



## SQUIRE POPE CARRIAGE HOUSE PRESERVATION PLAN

PREPARED FOR:  
THE TOWN OF BLUFFTON  
20 BRIDGE STREET  
BLUFFTON, SC 29910

PREPARED BY:  
MEADORS, INC.  
PO BOX 21758  
CHARLESTON, S.C. 29413

DATE: 09.30.2019



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# TABLE OF CONTENTS

|                                                                |     |
|----------------------------------------------------------------|-----|
| INTRODUCTION .....                                             | 7   |
| EXECUTIVE SUMMARY .....                                        | 9   |
| HISTORICAL OVERVIEW .....                                      | 11  |
| PREVIOUS RESEARCH .....                                        | 11  |
| TIMELINE .....                                                 | 13  |
| HISTORY .....                                                  | 15  |
| SITE MAP .....                                                 | 23  |
| PLAN KEY .....                                                 | 24  |
| HISTORIC HOUSE IMAGES .....                                    | 25  |
| DOCUMENTATION.....                                             | 35  |
| PHOTO DOCUMENTATION.....                                       | 35  |
| DRAWINGS.....                                                  | 43  |
| CONDITIONS ASSESSMENT.....                                     | 51  |
| REFERENCE TERMS .....                                          | 51  |
| EXTERIOR CONDITIONS ASSESSMENT .....                           | 55  |
| INTERIOR CONDITIONS ASSESSMENT .....                           | 87  |
| SELECTIVE DISASSEMBLY .....                                    | 111 |
| CONTEMPORARY DWELLINGS.....                                    | 121 |
| STRUCTURAL ASSESSMENT.....                                     | 127 |
| CONSERVATION .....                                             | 141 |
| MORTAR ANALYSIS .....                                          | 141 |
| PAINT ANALYSIS .....                                           | 151 |
| HYPOTHETICAL STRUCTURAL EVOLUTION .....                        | 161 |
| EVOLUTION PLAN.....                                            | 164 |
| STAKEHOLDER OUTREACH .....                                     | 167 |
| ONLINE SURVEY RESULTS .....                                    | 167 |
| STAKEHOLDER MEETING .....                                      | 176 |
| TREATMENT PHILOSOPHY.....                                      | 177 |
| RECOMMENDATIONS .....                                          | 179 |
| STRUCTURAL RECOMMENDATIONS .....                               | 179 |
| NON-STRUCTURAL RECOMMENDATIONS .....                           | 185 |
| PRIORITIZED RECOMMENDATIONS .....                              | 189 |
| MAINTENANCE PLAN .....                                         | 193 |
| REFERENCES .....                                               | 197 |
| APPENDIX A (M. HANCE PE LLC STRUCTURAL REPORT & DRAWINGS)..... | 199 |
| APPENDIX B (STAKEHOLDER RESPONSES).....                        | 213 |





## ATTENTION:

The Town of Bluffton  
20 Bridge Street  
Bluffton, SC 29910

## INTRODUCTION

The following report identifies the findings regarding the structural assessment and preservation plan of the Squire Pope Carriage House, located at 111 Calhoun Street in Bluffton, SC. This project is in response to RFP #2019-29 issued by the Town of Bluffton in March 2019 and contract dated April 18, 2019. The RFP was issued in an effort to develop a comprehensive, long-term actionable Preservation Plan to be used by the Town of Bluffton as an essential guiding document for future restoration, rehabilitation, and maintenance of the Squire Pope Carriage House.

The findings described within this summary encompass visual observations of all facades accomplished during site inspections performed by Meadors, Inc. during the summer of 2019. Structural assessment of the building was performed on site by Michael Hance PE on May 31, 2019.

Record drawings were prepared for each building elevation and all plans. The baseline drawings were used to document existing conditions and to label elements to be referenced in the photo section of the assessment. During the assessment, an awl was used to lightly press on wooden components to determine areas that were sound or exhibited deterioration. The condition of all building elements was recorded with photographs. A copy of the drawings can be found in the 'Documentation' section of the report.

During the course of this assessment, an online stakeholder survey was initiated on July 8, 2019 in order to involve the community in the preservation process and to discuss potential reuse strategies. A larger stakeholder meeting was conducted on August 8, 2019. Input obtained during these meetings assisted in formulating the treatment philosophy and final recommendations for the presentation of the Squire Pope Carriage House. A copy of the online survey and the unedited responses can be found in Appendix B.

The activity that is the subject of this report has been financed in part with Federal funds from the National Park Service, U.S. Department of the Interior, and administered by the South Carolina Department of Archives and History. However, the contents and opinions do not necessarily reflect the views or policies of the Department of the Interior, nor does the mention of trade names or commercial products constitute endorsement or recommendations by the Department of the Interior.





## EXECUTIVE SUMMARY

The ca. 1850 Squire Pope Carriage House is one of ten antebellum structures within the Bluffton Historic District to survive the 1863 “Burning of Bluffton” by the Union Army during the Civil War. Located at the South end of Calhoun Street along the May River, the two-story frame structure originally served as two separate outbuildings for the larger main Squire Pope House. The main house was destroyed in the 1863 fire and the outbuildings were joined together by the Pope family to serve as their home. Today, the modified vernacular structure is culturally and historically significant to Bluffton and the state of South Carolina. Recently acquired by the Town and currently awaiting restoration, the structure necessitates additional study and treatment prior to the loss of any further architectural material or future modifications to the site.

Meadors performed extensive structural and conditions assessment of the existing building, focusing on the structure’s most critical existing deficiencies. Selective disassembly was performed at identified locations to understand the evolution of the building. Concurrent with documentation, Meadors and the Town of Bluffton identified and involved the multiple community stakeholders. The purpose of the stakeholder involvement is to create, facilitate, and maintain open channels of communication with stakeholders to allow for full consideration of stakeholder views, feedback, and information in the preservation process. Initial outreach of identified stakeholders focused on an online survey. Input garnered from the stakeholders assisted in guiding and refining the treatment philosophy for the Squire Pope Carriage House.

Abiding by the defined treatment philosophy, recommendations have been formulated for each historic element, feature, and space. Additionally, a comprehensive conservation assessment and analysis was incorporated into the preservation plan to further understand and document the Squire Pope House. A detailed paint analysis of several architectural elements both in-situ developed a historic paint chronology for the structure and highlighted changes to the structure over time. In addition, petrographic was conducted on the samples taken from the chimney bedding mortar and the first-floor plaster. This analysis was conducted to understand the composition of the mortar materials and to further determine the evolution of the structure. Materials analysis of these elements provides a new avenue of information relating to the structure.

Based upon input from the stakeholders, materials analysis, and the conditions assessment, proposed treatment solutions for stabilization or repair have been outlined and prioritized. Specific recommendations have been created for the physical preservation of the building fabric. Recommendations are based on a tiered system and prioritized sequentially to address the most pressing deterioration issues. Accompanying the recommendations and the phasing plan, a detailed estimate of probable construction costs and expected time frame for repair has been created in order to assist the Town of Bluffton in planning the restoration work.





## PREVIOUS RESEARCH

The information described within this report is the culmination of historic research and previously completed conditions assessments of the Squire Pope Carriage House. The following reports have been consulted for the purposes of this analysis:

- Pope Family Papers, 1925 -1916; SCHS 1144.00 -South Carolina Historical Society.
- Wright Family Photos, 1940s -1960s.
- *Old Town Master Plan*; Dept. of Growth Management, Town of Bluffton; 2006.
- *A Guide to Historic Bluffton*; Bluffton Historical Preservation Society, Donna Huffman; 2007, Page 24.
- *Old Town Master Plan - 2012 Update*; Dept. of Growth Management, Town of Bluffton; 2012.
- *Preserving Culture by Rewriting History: Interpreting Sites in the Lowcountry Antebellum Planters' Summer Cottage Community of Bluffton, South Carolina*; Carolyn M. Coppola, 2013
- Squire Pope Property Notes; Erin Schumacher, Town of Bluffton; 2016.
- Historic Structure Report; Savannah College of Art and Design - PRES 480 Innovative Adaptive Rehabilitation; 2018
- Wright Family Park Site Plan; Town of Bluffton; 2019
- Beaufort County Register of Deed Records

In addition to these resources, local news coverage from the Bluffton area was consulted to understand the development of the project. These articles include:

- “Bluffton-Beaufort County land purchase gives town chance to restore historic building”; The Island Packet; March 17, 2017.
- “Here’s a look at Wright Family Park, Bluffton’s latest public works project”; The Island Packet; July 16, 2018.





# TIMELINE

|       |                                                                                                                                                                                                                   |
|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1850s | William Pope, Jr. also known as Squire Pope, constructs a large summer residence with outbuildings on the lot on the high bluff overlooking the May River in Bluffton, SC                                         |
| 1862  | Squire Pope dies in Sandersville, Georgia at the age of 74. Pope evacuated Hilton Head in 1861 following the arrival of Federal Troops on the island.                                                             |
| 1863  | June 4 1863 - The main house is destroyed during the "Burning of Bluffton" by the Union Army. The outbuildings are two of several structures to survive the fire.                                                 |
| 1868  | Sara Lavinia Pope, wife of Squire Pope, and their daughter Elizabeth return to the property. During this time, the surviving outbuildings are joined together.                                                    |
| 1869  | Sara Lavinia Pope writes in a letter to her granddaughter Ellen that "Our village is very dull, everybody seems discouraged at the times and finding it so hard to live."                                         |
| 1873  | Sarah Lavinia Pope dies. The property is likely transferred to a Pope relative.                                                                                                                                   |
| 1895  | Henry C. Pollitzer purchases the property from Rebecca O. Heirs. The interior of the structure is drastically changed during this era.                                                                            |
| 1900s | The interior ceilings are modified to install the coved beadboard. The west bay is likely added during this era (exact dates unknown).                                                                            |
| 1915  | Henry Pollitzer transfers the property to his wife, Mary Guerard Pollitzer. The property is then owned by daughter Princess Henrietta (Pollitzer) Hartford Pignatelli, a Bluffton born socialite and millionaire. |
| 1940  | Virginia Pope Duggar, a descendant of the Pope family, purchases the property from the Princess and members of the Pollitzer-Guerard family for \$5,000.00.                                                       |
| 1951  | Virginia Duggar dies and wills the property to Augustine T.S. Wright, Sr. and his son. Within the will, the property is referred to as "Leamington".                                                              |
| 1952  | Augustine T.S. Wright, Sr. and his wife Mary Wadley Morris Wright move into the Carriage House.                                                                                                                   |
| 1956  | The southeast corner of the porch is enclosed for an additional bedroom. Jalousie windows are installed on the south facade.                                                                                      |
| 1970s | Mary Wright and Mimi Gordon start Bluffton's first library in the trunk of Mary's car.                                                                                                                            |
| 1996  | Mary Wright leaves the home after living in the house for almost 50 years. Members of the Wright family occupy the house until the early 2000s.                                                                   |
| 2007  | Mary Wright dies in Chapel Hill, NC. The property is owned by her son Augustine T.S. Wright, Jr.                                                                                                                  |
| 2017  | Augustine T.S. Wright, Jr. sells the house and property to the Town of Bluffton and Beaufort County for \$1,500,000.00.                                                                                           |
| 2019  | The first phase of work on Wright Family Park begins with the construction of a bulkhead along the May River.                                                                                                     |



Map of structures burned in 1863  
(Bluffton Historical Preservation Society)



ca. 1950.



1958 Wright-Pinckney Wedding



Mary Wright



ca. 1970





## SITE HISTORY SUMMARY

The following history is based upon available historical records and existing research. The summary is not considered an exhaustive history of the Squire Pope Carriage House. Further research and architectural archaeology will likely uncover additional information relating to the history of the building.

### **History**

William Squire Pope was the son of Revolutionary War Captain, legislator, and planter William Pope. During the 19th century, Captain Pope owned a significant amount of land including Cotton Hope Plantation and Coggins Point Plantation on Hilton Head.

Current research indicates Squire Pope constructed a summer residence on the Bluffton property around 1850s. The structure was situated on the bluff of the May River with several outbuildings including slave dwellings constructed around the property. The design and exact location of the larger residence on the property are unknown. Family tradition states that the structure was constructed on portions of the bluff which are now eroded.

Due to Squire Pope's immense wealth, it is likely that enslaved persons resided and worked on the property prior to the Civil War. The names of those enslaved on the property are currently unknown. The 1860 Federal Census records document Squire Pope and Sarah Lavinia living in the same house with Elizabeth Pope Woodward and her nine children and the children's Governess, Mary Hathaway. Local Bluffton families such as the Kirks are recorded adjacent to the families in the census records.

In 1861 during the Civil War, the Pope family was forced to flee their home and take refuge in Sandersville, Georgia where Squire Pope died on May 10, 1862. Prior to his death and the Union occupation of his property, he owned five plantations totaling 3400 acres and around 180 slaves.

On June 4, 1863, The Union landed on Huntington Island and marched toward Bluffton. The marching Army troops met strong Confederate resistance within the Town requiring naval gunfire support. The Army gunboat *Mayflower* and ferryboat USS *Commodore McDonough* fired 200 artillery shells from the May River into a concentrated area of downtown Bluffton, setting a large blaze throughout the town. Approximately two-thirds of the town including forty private residences and nearly one hundred outbuildings were destroyed during the blaze. A newspaper article written two days later stated that the heavy growth of trees between Mr. Pope's house and the Episcopal Church (ca. 1857) saved the latter structure. It is unknown if this structure is Squire Pope's structure or a relative's dwelling.

Several outbuildings survived the fire, possibly due to their location away from the main house. After the War, Sarah Lavinia Pope and her daughter returned to the property and joined the existing outbuildings together. Surviving letters written during this era from Sarah to her



granddaughter Ellen detail her depression and sadness for what was lost. In particular, she wrote:

“Our village is very dull, everybody seems discouraged at the times and finding it so hard to live – It is a great pity for this is such a pleasant place to live at, if it was only the same that it was before the war.”

In 1870, the Federal Census recorded Sara and Elizabeth living together in Bluffton with Elizabeth’s young children shortly before Sarah Lavinia’s death in 1873. It is unknown if she lived at the property until her death or when the property was conveyed to another party. Additional deed research may uncover this missing link.

Physical evidence indicates that the house was extensively modified during the Victorian era. The internal plan is rearranged and beadboard is installed on the interior. A Victorian bay window was added to the south elevation and a diagonal chimney was constructed at the northeast corner of the two-story building. The exact timing of these modifications is not known.

In 1895, Rebecca O. Hiers sold the property to Henry C. Pollitzer. The structure remained in the Pollitzer family and was transferred to Henry’s wife Mary Guerard Pollitzer in 1915. The structure is likely modified again during this time including the construction or alteration of the porches.

In 1932, the property passed to Mary Pollitzer’s children following her death. Their daughter, Princess Pignatelli de Montecalbo, formerly Mrs. Henrietta Guerard (Pollitzer) Hartford, was a Bluffton born millionaire and socialite. The Princess is notable for saving the Joseph Manigault House in Charleston, SC from demolition by donating the structure to the Charleston Museum.

In 1940, Virginia Pope Duggar purchased the property from the Princess and other members of the Pollitzer family for \$5,000.00. Virginia lived in the house until her death in 1951. In her will, the property is referred to as Leamington, a reference to Leamington Plantation once owned by the Popes on Hilton Head Island. The property is then willed to her cousin Augustine T.S. Wright Sr. for the term of his natural life, and after his death to his son, Augustine T.S. Wright, Jr.

In 1952, Augustine Wright Sr. and his wife Mary Wadley Morris Wright moved into the residence. In 1956-57, the southeast corner of the second-floor porch was enclosed for a bedroom. Augustine T.S. Wright, Sr. died in 1966 and the Wright family occupied the house during the second half of the 20th century.

Mary Wright lived in the house until 1996. Following her departure, members of the Wright family occupied the house until the early 2000s. Mary Wright passed away in 2007 and was locally referred to as “Bluffton icon”.

In 2017, Augustine T.S. Wright, Jr. sold the house to the Town of Bluffton and Beaufort County for \$1,500,000.00 in a partnership through the Town and Beaufort County’s Rural and Critical Lands Preservation Program. The current plans are to develop the property into a passive park known as the “Wright Family Park” that will provide public access to the May River. The first phase in the development of the planned park began in the Summer of 2019 with the construction of a bulkhead along the shoreline.



|    |                    |    |   |         |
|----|--------------------|----|---|---------|
| 63 | Wm Pope Jr         | 71 | M | Planter |
|    | Sarah L "          | 67 | F |         |
|    | Elizabeth B Pope   | 67 | F |         |
| 64 | Elizabeth Woodward | 42 | F |         |
|    | Wm P "             | 18 | M |         |
|    | Ellen V "          | 17 | F |         |
|    | Certude P "        | 15 | F |         |
|    | J Park "           | 13 | M |         |
|    | James H "          | 11 | M |         |
|    | Elizabeth B "      | 9  | F |         |
|    | Thos D "           | 8  | M |         |

Figure 1: 1860 Federal Census showing Squire Pope and Sarah Lavinia living with Elizabeth Woodward and her nine children (1860 Federal Census).

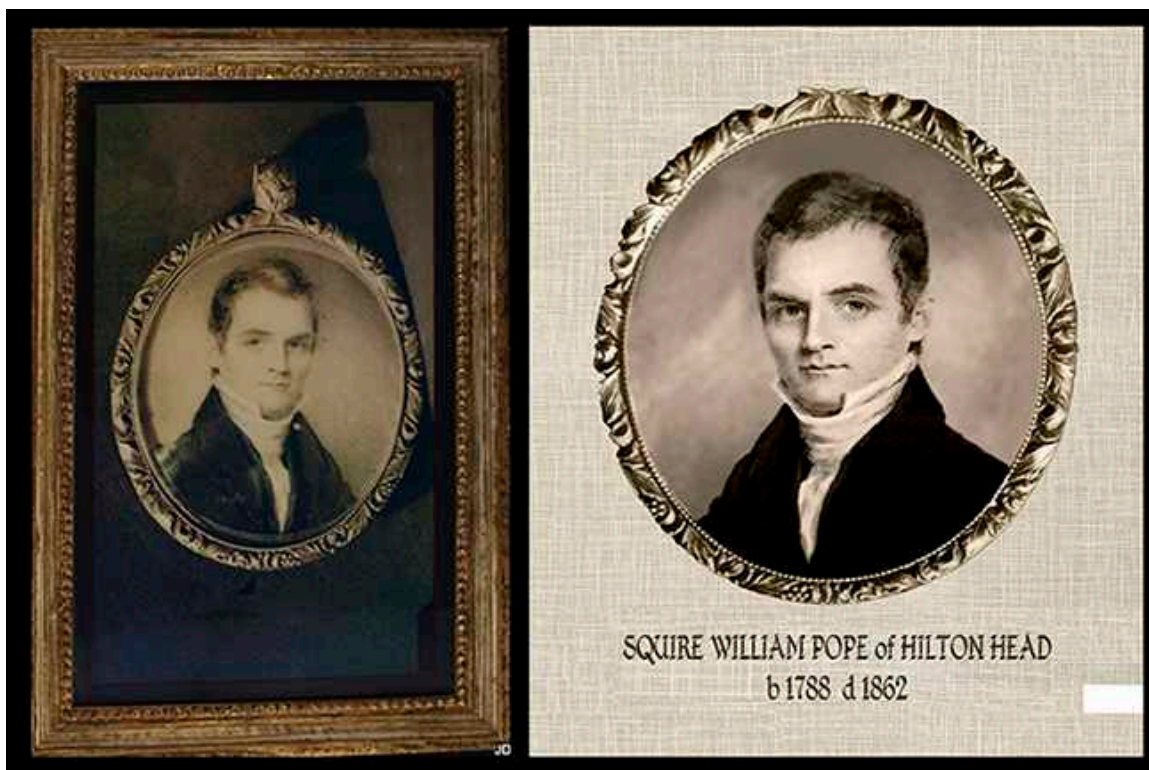


Figure 2: Squire William Pope (tallpinephoto.com)



**BLUFFTON IN ROINS** — The destruction of property on Bull's Island some days ago, and the recent raid on the Combahee, involving an immense loss of property, is followed by the burning of the beautiful town of Bluffton, on May River. This last outrage took place on Thursday morning last, and resulted in the loss of about forty private residences and nearly one hundred outhouses, stores, &c. We have succeeded in obtaining a list of the property owners who have suffered by the burning of their beautiful houses and settlements :

Gen. J. F. Drayton  
Col. A. J. Stoney  
Dr. J. W. Kirk  
George Allen  
Dr. Paul Pritchard

Henry Verdler  
"Squire Popes"  
Mr. Strobhart  
Mrs. Hardee  
J. Chalmers

Figure 3: June 6, 1863 *Charleston Mercury* article noting the destruction of Squire Pope's property among many others.

Bluffton Oct. 21. 1868

My dearest Ellen

I received your welcome letter a few weeks ago, would have answered last week, but as your Mother wrote I thought I would defer writing until this week. I am glad to hear through your Mother

such a sweet baby -

Figure 4: October 21, 1868 letter from Sarah Lavinia Pope (South Carolina Historical Society).



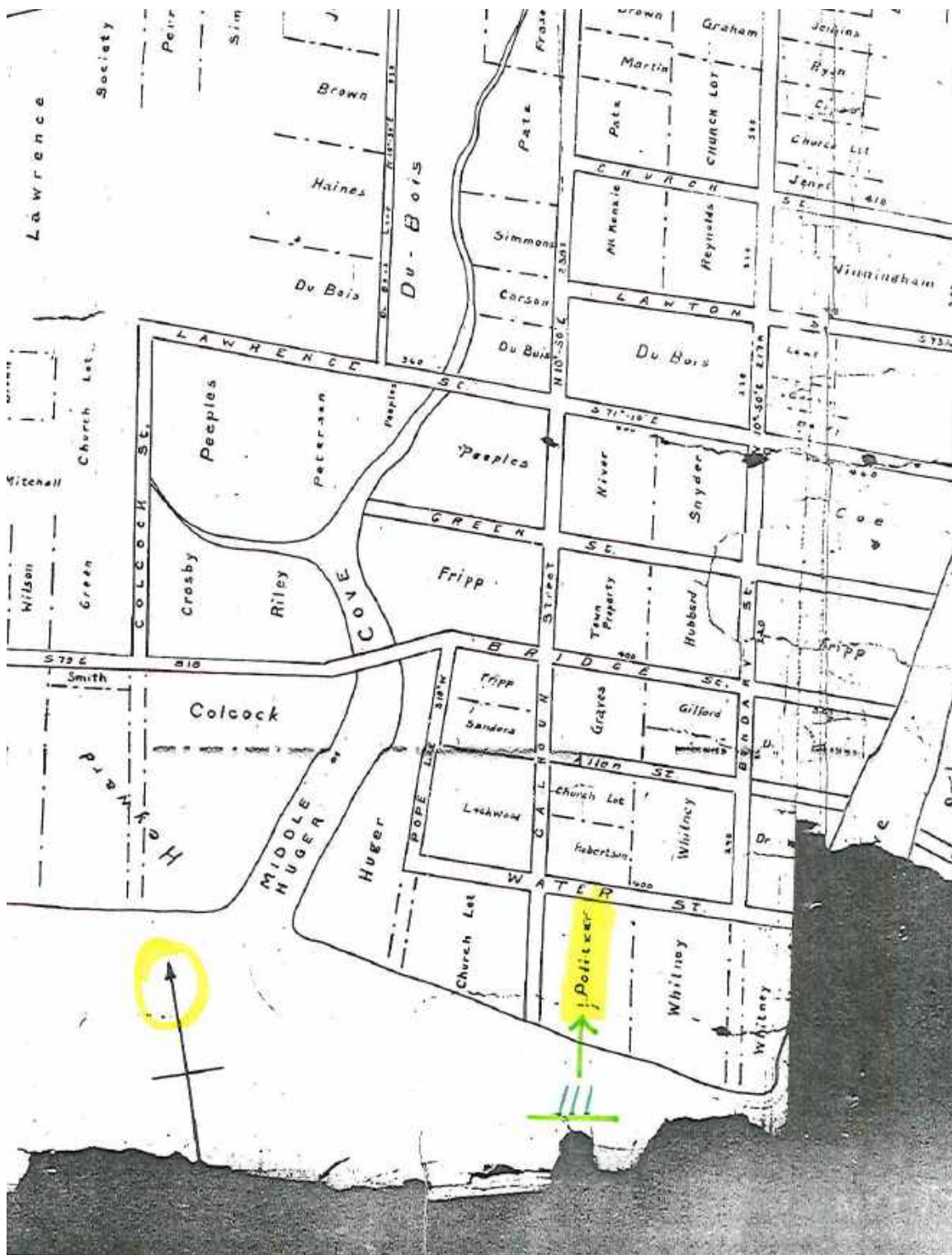


**Figure 5:** 1897 Plat showing the lot owned by the Pollitzer Family (Beaufort County Register of Deeds)





Figure 6: Mary G. Pollitzer (from the family records of Reginald Seabrook).



Figure 7: Princess Pignatelli (at center) (findagrave.com).





Figure 8: The Wright family in 1958 (Wright Family Photos).

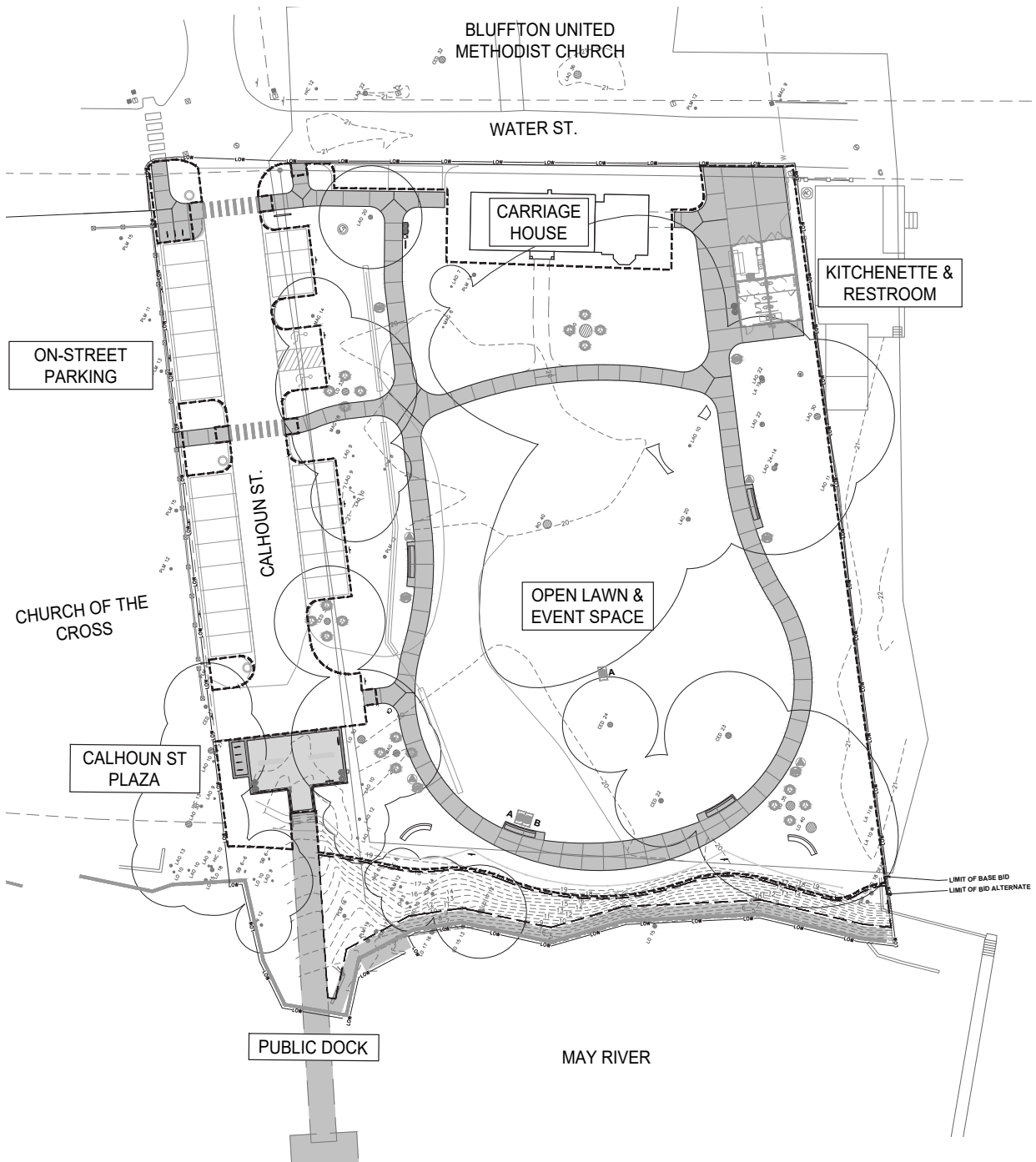


Figure 9: Mary Wright in 1995 (Wright Family Photos).





## SITE MAP WITH FUTURE PARK



MKSK Landscape Architects





## HISTORIC HOUSE IMAGES

### HISTORIC DOCUMENTATION

Few historic photographs are known to exist of the Squire Pope Carriage House. No images of the structures have been found that capture the outbuildings in their original configuration prior to the destruction of Bluffton in 1863 or from the 19th century.

A majority of the historic images of the property date to the period of ownership of the Wright Family and their relatives from approximately the 1940s to the 1990s. The following images serve as a record of the structure's rate of deterioration over the last 80 years, and provide clues to understanding the use and fenestration of the building during the 20th century.



**Figure 10:** The Wright Family in the 1940s (Wright Family Photos).





**Figure 11:** Squire Pope Carriage House in the early 1950s (Wright Family Photos).



**Figure 12:** Squire Pope Carriage House in 1957. The second-floor has been enclosed by this date (Wright Family Photos).





**Figure 13:** The west elevation is captured during the marriage celebration of Hannah Nancy Wright and John Chapman Pinckney on April 19th, 1958 (Wright Family Photos).



**Figure 14:** West Elevation in 1958 (Wright Family Photos).





**Figure 15:** South elevation showing the first floor screened porch and a portion of the bay window in 1958 (Wright Family Photos).



**Figure 16:** The south elevation and bay window in ca. 1959 (Wright Family Photos).





Figure 17: Looking toward the front yard and the May River in the 1960s (Wright Family Photos).



Figure 18: East elevation in 1965 (Wright Family Photos).





**Figure 19:** The Squire Pope Carriage House in the 1970s (Wright Family Photos).



**Figure 20:** North Elevation (1960s-1970s) (Mary Pinckney Files).





Figure 21: Mary Wadley Wright in the west living room (date unknown) (Mary Pinckney Files).



Figure 22: West Elevation, ca. 1990s (Wright Family Photos).





Figure 27: Mary Wright on the Bluff in the 1990s (Wright Family Photo).



Figure 26: South Elevation, 2007 (Mary Pinckney Files).





**Figure 28:** Hyphen and East Building in 2007 (May Pinckney Files).





# PHOTO-DOCUMENTATION OF EXISTING CONDITIONS





Figure 29: North Elevation.



Figure 30: North Elevation, Two-Story West Building.





Figure 31: North Elevation, One-Story East Building.



Figure 32: Northeast Corner.





Figure 33: East Elevation.



Figure 34: Southeast Corner.





Figure 35: South Elevation



Figure 36: South Elevation, One-Story Building. A small hyphen connects the two individual structures.





Figure 37: South Elevation, Two-Story Building.



Figure 38: Southwest Corner.





Figure 39: View looking north from the May River.



Figure 40: View looking south at the May River.





Figure 41: West Elevation.

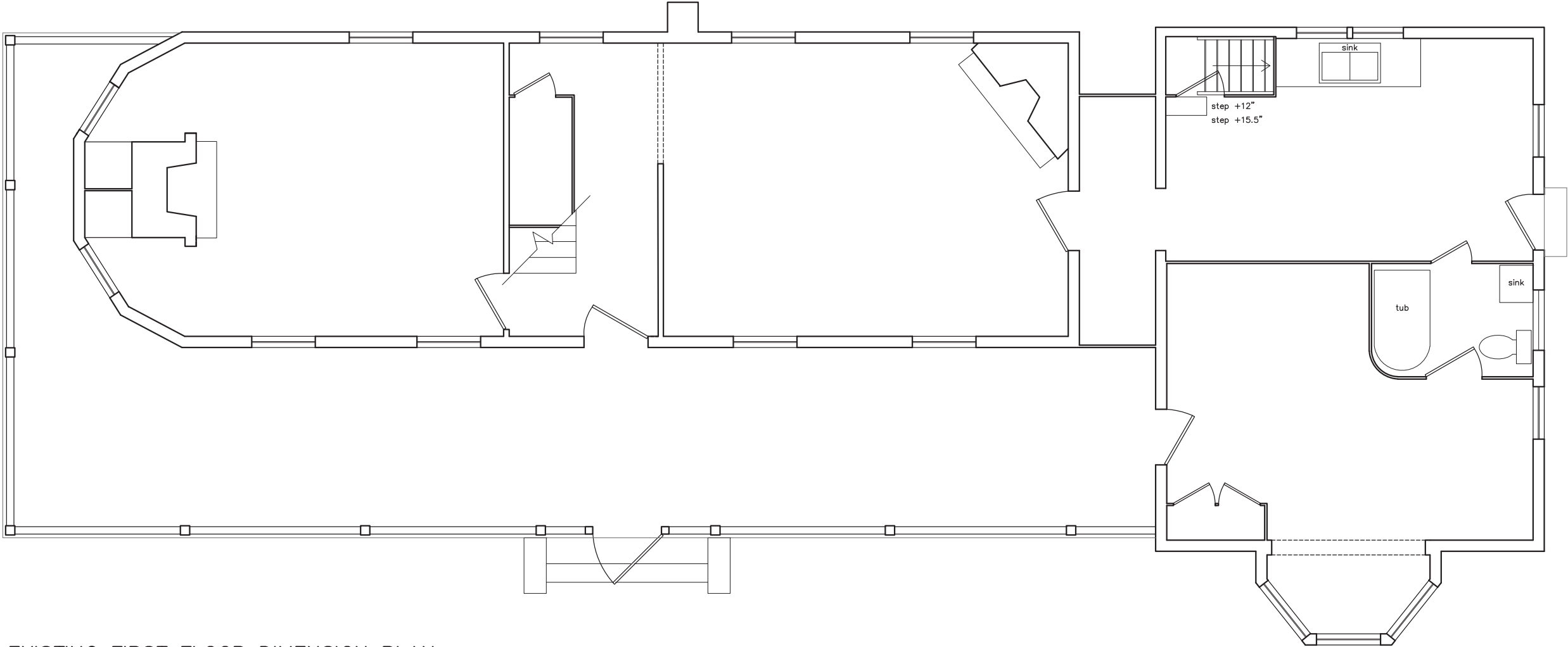


Figure 42: View of northwest corner.

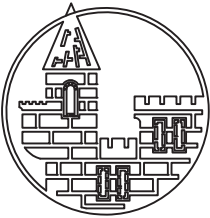


# DRAWINGS





1 EXISTING FIRST FLOOR DIMENSION PLAN  
3/16"=1'-0"



MEADORS, INC.

843.723.8585 ■ CHARLESTON, SC ■ 2811 AZALEA DRIVE

SQUIRE POPE CARRIAGE HOUSE

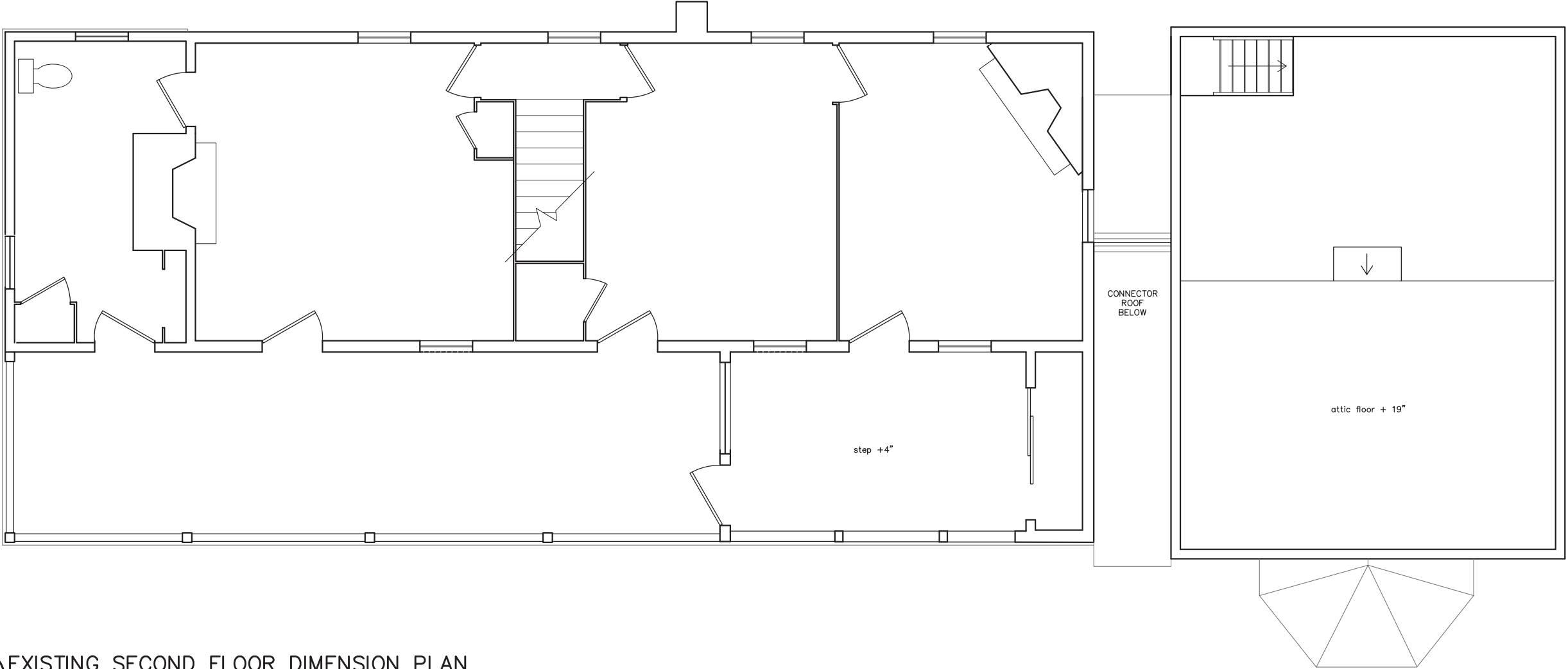
111 Calhoun Street  
Bluffton, SC 29910

August 2019

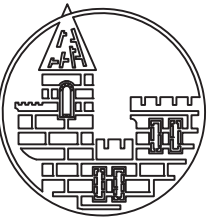
Plans

SHEET NO.

A1



1 EXISTING SECOND FLOOR DIMENSION PLAN  
3/16"=1'-0"



MEADORS, INC.

843.723.8585 ■ CHARLESTON, SC ■ 2811 AZALEA DRIVE

SQUIRE POPE CARRIAGE HOUSE

111 Calhoun Street  
Bluffton, SC 29910

August 2019

Plans

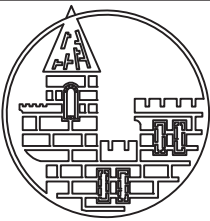
SHEET NO.

A2



NOTE: FOUNDATION PIERS ARE REPRESENTATIVE.  
THE FOUNDATION SUPPORTS REQUIRE ADDITIONAL  
STUDY DURING THE CONSTRUCTION PHASE.

1 EXISTING SOUTH ELEVATION  
3/16"=1'-0"



MEADORS, INC.

843.723.8585 ■ CHARLESTON, SC ■ 2811 AZALEA DRIVE

SQUIRE POPE CARRIAGE HOUSE

111 Calhoun Street  
Bluffton, SC 29910

August 2019

Elevations

SHEET NO.

A3



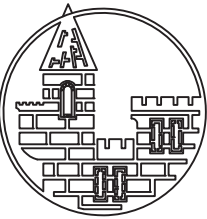
NOTE: FOUNDATION PIERS ARE REPRESENTATIVE.  
THE FOUNDATION SUPPORTS REQUIRE ADDITIONAL  
STUDY DURING THE CONSTRUCTION PHASE.

1 EXISTING WEST ELEVATION  
3/16"=1'-0"



NOTE: FOUNDATION PIERS ARE REPRESENTATIVE.  
THE FOUNDATION SUPPORTS REQUIRE ADDITIONAL  
STUDY DURING THE CONSTRUCTION PHASE.

2 EXISTING EAST ELEVATION  
3/16"=1'-0"



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SQUIRE POPE CARRIAGE HOUSE

111 Calhoun Street  
Bluffton, SC 29910

August 2019

Elevations

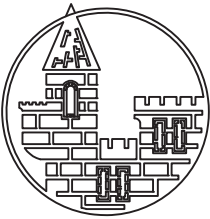
SHEET NO.

A4



NOTE: FOUNDATION PIERS ARE REPRESENTATIVE.  
THE FOUNDATION SUPPORTS REQUIRE ADDITIONAL  
STUDY DURING THE CONSTRUCTION PHASE.

1 EXISTING NORTH ELEVATION  
3/16"=1'-0"



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SQUIRE POPE CARRIAGE HOUSE

111 Calhoun Street  
Bluffton, SC 29910

August 2019

Elevations

SHEET NO.

A5





## REFERENCE TERMS AND DIAGRAMMS:

Adze: A long-handed tool with a curved blade set perpendicular to the handle. Used for dressing lumber.

Cant: A wedge-shaped block of wood.

Casement: A window sash that is hinged on the side.

Collar Tie: A horizontal timber uniting two opposite common rafters at a point below the ridge, usually in the upper half of the rafter length.

Diagonal Brace: A member installed at an angle to make a rectangular frame more rigid.

Double Hung: A type of window with two sashes, each sliding on a vertical track.

Fascia: A board nailed across the ends of the rafters at the eaves.

Footing: The bottommost part of a foundation wall, with a course of concrete or masonry wider than the base of the wall.

Girder: A structural member transversely supporting a load. A structural member carrying building loads. Sometimes called a “beam”.

Girt: A horizontal member used as a stiffener between studs, columns, or posts at intermediate level.

Header: A horizontal structural member that supports the load over a window or door opening.

Jamb: The side parts of a window frame, window opening, or door frame.

Joist: A structural load carrying member that supports floors and roofs.

Lap Siding: Type of siding in which two horizontal boards are not butted up against each other, but are overlapped, with part of one covering part of the other.

Live Load: The load superimposed on structural components by the use and occupancy of the building, not including the wind load, earthquake load, or dead load.

Mortise: A recess cut in one member, usually wood, to receive a tenon from another member.

Mortise-and-Tenon Joint: A joint between two members, usually wood, which incorporates one or two more tenons on one member fitting into mortises in the other member.



Post & Girt Framing: A system of structural wood-frame construction characterized by the use of heavy corner posts, horizontal girts to support the superimposed loads, and summerbeams to support the floor joists; largely replaced by balloon framing in the early 19th century. Structural members were interconnected by mortise-and-tenon joints.

Rafter: One of a series of inclined members to which a roof covering is fixed; any of a series of small, parallel beams for supporting the sheathing and covering of a pitched roof.

Sill: A strong horizontal framing member that forms the lowest member of a framework.

Single Hung: A type of window with two sashes, with only an operable lower sash. The upper sash is fixed in place.

Sistering: The reinforcement of a structural member by nailing or attaching a stronger piece to a weaker one.

Tenon: A projecting tongue-like part of a wood member designed to be inserted into a slot or mortise of another member to form a mortise-and-tenon joint.

Tie Beam: A horizontal timber connecting two opposite rafters at their lowest ends to prevent the rafters from spreading.

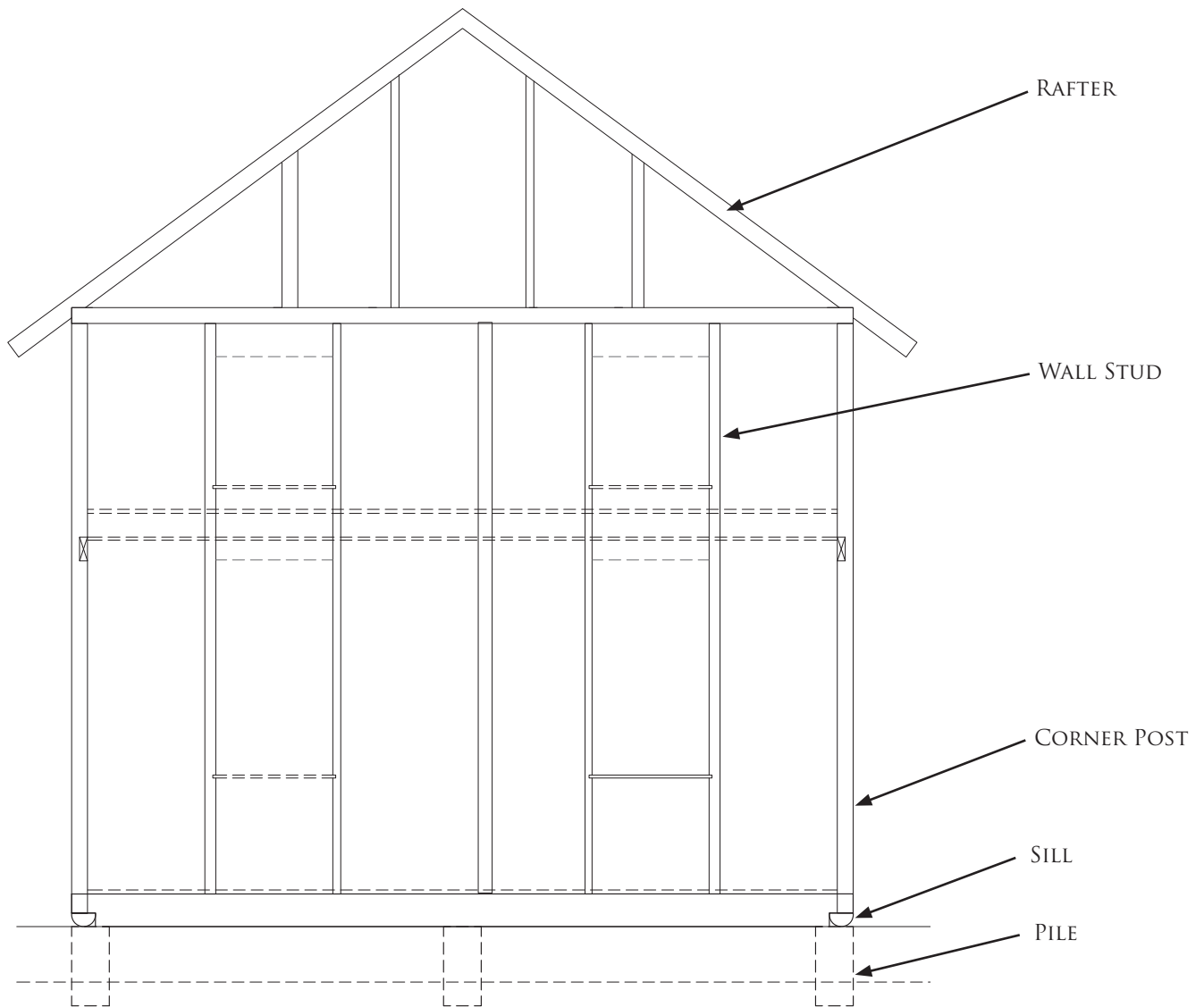
Timber Pile: A large straight log that is driven into the ground as a foundation support.

Top Plate: A horizontal member of a frame wall supporting ceiling joists, rafters, or other members.

Pointing: The treatment of joints between bricks, stone, or other masonry components by filling with mortar.



REFERENCE DIAGRAMS:





## EXTERIOR CONDITIONS ASSESSMENT

The Squire Pope Carriage House consists of two once independent structures that have been connected by a small one-story hyphen. The combined structures all contain unique details and histories worthy of individual discussion. For the purposes of this assessment, the structures will be referred to as the two-story west building, the one-story east building, and the hyphen. Together, these three sections comprise the Squire Pope Carriage House.

The exterior envelope of the Squire Pope Carriage House is significantly deteriorated with numerous visible areas of damage and structural settlement. A visual analysis of the exterior of the structure indicates extensive settlement of the structure at the west façade of the structure and at the hyphen connecting the two independent buildings.

In 2018, the west side of the structure appears to be in danger of collapse as the foundation and all supporting elements below the second-floor west bathroom enclosure have failed. A chain link fence has been installed around the perimeter of the building.



**Figure 43:** Squire Pope Carriage House, Northwest Corner: Overview of existing exterior conditions.



## FOUNDATION

### **Two-Story West Building**

The foundation of the structure has completely failed, and the first-floor framing members have settled into the soil. The perimeter sills are in direct contact with the soil and have completely deteriorated in multiple locations. Evidence of one large tree stump was discovered dislodged at the center of the structure and may indicate the building originally rested on log piers. A similar configuration was observed at the ca. 1870 Cyrus Garvin-Garvey House.

No log piers have been found in-situ beneath any of the visible perimeter sills. However, the piers may have all completely deteriorated and have allowed the structure to settle onto the soil. Masonry rubble was also observed beneath the eastern section of the one-story structure, but a solid masonry pier was not found in any location during this assessment. Additional evidence may be uncovered in the future restoration of the building to determine the original method of construction for the foundation.

Large sill members were observed on the perimeter of the structure and likely originally rested on wood or masonry piers. On the north elevation, the perimeter sills have sunk into the soil leaving only the top 10-20% of the framing members exposed. Where physically inspected, the sills were found to be deteriorated where in contact with the soil. A visible downward deflection in the wall is visible in the middle of the north elevation when viewed from the exterior.



**Figure 44:** Room 101, Foundation: Detail of tree stump found between the floor joists when the flooring was selectively removed.





**Figure 45:** Crawlspace Beneath Room 103, Looking South: Detail of the intermediate eastern perimeter sill (at left) mortised into the south perimeter sill. The sill at left is believed to be the original eastern sill for the smaller structure. Note adze marks on both historic sills. An floor joist is installed above the intermediate perimeter sill.



**Figure 46:** North Elevation of Two-Story Section: Detail of Eastern “Corner Post” with an additional stud added to the east (at left). The right vertical member appears to be the original corner post for the smaller structure prior to enlargement.





**Figure 47:** North Elevation of Two-Story Section: Detail of framing members at grade level to the west of the north chimney.



**Figure 48:** North Elevation of Two-Story Building: Detail of corner brace intersecting the deteriorated north perimeter sill.





**Figure 49:** Crawlspace beneath Room 103: Detail of dry stacked modern masonry installed below floor joist.



**Figure 50:** Crawlspace Beneath Room 101, Northwest Corner: Detail of deteriorated western perimeter sill. The settlement in this area is due to the failure of this structural member.



It is expected that the buried or inaccessible perimeter sills are in a similar condition and will require extensive repairs or full replacement. The west perimeter sill exposed directly below the west bay window is completely deteriorated. The complete failure of this member has likely caused extensive settlement in this area.

Where visible for inspection, the perimeter sills contain unique surface textures indicating they were formed by hand with an adze. The tool marks are indicative of early 19<sup>th</sup> century construction. Another matching large perimeter sill member was found midspan in the middle of Room 104. Assessment of the exterior framing at this location indicates that this joist is much larger in size than other floor joists directly adjacent on either side. The wood structural member appears to have been formed using an adze and is mortised into the exterior sills on the north and south sides of the structure. This larger joist is interpreted as the eastern perimeter sill of a smaller structure and the building appears to have been enlarged to the west to its current footprint. The date of the modification is unknown, but the method of framing and the size of the members used in the structure to the west of the intermediate sill indicate it was likely early during the building's history. A smaller joist has been installed directly over the intermediate sill at this location to accommodate the change in construction.

### **One-Story East Building**

The foundation of this building is largely inaccessible and could not be fully inspected. Masonry rubble was found in an animal burrow at the northwest corner of the structure, but further evidence of a masonry foundation was not uncovered.

On the north elevation, the perimeter sills of the building have also settled into the soil leaving only the top of the sills exposed. The perimeter sills to the west of the bay window are easily accessible and appear to rest directly on the soil. The underside of the perimeter sill is deteriorated. A portion of the sill was excavated at the east side of the bay window to further investigate the foundation. Masonry rubble was located around the sill but was not found directly beneath the structural member. The perimeter sills appear to be uniform in size and lack the adze marks seen on the two-story west structure.

A gap has formed within the interior of the south bay window indicating differential movement between the window structure and the rest of the building. This movement is likely induced by the failure of the foundation. Additional vertical separation was noted within at the interior southeast corner of Room 107.

### **Hyphen**

The hyphen foundation has completely failed and requires reconstruction. A small concrete pad is placed on the north side of the hyphen and was likely installed to support a water heater or similar equipment. The hyphen has settled on the north and south ends as the structures on either side have independently moved.





**Figure 51:** Northeast Corner of One-Story Building, Northwest Corner: The corner post has completely deteriorated. The perimeter sill is covered by soil.



**Figure 52:** South Elevation of One-Story Building: Detail of the foundation of the bay window. The decorative paneling is extensively deteriorated.





**Figure 53:** South Elevation of One-Story Building, Southwest Corner: Detail of exposed perimeter sill resting at grade. The bottom of each sill is deteriorated.



**Figure 54:** North Elevation, Hyphen: The foundation of the hyphen has failed.





**Figure 55:** Crawlspace Below Room 103, Looking North: Detail of Floor Joists. The intermediate perimeter sill is located at right. An additional floor joist has been installed directly over the sill after the building was enlarged.

## FLOOR JOISTS

### **Two-Story West Building**

#### *First Floor*

The exterior ends of the floor joists appear to be deteriorated where they were exposed during the assessment. The remaining condition of the members cannot be ascertained without removing all the interior floorboards. Where selective removal of the floorboards was performed, the joists appear to be in fair condition despite their minimal clearance above the soil. The joists appear to have been modified over time and dry stacked masonry has been added below the first-floor joists to reduce sagging.

#### *Second Floor*

Noticeable settlement is present in the west façade on either side of the chimney. A small hole was drilled into the ceiling within Room 101 and a borescope was inserted to assess the condition of the second-floor joists directly above this location. Assessment of the visible joists indicate that the joists run north to south. One joist in the middle of this





**Figure 56:** Crawlspace Below Room 103, Looking South: Detail of Floor Joist. The joist appears to be in fair condition.



**Figure 57:** Crawlspace Below Room 103: Overview of differently sized floor joists.



room was found to have split in the center due to the extensive settlement at the west side. The condition of the second-floor framing members is discussed further in the structural assessment.

Where visible, the joists appear to have been whitewashed, indicating the joists and framing members were likely exposed for a period following construction.

## One-Story East Building

### *First Floor*

The first-floor joists are in place directly on the perimeter sill and run east-west. The floor joists appear to be stable as few notable dips or deflections were observed during the on-site assessment. The joists likely rest at grade in direct contact with the soil. The ends of the joists are deteriorated where exposed on the northwest corner of this structure. Water damage is prevalent within the bathroom on the first floor, likely indicating deterioration of the floor structure.



**Figure 58:** Second Floor Joists Below Room 202: One joist was cracked due to settlement. The joists are hidden due to ceiling paneling in Room 101. The floor joists are whitewashed, indicating they were likely exposed on the first-floor.





**Figure 59:** North Elevation of Two-Story Building: Deteriorated corner post at the northeast corner. The internal diagonal chimney is present behind the post.

### *Second-Floor Attic*

The second-floor attic joists appear to be in good condition where exposed. Powderpost beetle damage is present at select locations, but the damage does not appear to have structurally compromised the integrity of the joists. The joists are whitewashed where exposed. The second-floor framing above Room 107 appears to have been modified to accommodate the ceiling heights on the first floor. The second-floor joists have been covered with modern plywood and are unavailable for full inspection. It is likely that the original ceiling joists have been cut to accommodate the canted ceiling in Rooms 106 and 107. Collar ties have been added directly over the cut joists.

### CORNER POSTS & DIAGONAL BRACES

During the field assessment, the lower two courses of siding were removed from both sections of the structure on the north elevation. The siding was found to be extensively deteriorated due to its proximity to the ground and required minimal effort to remove. The removal of the siding enabled the assessment of select framing members, including the north corner posts and diagonal braces.





**Figure 60:** North Elevation, One-Story Building: Detail of floor joists and flooring at this location. Deterioration is evident where the members are in direct contact with the ground.

### **Two-Story West Building**

The exposed corner posts at the northeast and northwest corner intersect the lower perimeter sill at ground level. The corner posts remain attached to the deteriorated sill. The lower ends of the corner posts were deteriorated where they intersect with the sill. An intermediate vertical member intersects the intermediate perimeter sill and likely served as the northeastern corner post for the original structure. A vertical member has been added to this post on the eastern side.

A large diagonal brace is located at the northwest corner and appears to be original. A smaller brace is present on the north elevation adjacent to the northeast corner post. The diagonal brace at this location is adjacent to the brick masonry and is significantly deteriorated. This diagonal brace may have been modified when the corner chimney was installed. An additional diagonal brace is present adjacent to the intermediate corner post on the north elevation and likely provided structural stability for the east frame addition. A mortise is present within the perimeter sill on the either side of the intermediate corner post and likely held the original northeast diagonal brace for the smaller west structure.

The remaining corner posts and diagonal braces on the other sides of the structure were inaccessible for inspection but are likely in a similar condition due to the relatively uniform settlement of the structure into the soil.



### **One-Story East Building**

The northeast and northwest corner posts are heavily deteriorated at the lower ends. Insect damage was observed on the northwest corner post. The diagonal braces at each corner are deteriorated where they intersect the sill at ground level.

### **Hyphen**

A corner post was not identified within the hyphen.

## FRAMING MEMBERS

### **Two-Story West Building**

The lower ends of all framing members throughout the structure in both building sections have deteriorated and require repair. This deterioration is largely due to the failure of the main sill, which caused the framing members to be in direct contact with the ground. This allowed for the framing members to constantly absorb moisture creating the perfect conditions for insects and rot.

### **One-Story East Building**

The framing members are believed to be in a similar condition throughout the structure. Where exposed on the north façade, the framing members are deteriorated at the lower ends.

### **Hyphen**

The framing within the hyphen is extensively deteriorated where available for inspection.

## EXTERIOR OPENINGS

### **Two-Story West Building**

The exterior openings throughout the two-story section of the carriage house range in condition from good to poor. The condition of the windows depends on the elevation, protection from environmental conditions, and degree of settlement within the structure.

Single hung gunstop windows are present throughout this structure on the north, south, and east elevations. The second-floor windows are noticeably smaller than the first-floor





**Figure 61:** South Elevation of Two-Story Section: Overview of the historic first-floor single hung gunstop windows and louvered shutters.



**Figure 62:** North Elevation of Two-Story Section: Overview of the historic second-floor single hung gunstop windows and louvered shutters.



openings. However, the fenestration is uniform on both floors with few deviations to the established order. Spring locks remain in place on many of the windows throughout the building.

Louvered shutters are present on the windows on both floors. The shutters located on the porch windows are in good condition where they are well protected from the elements. Original hardware is present on select windows. The glazing putty has failed and requires repair throughout the building. Old glass is also visible in several sashes on the first floor of the porch. The glass rabbits in several of the sashes are damaged.

Two casement windows are present on the first-floor porch bay window. The sashes are heavily weathered but are in fair condition. The windows no longer open due to the settlement on this façade. The casement windows likely postdate the single hung gunstop windows throughout the structure.

On the north elevation, the gunstop windows and louvered shutters are in poor condition. The sills are extensively rotten. The casing generally appears sound, but the window sashes are beginning to separate. Multiple muntins were observed to be broken or missing. Older glass panes are also present in several windows. One window has been repaired with caulk on the upper and lower sashes. Biogrowth is present on the horizontal window surfaces throughout this elevation.



**Figure 63:** South Elevation, One-Story Building: Detail of bay window. The older corrugated roof visible on the historic photographs remains on the bay window.



**Figure 64:** North Elevation of Two-Story Building: Detail of window conditions on this elevation. The original shutters are missing. Biogrowth is prevalent.



**Figure 65:** North Elevation of Two-Story Building: Detail of sill conditions.



A single hung gunstop window is present on the west elevation of second-floor bathroom infill. The window is protected by a closed pair of louvered shutters. The louvers are dislodged on the southern shutter.

A single hung gunstop window is present on the second-floor east elevation and the window overlooks the hyphen roof. This window is extremely racked due to settlement. An extra piece of trim has been added to the stool to accommodate the change in shape to the window sash.

### **One-Story East Building**

Two double hung wood windows are present on the east elevation. Wood shutters have been fixed-in-place on either side of windows on this elevation. A small transom is present between the windows. The double hung sash windows are in fair to poor condition with a degree of separation and deterioration.

A half lite wood door enters to the first-floor kitchen. The door sill is weathered and has been split. The door casing and jamb appear sound, but the door was installed later. The door is heavily weathered and is missing glass in the half lite.

Several panes are broken in the northern window on this elevation. Original shutter hardware remains in place in front of the lower sash. Older glass panes are present in both windows.

A large bay window is present on the east elevation of the one-story section of the carriage house. The cornice of the bay window is deteriorated but the dentils are sound. Three windows are present on the south, southeast, and southwest sides of the bay. The central window of the bay is noticeably taller than those installed on the southeast and southwest faces. The shutters throughout the windows are deteriorated. Old glass is present within the windows at this location. The window sashes are weathered but generally sound. On the southwest face, the bottom rail of the upper sash is separated but the upper sash is sound.

Diagonal paneling is present below the windows on the southeast and southwest sides. Vertical paneling is present on the center face. The lower panels and boards are deteriorated at the bottom where in contact with the soil.

Louvered wood vents are present in the north and south gables and provide ventilation to the attic. The vents appear weathered but are in good condition with no missing louvers.





**Figure 66:** East Elevation of One-Story Building: Detail of transom window.



**Figure 67:** South Elevation of One-Story Building: Detail of window and trim deterioration within the south bay window.



## EXTERIOR CLAPBOARDS

### **Two-Story West Building**

Generally, the lower two rungs of siding throughout the structure are deteriorated or missing due to its proximity to the ground. The siding above this is generally sound with moderate paint loss. The paint on the west elevation is heavily deteriorated. On the north elevation, the siding appears deteriorated behind the north leaning chimney. On the east elevation, the exterior clapboards have extensive biogrowth adjacent to the hyphen roof. It is believed the siding is deteriorated at this location. The corner boards throughout the building are in good condition except at the base of the building.

On the north elevation, the exterior clapboards are dislodged on the second floor adjacent to the northeast corner. On the second-floor east elevation, the clapboards have been covered with a membrane waterproofing system adjacent to the hyphen roof.

### **One-Story East Building**

Generally, the bottom two rungs of the siding are deteriorated or are dislodged. Steel fasteners used to install the board are actively corroding and failing. The siding throughout the structure is weathered and checked in select locations but appears to be in fair condition. Select siding and trim were installed using cut nails. Multiple holes are present in the siding on the north elevation from now removed piping.

### **Hyphen**

The framing and siding on the north and south facades of the hyphen have failed completely and are dislodged at multiple locations. The siding rests at a noticeable angle due the foundation failure.

## FASCIA & TRIM

### **Two-Story West Building**

The wood fascia and trim are extensively weathered on the all facades. On the two-story porches, the second-floor fascia and trim are heavily weathered with extensive paint failure. The soffit is generally loose and weathered at the corners with varying degrees of separation.

At the north elevation, the cornice from the north chimney to the northeast corner is in poor condition with extensive separation at the northeast corner. The cant within the trim is deteriorated at this location. The cant behind the leaning north chimney has been removed. The cant is also deteriorated to the west of the chimney.





**Figure 68:** North Elevation of Two-Story Building: Detail of dislodged siding to the left of the window. Note the deterioration within the soffit.



**Figure 69:** South Elevation of One-Story Building: Detail of siding failure due to corrosion of the steel fasteners.



The soffit and eave are extensively deteriorated on the south elevation directly above the 1950s porch infill. The soffit is suspect to the west of this location.

### **One-Story East Building**

The soffit and fascia on the south gable are heavily deteriorated. The fascia is dislodged on both gable eyebrows on the south elevation. The fascia and soffit are weathered but sound on the north and east elevations of this structure.

In areas where the corrugated metal roof has deteriorated, the fascia has extensive deterioration.

The existing white finish has deteriorated and there is biogrowth present in several locations, indicating that there is active moisture intrusion into the fascia.

### **Hyphen**

The soffit and eave on the hyphen are deteriorated due to failure of the metal roof. The construction of the soffit indicates that the hyphen was installed after the construction of each building.



**Figure 70:** South Elevation of Hyphen: Detail of dislodged fascia trim on the gable eyebrows.



## PORCH

### **Two-Story West Building**

#### *First Floor*

A two-story porch is present on the south and west elevations of the two-story building. A portion of the second-floor porch has been enclosed at the southeast corner and on the western elevation to accommodate additional interior rooms. Screens have been installed on the open areas of the porch. Concrete tabby knee walls and brick steps frame the front south porch entrance.

Victorian porch brackets are present on each column. On the first floor, the chamfered porch columns are deteriorated at the base on the eastern side and southwest corners. Several bases have been previously repaired. The porch balusters are toenailed directly into the posts. Portions of the carved baluster handrails have been replaced with square 2x4. A decorative lattice Gothic arch is present on the west elevation of the second floor. The lattice is in fair condition with extensive paint loss.

The porch foundation has collapsed, and the framing is sitting on the ground. Excavation below several columns indicates the porch originally rested on two to three courses of brick. Much of the decking on the first floor is deteriorated at the ends and several areas have been previously repaired in front of the south door. Previous repairs to the decking at the front entrance have now collapsed due to settlement of the floor.



**Figure 71:** South Porch of the Two-Story Building: Overview of the first-floor porch looking west. The porch framing does not appear to date to the construction of the building.





**Figure 72:** South Elevation of the Two-Story Building: Overview of the first-floor porch entrance concrete tabby and masonry steps.



**Figure 73:** Southwest Corner of Porch: The porch foundation has also settled into the surrounding soil. The ends of the decking boards are deteriorated throughout the first-floor.





**Figure 74:** South Elevation, Hyphen Porch: Detail of complete failure of the porch structural elements at the hyphen where it intersects the smaller building.



**Figure 75:** South Elevation, Second Floor Looking West: Overview of existing porch conditions.





Figure 76: South Elevation, Second-Floor Porch: Detail of decorative lattice on the west end.



Figure 77: South Elevation, Second-Floor Porch: Detail of the modified soffit detail below the porch roof framing.



### *Second Floor*

Wire nails were observed within the second-floor framing indicating this feature is a later addition. The porch rafter framing ties into the main roof framing but appears to be newer and constructed out of modern lumber. Based on this evidence, it is believed the porch was added during the late 19<sup>th</sup> century. The porch may have been initially added as a one-story porch due to the presence of shingles directly below the second-floor northwest bathroom enclosure. The second story appears to have been constructed later. Additional evidence may be uncovered during the future restoration to further clarify the evolution of the structure.

The second floor of the porch is in fair condition. The roof framing is exposed and appears to be in good condition. The framing is constructed out of standard lumber further indicating the roof is a later addition. The original fascia trim has been boxed and covered with siding, creating a unique detail below the roof framing. The original corner board at the southwest corner remains in place. The ends of the porch roof rafters are visible within the attic of the main structure.

The decking is heavily weathered and deteriorated at the ends at select locations. The second-floor balustrade and decorative lattice are heavily weathered with extensive paint failure. The woodwork at this location appears to be sound. Several spindles are dislodged.

## CHIMNEY

### **Two-Story West Building**

A large chimney is present at the center of the west elevation. This chimney appears to be original to the construction of the structure and contains historic Lowcountry bricks. The later bay window on the first floor of this elevation integrates the chimney on the interior of the first floor. The chimney is capped by a masonry arched cap. The upper portions of the chimney including the cap appear to have been modified as the masonry color changes above the roof line. The exposed masonry is in fair condition. The mortar appears to date to the 19<sup>th</sup> century but was inaccessible for analysis.

Another chimney is located on the northwest corner of the two-story section. The chimney is integrated into the structure of the building and features a corner firebox on both floors. The chimney appears to have been added during the late 19<sup>th</sup> century or early 20<sup>th</sup> century and contains red fired brick. The mortar and masonry are in good condition above the roof line. The mortar at the foundation of the firebox has failed and requires repointing. A sample of this mortar has been analyzed and is included in the "Mortar Analysis" of this report.

The north chimney placed on the exterior of the structure is leaning heavily to the north





**Figure 78:** North Elevation of the Two-Story Building: Detail of the north chimney. The chimney is currently leaning away from the structure.



**Figure 79:** West Elevation of the Two-Story Building: The chimney at this elevation is believed to be the oldest on the house. The upper cap has been modified as evidenced by the change in brick color.





**Figure 80:** Two-Story Building Roof: The roof is covered with modern green asphalt shingles. The roof has reached the end of its usable service life. Leaf debris commonly accumulates on the low sloped portions of the roof.



**Figure 81:** Northwest Corner of the Two-Story Building: Overview of the porch and infill roof detail where the roof intersects the original roof framing. This detail is also seen on the southeast corner of the building.





**Figure 82:** East Elevation of the Two-Story Building: Detail of the porch roof detail where it intersects the main roof at the southeast corner.



**Figure 83:** One-Story Building Roof: The roof is a modern 5V steel roof. This roof was likely installed in the 1990s. The coating has failed and the metal roofing panels are actively corroding.



and has separated from the building. This chimney appears to have been added during the early 20<sup>th</sup> century. The chimney is capped with a small brick arch and is connected to a furnace in Room 103.

### **One-Story Story Building**

No chimneys are present on this structure. Historic images indicate a small chimney once existed in the location of the vent pipe at the northeast corner of this building.

## ROOF

### **Two-Story West Building**

The main roof is a gable roof that transitions to a hipped roof around the perimeter. The roof is covered with a modern asphalt shingles. Historic images indicate that the building once had a painted corrugated metal roof, similar in appearance to the existing corrugated roof over the south bay window on the one-story east building. The modern asphalt shingle roof appears to have been installed around 1970. The asphalt shingles were applied to a mix of modern and historic sheathing. Unique roofing details are present at the northwest and southeast corners of the porch where the porch roof ends with a small shed roof at the intersection with the hipped roof of the main building. The roof detail has caused woodwork in this area to deteriorate. This detail indicates that the second-floor porch roof postdates the roof of the original structure. The shingles have been dislodged around the leaning north chimney.

The shingles are in poor condition and are likely at the end of their useful service life and should be replaced. Vegetation and organic debris frequently accumulate on the hipped roof above the porch.

The roof currently lacks gutters and downspouts. Rainwater currently is directed off the roof and saturates the ground around the perimeter of the building. The lack of gutters likely contributed to the deterioration of the perimeter sill.

### **One-Story East Building**

The roof is a gable roof facing east west and is covered with a modern 5V metal roof. The hipped roof on the bay window has an older corrugated metal roof. The roof is installed on battens. The metal is heavily corroded throughout this building, but the panels are intact. Gutters and downspouts are also missing on this building.



## Hyphen

A small gable roof connects the two structures over the hyphen. The hyphen roof is covered with a modern 5V roof. The metal panels are heavily corroded and organic debris has accumulated on this roof. Several layers of metal roofing were observed within this area. Counterflashing was not observed between the metal roof and the exterior clapboards on the second floor. A modern membrane system has been applied to the adjacent west clapboards, likely to flash this area.



**Figure 84:** Hyphen Roof: Detail of the 5V roof over the hyphen. Leaf debris are present on this roof.

## INTERIOR CONDITIONS ASSESSMENT

The interior of the Squire Pope Carriage House represents multiple eras of renovation and modification to the original antebellum structure. Due to the active deterioration mechanisms such as termite damage and settlement, the first floor of the structure is in a state of disrepair. The settlement of the structure at the west façade has reduced the structural stability of the building.

### FIRST FLOOR

The interior condition of the first-floor ranges from poor to fair. Where inspected, the lower ends of the framing members have deteriorated due to insect activity and moisture intrusion. The current floor framing sits directly on the ground as the original foundation has failed. The flooring throughout the first floor is uneven and reflects the degree of settlement within each room. The settlement of the structure has negatively affected the condition of the interior finishes.



**Figure 85:** Room 101, Looking West: There is extensive settlement on either side of the masonry chimney. The ceiling visible bows downward on either side.



## Two-Story West Building

### *Room 101, West Bay Room*

The walls within this room are covered with plaster from floor to ceiling. The plaster is cracked in a variety of locations due to the settlement of the structure. The ceiling is 2-3/4" beadboard with decorative battens installed on either side of the chimney. Two-inch picture mold trim is present at the intersection of the ceiling and the plaster walls. The western bay appears to be a later addition, as the bay window fully encompasses the masonry of the chimney and wood battens on the ceiling cover the transition from the original framing to the ceiling of the bay. The ceiling boards were installed during or sometime after the construction of the bay as they are present in both areas. A wood mantel with late 19<sup>th</sup> century to early 20<sup>th</sup> century decorative motifs surrounds the firebox. The mantel is in good condition with moderate paint failure and alligating. The brick hearth is in good condition and the firebox is covered with plywood. The extant interior finishes of this room show that this was the primary room of the structure.

The flooring is 3-1/2" tongue and groove (T&G) pine. The flooring boards deflect away from the masonry fireplace and a large bulge is present in the flooring in the center of the room.

A 6.5" baseboard with a 3/4" shoe mold is present throughout the room. The baseboard appears to predate the construction of the bay window as a plain 6.5" boards were used on the left side of the chimney to finish the interior of the bay. A portion of the original baseboard was reused on the right side of the chimney.

The interior casing on the bay windows differs from the single hung windows on the north and south sides. The larger windows contain fixed upper sashes with the spring catches still present on the inside face of the exterior window frame. The interior casing is 4-3/4" wide with a 1/2" beaded stop. The historic windows contain a 3" bull nose stool and 3" lower apron. The windows are typical of 19<sup>th</sup> century construction.

The interior door is a 1-1/8" wide three pin through tenon panel door with large three knuckle hinges and is also believed to date from the 19<sup>th</sup> century. This door may have been reclaimed from another building.

### *Room 102, Stair-Hall*

The stair hall features 3-1/2" beadboard ceiling with 2-3/4" T&G beadboard walls. The baseboard differs from Room 101 and is 6" in height with a bevel and a 1/2" quirk bead. The flooring is 4-1/2" T&G flooring with 5/8" wide boards placed randomly throughout the floor. Exposed flooring beneath the stairs reveals that the original wide plank flooring is likely located beneath the thinner flooring. The stair features an 8" rise and a 9-1/2" depth with a bannister height of 27" from the tread. The stair baluster has turned spindles and a wooden banister. The baluster is of a higher style than typically seen with the stair





Figure 86: Room 101, Northeast Corner: Detail of interior conditions and the interior door.



Figure 87: Room 102, Stair-Hall: Detail of the newel post and balustrade.





**Figure 88:** Room 103, Looking West towards the Stair-Hall. The opening between the rooms has been enlarged towards the north.



**Figure 89:** Room 103, Northeast Corner: Overview of the decorative interior paneling and the corner fireplace.



riser construction type and treads indicating the stair materials may have been reclaimed or recycled. Modern vinyl stair tread covers are present on each tread.

The front door is a high style four paneled door with glass inserts within the upper panels. The original glass has been replaced with Plexiglas and the interior sticking has been replaced. The exterior face of the door contains applied wood molding around each panel creating an arch in the upper panels. The hinges match those found on the interior door in Room 101. The threshold is worn but is in good condition. A modern brass dead bolt has been installed on the door above the historic doorknob and plate. Holes are present in the center of the door between the glass panels where a door knocker was previously installed. The door knocker is missing.

A single hung window with the fixed upper sash is present on the north wall within this room. The window and interior casing are identical to those discussed in Room 101.

The interior finishes are in fair condition with minimal paint loss. Dust and debris are common throughout this room.

### *Room 103, East Room*

The dividing wall between 102 and 103 is a curtain wall resting directly on the wood flooring. The interior of this room is in fair condition and features a corner fireplace at the northeast corner. The mantel has an applied diamond motif on the legs and header. The firebox has been covered with a square piece of plywood with a metal handle.

The baseboard differs from the previously discussed rooms and is 5" wide with ½" quirk bead. Two- and three-quarter inch T&G beadboard is laid vertically up to the 2-3/4" chair rail at a 33". Above the chair rail, 2-1/2" wide beadboard is laid alternately at a 45-degree angle to create decorative triangular patterns. Two-inch picture mold trim has been applied to the wall paneling at the ceiling. The ceiling has the same 3" beadboard seen in Rooms 101 and 102. The wood paneling is in fair condition with moderate paint loss.

The flooring widths are variable throughout the room. One third of the room features historic random wide plank flooring with widths ranging from 12" to 6". The east side of the room features 4-1/2" T&G flooring. A small square patch in the center contains 3" T&G wood flooring. The flooring has been painted with a beige coating. Several of the floorboards are loose. The wide plank flooring has been installed directly on the joists.

Four large identical windows are present within the room with two each on the north and south walls. The windows are identical to the 19<sup>th</sup> century windows discussed within Rooms 101 and 102. The stools were replaced to match the chair rail and apron. Three quarters of an inch quarter round molding has been added as a backband around the window casing. Evidence of water intrusion is present on the stools of the north windows.

An historic four panel door is present on the east wall leading to the hyphen interior. The



door is identical to the door in Room 101 with a similar rim lock. The door opening has been modified with a piece of applied trim to accommodate the settlement within the wall indicating that the damage has existed for a long period of time. The interior opening on the west wall appears to have been enlarged at some time to the stair hall.

Settlement is noted on the eastern side of the room. The wall paneling is damaged at the intersection of the west wall and the diagonal chimney wall framing. The interior face of the exterior siding and the east wall studs are whitewashed where exposed and matches the finish seen elsewhere. A non functioning furnace is present at the northwest corner of this room.

#### *Room 104, Hyphen*

The interior of the hyphen is in poor condition due to the excessive settlement and destabilization of the structure. 2-3/4" wide beadboard is installed on the ceiling. The original exterior clapboard of both structures is exposed to the interior of the structure further illustrating the history of these buildings. Whitewashed framing is visible in areas where the enclosed clapboards are dislodged. There is evidence of excessive water intrusion at the ceiling.



**Figure 90:** Room 104 (Hyphen) Looking South: The exterior clapboard of both structures remain exposed.



**Figure 91:** Room 105 (Kitchen), Looking West: Attic access is present at right. A variety of interior wall finishes are present throughout this space.



**Figure 92:** Room 105 (Kitchen) Looking East: There is extensive paint failure within this room.



## One-Story East Building

### *Room 105, Modern Kitchen*

The interior of this room contains the “modern” kitchen for the structure and has a variety of paneling types. An enclosed stairwell at the northwest corner provides access to the half-story attic. The north exterior wall has vertical 3-1/4” T&G paneling. Three-and-one-quarter inch T&G V-groove paneling encloses the north attic stair and the east exterior wall. The south interior wall features 3-1/4” wide vertical flat paneling with no groove detail. The inside face of the exterior clapboard siding is present on the west wall. Evidence of whitewash is present on the interior face of the clapboards at this location. The ceiling is 3-1/4” T&G V-groove paneling. The flooring is 3-1/8 T&G wood.

An interior board and batten door on the south wall provide access to the bathroom in Room 106. A newer half-lite paneled exterior door is on the east wall. Mid-20<sup>th</sup> century cabinetry and fixtures are present throughout this room. Wood paneling is located on the west wall.

### *Room 106, Bathroom*

The interior walls are the backside of the 3-1/4” T&G V-groove walls for Room 107. Paneling has been installed at an angle between the vertical walls and the ceiling to create a canted ceiling. A small casement window is present on the east wall. A porcelain tub and plumbing fixtures remain within the room but no longer function. The flooring matches the flooring within room 105. Extensive water damage is on the floor within this room. Another floor layer is present below the thinner wood flooring, like that observed within the two-story west structure.

### *Room 107, Bay Window Bedroom*

The interior north wall at the bathroom (Room 106) contains vertical 2-3/4” V-groove T&G paneling. The curtain wall separating the two rooms is elegantly curved. The remaining walls are covered with T&G paneling of random widths. Random widths of T&G paneling have been installed at an angle at the ceiling to create the appearance of a vaulted ceiling within the main room and within the bay window. The flat portion of the ceiling is covered with flat T&G of similar widths with no detail. The flooring matches the flooring in Rooms 105 and 106 and has been painted several colors. An older floor is present below this flooring. Separation was noted within the floor at the bay and at the southeast corner.

The wood trim varies throughout the room on each wall. The baseboards are 7” in height with a 1/2” quirk bead. A closet made from the V-groove board is on the west wall adjacent to the exterior porch door. The exterior is a four-panel door with glass inserts on the upper panels. A rim lock is present on the interior with a brass deadlock and steel sidelock.

A closet is present at the southwest corner of the room adjacent to the porch door. The room is in good condition with minimal paint loss. Debris is prevalent throughout this floor.





**Figure 93:** Room 107, Looking Northeast: View of the curved paneled wall between Rooms 106 and 107.



**Figure 94:** Room 107, Looking South: Detail of interior of the bay window. Note the separation of the floor below the windows.



## SECOND FLOOR

The second floor is in fair condition and appears to have been barely modified during the 20<sup>th</sup> century. As discussed previously, the rooms at the west side of the two-story building have settled significantly. No evidence of active water intrusion was found within the ceiling during the assessment. All the interior partition walls are curtain walls constructed out of one layer of vertical beadboard.

### *Room 201, West Bathroom Enclosure*

The west bathroom enclosure is extensively deteriorated and has settled downward due the failure of the foundation floor joists below. Access to this room was limited due to the existing conditions. The interior walls are covered with vertical 2-3/4" beaded T&G. The paneling is installed horizontally for two courses at the base of the walls to act as the baseboard.

The ceiling is covered with paneling of a similar size. The door to the enclosure is like the 19<sup>th</sup> century doors observed in Room 101 and 102. One window is located on the north wall and on the west wall and the window contains old glass. A door is present on the south wall and opens toward the second-floor porch. The bathroom fixtures remain in place. The masonry chimney has been boxed in with wood paneling.



**Figure 95:** Room 201, Looking West: The room has been infilled on the roof of the first floor porch. Due to settlement in the foundation, this room is structurally unstable.



**Figure 96:** Room 202, Looking West: Note settlement at the northwest corner. The mantle located within this room appears to be the oldest within the structure and is a typical antebellum style.

There is extensive paint failure throughout the room and evidence of water intrusion at the windows. This space is currently unsafe for occupation and in danger of collapse. The northwest portion of this room may be an early bathroom addition over the earlier one-story porch. This addition was enlarged to the south later.

#### *Room 202, West Bedroom*

The west wall of the room contains a large firebox with an early to mid-19<sup>th</sup> century mantel. The mantel is the oldest observed within the carriage house. The firebox has been enclosed with a galvanized panel and the brick hearth is loose and is not set in mortar. The firebox has been modified to accommodate a mid-20<sup>th</sup> century furnace that no longer operates.

Similar to Room 107, the ceiling has been modified with 3-1/4" V-groove paneling installed at an angle to create a vaulted ceiling. The flat ceiling contains 2-3/4" T&G beadboard. A small hatch in the ceiling provides access to the attic.

Vertical 2-1/4" T&G beadboard is present on the interior walls. Throughout the second floor the wood beadboard serves as room dividers as no interior wall framing remains except for the porch enclosures in Rooms 201 and 206. A small beadboard closet is on the east wall.



The baseboards are 6" with a ½" quirk bead and are similar to those seen in rooms 102 and 103. This is interpreted as the older beadboard and is commonly found on the exterior perimeter walls of the structure. Interior walls feature a 6" baseboard with a bevel and ½" bead and quirk and appears to have been installed to match the existing baseboard when the interior plan was reconfigured.

The floor appears to be original to the structure and contains large wide plank boards that range in width from 7" to 15". At the east side of the room, the flooring has been notched for an opening in the floor. The eastern notches for this opening were observed in Room 204. Nailing patterns around the opening indicate that floor structure was originally framed for the large central opening. This detail is commonly seen in 19<sup>th</sup> century structures adjacent to a fireplace hearth and the placement of this opening is in the center of the original structure prior to the hypothesized eastern addition described in the exterior assessment. The opening framed by the notches has been infilled with similar wide plank flooring. The wood on the perimeter of the opening shows no evidence of having been burned or in contact with fire.

The interior window trim is identical to the windows on the first floor with the addition of a ¼" round back band. The windows are smaller in scale than those assessed on the first floor. The upper sash remains fixed. A 1" wide through tenon paneled door identical to those assessed in Rooms 101 and 103 is present on the west wall. On the east wall, a similar four panel door opens inward away from the stair hall. This specific door is thicker at 1-1/4" and does not match the construction details of the 19<sup>th</sup> century through tenon doors. This door is believed to date from a different time period.

One exterior door is present on the south wall. The door is a four paneled door with larger glass panels at the top. The door features an older brass knob and steel rim lock. The later four paneled door was used exclusively on the second floor for the south porch doors in each bedroom.

The room slopes significantly to the northwest corner due to the failure of the foundation and the perimeter sills.





**Figure 97:** Room 202, Looking Northeast: Many of the rooms on the second floor feature a canted ceiling with beadboard installed at an angle. Note the differences in profile and size between the vertical and angled ceiling paneling.

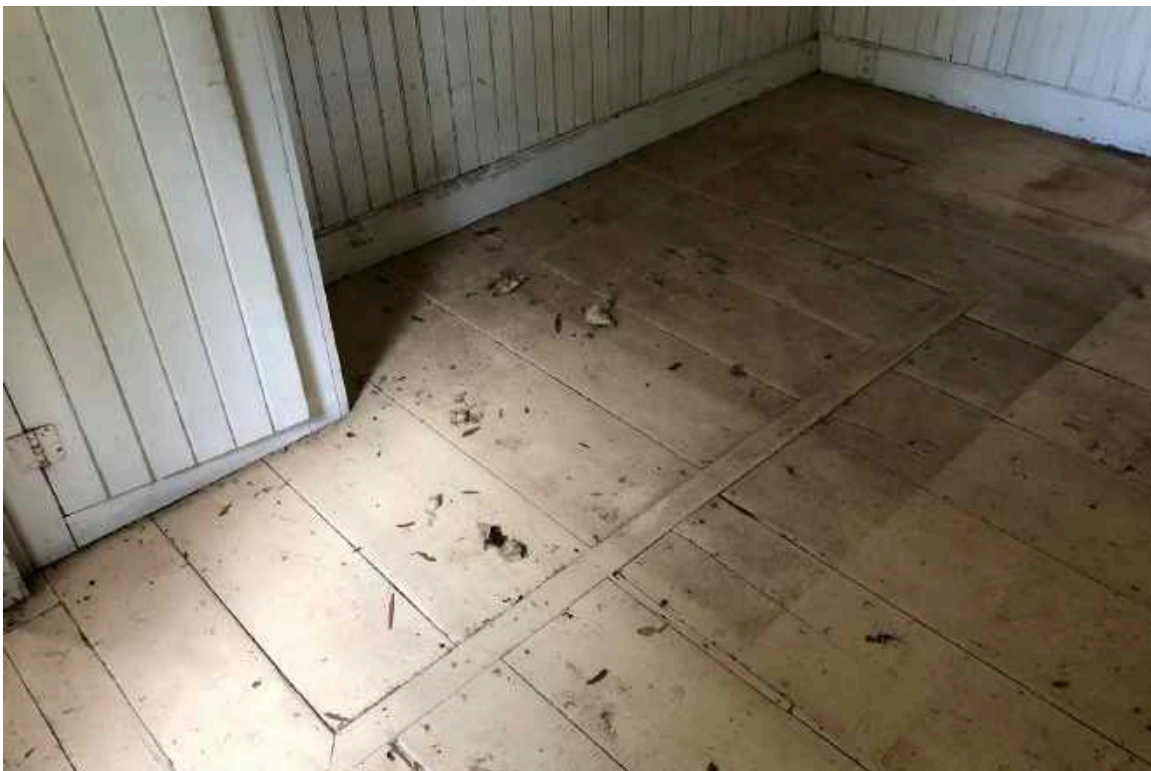


**Figure 98:** Room 202: Detail of historic wide plank flooring. The notch within the flooring and trim is a typical detail used adjacent to masonry hearths.



*Room 203, Stair-Hall*

The second-floor hallway contains 2-3/4" T&G beadboard observed throughout the house. This room lacks the decorative ceiling detail seen in the bedrooms. The exterior walls feature a 6" beadboard with 1/2" quirk bead which is believed to be original. Four-and-a-half-inch T&G flooring has been installed over the original wide plank flooring with the hallway. The floor stratigraphy can be seen above the top stair tread beneath the landing.

The interior walls contain a 6" baseboard with bevel. This baseboard type is believed to have been installed when the interior walls were modified. The stair-hall window is similar in design to the openings in Room 202.

The window is in poor condition with extensive paint failure. Debris has accumulated on the sill. An interior wire mesh screen is present on the lower sash.

*Room 204, Bedroom*

The door leading to the bedroom is identical to the door for Room 202 and is interpreted as a later door. Older 3 knuckle hinges are present on this opening.

The walls and ceiling paneling are identical to Room 202. A small closet with V-groove paneling with a matching paneled door is on the west wall. The exterior walls contain the older baseboard profile which extends into the small closet on the southwest corner. On the west interior wall, the baseboard stops at the location of the closet paneling,



**Figure 99:** Room 203, Stair-Hall: The landing on the second floor is narrow. Thinner tongue and groove floors are installed over older flooring boards.





**Figure 100:** Room 204, Looking South Towards Porch: This room is finished in a similar fashion to Rooms 202 and 205.



**Figure 101:** Room 204, Looking West: Detail of ceiling paneling.





**Figure 102:** Room 204: Detail of matching floor detail found in Room 202 (arrow). All four corners of the second floor opening were identified, indicating there was likely a central opening in the structure.

indicating this is a later infill and dates to the construction of the vaulted ceilings. A simple chair rail is located on this wall.

Large wide plank flooring is present on the western side of the room. As discussed previously, the eastern floor notch detail is present within the room and frame the original interior opening. The flooring transitions to thinner 4-1/2" T&G flooring along the north and east walls.

The north and south windows are in fair condition with moderate paint failure. An identical door to the one discussed in Room 202 is present on the west wall. The south window is located within Room 206 and is in good condition. A matching four panel door is present on the south side of the room.

#### *Room 205, East Bedroom*

The interior panels are identical to Rooms 202 and 204. The flooring is 4-1/2" T&G throughout this space. An identical paneled wood door with glass inserts leads into Room 206.



A diagonal fireplace is present at the northeast corner. Vertical paneling covers the masonry chimney and flue. The paneling at this location intersects the casing of the window on the north wall, possibly indicating that the window casing predates the installation of the corner fireplace and chimney. The firebox has been enclosed with a piece of galvanized metal to accommodate a furnace. The hearth appears to be in good condition. The mantel contains craftsman decorative elements and differs in style from the previously discussed mantels. The exterior wall baseboard features the older 6" with ½" quirk. The interior partition wall baseboards contain the later period bevel type.

The north and east windows are in poor condition and the frames and sash are racked due to settlement. Leaf debris is present on the east window sill. A window screen is located on the interior of the north window. The south window is within Room 206 and is in good condition.

#### *Room 206, South Porch Enclosure*

A portion of the second-floor porch has been enclosed for an additional bedroom. A closet is located on the east wall. The flooring has been modified to create a level floor.

A series of three jalousie window are present on the south wall. The jalousie windows are in fair condition but do not open completely. A large aluminum sliding window is on the west wall. A three vertical lite wood door with three lower horizontal panels opens



**Figure 103:** Room 205, Northeast Corner: Detail of the interior finishes within this room.





**Figure 104:** Room 205, South Elevation: Detail of the interior finishes within this room looking towards Room 206.



**Figure 105:** Room 206 (Porch infill) Looking East: The original siding and windows remain in place (at left).



out toward the second-floor porch. The exterior clapboard siding and exterior door casing remain in place. The exterior faces of the single hung windows in Room 205 are exposed on the interior of this enclosure. The original shutters have been removed but the hardware remains in place. The ceiling and lower walls are covered with modern T&G paneling.

## ATTIC

### **Two-Story West Building**

Attic access is provided via a ceiling hatch in Room 202. The original ceiling joists are whitewashed and match the white finish seen on the second-floor framing. The original rafters have been cut to create additional height for the canted ceilings on the second floor. Collar ties have been installed several feet above the rafters and have been decked with modern plywood. The collar ties are fastened to the rafters using large hand-wrought nails. The collar ties are also whitewashed and appear to have been formed by an adze, indicating they are likely original. Modern batt insulation is present in the space between the second-floor ceiling, original rafters, and the collar ties.

Historic rafters are present throughout the roof. The roof decking is a combination of older whitewashed boards and newer boards. The historic roof decking appears to be reclaimed floorboards as vertical joist marks are visible.



**Figure 106:** Attic of the One-Story Building, Rafters: Detail of toe-nailed rafters.





**Figure 107:** Attic of the One-Story Building: Overview of the roof framing looking south (at left) and north (at right).



**Figure 108:** Attic of the One-Story Building, Looking North: Detail of matching carpenter's marks.



Rafters extend from the top of the wall plate above the exterior soffit and are joined together at the ridge. The roof framing does not contain a ridge board. The rafters are spaced regularly throughout the attic.

On the western side of the building, the rafter tails are mortised at the ridge. The rafters are also marked with matching roman numerals. Both details are typical of early to mid-19<sup>th</sup> century construction. Towards the east, the rafter tails are toenailed together indicating a later construction date. The location of the framing transition roughly matches the footprint of the original building before the early eastern addition. One intermediate rafter has been added on the western side of the roof directly at this location. The decking in this area appears historic but has evidence of water intrusion and is deteriorated. The historic whitewashed decking was reclaimed from another location as impressions in the finish do not match the current configuration of the boards.

At each gable, several rafter tails are joined together to form the hipped roof at the east and west ends. The rafters are toenailed at the gables, possibly indicating they were installed later.

The porch rafters rest on an intermediate purlin and tie into the framing between each rafter of the main roof. The decking has been modified at this location to transition from the main roof to the porch roof. The porch rafters are modern.

On the west elevation, the rafter tails for the bathroom enclosure are deteriorated where visible for physical inspection.

### **One-Story East Building**

Attic access is provided via a small enclosed stair from Room 105.

The attic contains rafters extending from the top plate and toenailed at the ridge. A ridge board is absent within the roof framing. Regularly spaced battens are located on the outside of the rafters. Each rafter set has been inscribed with matching roman numerals.

The wood framing appears sound but has evidence of prior insect activity including termites and powderpost beetles. An attic vent is located on the north and south gables. The exterior framing on the north and south sides has been whitewashed. The interior face of the north clapboards contains whitewash finish while the southern clapboards lack a finish. This may indicate that the clapboards were replaced. The rafters are bare wood and lack a finish.





**Figure 109:** Attic of Two-Story Building: The western rafters are joined together with pegs at the ridge. Much of the roof decking has been replaced.



**Figure 110:** Attic of Two-Story Building: Detail of transition between pegged (arrow) and toenailed rafters (behind). Reclaimed floorboards have been used as decking at this location. The reclaimed material is deteriorated.





**Figure 111:** Attic of Two-Story Building, Eastern End: Detail of roof framing at gable vent. Note the absence of pegs at the rafter ridge.



**Figure 112:** Attic of Two-Story Building, Looking South: The rafter tails from the porch framing rest adjacent to the historic roof framing. The porch framing is modern and the rafter ends are deteriorated at select locations.





**Figure 113:** Attic of Two-Story Building: Modern plywood has been installed over whitewashed collar ties



**Figure 114:** Attic of Two-Story Building, Beneath Plywood Floor: The second-floor ceiling joists have been cut to accommodate the installation of the cant ceiling.



## SELECTIVE DISASSEMBLY

Selected historic finishes were removed to further identify the condition and the evolution of the structure. Locations of disassembly were identified in areas where the condition of the historic finishes warranted further investigation or removal of the finishes could be performed in the least invasive manner possible.

### LOCATION #01 - ROOM 101 BULGE

Selective demolition was performed in three locations within Room 101. The first area of interest was located at the center of the room at a noticeable upward bulge within the hole. Thin tongue and groove flooring were delicately removed at the location of the bulge to investigate the underlying conditions. The area of investigation occurred directly above a north-south floor joist and at the seam between the flooring.

Original wide plank flooring was uncovered beneath the later flooring. Notches within the floorboard were visible in the original flooring and were similar in appearance to the



**Figure 115:** Room 101: Detail of flooring conditions prior to selective disassembly.





**Figure 116:** First Floor, Room 101: Large wide plank flooring was uncovered directly beneath the existing small plank flooring. The underlying floor is fastened directly to the joists and is interpreted to be original.



**Figure 117:** First Floor, Room 101: A similar flooring detail to that found in Rooms 202 and 204 was found at this location. This may indicate that the center of the original structure once contained a large two-story opening.



flooring details on the second floor, indicating that the central opening of the structure was present on both floors. This detail is typically used adjacent to fireplace hearths. However, no evidence of mortar staining along the wood joists or a masonry foundation was found at this location.

The bulge is caused by the structural settlement on the west side of the room and the downward deflection of the underlying original plank flooring at this area. The first-floor framing within the room also appears to rest directly above grade. No foundation piers were located directly beneath the exposed flooring joists. However, a single deteriorated wood stump was uncovered between two floor joists. It is unknown if this is a remnant of the original foundation piers.

#### LOCATION #02: ROOM 101 NORTHWEST SETTLEMENT

The flooring was also removed at the northwest corner of the room to the right of the mantel. An investigation was performed at this location to understand the structural settlement and the condition of the wooden framing members. Following the removal of the thin tongue and groove flooring, the original wide flooring boards were observed. Wide flooring was not visible west of this location, indicating the existing flooring layer dates to the installation of the bay window. Square cuts were located within the original floorboards



**Figure 118:** First Floor, Room 101: A deteriorated tree stump was found between two joists at this location.





**Figure 119:** First Floor, Room 101 Northwest Corner: Detail of location #2.



**Figure 120:** First Floor, Room 101 Northwest Corner: Detail of the underlying floor following removal of the thinner boards. Square cuts in the underlying floor are the locations of the vertical studs for the original west wall.



and are interpreted as the location of the studs for the original west wall. The vertical framing members were fastened to the perimeter sill at this location and the flooring was installed around the structural members. The studs were removed during the construction of the west bay window.

A small 1-inch diameter hole was drilled into the ceiling of Room 101 to investigate the condition of the second-floor framing within this room. A small borescope was inserted within the opening and the joists were inspected where possible. One joist at this location was observed to have cracked horizontally due to the structural settlement. The joists and underside of the second-floor framing are painted with a white limewash indicating that these members were once exposed. This is a common finish typically seen in utilitarian slave structures throughout South Carolina.

### LOCATION #03: ROOM 103 FLOORING

The original exposed wide plank flooring was removed in the center of Room 103 in a location where the boards had been previously cut and the fasteners were dislodged. Within this space, the original floor joists rest either at grade or directly above. As discussed in the framing assessment, a large sill was found to the east of this area and is interpreted as the eastern side of the original structure. Later repairs were also noted in this location.



**Figure 121:** First Floor, Room 103: Detail of flooring removed at the center of the room, exposing the original first floor framing and later repairs.





**Figure 122:** Second Floor, Room 204: Location of floor boards removed to investigate the second floor framing.



**Figure 123:** Second Floor, Room 204: Detail of framing conditions. A whitewash covers the exposed faces of the joists.



LOCATION #04: ROOM 204 FLOORING

The wide plank flooring was also removed in an area on the second floor within room 204 adjacent to the porch door. The flooring was removed in this area where the boards were easily removed to investigate the condition of the second-floor framing. The framing at this location was found to be in good condition.

The joists and the underside of the removed boards contained a whitewash. Vertical framing members exposed at this location were also coated with a whitewash. The finish is incredibly brittle and likely dates to the construction of the building.

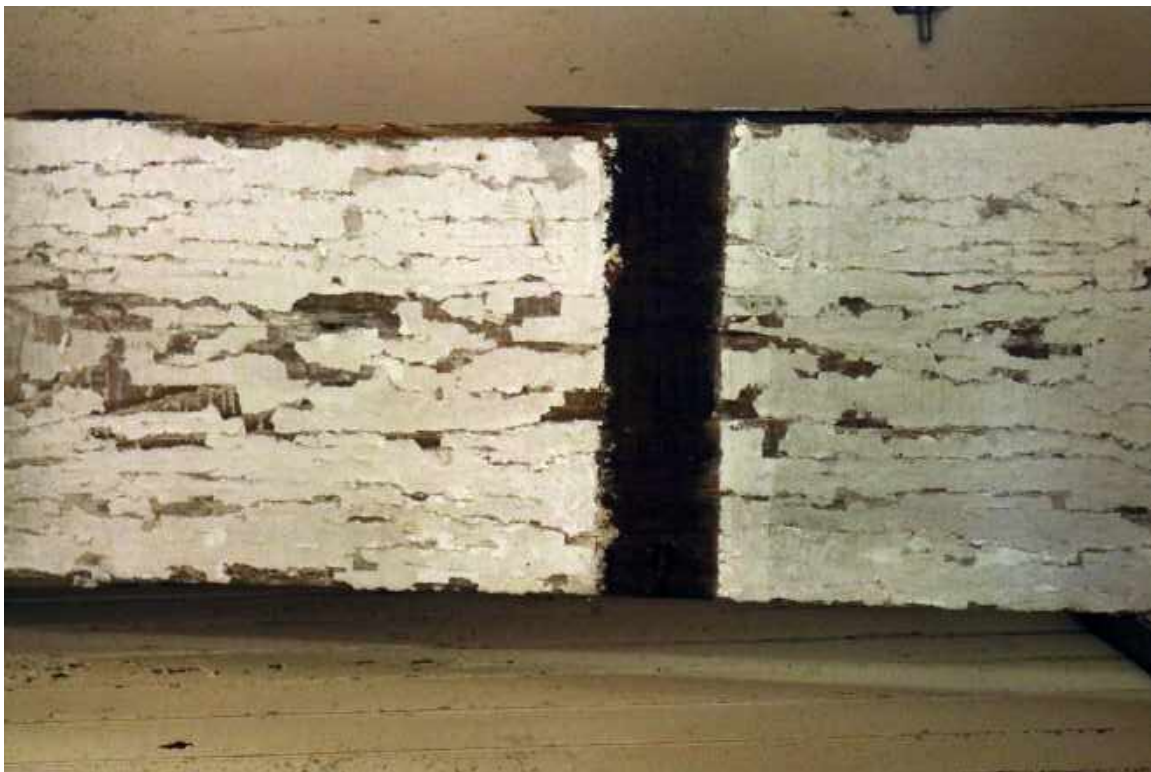


**Figure 124:** Second-Floor: Underside of removed floorboard containing a whitewash. The unpainted portion indicates the location of the underlying floor joist.





**Figure 125:** Second Floor, Room 204: Detail of a stud on the south elevation showing the presence of the whitewash on the girt, joist, and stud.



**Figure 126:** Second Floor, Room 204: Detail of the intersection between the first floor stair wall (at right) with the historic whitewashed framing material. The ceiling paneling of Room 103 is at bottom.



### LOCATION #05: ROOM 204 CEILING

A portion of the north vaulted ceiling was removed to investigate the method of installation of this detail and to determine the relative age of the material. The tongue and groove paneling on the ceiling does not match the profile of the paneling used on the wall, likely indicating the material was installed at a later date. As discussed previously, this condition is typical in all the main rooms on the second floor and in Rooms 106 and 107.

Upon selective disassembly of the wall, it was discovered that the vertical wall paneling was installed directly beneath the original ceiling joists. The paneling at this location was installed using cut nails, indicating a 19th-century construction date. The attic joists have been cut to accommodate the cant in the ceiling.

The V-groove panelling installed on the cant was installed using wire nails, indicating a 20th-century construction date. Based on the existing evidence, it is believed that the flat wall panelling was installed prior to the V-groove beadboard. At some time during the early 1900s, the upper portions of the flat T&G was removed and replaced with the cant T&G design. The historic ceiling framing members were also removed to accommodate this change in design and ceiling height.



**Figure 127:** Second Floor, Room 204: The cant ceiling was removed along the north wall within this room.





**Figure 128:** Second Floor, Room 204: Detail of the exposed framing members. The vertical wall paneling was installed up to the original whitewashed ceiling joists. The joists have been cut to accommodate the slope in the ceiling.



**Figure 129:** Second Floor, Room 204: Detail of cut nails in the vertical paneling (arrows).



## CONTEMPORARY DWELLINGS

In order to further understand the physical evidence uncovered during the assessment, research was conducted to identify extant contemporary structures to the Squire Pope Carriage House. The goal of this analysis was to illustrate the potential original configuration of the outbuildings.

Initial research indicates the central opening likely held a central fireplace or an opening that allowed for easy access to the second-floor for storage or living space for enslaved persons. Additional evidence may be uncovered through historic research or during restoration of the structure to definitely identify the purpose of this feature. The following examples serve as visual references of how the structure(s) may have appeared in the early 19th century.

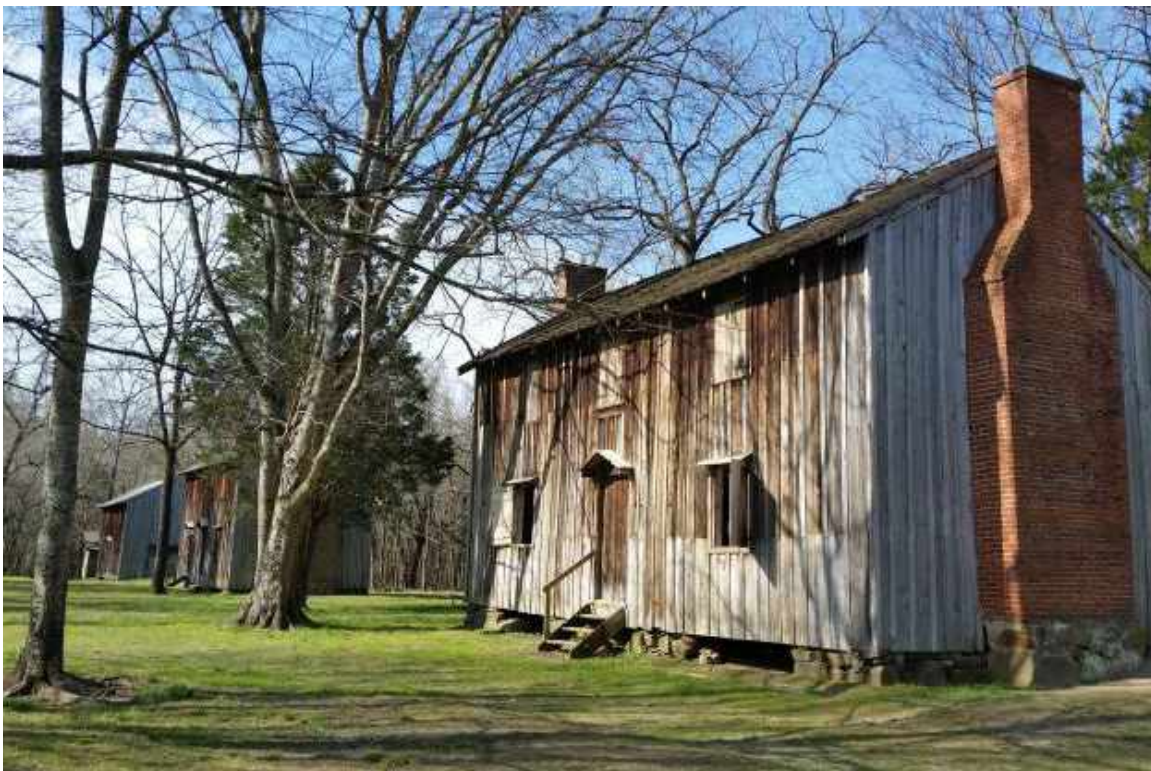


**Figure 130:** Horton's Grove two-story frame slave dwelling within the Stagville State Historic Site in North Carolina constructed around 1851 (NCpedia.org).





**Figure 131:** Interior of Horton's Grove slave cabin. The interior has been whitewashed similar to that seen at the Squire Pope Carriage House. Unlike at Squire Pope, the space between the framing members has been infilled with masonry (NCpedia.org).



**Figure 132:** Exterior of outbuilding at Friendfield Plantation built in the early 19th century. A double fireplace is located at the center of the structure with a room on either side.





**Figure 133:** Interior of Friendfield Plantation outbuilding. The interior face of the siding and framing members have been whitewashed similar to Squire Pope.



**Figure 134:** Detail of hearth floor detail at Friendfield Plantation (arrows). This detail is less decorative than that visible at Squire Pope.





**Figure 135:** Exterior of the ca.1840 duplex Brome slave cabin at St. Mary's City, MD (Preservation Maryland).



**Figure 136:** Interior of the Brome Slave Quarters (Preservation Maryland).





**Figure 137:** Two-story slave dwelling at Somerset Place (reconstructed). The original structures were built during the early 1800s (Afroculinaria).



**Figure 138:** Detail of kitchen building at Somerset Place with central fireplace and whitewashed interior (Afroculinaria).





## STRUCTURAL ASSESSMENT

The following review details the structural assessment of the Squire Pope Carriage House located at 111 Calhoun Street in Bluffton, South Carolina. The findings described within this report were limited to visual observations of existing structural components obtained during site inspection performed on May 31st, 2019. The structural investigation was performed with Meadors Construction per request as part of an overall assessment of the subject property. Selective demolition of interior finishes was performed at the each floor and the exterior wall of the two story structure to review framing conditions and construction. The full version of the structural assessment report can be found in Appendix A. The following is a summary of the findings:

The Squire Pope Carriage House is a two story wood framed structure with an adjoining single story kitchen house. The property is situated along the May River at the intersection of Calhoun and Water Street in the historic district of Bluffton, South Carolina. The adjoined kitchen and carriage house structure has an overall length of approximately 70 feet and width of 23 feet. At the South side of the structure facing the May River, an eight foot wide two story covered porch extends along the length of the carriage house and wraps around the West end. The two story carriage house is adjoined to the kitchen house with a 4 foot wide single story connector. The kitchen house sits perpendicular to the carriage house and connector and has a bay window facing the South side. Access to the second floor of the carriage house is provided by a center stairway with an entry door at the first floor porch. Each floor contains interior fireplaces located at the West end and Northeast corner of the structure. The enclosure of the West side of the second floor porch contains a bathroom at the back side of the fireplace. At the first floor of the West side, a Victorian style bump out extends approximately 5 feet onto the porch beyond the fireplace. Attic access for the carriage house is provided via a hatch in the West side bedroom adjacent to the stairway. The single story kitchen house contains a kitchen and dining area with a stairwell along the North side of the building leading to the attic space. During the site investigation, it was noted during selective demolition that the East side of the original two story structure was lengthened approximately 12 feet where it adjoined to connector and kitchen house. Selective demolition and a review of the attic framing in areas adjacent to the stairway also indicated previous openings in the original floor and roof framing systems. Based on this evidence, it is probable these openings once accommodated the original fireplaces that were most likely removed during the relocation and modification of the original structure following 1865.

The original finish floor elevation of the Squire Pope Carriage House is unknown due to deterioration of the foundation system. Remnants of brick were noted at the corners of



the kitchen house and dry stack brick was observed below column locations at the porch column locations. The majority of the exterior first floor girders are bearing directly on or in contact with grade resulting in settlement of the structure. The exterior walls of the adjoined carriage house and kitchen house are covered with horizontal lap wood siding. Roof coverings for the carriage house are asphalt shingles over plank sheathing. The roof system for this structure consists of a gable configuration running parallel to the length of the structure with hip ends constructed at the East and West side. A shed roof also covered with asphalt shingles extends over the second floor porch on the South side of the carriage house. The single story kitchen house and connector is covered with tin panels placed over wood purlins. Floor and roof framing for both structures are further discussed in the Findings section of this report.

## FINDINGS - BUILDING COMPONENTS

### FOUNDATION SYSTEM - CARRIAGE HOUSE/KITCHEN HOUSE

Due to exposure to the elements and age of the structure, the existing foundation system has deteriorated along the base of the exterior walls at both structures and was not able to be determined. Only dry stack brick was evident below column locations at the carriage house porch and remnants of brick were observed at the corners of the kitchen house. Based on the construction of the carriage house and a review of the first floor framing, foundation support was most likely only provided along the perimeter of the structure at the North and South walls and below porch column locations. For the kitchen house, based on the depth and span of first floor framing, interior foundation support is more likely but could not be verified. The deterioration of the foundation elements below the exterior walls of the carriage house and kitchen house has resulted in settlement of these structures and placed the perimeter sill girders and portions of the floor framing in direct contact with grade. Due to the deterioration of the foundation, the original finish floor elevation of the Squire Pope Carriage House could not be determined during the site investigation. As part of the structural assessment, proposed repairs to the foundation system are provided in the Recommendations section of this report.

### FIRST FLOOR FRAMING SYSTEM - CARRIAGE HOUSE

Due to exposure to the elements and age of the structure, the existing foundation system has deteriorated along the base of the exterior walls with only dry stack bricks were observed below porch column locations. The loss of foundation support at the carriage house exterior walls has placed the girder sills and portions of the floor framing in direct contact with grade. At the North wall parallel to Water Street, the majority of the perimeter sill band extends below grade. Deterioration of the perimeter sill is significant with portions of sill toward the West end no longer supporting the first floor system and the exterior wall studs. Although not exposed at the South side, the loss of foundation below the exterior wall at the porch has also placed girder and floor framing





**Figure 139:** Foundation System - Detail of settlement of foundation members.



**Figure 140:** North Elevation: Detail of buried perimeter sill with a vertical framing member exposed.



in contact with grade. Deterioration of the perimeter girder sill toward the Southwest side of the structure is likely due to the settlement of the second floor systems observed. Selective demolition of the first floor framing was performed at the East and West side of the stairway. Floorboards were removed to expose and review the condition of first floor joists at each of these locations. The floor joists at these locations were in fair condition but in contact with grade. At the East side demolition location, an existing joist was replaced with a 2x8 joist. As discussed previously, an 8x8 girder was observed approximately 12 feet from the East end wall. The presence of the 8x8 girder at this location in addition to corner diagonal bracing at the North end wall indicates the original structure was most likely lengthened when joined with the kitchen house. In addition, a review of framing at the selective demolition performed at the West side of the stairwell corresponds to a framed opening in the attic area. Floor framing at this location consists of a 4x8 floor girder with supporting 3x8 headers at a previous opening. Based on the framing and flooring detail at this location it is possible this opening was provided for a fireplace that was removed during relocation of the original structure to its present site. As part of the structural assessment, proposed repairs to the first floor framing system are provided in the Recommendations section of this report. The following bulleted items detail typical first floor framing components observed at the carriage house during the site investigation.

#### *First Floor Framing System - Carriage House*

1. The first floor of the structure consists of 3x8 floor joists spanning approximately 13 feet and bearing at the North and South Walls. Field measurements indicate the floor joist spacing to be approximately 28 to 32 inches on center. No evidence of interior foundation support was observed and is unlikely with the shortness of the joist span.
2. Floor joist ends are supported by an 8x8 perimeter girder sill along the perimeter walls. The joist to girder connection was achieved by notching the joist end to allow for bearing over the top face of the girder sill. Notch depth was approximately 1-1/2 to 2 inches. The method or presence of nail fastener attachment from girder to joist was also able to be determined due to the deterioration of these components and presence of interior and exterior finishes.
3. The floor joists at the two selective demolition locations noted were in fair condition but in contact with grade. Access to the remaining floor joists was limited due to the overall settlement of the structure however joist ends were examined at openings in the siding along the base of the North wall. Due to the deterioration of the girder sill at this location, rotation and deterioration of joist ends was evident. Further examination of the floor joists will be required during restoration of the structure to determine the extent of joist repair that might be required.



4. The interior floor finishes consist of wood plank flooring spanning over floor framing throughout. Hardwood flooring is installed over wood planks at the room to the West of the stairway. Wood plank flooring is in fair condition throughout for a structure of this age.
5. An eight foot wide screened porch extends along the South and West side of the carriage house. Porch girder framing consists of a 6x6 girder sill spanning along the porch perimeter with interior girders extending perpendicular to the exterior main house wall at column locations. The 6x6 perimeter sill girder rests on dry stack bricks at column locations spaced at 8 feet center along the South side of the structure. At the West side of the porch, the 6x6 girder bears directly at grade and the Northwest 6x6 girder sill has deteriorated completely. The interior porch girder to main house framing connection could not be determined. Porch floor framing consists of 2x6 joists span over interior girders and are spaced at approximately 30 inches on center. Porch decking spans perpendicular to the framing and is showing signs of wear and deterioration due to age and exposure to the elements. Deterioration of decking and framing was evident at the connector adjacent to the kitchen house on the South side. Deterioration of decking and framing was also noted at the Northwest corner where deterioration of the 6x6 porch girder sill has occurred. Further examination of the porch framing and interior girders can be performed during the restoration of the structure and is discussed in the Recommendations section of this report.

### FIRST FLOOR FRAMING SYSTEM - KITCHEN HOUSE/CONNECTOR

Due to exposure to the elements and age of the structure, the existing foundation system has deteriorated along the base of the exterior walls with only remnants of brick were observed at the building corners adjacent to the connector. For the one story kitchen house, based on the depth and span of first floor framing, interior foundation support is likely but could not be verified during the site investigation. Similar to the carriage house exterior walls, foundation deterioration has placed the girder sills and portions of the floor framing in direct contact with grade. At the North wall parallel to Water Street, the majority of the perimeter sill band is in contact with grade. As part of the structural assessment, proposed repairs to the first floor framing system are provided in the Recommendations section of this report. The following bulleted items detail typical first floor framing components observed at the kitchen house during the site investigation.

#### *First Floor Framing System - Kitchen House/Connector*

1. The first floor of the kitchen house consists of 3x6 floor joists spanning in the North to South direction across the length of the structure. Field measurements indicate the floor joist spacing to be approximately 28 to 32



inches on center. Based on the depth and span of first floor framing, interior foundation support is likely. Deflection of the floor system was prevalent at the interior of the kitchen and adjoining room. Further examination of the floor joists will be required during restoration of the structure to determine the extent of joist repair that might be required.

2. Floor joist ends are supported by an 8x8 perimeter girder sill along the perimeter walls. The joist to girder connection was achieved by notching the joist end to allow for bearing over the top face of the girder sill. Notch depth was approximately 1-1/2 to 2 inches. The method or presence of nail fastener attachment from girder to joist was also not able to be determined due to the deterioration of these components and presence of interior and exterior finishes.
3. Due to proximity to grade and exposure to the elements, deterioration of the floor joists at the connector was significant at the North and South side of the structure.
4. The interior floor finishes consist of wood plank flooring spanning over floor framing throughout. Wood plank flooring is in fair condition throughout for a structure of this age.

### EXTERIOR WALL COMPONENTS

Due to the collapse of the foundation system, settlement of the exterior walls is evident throughout the structure. In addition, portions of the wood studs at the first floor are exposed to the elements due to the absence of siding and deterioration of the structure. Selective demolition to verify rafter and ceiling joist bearing details was performed at the North side second floor ceiling of the carriage house adjacent to the stairway. Details of these findings are discussed below. As part of the structural assessment, proposed repairs to the exterior wall components are provided in the Recommendations section of this report. The following bulleted items detail typical exterior wall framing components observed during the site investigation.

#### *Exterior Wall Components - Carriage House*

1. Typical exterior wall construction consists of 3x4 wood studs spaced at approximately 28 to 32 inches on center. The wood studs extend the full height of the structure and bear directly on the 8x8 perimeter girder sill. The attachment of the wood studs to the girder sill was not able to be determined with the deterioration of the sill and nail fasteners.
2. Based on selective demolition, the top plate of the exterior wall is located approximately 91 inches above the second finish floor elevation. The ceiling





**Figure 141:** South Elevation: Masonry rubble located beneath the exposed perimeter sill.



**Figure 142:** South Elevation, One-Story Kitchen Building - Detail of the deteriorated lower end of a vertical framing member.



at the carriage house has been modified and raised approximately 14 inches as part of previous modifications to the original structure. The original ceiling joists form the eave detail at the wall top plate and have been cut at the inside face of the exterior wall to allow for an increased ceiling height. A rafter bearing plate extends over the existing ceiling joists at the North and South walls.

3. Although not observed due to the presence of interior finishes at the first floor North and South walls of the carriage house, support for the second floor framing in this type construction is typically provided a ledger plate notched into studs and nailed to the inside face of the wall directly below the floor joists. The condition of the ledger plate can be reviewed further during renovation of the structure.
4. As part of the exterior wall system, a wood post with diagonal bracing is installed at each corner of the structure. The diagonal bracing extends from the lower third of the post to the girder sills in each corner of the North and South walls. Each of the wood posts is intact however deterioration of the post based was evident as a result of exposure to the elements at the North wall. The base of the diagonal bracing is also damaged due to the similar exposure.
5. The exterior wall closure system is provided by horizontal siding fastened directly to the wood stud framing. At the North wall, the majority of siding is intact however exterior siding at the base of the wall is damaged to settlement and loss of foundation at these areas. Siding is also showing signs of wear throughout due to age and exposure to the elements.
6. Interior finishes at the exterior walls consists of plaster at the first floor and bead board siding at the second floor. Cracks in the plaster were noted at the exterior and interior walls of the first floor as a result of the settlement of the structure. Overall, interior finishes at the second floor are in fair condition. Separation of bead board siding is evident at areas where settlement of the second floor is prevalent.

#### *Exterior Wall Components - Kitchen House/Connector*

1. Typical exterior wall construction consists of 3x4 wood studs spaced at approximately 28 to 32 inches on center. The wood studs extend to the top plate supporting the ceiling structure and bear directly on the 8x8 perimeter girder sill. The attachment of the wood studs to the girder sill was not able to be determined with the deterioration of the sill and nail fasteners.
2. In the kitchen area, ceiling joists form the eave detail at the wall top plate and a rafter bearing plate extends over the existing ceiling joists at the East and



West walls. The ceiling at the South side dining area has been modified and raised as part of previous modifications to the original structure. The original ceiling joists form the eave detail at the wall top plate and have been cut at the inside face of the exterior wall to allow for an increased ceiling height. A rafter bearing plate extends over the existing ceiling joists at the East and West walls.

3. As part of the exterior wall system, a wood post with diagonal bracing is installed at each corner of the kitchen house structure. The diagonal bracing extends from the lower third of the post to the girder sills in each building corner. Each of the wood posts is intact however deterioration of the post based was evident as a result of exposure to the elements at the West and East wall. The base of the diagonal bracing is also damaged due to the similar exposure.
4. The exterior wall closure system is provided by horizontal siding fastened directly to the wood stud framing. The majority of siding is intact however exterior siding at the base of the wall is damaged to settlement and loss of foundation throughout. Siding is also showing signs of wear throughout due to age and exposure to the elements.
5. Interior finishes at the exterior walls consists of bead board siding. Overall, interior finishes at the second floor are in fair condition. Separation of bead board siding is evident at areas where settlement is prevalent.
6. Connector exterior wall framing and siding is in poor condition at the North and South walls.

## SECOND FLOOR FRAMING SYSTEM

As noted previously, settlement of the structure's exterior North and South walls has occurred as a result of the deteriorated foundation. This settlement has resulted in deflection at the second floor joist ends along the North and South wall and is most severe at the western end of the two story structure. Selective demolition included a small boring through the first floor ceiling adjacent to the West end fireplace to review framing conditions with a borescope at this location. A severe crack was noted in two floor joists at this area where extensive stress and deflection has resulted in joist failure. Deterioration of the floor framing was also visible from the 1st floor porch directly below the West end second floor bathroom. Selective demolition was also performed at the second floor level adjacent to the South wall on the East side of the stairway. Floor joists at this location were in relatively good condition with minor deflection due to settlement of the exterior walls. As part of the structural assessment, proposed repairs to the second floor framing are provided in the Recommendations section of this report. The following bulleted items detail typical second floor framing components observed at the two story carriage house during the site investigation.



### *Second Floor Framing System*

1. The second floor framing system of the structure consists of 3x8 floor joists spaced at 28 to 32 inches on center that span from the North to South Walls. As previously noted, deflection of the second floor framing corresponds to the settlement of the structure along the North and South walls.
2. Based on the severity of deflection and failure of joists noted at the West end adjacent to the fireplace and deterioration noted below the West end bathroom over the porch, it is recommended access to these locations be prohibited until temporary shoring of the second floor framing can be put in place. Floor joists at the West end and remaining areas can be further evaluated during the renovation process and following stabilization.
3. At the North and South walls, support for the floor joists is provided by a ledger plate that has been set in to a notch at the inside face of the wall studs. The second floor joist ends are notched and bear directly on top of the ledger plate. The top of the second floor joists are covered by wood plank floor spanning perpendicular to the framing. The first floor ceiling consists of bead board finishes fastened to the bottom of the floor joists. The floor and ceiling boards are in fair condition.

### *Second Floor Porch Framing System*

1. Second floor porch framing consists of a 6x6 dropped girder spanning along the porch perimeter over 1st floor wood columns spaced at approximately 8 feet on center. At each column, a 4x6 interior girder extends to the main house and supports 2x6 joists spaced at 30 inches on center. Overall, exposed porch framing appears to be in fair condition for a structure of this age. At the West end of the structure, the porch has been enclosed at the backside of the chimney and serves as the second floor bathroom. Deflection and deterioration of the porch floor framing at the bathroom area was noted. Damage observed at this location might be attributed to a previous plumbing leak. As part of a renovation performed in the 1950's, a 16 foot portion of the Southeast end of the second floor porch was enclosed to provide additional space. Based on field observations, the existing porch floor framing remained in place.
2. Based on the severity of deflection and failure of joists noted at the West end adjacent to the fireplace and deterioration noted below the West end bathroom over the porch, it is recommended access to these locations be prohibited until temporary shoring of the second floor framing can be put in place.
3. Porch decking spans perpendicular to the framing and is showing signs of wear and deterioration due to age and exposure to the elements.



## ROOF FRAMING SYSTEM - KITCHEN HOUSE

The following bulleted items detail typical roof framing components observed during the site investigation. As part of the structural assessment, proposed repairs to the roof framing components are provided in the Recommendations section of this report.

### *Roof Framing System - Carriage House*

1. Roof coverings for the carriage house are asphalt shingles over plank sheathing. The roof system for this structure consists of a gable configuration running parallel to the length of the structure with hip ends constructed at the East and West side. A shed roof also covered with asphalt shingles extends over the second floor porch on the South side of the carriage house. The roof shingles are showing signs of wear and deterioration due to age and exposure to the elements.
2. The carriage house roof system is constructed of 3x4 rafters spaced at 28 inches on center with the ridge running parallel to the North and South walls. At the East and West end, the hip roof is formed by 3x4 hip rafters extending to the ridge end. Hip rafter connections to the ridge beam are nailed in place. At the ridgeline, the rafters abut each other and no ridge board is present. The original 3x4 rafters overlap and are pegged at the ridge connection. Three replacement rafters measured at 2x5 were noted over the East side bedroom. As discussed previously, the top plate of the exterior wall is located approximately 91 inches above the second finish floor elevation. The ceiling at the carriage house has been modified and raised approximately 14 inches throughout. The remaining ceiling joists form the eave detail at the wall top plate and have been cut at the inside face of the exterior wall to allow for an increased ceiling height. A rafter bearing plate extends over these joists at the North and South walls. Overall, the roof rafters are in fair condition. During the site investigation, two rafters have been sistered at the base due to cracking evident. Framing adjacent to the attic hatch over the stairway also indicates framing for a previous opening possibly corresponding to the original fireplace discussed within this report.
3. The horizontal plank roof sheathing spanning perpendicular to the rafters is in fair condition and has been replaced at various locations.
4. Access to the attic area is provided by a ceiling hatch in the room west of the stairway. As discussed previously, the second floor ceiling has been raised as part of modifications to the original structure. Based on field observations, it appears the original ceiling joists were cut and raised to their current elevation and fastened to the existing rafters. Ceiling joists appear to be in good condition where visible. Plywood sheathing has been installed throughout



most of the attic area.

5. The roof eave extends just beyond the exterior wall siding and consists of a fascia board fastened to the end of the roof rafters. The fascia board is mostly intact but showing signs of wear due to age and exposure to the elements.
6. The shed roof extending over the second floor porch is constructed of 2x4 rafters spaced at 32 inches on center. Porch rafters bear on a 4x6 dropped girder spanning over perimeter wood columns spaced at approximately 8 feet on center. At the exterior wall, porch rafters extend into the attic space and supported by a 2x4 plate spanning over carriage house rafters. The porch shed roof is covered with asphalt shingles over horizontal plank sheathing. Overall the porch roof framing appears to be in good condition.

### ROOF FRAMING SYSTEM - KITCHEN HOUSE AND CONNECTOR

The following bulleted items detail typical roof framing components observed at the kitchen house during the site investigation. As part of the structural assessment, proposed repairs to the roof framing components are provided in the Recommendations section of this report.

#### *Roof Framing System - Kitchen House*

1. The kitchen house roof system is a gable configuration constructed of 3x4 rafters spaced at 32 to 34 inches on center with the ridge running parallel to the East and West walls. At the ridgeline, the rafters abut each other and no ridge board is present. In the kitchen area, ceiling joists form the eave detail at the wall top plate and a rafter bearing plate extends over the existing ceiling joists at the East and West walls. Similar to the second floor of the carriage house, the ceiling at the South side dining area has been modified and raised as part of previous modifications to the original structure. The original 4x4 ceiling joists form the eave detail at the wall top plate and have been cut at the inside face of the exterior wall to allow for an increased ceiling height. A rafter bearing plate extends over the existing ceiling joists at the East and West walls. Overall, the roof rafters are in fair condition. Shims were noted at the purlin to rafter connection at the center of the roof system. Rotation at the top of the rafters was also noted at the ridgeline where rafter ends only abut each other.
2. The roof closure system is provided by tin roof panels fastened to 1x3 wood roof purlins spaced at 9 inches on center. The roof purlins run parallel to the length of the structure and are supported by the rafter framing. Overall, the



roof purlins are in fair condition. Due to age and exposure to the elements, the tin panels have signs of corrosion, but the majority of the panels are intact.

3. The roof eave extends just beyond the exterior wall siding and consists of a fascia board fastened to the end of the roof rafters. The fascia board is mostly intact but showing signs of wear due to age and exposure to the elements
4. Access to the attic area is provided by a small stairway constructed at the Northwest corner of the kitchen house. As discussed previously, the South side ceiling has been raised as part of modifications to the original structure. Ceiling joists appear to be in good condition where visible. Plywood sheathing has been installed throughout most of the attic area.
5. The connector roof framing is similar to that observed at the kitchen house with a shallow roof pitch. The connector is covered by tin panels over 1x3 roof purlins. At the South side of the connector, water damage to rafter framing and purlins was evident over the porch area.
6. Gable end wall framing at the North and South end of the kitchen house is in fair condition but minimal.

#### CARRIAGE HOUSE NORTH WALL CHIMNEY STACK:

At the North wall of the carriage house adjacent to the center stairway, the exterior chimney stack extending above the eave line has begun to rotate and pull away from the house structure. The chimney stack is constructed of brick masonry and is inoperable. Temporary shoring of the chimney stack structure is recommended to prevent further rotation and provide stabilization until renovation of the property proceeds.





## MORTAR ANALYSIS

One (1) bedding mortar sample taken from the northeast diagonal fireplace in Room 103 and one (1) interior plaster sample from Room 101 were analyzed during the assessment. The goal of this analysis was to identify the binder type within each sample and understand the relative age of each material.

Petrographic analysis was chosen as the primary analysis method used to determine the characteristics of the existing sample. Petrography allows for the analysis of thin sections of stone, mortars, and stuccos via the use of a polarized light microscope. Textural relationships of the sample can be assessed and the various mineral components definitively identified based upon their crystallography.

### METHODOLOGY

Petrographic analysis was conducted on each sample according to ASTM C1324 with a petrographer meeting the guidelines of ASTM C856 in order to definitely identify the composition of the individual components. A small thin section was made of each sample and was impregnated with a blue-tinted epoxy. The prepared sample slides were analyzed using a Motic BA310 trinocular polarizing microscope. Digital photomicrographs were taken of the sample at various magnifications and are included in the report.

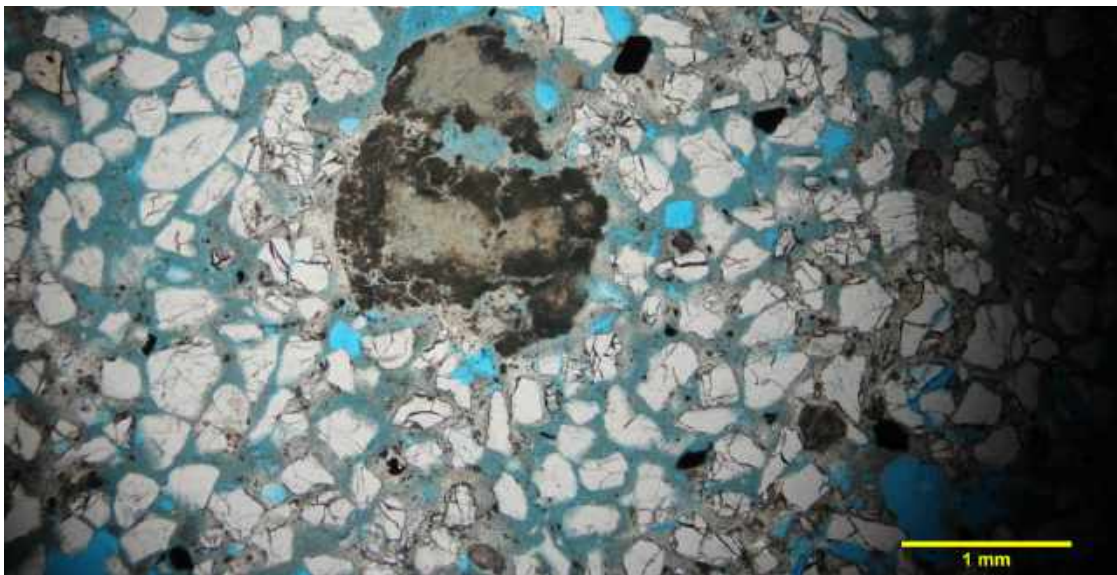


**Figure 143:** Detail of the microstructure of the mortar sample. The samples have been cast with a blue epoxy resin to easily visualize the relative permeability of each material.



**Sample #:** SquirePope.BM

**Date Sampled:** 2019

**Sampled By:** Meadors

**Sample Location:** Northeast fireplace foundation.

**Type of Mortar:** Bedding Mortar

**Visual Description of Bulk Sample:** Sample is soft yet cohesive in hand sample and sandy brown in color. Clumps of clay and lime are present within the binder matrix.

**Surfaces:** Only one surface present.

**Color:** Beige to light brown.

**Munsell Color:** 10YR 8/3 "Very pale brown"

**Hardness:** less than 5 (Mohs scale)



Figure 144: Detail of sampling location.



Figure 145: Interior of fireplace in Room 103.



Figure 146: Detail of the prepared slide.



## FINDINGS

The bedding mortar sampled is beige to tan in hand sample with few large aggregates visible within the mortar. The sample is easily disaggregated and broken by hand. The mortar has a relatively high permeability as determined by the water drop test. Lime blebs are present at select locations.

Petrographic analysis has identified that the mortar is composed of an oversanded lime-sand mortar.

### **Aggregate**

The sample contains a very high concentration of quartz aggregate and with minor concentrations of orthoclase feldspar. Where present, the quartz is subangular to subrounded silica quartz grains. Visually, the aggregate appears to be narrowly graded and the mix is oversanded. Mica particles are also present within the sample, possibly originating from the original lime source. Several particles of amphibole and clinpyroxene were also observed with the sample. Acid digestion was not performed during this analysis to isolate the individual aggregate.

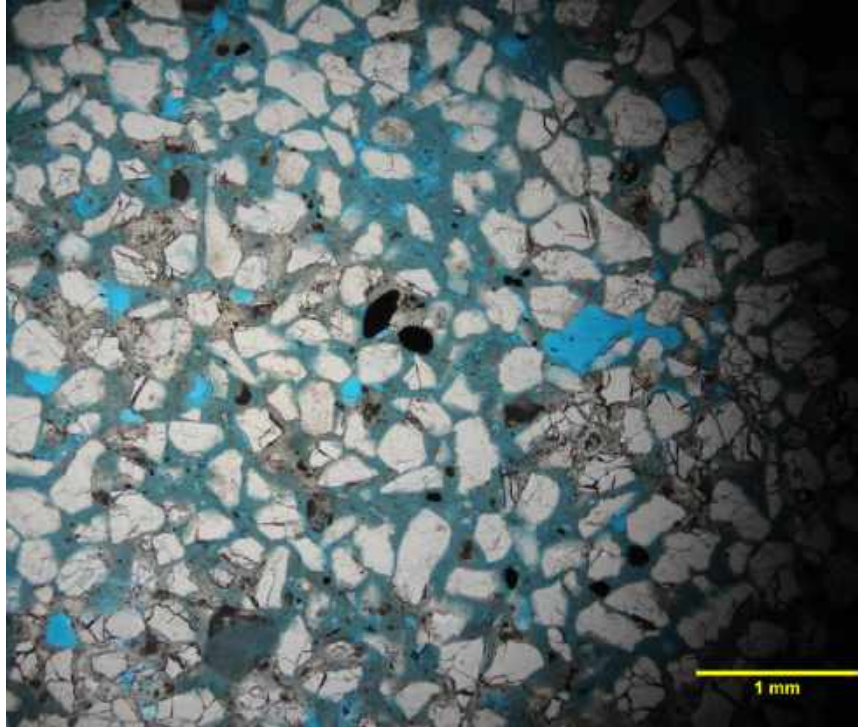


**Figure 147:** Plane polarized light image of the bedding mortar sample. Small white angular quartz are frequent within the lime binder. Dark particles of charcoal are visible at the center of the slide (40x magnification).



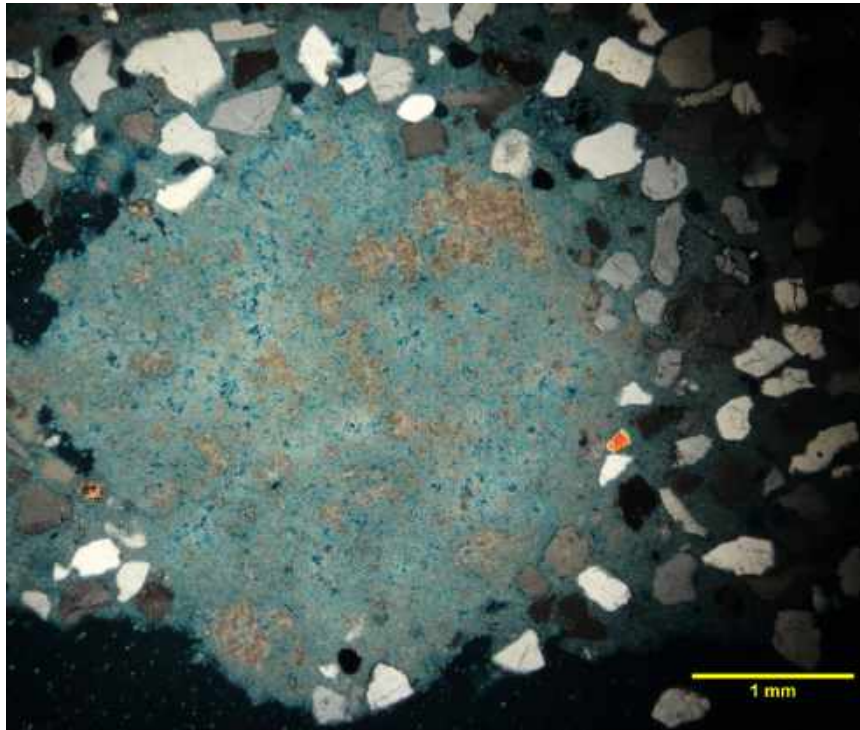


**Figure 148:** Cross polarized light image of the mortar sample. A very large lime grain is present at center (40x magnification).

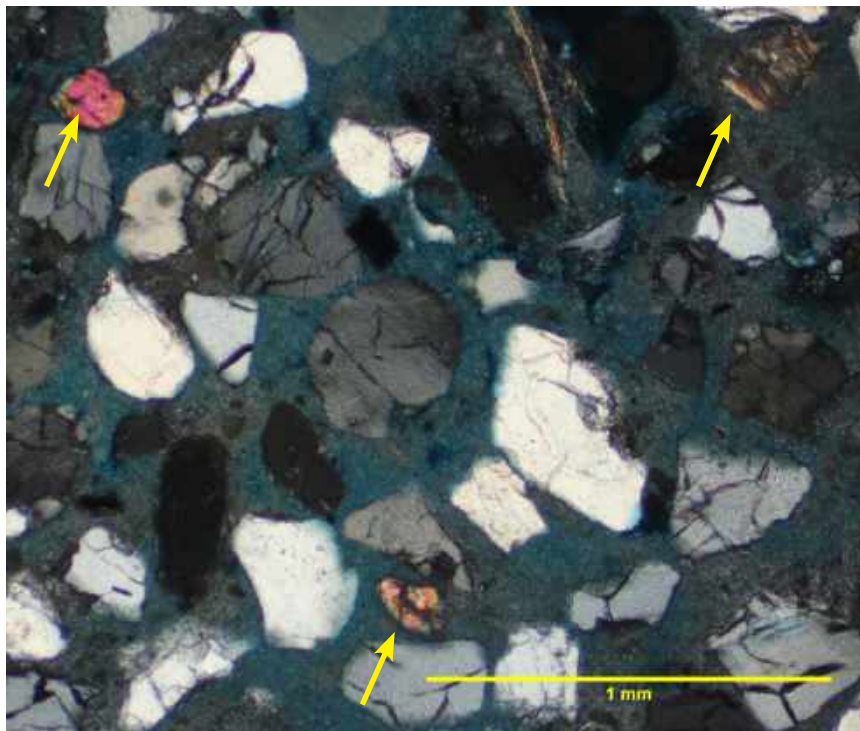


**Figure 149:** Cross polarized light image of the bedding mortar sample. Remnant grains of mica, amphibole, and clinopyroxene originating from the lime host rock are visible within the sample (arrows) (100x magnification).



## FINDINGS (CONT.)

### **Binder**

The original binder is identified as a non-hydraulic lime. Under polarized light, the binder is translucent to cloudy. Carbonated lime blebs are prominent and range in size throughout the binder. The original microtexture of the host minerals within the lime has largely been destroyed, but the original lime source is believed to have been crystalline limestone or marble. Relict portland cement particles or hydraulic particles were not found within the sample.

The binder was very porous and moderately carbonated, as evidenced by the light brown colored matrix observed in polarized light. Select areas of the binder were well carbonated around individual quartz and feldspar grains. Well carbonated lime blebs were also visible in thin section.

Soot and cinder debris is abundant within the sample, indicating the original mix was relatively impure. No evidence of plant or animal fiber was found within the binder.

### **Condition Of Mortar**

The mortar appears to be in fair condition but appears to be oversanded when compared to the modern standards. This gradation is typically not recommended for modern mortars according to ASTM C144. This narrow sand gradation has also been found within many bedding mortars dating from 1820 to the 1890s in the Lowcountry prior to the widespread use of portland cement-based mortars.



**Sample #:** SquirePope.PI

**Date Sampled:** 2019

**Sampled By:** Meadors

**Sample Location:** North Wall of Room 101

**Type of Mortar:** Interior Plaster

**Visual Description of Bulk Sample:** The sample is hard and dense in bulk sample. The material does not easily disaggregate by hand. The plaster contains multiple layers. The backside of the sample contains the impression of the wood lath.

**Surfaces:** Two to three plaster layers are visible in hand sample. A white architectural coating is on the exterior surface.

**Color:**

Lower layer - gray.

Upper Layers- white.

**Munsell Color:**

Scratch Coat: 10YR 7/1 "Light Gray"

Finish Coat: 9.5/N "White"

**Hardness:** greater than 5 (Mohs scale)



**Figure 150:** Image of sampling location within Room 101.



**Figure 151:** North wall within Room 101.



**Figure 152:** Photo of petrographic slide.



## FINDINGS

The plaster sample is cohesive and dense in hand sample. The plaster contains 4 layers of material applied with two different compositions. The scratch coat was applied as one layer of material. The finish coat consists of three applications of equal thickness. The backside of the scratch coat contains the impressions of the wood machine cut lath. The exterior surface of the sample is covered with a white finish. The exterior surface texture is smooth.

Petrographic analysis has identified that the plaster is composed a gypsum plaster containing both anhydrous and hemihydrate gypsum as the primary binder. The finish layers contain calcium sulphate hemihydrate gauged with lime.

### **Aggregate**

Quartz aggregate was largely absent from the plaster. Select quartz grains are visible but are not frequent. Large particles of gypsum are present within open pore spaces and likely behave as aggregate. Acid digestion was not performed during this analysis to isolate the individual aggregate.

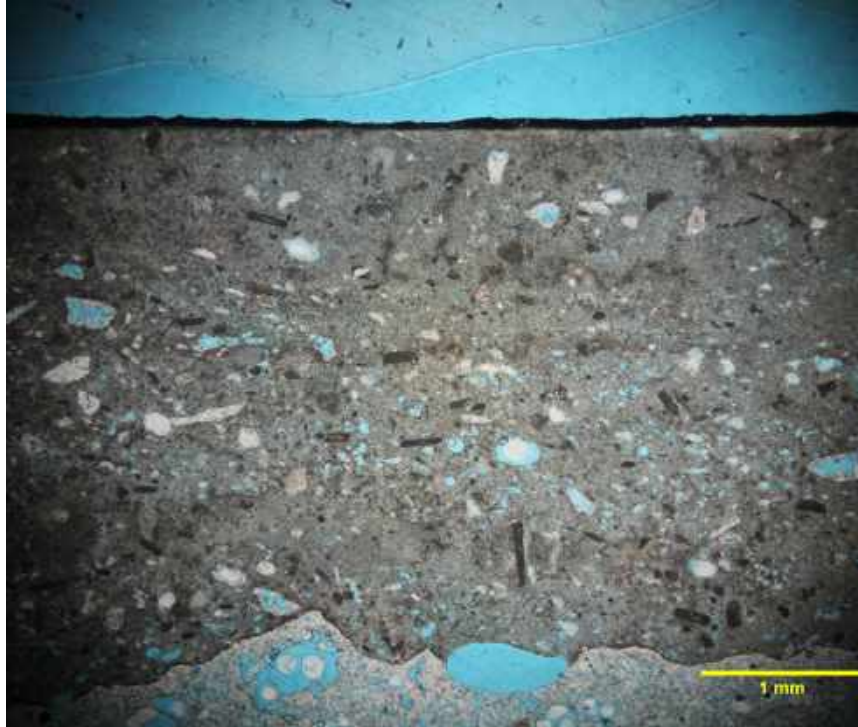


**Figure 153:** Plane polarized light image of the finish coats of the plaster sample. Quartz and other large aggregate is absent from the system. The finish coats contain a large percentage of lime as evidenced by the brown color of the binder matrix (40x magnification).



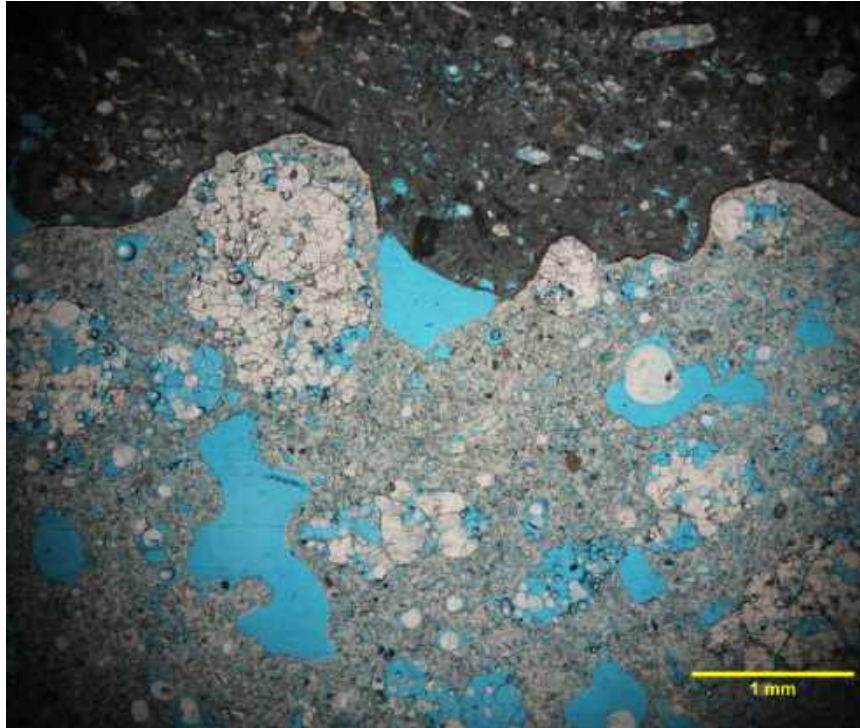


**Figure 154:** Plane polarized light image of the plaster sample. Isotropic fiber reinforcement is present throughout the scratch coat and visible as white circular areas containing many strands (40x magnification).

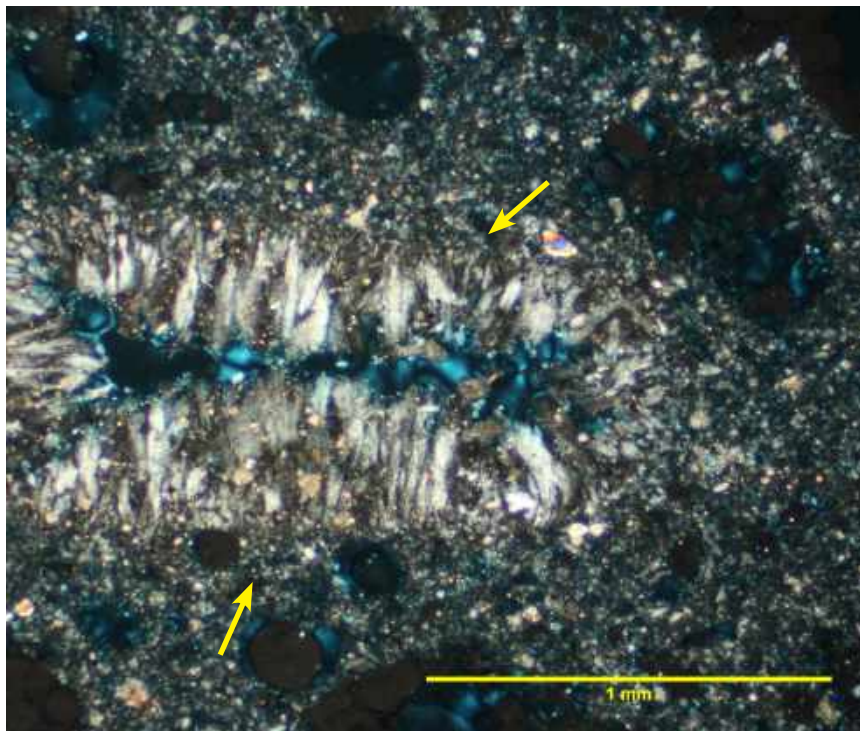


**Figure 155:** Cross polarized light image of the plaster sample. Detail of a large gypsum crystal within a pore space (arrows). Particles of anhydrite are present throughout the scratch coat (100x magnification).



## FINDINGS (CONT.)

### **Binder**

The scratch or base coat is identified as an anhydrous gypsum plaster with fiber reinforcement. Fine-grained interlocking gypsum needles are frequently observed within the base coat. Anhydrite particles are frequent throughout this layer indicating the plaster layer may contain Keene's cement, a proprietary gypsum plaster which sets very hard. It is a type of interior wall plaster that is obtained from gypsum, which is heated above 170° C. to form a hydrous calcium sulfate and then soaked in a solution of potassium aluminum sulfate to accelerate set. Fiber reinforcement is present within the basecoat but is absent in the upper layers. The fiber is inorganic and isotropic.

The brown and finish coats contain hemihydrate gypsum plaster gauged with lime. Cured lime particles are distributed throughout the upper layers. Large voids contain fibrous gypsum crystals indicating a roughly equal gauging of lime with gypsum.

### **Condition Of Plaster**

The components of the plaster are well mixed and cured. The plaster is in good condition and has only failed due to structural settlement of the building. Calcined wall plaster is rare before 1890, indicating this material dates to the 20th century.

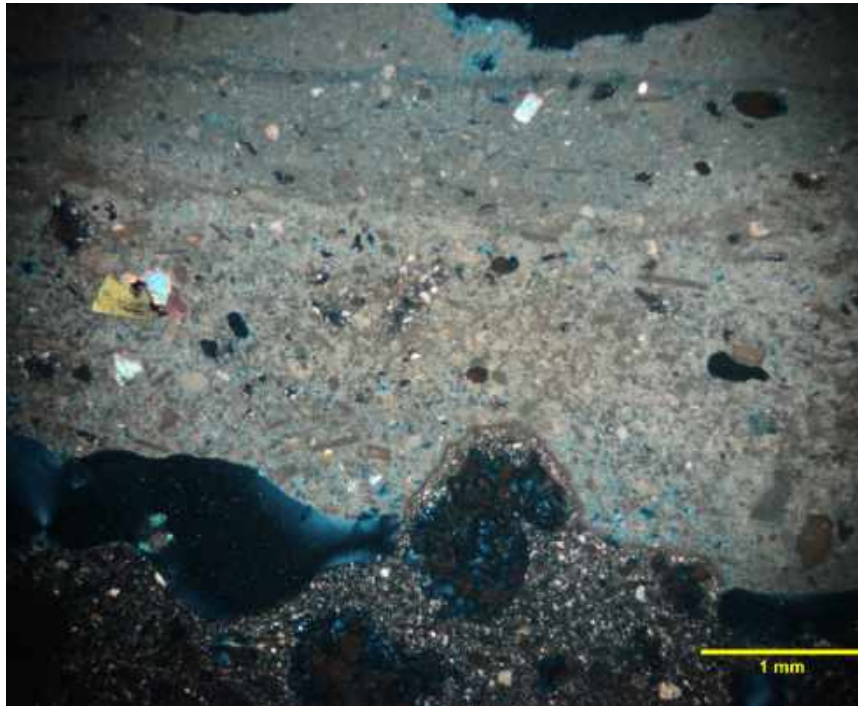


**Figure 156:** Cross polarized light image of the plaster sample. Detail of the boundary between the base and finish coats. Note the isotropic fibers within the scratch coat. (40x magnification).



## CONCLUSIONS

The bedding mortar was identified as an oversanded lime mortar typical of 19th century masonry construction within the Lowcountry. The plaster analyzed was determined to be a 20th century gypsum plaster with lime gauging in the finish coats.

Further lab analysis may be required to determine the exact formulations of the mortar and plaster. Atomic absorption spectroscopy is recommended to estimate the original binder to aggregate proportions and to analyze the original binder chemistry of each sample. X-ray diffractometry (XRD) is an additional analytical technique that can assist in answering very specific questions regarding the materials' mineral components.



## PAINT ANALYSIS

### INTRODUCTION

During the month of August 2019, Meadors Conservation analyzed interior paint samples from the Squire Pope Carriage House located in Bluffton, SC. Cross-section paint microscopy was used to analyze the historic finishes of select interior elements. This paint research is being conducted as a means of further deciphering the evolution of the structure only. A complete paint analysis of the interior and exterior finishes was not conducted.

### PAINT MICROCOPY PROCEDURE

In June and July 2019 Meadors Conservation extracted representative interior paint samples from the Squire Pope Carriage House. A total of 8 samples were removed from various interior items.

Extracted samples were labeled, photo located, and transported back to Meadors laboratory for further evaluation. Each sample was examined under low magnification to identify the most intact samples, seven samples were selected for further investigation.

Small representative samples of approximately 1/8" were cast in a polyester resin (Bioplastic) within mini ice cube trays. After curing, selected samples were cross-sectioned using a Buehler Isomet diamond blade saw. The resulting cross-sections were polished using a wet polishing process on 240, 400, and 600 grit papers, followed by polishing cloths. The samples were then examined under various magnifications using a Motic BA410T-FL fluorescence microscope under both visible and ultraviolet light. Ultraviolet light helps to differentiate layers and identify certain types of binding media based on their autofluorescence.



Digital images (photomicrographs) of representative cross-sections were photographed using a Canon Rebel T3i digital single lens reflex camera mounted to the microscope. Each sample was analyzed to further understand the architectural coatings.



**Figure 157:** Process of preparing paint samples.

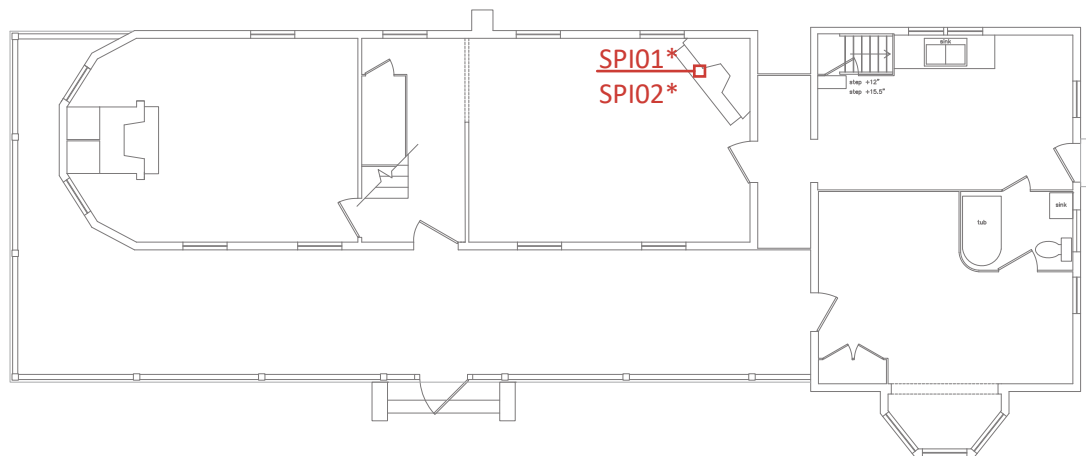
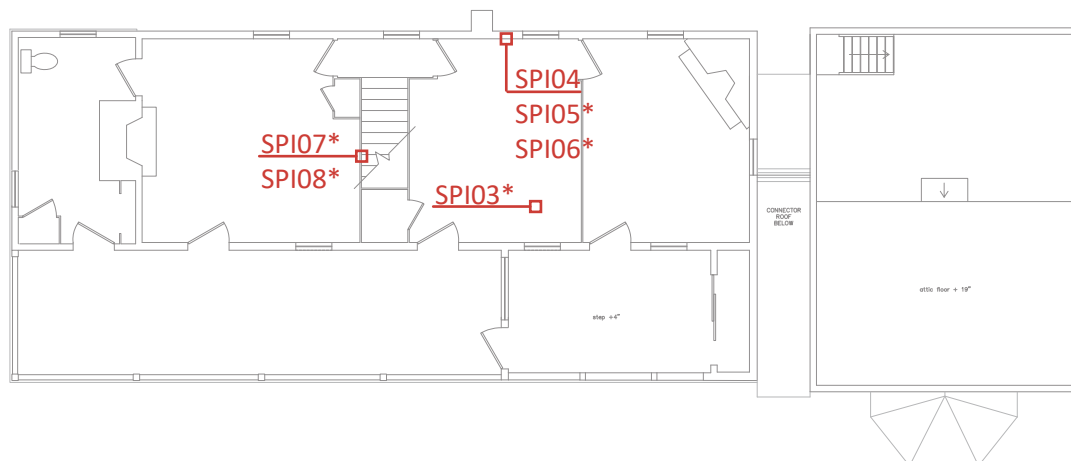


## SAMPLE LOG

| <i>Sample #</i> | <i>Sample Location</i>         |
|-----------------|--------------------------------|
| SPI01*          | Room 103, mantel apron         |
| SPI02*          | Room 103, mantel apron diamond |
| SPI03*          | Room 204, floor board          |
| SPI04           | Room 204, wall board cant      |
| SPI05*          | Room 204, wall board cant      |
| SPI06*          | Room 204, wall board           |
| SPI07*          | Room 202, wall board cant      |
| SPI08*          | Room 202, wall board           |

Note: Samples with \* selected for analysis.

## SAMPLE LOCATIONS

FIRST FLOOR PLANSECOND FLOOR PLAN

## SAMPLES SPI01 &amp; SPI02- SUMMARY OF FINDINGS



**Figure 158:** Photograph of Room 103. The fireplace mantel in the northeast corner of Room 103 was sampled to determine whether the diamond at the center of the apron was installed originally with the mantel or applied at a later date.

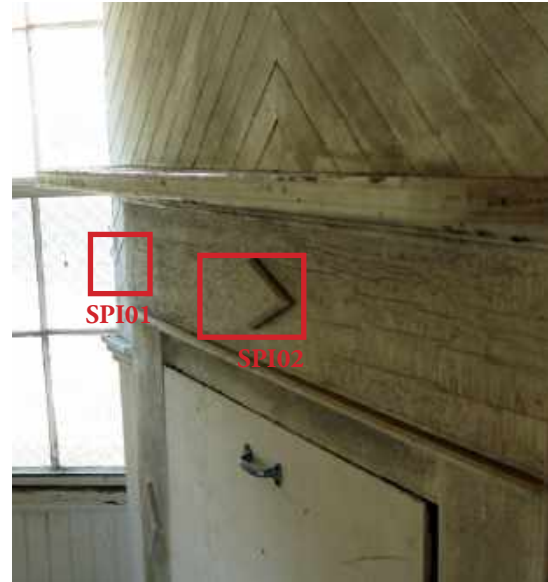


**Figure 159:** Detailed photograph of mantel in Room 103. Two paint samples were extracted from the mantel. 1) SPI01 - mantel apron, 2) SPI02 - diamond applique on mantel apron.



**Figure 160:** Visible Light 200x- SPI01. Based on the paint cross-sections examined, the diamond on the apron was installed at the same time as the mantel. The initial pigmented transparent finish is seen in both sample SPI01 and SPI02.

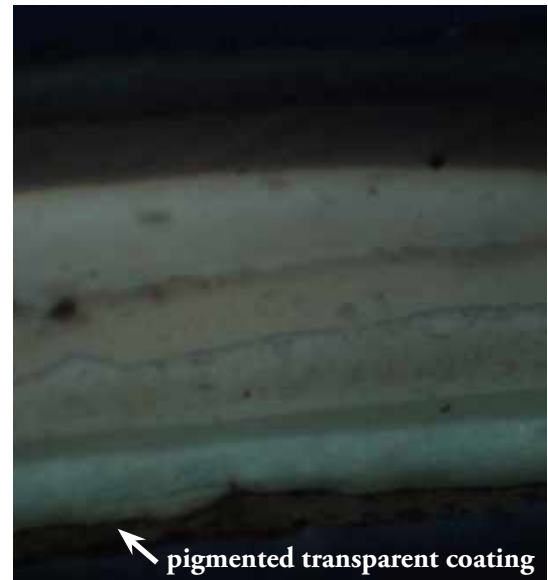


**Figure 161:** UV Light 200x - SPI01



## SAMPLES SPI01 & SPI02- SUMMARY OF FINDINGS CONTINUED



**Figure 162:** Visible Light 100x- SPI02. The mantel and diamond applique were both painted white for the duration of its history, with the exception of the original transparent finish.



**Figure 163:** Ultraviolet Light 100x- SPI02.



**Figure 164:** Visible Light 200x- SPI02.

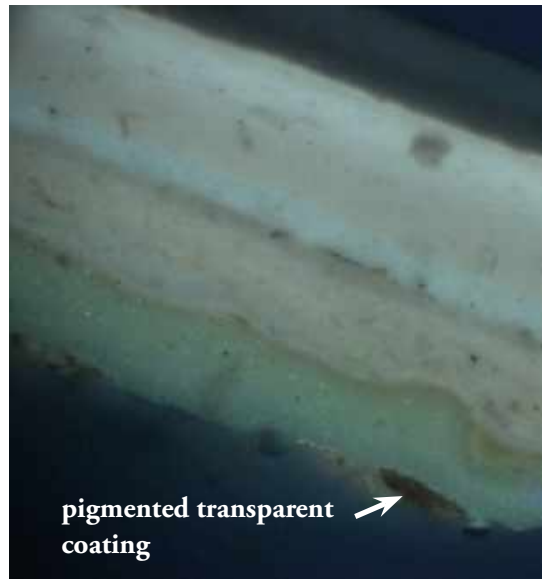


**Figure 165:** UV Light 200x - SPI02.



## SAMPLE SPI03- SUMMARY OF FINDINGS

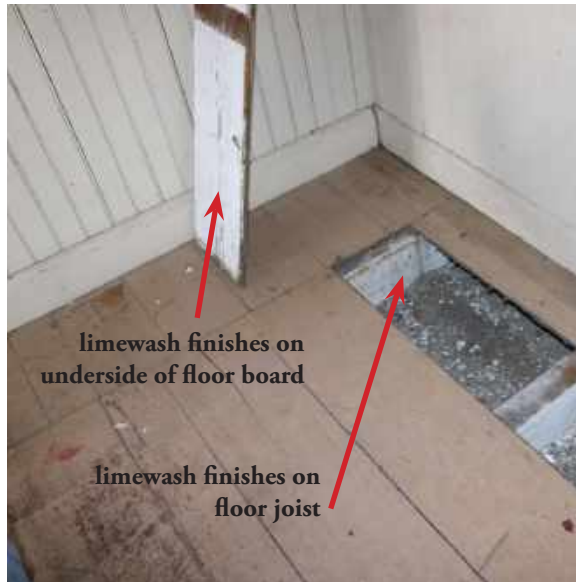


**Figure 166:** Photograph of Room 204. Limewash was found on the underside of the 2nd floor, floor boards and on the floor joists below. The presence of a coated surface indicates that the 1st floor ceiling, in this section of the building, was exposed during the early part of its history.



**Figure 167:** Detailed photograph of limewash finishes found on the underside of the floor board in Room 204. Note location of paint sample SPI03. The extracted paint sample was brittle and easily broken when handled.

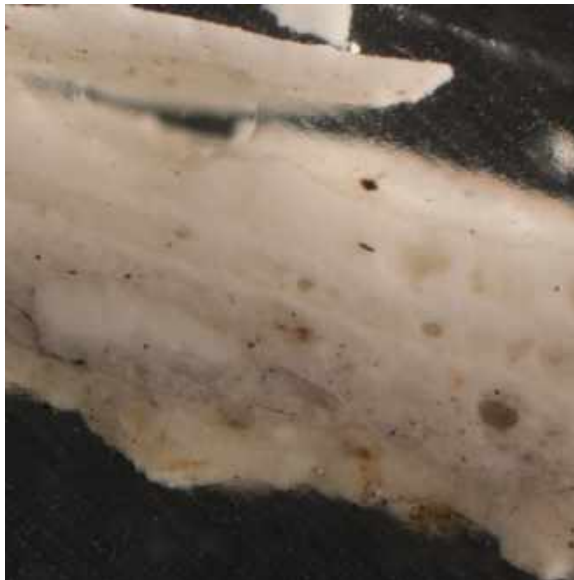


**Figure 168:** Visible Light 100x- SPI03. The coatings seen in the cross-section are unpigmented limewashes. All layers have the characteristic translucent appearance of limewash coatings.



**Figure 169:** Ultraviolet Light 100x- SPI03. Note bluish autofluorescence which is characteristic of limewash coatings.



## SAMPLES SPI05 &amp; SP106- SUMMARY OF FINDINGS



**Figure 170:** Photograph of Room 204. The wall board and ceiling cant boards were both sampled to confirm whether the cant at the upper section of the wall was installed after the wallboard. Examination of fasteners in the room appear to support this hypothesis.

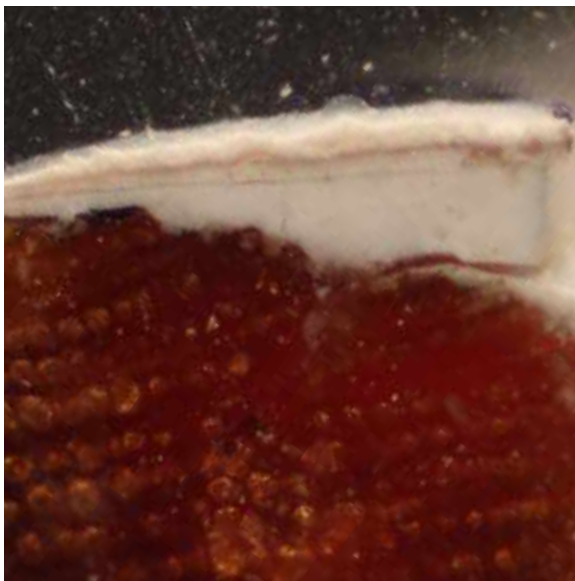


**Figure 171:** Visible Light 100x- SPI05. Three paint layers are visible in cross section. Both the cant and the wall boards have the same number of paint layers. Fasteners and paint analysis conducted in Room 202 indicate that the cant was installed after the wall board. The wood walls in this room appear to have remained unpainted initially.



**Figure 172:** Ultraviolet Light 100x- SPI05. The substrate of the sample appears to have shellac embedded in the wood pore structure. Shellac was a commonly used sealer applied to new wood prior to the application of paint.



## SAMPLES SPI05 & SPI06- SUMMARY OF FINDINGS CONTINUED

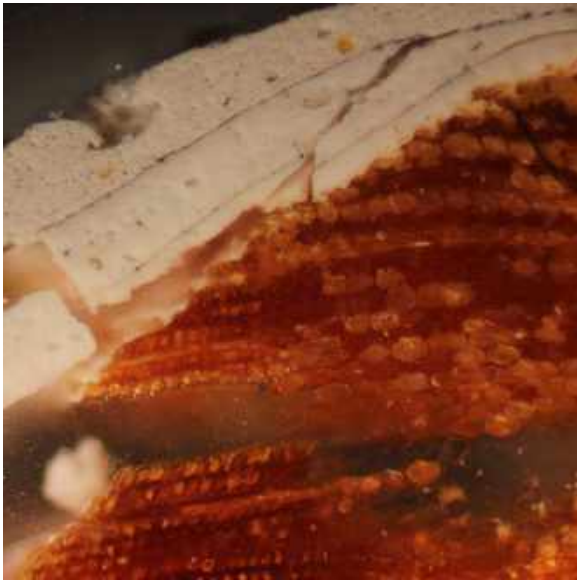


**Figure 173:** Visible Light 100x-SPI06. Three paint layers are visible in cross section.

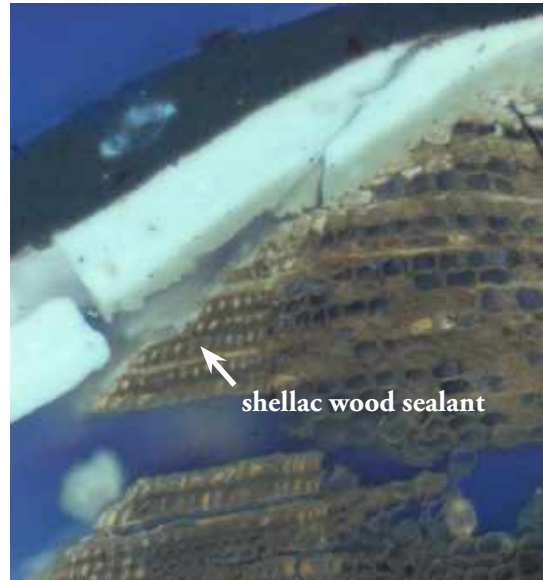


**Figure 174:** Ultraviolet Light 100x- SPI06.



**Figure 175:** Photograph of Room 204. Detail view of transition between wall board and cant at the uppers section of the wall. The ceiling joists in this area were modified to elevate the ceiling height. A cant, at the top of the wall, appears to have been installed at this time



## SAMPLES SPI07 &amp; SP108- SUMMARY OF FINDINGS



**Figure 176:** Photograph of Room 202. The wall board and ceiling cant boards were both sampled to confirm whether the cant at the upper section of the wall was installed after the wallboard. Examination of fasteners in the room appear to support this hypothesis.

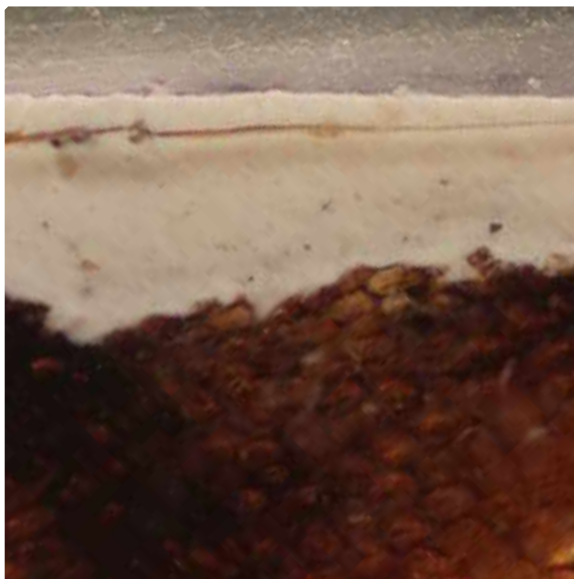


**Figure 177:** Visible Light 100x- SPI07. Two paint layers are visible in cross section. This sample substantiates the hypothesis that the wall boards were installed prior to the cant boards.

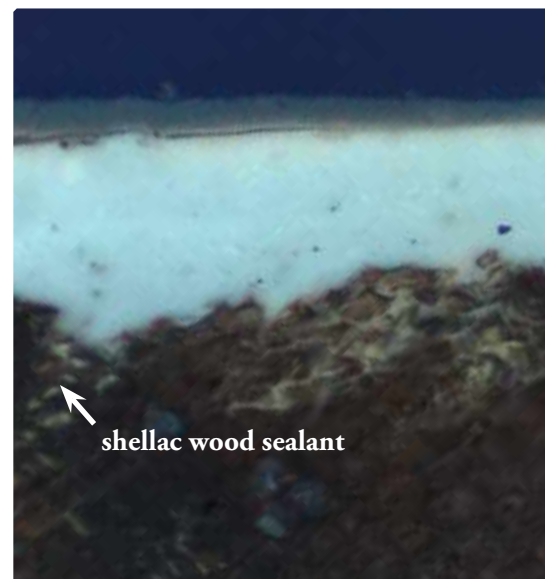


**Figure 178:** Ultraviolet Light 100x- SPI07



## SAMPLES SPI05 & SPI06- SUMMARY OF FINDINGS CONTINUED



**Figure 179:** Visible Light 100x- SPI08. Four paint layers are visible in cross section. This sample substantiates the hypothesis that the wall boards were installed prior to the cant boards.



**Figure 180:** Ultraviolet Light 100x- SPI08.



## HYPOTHETICAL STRUCTURAL EVOLUTION

The following description and diagram details the hypothetical evolution of the structure based upon existing historic research and physical evidence. This proposed evolution is subject to change based upon additional new information.

### ANTEBELLUM 1:

- A small two-story post and beam dwelling approximately 24'6" x 14'2" in size is constructed on the property. The interior is whitewashed. The interior of the building featured a central opening. The purpose of the opening is unknown.

### ANTEBELLUM 2:

- The two-story building is enlarged to the east to its present form. This is supported by documented changes in the floor and roof framing. The interior of the addition is also whitewashed. The eastern one-story building is constructed around this time.



**Figure 181:** Hyphen, East Elevation of Two Story Building: Detail of whitewash on the backside of dislodged siding indicating the east enlargement of the two-story building was also whitewashed.



POSTBELLUM:

- One or more of the buildings are moved to their current location and connected via a small hyphen. The single hung gunstop windows are likely added around this time.

VICTORIAN 1A:

- A one-story porch is built on the south and west elevations.
- A corner chimney is added to the northeast corner of the two-story building.
- The bay window is constructed on the south elevation of the one-story building. Vertical wall and ceiling paneling may have been added throughout the structure during this renovation.

VICTORIAN 1B:

- A bathroom addition is constructed on top of the one-story porch at the northwest corner. Existing evidence shows the addition was installed on the original porch wood shake roof.



**Figure 182:** Detail of wood shake roof below the second floor bathroom infill (arrows). The corner siding boards also remain in place. The enlargement at right is later.





**Figure 183:** Attic: Detail of newer porch roof framing intersecting the historic rafters.

#### VICTORIAN 2A & 2B:

- The second-floor porch is constructed and the Victorian detailing is added.
- The canted paneled ceilings are also likely added in both buildings. An additional bathroom is installed to the first floor of the one-story building.

#### EARLY 20TH CENTURY:

- The west wall of the two-story building is removed on the first floor to construct another bay. Casement windows are installed within the new bay wall.
- The north chimney is constructed for a gas furnace in Room 103.

#### MID-20TH CENTURY (1950s):

- The second-floor porch is infilled at the southeast corner for a bedroom. Jalousie windows are installed on the south elevation of the addition.





Antebellum 1

Antebellum 2

Postbellum

Victorian 1A

Victorian 1B

Victorian 2A

Victorian 2B

Early 20th Century

Mid 20th Century (1950's)







## STAKEHOLDER INVOLVEMENT & COMMUNITY OUTREACH

During the creation of the preservation plan, an online stakeholder survey was initially conducted to receive input from a variety of participants. Following analysis of the results, the findings were presented and discussed in person during a second stakeholder meeting.

### ONLINE STAKEHOLDER SURVEY

The online stakeholder survey was organized via the use of Google Forms and was identified as the primary method of outreach for the preservation plan. The online survey was exclusively used to quickly disseminate information and receive feedback on the proposed treatment philosophy as well as recommendations for identified historic features. The online survey was created on an online platform that can easily be shared via an active website link and be completed in several minutes.

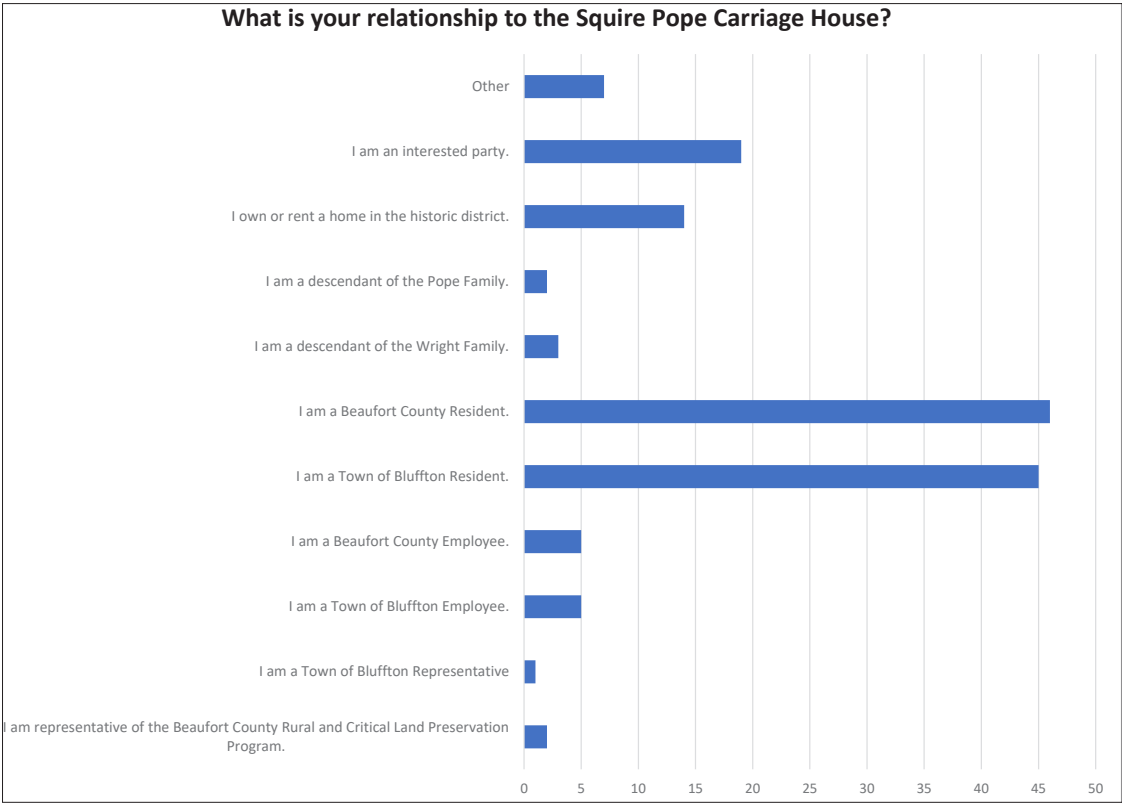


**Figure 184:** Participant data from the online stakeholder survey. “Other” participants included those who plan to retire in Bluffton and consultants who previously worked on historic structures in the Town.



The goals of the stakeholder survey were to:

- Identify the significance of the structure.
- Identify the value of the structure within the community.
- Identify character-defining features.
- Offer identified stakeholders the opportunity to propose a future use.
- Offer the opportunity to provide additional feedback about the process.

Stakeholder were identified by the Town of Bluffton and sent to participants via e-mail and website postings. The stakeholder survey was open for participants for a three-week period from July 9th to July 26th. Data collected by the survey was stored online within a Google Forms database and exported for further analysis.

## SURVEY FINDINGS

### *Respondents*

A total of 84 responses were submitted on the online survey. A majority of participants were Town of Bluffton or Beaufort County residents. Two representatives of the Beaufort County Rural and Critical Land Preservation Program and one Town of Bluffton representative participated the survey. Three descendants of the Pope & Wright families also took the survey.

### *Character-Defining Features*

Almost 40% of participants identified the two-story porches as the most significant character-defining features of the structure. The second most popular response was the surrounding landscape and tree canopy. The interior finishes were identified as the third most important feature. Other responses included:

- The overall historic value of the carriage house
- The story about the Reconstruction Era.
- All are important.
- Fenestration and windows, possibly interior finishes.



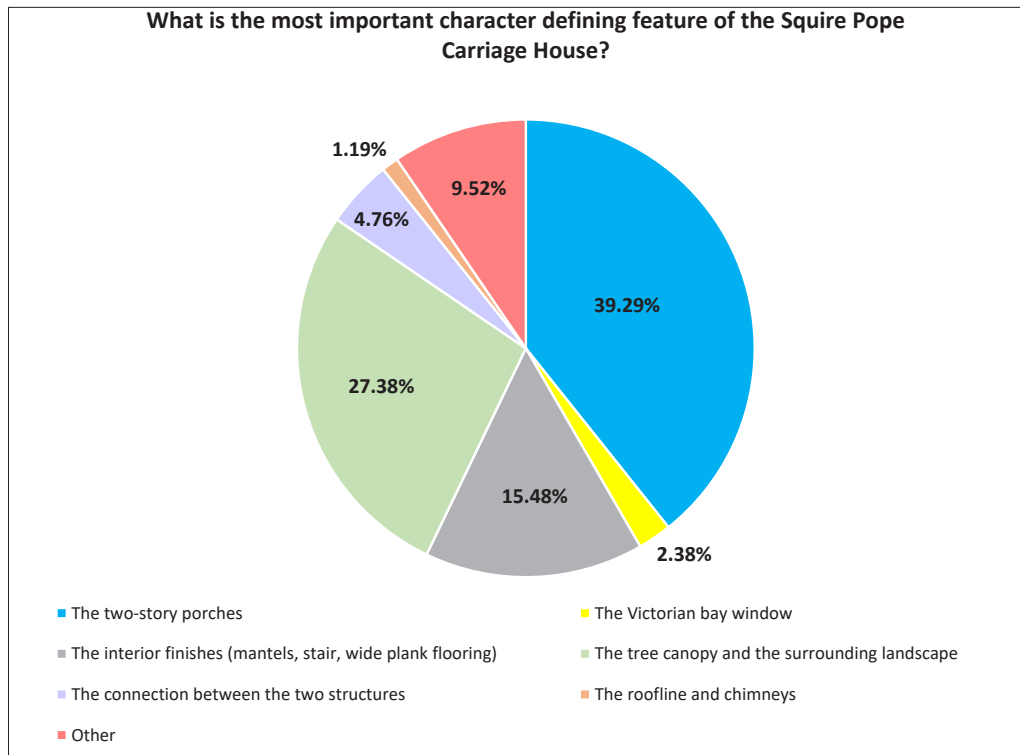


**Figure 185:** Stakeholder Survey Question #2 Results: 39.29% of participants stated that the two story porches were the main character-defining feature of the structure.

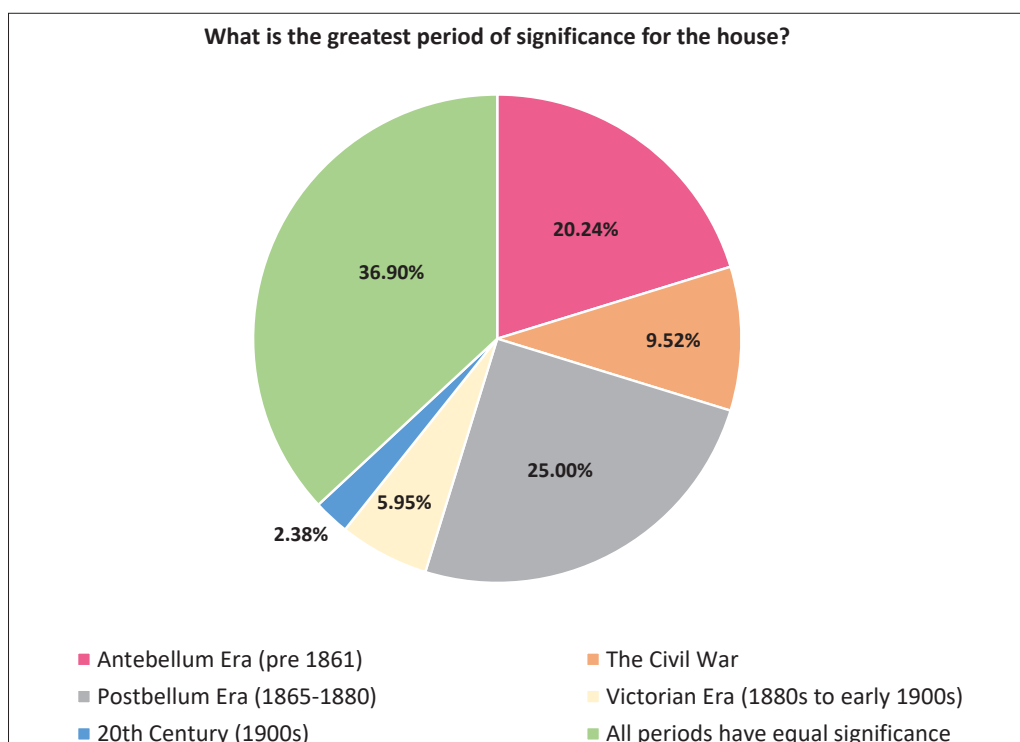


**Figure 186:** Stakeholder Survey Question #3: Era of Significance. 36.90% of respondents selected that all historic periods have equal significance. The second most popular response was the Woodward.



### *Period of Significance*

Respondents noted that all periods are significant for the house ranging from antebellum to the 20th century. Twenty-five percent of participants noted that the postbellum or reconstruction era was the most significant.

### *Existing Challenges*

Respondents identified that the current state of deterioration (69%) and determining a future use (40.5%) were the biggest challenges facing the structure. Participants were given a chance to suggest a proposed use in the final questions. Other responses included:

- Wanting the structure to be all purpose and suit every use.
- Cost

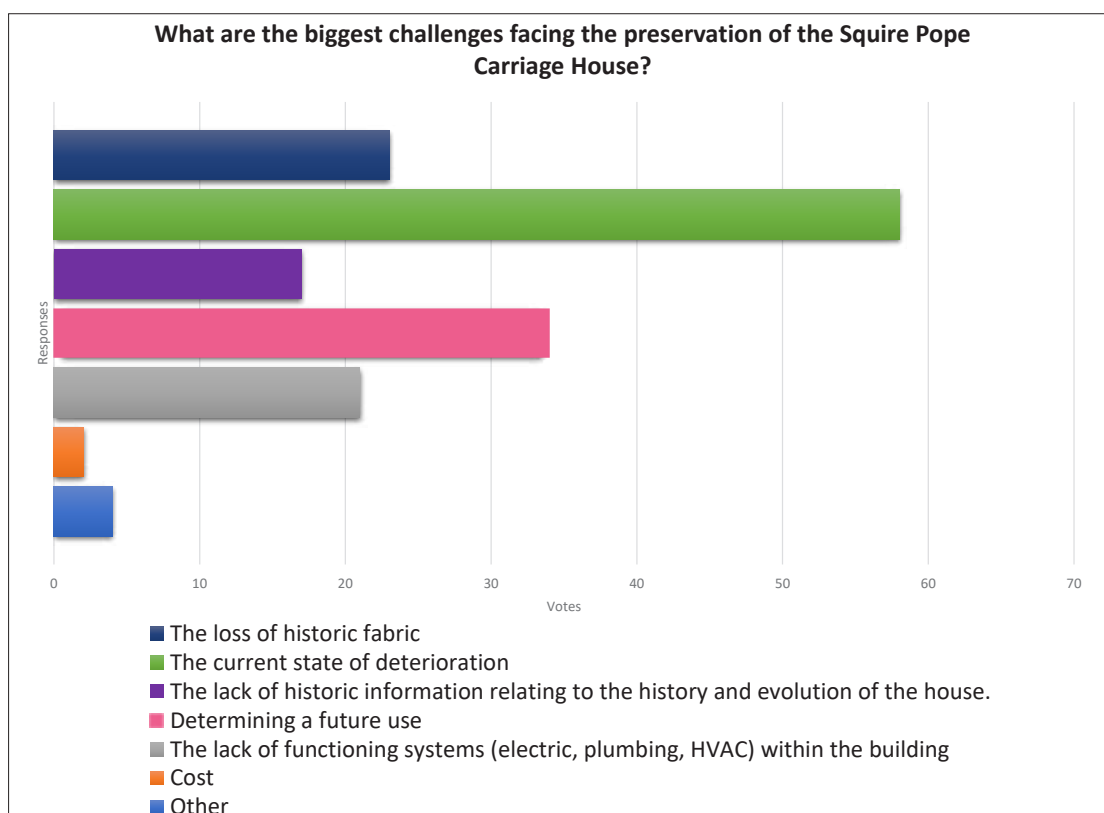


**Figure 187:** Stakeholder Survey Question #4: The current state of deterioration was noted as the biggest challenge facing the preservation of the structure.



### *20th-Century Alterations & Modern Systems*

Participants strongly supported removing 20th century alterations to the structure with eighty-three percent supporting removal. Approximately ninety-three percent of respondents voted overwhelmingly in favor of introducing modern systems such as new plumbing, electrical, and HVAC into the structure.

### *Uses*

Survey takers were posed questions relating to the overall use of the structure. Forty-nine percent voted in support of a combination of private and public uses while eleven percent responded that either use is acceptable. Three percent supported private use.

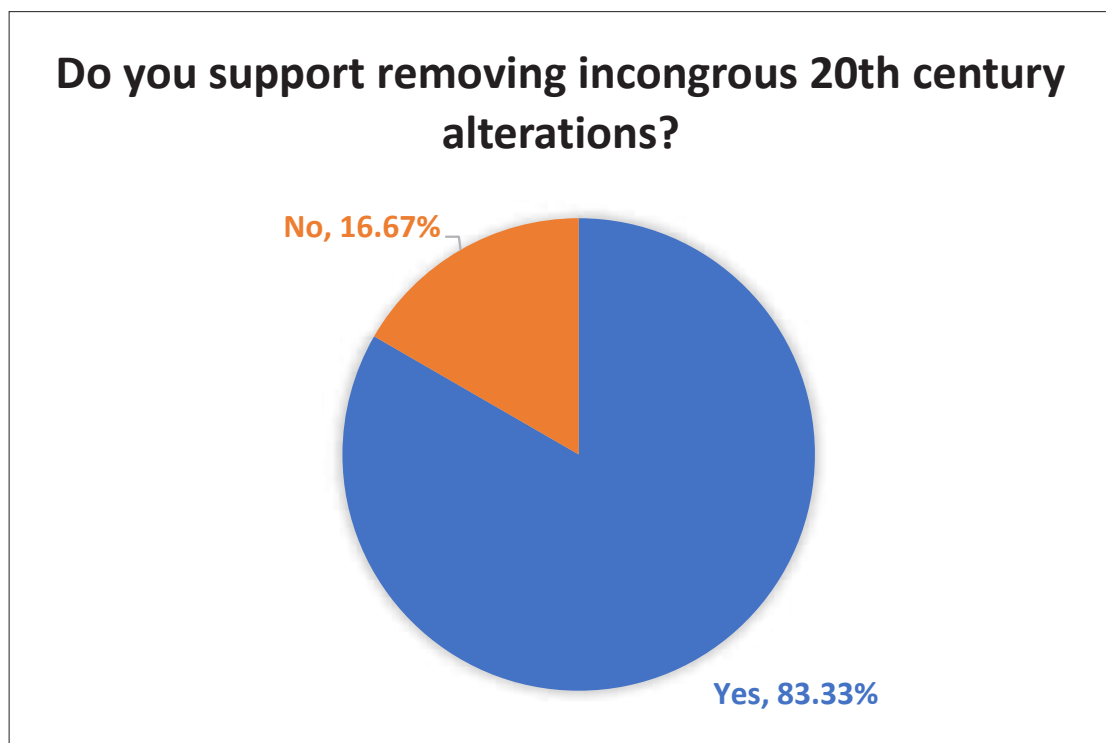
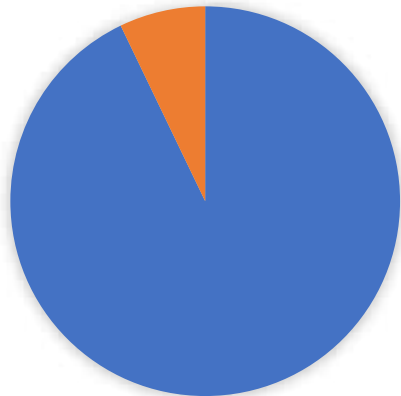


**Figure 188:** Stakeholder Survey Question #5 Results: 83.33% of participants voted in support of removing 20th century alterations.



## Do you support introducing modern systems (HVAC, plumbing, and electrical) into the structure?

No, 7.14%

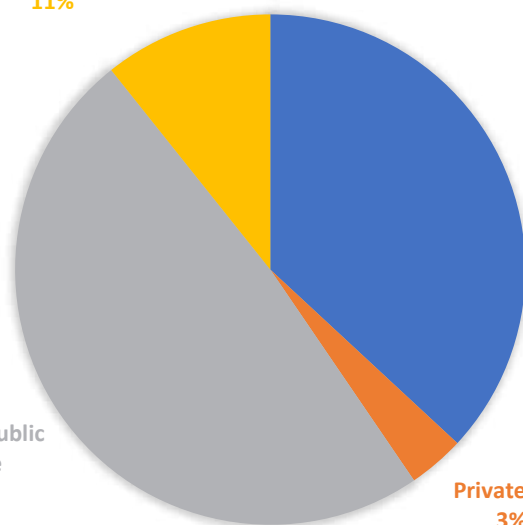


Yes, 92.86%

**Figure 189:** Stakeholder Survey Question #6: Respondents overwhelmingly support introducing modern systems into the structure.

## Do you think the restored structure should be used privately or be accessible to the public?

Either use is acceptable  
11%



Public use  
37%

A combination of public  
and private use  
49%

Private Use  
3%

**Figure 190:** Stakeholder Survey Question #7 Results: 49% voted in support of a combination of public and private use.



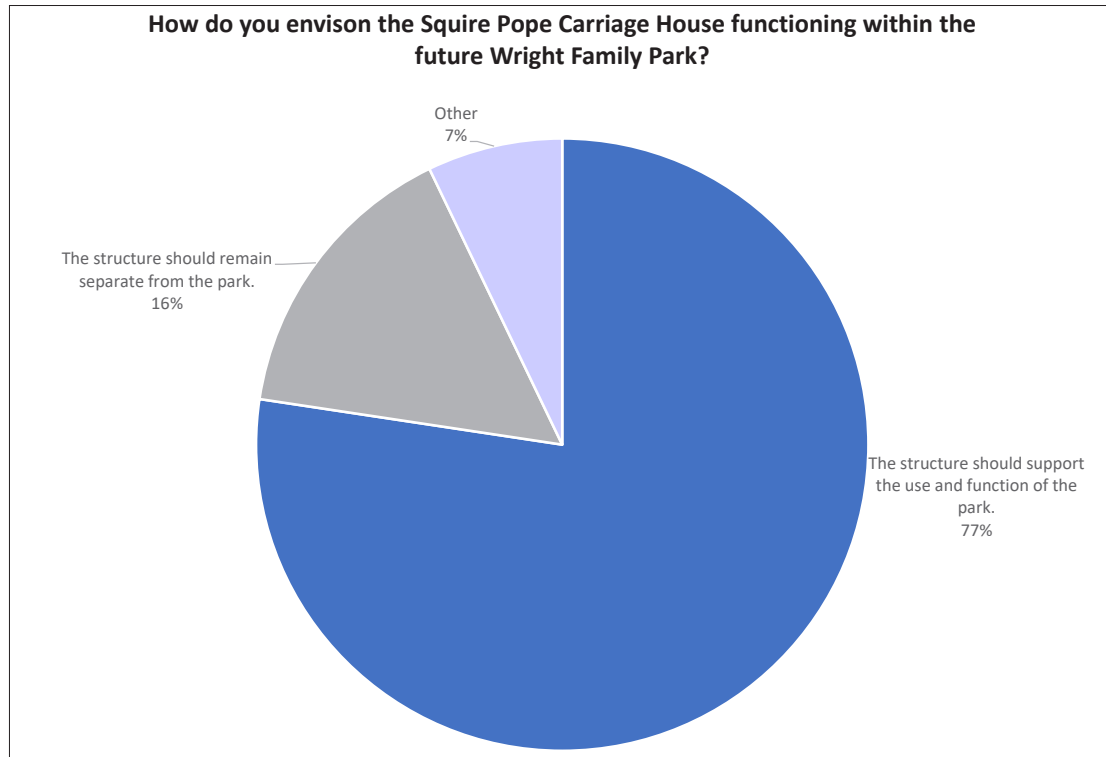


**Figure 191:** Stakeholder Survey Question #8 Results: A majority of respondents supported having the structure be an integral part of the Wright Family Park.

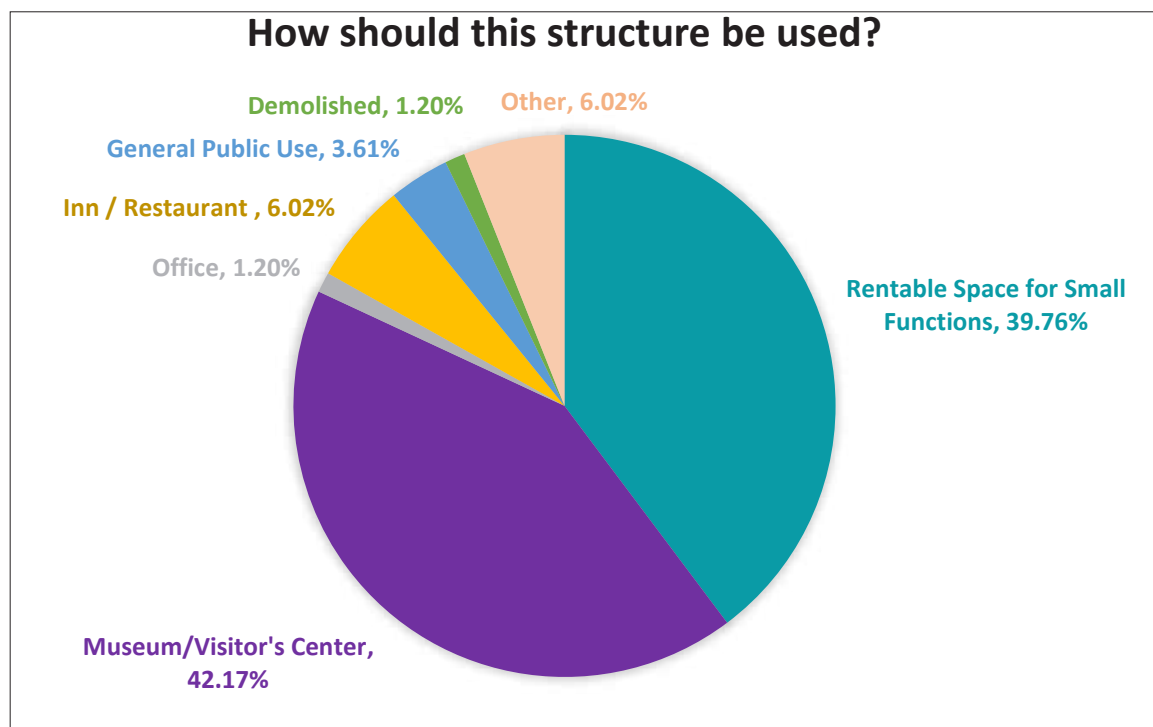


**Figure 192:** Stakeholder Survey Question #9: Overview of proposed uses summarized from the survey comments.





Data pieced from individual comments roughly says that forty-two percent of participants would like to see a visitor's center, while forty percent would prefer a rentable space. A copy of the unedited comments is included in Appendix B.

#### *Comments related to feedback or guidance*

A final open-ended question at the end of the online survey asked for any feedback or guidance related to the structure, the process, and the future preservation plan. Several themes emerged from the submitted comments. Common themes included concerns about the cost, the need to elevate the existing structure, and making the building accessible. There were multiple requests for additional research on the occupants. A copy of the unedited comments is also included in Appendix B. Overall the comments were very positive regarding the structure and its future preservation. The structure is highly valued by the stakeholders and is an important part of the community.

#### *"Squire Pope Carriage House"*

Multiple comments submitted in the survey and to the Town of Bluffton identified other individuals associated with the structure that have had a greater impact to the site and structure than Squire William Pope

Squire Pope died in 1862 prior to the Burning of Bluffton in 1863. Current research by Augustine Wright III, a descendant of the Pope and Wright families, indicates that Elizabeth (Pope) Woodward, Sarah Lavinia Pope's daughter, should be credited with reconfiguring the house after the Civil War and that the builder was likely connected to the Woodward family. Further research is necessary to confirm the history.

Additionally, Wright family members have stated that over the last 150 years much of the time the house was owned, occupied, or maintained by women head of households. Current physical evidence does not support the theory that either structure was used as a traditional carriage house. Therefore, the restoration of the building provides a unique opportunity to revisit the current "Squire Pope Carriage House" name.

Potential names suggested by Pope/Wright Family Descendants:

- Sarah Lavinia Pope Reconstruction House
- Pope Reconstruction House
- Eliza Pope Woodward House
- Mrs. Alsop (Elizabeth Pope) Woodward House
- Woodward Wright House



## STAKEHOLDER MEETING

Primary stakeholders identified by the Town of Bluffton were invited to the meeting to allow Meadors Conservation to present an overview of the project and collect information and input related to preservation issues and project concerns. The meeting was held on August 8, 2019. The meeting was attended by approximately 20 members of the public and 10 identified stakeholders.

The meeting focused on identifying objectives and strategies related to the vision of the site and to promote discussion of issues related to the site's preservation. Data from the online stakeholder was presented in-depth and discussed. Project team members presented on the hypothetical evolution of the house based on existing physical evidence uncovered during the assessment. The current name of the structure was evaluated and the possibility of renaming the structure was discussed and was generally supported by the community members in attendance.

Following this meeting, the responses from the community were evaluated and compiled. Possible sources of new information discussed during the meeting were investigated. Ultimately, the information from this meeting was used to stimulate and inform the creation of a treatment philosophy for the preservation of the Squire Pope Carriage House.



## TREATMENT PHILOSOPHY

The preservation of the Squire Pope Carriage House will focus on preserving remaining items in situ to highlight the development of the structure over time. The evolution of the structure and the evidence that displays the change over time will be respected during the preservation process. Interventions will abide by the Secretary of Interior's Standards and will combine the approaches of Preservation and Rehabilitation. Recommendations and interventions will also be guided by two integral goals.

The first goal will focus on maximizing the retention of historic character-defining elements and minimizing the further loss of historic fabric. The second goal will focus on repairing all necessary elements of the Squire Pope Carriage House to provide the structure a successful future. Current and past deterioration mechanisms that have contributed to the decay of the structure will be addressed and remedied. Existing deficiencies in the structure will be sensitively addressed and modern interventions and systems will be integrated seamlessly as not to detract from the preserved structure.

The preservation and rehabilitation of the Squire Pope Carriage House will ensure that the multiple layers of change are represented within the structure to communicate the full evolutionary history of the building. The original setting and surrounding landscape will also be respected and honored as character-defining features of the historic structure and site.



**Figure 194:** Room 202: Change over time is readily evident throughout the structure.





## STRUCTURAL RECOMMENDATIONS

Based on the as-built conditions described in the “Structural Assessment”, the following recommendations are provided to address the restoration of the structural components at the carriage house and adjoining kitchen house as part of the structural assessment of this property.

### RAISING THE STRUCTURE

Based on the observed conditions at the structure and to implement the recommendations regarding the foundation and first floor framing provided below, the existing structure will need to be raised temporarily to a level that will allow for the scope of work to be performed. Elevating the structure should be performed by a specialized contractor and can be accomplished by the use of the steel I-beams and wood cribbing. Excavation at the perimeter of the structure might also be required as part of the raising process due to the deterioration of the foundation and the current elevation of the first floor. All efforts to minimize damage to the structure as it is raised should be provided. The final elevation of the structure has yet to be determined.

### CARRIAGE HOUSE WEST END - TEMPORARY SHORING

Based on the severity of deflection and failure of joists noted at the West end adjacent to the fireplace and deterioration noted below the West end bathroom over the porch, it is recommended access to these locations be prohibited until temporary shoring of the second floor framing can be put in place. Temporary shoring should consist of two temporary walls extending the length of the West end room to the stairway wall.

### FOUNDATION SYSTEM- CARRIAGE HOUSE/KITCHEN HOUSE:

Due to exposure to the elements and age of the structure, the existing foundation system has deteriorated along the base of the exterior walls. Collapse of the foundation has resulted in settlement of the structure and placed the floor framing system in direct contact with grade. The following bulleted items detail recommended repairs to the foundation system.



*Foundation System:*

1. *Exterior Foundation Piers:* Due to the deterioration of the existing foundation system at both adjoining structures, the installation of a new foundation system at the exterior walls throughout is recommended following the raising of the structure. The foundation piers can be constructed of brick masonry and spaced approximately 6 feet on center throughout the perimeter of the structure. New piers should also align with porch columns at the South and West side of the carriage house. Piers are to be installed on a reinforced concrete foundation. Dimensions of the piers and spacing have yet to be determined. New footings should be place a minimum of 12" below grade.
2. *Interior Foundation Piers:* At the kitchen house, new interior piers are recommended and should be located below interior girder framing as required. The location of piers can be verified following the raising of the structure. New footings should be place a minimum of 12" below grade.
3. *Fireplace Brick Masonry:* Following the raising of the structure, a new foundation and cmu wall or brick masonry support system should be installed below the two existing fireplaces. Dimension and height of the new support system will need to be determined after further evaluation. It is recommended the brick masonry be further evaluated during the renovation process. Damaged fireplace and chimney stack brick should be repaired or replaced with brick of similar material and dimension. Mortar joints should also be repointed where required.

FIRST FLOOR FRAMING SYSTEM- CARRIAGE HOUSE/KITCHEN HOUSE:

Due to the contact with grade, termite activity and exposure to the elements, portions of the 8x8 perimeter sill band and first floor framing will require repair or replacement. The following bulleted items detail recommended repairs to the first floor framing system.

*First Floor Framing System:*

1. *Perimeter Girder Sill:* After the structure is raised, the condition of all 8x8 perimeter sill girders should be further evaluated to determine if any portions can be salvaged for the renovation process. Based on the conditions observed in the field and length of contact with grade, it is likely the majority of the perimeter sill girder at the North wall of the carriage house and kitchen house will require replacement. Replacement of the 6x6 girder at West end of the carriage house is also recommended. Evaluation of the remaining 6x6 porch girder framing will be required after the structure is raised. Following the construction of new foundation piers, a new pressure treated 8x8 girder sill is to be installed below the perimeter of the structure where required. The girder sill is to be fastened to each foundation pier with (2) ½" diameter stainless steel epoxy anchors with a minimum embedment of 8 inches into the brick or cmu masonry pier.



2. *First Floor and Porch Joists:* Following the raising of the structure, the existing floor joists and porch framing are to be further evaluated to determine their present condition. Floor joists that are damaged beyond repair are to be replaced with new pressure treated joists of similar dimension. The floor joist ends are to be notched in similar fashion to the existing framing and fastened to the 8x8 perimeter girder sill along the North and South walls. The joist to girder connection is to be notched at the joist end and will bear over the top face of the girder sill. Joist ends can be fastened to the girder sill with stainless steel nails or timberlok screws.
3. *Floor Boards:* The floor joists are covered with wood planks spanning parallel to the length of the structure. To replace the existing first floor joists, the existing floor boards will need to be removed and stored. Salvaged floor boards are to be reused following installation of the new first floor framing as required. Damaged floor boards are to be replaced with matching material where required.

### EXTERIOR WALL COMPONENTS - CARRIAGE HOUSE/KITCHEN HOUSE

Due to the collapse of the foundation system, settlement of the exterior walls is evident throughout the structure. In addition, portions of the wood studs are exposed to the elements due to the absence of siding and deterioration at the base of the structure. The following bulleted items detail recommended repairs to the exterior wall components.

#### *Exterior Wall Components:*

1. *Exterior Wall Studs:* Due to the deterioration of the girder sill and absence of base siding at the North side of the structure, several of the wall studs have been exposed and are in contact with grade. Following the completion of repairs to the first floor framing system, it is recommended existing wall studs be fastened to the 8x8 perimeter girder sill. Attachment to the girder sill can be provided by timberlok screws or a similar fastener. Missing wall studs are to be replaced with a full height stud of similar dimension and material. At locations where damaged walls studs are to remain, existing studs are to be sistered from the girder sill to the top plate where required. Interior finishes can be repaired following installation of new studs as needed.
2. *Ledger Plate:* During repairs to the carriage house North side wall systems, it is recommended the ledger plate supporting the second floor framing be further evaluated. If the ledger plate has shifted and is not adequately attached due to the settlement of the exterior walls, it is recommended the plate be refastened with timberlok screws at locations where required. At new and sistered stud locations, the inside face is to be notched to set in the ledger plate. At locations where the ledger plate is damaged beyond repair, a new ledger plate of similar dimension and material is to be installed. *Corner Posts:*



As part of the exterior wall system, a 4x6½” wood post is installed at each corner of the structure. Each of the wood posts is intact however deterioration of the posts was evident as a result of exposure to the elements and termite activity. A full height replacement of each of the corner posts is recommended.

3. *Corner Post Diagonal Bracing:* As part of the exterior wall system, a wood post and diagonal bracing is installed at each corner of the structure. Each of the wood posts is intact however deterioration of the posts was evident as a result of exposure to the elements along the North wall. If the post is damaged beyond repair, a full replacement of the corner post and diagonal bracing is recommended. Remaining corner posts and diagonals should be further evaluated during the renovation process.
4. *Kitchen House – Gable End Framing:* It is recommended new wall studs be installed at North and South gable end of the attic area. New wall studs should be minimum 2x4 and sistered to existing wall stud framing.
5. *Exterior Wall Siding:* The exterior wall closure system is provided by horizontal lap siding fastened directly to the wood stud framing. Following completion of repairs to the exterior wall studs, existing exterior wall siding is to be reattached throughout. At locations where siding is damaged or missing, new lap siding of similar dimension and material is to be installed.

## SECOND FLOOR FRAMING SYSTEM - CARRIAGE HOUSE

As noted previously, settlement of the structure’s exterior North and South walls has occurred as a result of the deteriorated foundation. This settlement has resulted in deflection at the second floor joist ends along the North and South wall and is most severe at the western end of the two story structure. The following bulleted items detail recommended repairs to the second floor framing system.

### *Second Floor Framing System:*

1. *Floor Joists:* As noted in the Findings section of this report, settlement of the exterior walls at the western end of the carriage house has resulted in failure of the joists adjacent to the fireplace. Following the installation of the temporary shoring and stabilization of the structure, it is recommended the damaged joists be removed and replaced with new LVL joists. The condition of the remaining floor joists could not be determined without removal of the floor boards or ceiling boards below. Field verification of the condition of the remaining floor joists should be performed during the restoration process to determine if further repairs are required.
2. *Floor/Ceiling Boards:* The floor and ceiling boards are in fair condition. Any damaged floor boards should be repaired or replaced with boards of similar



dimension and material following completion of floor framing repairs as required.

### ROOF FRAMING SYSTEM

The following bulleted items detail recommended repairs to the roof framing system at the carriage house and kitchen house structures.

#### *Roof Framing System- Carriage House:*

1. *Asphalt Shingles:* Roof coverings for the carriage house and shed roof over the porches are asphalt shingles over plank sheathing. The roof shingles are showing signs of wear and deterioration due to age and exposure to the elements. It is recommended the existing shingles be removed and replaced. Repairs to any damaged plank roof sheathing should also be performed at this time. A layer of ice and water shield or building felt should be applied over the plank sheathing prior to application of new shingles.
2. *Roof Rafters:* Based on field observations, two rafter locations are to be addressed for repair. Damaged rafters can be sistered or fully replaced with new rafters of similar dimension and material.
3. *Collar Ties:* At the ridgeline, the rafters abut each other and no ridge board is present. It is recommended new collar ties be installed at each rafter location and placed in the upper 1/3 of the attic elevation. New collar ties are to have a minimum dimension of 2x4.

### ROOF FRAMING SYSTEM- KITCHEN HOUSE AND CONNECTOR

1. *Tin Roof Panels:* The roof closure system for the kitchen house and connector is provided by tin roof panels fastened to 1x3 wood roof purlins spaced at 9 inches on center. Due to age and exposure to the elements, it is recommended the existing tin panels be removed and replaced with a new roof system. Following removal of the tin panel roof system, any damaged roof purlins can be removed and replaced with like material of similar dimension.
2. *Collar Ties:* At the ridgeline, the rafters abut each other and no ridge board is present. It is recommended new collar ties be installed at each rafter location and placed in the upper 1/3 of the attic elevation. New collar ties are to have a minimum dimension of 2x4.



3. *Connector Roof Framing:* At the South side of the connector, the roof and purlin framing are deteriorating. It is recommended connector roof framing at this location be removed and replaced with like material of similar dimension.

### CARRIAGE HOUSE NORTH WALL CHIMNEY STACK

At the North wall of the carriage house adjacent to the center stairway, the exterior chimney stack extending above the eave line has begun to rotate and pull away from the house structure. The chimney stack is constructed of brick masonry and is inoperable. Temporary shoring of the chimney stack structure is recommended to prevent further rotation and provide stabilization until renovation of the property proceeds. Consideration should be given to reconstruction of the chimney stack to correspond to the final building elevation or permanent removal.



## NON-STRUCTURAL RECOMMENDATIONS

The findings from the conditions assessment and structural assessment have confirmed that the Squire Pope Carriage House is in a state of disrepair and requires immediate attention before further historic material is lost. The aforementioned structural issues and non-structural recommendations are regarded as the highest priority for the preservation of the entire structure. Several additional recommendations have been formulated based upon stakeholder feedback and the treatment philosophy to preserve the Squire Pope Carriage House. The following recommendations seek to limit the removal of the historic fabric and reconstruct elements that are essential to telling the story of the Squire Pope Carriage House.

The primary goal of the immediate recommendations is to secure the exterior envelope and address all existing structural deficiencies including elevating the existing historic structures. In addition, the recommendations are designed to remove active deterioration mechanisms such as water intrusion and insect activity. Due to the historic nature of this building, it is recommended that the Secretary of the Interior's Standard for Preservation be followed strictly including the design of the restoration and actual repair methods.

The assessment of the structure has identified specific areas of historic fabric that exist in a precarious condition and in danger of complete structural failure. The careful disassembly and reconstruction of specific elements such as the west second-floor porch infill may be necessary to preserve the entire structure. Every attempt should be made to salvage and reconstruct the historic elements in this area following stabilization and repair of the entire structure.

Short term repairs focus on preserving the historic openings and introducing modern systems into the structure to improve the usability of the historic building. The introduction of new systems such as plumbing, electrical, and heating and cooling systems will allow the building to be used for a variety of purposes and to successfully function as a modern building.

Long term recommendations focus on addressing interior finish conditions and aesthetic concerns. The recommendation within this tier allow for modification and flexibility depending on the final proposed use. Ultimately, the successful completion of all repair recommendations will preserve the building for the next generation.



## RECONSTRUCTION:

### *Immediate*

- Following the elevation and stabilization of the historic structures, the second-floor west bathroom infill and the hyphen should be reconstructed using the salvaged historic material and matching the existing historic details.

## EXTERIOR WINDOWS, DOORS, & SHUTTERS:

### *Short Term*

- It is recommended that all the windows, doors, and shutters be repaired as necessary. Missing wooden elements or detailing should be replaced to match the existing. Piecemeal repair of these openings is not recommended. All broken glass should be replaced in kind.
- Areas of glazing failure should be repaired and all ferrous hardware should be treated with a rust inhibitor and repainted. All exterior doors should be repainted to restore their appearance and to protect from further deterioration.
- New weather stripping should be installed on all windows and doors where needed.

## ROOF:

### *Immediate*

- The existing green asphalt shingle and 5V metal roofs should be replaced with a new corrugated metal roof. The corrugated metal roof is the oldest roof documented in the early 20th century images. The profile of the roofing panels should match the extant historic roofing panels on the south bay window.

## GUTTERS & DOWNSPOUTS:

### *Immediate*

- Gutters and downspouts should be installed on both structures to control drainage around the structure. The gutter system should be compatible with the new roof.
- The gutters should be properly installed to promote positive drainage.



## EXTERIOR SIDING AND TRIM:

### *Immediate*

- Following the completion of the structural repairs, the exterior siding and trim should be reinstalled and repaired.
- Once the building envelope is secured, the exterior siding and trim should be repainted to prevent further deterioration following completion of this phase.

## PORCHES

### *Immediate*

- Following stabilization and reconstruction of the foundation, columns, balustrades, and other decorative elements that are deteriorated should be repaired in kind. Historic decking that is checked and separated should be replaced in kind.

## BUILDING SYSTEMS

### *Short-Term*

- Engage a MEP engineer to design electrical, plumbing and HVAC systems for the restored building.
- Install necessary wiring and equipment in a sensitive manner to allow for environmental control and electricity.
- Install a new plumbing system in a sensitive manner to accommodate the proposed uses while respecting the existing plan and historic materials.
- The cost and design of the new systems can be determined when the final use is selected.

## INTERIOR

### *Long-Term*

- It is recommended that all the interior finishes be restored to reflect the evolution of the structure and to highlight specific periods of occupancy.
- Damage to the interior finishes should be repaired following all immediate and short term repairs.
- Damage to the interior plaster of Room 101 should be repaired following stabilization.



- The interior of the building should be repainted at the end of the construction work.
- The interior fireboxes and mantels should be restored. The function of these historic openings can be determined following the identification of a future use.

### TERMITE & INSECT CONTROL

#### *Immediate - Long Term*

- The entire structure and foundation should be annually inspected by a licensed pest control operator. Areas should be treated as necessary.

### PRIORITIZED RECOMMENDATIONS

The following pages include prioritized recommendations based upon Meadors' assessment of the structure. Approximate costs have been determined for each recommended repair and have been organized according to priority level. The priority levels are arranged as follows:

Priority level 1: Repairs that should be completed immediately. These repairs are necessary to stabilize and repair the foundation and all structural members within the building. Upon the completion of these items, the building should be able to stand independently without the existing stabilization. These repairs are necessary to stabilize and repair second floor and secure the building envelope.

Priority level 2: Repairs that should be completed within the next one to two years. These repairs are important for the long term durability of the building and will extend the service life of the historic building materials. Upon the completion of these recommended items, the structure will be fully weatherized and secured.

Priority level 3: Repairs that should be completed within the next three to five years. These repairs are often aesthetic in nature and/or do not pose an imminent deterioration risk. Completion of these repairs would contribute to the overall preservation of the structure and enable the structure to be fully utilized.

**Note : All budget numbers were established based on the existing layout and condition of the structure. The budget will be revised once the final layout and use has been determined. Costs are subject to change based upon the final proposed use. The standard construction fee of 10% overhead and 10% profit has been added to all items.**



| PRIORITY LEVEL                        | ITEM                            | RECOMMENDATIONS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | COST         |
|---------------------------------------|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| GENERAL CONDITIONS                    | General Conditions (All phases) | <ul style="list-style-type: none"> <li>◦ Mobilization/Demobilization</li> <li>◦ Modify existing work fence</li> <li>◦ Permitting</li> <li>◦ Scaffolding (\$25,000- Phases 1-2)</li> <li>◦ Sanitary Facilities</li> <li>◦ Debris Removal</li> <li>◦ Site Protection</li> <li>◦ Final Cleaning</li> <li>◦ Site Supervision (\$60,000 - All phases)</li> </ul>                                                                                                                                                                                                                                                                                                                 | \$119,790.00 |
| IMMEDIATE<br>(7-8 MONTHS TO COMPLETE) | Soils Testing                   | <ul style="list-style-type: none"> <li>◦ Test the soils beneath the structure to determine the load bearing capacity prior to construction work.</li> <li>◦ Perform a minimum of two soil borings during this testing.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                           | \$5,445.00   |
|                                       | Selective Disassembly           | <ul style="list-style-type: none"> <li>◦ Document and deconstruct west second-floor bathroom addition. Retain first-floor west bay window.</li> <li>◦ Stabilize porch floors adjacent to the areas of disassembly.</li> <li>◦ Document and deconstruct hyphen/connector.</li> <li>◦ Salvage all historic material for future reconstruction &amp; reinstallation.</li> <li>◦ Deconstruct north chimney, clean and store bricks.</li> <li>◦ Remove the 1957 second-floor bedroom porch infill.</li> <li>◦ Preserve previously enclosed porch elements.</li> </ul>                                                                                                            | \$18,549.30  |
|                                       | Elevation and Shoring           | <ul style="list-style-type: none"> <li>◦ Shore Room 101 with two temporary walls extending the length of the room to the stairwell wall.</li> <li>◦ Verify second floor structural connections and refasten to prevent damage to components prior to raising.</li> <li>◦ Stabilize historic chimneys.</li> <li>◦ Excavate around the structure to accommodate the structural supports. Perform additional archaeology where necessary.</li> <li>◦ Elevate structure a minimum of 32 inches above ground or as necessary to install a new foundation.</li> </ul>                                                                                                             | \$84,700.00  |
|                                       | Foundation                      | <ul style="list-style-type: none"> <li>◦ Construct new foundation piers with footings a minimum of 12" below grade. Geotechnical soil testing will determine foundation depth requirements.</li> <li>◦ Construct new foundation.</li> <li>◦ Construct interior foundation piers.</li> <li>◦ Install a new foundation and cmu wall/brick masonry support system for existing historic chimneys. Repoint the historic brick where required.</li> <li>◦ Construct stairs at main entrances to access elevated structure.</li> </ul>                                                                                                                                            | \$62,328.39  |
|                                       | First-Floor Framing             | <ul style="list-style-type: none"> <li>◦ Document, remove, &amp; store existing baseboards and floorboards.</li> <li>◦ Inspect the condition of all 8x8 perimeter sill girders. Inspect 6x6 porch girder.</li> <li>◦ Replace of 6x6 girder at West end of two-story building.</li> <li>◦ Install new 8x8 pressure treated girder sill at perimeter of the structure where required.</li> <li>◦ Fasten girder to new foundation piers with stainless steel epoxy anchors.</li> <li>◦ Repair existing first floor framing. Replace deteriorated joists where necessary.</li> <li>◦ Replace damaged floorboards in-kind. Reinstall baseboards. Repair where needed.</li> </ul> | \$113,931.27 |

**Note:** "Immediate" recommendations are continued on the following page.



| PRIORITY LEVEL                                                          | ITEM                                     | RECOMMENDATIONS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | COST         |
|-------------------------------------------------------------------------|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| IMMEDIATE<br>(7-8 MONTHS TO COMPLETE)<br><br>CONTINUED                  | Exterior Wall Components                 | <ul style="list-style-type: none"> <li>◦ Document, remove, &amp; store existing siding as required to repair existing framing.</li> <li>◦ Sister or repair existing wall studs and corner posts.</li> <li>◦ Refasten wall studs to 8x8 perimeter girder via timber lok screws.</li> <li>◦ Evaluate condition of girder plate. Refasten girder plate with timber lok screws where required.</li> <li>◦ Replace deteriorated diagonal members.</li> <li>◦ Sister new wall studs to the existing members on the north and south gable of the one-story kitchen building.</li> <li>◦ Reinstall historic siding and repair deteriorated siding in kind with new lap siding of similar dimension and material. Restore historic trim.</li> </ul> | \$81,569.24  |
|                                                                         | Second-Floor Framing System              | <ul style="list-style-type: none"> <li>◦ Document, remove, &amp; store existing first-floor ceiling beadboard as required to repair second-floor framing. Remove floors in Room 202 if necessary.</li> <li>◦ Refasten second floor joists to girder plate</li> <li>◦ Replace or sister damaged joists in-kind.</li> <li>◦ Replace damaged floorboards in-kind. Reinstall baseboards. Repair where needed.</li> </ul>                                                                                                                                                                                                                                                                                                                       | \$12,655.84  |
|                                                                         | Reconstruction                           | <ul style="list-style-type: none"> <li>◦ Reconstruct second floor west addition and porch following elevation of the structure.</li> <li>◦ Reconstruct hyphen following elevation of the structure.</li> <li>◦ Match all existing historic details and reuse sound material where possible.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                     | \$54,450.00  |
|                                                                         | Roof Framing System<br>(Both Structures) | <ul style="list-style-type: none"> <li>◦ Sister or fully replace damaged rafters in kind within the west building. 2 rafters require repair or replacement.</li> <li>◦ Install 2x4 collar ties at each rafter location at the upper 1/3 of the attic framing.</li> <li>◦ Replace sheathing or battens where deteriorated.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                       | \$20,207.00  |
|                                                                         | Roof                                     | <ul style="list-style-type: none"> <li>◦ Replace existing roofs with a corrugated roof matching the roof documented in the historic photos.</li> <li>◦ Modify and properly flash roof detail at the intersection of the porch roof and the main hip roof of the second-story building.</li> <li>◦ Restore damaged eave trim.</li> <li>◦ Install lightning protection.</li> </ul>                                                                                                                                                                                                                                                                                                                                                           | \$30,250.00  |
|                                                                         | Gutters & Downspouts                     | <ul style="list-style-type: none"> <li>◦ Install gutters and downspouts throughout the building to manage drainage around the building.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | \$12,100.00  |
|                                                                         | Porch                                    | <ul style="list-style-type: none"> <li>◦ Restore first floor porch framing and decking.</li> <li>◦ Repair wooden elements on all porches.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | \$20,646.37  |
|                                                                         | Exterior Finishes                        | <ul style="list-style-type: none"> <li>◦ Paint exterior envelope.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | \$42,350.00  |
|                                                                         | Pest Control                             | <ul style="list-style-type: none"> <li>◦ Following construction, obtain a termite bond for the new structure and the new work.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | \$1,815.00   |
| Total Estimated Budget for Primary Repairs Including General Conditions |                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | \$680,787.40 |



| PRIORITY LEVEL                                                                    | ITEM              | RECOMMENDATIONS                                                                                                                                                                                                                                                                                                           | COST         |
|-----------------------------------------------------------------------------------|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| SHORT TERM<br>(4 MONTHS TO COMPLETE)                                              | Doors             | <ul style="list-style-type: none"> <li>◦ Repair all historic doors on both floors.</li> <li>◦ Replace door on east elevation.</li> <li>◦ Install weather-stripping on all exterior doors.</li> </ul>                                                                                                                      | \$15,826.80  |
|                                                                                   | Windows           | <ul style="list-style-type: none"> <li>◦ Restore all existing windows. Install swing locks where missing and ensure sash locks are installed on all windows.</li> <li>◦ Install weather-stripping on all windows.</li> <li>◦ Repair existing louvered shutters. Replace in kind where missing or deteriorated.</li> </ul> | \$77,485.38  |
|                                                                                   | Plumbing          | <ul style="list-style-type: none"> <li>◦ Install plumbing in a sensitive manner to accommodate the proposed uses while respecting the existing layout and historic materials.</li> <li>◦ Install new plumbing fixtures (\$5,000 allowance).</li> </ul>                                                                    | \$24,200.00  |
|                                                                                   | Electrical & HVAC | <ul style="list-style-type: none"> <li>◦ Engage a MEP Engineer to establish plan for the structure. Budget does not include design fees.</li> <li>◦ Install the necessary wiring and equipment in a sensitive manner to allow for environmental control and electricity.</li> </ul>                                       | \$78,650.00  |
|                                                                                   | Pest Control      | <ul style="list-style-type: none"> <li>◦ Annually inspect building with a licensed pest control operator and apply treatment as necessary.</li> </ul>                                                                                                                                                                     | \$484.00     |
| Total Estimated Budget for Short Term Repairs Including 65% of General Conditions |                   |                                                                                                                                                                                                                                                                                                                           | \$274,509.68 |

| PRIORITY LEVEL                                                                 | ITEM              | RECOMMENDATIONS                                                                                                                                                                                                                                                                                                                                                          | COST         |
|--------------------------------------------------------------------------------|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| LONG TERM<br>(8 WEEKS)                                                         | Doors (Interior)  | <ul style="list-style-type: none"> <li>◦ Restore and rehang interior doors where require.</li> <li>◦ Install historically appropriate fasteners where missing or deteriorated.</li> </ul>                                                                                                                                                                                | \$20,388.50  |
|                                                                                | Interior Finishes | <ul style="list-style-type: none"> <li>◦ Reinstall and restore existing interior paneling, ceiling, trim, and walls. Replace in kind where missing or damaged.</li> <li>◦ Secure handrail on stairs.</li> <li>◦ Secure attic door in one-story building.</li> <li>◦ Paint interior.</li> <li>◦ Install new lighting fixtures as required (\$7,500 allowance).</li> </ul> | \$67,155.00  |
|                                                                                | Plaster           | <ul style="list-style-type: none"> <li>◦ Repair deteriorated plaster in Room 101.</li> </ul>                                                                                                                                                                                                                                                                             | \$12,100.00  |
|                                                                                | Fireboxes         | <ul style="list-style-type: none"> <li>◦ Restore interior fireboxes.</li> </ul>                                                                                                                                                                                                                                                                                          | \$12,100.00  |
|                                                                                | Pest Control      | <ul style="list-style-type: none"> <li>◦ Annually inspect building with a licensed pest control operator and apply treatment as necessary.</li> </ul>                                                                                                                                                                                                                    | \$484.00     |
| Total Estimated Budget for Long-Term Repairs Including 35% of General Expenses |                   |                                                                                                                                                                                                                                                                                                                                                                          | \$154,154.00 |
| Total Estimated Budget for All Repairs with General Expenses                   |                   |                                                                                                                                                                                                                                                                                                                                                                          | \$989,661.08 |





# MAINTENANCE PLAN

## INTRODUCTION

Maintenance plans are an essential preservation tool that can help retain the integrity of a historic structure by reducing the likelihood of deterioration and protecting the materials and workmanship of the building. Proactive maintenance and preventative care is one of the most effective ways to prevent costly catastrophic repairs and restoration work. Additionally, routine maintenance can reduce the need for the replacement of historic features and result in less physical disruption to the historic material.

The following maintenance plan has been developed for the restored and rehabilitated Squire Pope Carriage House and is based upon the assumption that conducting simple, regularized inspections and repairs as part of a year long inspection plan can prevent future costly expenditures.

All repairs and interventions for each material type should abide by the Secretary of Interior's Standards. Recommendations for inspection have been formulated in accordance with Preservation Brief 47 "Maintaining the Exterior of Small and Medium Size Buildings," and the Preservation Alliance for Greater Philadelphia "Minimum Maintenance Program for Facade Easements."

## ***GENERAL GUIDELINES FOR INSPECTION:***

### **ROOF**

- Inspect corrugated metal.
- Inspect roof flashing.
- Inspect chimney flashing.
- Check for deterioration and metal corrosion.
- Keep roof free of leaves, moss, fungi, and debris.
- Check for cracks, warps, distortions or weak areas, loose or damaged seams, loose attachments, rust, holes, wear, or deteriorated finishes.
- Check for loose, damaged or missing sections. Check substrate underneath for moisture damage, especially at attachment points.



**MASONRY (CHIMNEYS AND PIERS)**

- Check for moist areas, cracks, crumbling, loose brick, mortar loss, or efflorescence.
- Check for moisture intrusion into masonry and repair leaks and voids with an appropriate mortar.
- If significant cracks are present, spalling, or deterioration is found, review condition with Architect, Conservator, or Restoration Contractor.

**WINDOWS (SINGLE HUNG & CASEMENT)**

- Check for moisture damage, warping, splitting, and unsound joints.
- Individually open all windows to ensure they are in operable condition.
- Check window putty for cracks or missing sections.
- Inspect all window woodwork for area of decay or moisture intrusion.
- Inspect for cracked or broken panes of glass.
- Clean window glass as needed.
- Check for loose attachments of hardware.
- Inspect windows and keep free of leaves, moss, fungi, and debris.
- Inspect for paint failure on all woodwork.

**DOORS (INTERIOR & EXTERIOR)**

- Check for moisture damage, warping, splitting, and unsound joints.
- Individually open all doors to ensure they are in operable condition.
- Inspect all woodwork for areas of decay or moisture intrusion.
- Check for loose attachments of hardware.
- Inspect doors and keep free of leaves, moss, fungi, and debris.
- Inspect for paint failure on all woodwork.

**WOODWORK (CORNICE, PORCH, TRIM, SIDING)**

- Check for moisture damage, warping, splitting, and unsound joints.
- Check for worn or bare spots, blistering, peeling, and mildew.
- Inspect all woodwork for areas of decay or moisture intrusion.
- Check for loose attachments of hardware.
- Inspect all surfaces and keep free of leaves, moss, fungi, and debris.
- Inspect for paint failure on all woodwork.

**WOODWORK: INTERIOR (TRIM, PANELING)**

- Check for moisture damage, warping, splitting, and unsound joints.
- If wood is decayed, determine source of moisture, for leaks, and replace decayed wood to match original material. Repair unsound or loosened joints. Replace missing wooden elements to match original in dimensions, species, workmanship, and finish.
- In painted woodwork seal fine cracks with wood filler. Check putty for cracks



| BUILDING INSPECTION FREQUENCY CHART |                                                            |                             |
|-------------------------------------|------------------------------------------------------------|-----------------------------|
| Building Feature                    | Inspection Frequency                                       | Season                      |
| Roof                                | Annually, every 5 years by roofer                          | Spring/Fall                 |
| Chimneys                            | Annually, every 5 years by mason                           | Spring or Fall              |
| Roof Drainage                       | 6 months, after major storms                               | 6 months; Spring and Fall   |
| Exterior Walls                      | Annually                                                   | Spring or Fall              |
| Porches                             | Annually                                                   | Spring or Fall              |
| Windows                             | Annually                                                   | Spring or Fall              |
| Doors                               | Annually                                                   | Spring or Fall              |
| Entryways                           | Annually; heavily used entries may merit greater frequency | Spring or Fall              |
| Building Perimeter                  | Annually                                                   | Spring or Fall              |
| Woodwork & Paint                    | Annually                                                   | Spring or Fall              |
| Foundation and Grade                | Annually                                                   | Spring or during wet season |
| 2nd Floor Interior                  | 4 months, or after a major storm                           | Spring, Summer, Fall        |
| 1st Floor Interior                  | 4 months, or after a major storm                           | Spring, Summer, Fall        |
| Structural                          | Annually                                                   | Spring or Fall              |
| Termites                            | 6 months                                                   | Spring and Fall             |
| HVAC Equipment                      | 6 months                                                   | Spring and Fall             |
| Electrical/Plumbing                 | 6 months                                                   | Spring and Fall             |
| Fire Extinguishers                  | Annually                                                   | Spring or Fall              |

**Figure 195:** Building Inspection Frequency Chart.

## PAINT

- Check for worn or bare spots, blistering, peeling, and mildew.
- Check where moisture is entering wood and stop leaks.
- Split blisters, scrape peeling areas, remove rust and sand rough spots. Deteriorated paint finishes should not be removed using sandblasting, open-flame burning methods, or rotary mechanical tools.
- Prime and paint (two finish coats) using products compatible with the surface material and according to manufacturer's specifications.
- For ferrous metals, scrape and wire brush deteriorated paint and rust from metal before priming and painting.

## INSECTS

- Inspect building for termites and other wood-damaging insects.
- Clear cobwebs in unused areas.
- Inspect for fleas.

## MECHANICAL BUILDING SYSTEMS (HVAC)

- Change and clean filters, vents, and condensation pans to control fungus, mold, and other organisms as often as needed.
- Inspect for adequate ventilation, ensure that area is free of musty smell.
- Check for visible signs of moisture damage from HVAC system including staining, wet patches, bubbling.
- Ensure that a semi-annual inspection is performed by qualified HVAC professional prior to start of cooling season.



### **ELECTRICAL (LIGHTING, WIRING)**

- Check interior lights and bulbs. Check fittings and wall connections.
- Check electrical outlets for damage and secure plate connections.
- Check smoke detectors.
- Check wiring, sockets, and fixtures. Visually inspect for sparks, frayed ends, loose connections, corrosion, and other damage.

### **PLUMBING (BATHROOMS, SINKS)**

- Check water system for leaks including water, waste and vent piping and fittings. Visually inspect for leaks, corrosion, damage, and ease of operation.
- Check kitchen sinks.
- Check spigots on exterior of buildings.

### **FIRE EXTINGUISHERS**

- Check all fire extinguishers and test annually.
- Ensure regular inspection by a licensed professional. Ensure that extinguishers are not blocked by equipment or other objects that could interfere with access in an emergency.
- Ensure extinguisher pressure is at the recommended level.
- Note if the extinguisher nozzle or other parts are damaged in any way, and if the pin and tamper seal are intact.
- Inspect for dents, leaks, rust, chemical deposits, and other signs of abuse or wear.



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# Appendix A: Structural Assessment Report



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**August 16, 2019**

**Betty Prime  
Meadors, Inc.  
2811 Azalea Drive  
Charleston SC 29407**

**SUBJECT:     Structural Assessment  
              Squire Pope Carriage House  
              111 Calhoun Street  
              Bluffton, South Carolina**

Ms. Prime:

The following review details the structural assessment of the Squire Pope Carriage House located at 111 Calhoun Street in Bluffton, South Carolina. The findings described within this report were limited to visual observations of existing structural components obtained during site inspection performed on May 31<sup>st</sup>, 2019. The structural investigation was performed with Meadors Construction per request as part of an overall assessment of the subject property. Selective demolition of interior finishes was performed at the each floor and the exterior wall of the two story structure to review framing conditions and construction.

The Squire Pope Carriage House is a two story wood framed structure with an adjoining single story kitchen house. The property is situated along the May River at the intersection of Calhoun and Water Street in the historic district of Bluffton, South Carolina. Based on historical information available, the original carriage house structure and adjoining kitchen house are estimated to have been built in 1850. The carriage house served as an outbuilding for a larger summer residence on the surrounding property once owned by Squire William Pope. Pope, a prominent landowner and legislator, also owned Coggin's Point Plantation on Hilton Head Island. During the Civil War, several structures in the Town of Bluffton including the larger residence at the property were burned by the Union Army in 1863. The carriage house is one of only a few structures to survive this event. Details and the location of the larger residence destroyed at the property are not known. Following the Civil War in 1865, the Pope family returned to the Bluffton area and utilized the carriage house as their primary residence. During this period, the existing carriage house was modified and adjoined to the kitchen house where it presides at its present location. Exterior modifications to the original structure included the addition of a covered porch at the 1<sup>st</sup> and 2<sup>nd</sup> floors at the South side and West side of the carriage house facing the May River. Subsequent exterior modifications also include enclosure of the second floor porch at the West and Southeast side of the carriage house. Interior modifications included the raising of the second floor ceiling. The timing of these modifications is not known however the enclosure of the Southeast end of the second floor porch is believed to have been performed during the 1950's.

The adjoined kitchen and carriage house structure has an overall length of approximately 70 feet and width of 23 feet. At the South side of the structure facing the May River, an eight foot wide two story covered porch extends along the length of the carriage house and wraps around the West end. The two story carriage house is adjoined to the kitchen house with a 4 foot wide single story connector. The kitchen house sits perpendicular to the carriage house and connector and has a bay window facing the South side. Access to the second floor of the carriage house is provided by a center stairway with an entry door at the first floor porch. Each floor contains interior fireplaces located at the West end and Northeast corner of the structure. The enclosure of the West side of the second floor porch contains a

**Structural Assessment  
Squire Pope Carriage House  
Bluffton, SC  
August 16, 2019  
Page Two**

bathroom at the back side of the fireplace. At the first floor of the West side, a Victorian style bump out extends approximately 5 feet onto the porch beyond the fireplace. Attic access for the carriage house is provided via a hatch in the West side bedroom adjacent to the stairway. The single story kitchen house contains a kitchen and dining area with a stairwell along the North side of the building leading to the attic space. During the site investigation, it was noted during selective demolition that the East side of the original two story structure was lengthened approximately 12 feet where it adjoined to connector and kitchen house. Selective demolition and a review of the attic framing in areas adjacent to the stairway also indicated previous openings in the original floor and roof framing systems. Based on this evidence, it is probable these openings once accommodated the original fireplaces that were most likely removed during the relocation and modification of the original structure following 1865.

The original finish floor elevation of the Squire Pope Carriage House is unknown due to deterioration of the foundation system. Remnants of brick were noted at the corners of the kitchen house and dry stack brick was observed below column locations at the porch column locations. The majority of the exterior first floor girders are bearing directly on or in contact with grade resulting in settlement of the structure. The exterior walls of the adjoined carriage house and kitchen house are covered with horizontal lap wood siding. Roof coverings for the carriage house are asphalt shingles over plank sheathing. The roof system for this structure consists of a gable configuration running parallel to the length of the structure with hip ends constructed at the East and West side. A shed roof also covered with asphalt shingles extends over the second floor porch on the South side of the carriage house. The single story kitchen house and connector is covered with tin panels placed over wood purlins. Floor and roof framing for both structures are further discussed in the Findings section of this report.

**FINDINGS – BUILDING COMPONENTS:**

**Foundation System – Carriage House/Kitchen House:**

The following bulleted items detail typical foundation components observed during the site investigation. Due to exposure to the elements and age of the structure, the existing foundation system has deteriorated along the base of the exterior walls at both structures and was not able to be determined. Only dry stack brick was evident below column locations at the carriage house porch and remnants of brick were observed at the corners of the kitchen house. Based on the construction of the carriage house and a review of the first floor framing, foundation support was most likely only provided along the perimeter of the structure at the North and South walls and below porch column locations. For the kitchen house, based on the depth and span of first floor framing, interior foundation support is more likely but could not be verified. The deterioration of the foundation elements below the exterior walls of the carriage house and kitchen house has resulted in settlement of these structures and placed the perimeter sill girders and portions of the floor framing in direct contact with grade. Due to the deterioration of the foundation, the original finish floor elevation of the Squire Pope Carriage House could not be determined during the site investigation. As part of the structural assessment, proposed repairs to the foundation system are provided in the Recommendations section of this report.

**First Floor Framing – Carriage House:**

The following bulleted items detail typical first floor framing components observed at the carriage house during the site investigation. Due to exposure to the elements and age of the structure, the existing foundation system has deteriorated along the base of the exterior walls with only dry stack bricks were observed below porch column locations. The loss of foundation support at the carriage house exterior



**Structural Assessment  
Squire Pope Carriage House  
Bluffton, SC  
August 16, 2019  
Page Three**

**First Floor Framing – Carriage House: (Continued)**

walls has placed the girder sills and portions of the floor framing in direct contact with grade. At the North wall parallel to Water Street, the majority of the perimeter sill band extends below grade. Deterioration of the perimeter sill is significant with portions of sill toward the West end no longer supporting the first floor system and the exterior wall studs. Although not exposed at the South side, the loss of foundation below the exterior wall at the porch has also placed girder and floor framing in contact with grade. Deterioration of the perimeter girder sill toward the Southwest side of the structure is likely due to the settlement of the second floor systems observed. Selective demolition of the first floor framing was performed at the East and West side of the stairway. Floorboards were removed to expose and review the condition of first floor joists at each of these locations. The floor joists at these locations were in fair condition but in contact with grade. At the East side demolition location, an existing joist was replaced with a 2x8 joist. As discussed previously, an 8x8 girder was observed approximately 12 feet from the East end wall. The presence of the 8x8 girder at this location in addition to corner diagonal bracing at the North end wall indicates the original structure was most likely lengthened when joined with the kitchen house. In addition, a review of framing at the selective demolition performed at the West side of the stairwell corresponds to a framed opening in the attic area. Floor framing at this location consists of a 4x8 floor girder with supporting 3x8 headers at a previous opening. Based on the framing and flooring detail at this location it is possible this opening was provided for a fireplace that was removed during relocation of the original structure to its present site. As part of the structural assessment, proposed repairs to the first floor framing system are provided in the Recommendations section of this report.

***First Floor Framing System – Carriage House:***

1. The first floor of the structure consists of 3x8 floor joists spanning approximately 13 feet and bearing at the North and South Walls. Field measurements indicate the floor joist spacing to be approximately 28 to 32 inches on center. No evidence of interior foundation support was observed and is unlikely with the shortness of the joist span.
2. Floor joist ends are supported by an 8x8 perimeter girder sill along the perimeter walls. The joist to girder connection was achieved by notching the joist end to allow for bearing over the top face of the girder sill. Notch depth was approximately 1-1/2 to 2 inches. The method or presence of nail fastener attachment from girder to joist was also able to be determined due to the deterioration of these components and presence of interior and exterior finishes.
3. The floor joists at the two selective demolition locations noted were in fair condition but in contact with grade. Access to the remaining floor joists was limited due to the overall settlement of the structure however joist ends were examined at openings in the siding along the base of the North wall. Due to the deterioration of the girder sill at this location, rotation and deterioration of joist ends was evident. Further examination of the floor joists will be required during restoration of the structure to determine the extent of joist repair that might be required.
4. The interior floor finishes consist of wood plank flooring spanning over floor framing throughout. Hardwood flooring is installed over wood planks at the room to the West of the stairway. Wood plank flooring is in fair condition throughout for a structure of this age.
5. An eight foot wide screened porch extends along the South and West side of the carriage house. Porch girder framing consists of a 6x6 girder sill spanning along the porch perimeter with interior girders extending perpendicular to the exterior main house wall at column locations. The 6x6 perimeter sill girder rests on dry stack bricks at column locations spaced at 8 feet center along the South side of the structure. At the West side of the porch, the 6x6 girder bears directly at grade and the Northwest 6x6 girder sill has deteriorated completely. The interior porch girder to main



**Structural Assessment  
Squire Pope Carriage House  
Bluffton, SC  
August 16, 2019  
Page Four**

house framing connection could not be determined. Porch floor framing consists of 2x6 joists span over interior girders and are spaced at approximately 30 inches on center. Porch decking spans perpendicular to the framing and is showing signs of wear and deterioration due to age and exposure to the elements. Deterioration of decking and framing was evident at the connector adjacent to the kitchen house on the South side. Deterioration of decking and framing was also noted at the Northwest corner where deterioration of the 6x6 porch girder sill has occurred. Further examination of the porch framing and interior girders can be performed during the restoration of the structure and is discussed in the Recommendations section of this report.

**First Floor Framing – Kitchen House/Connector:**

The following bulleted items detail typical first floor framing components observed at the kitchen house during the site investigation. Due to exposure to the elements and age of the structure, the existing foundation system has deteriorated along the base of the exterior walls with only remnants of brick were observed at the building corners adjacent to the connector. For the one story kitchen house, based on the depth and span of first floor framing, interior foundation support is likely but could not be verified during the site investigation. Similar to the carriage house exterior walls, foundation deterioration has placed the girder sills and portions of the floor framing in direct contact with grade. At the North wall parallel to Water Street, the majority of the perimeter sill band is in contact with grade. As part of the structural assessment, proposed repairs to the first floor framing system are provided in the Recommendations section of this report.

***First Floor Framing System – Kitchen House/Connector:***

1. The first floor of the kitchen house consists of 3x6 floor joists spanning in the North to South direction across the length of the structure. Field measurements indicate the floor joist spacing to be approximately 28 to 32 inches on center. Based on the depth and span of first floor framing, interior foundation support is likely. Deflection of the floor system was prevalent at the interior of the kitchen and adjoining room. Further examination of the floor joists will be required during restoration of the structure to determine the extent of joist repair that might be required.
2. Floor joist ends are supported by an 8x8 perimeter girder sill along the perimeter walls. The joist to girder connection was achieved by notching the joist end to allow for bearing over the top face of the girder sill. Notch depth was approximately 1-1/2 to 2 inches. The method or presence of nail fastener attachment from girder to joist was also not able to be determined due to the deterioration of these components and presence of interior and exterior finishes.
3. Due to proximity to grade and exposure to the elements, deterioration of the floor joists at the connector was is significant at the North and South side of the structure.
4. The interior floor finishes consist of wood plank flooring spanning over floor framing throughout. Wood plank flooring is in fair condition throughout for a structure of this age.

**Exterior Wall Components:**

The following bulleted items detail typical exterior wall framing components observed during the site investigation. Due to the collapse of the foundation system, settlement of the exterior walls is evident throughout the structure. In addition, portions of the wood studs at the first floor are exposed to the elements due to the absence of siding and deterioration of the structure. Selective demolition to verify rafter and ceiling joist bearing details was performed at the North side second floor ceiling of the carriage house adjacent to the stairway. Details of these findings are discussed below. As part of the structural



**Structural Assessment**  
**Squire Pope Carriage House**  
**Bluffton, SC**  
**August 16, 2019**  
**Page Five**

assessment, proposed repairs to the exterior wall components are provided in the Recommendations section of this report.

*Exterior Wall Components – Carriage House:*

1. Typical exterior wall construction consists of 3x4 wood studs spaced at approximately 28 to 32 inches on center. The wood studs extend the full height of the structure and bear directly on the 8x8 perimeter girder sill. The attachment of the wood studs to the girder sill was not able to be determined with the deterioration of the sill and nail fasteners.
2. Based on selective demolition, the top plate of the exterior wall is located approximately 91 inches above the second finish floor elevation. The ceiling at the carriage house has been modified and raised approximately 14 inches as part of previous modifications to the original structure. The original ceiling joists form the eave detail at the wall top plate and have been cut at the inside face of the exterior wall to allow for an increased ceiling height. A rafter bearing plate extends over the existing ceiling joists at the North and South walls.
3. Although not observed due to the presence of interior finishes at the first floor North and South walls of the carriage house, support for the second floor framing in this type construction is typically provided a ledger plate notched into studs and nailed to the inside face of the wall directly below the floor joists. The condition of the ledger plate can be reviewed further during renovation of the structure.
4. As part of the exterior wall system, a wood post with diagonal bracing is installed at each corner of the structure. The diagonal bracing extends from the lower third of the post to the girder sills in each corner of the North and South walls. Each of the wood posts is intact however deterioration of the post based was evident as a result of exposure to the elements at the North wall. The base of the diagonal bracing is also damaged due to the similar exposure.
5. The exterior wall closure system is provided by horizontal siding fastened directly to the wood stud framing. At the North wall, the majority of siding is intact however exterior siding at the base of the wall is damaged to settlement and loss of foundation at these areas. Siding is also showing signs of wear throughout due to age and exposure to the elements.
6. Interior finishes at the exterior walls consists of plaster at the first floor and bead board siding at the second floor. Cracks in the plaster were noted at the exterior and interior walls of the first floor as a result of the settlement of the structure. Overall, interior finishes at the second floor are in fair condition. Separation of bead board siding is evident at areas where settlement of the second floor is prevalent.

*Exterior Wall Components – Kitchen House/Connector:*

1. Typical exterior wall construction consists of 3x4 wood studs spaced at approximately 28 to 32 inches on center. The wood studs extend to the top plate supporting the ceiling structure and bear directly on the 8x8 perimeter girder sill. The attachment of the wood studs to the girder sill was not able to be determined with the deterioration of the sill and nail fasteners.
  2. In the kitchen area, ceiling joists form the eave detail at the wall top plate and a rafter bearing plate extends over the existing ceiling joists at the East and West walls. The ceiling at the South side dining area has been modified and raised as part of previous modifications to the original structure. The original ceiling joists form the eave detail at the wall top plate and have been cut at the inside face of the exterior wall to allow for an increased ceiling height. A rafter bearing plate extends over the existing ceiling joists at the East and West walls.
3. As part of the exterior wall system, a wood post with diagonal bracing is installed at each corner of the kitchen house structure. The diagonal bracing extends from the lower third of the post to



**Structural Assessment  
Squire Pope Carriage House  
Bluffton, SC  
August 16, 2019  
Page Six**

the girder sills in each building corner. Each of the wood posts is intact however deterioration of the post based was evident as a result of exposure to the elements at the West and East wall. The base of the diagonal bracing is also damaged due to the similar exposure.

4. The exterior wall closure system is provided by horizontal siding fastened directly to the wood stud framing. The majority of siding is intact however exterior siding at the base of the wall is damaged to settlement and loss of foundation throughout. Siding is also showing signs of wear throughout due to age and exposure to the elements.
5. Interior finishes at the exterior walls consists of bead board siding. Overall, interior finishes at the second floor are in fair condition. Separation of bead board siding is evident at areas where settlement is prevalent.
6. Connector exterior wall framing and siding is in poor condition at the North and South walls.

**Second Floor Framing System – Carriage House:**

The following bulleted items detail typical second floor framing components observed at the two story carriage house during the site investigation. As noted previously, settlement of the structure's exterior North and South walls has occurred as a result of the deteriorated foundation. This settlement has resulted in deflection at the second floor joist ends along the North and South wall and is most severe at the western end of the two story structure. Selective demolition included a small boring through the first floor ceiling adjacent to the West end fireplace to review framing conditions with a borescope at this location. A severe crack was noted in two floor joists at this area where extensive stress and deflection has resulted in joist failure. Deterioration of the floor framing was also visible from the 1<sup>st</sup> floor porch directly below the West end second floor bathroom. Selective demolition was also performed at the second floor level adjacent to the South wall on the East side of the stairway. Floor joists at this location were in relatively good condition with minor deflection due to settlement of the exterior walls. As part of the structural assessment, proposed repairs to the second floor framing are provided in the Recommendations section of this report.

***Second Floor Framing System:***

1. The second floor framing system of the structure consists of 3x8 floor joists spaced at 28 to 32 inches on center that span from the North to South Walls. As previously noted, deflection of the second floor framing corresponds to the settlement of the structure along the North and South walls.
2. Based on the severity of deflection and failure of joists noted at the West end adjacent to the fireplace and deterioration noted below the West end bathroom over the porch, it is recommended access to these locations be prohibited until temporary shoring of the second floor framing can be put in place. Floor joists at the West end and remaining areas can be further evaluated during the renovation process and following stabilization.
3. At the North and South walls, support for the floor joists is provided by a ledger plate that has been set in to a notch at the inside face of the wall studs. The second floor joist ends are notched and bear directly on top of the ledger plate. The top of the second floor joists are covered by wood plank floor spanning perpendicular to the framing. The first floor ceiling consists of bead board finishes fastened to the bottom of the floor joists. The floor and ceiling boards are in fair condition.



**Structural Assessment**  
**Squire Pope Carriage House**  
**Bluffton, SC**  
**August 16, 2019**  
**Page Seven**

*Second Floor Porch Framing System:*

1. Second floor porch framing consists of a 6x6 dropped girder spanning along the porch perimeter over 1<sup>st</sup> floor wood columns spaced at approximately 8 feet on center. At each column, a 4x6 interior girder extends to the main house and supports 2x6 joists spaced at 30 inches on center. Overall, exposed porch framing appears to be in fair condition for a structure of this age. At the West end of the structure, the porch has been enclosed at the backside of the chimney and serves as the second floor bathroom. Deflection and deterioration of the porch floor framing at the bathroom area was noted. Damage observed at this location might be attributed to a previous plumbing leak. As part of a renovation performed in the 1950's, a 16 foot portion of the Southeast end of the second floor porch was enclosed to provide additional space. Based on field observations, the existing porch floor framing remained in place.
2. Based on the severity of deflection and failure of joists noted at the West end adjacent to the fireplace and deterioration noted below the West end bathroom over the porch, it is recommended access to these locations be prohibited until temporary shoring of the second floor framing can be put in place.
3. Porch decking spans perpendicular to the framing and is showing signs of wear and deterioration due to age and exposure to the elements.

**Roof Framing System - Carriage House:**

The following bulleted items detail typical roof framing components observed during the site investigation. As part of the structural assessment, proposed repairs to the roof framing components are provided in the Recommendations section of this report.

*Roof Framing System – Carriage House:*

1. Roof coverings for the carriage house are asphalt shingles over plank sheathing. The roof system for this structure consists of a gable configuration running parallel to the length of the structure with hip ends constructed at the East and West side. A shed roof also covered with asphalt shingles extends over the second floor porch on the South side of the carriage house. The roof shingles are showing signs of wear and deterioration due to age and exposure to the elements.
2. The carriage house roof system is constructed of 3x4 rafters spaced at 28 inches on center with the ridge running parallel to the North and South walls. At the East and West end, the hip roof is formed by 3x4 hip rafters extending to the ridge end. Hip rafter connections to the ridge beam are nailed in place. At the ridgeline, the rafters abut each other and no ridge board is present. The original 3x4 rafters overlap and are pegged at the ridge connection. Three replacement rafters measured at 2x5 were noted over the East side bedroom. As discussed previously, the top plate of the exterior wall is located approximately 91 inches above the second finish floor elevation. The ceiling at the carriage house has been modified and raised approximately 14 inches throughout. The remaining ceiling joists form the eave detail at the wall top plate and have been cut at the inside face of the exterior wall to allow for an increased ceiling height. A rafter bearing plate extends over these joists at the North and South walls. Overall, the roof rafters are in fair condition. During the site investigation, two rafters have been sistered at the base due to cracking evident. Framing adjacent to the attic hatch over the stairway also indicates framing for a previous opening possibly corresponding to the original fireplace discussed within this report. The horizontal plank roof sheathing spanning perpendicular to the rafters is in fair condition and has been replaced at various locations.



**Structural Assessment  
Squire Pope Carriage House  
Bluffton, SC  
August 16, 2019  
Page Eight**

4. Access to the attic area is provided by a ceiling hatch in the room west of the stairway. As discussed previously, the second floor ceiling has been raised as part of modifications to the original structure. Based on field observations, it appears the original ceiling joists were cut and raised to their current elevation and fastened to the existing rafters. Ceiling joists appear to be in good condition where visible. Plywood sheathing has been installed throughout most of the attic area.
5. The roof eave extends just beyond the exterior wall siding and consists of a fascia board fastened to the end of the roof rafters. The fascia board is mostly intact but showing signs of wear due to age and exposure to the elements.
6. The shed roof extending over the second floor porch is constructed of 2x4 rafters spaced at 32 inches on center. Porch rafters bear on a 4x6 dropped girder spanning over perimeter wood columns spaced at approximately 8 feet on center. At the exterior wall, porch rafters extend into the attic space and supported by a 2x4 plate spanning over carriage house rafters. The porch shed roof is covered with asphalt shingles over horizontal plank sheathing. Overall the porch roof framing appears to be in good condition.

**Roof Framing System – Kitchen House and Connector:**

The following bulleted items detail typical roof framing components observed at the kitchen house during the site investigation. As part of the structural assessment, proposed repairs to the roof framing components are provided in the Recommendations section of this report.

*Roof Framing System - Kitchen House and Connector:*

1. The kitchen house roof system is a gable configuration constructed of 3x4 rafters spaced at 32 to 34 inches on center with the ridge running parallel to the East and West walls. At the ridgeline, the rafters abut each other and no ridge board is present. In the kitchen area, ceiling joists form the eave detail at the wall top plate and a rafter bearing plate extends over the existing ceiling joists at the East and West walls. Similar to the second floor of the carriage house, the ceiling at the South side dining area has been modified and raised as part of previous modifications to the original structure. The original 4x4 ceiling joists form the eave detail at the wall top plate and have been cut at the inside face of the exterior wall to allow for an increased ceiling height. A rafter bearing plate extends over the existing ceiling joists at the East and West walls. Overall, the roof rafters are in fair condition. Shims were noted at the purlin to rafter connection at the center of the roof system. Rotation at the top of the rafters was also noted at the ridgeline where rafter ends only abut each other.
2. The roof closure system is provided by tin roof panels fastened to 1x3 wood roof purlins spaced at 9 inches on center. The roof purlins run parallel to the length of the structure and are supported by the rafter framing. Overall, the roof purlins are in fair condition. Due to age and exposure to the elements, the tin panels have signs of corrosion, but the majority of the panels are intact.
3. The roof eave extends just beyond the exterior wall siding and consists of a fascia board fastened to the end of the roof rafters. The fascia board is mostly intact but showing signs of wear due to age and exposure to the elements.
4. Access to the attic area is provided by a small stairway constructed at the Northwest corner of the kitchen house. As discussed previously, the South side ceiling has been raised as part of modifications to the original structure. Ceiling joists appear to be in good condition where visible. Plywood sheathing has been installed throughout most of the attic area.



**Structural Assessment  
Squire Pope Carriage House  
Bluffton, SC  
August 16, 2019  
Page Nine**

5. The connector roof framing is similar to that observed at the kitchen house with a shallow roof pitch. The connector is covered by tin panels over 1x3 roof purlins. At the South side of the connector, water damage to rafter framing and purlins was evident over the porch area.
6. Gable end wall framing at the North and South end of the kitchen house is in fair condition but minimal.

**Carriage House North Wall Chimney Stack:**

At the North wall of the carriage house adjacent to the center stairway, the exterior chimney stack extending above the eave line has begun to rotate and pull away from the house structure. The chimney stack is constructed of brick masonry and is inoperable. Temporary shoring of the chimney stack structure is recommended to prevent further rotation and provide stabilization until renovation of the property proceeds.

**RECOMMENDATIONS –BUILDING COMPONENTS:**

Based on the as-built conditions described in the Findings section above, the following recommendations are provided to address the restoration of the structural components at the carriage house and adjoining kitchen house as part of the structural assessment of this property.

**Raising the Structure:**

Based on the observed conditions at the structure and to implement the recommendations regarding the foundation and first floor framing provided below, the existing structure will need to be raised temporarily to a level that will allow for the scope of work to be performed. Elevating the structure should be performed by a specialized contractor and can be accomplished by the use of the steel I-beams and wood cribbing. Excavation at the perimeter of the structure might also be required as part of the raising process due to the deterioration of the foundation and the current elevation of the first floor. All efforts to minimize damage to the structure as it is raised should be provided. The final elevation of the structure has yet to be determined.

**Carriage House West End – Temporary Shoring:**

Based on the severity of deflection and failure of joists noted at the West end adjacent to the fireplace and deterioration noted below the West end bathroom over the porch, it is recommended access to these locations be prohibited until temporary shoring of the second floor framing can be put in place. Temporary shoring should consist of two temporary walls extending the length of the West end room to the stairway wall.

**Foundation System – Carriage House/Kitchen House:**

Due to exposure to the elements and age of the structure, the existing foundation system has deteriorated along the base of the exterior walls. Collapse of the foundation has resulted in settlement of the structure and placed the floor framing system in direct contact with grade. The following bulleted items detail recommended repairs to the foundation system.



*Exterior Foundation Piers:* Due to the deterioration of the existing foundation system at both adjoining structures, the installation of a new foundation system at the exterior walls throughout is

**Structural Assessment**  
**Squire Pope Carriage House**  
**Bluffton, SC**  
**August 16, 2019**  
**Page Ten**

recommended following the raising of the structure. The foundation piers can be constructed of brick masonry and spaced approximately 6 feet on center throughout the perimeter of the structure. New piers should also align with porch columns at the South and West side of the carriage house. Piers are to be installed on a reinforced concrete foundation. Dimensions of the piers and spacing have yet to be determined. New footings should be place a minimum of 12" below grade.

2. *Interior Foundation Piers:* At the kitchen house, new interior piers are recommended and should be located below interior girder framing as required. The location of piers can be verified following the raising of the structure. New footings should be place a minimum of 12" below grade.
3. *Fireplace Brick Masonry:* Following the raising of the structure, a new foundation and cmu wall or brick masonry support system should be installed below the two existing fireplaces. Dimension and height of the new support system will need to be determined after further evaluation. It is recommended the brick masonry be further evaluated during the renovation process. Damaged fireplace and chimney stack brick should be repaired or replaced with brick of similar material and dimension. Mortar joints should also be repointed where required.

**First Floor Framing System – Carriage House/Kitchen House:**

Due to the contact with grade, termite activity and exposure to the elements, portions of the 8x8 perimeter sill band and first floor framing will require repair or replacement. The following bulleted items detail recommended repairs to the first floor framing system.

*First Floor Framing System:*

1. *Perimeter Girder Sill:* After the structure is raised, the condition of all 8x8 perimeter sill girders should be further evaluated to determine if any portions can be salvaged for the renovation process. Based on the conditions observed in the field and length of contact with grade, it is likely the majority of the perimeter sill girder at the North wall of the carriage house and kitchen house will require replacement. Replacement of the 6x6 girder at West end of the carriage house is also recommended. Evaluation of the remaining 6x6 porch girder framing will be required after the structure is raised. Following the construction of new foundation piers, a new pressure treated 8x8 girder sill is to be installed below the perimeter of the structure where required. The girder sill is to be fastened to each foundation pier with (2) ½" diameter stainless steel epoxy anchors with a minimum embedment of 8 inches into the brick or cmu masonry pier.
2. *First Floor and Porch Joists:* Following the raising of the structure, the existing floor joists and porch framing are to be further evaluated to determine their present condition. Floor joists that are damaged beyond repair are to be replaced with new pressure treated joists of similar dimension. The floor joist ends are to be notched in similar fashion to the existing framing and fastened to the 8x8 perimeter girder sill along the North and South walls. The joist to girder connection is to be notched at the joist end and will bear over the top face of the girder sill. Joist ends can be fastened to the girder sill with stainless steel nails or timberlok screws.
3. *Floor Boards:* The floor joists are covered with wood planks spanning parallel to the length of the structure. To replace the existing first floor joists, the existing floor boards will need to be removed and stored. Salvaged floor boards are to be reused following installation of the new first floor framing as required. Damaged floor boards are to be replaced with matching material where required.



**Structural Assessment  
Squire Pope Carriage House  
Bluffton, SC  
August 16, 2019  
Page Eleven**

**Exterior Wall Components – Carriage House/Kitchen House:**

Due to the collapse of the foundation system, settlement of the exterior walls is evident throughout the structure. In addition, portions of the wood studs are exposed to the elements due to the absence of siding and deterioration at the base of the structure. The following bulleted items detail recommended repairs to the exterior wall components.

*Exterior Wall Components:*

1. *Exterior Wall Studs:* Due to the deterioration of the girder sill and absence of base siding at the North side of the structure, several of the wall studs have been exposed and are in contact with grade. Following the completion of repairs to the first floor framing system, it is recommended existing wall studs be fastened to the 8x8 perimeter girder sill. Attachment to the girder sill can be provided by timber lok screws or a similar fastener. Missing wall studs are to be replaced with a full height stud of similar dimension and material. At locations where damaged walls studs are to remain, existing studs are to be sistered from the girder sill to the top plate where required. Interior finishes can be repaired following installation of new studs as needed.
2. *Ledger plate:* During repairs to the carriage house North side wall systems, it is recommended the ledger plate supporting the second floor framing be further evaluated. If the ledger plate has shifted and is not adequately attached due to the settlement of the exterior walls, it is recommended the plate be refastened with timber lok screws at locations where required. At new and sistered stud locations, the inside face is to be notched to set in the ledger plate. At locations where the ledger plate is damaged beyond repair, a new ledger plate of similar dimension and material is to be installed.
3. *Corner Posts and Diagonal Bracing:* As part of the exterior wall system, a wood post and diagonal bracing is installed at each corner of the structure. Each of the wood posts is intact however deterioration of the posts was evident as a result of exposure to the elements along the North wall. If the post is damaged beyond repair, a full replacement of the corner post and diagonal bracing is recommended. Remaining corner posts and diagonals should be further evaluated during the renovation process.
4. *Kitchen House – Gable End Framing:* It is recommended new wall studs be installed at North and South gable end of the attic area. New wall studs should be minimum 2x4 and sistered to existing wall stud framing.
5. *Exterior Wall Siding:* The exterior wall closure system is provided by horizontal lap siding fastened directly to the wood stud framing. Following completion of repairs to the exterior wall studs, existing exterior wall siding is to be reattached throughout. At locations where siding is damaged or missing, new lap siding of similar dimension and material is to be installed.

**Second Floor Framing System – Carriage House:**

As noted previously, settlement of the structure's exterior North and South walls has occurred as a result of the deteriorated foundation. This settlement has resulted in deflection at the second floor joist ends along the North and South wall and is most severe at the western end of the two story structure. The following bulleted items detail recommended repairs to the second floor framing system.



**Structural Assessment**  
**Squire Pope Carriage House**  
**Bluffton, SC**  
**August 16, 2019**  
**Page Twelve**

*Second Floor Framing System:*

1. *Floor Joists:* As noted in the Findings section of this report, settlement of the exterior walls at the western end of the carriage house has resulted in failure of the joists adjacent to the fireplace. Following the installation of the temporary shoring and stabilization of the structure, it is recommended the damaged joists be removed and replaced with new LVL joists. The condition of the remaining floor joists could not be determined without removal of the floor boards or ceiling boards below. Field verification of the condition of the remaining floor joists should be performed during the restoration process to determine if further repairs are required.
2. *Floor/Ceiling Boards:* The floor and ceiling boards are in fair condition. Any damaged floor boards should be repaired or replaced with boards of similar dimension and material following completion of floor framing repairs as required.

**Roof Framing System:**

The following bulleted items detail recommended repairs to the roof framing system at the carriage house and kitchen house structures.

*Roof Framing System – Carriage House:*

1. *Asphalt Shingles:* Roof coverings for the carriage house and shed roof over the porches are asphalt shingles over plank sheathing. The roof shingles are showing signs of wear and deterioration due to age and exposure to the elements. It is recommended the existing shingles be removed and replaced. Repairs to any damaged plank roof sheathing should also be performed at this time. A layer of ice and water shield or building felt should be applied over the plank sheathing prior to application of new shingles.
2. *Roof Rafters:* Based on field observations, two rafter locations are to be addressed for repair. Damaged rafters can be sistered or fully replaced with new rafters of similar dimension and material.
3. *Collar Ties:* At the ridgeline, the rafters abut each other and no ridge board is present. It is recommended new collar ties be installed at each rafter location and placed in the upper 1/3 of the attic elevation. New collar ties are to have a minimum dimension of 2x4.

*Roof Framing System – Kitchen House and Connector:*

1. *Tin Roof Panels:* The roof closure system for the kitchen house and connector is provided by tin roof panels fastened to 1x3 wood roof purlins spaced at 9 inches on center. Due to age and exposure to the elements, it is recommended the existing tin panels be removed and replaced with a new 5V metal roof system. Following removal of the tin panel roof system, any damaged roof purlins can be removed and replaced with like material of similar dimension.
2. *Collar Ties:* At the ridgeline, the rafters abut each other and no ridge board is present. It is recommended new collar ties be installed at each rafter location and placed in the upper 1/3 of the attic elevation. New collar ties are to have a minimum dimension of 2x4.
3. *Connector Roof Framing:* At the South side of the connector, the roof and purlin framing are deteriorating. It is recommended connector roof framing at this location be removed and replaced with like material of similar dimension.



**Structural Assessment  
Squire Pope Carriage House  
Bluffton, SC  
August 16, 2019  
Page Thirteen**

**Carriage House North Wall Chimney Stack:**

At the North wall of the carriage house adjacent to the center stairway, the exterior chimney stack extending above the eave line has begun to rotate and pull away from the house structure. The chimney stack is constructed of brick masonry and is inoperable. Temporary shoring of the chimney stack structure is recommended to prevent further rotation and provide stabilization until renovation of the property proceeds. Consideration should be given to reconstruction of the chimney stack to correspond to the final building elevation or permanent removal.

I appreciate the opportunity to provide you with this letter and if I can answer any questions or provide any additional services, please contact my office.

Respectfully yours,

A handwritten signature in black ink, appearing to read "M. H. Hance".

Michael H. Hance, PE  
Michael H. Hance PE LLC



# Appendix B: Stakeholder Survey & Responses (unedited)



## Squire Pope Carriage House Stakeholder Survey

The goal of this survey is to create, facilitate, and maintain open channels of communication to allow for full consideration of stakeholder views, feedback, and information in the development of the treatment philosophy for the Squire Pope Carriage House. The treatment philosophy is a concise statement of the significance of the historic resource and the recommended overriding approach that will guide the preservation of the structure.

\* Required

## Squire Pope Carriage House Timeline

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Below is a preliminary timeline based upon the existing physical evidence and surviving research. This timeline may assist you in completing this survey. Please feel free to add any additional information in your response to the final question.

### 1850

The existing Squire Pope buildings are constructed as separate outbuildings. "Squire" William Pope was a wealthy landowner from Hilton Head Island. Physical evidence indicates that the interiors were whitewashed. The larger two-story structure may have had an internal chimney.

### 1863

The Squire Pope main house is destroyed during the Burning of Bluffton. Several outbuildings survive the fire.

### 1865

Mrs. Pope and her daughter return to the property and join the buildings together to serve as their home. The structures are likely moved to this location from another site on the property and enlarged. The west chimney may have been constructed around this time.

### 1870s-1880s

The structures are heavily altered and modernized. The porches and bay window with Victorian detailing are added during this era. The interior layout is modified and beadboard panelling is installed. A diagonal chimney is added to the northeast corner of the two-story building.

### 1900s

The interior of the building is modified and slanted beadboard is installed at the ceilings in the bedrooms. An additional chimney is added to the north facade.

### 1950s

The property is owned by the Wright Family. A portion of the second floor porch is enclosed and the jalousie windows are installed.

### 2017

The Town of Bluffton purchases the property in conjunction with Beaufort County's Rural and Critical Land Preservation Program from the Wright Family.

## Stakeholder Survey Questions

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Please answer the questions below.

**1. What is your relationship to the Squire Pope Carriage House (Check all that apply) \***

*Check all that apply.*

- ☐ I am a member of the Beaufort County Council.
- ☐ I am a Town of Bluffton Representative (Mayor, Council Member).
- ☐ I am representative of the Beaufort County Rural and Critical Land Preservation Program.
- ☐ I am a Town of Bluffton Employee.
- ☐ I am a Beaufort County Employee.
- ☐ I am a Town of Bluffton Resident.
- ☐ I am a Beaufort County Resident.
- ☐ I am a descendant of the Wright Family.
- ☐ I am a descendant of the Pope Family.
- ☐ I own or rent a home in the historic district.
- ☐ I am an interested party.
- ☐ Other: \_\_\_\_\_

**2. What is the most important character defining feature of the Squire Pope Carriage House? \***

*Mark only one oval.*

- ☐ The two-story porches
- ☐ The Victorian bay window
- ☐ The interior finishes (mantels, stair, wide plank flooring)
- ☐ The tree canopy and the surrounding landscape
- ☐ The connection between the two structures
- ☐ The roofline and chimneys
- ☐ Other: \_\_\_\_\_

**3. The Squire Pope structure has evolved over time. What is the greatest period of significance for the house? \***

*Mark only one oval.*

- ☐ Antebellum Era (pre 1861)
- ☐ The Civil War
- ☐ Postbellum Era (1865-1880)
- ☐ Victorian Era (1880s to early 1900s)
- ☐ 20th Century (1900s)
- ☐ All periods have equal significance



4. **What are the biggest challenges facing the preservation of the Squire Pope Carriage House (check all that apply) \***

*Check all that apply.*

- ☐ The loss of historic fabric
- ☐ The current state of deterioration
- ☐ The lack of historic information relating to the history and evolution of the house.
- ☐ Determining a future use
- ☐ The lack of functioning systems (electric, plumbing, HVAC) within the building
- ☐ Other: \_\_\_\_\_

5. **Do you support removing incongruous 20th century alterations? \***

*Mark only one oval.*

- ☐ Yes
- ☐ No

6. **Do you support introducing modern systems (HVAC, plumbing, and electrical) into the structure? \***

*Mark only one oval.*

- ☐ Yes
- ☐ No

7. **Do you think the restored structure should used privately or be accessible to the public? \***

*Mark only one oval.*

- ☐ Public use
- ☐ Private use
- ☐ A combination of public and private uses
- ☐ Either use is acceptable

8. **How do you envision the Squire Pope Carriage House functioning within the future Wright Family Park? \***

*Mark only one oval.*

- ☐ The structure should support the use and function of the park.
- ☐ The structure should remain separate from the park.
- ☐ Other: \_\_\_\_\_

9. **How should this structure be used in the future? \***

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10. **What other feedback or guidance, if any, do you have about the preservation or history of this structure?**

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## How should this structure be used in the future?

1. Should rent it for functions. The town could use revenue for upkeep and maintenance of the property.
2. Multiple uses: bathrooms, catering kitchen, historical tours, changing rooms for weddings, etc.
3. Support Park Functions (i.e. Bridal preparation for outdoor weddings) - Use for BHS tours
4. Perhaps offices or event space. I'm open to ideas.
5. Public use
6. As mentioned above, I can see this structure being used in the same way that the Garvin-Garvey House is being used today - tours led by trained docents, children's school visits, vacationers visiting Bluffton, etc. It should get the same treatment that was given to the Garvin-Garvey House. A historic state marker would also be a wonderful addition once the renovations are completed.
7. It is my understanding that the Rural and Critical Lands requires the property not be privately used. Is this correct? This structure would be a great Welcome Center with its riverfront views and combined with a history of Bluffton. Done like the Garvin House.
8. Historic museum connected with the Heyward House.
9. Public and private events
10. Visitor Center
11. Tourist attraction and an event facility for small to medium local affairs for the public or private parties if it stays in the public domain
12. Provide a Docent to tell the history of the family and house and it's impact in our community.
13. History of Bluffton Museum - Lecture Hall
14. Community events, receptions, civic & historical events.
15. rental for events
16. A very good question. I hope to see it restored to a usable state most definitely for public use in some capacity.
17. See above, a May River Museum
18. open by reservation to public for small gatherings or events
19. Would love to see an Inn or b&bQ
20. Should be part of the park. Maybe have docents to give a tour and tell the story of the house.
21. Cater-type activities, staging of warm food, refrigeration, no cooking. Indoor area to support the approved functions and to be rented separately from the actual park, similar to Rotary Community Center and Oscar Frazier Park.
22. Residents and visitors should understand the effect of the passage of time and prevailing tastes on historic architecture. Buildings evolve and it is not for us to say that ante-bellum is more important than Victorian or early 1900s. Give them all a voice with an interactive exhibit that shows how the house



may have changed. As visitors walk through, they see signs highlighting the architectural points of interest and an interactive touch screen could suggest what that feature or room may have looked like in other eras. This may require adding electricity and/or AC. There is a wonderful project in Boston called the Vilna Shul where they are revealing layers of artistic decoration. I believe their ultimate intent is to restore back to the very original layer, but meanwhile, the years exist side by side. I like the idea of exploring all of the layers.

23. For the benefit of the community
24. Bed & Breakfast, a coffee shop or a restaurant highlighting the history of the house
25. Honestly, I think it should just be torn down - the expense to repair it is too much.
26. as a great example of our history, museum like
27. Children's museum
28. To support the function and use of the park; possibly a small museum re: the history of the house.
29. Like the Garvin/Garvey House
30. Complement historic Bluffton
31. A civil war museum
32. Offices for Bluffton centric organization - Chamber of Commerce, Visitors Center, Dock management/ kayak rentals, Bluffton/Beaufort Co Recreation Dept,
33. It should be used for historical tours of Bluffton. That way the town can make some profit
34. Compliment the Heyward house as a visitor center or museum.
35. Possibly for small indoor special events like meetings, symposium. Exhibits about the history of the property and the house.
36. Event hall or area. Think wedding receptions, corporate parties
37. museum/visitors center for the park with water fountains, bathrooms, gallery
38. A venue for gatherings
39. As a historic landmark, not a restaurant.
40. I believe future use of the structure should be used to enhance the historical significance of the location, the family, and the town. We do not need a bed-and-breakfast, a restaurant, coffee shop, a boutique on this property. There is ample opportunities on Calhoun for such opportunities. This structured and land should be preserved, protected, and revered well into the future for generations to come.
41. Tie it to pre 1861 history of Bluffton
42. Meeting rooms for private and government. Use for weddings receptions.
43. As a museum-like structure that informs the public through signage, photos etc of the history of the property and how it relates to the history of The Town of Bluffton and the Lowcountry, its commerce, residents and evolution over the past two centuries similar to Garvin-Garvey House.
44. .



45. Historical museum
46. Rent for private functions (parties, weddings, showers, etc) but open to public in some capacity otherwise.
47. As a history center
48. It could be leased for office space or rented for events, where the proceeds could be used for maintenance and management of this, and possibly other, park properties in the Bluffton area (County and Town owned).
49. Historic story board placards outdoors, add wide swings overlooking the river similar to the swings in Beaufort, picnic tables
50. It should be somewhat sustainable.
51. an event space
52. Bed & breakfast, museum tour (like Rose Hill Cottage), private residence with agreement to be hosts for town tours as agreed upon. All great options.
53. The structure should be used for the public in conjunction with the new public dock. A restaurant or pub would be great.
54. I think it would be a wonderful place to hold public & private events
55. As a historical landmark in old town Bluffton.
56. We were informed that it would not likely be utilized for general use. Rather that the use would be about preserving the structure, mostly visible from the exterior. We were led to believe that my Father, and his immediate family could visit once restored/stabilized.
57. tours/special events (both public and private)
58. Living museum--like the Garvin House
59. As a 'soft' catering kitchen for rental events at the park involving food/beverage
60. Provide a shaded porch and swings for taking in the view, a climate controlled area to support park functions (such as a "bridal suite" out of the single story portion) and perhaps office space.
61. interpretive piece for property plus public use for community and private events
62. There are no restaurants on the water in Bluffton or even a water view. Would love a restaurateur to consider something like Skull Creek or Hudson's that have been so successful for the property.
63. A learning center about the May River for interested groups or maybe a small museum dedicated to Bluffton's antebellum and civil war history. Should include accessible restrooms for visitors, fishermen and tourists.
64. Space/facilities supporting park events and tourism
65. As an educational site within the park.
66. Museum, private, catered functions, such as weddings, wine tastings, possibly a classical music venue etc.



to generate funds for its ongoing upkeep.

67. An exhibit of how architecture changes with time and necessity. Many old buildings evolve to adapt to the times and this is obviously one that was changed to meet the needs of the family.
68. It should be used as a historical venue to hold public and private functions such as weddings, receptions, meetings such as Kiwanis and Rotary,
69. As a historic house structure museum
70. Rental (monetary) rental use. Funds received saved for M&R future needs for the structure. I envision the structure have a non-cooking, but warming & cooling kitchen within it to provide for: Group, corporate, or family leased functions. Catered events that might incorporate a segment of the Park with it. Exterior signage as to a contact for the use of the structure should be in place. Upstairs, could be the offices for the Bluffton Historic & Preservation Society. Could also be used for ticket booth operations for live public events at the Park.
71. A place for small reception, weddings, family gatherings, possible varied church functions,
72. As an historic example of how the Bluffton community developed during the Reconstruction Era. It should be partnered with the Garvin-Garvey home.
73. Historic landmark
74. some type of historic presence -too much is being lost
75. A place for rest and relaxation.
76. Restrooms, interpretive displays about the property history, day public use as a shelter, event rentals managed by the Town, long-term lease to concessionaire like ice cream shop, etc. (provided space allows)
77. Public & private access / rentals for private functions
78. Perhaps public restrooms to support the nearby public docks and many street fairs along with a portion to highlight the building historical significance.
79. In conjunction with the park. Also, could be rented out for private events or speaker series.
80. The property should be used as public library with local publications, historic publications, Gullah art, historic relics, and spaces dedicated to reading while enjoying the outdoor landscape. Not only should it be a peaceful curiosity, but a magnet for the community and its activities.
81. A small cultural museum about Bluffton history and the ecology of May River (similar to RiverworksDiscovery.org), possibly run under a foundation with volunteers (Heyward House is a house museum and doesn't have space to offer input on oyster industry, civil war, etc). Include a small lecture room, display room for interactive exhibits and artifacts (40%) 2 meeting spaces (upstairs) for non-profits in historic district. It could also provide collection storage, workroom, lobby with restrooms and possibly a small kitchen. It also could offer more accessible space for archives than town hall.
82. I suggest it become a small cultural museum with interactive exhibits on the oyster industry, civil war, and 20's and 30's commercial businesses, including the steamships, include meeting space for non-profit orgs, which is currently limited. Also it could be used for the BHPS archives with more convenience and space than currently allocated at the new town hall. Cost and deterioration was most important.



## What other feedback or guidance, if any, do you have about the preservation or history of this structure?

1. Use the funds wisely...make it to be a functional piece of history.
2. I personally know Mercer Pickney who was the last family member to reside in the structure. He now lives on Old Farm Road. He told me that the structure is doing directly on the ground. Therefore, the rot and bug damage will be extensive. As a member of Bluffton United Methodist, I know the expense to renovate a building in the area because of the church's recent renovation of The Graves Property. If the town is going to go to that expense, first, the structure needs to be raised off of the ground. Also, the structure needs to be accessible for many uses.
3. Would like to see some informal gardens between the large oak and the house. Can any further research be done on the main house or Pope family descendants to obtain any information on the main house. No photos, drawings or illustrations are currently available.
4. I think it's better to keep it close to its original style to represent Bluffton history than overly modernize it to make it more useful.
5. I think people feel more connected to a house once they know who those were who once called it home. In this case, it would be nice to see a complete report done on the Pope's, their successes prior to the Civil War and their sadness having returned to Bluffton after the burning of the town. In reading several letters that I found in the Pope Family Papers housed at the South Carolina Historical Society in Charleston, was one written by Sarah Pope (Squire Pope's widow) to her daughter, Elizabeth in Atlanta telling her about the state of Bluffton upon her return. It touches on the sadness those must have felt returning to a different Bluffton than the one they had fled. As I mentioned, I have researched the Pope family for another project and thus why I have all of this information.
6. As one of our 10 antebellum structures, it is extremely important that it be painstakingly rehabbed according to the Standards of the Park Service for Rehabilitation. Does the Town have the historical info that was done by Gus Wright and his son, Gus? This could be invaluable. The question about time period significance --- over the years each period is significant, each period contributed to the structure and its survival. It may be that the question is: do we want to take it back to original or keep the changes to show how the owners adapted to the times? Big question..... Thank you for including me as a stakeholder. It is my privilege and honor. Joanie Heyward.
7. Restore it to the pre-1860s condition. As a restoration project, HVAC should only be installed to provide protection from mold issues. Electric should only be installed for security/safety concerns. I don't see a need for plumbing.
8. Preservation of History and its architecture is good way to link our past and all that was good and bad to our present and future development to keep what was true and good and replace what hindered with what will benefit now. and in the future. If do not learn and improve upon what went before, we are doomed to make the same mistakes and repeat its failures going forward.
9. PLEASE preserve the tree canopy and protect the river - runoff, sewage systems, etc
10. Please take care in how it is repurposed.



11. Cudos to the town and county for their preservation efforts.

12. n/a

13. Squire Pope House could be a draw for vacationers and schoolchildren alike. It would be a boon for businesses up and down Calhoun Street, drawing traffic all the way to the end instead of stopping at Lawrence Street. And if the Town would permit a rotation of food trucks at the park itself (perhaps just one at a time), the public would really have a great place to eat, learn, play, and appreciate Bluffton.

14. See previous answer.

15. Must be protected and respected

16. Preserve surrounding trees and landscape.

17. None

18. #1 Priority > new foundation and stabilization. I am intrigued at the idea of separating the two buildings again, possibly restore to period of civil war. Identify and mark location of all original structures thru tools/archaeology. It's a fascinating story!

19. Make the view of the river the focus.

20. Preserve the structure but let it generate revenue back to the town.

21. The decisions made today will last long into the future. I beg those in charge to consider the significance of location in conjunction with other historical properties and the waterfront adjacent. Protecting the integrity of the historical significance and beauty of the property is imperative. Bluffton has an opportunity to preserve this home and land in a way which will guarantee that future generations can glimpse back in time to an era long past honoring the town's commitments to preservation. My wife and I live next-door to the Wright family on Water Street. Mrs. Wright was a neighbor and a friend. Our son was born right next-door to the Wright home in 1994. This space holds a sacred place in our hearts; Mrs. Wright was a beautiful and caring person and I would love to see the property utilized to honor her, her family, and the town's commitment to preservation.

22. none

23. I believe the outreach to local long-term residents will be significant in gathering historical information and I would hope some photographs that could prove to be fascinating and very helpful in tracing and understanding the history of this property and the town in general.

24. Too much to put down here.

25. Clean the property and open it for tours on thursdays with a donation area for those interested to contribute towards property maintenance

26. Highlighting unique architectural features to the various time periods.

27. Bring it back to it's original form as possible.

28. I think that it would really be best to try to restore in a historically correct for the time period with the exception of adding plumbing & HVAC. With the surroundings it would make a lovely wedding venue



29. Much of the information on the timeline is verging on inaccurate. More accurate details can be ascertained. I would be happy to assist, so that adequate preservation can take place. I would think it is hard to make decisions, if not presented with a more correct picture. The question about “incongruous 20th Century Alterations” seems to be leading, with its adjective. In addition it blankets several changes into one question, for example the screened porches, the bay window, the kitchen counters, the portable air conditioners, the ceiling fans, the toilets, and the electricity were all added in the 20th century. To answer that question, is really difficult. Again, I wish to express my thanks for the questionnaire, however it seems that the questions may need some additional refining. Thanks. Personally, what I have found charming about the house is its very “Phoenix” nature: rising from the ashes, people adapted over the decades. It was locked into place in its current configuration about 1957. In Bluffton, that alone is old enough for a home to be considered for historic preservation. I think it would be most appropriate to aim for a preservation of its condition of about 60 years ago. There are still a number of people alive that remember that time, and it would serve justice to the reconstruction period as well as what is perceived to be an interesting time in Bluffton’s history. Furthermore, as an unique structure, the greatest number of years of its life has been lived in that configuration. Augustine Wright III
30. A hardscape patio would increase space for events/pretty fence surrounding all for security/and to separate from other park functions
31. Bathrooms should be a first consideration for our visitors to the park
32. The building should be designed to be used.
33. The land surrounding the house should landscaped, dead trees removed, grass planted and mowed so that it compliments the beautiful Church of the Cross property opposite.
34. If you are going to keep the building, you will need to have modern systems to maintain its preservation. Otherwise it would be a waste of time and resources to rehab and maintain.
35. Restoring this home will add to the charm of Old Town Bluffton. People move to Bluffton for that ‘small town’ feel and keeping the historical aspect of the old homes yet making them useful to the community is a win-win situation.
36. I am a member of the Wright/Pope family and will be glad to answer any historical questions. All Wrights are Pope descendants. Emma Pope married Arthur Perry Wright after she moved to Bluffton permanently from Hilton Head.
37. Low voltage lighting for the exterior of house, trees, and grounds would create a beautiful ambiance (and a degree of safety, and security).
38. will take lots of money, but is important to the history of our area.
39. develop as a historic site and plan to use now and in the future as history
40. I think the tree canopy, the bay window, porches and the chimney’s are important as well!
41. Since Bluffton was the original home of many Confederate officers and headquarters of the pickets during the Civil War and the seat of Secession beginning in the 1830’s, these stories could be told in the home owned by Sq. Pope. The stories of the commercial businesses and steamships (next door at the Calhoun St dock) in the 20’s and 30’s, boot legging and the many oyster industries and histories of oystermen and women could also be exhibits.



