas in 1861. It stands today, however, as a significant visual landmark on the post-battle landscape. The house has also played an important role in the commemoration of the battle by first serving as a visitor information center during the ownership of Hugh F. Henry (1870-98), and later as a museum during the ownership of the Sons of Confederate Veterans (1922-40). Current plans are to restore the Henry House to its 1896-98 appearance.

METHODOLOGIES

DOCUMENTATION REVIEW

The following documentation on the Henry House was made available for this interior finishes study by Senior Historical Architect Tom Vitanza:

Draft "Historic Structure Report" by Tom Vitanza, October 31, 2001.

"Summary of Research Performed by HPTC as of November 9, 2001."

Copies of historic photographic views of the house exterior, the earliest dated circa 1884. (Note that no historic interior views are known to exist.)

Draft architectural drawings by the Historic American Buildings Survey (HABS).

PAINT ANALYSIS

Eighty eight (88) paint samples total were removed from eight interior rooms in the first and second stories of the Henry House.

Room 101 (Kitchen)	15 samples
Room 102 (Museum Room)	12 "
Room 103 (Entry-Stair Hall)	17 "
Room 104 (Bathroom)	6 "
Room 201 (North Room)	10 "
Room 202 (Middle Room)	12 "
Room 203 (South Hall)	6 "
Room 204 (South Room)	10 "
Total	88 samples

Prior to sampling, site notes were made recording the existing painted finishes of each room, and photographs were taken (figs. 1-14). Small samples of paint were then extracted from representative room elements using an X-Acto knife fitted with a No.-18 blade. Each sample was placed in a separate coin envelope labeled with the sample location. Paint-sample locations were also recorded on floor plans, included in Appendix A of this report. Analysis of the samples was undertaken at the Northeast Cultural Resources Center (NCRC), National Park Service, in Lowell, Massachusetts.

At the NCRC, each paint sample was assigned a log number, which is derived from the center's "Integrated Research Organization System" (IROS). This system provides a three-part code that identifies the site, the building from which the sample was taken, and the sample number. The first sample removed for this study, for example, was assigned log number "MANA HENHSE P01." "MANA" signifies Manassas National Battlefield Park; "HENHSE" is the park's structure designation for the Henry House; the letter "P" indicates that the sample is paint; and the number "01" denotes that this is the first sample removed from the building.

The paint samples were mounted in petrie dishes filled with microcrystalline wax and microscopically viewed using two binocular microscopes. The samples were first examined with reflected tungsten light at 10 to 63 times magnification with a Nikon SMZ-2T microscope. They were next viewed under long-wave ultraviolet light with an Olympus BX-40 microscope.

Certain characteristics of each paint layer were noted and recorded, such as paint color and characteristic appearance under ultraviolet light. Paint-layer colors viewed under visible light were simply described, such as "blue," "green," or "white." Each paint layer was also observed to have a characteristic fluorescence color under ultraviolet light, which was particularly helpful in distinguishing multiple layers of white and cream paints. Lead paints were identified by a spot chemical test using a solution of sodium sulfide and water, in which a positive reaction turns a paint layer brown or black. Paints containing calcium carbonate, such as whitewash and kalsomine, were identified by their characteristic chalky appearance and positive reaction to a spot chemical test using diluted hydrochloric acid. Kalsomine paints were further distinguished from whitewash by the application of warm tap water, which dissolves kalsomine but not whitewash. Finish layers were distinguished from primer layers by the presence of dirt and/or poor adhesion between the paint layers. Chromochronology charts recording the paint layers for each paint sample may be found in Appendix B of this report.

Dating of the paint layers was achieved by removing paint samples from room elements of known date of installation. Rooms in the earliest (southern) portion of the house have been dated circa 1870, while those in the north addition have been dated circa 1883. Changes believed to have been made by the Sons of Confederate Veterans, who owned the house from 1922 to 1940, were dated circa 1922. Alterations associated with the introduction of plumbing and electrical wiring in the house were dated circa 1950. Therefore, for example, the first finish observed in a paint layer removed from an element dated circa 1883 was dated "circa 1883," unless a layer of dirt on the substrate suggested that it had remained unfinished for a period of time.

No color matches were to the Munsell Color Notation system of the paint layers identified as likely dating to the historic time period 1896-98, as explained on "Conclusions" on page 48.

WALLPAPER ANALYSIS

Samples of wallpaper were removed from the walls and ceilings of four rooms of the house as follows:

Room 103
1 layer of body wallpaper
1 layer of border paper
1 layer of ceiling paper

Also, remnants of one earlier body wallpaper and ceiling paper preserved beneath a later molding applied to the upper walls circa 1922.

Room 104	1 layer of body wallpaper 1 layer of ceiling paper
Room 203	1 layer of body wallpaper 1 layer of border paper 1 layer of ceiling paper
Room 204	1 layer of body wallpaper 1 layer of border paper 1 layer of ceiling paper

The wallpaper samples ranged in size from 2-inches square to 16 inches by 19 inches. The samples were mailed by Tom Vitanza to the Northeast Cultural Resources Center for close examination and analysis. There, later paint layers covering the papers were examined under the microscope and recorded. Attempts were then made to carefully remove this overpainting to identify the printed patterns of the wallpapers beneath. This was achieved, where possible, by mechanically peeling the paint from the paper.

Wallpaper patterns and colors were documented with written descriptions, included in Appendix C of this report. Dating of the papers was achieved based on stylistic characteristics of the designs, border widths, and their relative placement on the walls and ceilings.

ANALYSIS RESULTS

ROOM 101
(KITCHEN)

Description

Room 101 is the kitchen, located at the north end of the house. This room was constructed circa 1883 as an addition to the original house of circa 1870. Exposed clapboard siding at the south wall had originally served as the exterior sheathing for the exposed north elevation of the house. Architectural elements dating to circa 1883 include two layers of wide floorboards (presently concealed beneath later flooring), tongue-and-groove wall paneling, one exterior doorway (D-106), two interior doorways (D-102 and D-107), two windows (W-101 and W-105), and a stair to the second story concealed behind a paneled partition at the north wall. A later beaded-board ceiling conceals the original exposed joists and boards of the circa-1883 ceiling, which may be seen within the later southwest closet. Other alterations of unknown date have been made to Room 101 over the years. Two layers of flooring were installed over the original floorboards; the north stair partition was extended farther to the east; a closet was built in the southwest corner; a kitchen sink and cabinets were installed at the east wall; and the stone chimney breast was covered with plasterboard.

The existing painted finishes of the room are in very poor condition today, peeling from all surfaces to reveal earlier green-color paints and bare-wood substrates. Early finishes are preserved within the southwest closet, including a whitewash-like finish on the stone chimney breast, and a cream-color paint applied to the south clapboards and exposed ceiling elements. Another early painted finish was also observed by historical architect Tom Vitanza on ceiling elements preserved above the existing beaded-board ceiling during structural stabilization work. This area was unfortunately not accessible at the time of this paint analysis. The room was most recently finished with a white-color paint applied to the paneled walls, beaded-board ceiling, doors, window sashes, and the trim at the doorways and windows. This last painting may date to 1964, when the park reported "the interior of the Henry House was painted by the park labor force."

Paint Samples

Fifteen paint samples were examined from Room 101 for the paint analysis. These samples were assigned log numbers MANA HENHSE P01-P015. See Appendix A, page A-3, for an annotated floor plan showing paint-sample locations. See Appendix B, pages B-3 through B-5, for a record of the paint layers (chromochronologies) identified for each individual paint sample.

Wallpaper Samples

No wallpaper was found in Room 101.

Analysis Results

General Observations. Of all the rooms in the house, the kitchen was found to have been painted with the most frequency. The paint analysis was useful in identifying the approximate dates of several room elements. The east addition to the north partition wall

appears to have been installed sometime before 1922, the later beaded-board ceiling and molding circa 1922, and the extant six-over-six window sashes at W-101 sometime after 1922. The clapboards and exposed ceiling in the southwest closet have only one layer of cream-color paint applied circa 1950.

Circa 1883. The kitchen was simply finished following its construction circa 1883. The woodwork of the room was unpainted originally, as evidenced by a heavy layer of dirt between the wood substrate and the first layer of paint. Unpainted elements included the paneled walls, doors, trim, and presumably also the exposed joists and boards of the ceiling. Only the plaster-covered stone chimney breast at the south wall appears to have been finished with whitewash.

Pre-1922. At some unknown time after circa 1883 and before circa 1922, a closet was created in the southwest corner of the kitchen, and the room's woodwork was finished with a buff-color, kalsomine-type paint, and later with a white kalsomine-type paint. This paint was applied to the paneled walls outside the closet, the board-and-batten doors, and the trim at the doorways and windows. The exposed joists and boards of the ceiling may also have been covered with this buff-color paint (no paint samples were available for this study). The chimney breast retained its whitewash finish.

Circa 1922. A beaded-board ceiling and upper-wall molding were likely installed in the kitchen around 1922, when the house was acquired by the Sons of Confederate Veterans. This is based on the use of wire nails in their installation, and the fact that a similar molding was installed about this same time in Room 103. The moldings in both Rooms 101 and 103 were both first finished with a white paint characterized by its crystalline appearance, and yellow-green fluorescence under near ultraviolet light. This white paint was also used on the paneled doors, and the trim at the doorways and windows. The paneled walls and the exposed chimney breast were painted with kalsomine-type paints: light green on the walls and chimney, and cream on the ceiling.

Post-1922 to 1964. The kitchen was painted approximately 18 times between circa 1922 and 1964. Light-green-color paint was preferred for the walls (later changing to cream), and cream for the ceiling, paneled doors, and woodwork trim. The most recent white paint was probably applied in 1964, when the interior of the Henry House was reported to have been "painted by the park labor force."



Figure 1. Room 101, view looking northwest.



Figure 2. Room 101, view looking southwest.

ROOM 102
(MUSEUM ROOM)

Description

Room 102 is the middle room in the first story. It is part of the original house that was constructed circa 1870. The original use of this room has not been identified, although a reasonable guess would be a combination kitchen and sitting room. It was likely upgraded to a parlor when the north adjacent kitchen was constructed circa 1883. The room was later used as a "museum room" by the Sons of Confederate Veterans during their ownership of the house from 1922 to 1940. Caretaker families occupied the house following its acquisition by the National Park Service in 1940, who probably used Room 102 as a living room. The entire house, including Room 102, has been used by NPS for storage since 1964. The floor in Room 102 was removed during structural stabilization work in 2001 and is missing today.

Original elements of the Room 102 that are believed to date to circa 1870 include the plastered walls and ceiling on sawn lath, one interior doorway with four-panel door in the south wall (D-103), two window openings (W-102 and W-104), a wooden fireplace mantel centered at the north wall, a baseboard with simple bead molding, and molded trim at the doorway and window openings. A second interior doorway, with four-panel door and plain-board trim, was added to the north wall of the room circa 1883. Existing 2-over-2 window sashes replaced the room's original six-over-six sashes circa 1922, according to exterior photographic views of the house. Electrical outlets are thought to have been introduced around 1950. The circa-1922 window sashes were recently restored by the park.

Paint Samples

Twelve paint samples were examined from Room 102 for the paint analysis. These samples were assigned log numbers MANA HENHSE P16-P27. See Appendix A, page A-3, for an annotated floor plan showing the paint-sample locations. See Appendix B, pages B-6 and B-7, for a record of the paint layers (chromochronologies) identified for each individual paint sample.

Wallpaper Samples

No wallpaper was found in Room 102.

Analysis Results

General Observations. One surprising finding for Room 102 was the identification of later plaster on the walls and ceiling that appears to have been applied to the original sawn lath. This likely occurred around 1922, when the room was converted to a museum room by the Sons of Confederate Veterans. The paint analysis also confirmed that the fireplace mantel is probably an early feature of the room, predating circa 1922 and likely as early as circa 1870. No paint samples were removed from the circa-1922 window sashes, since recent restoration by the park has completely removed the early paints from the sashes.

Circa 1870-83. The woodwork in Room 102 remained unpainted for many years, based on the presence of dirt between the wood and the first layer of paint. A waxy substance may have been applied to the woodwork during this time, based on samples removed from the baseboard, doorway trim, and fireplace mantel. No evidence of early finishes survives for the existing plaster walls and ceiling, which appear to have been replastered circa 1922.

Pre-1922. Sometime after circa 1883 and before circa 1922, the woodwork in Room 102 began to be painted with a white, non-lead paint. As many as four paint layers were observed on the trim at the south doorway (D-103), and three paint layers on the baseboard at the east wall and the doorway trim at the north doorway (D-102). It is not known how the plaster walls and ceiling were finished at this time, since the plaster appears to have been replaced around 1922.

Circa 1922. The woodwork of Room 102 was repainted white around 1922, based on the findings of the paint analysis. This is the same white paint, with characteristic crystalline appearance and yellow-green fluorescence, that was observed as a first finish on elements installed in the adjacent entry hall (Room 103) circa 1922. The plaster walls and ceiling are also believed to have been replaced with the existing plaster at this time. These appear to have been finished with wallpaper and ceiling paper, based on wallpaper fibers preserved beneath later painted finishes. No samples of the wallpaper survive today.

Post-1922 to 1964. Sometime after 1922, wallpaper and ceiling paper were removed from the room, and the walls, ceiling, and woodwork were finished with a cream-color paint. Pastel paint colors were introduced around 1940-50, when the walls were first painted blue-green, and later pink, with cream-color woodwork. Monochromatic paint schemes of light green, and later violet, were implemented in later years. The entire room was most recently painted white, most likely in 1964 when the interior of the Henry House was reported to have been "painted by the park labor force."



Figure 3. Room 102, view looking north.



Figure 4. Room 102, view looking southwest.

ROOM 103
(ENTRY-STAIR HALL)

Description

Room 103 is the entry-stair hall located at the south end of the first story in the original (1870) portion of the house. Original features believed to date to circa 1870 include wide floorboards, plaster walls and ceiling, the main exterior doorway with four-panel door in the west wall (D-106), one interior doorway with similar four-panel door in the north wall (D-103), simple baseboards with top bead, molded trim at the two doorways, and the stair and railing at the south wall leading to the second story. A second exterior doorway, with paneled door and plain-board trim, was enlarged from an earlier window opening in the south wall by the Sons of Confederate Veterans around 1922. The bottom riser was removed from the stair at this time, and the railing was foreshortened, to make room for the new doorway. A molding installed at the upper walls of the room using wire nails also likely dates to 1922. A bathroom was later installed on the east side of Room 103 around 1950, separated by a new wallboard partition wall. This bathroom is discussed separately in this report as Room 104. The floor framing and flooring were removed from the west side of the room for structural repair work in 2001.

The finishes in Room 103 include both paint and wallpaper that are in poor condition. The paint is peeling, and the wall and ceiling papers are hanging off their plaster substrates. One layer of wallpaper and ceiling paper was observed on the plaster walls (not including the later east partition) and ceiling. Small swatches of an earlier wall and ceiling paper were also found preserved behind the circa-1922 molding at the upper walls. The room was most recently finished with a white-color paint applied to the wall and ceiling papers, the doors, door trim, baseboards, and stair stringer. The stair is finished with brown paint on the treads and risers, and green paint on the balusters, handrail, and railing newel.

Paint Samples

Seventeen paint samples were examined from Room 103 for the paint analysis. These samples were assigned log numbers MANA HENHSE P28-P44. See Appendix A, page A-3, for an annotated floor plan showing the paint-sample locations. See Appendix B, pages B-8 through B-10, for a record of the paint layers (chromochronologies) identified for each individual paint sample.

Wallpaper Samples

Samples of two layers of wall and ceiling paper were removed from Room 103 for analysis: the earlier from beneath the upper-wall molding of circa 1922; the later from the walls and ceiling of the room.

Analysis Results

General Observations. The large number of datable architectural elements in Room 103 made it one of the easiest rooms in which to interpret the findings of the paint analysis.

The earliest paint layer on the trim of the circa-1922 doorway trim, for example, was clearly dated circa 1922. This paint was also found in Rooms 101 and 102, enabling dating of the circa-1922 paint in those rooms.

Circa 1870. The findings of the paint analysis suggest that Room 103 was originally finished with whitewashed walls and ceiling, and unpainted woodwork.

Pre-1922. Sometime between circa 1870 and 1922, the woodwork of Room 103 began to be painted with a white, non-lead paint. As many as two layers of this paint were identified in the paint samples examined for this paint analysis. The walls continued to be finished with whitewash.

Circa 1922. A complete redecoration of Room 103 occurred circa 1922, along with the addition of a new exterior doorway in the south wall and modifications to the stair. Both the walls and the ceiling were covered with paper, a 2-inch-wide ribbon of which survives beneath a molding installed at the upper walls of the room. The body wallpaper is machine-printed with a stylized botanical design in colors of blue, white, gray, and glitter (a non-metallic, sparkling material) on a plain paper ground. The ceiling paper, which was overlapped at the upper wall by the wallpaper, was also machine-printed with a widely spaced geometric design in colors of blue and white on a pale white ground.

The woodwork in the room was given a fresh coat of white paint circa 1922. This paint is distinguished from the other layers of white paint in the room by its crystalline appearance when viewed under magnification, and green-yellow fluorescence under near ultraviolet light. White paint was applied to the doors, door trim, baseboard, stair stringer, and stair railing. It is also the first layer of paint applied to the upper-wall molding, which establishes the date of the molding as circa 1922. The floorboards, and the treads and risers of the stair, appear to have been finished with varnish.

Post-1922. Sometime after circa 1922 and before circa 1950, the wallpaper and ceiling paper were removed, except where covered by the wall molding. The plaster walls, ceiling, and wood molding were then finished with a yellow kalsomine paint, and the woodwork painted a cream color. It is not known how long this scheme remained before a second papering of the room occurred, also before circa 1950. The walls and ceiling were then hung with the wallpaper and ceiling paper that adorn the room today. Although painted over in later years, careful removal of the paint from the wallpaper reveals a machine-printed pattern of flowers and stripes in colors of pink, white, and blue on a gray ground. A narrow border, 2 1/8-inches wide, was applied below the upper-wall molding, with a machine-printed design of a classical egg-and-dart motif in colors of green and white on a plain ground. The overpainting could not be removed from the ceiling paper to ascertain its design. The woodwork of the room was painted cream at this time.

Circa 1950 to 1964. Around 1950, when the east partition wall was installed, the existing wallpapered walls were painted mint green, the papered ceiling light gray, and the woodwork white. The last (circa-1964) painting of the room colored the walls and woodwork white, the stair treads and railing brown, and the stair railing green.



Figure 5 (Left).

Room 103, view looking east up stairs.



Figure 6 (Right).

Room 103, front doorway at west wall.

ROOM 104
(BATHROOM)

Description

Room 104 is a small bathroom located off the entry-stair hall (Room 103), in the original part of the house. This room is believed to have been partitioned from the hall around 1950 when indoor plumbing was installed in the house. A date of circa 1950 is based on two pieces of evidence. First is a park report dated February 1949 that recorded "no electricity" and "no plumbing" in the house. Second is the manufacturing date of "April 25, 1949" stamped inside the extant toilet tank. A date of circa 1950 was therefore assigned to the room, since plumbing fixtures are typically installed within a year of their manufacturing date.

Architectural elements in Room 104 that date to the original (circa-1870) construction of the house include the plaster ceiling and the exposed stair stringer at the south wall. Although the north, east, and south walls are original, they are covered with modern wallboard and tileboard that presumably dates to the creation of the bathroom circa 1950. Also installed circa 1950 were the west partition with two-panel door and plain-board trim, the window in the east wall, and the tile floor. While the six-light sash of the window may have been reused circa 1950, its recent restoration by the park has removed all early layers of paint.

The bathroom is finished today with white-painted wallpaper, ceiling paper, door, window, and woodwork trim. Unpainted wallpaper is preserved on the east and south wallboard walls of the southeast cabinet.

Paint Samples

Six paint samples were examined from Room 104 for the paint analysis. These samples were assigned log numbers MANA HENHSE P45-P50. See Appendix A, page A-3, for an annotated floor plan showing the paint-sample locations. See Appendix B, page B-11 for a record of the paint layers (chromochronologies) identified for each individual paint sample.

Wallpaper Samples

Samples of the single layer of wall and ceiling papers were removed from Room 104 and its southeast cabinet for analysis.

Analysis Results

General Observations. Most of the materials and finishes within Room 104 were found to date to the circa-1950 creation of the bathroom. Removal of these materials, such as the floor tiles and wallboard, will undoubtedly reveal earlier finishes.

Pre-1950. Early finishes predating 1950 were identified as four layers of whitewash on the plaster ceiling, and two layers of white paint on the stair stringer. These correspond to early finishes in Room 103, of which Room 104 was once a part.

Circa 1950. The new bathroom was given the following finishes upon its installation circa 1950. Vinyl tiles were installed on the floor; the walls were covered with wallboard and finished with tileboard on the lower walls, wallpaper on the upper walls; paper was applied to the ceiling; the woodwork trim was painted cream; and the room's paneled door was painted dark green. The pattern of the wallpaper and ceiling paper could not be ascertained due to later layers of paint applied to the upper walls and ceiling. However, a clue may be obtained from the unpainted wallpaper preserved on the south and east walls of the room's southeast cabinet. The design of this paper is one typically used on ceilings, being an abstract and non-directional pattern printed in glitter (a non-metallic, sparkling material) on a cream-color ground.

Post-1950 to 1964. Room 104 has been painted three times since circa 1950. The first covered the wallpapered walls with pink paint, the ceiling and woodwork trim with white-cream paint, and the door with yellow paint. The second painting of the room was in monochromatic blue, except for the door that was painted cream. The room has most recently been painted white, which most likely took place in 1964 when the park reported "the interior of the Henry House was painted by the park labor force."



Figure 7. Room 104, as viewed through the partition doorway connecting Rooms 103 and 104.

ROOM 201
(NORTH ROOM)

Description

Room 201 is the north room in the second story of the house, located above the kitchen. This room was constructed circa 1883 as an addition to the original house of circa 1870. Clapboard siding at the south wall originally served as the exterior sheathing for the exposed north elevation of the house. The chimney at the south wall is also a feature of the original house, although its plastered and trimmed finish dates to the room's creation circa 1883. Other architectural elements dating to circa 1883 include the wide floorboards, plaster walls and ceiling, one interior doorway at the south wall (D-201), two windows with six-over-six sashes (W-201 and W-207), plain-board trim and baseboards, and a railing and stair leading to the first story at the south wall. Of unknown vintage is the room's four-panel door, which differs in style from all the other doors in the house. Window sashes in the east wall have been recently replaced by the park with ventilation louvers.

The existing painted finishes in Room 201 are in poor condition, peeling from both plaster and wood substrates. Light-green paint covers the plaster walls and ceiling. White paint finishes the paneled door, window sashes, baseboards, trim, and stair railing. The floorboards have no painted or other visible finish. Recent restoration of the window sashes by the park has stripped the sashes of all early layers of paint.

Paint Samples

Ten paint samples were examined from Room 201 for the paint analysis. These samples were assigned log numbers MANA HENHSE P51-60. See Appendix A, page A-5, for an annotated floor plan showing the paint-sample locations. See Appendix B, pages B-12 and B-13, for a record of the paint layers (chromochronologies) identified for each individual paint sample.

Wallpaper Samples

No wallpaper was found in Room 201.

Analysis Results

Circa 1883. It is clear from the examination of the paint samples from Room 201 that this room remained unpainted for some period of time, based on a heavy layer of dirt deposited on both plaster and wood substrates. How long the room remained in this unfinished state could not be determined.

Unknown Date. The first painting of the room occurred at some unknown time after circa 1883. White kalsomine paint was applied at this time to the plaster walls and ceiling, and to the clapboards at the south wall. All other woodwork, such as the baseboards, door, and trim, remained unpainted.

Post-1922 to 1964. The next painting of the room appears to have taken place sometime after circa 1922, based on the dark green paint that was used on both the stair railing of Room 201 and the walls of Room 101. Kalsomine paint tinted a light peach color was applied to the walls, baseboards, and trim, and yellow kalsomine was applied to the ceiling. This was the first painting of the room's woodwork trim. Absence of this paint from the paneled door, and the presence of an early varnish finish not found elsewhere in the room, is suggestive of the door's reuse from some other location. This is further indicated by the style of the door and its loose-pin hinges, which do not match the other doors of either circa 1870 or circa 1883.

Room 201 has been painted three additional times since the post-1922 paint scheme of light peach and dark green. First, the walls, clapboards, and ceiling were overpainted with light-blue paint, and the woodwork with white/cream. Next, the walls, clapboards, and ceiling were repainted a slate blue, and the woodwork white/cream. The paneled door may have been introduced in the room at this time. The most recent treatment painted the walls, clapboards, and ceiling light green, and the woodwork white. This likely occurred sometime before 1964, when white paint is believed to have been applied by the park to the downstairs rooms.



Figure 8. Room 201, view looking northwest.

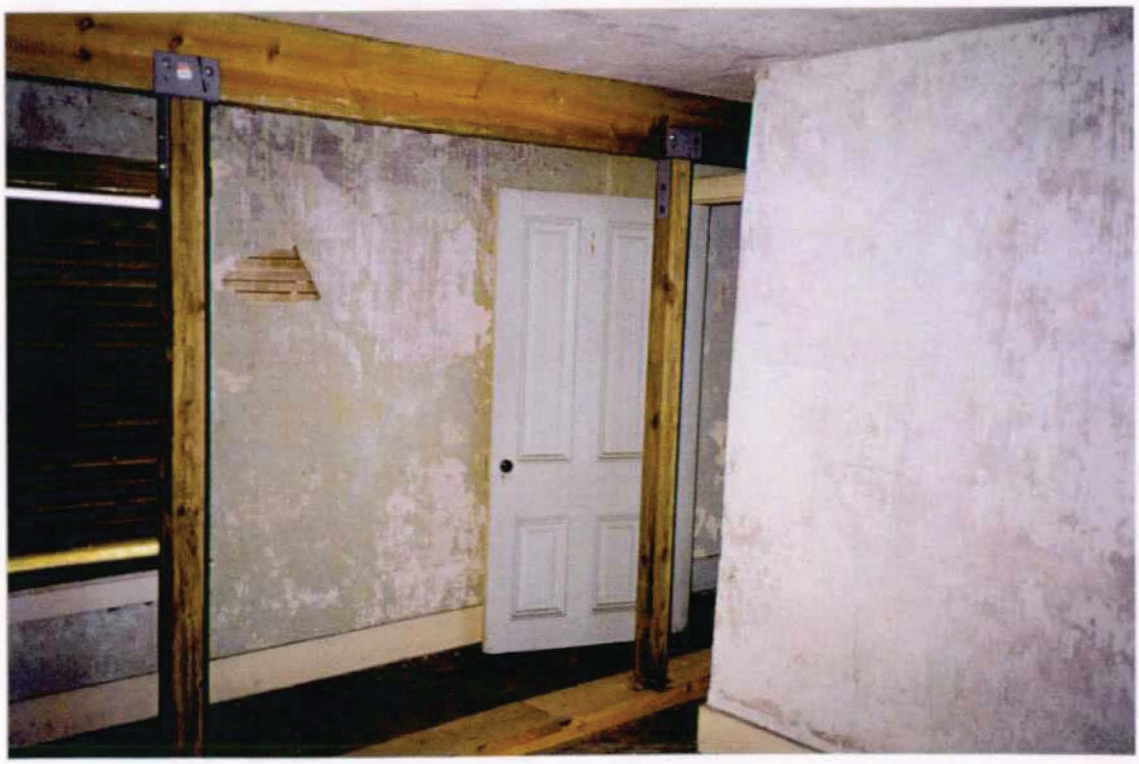


Figure 9. Room 201, view looking southeast.

ROOM 202
(MIDDLE ROOM)

Description

Room 202 is the middle room in the second story, located in the original (circa-1870) portion of the house. Original elements of the room are believed to include the wide floorboards, plaster walls and ceiling, one doorway with four-panel door in the south wall (D-202), two windows with six-over-six sashes in the east and west walls, (W-202 and W-206), beaded baseboards, molded trim, and wooden mantel centered at the north wall. A doorway was installed in the north wall circa 1883, with simple board trim (D-201). The four-panel door in this doorway may be later, based on its style that differs from other doors in the house and loose-pin hinges.

The room's painted finishes are in poor condition, peeling from both plaster and wood substrates. The color scheme is generally monochromatic, with light-blue paint applied to the walls, ceiling, doors, baseboards, trim, and mantel. The floorboards are plain and unfinished. The window sashes are painted white, having been recently stripped of their early paint and restored by the park.

Paint Samples

Twelve paint samples were examined from Room 202 for the paint analysis. These samples were assigned log numbers MANA HENHSE P61-72. See Appendix A, page A-5, for an annotated floor plan showing the paint-sample locations. See Appendix B, pages B-14 and B-15, for a record of the paint layers (chromochronologies) identified for each individual paint sample.

Wallpaper Samples

No wallpaper was found in Room 202.

Analysis Results

General Observations. Of the three living spaces in the second story, Room 202 is the most formal, being equipped with a fireplace and mantel.

Circa 1870-83. The room's earliest paint scheme included whitewashed walls and ceiling, and unpainted woodwork. No fewer than five layers of whitewash were counted on the plaster walls, and three layers on the ceiling. It is not known how long the room maintained this simple appearance, although it is likely to have existed circa 1870 through 1883.

Post-1922 to 1964. Color was first introduced into Room 202 when the walls were painted with blue-tinted kalsomine. The room's woodwork was also then painted for the first time with a white paint. When this occurred is not known, although a likely guess would be sometime after 1922, based on dating of the corresponding tinted kalsomine paint in the north adjacent room (Room 201). Four additional paintings of the room have followed the blue-and-white paint scheme. First, the walls and trim were painted with gray kalsomine paint, and the baseboards, south door, and mantel with white-cream paint. Second, the walls and ceiling were painted yellow and the woodwork cream. The paint evidence suggests that the north four-panel door may have been installed at this time, having been reused from some other location. Third, the walls were painted red, the ceiling yellow, and the woodwork white/cream. Most recently, the entire room was painted with a light-blue-color paint. This likely occurred sometime before 1964, when white paint appears to have been employed by the park in the downstairs rooms.



Figure 10. Room 202, view looking northwest.



Figure 11. Room 202, view looking southeast.

ROOM 203
(SOUTH HALL)

Description

Room 203 is the upper stair hall located in the original (circa-1870) portion of the house. Original features of this room include wide floorboards, plaster walls and ceiling, two doorways with four-panel doors (D-202 and D-203), one window in the east wall with six-over-six sashes (W-203), beaded baseboards, and molded trim.

The painted finishes of this room are in poor condition, failing from all plaster and wood substrates. Both the walls and ceiling are covered with paper, the walls are painted mint green (faded to light blue), and the ceiling light gray. Mint green/light-blue paint also finishes the electrical outlet plate at the west wall. The woodwork is painted white, the floorboards are brown. The window sashes were recently restored and their early paint layers removed by the park.

Paint Samples

Six paint samples were examined from Room 203 for the paint analysis. These samples were assigned log numbers MANA HENHSE P73-P78. See Appendix A, page A-5, for an annotated floor plan showing the paint-sample locations. See Appendix B, page B-16, for a record of the paint layers (chromochronologies) identified for each individual paint sample.

Wallpaper Samples

Samples of one layer of wall and ceiling paper were removed from Room 203 for analysis.

Analysis Results

General Observations. The upper stair hall (Room 203) appears to have been historically finished in a similar manner to the entry-stair hall (Room 103).

Circa 1870-83. The earliest finishes of this room were identified as whitewashed walls and ceiling and unpainted woodwork, similar to Rooms 103, 202, and 204. No fewer than six layers of whitewash were counted on the walls, and three layers of whitewash on the ceiling. It is not known how long the room maintained this simple appearance, although there is little doubt that it was retained through circa 1883.

Pre-1950. At some unknown time between circa 1883 and 1950, the woodwork in Room 203 was painted for the first time with a cream-color kalsomine paint, later followed by several paintings in white or cream. The walls and ceiling were also papered sometime after circa 1922 and before 1950 with the same papers hung most recently in Room 103. Although painted over in later years, careful removal of the paint from the wallpaper reveals the same pattern as found in Room 103, being a machine-printed design of flowers and

stripes in colors of pink, white, and blue on a gray ground. A narrow border, 2 1/8-inches wide, was applied to the upper wall, with a machine-printed design of a classical egg-and-dart motif in colors of green and white on a plain ground. The overpainting could not be removed from the ceiling paper to ascertain its design. The woodwork of the room was painted white at this time.

Circa 1950. The last painting of Room 203 is believed to have occurred around 1950, which date was derived from the analysis of paint samples in Room 103. The wallpaper was then painted a mint-green color (since faded to light blue), the ceiling light gray, and the woodwork white. The existing coat of varnish observed in the floor sample may have been applied to the flooring at this time.



Figure 12. Room 203, view looking south.

ROOM 204
(SOUTH ROOM)

Description

Room 204 is the south room in the second story in the original (circa-1870) portion of the house. Original features of this room include the wide floorboards, plastered walls and ceiling, one doorway with four-panel door (D-203), one window in the south wall (W-204), one window in the west wall with six-over-six sashes (W-205), beaded baseboards, and molded trim. The sashes in the south window have been recently replaced by the park with ventilation louvers. The sashes in the west window have been recently restored and stripped of their early paint layers.

The finishes in this room are in poor condition, failing from both plaster and wood substrates. The wallpaper-covered walls are painted light pink, as are the baseboards and an electrical outlet plate. The ceiling is also papered and painted cream-yellow. White paint finishes the window and doorway trim, and the walls in the northeast corner in the location of a former closet.

Evidence of an earlier decorative treatment is also visible in the southwest corner of the room where the wallpaper is missing from the wall. Here, a peach-color paint covers the walls up to the height of the upper window trim, while the upper 8 inches of wall above the level of the window appear to be painted the same light color as the ceiling.

Paint Samples

Ten paint samples were examined from Room 204 for the paint analysis. These samples were assigned log numbers MANA HENHSE P79-P88. See Appendix A, page A-5, for an annotated floor plan showing the paint-sample locations. See Appendix B, pages B-17 and B-18, for a record of the paint layers (chromochronologies) identified for each individual paint sample.

Wallpaper Samples

Samples of one layer of wall and ceiling paper were removed from Room 204 for analysis.

Analysis Results

General Observations. The paint evidence was not helpful in conclusively determining whether or not the east and south partition walls in this room are original, as had been questioned by historical architect Tom Vitanza. The design of the woodwork moldings and four-panel door at these walls would strongly suggest, however, that the walls do in fact date to circa 1870.

Circa 1870-1883. The earliest finishes in this room as determined by the paint analysis were whitewashed walls and ceiling and unpainted woodwork, similar to Rooms 103, 202, and 203. No fewer than four layers of whitewash were counted on the walls, and three layers of whitewash on the ceiling. Dirt observed on the wood substrate of the room's woodwork is strong evidence that the woodwork remained unpainted for some unknown period of time.

Post-1922 to Circa 1964. Peach-color paint was applied on top of the whitewash up to the level of the upper window trim at some unknown date—most likely sometime after 1922, when similar peach-tinted kalsomine was used in Room 201. The woodwork was painted white at this time. The peach-colored walls were next covered with wallpaper, and the ceiling with ceiling paper. Although painted over in later years, areas of paint failure indicate that the wallpaper is a floral pattern machine-printed in colors of pink, blue, white, and glitter (a non-metallic, sparkling material), on a plain ground. A corresponding border paper 2 3/8-inches wide printed in similar colors embellished the upper walls near the ceiling. The pattern of the ceiling paper could not be ascertained. The woodwork was painted cream-white. The room has been refinished twice since installation of the wallpaper. First, the wallpaper was painted a light blue-green color, the ceiling white, and the woodwork cream-white. The most recent painting colored the walls and baseboard light pink, except in the northeast corner where the interior walls of a now-missing small closet were painted white. The woodwork was also painted white. This last painting is believed to have occurred sometime before 1964.



Figure 13 (Left).

Room 204, view looking southeast.



Figure 14 (Right).

Room 204, detail view of southwest corner showing painted walls and ceiling beneath existing wallpaper.

CONCLUSIONS

GENERAL OBSERVATIONS

The following observations are based on the findings of the finishes analysis.

Paint Condition

The painted finishes in all rooms of the house were found to be in poor condition, flaking from both plaster and wood substrates. The integrity of the paint samples was therefore compromised, particularly on elements such as the baseboards. Historic paint layers were completely missing from most of the window sashes, which have been recently restored by the National Park Service. No paint samples were therefore removed from the sashes, except in Room 101 where the east-window sashes remain in unrestored condition.

Painting Frequency

Rooms in the first story were observed to have been painted with more frequency than rooms in the second story, with the most paint layers identified in the kitchen (Room 101). Paneled walls, plaster walls, and woodwork trim in all the rooms are painted today, although this does not always appear to have been the case (see "Historic Finishes: 1896-98").

Paint Types and Dates

Several paint types were identified by the analysis: whitewash, kalsomine, and oil-based. Whitewash is an inexpensive finish that typically consists of lime mixed in water. Kalsomine is a chalk-based paint that is bound with glue and mixed in warm water. Oil paints are typically comprised of linseed oil, dryers, and pigments. Surprisingly few oil-based paints at the Henry House were found to contain lead. Whitewash was the earliest identified finish that was applied to selected plaster walls and ceilings. Kalsomine and oil-based paints were used later (after circa- 1896-98) on the plaster walls and ceilings, and on selected woodwork elements.

Floor Finishes

The presence of multiple layers of flooring in several rooms of the house, and the complete removal of the flooring in Room 102, made identification of early flooring finishes problematic. Most of the exposed wooden floorboards in the house appear to have been unfinished, except in the entry hall and upper stair hall (Rooms 103 and 203). Here, the floorboards and stair treads were varnished beginning around 1922, and later painted brown.

Wallpaper Finishes

Wallpapers were identified in four of the eight rooms: 103, 104, 203, and 204. These include body paper, narrow border paper, and ceiling paper in Rooms 103, 203, and 204, and body paper and ceiling paper in Room 104. Two episodes of papering are evident in Room 103, while only one papering survives in Rooms 104, 203, and 204. All of the existing papers appear to have been applied between circa 1922 and 1950. The patterns of most have been obscured by one or more layers of paint, except where protected by an upper wall

molding in Rooms 103 and 203, and preserved within an under-stair cabinet in Room 104. All of the papers have machine-printed designs on mechanical wood-pulp paper. The narrow borders are a type that became popular after circa 1915.

Room 102 was finished with wallpaper circa 1922, based on the physical evidence of wallpaper fibers preserved on the circa-1922 plaster walls and ceiling. No wallpaper remnants, except the small fibers, survive in Room 102 today.

Dating of Selected Room Elements

The finishes analysis was useful in roughly dating selected room elements based on their paint evidence. The antiquated look of the wood substrate and paint evidence confirmed, for example, that the fireplace mantels in Rooms 102 and 202 predate circa 1922 and may be as early as circa 1870. Elements that appear to have been introduced during ownership of the Sons of Confederate Veterans (1922-40) were also identified, including the east window sashes, beaded-board ceiling, and upper-wall molding in Room 101; the plaster walls and ceiling in Room 102; and the paneled door in Room 201.

HISTORIC FINISHES: 1896-98

Identification of the historic interior finishes of the Henry House for the time period 1896-98 was hampered by the lack of both documentary information and conclusive physical evidence. No interior photographs are known to exist for this time, nor have any written descriptions of the interior rooms been found. Physical evidence is also lacking in the form of alterations that may have been introduced at this time. The historic finishes identified here for 1896-98 were therefore based exclusively on the available paint evidence.

The interior rooms of the Henry House appear to have remained simply finished for many years with whitewash applied to most of the plaster walls and ceilings, with the woodwork left plain and unpainted except for what may have been a wax-paste finish. One room in the second story, Room 201, was left completely unfinished, with exposed plaster walls, plaster ceiling, and woodwork. Physical evidence for the unpainted woodwork and plaster elements includes dirt and grime observed on these surfaces, beneath the first layer of paint. This may also be a contributing factor in the extensive paint failures in every room of the house.

While this interior treatment seems unusually austere, it nevertheless appears to have suited owner Hugh F. Henry, who built and occupied the house from circa 1870 until his death in 1898. Henry was equally conservative with the house's exterior finishes, judging by two exterior photographs taken circa 1884 and July 14, 1896 that show all exterior elements of the front (west) façade unpainted and exposed to the weather. These included the wooden siding, trim, paneled door, window sashes, and louvered window shutters. It was not until sometime after acquisition by the federal government in 1940 that the exterior began to be painted white.

No color matches were made to the Munsell Color Notation system for the identified 1896-98 interior finishes, since the only painted finish appears to have been an unpigmented whitewash.

RECOMMENDATIONS

RECOMMENDATIONS

Restoration of the Henry House interior finishes to their circa 1896-98 appearance would involve painting the plaster walls and ceilings with whitewash (or a similar matte-white paint), except in Room 201 where the plaster was unpainted. Extensive stripping of paint from woodwork in all rooms would also be required. The historic finishes identified for each room are summarized below:

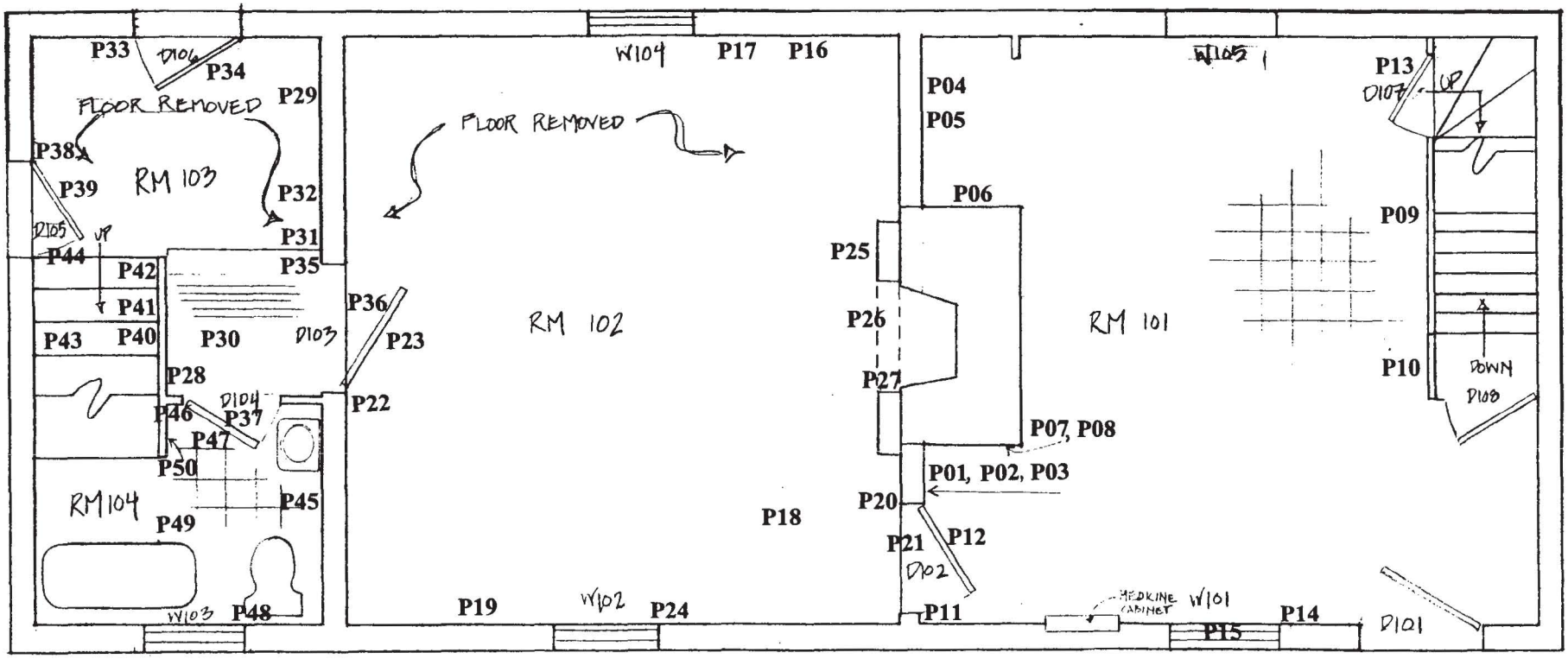
Circa 1896-98 Finishes

ROOM	FLOORBOARDS	PANELED WALLS	PLASTERED WALLS & CEILING	WOODWORK
101	unknown	unpainted	n/a	unpainted
102	unknown		probably whitewashed (plaster replaced circa 1922)	unpainted
103-104	unpainted	n/a	whitewash	unpainted
201	unpainted	n/a	unpainted	unpainted
202	unpainted	n/a	whitewash	unpainted
203	unpainted	n/a	whitewash	unpainted
204	unpainted	n/a	whitewash	unpainted

Documentation of this painting and paint removal should be included in the park's files on the Henry House.

APPENDIX A

Annotated Floor Plans

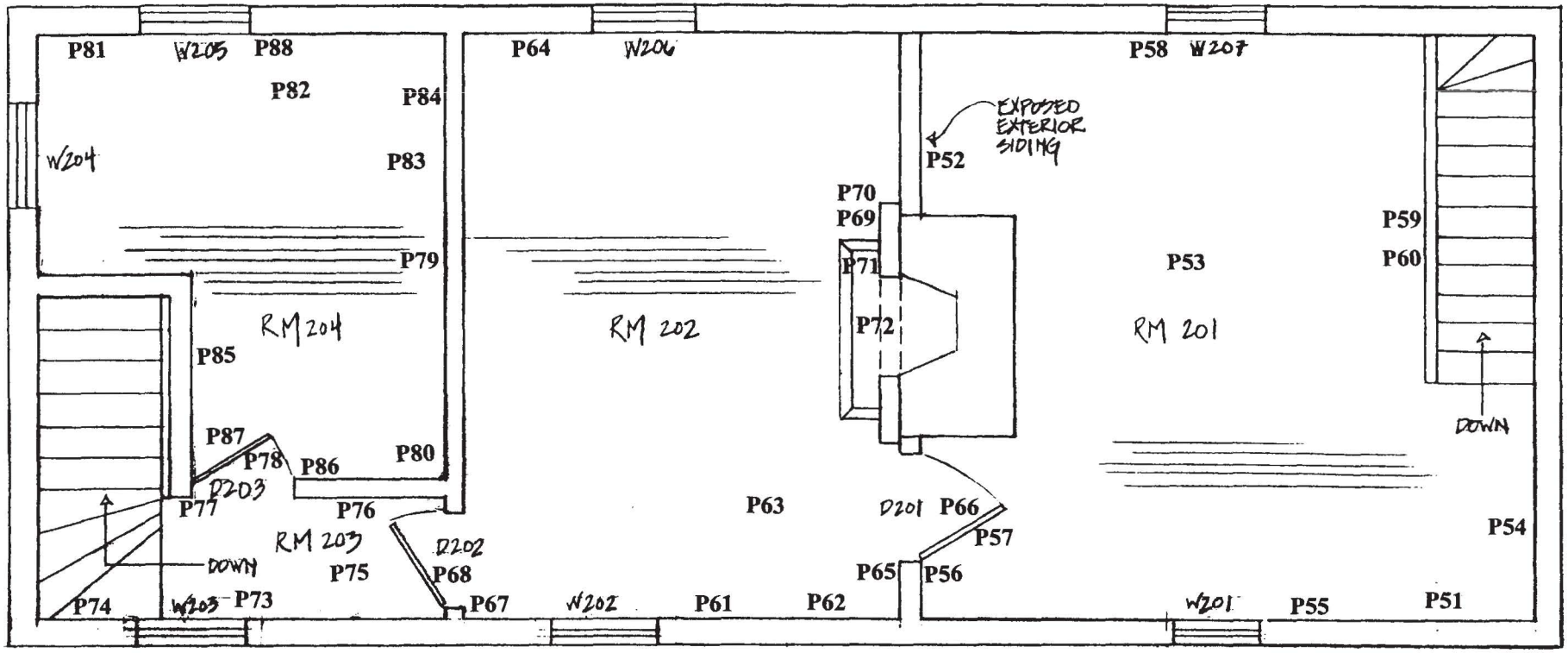


NORTH

HENRY HOUSE

FIRST FLOOR PLAN

Annotated with paint-sample locations.



HENRY HOUSE

SECOND FLOOR PLAN

Annotated with paint-sample locations.

APPENDIX B

Paint-Sample Chromochronologies

PAINT-SAMPLE CHROMOCHRONOLOGIES
ROOM 101 (Chart 1 of 3)

Paint Sample:	MANA HENHSE P01	MANA HENHSE P02	MANA HENHSE P03	MANA HENHSE P04	MANA HENHSE P05	MANA HENHSE P06
Element:	Room 101: former exterior clapboards, SE corner	Room 101: upper-wall molding	Room 101: beaded ceiling boards (wire nails)	Room 101: former exterior clapboards inside SW closet	Room 101: ceiling inside SW closet	Room 101: chimney breast inside SW closet
Substrate:	Wood	Wood	Wood	Wood	Wood	Plaster
Circa Date:	1870	1922	1922	1870	1883	1870/1883
1870	*dirt*			*dirt*	*dirt*	
1883						whitewash
1896-98						whitewash
						whitewash
						whitewash
	buff*					*closet enclosure*
	white*					
1922	light green*	cream	cream*			
	light green*					
	light green*	cream*	cream*			
	light green*	cream*	cream*			
	light green*	light green*	light green*			
	light green*	yellow*	yellow*			
	dark green	dark green				
	cream	cream	cream			
	cream	cream	cream			
	cream	cream	cream			
	cream	cream	cream			
	cream	cream	cream			
	cream-white	cream-white	cream-white			
1950	cream	cream	cream	cream	cream	*-wallboard-*
	cream-white					
	cream					
	yellow	yellow				
	light yellow	light yellow				
1964	white	white	white			

Key:
* Denotes kalsomine paint.

PAINT-SAMPLE CHROMOCHRONOLOGIES
ROOM 101 (Chart 2 of 3)

Paint Sample:	MANA HENHSE P07	MANA HENHSE P08	MANA HENHSE P09	MANA HENHSE P10	MANA HENHSE P11	MANA HENHSE P12
Element:	Room 101: east chimney breast	Room 101: wallboard covering east chimney breast	Room 101: north vertical-board partition at stair	Room 101: east addition to north partition	Room 101: doorway trim (D-102)	Room 101: four-panel door (D-102)
Substrate:	Plaster	Wallboard	Wood	Wood	Wood	Wood
Circa Date:	1870/1883	1950	1883	?	1883	1883
1870						
1883	whitewash		*dirt*		*dirt*	*dirt*
1896-98	whitewash					
	whitewash					
	whitewash					
			buff*		buff*	
			cream-white*	cream-white*	*[cream-white*]*	white
1922	light green*		light green*	light green*	*[light green*]* white	white
	light green*		light green*	light green*	*[light green]* cream	cream
	light green*		light green*	light green*		
	light green*		light green*	light green*	cream	cream
	white*		light green*	light green*		
			light green*	light green*	cream	cream
	dark green		dark green	dark green	[red & green traces]	red
	cream		cream	cream	cream	cream
	cream		gray	cream	cream	cream
	cream			cream	cream	
	cream			cream	cream	
				cream	cream	
	cream-white			cream	cream-white	cream-white
1950	*wallboard*	*wallboard* cream	cream	cream	cream	cream
		cream-white	cream-white		cream-white	cream-white
		cream	cream		cream	cream
		yellow	yellow	yellow	yellow	yellow
		light yellow	light yellow	light yellow	light yellow	light yellow
1964		white	white	white	white	white

Key: * Denotes kalsomine paint.

PAINT-SAMPLE CHROMOCHRONOLOGIES
ROOM 101 (Chart 3 of 3)

Paint Sample:	MANA HENHSE P13	MANA HENHSE P14	MANA HENHSE P15
Element:	Room 101: board-and-batten door (D-107)	Room 101: window trim (W-101)	Room 101: 6-over-6 sashes (W-101)
Substrate:	Wood	Wood	Wood
Circa Date:	1883	1883	1883
1870			
1883	*dirt*	*dirt*	
1896-98			
	buff*	buff*	
	cream-white*	white	
1922	light green*	white	
	light green*		
	light green*	cream	cream
	light green*	cream	cream
	light green*		
	light green*		
	cream	cream	cream
	cream	cream	cream
	cream	cream	cream
	cream	cream	
	cream	cream	
	cream-white	white	white
1950	cream	white	white
	cream-white	white	
	cream		
	yellow	yellow	yellow
	light yellow	light yellow	light yellow
1964	white	white	white

Key:
* Denotes kalsomine paint.

PAINT-SAMPLE CHROMOCHRONOLOGIES
ROOM 102
(Chart 1 of 2)

Paint Sample:	MANA HENHSE P16	MANA HENHSE P17	MANA HENHSE P18	MANA HENHSE P19	MANA HENHSE P20	MANA HENHSE P21
Element:	Room 102: west plaster wall	Room 102: west plaster wall, beneath face plate of electrical outlet	Room 102: ceiling, northeast corner	Room 102: baseboard at east wall	Room 102: trim at north doorway (D-102)	Room 102: door at north doorway (D-102)
Substrate:	Plaster	Plaster	Plaster	Wood	Wood	Wood
Circa Date:	1922	1922	1922	1870	1883	1883
1870				*dirt, wax?*	*wax?*	*dirt*
1883						
1896-98						
				white	white	white *-dirt-*
				white	white	
				white	white	
1922	*[wallpaper fibers]*	*[wallpaper fibers]*	*[wallpaper size?]*	white	white	
				cream	white	
				cream	cream	cream
				cream	cream	cream
	cream	cream	cream	cream	cream	cream
	cream		cream	cream	cream	cream
	blue-green	blue-green	cream	cream	cream	cream
1950	pink	pink *electrical outlet*	cream	cream	cream	cream
	light green		cream	light green	*[light green]* cream	
	pale green		cream	pale green	pale green	yellow
	violet		cream	violet	violet	light yellow
1964	white		white	cream	cream	white

Key:
* Denotes kalsomine paint.

PAINT-SAMPLE CHROMOCHRONOLOGIES
ROOM 102
(Chart 2 of 2)

Paint Sample:	MANA HENHSE P22	MANA HENHSE P23	MANA HENHSE P24	MANA HENHSE P25	MANA HENHSE P26	MANA HENHSE P27
Element:	Room 102: trim at south doorway (D-103)	Room 102: door at south doorway (D-103)	Room 102: trim at east window (W-102)	Room 102: mantel pilaster	Room 102: mantel upper shelf	Room 102: brick facing at fireplace opening
Substrate:	Wood	Wood	Wood	Wood	Wood	Brick
Circa Date:	1870	1870	1870	1870	1870	?
1870	*wax?*			*dirt, wax?*	*dirt, wax?*	
1883						
1896-98						
	white					
	white					
	white		white	white	white	
	white	white	white	white	white	
1922	white	white	white	white	white	
	cream	cream	cream	cream	cream	
	cream	cream	cream	cream	cream	
	cream	cream	cream	cream	cream	
	cream	cream	cream	cream brown	cream brown	
	cream	cream	cream	cream	cream	
1950	cream	cream	cream	cream	cream	
	cream	cream	*[light green]* cream	cream	cream	
	pale green	pale green	pale green	pale green	pale green	
	violet	violet	violet	violet		
1964	white	white	white	white	white	red

Key:
* Denotes kalsomine paint.

PAINT-SAMPLE CHROMOCHRONOLOGIES
ROOM 103
(Chart 1 of 3)

Paint Sample:	MANA HENHSE P28	MANA HENHSE P29	MANA HENHSE P30	MANA HENHSE P31	MANA HENHSE P32	MANA HENHSE P33
Element:	Room 103: floorboards, SE corner	Room 103: north plaster wall	Room 103: ceiling	Room 103: upper wall molding	Room 103: baseboard at north wall	Room 103: trim at west doorway (D-106)
Substrate:	Wood	Plaster	Plaster	Wood	Wood	Wood
Circa Date:	1870	1870	1870	1922	1870	1870
1870	*dark resin/wax?*	whitewash	whitewash			
1883		whitewash	whitewash			
1896-98		whitewash	whitewash			
		whitewash	whitewash			
						white
					white	white
1922	varnish	[*wallpaper #1—missing 2001!*]	[*ceiling paper #1—missing 200!*]	[*wallpaper #1 & ceiling paper #1 preserved beneath molding*] white	white	white
		yellow*	yellow*	yellow*	cream	cream
		wallpaper #2 (same as Room 203)	*ceiling paper #2 (same as Room 203)*	white	*[missing cream?]*	*[missing cream?]*
					"	"
				white	"	"
					"	"
					"	"
1950		mint green	light gray	mint green	*[missing green?]*	mint green
				yellow		
1964		white		white	white	white

Key:
* Denotes kalsomine paint.

PAINT-SAMPLE CHROMOCHRONOLOGIES
ROOM 103
(Chart 2 of 3)

Paint Sample:	MANA HENHSE P34	MANA HENHSE P35	MANA HENHSE P36	MANA HENHSE P37	MANA HENHSE P38	MANA HENHSE P39
Element:	Room 103: front door (D-106)	Room 103: trim at north doorway (D-103)	Room 103: north door (D-103)	Room 103: east two-panel door (D-104)	Room 103: south door (D-105)	Room 103: trim at south doorway (D-105)
Substrate:	Wood	Wood	Wood	Wood	Wood	Wood
Circa Date:	1870	1870	1870	1950	1922	1922
1870						
1883						
1896-98						
	white	white				
	white	white	white			
1922	white	white	white		*[poor condition]*	white
	cream	cream	cream			cream
	cream	cream	cream			cream
		cream	cream		buff	cream
		cream	cream			cream
		cream	cream		cream	cream
1950		mint green	cream	cream		white
			Room-102 paints: *light green* *violet* *cream*			
1964	white	white	white	white	white	white

Key:
* Denotes kalsomine paint.

PAINT-SAMPLE CHROMOCHRONOLOGIES
ROOM 103
(Chart 3 of 3)

Paint Sample:	MANA HENHSE P40	MANA HENHSE P41	MANA HENHSE P42	MANA HENHSE P43	MANA HENHSE P44
Element:	Room 103: stair baluster	Room 103: later stair newel	Room 103: stair handrail	Room 103: original stair riser	Room 103: later stair riser
Substrate:	Wood	Wood	Wood	Wood	Wood
Circa Date:	1870	1922	1870	1870	1922
1870			*dirt*	*brown, dirt/wax?*	
1883					
1896-98					
			white		
	white		white		
1922	white	white	white	varnish	varnish
	cream	cream	cream		
	cream	cream	cream		
	cream	cream	cream	varnish	varnish
	cream	cream	cream		
	cream		cream		
	cream	cream	cream		
1950	white	white	white	varnish	varnish
1964	medium green	medium green	medium green	brown	brown

Key:
* Denotes kalsomine paint.

PAINT-SAMPLE CHROMOCHRONOLOGIES
ROOM 104
(Chart 1 of 1)

Paint Sample:	MANA HENHSE P45	MANA HENHSE P46	MANA HENHSE P47	MANA HENHSE P48	MANA HENHSE P49	MANA HENHSE P50
Element:	Room 104: upper north wall	Room 104: doorway trim (D-104)	Room 104: two-panel door (D-104)	Room 104: window trim (W-103)	Room 104: ceiling	Room 104: stair stringer
Substrate:	Wallboard	Wood	Wood	Wood	Plaster	Wood
Circa Date:	1950	1950	1950	1950	1870	1870
1870					whitewash	
1883					whitewash	
1896-98					whitewash	
					whitewash	
						white
						white
1922					*[missing ceiling paper]*	white
					yellow*	cream
						cream
1950	*wallboard, wallpaper*	cream	dark green	cream	*ceiling paper*	cream
	pink	*[pink]*	yellow	cream	white	cream
	light blue	light blue	cream	light blue	light blue	light blue
1964	white	white	white	white	white	white

Key:
* Denotes kalsomine paint.

PAINT-SAMPLE CHROMOCHRONOLOGIES
ROOM 201
(Chart 1 of 2)

Paint Sample:	MANA HENHSE P51	MANA HENHSE P52	MANA HENHSE P53	MANA HENHSE P54	MANA HENHSE P55	MANA HENHSE P56
Element:	Room 201: east wall	Room 201: former exterior clapboards, SW corner	Room 201: ceiling	Room 201: attach hatch frame	Room 201: baseboard at east wall	Room 201: trim at south doorway (D-201)
Substrate:	Plaster	Wood	Plaster	Wood	Wood	Wood
Circa Date:	1883	1870	1883	1883	1883	1883
1870		*dirt*				
1883	*dirt*		*dirt*	*dirt*	*dirt*	*dirt*
1896-98						
	white*	white*	white*	white*		
post-1922	light peach*	light peach*	light yellow*	light yellow*	light peach*	light peach*
	light blue	light blue	light blue	light blue	white *[light blue]*	white
	slate blue	slate blue			white	cream
pre-1964?	light green	light green	light green	white	white	white

Key:
* Denotes kalsomine paint.

PAINT-SAMPLE CHROMOCHRONOLOGIES
ROOM 201
(Chart 2 of 2)

Paint Sample:	MANA HENHSE P57	MANA HENHSE P58	MANA HENHSE P59	MANA HENHSE P60
Element:	Room 201: south door (D-201)	Room 201: west window trim (W-207)	Room 201: baluster at stair railing	Room 201: handrail at stair railing
Substrate:	Wood	Wood	Wood	Wood
Circa Date:	post-1883 (reused?)	1883	1883	1883
1870				
1883		*dirt*		
1896-98				
post-1922		light peach*	dark green	dark green
	(Paint from reuse location?) *pink* *-varnish-*	white	cream	cream cream
	cream	cream	white	white
pre-1964?	white	white	white	white

Key:
* Denotes kalsomine paint.

PAINT-SAMPLE CHROMOCHRONOLOGIES
ROOM 202
(Chart 1 of 2)

Paint Sample:	MANA HENHSE P61	MANA HENHSE P62	MANA HENHSE P63	MANA HENHSE P64	MANA HENHSE P65	MANA HENHSE P66
Element:	Room 202: east wall, mid level	Room 202: east wall, upper level near ceiling	Room 202: ceiling	Room 202: baseboard at west wall	Room 202: trim at north doorway (D-201)	Room 202: north door (D-201)
Substrate:	Plaster	Plaster	Plaster	Wood	Wood	Wood
Circa Date:	1870	1870	1870	1870	1883	post-1883 (reused?)
1870	whitewash	whitewash	whitewash			
1883	whitewash	whitewash	whitewash			
1896-98	whitewash	whitewash	whitewash			
	whitewash	whitewash				
post-1922	blue*	blue*		*[blue*]* white	 white	
	gray*	gray*		white	gray*	
						(Paint from reuse location?) *pink* *yellow* *-varnish-*
	yellow	yellow	yellow	cream	cream	cream
	red	red	yellow	white	cream	cream
pre-1964?	light blue	light blue	light blue	light blue	light blue	light blue

Key:
* Denotes kalsomine paint.

PAINT-SAMPLE CHROMOCHRONOLOGIES
ROOM 202
(Chart 2 of 2)

Paint Sample:	MANA HENHSE P67	MANA HENHSE P68	MANA HENHSE P69	MANA HENHSE P70	MANA HENHSE P71	MANA HENHSE P72
Element:	Room 202: trim at south doorway (D-202)	Room 202: south door	Room 202: mantel, left pilaster	Room 202: mantel, ogee molding	Room 202: mantel, upper shelf	Room 202: pargetted fireplace opening
Substrate:	Wood	Wood	Wood	Wood	Wood	Plaster
Circa Date:	1870	1870	1870	1870	1870	1870
1870	*[whitewash]*			*dirt*		*dirt*
1883	*[whitewash]*					
1896-98	*[whitewash]*					whitewash
post-1922	*[blue*]* white	white	white	white	white	*sheet-metal cover*
	gray*	white-cream	white-cream		white	
	cream	cream	cream	cream	white	
	white	white		white	cream	
pre-1964?	light blue	light blue	light blue	light blue light blue	light blue light blue	

Key:
* Denotes kalsomine paint.

PAINT-SAMPLE CHROMOCHRONOLOGIES
ROOM 203
(Chart 1 of 1)

Paint Sample:	MANA HENHSE P73	MANA HENHSE P74	MANA HENHSE P75	MANA HENHSE P76	MANA HENHSE P77	MANA HENHSE P78
Element:	Room 203: floorboards	Room 203: east wall at stair	Room 203: ceiling	Room 203: baseboard at west wall	Room 203: trim at west doorway (D-203)	Room 203: west door (D-203)
Substrate:	Wood	Plaster	Plaster	Wood	Wood	Wood
Circa Date:	1870	1870	1870	1870	1870	1870
1870	*dirt/wax*	whitewash	whitewash	*dirt*	*dirt*	*dirt*
1883		whitewash				
1896-98		whitewash	whitewash			
		whitewash				
		whitewash	whitewash			
		whitewash				
				cream*	cream*	
				white	white	white
					white	white
					white	white
					cream	
		wallpaper (same pattern as wallpaper #2, Room 103)	*ceiling paper (same pattern as ceiling paper #2, Room 103)*	white	white	
1950	varnish	mint green	light gray	white	mint green white	white

Key:
* Denotes kalsomine paint.

PAINT-SAMPLE CHROMOCHRONOLOGIES
ROOM 204
(Chart 1 of 2)

Paint Sample:	MANA HENHSE P79	MANA HENHSE P80	MANA HENHSE P81	MANA HENHSE P82	MANA HENHSE P83	MANA HENHSE P84
Element:	Room 204: north wall	Room 204: wall at NE corner, former closet	Room 204: upper wall, SW corner	Room 204: ceiling	Room 204: attic hatch frame	Room 204: baseboard at north wall
Substrate:	Plaster	Plaster	Plaster	Plaster	Wood	Wood
Circa Date:	1870	1870	1870	1870	1870	1870
1870	whitewash	whitewash		whitewash		*dirt*
1883	whitewash	whitewash		whitewash		
1896-98	whitewash	whitewash	whitewash	whitewash		
	whitewash	whitewash				
					white*	
post-1922	peach*	peach*	peach*		white	white
	wallpaper	*wallpaper*	*[wallpaper removed]*	*ceiling paper*	cream	white
	light blue-green	light blue-green		white	white	cream
pre-1964?	light pink	white				light pink

Key:
* Denotes kalsomine paint.

PAINT-SAMPLE CHROMOCHRONOLOGIES
ROOM 204
(Chart 2 of 2)

Paint Sample:	MANA HENHSE P85	MANA HENHSE P86	MANA HENHSE P87	MANA HENHSE P88
Element:	Room 204: baseboard at east partition wall	Room 204: trim at east doorway (D-203)	Room 204: east door (D-203)	Room 204: trim at west window (W-205)
Substrate:	Wood	Wood	Wood	Wood
Circa Date:	1870	1870	1870	1870
1870				
1883				
1896-98				
			mustard yellow*	
		cream-yellow*	white*	white*
post-1922	white	white *[peach*]* white	white	white
	white			
	white	cream	cream	cream
pre-1964?	light pink	white	white	white

Key:
* Denotes kalsomine paint.

APPENDIX C

Wallpaper Descriptions

HENRY HOUSE WALLPAPERS

Wallpaper was found in November 2001 in four rooms of the Henry House: Rooms 103, 104, 203, and 204. One layer of paper survives in Rooms 104, 203, and 204, while two layers were discovered in Room 103. Three types of wallpaper finish the rooms of the Henry House: body wallpaper, narrow border paper, and ceiling paper. All papers have machine-printed patterns on mechanical wood-pulp paper. The narrow borders suggest a date of sometime after 1915. No wallpapers predating circa 1922 were identified. Descriptions of the wallpapers found in each room follow.

ROOM 103

Wallpaper #1: circa 1922:

Location: horizontal fragments only are preserved beneath the upper ceiling molding, 2-inches wide, installed with wire nails circa 1922.

Body wallpaper: machine-printed with a stylized botanical design in colors of blue, white, gray, and glitter (a non-metallic, sparkling material) on a plain paper ground.

Border paper: none.

Ceiling paper: machine printed with a widely spaced geometric design in colors of blue and white on a pale white ground.

Wallpaper #2, post-1922:

Location: existing paper on the walls ceilings of Rooms 103 and 203.

Body wallpaper: machine-printed with a pattern of flowers and stripes in colors of pink, white, and blue on a gray ground. The pattern is now covered by two layers of paint.

Border paper: 2 1/8" wide, machine printed with a classical egg-and-dart motif in colors of green and white on a plain ground. The pattern is now covered by two layers of paint.

Ceiling paper: overpainting could not be removed to reveal the design of the ceiling paper.

ROOM 104

Wallpaper #1, circa 1950:

Location: existing paper on the walls and ceiling of Room 104.

Body wallpaper: the wallpaper is currently covered with three layers of paint. which could not be removed to reveal the wallpaper pattern. However, it is likely that the wallpaper preserved in the room's southeast cabinet is the same paper used in the room. This paper has an abstract and non-directional pattern typical of ceiling papers, printed in glitter (a non-metallic, sparkling material) on a cream-color ground.

Border paper: none.

Ceiling paper: the pattern of the ceiling paper could not be ascertained due to a covering of three layers of paint.

ROOM 203

Wallpaper #1, post-1922:

Location: existing paper on the walls and ceiling of Rooms 103 and 203. This is the same paper as "wallpaper #2" described for Room 103.

Body wallpaper: machine-printed with a pattern of flowers and stripes in colors of pink, white, and blue on a gray ground. The pattern is now covered by one layer of paint.

Border paper: 2 1/8" wide, machine printed with a classical egg-and-dart motif in colors of green and white on a plain ground. The pattern is now covered by one layer of paint.

Ceiling paper: pattern could not be ascertained due to a covering of one layer of later paint.

ROOM 204

Wallpaper #1, post-1922:

Location: existing paper on the walls and ceiling of Room 204.

Body wallpaper: machine-printed with a floral pattern in colors of pink, blue, white, and glitter (a non-metallic, sparkling material) on a plain ground. The pattern is now covered by two layers of paint.

Border paper: 2 3/8" wide, machine-printed in similar colors to the body wallpaper. The pattern is now covered by two layers of paint.

Ceiling paper: pattern could not be ascertained due to a covering of one layer of paint.