

historic structure report  
architectural data section

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FREDERICKSBURG AND SPOTSYLVANIA  
COUNTY BATTLEFIELDS MEMORIAL  
CHATHAM

NATIONAL MILITARY PARK/VIRGINIA





HISTORIC STRUCTURE REPORT  
ARCHITECTURAL DATA SECTION  
CHATHAM  
FREDERICKSBURG AND SPOTSYLVANIA COUNTY BATTLEFIELDS  
MEMORIAL NATIONAL MILITARY PARK  
VIRGINIA

Prepared by Gerald Karr  
Edited by Harlan D. Unrau

DENVER SERVICE CENTER  
BRANCH OF CULTURAL RESOURCES  
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## EDITOR'S FOREWORD

This Historic Structure Report, Architectural Data, on Chatham was prepared by Gerald Karr, an architect on the Mid-Atlantic/North Atlantic Team, in 1976-77. At that time the Historical Data Section of the Historic Structure Report was assigned to Ronald W. Johnson. When the first draft of the two sections was submitted for review in March 1977 the Architectural Data Section was approved subject to minor editorial and graphics presentation changes, but the Historical Data Section was judged to require considerable revision. Subsequently, the Historical Data Section was revised and edited by myself and printed in October 1982 under the title, "Preliminary Historic Resource Study, Chatham." In June 1983 I was assigned the task of editing and preparing for printing the Architectural Data Section by Karr. One should refer to the Preliminary Historic Resource Study as a background study document for this report by Karr. I want to thank Evelyn Steinman, editorial clerk, Branch of Cultural Resources, for her efforts in typing the manuscript and handling the administrative details associated with its printing.

Harlan D. Unrau  
Historian  
August 12, 1983

## PREFACE

As the author of this Historic Structure Report, Architectural Data Section, I would like to thank a number of NPS offices and individuals without whose support the task would have been considerably more difficult. Superintendent Dixon B. Freeland, Chief Historian Robert K. Krick, and Chief of Maintenance Carlton R. McCarthy, Jr., and the rest of the staff of Fredericksburg and Spotsylvania County Battlefields Memorial National Military Park have rendered assistance in all phases of the research. Project Coordinator Lawrence B. Coryell and numerous other members of the Mid-Atlantic Regional Office staff have provided useful guidance toward completing the project. John F. Luzader, Chief, Historic Preservation Division, Denver Service Center, also contributed his aid in the coordination and completion of this project.

Gerald Karr  
March 1977

## STATEMENT OF HISTORICAL SIGNIFICANCE

Chatham, built circa 1768 to 1771, meets the criteria of the National Register of Historic Places established for the First Order of Significance. Architecturally, it is a classic example of a brick Georgian-style mansion that despite minor alteration has essentially retained its original integrity. William Fitzhugh, a prominent tidewater Virginia planter, built the home. From the original builder to the final private owner, retired General Motors executive John L. Pratt, Chatham has been owned by and associated with a number of locally as well as nationally prominent individuals. For instance, the house has demonstrable associations with George Washington, Thomas Jefferson, Abraham Lincoln, Clara Barton, Walt Whitman, and others.

As the Civil War Battle of Fredericksburg raged, Chatham became a significant focal point for a number of reasons. The commander of the Right Grand Division, Major General Edwin V. Sumner, made Chatham his field headquarters. Major General Ambrose E. Burnside conferred with his top aides at the house. A number of artillery batteries situated near the house offered covering fire for the engineers, who built ponton bridges, as well as for troops who crossed the temporary bridges to attack the Confederates atop Marye's Heights. Following the battle, Chatham served as a temporary field hospital where Barton and Whitman ministered to the wounded. During the Union army's winter encampment volunteers established a rest station at the house to serve pickets off duty.

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## INTRODUCTION

The architectural story of Chatham spans nearly 170 years from its construction in the early 1770s to the last major project in 1935. During this period, a rich legacy was created, and a remarkable resource preserved. As we find it today, Chatham consists of two distinct groups of physical features, distinguished primarily by age and historical associations, which will be dealt with separately in this report since the conclusions and recommendations for the individual features in each group are similar.

The plantation house with its detached kitchen and laundry comprise the first group of historic features. These three structures date to the original construction period undertaken by William Fitzhugh of Chatham in about 1770 and are the only extant buildings known to be standing at the time of the Battle of Fredericksburg in 1862. Also included in this group are landscaping and trees positively identified as extant during the battle. These features all are of the First Order of Significance.

The second group consists of the support structures--barn, stables, dairy, numerous farm outbuildings--and a variety of grounds and garden improvements which were provided in the post-Civil War era and are valuable in setting the historic scene. This group is of the Third Order of Significance.

For convenience, the locations of these structures are shown on the "Chatham Site Sketch" in Appendix A. This plan represents existing conditions in March 1976.

The purpose of this Architectural Data Section is to supply the basic information needed to implement the preservation effort at Chatham. To this end, emphasis has been placed on practical recommendations for the treatment of the original structures and later ancillary structures. A structure of the size, complexity, and antiquity of Chatham could and perhaps should be the subject of long-term study to more fully understand its place in the architectural pantheon of Tidewater Virginia.

In a sense, therefore, this work should be seen as introductory in terms of physical history analysis, a guide to understanding the basic elements of the house, and a recording of the existing conditions in 1976. Should a different level of treatment--restoration, for example--be contemplated in the future, study of the specific elements relating to that work will be required.

CHAPTER I  
THE PLANTATION HOUSE COMPLEX

#### A. The Plantation House

Although it can be inferred with certainty that Chatham was built between 1768 and 1771, the first document to describe the house and its detached wings is the Mutual Assurance Society Policy No. 48 of 1797 (Appendix B) some 25 years after the initial building campaign. No description of Chatham during this interim has been discovered. While the events surrounding its design and construction are presently unknown, a fairly clear picture of the original configuration of the building has emerged from physical investigation of the historic fabric. These findings are in many cases corroborated by documentary evidence. It must be mentioned, however, that while every effort was made to confirm hypotheses regarding the historical appearance of the building with at least two and usually more observations, a class "B" investigation was performed, and this level of inquiry does not permit major destructive investigative techniques. Some areas, the main doorways for example, were not, therefore, subjected to physical investigation, and remain architectural preserves available for future study.

#### Stylistic Analysis

The insurance survey of 1797 describes the original building group as five structures: a dwelling house, two wings, a kitchen, and a laundry. The sketch plan which accompanies the policy shows these components in their present locations. Also indicated on the plan are two "brick covered ways" which connect the dwelling house and its wings. All evidence points to the present arrangement as the original one; in fact, the building as it now stands probably represents quite closely the 18th century exterior appearance of Chatham. A detailed description of how this conclusion was reached is contained in a later section of this report. It should be noted here, however, that no evidence exists to support speculation that the ambiguous "brick covered ways" were open porticoes, later enclosed by brick walls. They appear in every way to be contemporary with the main house and wings.

At the time of construction, the plantation house group stood at the end of a one hundred year colonial tradition of rural Virginia

architecture. Chatham lies both chronologically and stylistically in a transitional period between the monumentality of the early and mid-18th century, and the unified assemblages of the last quarter of that century.

In the 1770s, Virginia plantation houses using English models came to be composed of several small structures connected by covered or enclosed passages, rather than a single massive block with detached dependencies. Harewood in Jefferson County, West Virginia (1756), is a very early example of this arrangement, and while smaller than Chatham, has the same basic plan for both dwelling house and wings.<sup>1</sup>

The central portion of the Chatham plantation house is large and well detailed, sharing in elevation its basic proportions with Westover in Charles City County and Sabine Hall in Richmond County, both of which were constructed around 1730. From this point of view, Chatham looks back to the earlier style, which stressed the monumental character of the main house and separated the service wings from it. This early scheme often further subordinated the dependencies by placing them at right angles to the primary structure, diminishing their importance both by avoiding an axial relationship between them and by presenting the narrow end of the wings to the viewer, thus reducing their visual bulk.

Late in the century, builders integrated the dwelling house, service wings, and connecting passages into one unified composition, where the elements were arranged on the same axis and visually interpreted as a whole. Two houses--Brandon in Prince George County (ca. 1770), and Battersea in Dinwiddie County (ca. late 1770s), exhibit this organizational approach, and both have been linked to English prototypes.<sup>2</sup>

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1. Thomas Tileston Waterman, The Mansions of Virginia (New York, 1945), p. 360.

2. Ibid., p. 364.

Chatham incorporates elements of both styles. The central block of the house owes a debt to early thought, being a generously proportioned two-story structure similar to Westover and Sabine Hall. The wings at Chatham, however, are situated on axis with the central block and from the outset connected by stair halls. Compromising this modern scheme is the location of the kitchen and laundry, separated from the wings by 44 feet (quite probably to reduce the risk of fire) and oriented at right angles to the main building axis.

### 18th Century Appearance

At the end of the 18th century, Chatham consisted of the dwelling house with its attached wings, kitchen and laundry, all extant. In addition, documentation exists showing a mill situated to the south, probably across the ravine from the domestic area. A survey of 1805 locates a brick smoke house south of the kitchen, and another north of the laundry. An advertisement to sell Chatham in 1797, however, identifies a store house and smoke house, the former probably being more properly identified with the laundry. The same advertisement lists a dairy and spring house, stables for thirty horses, coach houses for four coaches, barns, a granary, a dairy, an ice house, a barn accommodating thirty-six head, an overseer's house, a blacksmith's shop, and slave quarters for fifty (Appendix C).

In 1797 Fitzhugh pointed out in his offer to sell that "the grounds adjoining the house are neatly laid out in pleasure and kitchen gardens, interspersed with a variety of scarce trees, [and] a choice collection of flowers and flowering shrubs." He further listed an extensive number of fruit, nut, and berry orchards, as well as fields planted with clover grass, hay, and corn. Wheat was also a successful crop at the farm. It is noteworthy that flowers and flowering trees have been a vital part of the character of Chatham from its earliest period to the residence of its last private owner.

From these two primary sources--the insurance survey of 1797 and an advertisement to sell the plantation in the same year--a reasonably clear picture of Chatham's exterior appearance in the 18th century can be determined. The plantation house, kitchen, and laundry stood as they are today, surrounded by gardens, shrubs, and ornamental trees. To the east were 700 cultivated acres and more than a dozen support structures associated with the farm operation. The heights on which Chatham is situated would probably have seemed barren compared to their present heavily wooded condition. Fitzhugh boasts of the views "in every direction over the towns of Fredericksburg and Falmouth and an extensive cultivated country." Photographic records, though 60 years later, show the house standing at the edge of a virtually treeless cultivated plain in prominent view from Fredericksburg. The 18th century condition was probably not much different.

#### Exterior

The plantation house is a particularly well built and finely detailed work of architecture. All the walls above the water table are Flemish bond with glazed headers and grapevine joints, as are the detached kitchen and laundry. The same bond is employed below the water table, where plain headers are substituted for glazed. The only exception to this is the unusual header/stretcher courses used below the cornice at the juncture of the house, wings, and passages. The window jambs and jack arches are embellished with rubbed brick in skillfully formed "butter" joints. These decorative bricks were carefully made by grinding their faces perfectly flat and square, permitting them to be laid in extremely thin--3/16 inch or less--mortar joints. The effect created is subtle but noticeable emphasis on the masonry opening. In a similar way, rubbed brick were installed at the corners of the house and wings and used in the four-course belt which marks the second floor line.

A molded brick ovolo and cove forms the top of the water table. It is interesting to note that despite the care taken with brickwork throughout the buildings, the cellar windows are not provided with relieving arches of any kind. The bricks merely rest without bond interruption on the cellar window frames.

The corbeling of the water table increases the wall thickness to one foot ten inches at grade. A close examination of the cellar wall reveals two more courses corbeled out to form a two foot six inch spread foundation. It is also apparent that the cellar floor was lowered below the foundation line, necessitating the addition of several courses of brick to be placed eccentrically under the foundation.

After the Civil War, the brick walls were painted, a practice which continued through the occupation of the residence by the Devore family (1920-31). The first coat of paint was mustard yellow, then brick red, followed by several coats of white (Appendix D). Much of the paint has now peeled off, revealing the original surface. The paint on the brickwork makes it difficult in certain areas to determine whether repairs or replacement have taken place. Other areas, however, are visible and show extensive repairs over the cellar windows, using hard modern brick and portland cement mortar. These areas are generally in poor condition due to lateral displacement and joint separation.

The two existing limestone frontispieces and steps from the Devore ownership were designed by Oliver H. Clarke, an architect in Washington, D. C., as part of his colonialization renovation program. The east doorway is a copy of the garden entrance at Westover, which in turn was taken from Palladio Londinensis, a popular 18th century architectural text.<sup>3</sup> The west door is an ungainly modified doric style, possibly of Clarke's own design. These entrances cover what evidence may remain of the original entry. During the greater part of its existence, however, the west or formal side of the house was provided with a two-story porch, and the east or garden side with a colonaded terrace. Clarke's measured drawings (Appendix E), as well as numerous photographs, recorded this treatment before its removal in the 1920s. In addition, ten of the columns were preserved after their removal from the porch. These are now in the artifact collection of Fredericksburg and Spotsylvania County Battlefields Memorial National Military Park.

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3. Ibid., p. 150.

The exact construction date of the porch is not known. Civil War photographs, the earliest graphic records of Chatham, show the porch in place in 1863. At that time the three porches were connected via a continuous walk, which was still in place at the end of the 19th century, but had been removed by 1910 as shown in a photograph of that date. Changes are also visible in the treatment of the handrail and balusters. An examination of the roof area which was covered by the porch gable reveals original sheathing, with 18th century wrought roofing nails still protruding through it, running continuously over the entire roof surface. Had the porch been part of the original construction, the gable area probably would not have been sheathed, and certainly would not have roofing nails in it. Therefore, the porch was not original. Stylistically, the porch is Greek Revival, which points to an early 19th century date.

In the course of the architectural investigation, several pieces of exterior trim, matching the existing original brackets, were discovered in the attic. One of these which still had its wrought nails in place was covered with one weathered coat of cream-colored paint. The single paint layer indicates early removal; the weathered surface that it was in place for a considerable time. A soffit bearing the marks of removed modillions was also discovered in the attic. This millwork also has the same paint layering as mentioned above. It was concluded, therefore, that this was original trim from the center of the cornice where the porch covered it and removed at the time of porch construction. This evidence strongly suggests an early 19th century date, possibly in 1806 when Major Churchill Jones bought Chatham.

During the removal of the porch in 1921, The Fredericksburg Free-Lance reported that workmen found a stone bearing the inscription "John Hall, Builder. October 11, 1859."<sup>4</sup> The exact location of the stone is not noted in the newspaper article and thus cannot be construed as irrefutable evidence. It may, for example, be associated with the "stone

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4. The Fredericksburg Free-Lance, June 22, 1921.

steps," noted in Mrs. Lacy's memoirs which might have been built in 1859. The paint evidence from the cornice and columns indicates strongly that the porch was added in the early part of the century. At present the question of when the porch was built remains open, pending further investigation.

Much of the exterior woodwork is original. The entire cornice, except for the area covered by the porch gable, appears to be original. Paint samples from the modillions, fascia, soffits, and trim all match, and all are assembled with wrought nails. The window frames and sills are mostly original fabric fastened with pinned joints. Many windows, however, have been repaired and partially replaced. The sash and lights are all post-Civil War, the windows having been mostly broken out according to contemporary accounts of the building's condition after withdrawal of the federal troops. All window frames are covered with at least six coats of paint: In some areas paint is 1/8-inch thick; in others it has peeled, exposing raw wood to the weather. All the cellar windows on the east facade have been removed and filled with brick. Of those on the west, only four have frames and trim intact. All have renewed sills. The openings are enclosed by vertical wood bars and glazed casements.

The 1862 Signal Corps photographs of Chatham show louvered exterior shutters in place. Exterior blinds were not normally installed in 18th century brick buildings, and in fact the house is fitted with interior shutters which fold into the window jambs forming a paneled splay. The concealed parts of these shutters still have their original hand wrought hinges in place, and only one layer of paint--the original dark green. It is likely, therefore, that the exterior louvers were installed early in the 19th century, explaining why the interior shutters show so little evidence of extended use. Some of the shutters now in place are known to have been recently installed.

While the entry doors appear to be 20th century installations, the door frames, paneled jambs, and soffits disclose an early origin when subjected to paint analysis. Exact dating by this method is not possible. The style of the trim, however, is not 18th century. An 1881 photograph

in the collection of the park, though unclear, shows the east doorway before installation of the porch which appears in Clarke's drawing of 1920. The surround appears to be a simple horizontal cornice and wood architrave around the door. It must be remembered that this was the original back door, the formal entry being on the river side of the house. Thus, the east doorway may have received a less elegant treatment than the west. Investigation behind the stone frontispieces now in place may reveal evidence of the original appearance.

The present roof material is slate on original 1 x 6 solid sheathing. In the course of investigation, several shingles and fragments of shingles were found in the attic of the plantation house.

Believed to be the oldest of these shingles are two handsplit and drawknife-dressed cedar shakes with round 5/8-inch thick butts. One of these is considerably worn by erosion, leaving the pattern of the adjacent course etched on its surface. The extraordinary wear on this shingle indicates an especially long exposure before replacement. Civil War photographs reveal quite clearly that the shingles were square butted by 1863. One may assume that the building was re-roofed shortly before the war by Major Lacy, who also undertook several changes on the interior of Chatham. The other shingle was never installed, perhaps because it was too short. This artifact is especially valuable because it illustrates the degree to which finish and shaping was carried in making shingles for the house. From these two examples the length, width, thickness, spacing, and exposure of the original 18th century room can be determined.

Several types of sawn shingles were found in the attic. Many were plain, but several examples had a dark green stain. Some of them may date to the pre-Civil War roof replacement, while others, especially those which were stained, probably represent the postwar roof materials.

Although no documentation exists to confirm the installation date, the present slate roof almost certainly was part of the Devore colonialization renovation effort in the 1920s. The nails used to fasten the slates, for example, are modern copper wire nails--not in widespread use until the

end of the 19th century--and only the Devores undertook major work during that period. In addition, the photograph from 1910 shows the roof to be of wood. An examination of the roof surface revealed slight sagging between major rafters caused by increased dead load of the slate. This effect is not serious, but secondary trusses would be helpful in preventing further deterioration.

The plantation house is fitted with gutters throughout. The central portion has copper gutters and ferrous metal downspouts. Both are painted. The passages and wings have painted ferrous metal gutters and downspouts. The entire roof drainage system, while mechanically sound, has peeling paint and signs of drain obstruction in some areas.

The chimneys have been reconstructed at least once and possibly several times. Evidence of this work is easily visible inside the attic. Presently, the chimneys are in an unstable condition due to deteriorated mortar and shear cracking, especially on the south chimney. The brick used for this work is soft and several units are spalling.

Chatham is fitted with a lightning protection system which first appears in photographs from the 1920s--again probably an item installed by the Devores. The four plantation house chimneys have air terminals which are connected to a substandard ground conductor system. The anchorage for these terminals, moreover, has corroded away over the past fifty years and the terminals are in danger of falling. In addition to the house, the tallest trees which surround it have one or more air terminals in them. A disturbing exception to this practice is the big sycamore on the east side of the house, which is unprotected.

### Interior

Oliver H. Clarke's measured plan of 1920 is the only record of Chatham's pre-Devore interior condition. From this drawing, in conjunction with the investigation of fabric, much can be learned about the original organization of interior spaces. The central part is divided into three square rooms. Brick interior bearing walls, nearly 24 inches

thick, separated the rooms and provided support for the original floor framing system. These walls rise from the cellar to the second floor ceiling level, where they terminate in a timber plate and roof-supporting kingpost.

### The Stairs

A unique and puzzling feature of the house is the conspicuous absence of a stair in its central part, the only two-story segment of the building. The center room (Room 105) in fact never was intended to have a stair. The conjectural restored plan (Appendix F) explains the mystery of the "brick covered ways" mentioned in the insurance survey of 1797 which connected the wings and dwelling unit. They were, from the time of construction, not only passages but also stair halls.

Several pieces of evidence conclusively prove this hypothesis. Plaster samples were removed from both the north and south walls of Room 107. The material is early lime plaster, horsehair reinforced, and precisely matching other plaster samples known to be original from other locations. This plaster was applied to unfinished rough-laid interior brick intended from the outset to be plastered. It was deduced from this evidence that the passage marked 15e on the "Chatham Site Sketch" (Appendix A) never was an open passage. Had it been open, the north and south walls would have received exterior tooled mortar joints. Corroborating this evidence is the observation that the wall connection of 15e to 15a and 15c is fully keyed--that is alternating courses interlock with the adjacent wall--a process not likely if the passage wall was a later addition. Finally, an excavation at the foundation of 15e and 15a revealed the footing of 15e, where the passage actually goes under the footing of 15a, indicating the former had to be built first.

Quoted in Ronald W. Johnson's "Preliminary Historic Resource Study, Chatham" text was a description by Charles Augustus Murray of the plantation house during Judge Coalter's ownership. He recounts entering a "small entrance-hall, floored with polished pine boards; the wainscotting of the parlour attracted my notice. . ." The "small entrance-hall" surely

could not be the generous 22 x 22 foot center room (Room 105), but was undoubtedly one of the other passages, both of which still possess their durable long-leaf southern pine flooring.

An investigation of the attic of 15d led to a remarkable discovery. The top of a stair hall symmetrical to the one in 15e had been preserved since the stair's removal. The plaster was partly intact. Marks of wainscoting clearly were visible. The width of the stair can be measured and the angle of the stringers calculated. Beaded soffit boards left in place where the stair passed through the partition wall into 15a were analyzed for paint evidence.

Several conclusions were reached by study of this fabric. True to the rigid symmetry of Chatham, the original construction incorporated two stairs, one in each of the passages, forming circulation cores and informal reception areas. Although relatively narrow--3 feet 7 inches--the stairs were well finished with wainscot, undoubtedly matching the panel and chair rail used elsewhere. These stairs were original; in fact, it is logical to assume that 15a and 15e were built at the same time, as the foundation evidence suggests, in order that a stair for moving men and materials to the second floor of 15a be ready in advance of work there. The short diagonal flight of stairs presently in place at the second floor level is also original, as evidenced by the early split lath construction of the angled passage wall visible from Room 204, and by the undisturbed plate and stud connection in the attic above this wall. Paint analysis shows the stair hall soffit received only three layers of paint, these matching original first floor wainscot colors up to a point just prior to the Civil War. The stair, therefore, was probably removed by Major Lacy. All these findings are in agreement with Fitzhugh's mention of "two pairs of stairs" in his 1797 advertisement. There were, in fact, a "pair" of stairs in each passage, one up to the second floor, the other down to the cellar.

## Cellar

Also mentioned in the 1797 advertisement are Chatham's "excellent dry cellars," another original feature of the building. Presently, the cellar is provided with a concrete floor, probably about a foot lower than the original as evidenced by the foundation underpinning mentioned previously. The cellar walls bulge inward in several bays on the west side of the building, a condition caused by lateral soil pressure and aggravated by vegetative encroachment. Roots of vines and shrubs planted close to the building have found their way between the bricks, breaking the joints and dislodging the mortar. Lateral displacement can be attributed to the insufficient bonding between courses. Further endangering the stability of the walls is the damage to the wood cellar window lintels by insect attack. These members support both a portion of the masonry wall and provide end bearing for joists which are located at window openings.

The first floor framing system, visible from the cellar, is undated but cannot be earlier than late 19th century. It consists of a 10 x 10 summer beam running longitudinally down the center of each bay, supporting 3 x 12 joists on approximate 20-inch centers. Gauge marks and joist pocket remains indicate the original system to be grid of 4 x 4s some of which are still in place resting on relatively small, closely spaced, secondary joists. Fortunately, the present structure was placed from below without disturbing many of the primary joists to which the flooring is attached. In this way, the original floor, where it survived, remains undisturbed. The unusual original structural configuration merits note as an area for future study in order to understand the exact dimensions and spacing of this early structural system.

The modern joists, like the window lintels, fell prey to insect damage. Approximately twenty members have been identified and marked as shown to have been infested. The summer beams escaped insect attack but at least one is cracked by fiber shear in the horizontal plane. Engineering analysis (Appendix G) shows the joists to be more than adequate if the unsound members are replaced and if the summer beams are strengthened with a center column.

Several types of flooring were used for the first floor. Original material is all long-leaf southern pine, a prime quality material with extraordinary wear characteristics. These boards are approximately 1 x 8, gauged with a plane to insure uniform height, and joined together with hardwood pins or dowels, then blind nailed to the joists with flat point "T" head nails. This particular construction method is listed in the Carpenter's Company of Philadelphia Rulebook of 1786 as the most expensive kind of floor joinery.<sup>5</sup>

The cellar of 15c is occupied by the modern kitchen, the only finished area in the cellar. The interior wall surfaces are plastered with portland cement, and the ceiling is gypsum, all painted. There are two objects of note in this area--a cast iron wood burning stove and a very early Hotpoint electric stove, both of which should be evaluated for possible historical merit.

#### First Floor

The first floor interior finish differs from the rooms of 15a and the other areas. Rooms 105 and 106 possess much of their original paneling. The date of this woodwork was first established by paint analysis, showing the original color, dark green, as the bottom layer in all major areas. Removable panels covering pipe chases at the south wall of Room 105 when examined for tool marks show the marks of 18th century sawing and planing. The nailing adjacent to such a panel is driven through an original style into an undisturbed wood nailer set in the brick wall. When removed, a sample nail was found to be a flat point "T" head finish nail. The entire south wall panel where this investigation was performed is a single unit, with full length rails. From the evidence, it was concluded that the entire south wall paneling has been in place as a unit since the original construction of the house. Examination of the brick

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5. The Rules of Work of the Carpenter's Company of the City and County of Philadelphia (Facsimile ed., Princeton, 1971), p. 11.

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behind the pipe chases disclosed no signs of plastering or exposure without paneling. The layering here was used therefore as a reference for comparison of other samples of paneling.

The large doorway shown in a ca. 1914 photograph between Rooms 104 and 105 (now replaced by a smaller entry) was closed by two large concealed sliding doors.<sup>6</sup> One of these is extant and in use on the outside of the Watchman's Office, possibly still hung on original hardware. Again paint analysis was used to verify the stylistic indication of an early 19th century date. As can be seen from the paint schedule, the probable dates of the door installation and removal are bracketed by its position in the paint sequence. Since both sides of the door are painted the same, we may infer that the lost paneling of Room 104 follows the same progression of colors as that for Room 105.

The south wall of Room 105, therefore, is more complex in its chronology than the rest of the room due to the modifications which were involved in first creating, then reducing, the doorway between the rooms. Preliminary paint analysis revealed that some of the panels and stiles are original, retained after changes in the wall took place, and that the rails and remaining panels date from the Devore ownership.

Using this method of analysis, the paneling in Room 106 was found to be original, with the pilasters and window jambs excepted. The room is further enriched by a bracketed cornice which is original fabric and resembles the exterior treatment on a smaller scale. Neither Room 104 nor 106 had its original window jambs. It is assumed the trim matched that of the passages (Rooms 102 and 109) which is original, but that it was damaged during wartime occupation and replaced. The jambs and architrave of Room 105 are the original, but the packet shutters were removed at an unknown date, leaving empty spaces in the jambs to receive them. Pieces of window trim are found in the present second

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6. Photograph from Harper's Bazaar, August 1914, 34-35.

floor ceiling, employed as nailers which may be helpful in identifying the date that the millwork was removed.

Room 104 has new paneling for which Clarke's drawings still exist. It is a house tradition that Union pickets stripped the room for firewood during the winter of 1862. A photograph from the Sullivan residence shows the plastered walls which remained until after 1921, the date of Clarke's design.

### Passages

The north passage, which contains Rooms 102b and 103, possesses much evidence supporting the previous discussion of how and when the stairs were built and modified. All of the flooring in Room 103, for example, is original, except for a conspicuous patched area where the original cellar stair penetrated the first floor. A careful examination of the plaster walls disclosed the line left by patching the plaster when the stair and landing were removed. Analysis of the west wall wainscot in Room 103 shows it to be from the original second floor hall, taken from the north end of the corridor when the stair was removed, and then installed on the new wall which created Room 103 from the former stair hall.

A comparison of Clarke's measured drawing and the physical evidence strongly suggests that the stair shown in 1920 is at least in the original location and possibly was the historic stair. Clarke's change to the new stair only makes sense when seen as an attempt to increase closet and storage space and to create a new pantry. In doing so, new door and window openings were cut in the east wall of the south passage, in order to allow staff access directly to the pantry. The floor of Room 107 is presently covered with linoleum and was not visible at the time of this investigation. The corridor, Room 109a, however, does still show historic flooring material.

## Wings

The wings both originally consisted of a room and antechamber separated by the fireplace wall. The east chimney breast of both rooms functioned originally as a closet common to both rooms via a door from each, lighted by an eastern window. Clarke's measured plan shows this closet and communicating door arrangement still intact as late as 1920. Traces of plaster patching in Room 110 verify his drawing. Both wings are wainscoted with the historic panels. Room 111 deserves special note for the modifications made there in converting it to a library. Clarke's measured plan shows the room before the south wall was cut away to provide space for built-in book shelves. The wall had already been modified by the introduction of a door in the center of the wall, replacing the original window. Evidence of the window still can be seen around the masonry jambs of the door. The exact date of this latter modification is not known, but a Civil War era photograph taken from the south shows an entry in that location in 1862.

The fireplace breasts in both Rooms 101 and 111 are suspiciously deep for a single fireplace and there are in fact two flues in the chimney, thus indicating two fireplaces. Evidence to confirm this thought could be determined by removal of plaster in the appropriate areas.

In the course of investigation, several doors were discovered to be relocated 18th century fabric. Marks of recessed "HL" hinges and the original rimlock were visible on the stiles and rails, and paint samples taken from a relocated door in the basement kitchen verified the presumed 18th century date. A similar door was also found between Rooms 109b and 111. These doors reveal the high degree of finish incorporated at Chatham. The hinges appear to have been concealed by letting the strap into the face of the door, and the remaining half of the hinge probably was hidden by installing it under the architrave, thus leaving only the hinge knuckle in view.

## Second Floor

The stair that leads to the second floor which has been discussed previously terminates at a narrow mezzanine, Room 205. This space is enclosed within the attic of the south passage, providing an intermediate level approximately 40 inches below the second floor line. There are two closets in the kneewall space along the mezzanine and a door which leads to a storage area in the attic of the south wing. In the latter is a modern cedar storage unit approximately 8 x 10 feet for draperies and clothing, and a separate rug storage chest. The entire attic space is covered with 1/2-inch welded mesh over seaweed insulation (see "Attic," following, for a discussion of this material), and is floored with rough pine.

The present second floor plan, with minor exceptions, reflects the original configuration. The short set of six stairs from Room 205 to the corridor, Room 202, is an original feature, as demonstrated by paint analysis of the paneling, and its symmetry with the original remains found in the attic of the north passage. Further, Clarke's 1920 drawing notes the short stair "to remain," and an examination of the diagonal wall beside the stair showed it to be original. The arched opening in the wall between the plantation house and the south passage is a new construction as beaded soffit boards were found in the remains of the north stair.

The second floor floorboards have been preserved in their original condition with very minor patching. At an unknown date, probably at the beginning of this century or during the Devore residence, the entire first floor ceiling was removed, and with remarkable and fortunate skill, a new structural system was installed from below. The system consists of steel channels placed longitudinally, set into the brick bearing walls, supporting 3 x 12 wood joists. Like the first floor, the historic framing was a grid of primary and secondary members. The new joists are placed side-by-side with the primary historic members, and the flooring thus actually remains attached to the latter undisturbed (Appendix G).

The method of joining the flooring differs from the first floor in that a blind nailed splined joint was used at this level instead of dowels,

probably because splining was less expensive and dowels were not thought to be necessary at the second floor. Following accepted 18th century building practice, clear long-leaf yellow pine boards approximately 8 inches wide and long enough to span from wall-to-wall without butt joints were used. The ends of the flooring, therefore, are concealed under the baseboard in all rooms except the corridor, Room 202, which is divided into three sections corresponding to the three room divisions.

In the course of the floor investigation the switching mechanism for the bellropes, once used to call the servants at the first floor, was discovered. Spring-loaded knife switches were attached to the underside of the floor, actuated by a wire which in turn went through the ceiling and was fastened to a rope.

The conjectural restored plan (Appendix F) illustrates the rigid symmetry of the original second floor. The corridor connected north and south stairs and provided access to the three equal rooms. An apparent flaw in the scheme is the lack of a fireplace in the center room. It is difficult to imagine occupying an unheated space in the damp Virginia winters but no evidence of a historic heating system was found there. The two end wall fireplaces, it should be noted, are located slightly off-center in order to make room for the stairs, and the clumsy juncture of diagonal wall and chimney breast is an original feature.

The first change in this part of the house was the removal of the north stair and the installation of a small chamber, Room 201a, at that end of the corridor. It is entirely possible that the original purpose of the room was used as a bath or dressing room even before the advent of running water. Or perhaps Major Lacy, the probable originator of this change, desired greater privacy for his bedchamber by isolating it from the thoroughfare of the corridor. Whatever the reason, this room and the corridor closet, Room 202a, are early features of the plan. The bedroom closet, Room 201b, is a later addition. Several layers of wallpaper, including an 1850s floral pattern, are to be found above a false ceiling in the closet. From Clarke's measured drawing it is known that the closet was in place by 1920.

Also completed by 1920 was the other bath, Room 203a, which reduces the size of Room 203 by using the south end of the room. The two associated closets, Rooms 203b and 204a, postdate the measured drawing, presumably as part of the Devore work.

All second floor rooms are presently covered, walls and ceiling, with wallpaper. Particularly fine wallpaper, tentatively identified as ca. 1850, was found in the bedroom closet, Room 201a, suggesting Major Lacy as the probable initiator of the papering. It is possible that this paper remains underneath the present finish and should be cared for with extreme caution. The exception to this finish is the paneling in the corridor, shown to be original by fabric investigation and paint analysis. The paneling and window frames, for example, possess virtually the same paint schedule as the dining room, Room 106, indicating the age and authenticity of both wainscot and fenestration. By the same technique, the wood arches at the doorways, 201/202 and 202/205, are shown to be very recent, likely early 20th century additions. Another known change in the appearance of Room 202 is the elimination of the porch door, which appears as sash window with hinged lower panel in a pre-Devore photograph. This device became unnecessary with the removal of the porch. The only remaining major change was the addition sometime after 1862 of two windows each at the north and south walls. The Civil War photographs show no windows at the second floor except those on the east and west elevations. All later pictures record the windows in their present locations.

### Attic

Only the attic provides us with an original structural system in the plantation house. All other floors have been heavily modified, leaving scant traces of the early configuration. The structural system employed at the attic level of all parts of the plantation house is similar throughout. The attic of the central manor house portion is most interesting and complex and will be studied here in detail.

The attic framing departs from that of the lower floors in its abandonment of the unique grid discussed earlier, and the adoption instead of a more conventional configuration. The typical three-bay system is further subdivided into six bays by the introduction of transverse beams which create six nearly equal bays, 11 feet to 11 feet, 10 inches in width. These then receive summer beams arranged on the longitudinal axis into which the joists are framed. At each of the transverse beams, there is a kingpost which supports a major rafter corresponding to the framing below. Like most 18th century buildings, there is no ridge beam at Chatham; the major rafters frame into the kingpost and are secured with wood pins, while other rafters are half-lapped at the peak and nailed.

The lumber used for this framing is both pit-sawn and hewn, sometimes with both methods employed on the same member. The connection between transverse and summer beams is a mortise and tenon joint pinned with a tree nail. Joists also frame into the summer beams with mortise and tenon joints.

Attic connections were made with the help of a numbering system. Each of two members which join are marked with Roman numerals denoting their location. It can be surmised, therefore, that the entire structure, having been prefabricated on the ground, was disassembled, hauled up to the second floor level, and then reassembled from the component parts according to the numbers. This technique, obviously, required a greater amount of planning and organizational skill than simply performing the work in place.

All attic spaces are insulated with an obsolete material consisting of seaweed filler quilted into a kraft paper envelope, fastened to the rafters and collar ties with nails. The filler was found to burn readily in the presence of the kraft paper, thus constituting an extreme fire hazard.

### Topics for Further Study

A "Class A" investigation of Chatham would undoubtedly provide a more in-depth understanding of this remarkable 18th century house. Several areas were not investigated due to the prohibition against using destructive investigative techniques. There are, however, areas of particular note which could prove fruitful without major intrusions into the fabric.

A more extensive study of the painted millwork would be useful in determining when major changes to the exterior were made. The main doorways might reveal precisely when the porch was removed and perhaps shed light on the original frontispiece appearance. An investigation of the shutters could reveal their age. The several pieces of trim used as nailers in the attic could be helpful in dating interior modifications. All plaster walls, especially those presently papered, should be investigated carefully. Mid-19th century paper has already been found in Room 201, and further conservation efforts should be directed there.

The present investigation was made in light of the proposed preservation treatment. If restoration is contemplated at a later date, more thorough investigation of the decorative elements of Chatham will be necessary.

Data exists suggesting location of the mill, storehouse, and smoke house mentioned in 18th century documents. These and other suspected sites should receive archeological investigation. The cave remains and graves are other areas for investigation.

#### B. The Kitchen and Laundry

The two remaining original outbuildings, the kitchen and laundry, will be treated briefly. Their authenticity has been established through documentary sources and verified by Class C fabric investigation. Recommendations for treatment of these structures include direction for future study.

### Kitchen Exterior

The insurance survey of 1797 identified the outbuilding on the south end of the plantation house as a "Kitchen 22 feet wide, 37 feet long, built of brick and covered with wood, one story high." Subsequent surveys identify it as such through May 1915. At some point after that date, probably during the Devore ownership, the building was converted to a residence for a member of the house staff. According to tradition, the butler lived in the structure.

The structure is built in much the same way as the plantation house. The brick are laid up in Flemish bond using glazed headers and grapevine joints. A combination of unchecked vegetation and crude repairs using portland cement have severely damaged certain parts of the brickwork. Trees and shrubs planted close to the north, east, and west sides of the structure have promoted a damp climate and the growth of fungus, severely damaging the brick, particularly at the water table. The structure is well endowed with architectural detail similar to the main house--rubbed brick jack arches, window jambs, and corners, for example. Other elements are treated in a less elegant manner appropriate to the size and function of the structure. The water table, for example, is a cove molding instead of an ovolo and cove. A plain soffit and fascia are employed instead of the modillioned cornice used on the main house.

In its original state, the structure did not have a second floor. The dormers, slate roof, and interior partitions are later modifications. Much of the history of changes in use and room arrangement might be discovered through an intensive fabric analysis, which was not in the scope of this project. It is sufficient to say, however, that the significance of this structure is derived from being one of the original structures at Chatham, an integral part of the original house operation.

The roof and dormers are covered with slate. A lozenge pattern is used in the dormer pediments, initiating, perhaps, a similar pattern detected in the now destroyed pediment of the former porch of the main house. The slate is sound, and the roof is in good condition. The gutters and downspouts, however, are painted ferrous metal and in poor

condition. They empty on the bare earth, promoting erosion and possible foundation settlement.

### Kitchen Interior

The building is presently finished on the inside with plaster walls, simple four-panel doors, and plain beaded trim, all of which is of 20th century origin. The plaster shows some minor cracking, and door heads are not level, indicating some recent settlement, possibly due to improper floor support. The floor finish is similar to the first floor.

The floor plans show the arrangement of first floor spaces into a central stair hall, a large room with a fireplace on the east, and two smaller ones on the west. The second floor consists of the continued stair hall, two flanking rooms lit by dormers and small end windows, and a centrally located bath:

### Topics for Further Study--Kitchen

An individual historic structure report should be programmed for this building to determine how much existing fabric is original and to outline the chronology of its use. The exact original arrangement of interior spaces might be determined through more extensive fabric investigation. Such a study could be undertaken before or as a part of stabilization and adaptation work on the structure, or, since the impact on historic fabric as a result of the proposed development is minimal, further study could be delayed to a future date. In the case of the latter, the building should be designated an Architectural Preserve and marked as such on the development drawings and site plan.

### Laundry Exterior

In its original form, the laundry was the identical twin of the kitchen, with one major exception: the laundry has always had a full cellar, as pointed out in Fitzhugh's advertisement of 1797: "detached from the MANSION-HOUSE are . . . a Kitchen and Larder, House

Keeper's Room and Laundry with a cellar underneath. . . ."

Consequently, the house stands slightly higher above grade and the kitchen, allowing space for cellar windows. Like its twin, the exact configuration of the original interior cannot be determined without extensive disruption of the fabric. Such investigation is an area for further study.

The terse insurance survey description is identical to that of the kitchen: "Laundry 22 feet wide, 37 feet long, built of brick and covered with wood, one story high." Outside, the laundry is less modified than the kitchen. There is only one door opening--the original, facing south, toward the main house. No dormers or new windows have been added, nor are there any signs of changes to the brickwork other than minor repairs. Approximately 100 square feet of brick is badly damaged or is in inappropriate repair material, including areas over the cellar windows requiring treatment similar to the same location on the plantation house. Like the other two original structures, all the brickwork of the laundry is painted white. The roof is slate and is in good condition. The gutters and downspouts are made of painted ferrous metal and are in a deteriorated state. The millwork is sound but needs to be painted.

#### Laundry Interior

As noted previously, the exact interior arrangement is not known in detail. It appears, however, that the space was divided into two unequal rooms by a partition to the west of the door. There are two generous fireplaces, which are presumed to be original since they rest on similar size original chimney foundations in the basement. The size of the fireplaces probably is due to the requirement that they accommodate large vessels needed for washing clothes.

The full cellar is reached by an exterior stair on the east side of the building. The floor is concrete; the walls are brick painted white. These brick foundation walls have suffered from moisture intrusion, probably due to the same combination of vegetative encroachment and disintegrating mortar which affects the plantation house. Much of the

sound wall surface is covered with mildew, and water which seeps through the wall collects in puddles on the floor.

The original floor framing seen from the cellar consists of 3 x 12 joists on approximately 20-inch centers spanning transversely. A modern center beam made of four 2 x 4s added later runs perpendicular to the joists and rests on 12 x 12 brick piers. The original 6-inch pine flooring is attached to this assembly, and the entire floor system is coated on the underside with a black substance, probably creosote.

Presently, the building has two main rooms, approximately equal in size, separated by closets and a bath. A small frame and clapboard attached shed was added to the north facade, providing space for a minimal kitchen which is provided with a wall-hung enameled double sink. The bath is functional and adequate for occasional use.

Since the Devore ownership, this building has been used as a guest house, outfitted with kitchenette and bath, and furnished with wainscot topped by a Greek key chair rail and dentil cornice. Paint samples from these areas verify the 1920s date.

#### Topics for Further Study--Laundry

An individual historic structure report should be programmed for this building to determine how much existing fabric is original and to outline the chronology of its use. Fabric investigation may be able to ascertain the exact original interior arrangement. Since there is no development proposed for the laundry at this time, further study can be delayed to a future date. The building should be designated an Architectural Preserve, and marked as such on the site plan.

#### C. Recommendations for Treatment--The Plantation House Complex

Two phases for treatment at Chatham are outlined in this section. Phase I includes only those emergency stabilization items necessary for meeting the proposed opening date of October 1977. Phase

II lists the additional work required to insure the continued preservation of the entire Chatham complex.

1. The Plantation House

a. Proposed Use

The use of the plantation house has been identified by management as follows: Rooms 104, 105, and 106 will be visitor occupied exhibit areas containing flatwork on the walls and freestanding display cases. The exhibit designer has not been named, but a conceptual plan has been produced outlining the scope of that work. Based on these parameters the visitor areas require no special structural modifications or mechanical equipment. It is emphasized, however, that any special lighting, audio visual, and electrical equipment, or any exhibit devices which encroach on historic fabric will require new and specific professional input to determine the compatibility of these intrusions with the preservation of the structure. Visitors will enter through the east door, circulate through the three rooms, then exit by the west door and continue the interpretive tour. Restrooms for the public will be located elsewhere on the property. The remainder of the first floor and the entire second floor are proposed as staff offices, with no visitor access permitted to those areas. Room 201 has been tentatively designed for use by the superintendent. The cellar will be unused.

It must be noted that in its present configuration, the second floor possesses only one means of egress--the south stair. Because this condition constitutes a hazard in the event of fire, and in order to insure the continued preservation of the structure, a fire detection system is recommended.

b. Phase I--Emergency Stabilization

These items are necessary prior to occupancy as outlined above:

1. Secondary support for first floor framing system. Columns are to be placed under existing summer beams as suggested in the structural engineer's report to shore up cracked beams.

2. Replacement of damaged first floor joists. Approximately 20 new members must be installed to replace existing members which have sustained water or insect intrusion.

3. Replacement of cellar window lintels. All existing lintels should be replaced with new steel or pressure impregnated wood lintels. It is highly recommended that any brick repairs above the windows be carried out at this time.

4. Installation of a perimeter drain to correct water intrusion through the foundation wall. As part of this work, the foundation wall below grade should be parged and sealed. Archeology will be required in the excavated area.

5. Rehabilitation of existing electrical system to bypass or remove all substandard wiring. It is strongly suggested that the new incoming service be sized to anticipate future electrical needs.

6. Removal of existing seaweed insulation and installation of 6-inch fiberglass batt insulation in attic floor.

7. Stabilization of chimneys.

8. Repair of approximately 100 square feet of slate roofing.

9. Glazing repairs. There are at least 20 broken or cracked lights which require replacement. In addition, every light requires removal of deteriorated putty and renewal with fresh glazing compound.

10. Exterior painting. After the glazing is complete, painting should be undertaken immediately to protect all exposed wood surfaces. The recommended color is gloss white, which is in keeping with the present paint and sympathetic with the historic appearance of the building. Loose or damaged paint should be removed carefully without injuring the millwork. Sound paint should be left in place and painted over. A well executed paint renewal schedule must be maintained by

periodic washing and touch-up. If this maintenance procedure is followed, the paint will last for many years without requiring repainting. Repainting on a schedule without regard to the need for such work should be avoided. The cornice should have any deteriorated paint removed before painting.

11. Replacement of historic materials. Fabric removed in the course of architectural investigation must be reinstalled under the supervision of a qualified project inspector or an historical architect.

12. Interior painting and repairs. Minor repairs are required on woodwork and plaster. The three visitor-occupied rooms require painting. If painting or new wallpaper is desired in staff areas, removal of existing fabric should not be attempted without professional advice for the salvage of historic materials.

13. Lightning protection. Existing air terminals require new anchors to the chimneys and an inspection of existing ground conductors.

14. Heating system rehabilitation. A new standby boiler, minor repairs, and new controls are needed to upgrade the existing heating plant to safe and acceptable standards (see mechanical engineer's report, Phase II).

15. Removal of vegetation. Much of the sub-grade damage to foundations is caused by the roots of plant materials which had been planted too close to the structure. Future growth should not be permitted within 10 feet of the foundation walls.

16. Insect control. A regular schedule of soil poison and insect control maintenance should be initiated to prevent future insect damage to the wood structure.

17. Cellar window repairs. Several windows have been identified for decayed wood lintels and millwork and deteriorated brickwork. Selected parts of the windows and frames must be replaced. The associated brick repairs are mentioned below.

18. Flooring. A section of modern 1 x 4 flooring approximately 6 x 6 feet located just inside the west door, Room 105, is rotted from below and requires replacement with similar material. The increased traffic at Chatham, from both visitors and staff, will quickly damage the exposed wood flooring unless protected. It is recommended that all visitor and staff areas be carpeted with a commercial grade level-loop carpet sympathetic in color and texture with its setting. This material will provide a protective covering over the historic floor, ease maintenance, and reduce sound reflection in visitor areas.

## 2. Professional Input

The main house, kitchen, and laundry are of the First Order of Significance. Work performed on these structures is subject to professional determination as required by NPS-28, Cultural Resources Management Guidelines. Drawings, specifications, or both are required for all of the above items.

## 3. Phase II--Preservation

The following items, in conjunction with the recommended treatment for support structures outlined in Part II of this report, constitute the work necessary for the preservation of the Chatham complex. All items below are of immediate concern, and should be undertaken without delay. Extended deferment of this work will endanger historic fabric.

### a. The Plantation House

1. Molded water table brick. The ovolo and cove water table cap have been lost or damaged in places, requiring replacement with a similar handmade material. Approximately 150 linear feet of new brick is needed. The new material should be made using a sample section of water table from the building to match the original as closely as possible.

2. Brickwork. A total of 600 square feet of new brick is required to replace damaged, missing, or inappropriate units. The new brickwork

needed includes about 10 percent gauged or "rubbed" brick. Attention should be especially given to the brickwork around the cellar windows.

3. Pointing. Tuck pointing to match historic materials will be required for approximately 2,500 square feet of brick wall. About 80 percent of this may be expected to require joint cleaning and mortar removal prior to pointing.

4. Paint removal from walls. As much residual paint on the brick walls should be removed as possible to prevent undue retention of moisture between the paint film and the wall surface. The method of removal should be subject to controlled experimentation and the approval of a qualified professional to insure no damage will be done to the fabric. Acceptable cleaning techniques include, but should not be limited to: brushing with a stiff non-metallic brush, low pressure water spray, scraping with a wood or plastic spatula, or any combination of these methods. Specifically forbidden are: sandblasting, chemical treatments of any kind, and scraping or brushing with metallic implements. Before the removal is undertaken, the walls must be examined for evidence, such as the marks of the porch pilasters, and this information recorded on the measured drawings.

Removal of paint from the wall will necessarily destroy the layering of paint from the latter half of the 19th century. These layers, however, have been recorded in this report, and much of the paint has already peeled off. The proposed removal will help prevent moisture from collecting on the surface of the wall, resulting in better prospects for the continued preservation of the building. The overall impact, therefore, is positive.

5. Shutters. As was noted previously, exterior louvered shutters were not an 18th century feature at Chatham. The recommendation is to retain the existing shutters in place, since preservation of the resource is the intent of the proposed treatment. The same care should be given to the shutters as to the other exterior millwork, and additionally, the anchorage and hinge operation should be checked. Replacement of all mounting screws into the window frames is also required.

6. Gutters and downspouts. The gutters on the manor house are made of copper and are in excellent condition. The downspouts, however, are not and have deteriorated seriously. They should be replaced with new lead-coated copper, then painted white. The drainage leads to a terra cotta drain. Prior to installation of downspouts, the drain should be inspected and cleaned to insure proper operation.

The drainage system for the wings and passages of the manor house are all ferrous metal. While these components are still usable, it is recommended that these be replaced when possible with lead-coated copper. All gutters, downspouts, and anchorages should match existing hardware, and after installation, be painted to match exterior wood trim.

7. Roofing: The peaks of the roofs are formed by loosely butted slates sealed with cement. Gaps in this treatment were observed during the roof inspection. The final course of slate on either side of the peak should be removed, the residual cement cleaned from the slate and the sheathing, and the slate reset in a comb ridge with fresh elastic slaters cement.

Spot inspections of roof areas accessible during investigation indicate approximately 100 square feet of individual slates will require replacement. Repairs of the roof should include a slate-by-slate inspection of all areas for firm anchorage and structural integrity.

8. Chimneys. Both chimneys on the plantation house are damaged by cracking, decayed brick, and joint deterioration. They should be repaired by removing decayed units only, replacing with new brick only those portions that are absolutely necessary. Loose mortar should be chiseled out of the joints by hand and repointed with a compatible mortar mix. Concealed metal reinforcement is necessary to tie together the vertical crack in the south chimney. If the chimneys will not be used, consideration should be given to capping them.

9. Lightning protection system. The existing air terminals should be retained, but with new anchors to the chimneys. The ground

conductors should be replaced with new cable run from the chimneys in a safe and approved manner. Lightning arrestors also should be provided in unprotected trees near the house.

10. Millwork. About thirty panels need to be reset into their frames. Most of these panels have warped loose from their stiles and rails or have suffered some other damage. A few split panels should be removed and the parts doweled and glued together. Chips, holes, or missing pieces should be repaired with wood of similar species. All interior millwork should be treated as historic fabric.

11. Windows. In order to reduce infiltration of unwanted outside air, all windows should be fitted with weatherstripping. In their present condition, the windows fit loosely or have not been operated regularly and will not open. As part of their rehabilitation, each of the approximately ninety sashes should be removed, fitted for weatherstrip, the counterweight system examined for wear or damage, repairs made, and the reassembled windows checked for smooth operation.

In order to take advantage of the natural temperature mitigating characteristics of the house, it is recommended that all windows be operable. An intimate indoor-outdoor relationship is a vital part of the Chatham experience, and garden smells and sounds should be allowed inside when the weather is mild. The windows, on the other hand, should fit tightly when mechanical ventilation is employed.

12. Plaster walls and ceilings. There are about 600 linear feet of cracks and minor damage to the plasterwork which need repairs.

13. Wallpaper. Nearly the entire second floor is wallpapered. This material should be taken off using a commercial steam wallpaper remover, the plaster repaired if necessary, and the walls resurfaced. New paper is suggested for the rooms and corridor walls; the ceilings should be painted. Extreme care should be exercised during wallpaper removal so that underlying layers, if present, are preserved and properly documented.

14. Painting. None of the paint at Chatham is in adequate condition to allow merely washing before occupation. All the plaster, wood trim, and paneling must be cleaned and repainted in order to restore its appearance. It is suggested that the colors be selected from the schedule of historic colors established through paint analysis.

15. Fireplaces. In the interest of safety, the fireplaces should not be used, and the flues closed.

16. Toilet facilities. It is recommended that public toilets not be located in the plantation house. Staff toilets should be located in the present bathrooms. The second floor facilities, Rooms 201a and 203a, should be modified to provide mens' and womens' bathrooms. The first floor bathrooms, Rooms 101a and 103a, could be used in their present condition. Modification of these rooms, however, will improve the use of space and reduce the maintenance requirements of the facilities. The lavatory, Room 111a, should remain without charge.

All the partitions scheduled for removal were installed by the Devores in the 1920s and are not historic fabric. Their removal will be monitored by an exhibit specialist to insure no damage is accidentally done to historic fabric. New pipes must be routed through existing chases; new wiring must be routed through existing conduit. Negative impacts will be minimal.

17. An interim heating system using many existing components is adequate for the present at Chatham. The use of such a system will not require removal of historic fabric, because the existing pipes and chases can be used. Required additions and modifications to the hardware presently in use were examined and analyzed by Mechanical Engineer Richard B. Case:

The heating equipment for Chatham is located in a utilities building in the garage wing, remote to the main house, and serves the following structures:

- A. Main House
- B. Laundry Building (Guest House)
- C. Kitchen Building (currently used as residence)
- D. Office space located in the utilities building

The central heating system is a hot water circulation type system with supply and return piping routed through a concrete tunnel. Parallel 3/4 H.P. circulation pumps (one stand-by) appeared to be in good condition. The oil-fired boiler was manufactured by Orr and Sembower, Inc., Size #327, with a Nu-Way Burner having a capacity of 6-10 gallons of #2 oil per hour. At an 8 gallon flow, this would be equivalent to (8 x 138,000 x .80 eff.) 883,200 BTU/hr. Although this system is in excess of 40 years old, it is in good repair. A 4,000-gallon underground fuel oil tank is located near the utility building. The tank is properly vented, but is in need of fuel gauge repair.

Domestic hot water was supplied to the aforementioned structures by means of a hot water boiler/circulating pump located within the utilities building. The domestic water piping was routed to each building through the concrete tunnel as mentioned above. The domestic hot water pump was controlled by time clock setting.

The main building is equipped with radiators, convectors, and a fan coil heating unit. A humidity supply system is currently installed as part of the fan unit assembly and should be replaced in the near future. The fan coil casing, near the humidifier, is very rusty and should also be repaired or replaced in the near future.

The laundry building is equipped with two small convectors and a heating coil fan unit. This fan unit was not operated so its condition is not known. The kitchen building is equipped with radiators only.

The electrical controls for the main heating system are in need of attention. At present, the entire heating system appears to be controlled by one thermostat located in the library room of the main building. With this condition, the kitchen building is likely to be overheated.

Accordingly, the following recommendations are based upon the immediate stabilization of heating the existing system at Chatham:

1. Adjust burners in both heating boiler and domestic hot water boiler.
2. Add combustion air ventilation capability for boiler room area.
3. Reline the domestic hot water boiler fire box.
4. Replace the domestic hot water circulation pump with a new unit.
5. Replace all loose insulation on both supply and return hot water piping.
6. Improve heating system controls as listed above.
7. Although the main house fan coil heating unit should operate for several seasons, it is in need of repair. The heating coil should be replaced and the frame assembly should be repaired.
8. Add three-way valve at kitchen building hot water supply with room thermostat.
9. Add outside air thermostat with a three-way valve to moderate boiler supply water temperature with varying outside air temperature.

The subject of air conditioning was discussed, but it was determined that no air conditioning would be required for offices. Planning for such a system should be a part of the overall rehabilitation effort. No window units were to be permitted. Estimated cost \$10,000

Additional improvements for long-term preservation (no cooling) include:

1. Installation of a standby boiler to supplement existing components.
2. Replacement of existing main house fan coil heating unit and humidifier with a new unit.
3. Addition of a new air filter system.
4. Replacement of piping insulation (approximately 50 percent).  
Estimated cost \$20,000

In the event of the installation of a cooling system, the following factors must be kept in mind:

1. Based on cooling a total of 5,250 square feet, air conditioning equipment would be approximately 20 tons.
2. New chilled water lines would be required.  
Estimated cost \$60,000

18. Electrical. Existing wiring is very badly deteriorated, and the main disconnect does not function at all. Investigation has shown that feeders from the service panel in the garage wing run underground to the distribution panel in the cellar of the plantation house. Individual circuits run in conduit to the first and second floor levels where the conduit stops, and final runs are made with flexible armored cable. Samples of this material show that the fabric insulation in some areas has deteriorated to a point where the conductors are exposed.

This system was apparently installed at the same time as the existing floor framing; that is, when the first floor ceilings were removed. Consequently, it is not possible to follow these cables to the second floor receptacles without removing either the floor or the ceiling, neither of which is practical.

Accordingly, Electrical Engineer John F. Kozel has proposed the following recommendations for immediate stabilization:

New wiring required for the operation of staff offices on the second floor and exhibits on the first floor be provided in keeping with accepted electrical system standards and preservation of historic fabric.

In addition, work for long-term preservation of the electrical system should include:

At Chatham the electrical system in the wing above the basement level is in poor condition and should be removed and replaced. The conduit in the basement and on the existing users can be reused in many

instances. There are considerable dead runs and other runs which should be replaced. Since we are revamping the interior it is recommended that MI cable or some other first-class wiring system be used. MI cable is the most fire resistant and best wiring system for a historic structure.

The other buildings should also be rewired at the time they are rehabilitated or modified. The type of wiring and circuitry should be determined for these structures depending upon their historic importance.

The power feeding the Chatham complex for the present should be sufficient. When the maintenance area is established and plans formed for air conditioning, etc., all high tension lines on Park Service property should be placed underground and two pad mounted transformers installed--one near the main house and one near the old barn.

Rewiring of the portions of Chatham to be utilized by park staff or park visitors should be accomplished before such activities are implemented.

19. Insulation. All seaweed and kraft paper insulation must be removed from the attic of the plantation house. New fiberglass blanket insulation is to be placed between the attic joists. In the attic of the south wing, a storage room with floor, the insulation should be placed between the rafters.

20. Security lighting. The existing security lights on the east and west elevations should be removed and replaced by concealed lighting in some other location.

21. Smoke detection and suppression. As a building of the First Order of Significance, smoke and fire detection systems are mandatory in this structure. The building is equipped with fire hoses concealed in the paneling in Rooms 102a, 109b, and 202, and professional fire fighting service provided by the City of Fredericksburg is five minutes away. It is felt that the house, as its use and occupancy is outlined in this

report, does not require a fire suppression system at this time. If the occupancy is changed in the future, or if extraordinarily valuable objects are exhibited, the possibility of installing such a system should be re-examined. The fire hoses and associated plumbing should be examined by a qualified fire inspector to insure the system is in acceptable working order.

22. Maintenance Manual. A Historic Structure Preservation Guide for Chatham should be programmed.

b. The Kitchen

This building is recommended for adaptation to a park employee's residence. It is located in a service yard area which can be screened visually from park visitors, and vehicular access separated from pedestrian traffic. The interior contains approximately 1,000 usable square feet, making it suitable for occupancy by a single person or a couple.

In order to bring the building up to acceptable standards, minor changes will be required in the room arrangement, and a new heating system, new bath, and kitchen fixtures will be needed. New paint and floor finishes are also required. The preliminary design for the house is shown in Appendix H.

1. New heating controls, as outlined in the engineer's report, will be required, using existing radiators and hot water supplies from the central heating plant.

2. The existing electrical system is not acceptable for the contemplated use. A new system, similar to the one proposed for the plantation house, will be required prior to occupancy.

3. Exterior work should include removal of vegetation in contact with the structure and cutting back of plant materials which shade the building, thus preventing the walls and surrounding ground from drying

properly. This condition is especially troublesome on the north and east sides of the structure.

4. The brickwork will require replacement of about 200 square feet with new material to match the historic units. In addition, 700 square feet of pointing with appropriate mortar to match the existing will be required. The mortar mix, application, and tooling should match that of the main house.

5. The chimneys require pointing and partial reconstruction. The west fireplace is presently closed. Its chimney should be properly capped to prevent water or insect intrusion. The other fireplace should be made inoperable. A smoke detection system similar to and connected to the same central system as that of the main house should be provided as a safety measure. In addition a portable fire extinguisher of appropriate size and type should be provided in the kitchen.

6. The downspouts should be replaced with similar appliances made of lead-coated copper, and ground drains should be installed.

7. The treatment of windows, exterior millwork, cleaning of brick walls, and minor roof repairs should be the same as for the main house.

No historic fabric will be removed from the exterior of the kitchen. Repairs will be performed under the supervision of an experienced exhibit specialist, insuring that the fabric will be respected. There will be no negative impact.

The repairs will arrest deterioration which presently threatens the integrity of the structure. This action will have a positive impact on the continued preservation of the structure.

Proposed renovation of the kitchen involves removal of the wall on the west side of the first floor, which is a 20th century change in the building. Introduction of modern appliances will require cutting a few small holes in the floor for new plumbing. The negative impacts of the

described work are minor when compared with the benefits of having a staff member residing on the Chatham property.

c. The Laundry

Continued use as a guest residence is the most promising and economical use for the laundry. The conversion of the building to a staff residence is not recommended for several reasons. The structure is a prominent part of the garden setting near the summer house and lily pond. There is no screening with trees and shrubs as there is on the garden side of the kitchen to insure privacy for the occupant. The only entry to the building faces a visitor area, and there is no vehicular access. Occasional use by guests or park staff in transition is most appropriate, however, and could be accomplished with little or no impact on the historic fabric.

Work required to accommodate this use includes:

1. Exterior brickwork repairs totaling about 200 square feet, similar to such work on the main house. Pointing of an additional 500 square feet is also needed.
2. Both chimneys suffer from severe brick decay and require partial reconstruction.
3. Vegetation on the north and west sides of the laundry should be removed to permit the building to dry out properly.
4. The downspouts should be replaced and ground drains checked for proper operation.
5. The treatment of exterior millwork, windows, cleaning of brick walls, and minor roof repairs should be the same as for the main house.
6. Perimeter drainage and foundation sealing is needed to stop moisture intrusion.

7. The interior requires painting and floor cleaning.
8. New heating controls and a new forced-air heating coil are needed.
9. New electrical wiring should be installed using components similar to those in the plantation house.
10. Appliances and furniture are needed to make the building hospitable.

No historic fabric will be removed from the exterior of the laundry. Repairs will be performed under the supervision of an experienced exhibit specialist, insuring that the fabric will be respected. There will be no negative impact. The repairs will arrest deterioration which presently threatens the integrity of the structure. This action will have a positive impact on the continued preservation of the structure.

Proposed interior changes involve no disturbance of historic fabric other than the possibility of a few small holes necessary for installation of new wiring. Floor cleaning will be non-abrasive and limited to mild chemical solutions. Repairs to the floor system will be performed without removal of historic fabric. The negative impacts of the described work are minor when compared with the benefits of making the laundry a functioning facility.

CHAPTER II  
THE SUPPORT STRUCTURES

As pointed out in Chapter I, Chatham has always possessed numerous dependent structures. The buildings which are there today are nearly all of pre-Pratt origin. With two exceptions, little information regarding their construction is available, and approximate dates can only be surmised from function, materials, or stylistic analysis.

The purpose of this section is to focus on the preservation needs of these structures, and to analyze their proposed or suggested use with regard to appropriateness as adaptive structures. There are four parts to the discussion of each feature: a description of the fabric as it stands, including any available historic data; suggested treatment to satisfy the immediate preservation needs of the structure; an outline of the recommended maintenance approach; and a suggestion for use compatible with the function, location, and configuration of the structure. All support structures need further study, and should be investigated in detail when funds are available for that purpose.

#### Caretaker's House

Description - This one-story frame house is the only building east of Chatham Lane. The walls are frame sheathed with clapboard on a brick foundation which encloses a half basement. Decorative hexagonal asphalt shingles cover the roof, dormer, and porch gable, surmounted by brick chimneys, all in good condition. Some rust stains are noted on the west exposure of the roof, possibly indicating faulty ferrous metal flashing. Wood trim around the eaves, soffit, and gables is sound but the paint is peeling from some parts of the millwork. The gutters and downspouts are mechanically sound but are painted and peeling like the trim. The double hung sash windows, window casings, and siding are all in excellent condition.

The interior finish of the caretaker's house is painted plaster, showing no cracks or signs of settlement, and this finish is carried throughout the building. A new forced hot air heating system is centrally located in the basement.

Behind the house is a small chicken coop for domestic use and a detached garage.

Treatment - The overall condition of this structure is excellent, as a result of care by a long-time estate employee prior to NPS acquisition of Chatham. The cornice and gutters need to be painted and spot touch-up should be done elsewhere as required. The source of staining on the roof should be ascertained as a precaution.

Maintenance - Regular inspection and maintenance should be carried out on the same basis as other park residences, except that the exterior appearance should not be altered without consideration by a qualified professional.

Use - Continued use as a staff residence is the most appropriate function for the building.

#### Stable and Garage

Description - This structure is actually composed of three components joined to form a simple complex. The main part is a one-story brick building with a hay loft and tack room above. The roof is covered with asphalt shingles which were installed in about 1965 and are in excellent condition. The millwork is sound but needs painting. The ferrous metal gutters are deteriorated.

The entire building was painted white and exhibits the same problems noted for the main house. In addition, there are shear cracks visible over window heads and around the garage doors which appear to be related to modifications made when the building was modernized. About two-thirds of the structure has been converted to a modern garage by reinforcing the ceiling beams with steel tie rods and pouring a concrete slab floor. Communicating with the garage is a storage room. The remaining space in the one-story brick building is taken up by the stair to the loft and a room used for garden implement storage. This space leads to a brick wing which contains horse stalls made of hardwood

and fitted with brass hardware. The stalls have not been used for some time, but otherwise are in excellent condition. The hardware deserves note for its unusual design and excellent finish quality.

The brickwork and millwork are in about the same condition as in the one-story brick building. The roof of this section, however, is covered with wood shingles on open sheathing. There are several places known to leak in this area, and some water damage has been done to the sheathing and flooring.

To the east of the brick stable is a partly enclosed post and beam wing arranged in an "L" shape, forming a yard. The structure is in good condition. The roof was renewed in 1970 with asphalt shingles.

Treatment - Replace with shingles to match the garage wing. The gutters and downspouts should be replaced with lead-coated copper, and the ground drains checked for proper operation. The exterior millwork needs painting.

The brickwork should be cleaned using the same method as for the main house, after which about 100 square feet of brick should be replaced, and 200 square feet of pointing done.

The interior should be cleaned and unnecessary flammable materials removed. Particular care should be exercised in the stall area to avoid damage to the wood or hardware. Appropriate fire extinguishers should be placed in the garage and storage areas. Extra wood trim stored in the loft rafters dates from the renovation of the 1920s and is a valuable stock for repair purposes. Also stored in the loft are ten columns from the now lost porches. The square ones are the lower piers of the west porch. The cylindrical columns are from the east porch. These columns form an important historic resource and should be accessioned into the park's artifact collection and carefully protected and preserved. The sliding paneled door on the east end of the stable wing is also an important artifact. It should be removed, with all hardware, accessioned into the park collection, and stored in a safe place in the main house.

Maintenance - The present exterior appearance of the building should be maintained, except that efforts to remove paint from the brick walls should continue on a yearly basis until all paint is removed. Vegetation near the structure should be kept from climbing on or touching the walls.

Routine interior maintenance can be carried out as for a "non-historic building," except for the stable area, where special care must be exercised. Changes in the interior structure should be carried out only after consultation with an historical architect.

The open wing should be painted only when the present coat is worn, cracked, or peeling. Painting on a schedule without regard to need is not recommended.

Use - The garage is appropriate for its continued use in that capacity. The first floor storage area can continue to be used for its intended purpose. In this structure, as in all utility buildings which have historic value, prudent fire precautions and steps to minimize incidental damage should be planned and implemented by the maintenance staff. Installation of fire extinguishers, for example, should precede occupancy.

It is recommended that the stalls in the stable wing be designated an Historic Preserve, and activity there be limited to uses which will not damage the fabric.

The open wing should continue being used as an area for storage of farm vehicles and equipment.

#### Corn Crib

Description - Opposite the stable and garage stands a corn crib built of 2 x 4s with 1 x 3s forming the walls. All of the wood structure is in good condition. The use of wire common nails throughout the wood construction indicates the structure was built in the 20th century. The

roof is of deteriorated shingled wood and topped by a cupola which once held a bell (now in the possession of Dr. Massad who lives immediately to the south on Chatham Lane), reportedly used for calling the farm workers. The structure rests on concrete footings.

Treatment - Replace the roof with new wood shingles similar to the existing ones. Immediate painting is not required but can be expected to be needed shortly. Monitoring is required.

Maintenance - Periodic inspection and painting when required.

Use - Continued maintenance as an element in the Chatham scene.

#### Gas Pump

Description - A 1930s vintage gas pump originally for private domestic and farm use.

Treatment - Safety certification by a qualified inspector; inspection of fuel storage tank; and renewal of worn parts as required.

Maintenance - Periodic painting and inspection.

Use - Gas pump for fueling work vehicles.

#### Well House

Description - Prior to conversion of Chatham to the county water system, water from this well was pumped to a water treatment facility in the watchman's office and then distributed for domestic purposes. Water is still pumped from this well and used for irrigation.

The well house also is the place where electric service for Chatham enters the estate and is metered. Transformers are located on a pole adjacent to the house. Also located here are circuit breakers and pumps.

The building is built of brick, partially set into the slope of the hill, fitted with a wood and glass door. The roof is a concrete slab with a center vent.

Treatment - Secure roof vent and animal screen. Inspect circuit breakers and pumps for proper operation. Replace as required.

Maintenance - Periodic inspection of mechanical and electrical equipment; inspection of roof and brick walls; painting of wood door and trim when needed.

Use - Continued use as mechanical and electrical control room for authorized personnel only.

#### Watchman's Office

Description - A proposed landscape plan of 1922 shows a simple rectangular building in the location of the watchman's office. It is not known if this represents part of the present building, or whether the plan merely shows a suggestion for a building at this location. By 1932, however, the structure was in place in its present configuration, as shown in an engineer's plan of that date. The construction and the detail of the building strongly suggests an early 20th century date. There are three parts to this structure: a brick house, similar to the kitchen, the first floor of which has a small office and a stair to the second floor; a wing, extending to the south from the house; and a curved portico, enclosing garage and storage space. The interior space of the wing actually includes part of the house volume, limiting the size of the office space and stair in the watchman's office. The wing is devoted wholly to mechanical equipment: the furnace, which supplies heat to the main house, kitchen, and laundry; the domestic hot water tank; disused water treatment tanks; electrical panels; and the furnace fuel tank are located in this area. The large water tank in the wing is a functioning part of the domestic water system. The water presently flows through part of the water treatment valve system into the large tank, then out to the other structures. The treatment function is no longer needed since the

water comes from the county system, but it is suggested that the tank be left in use as a reserve firefighting supply.

Treatment - The exterior brick walls are painted and require cleaning as outlined for the main house. In addition 150 square feet of pointing and 50 square feet of brick replacement are required. The west chimney is damaged, presently leaning eastward. It should be rebuilt with new brick to match the existing materials.

The dormer wood trim needs repair and painting. The gutters and downspouts should also be painted, and the ground drains checked for proper operation. Other millwork on the north side of the watchman's office needs washing only. The millwork on the wing and curved portico need paint.

The interior requires thorough cleaning, minor plaster repairs, and new paint throughout. The electrical and heating systems should be upgraded to acceptable standards if the use of the building as determined by management is on a regular basis.

Maintenance - The watchman's office is a utility structure. The exterior facing north and east should be kept in its present appearance in order to maintain the historic scene. The interior areas devoted to mechanical equipment may be treated as non-historic spaces. The office area may also be treated as non-historic insofar as such treatment will not affect the exterior appearance.

Use - The office space is suited for continued use for that purpose. The mechanical area should remain in its present state, with the possible exception of the removal of the water treatment plant.

#### Gate

Description - This brick gate extends from the west ends of the watchman's office and the kitchen, enclosing the service yard formed by these two structures. The wall curves to the west, terminating in square

brick pylons capped with stone finials. The brick is spalling and badly decayed in several places. From the pylons are hung wooden gates which are in good condition. The installation date of the gate is not known, but it probably falls within the Devore residence during the 1920s.

Treatment - There is very serious damage done to this structure by brick decay. The soft brick is laid up in portland cement mortar, causing the face of the brick to spall off. Decayed units should be replaced. Paint should be removed as described previously.

Maintenance - Periodic inspection; paint gates as necessary.

Use - Continue existing function.

#### Ha-Ha Wall

Description - A Ha-Ha is a wall or fence separating two drastically different levels of the landscape. This one is built of brick approximately 2 feet 6 inches high by 1 foot wide. Ornamental cast concrete pineapples decorate corners and ends of the wall. The wall is a part of the Devore renovation.

Treatment - Secure loose pineapples.

Maintenance - Periodic inspection.

Use - Continue existing function.

#### Satyr Temple

Description - This structure is one of several ornamental garden objects. It was probably designed in 1926 by Oliver Clarke. His drawings for the companion Empty Temple are in the possession of the National Park Service, and the two probably were done at the same time.

The structure is cast concrete to simulate stone on a three step base which supports eight columns. The entablature and roof are also concrete. Cracks have developed at the cornice where standing water at the edge of the roof has penetrated the cement wash surface.

Inside the temple is a limestone figure of a satyr seated on a pedestal.

Treatment - Application of a water seal or new cement wash to seal the roof. The structure should then be cleaned to remove water stains and moss.

Maintenance - Periodic inspection.

Use - Continue existing function as visual amenity.

### Empty Temple

Description - This structure was designed by Oliver Clarke in 1926, and his original drawings are available. There is a plinth inside to accept a statue, but there presently is none.

Like the Satyr Temple the construction is of concrete cast to simulate stone. There also is a severe problem with water damage through the roof and on the columns.

Treatment - Seal the roof and clean the structure below.

Maintenance - Periodic inspection.

Use - Continue existing function as visual amenity.

### Ha-Ha Stair

Description - This stair leads from the second to the lowest terrace level. The treads and risers are made of hard brick laid on edge with portland cement. Ornamental pineapples make up the top of the stair rail.

Treatment - Six bricks require replacement.

Maintenance - Periodic inspection.

Use - Continue existing function.

#### Music Stair

Description - This is another one of Clarke's designs, done in 1926 for the Devores. The stair leads from the highest terrace level to the middle level. The base is brick, the treads are concrete, and the railing is ornamental wrought iron. A musical score is incorporated into the horizontal rail.

Treatment - None required.

Maintenance - Periodic inspection, painting of ironwork when required.

Use - Continue present function.

#### Statue of Flora

Description - This is a slightly less than lifesize representation of Flora, Roman goddess of flowers, made of cast concrete on a pedestal.

Treatment - Cleaning with mild soap and warm water, using a stiff non-metallic brush.

Maintenance - Periodic inspection.

Use - Continue present function as a visual amenity.

## Summer House

Description - The architect's plans exist for this structure: it was built in 1940 by the Pratts. The floor is covered with quarry tile on a concrete slab approximately six inches above grade. Wooden columns and end walls support a battened copper hip roof. Enclosing the roof are bronze mesh screens which can be covered with removable louvered panels during the winter. The interior can be divided by louvered panels which fold for storage into the side walls at the east and west ends of the structure.

Treatment - None required.

Maintenance - Periodic inspection and painting when required. Seasonal removal and replacement of louvered panels.

Use - The location of this structure near the garden and its excellent physical condition make the summer house an ideal concession facility or picnic area in warm weather. There is adequate space on the lawn to the north of this feature for tables without intruding on the vista of the house and garden. If the summer house is not used as a concession space, the facility should be fitted with tables, chairs, and trash receptacles, thus providing a shaded lunch or rest area.

## Lily Pond

Description - This concrete basin supports water lilies and goldfish. It is located on axis with the summer house and photographs document its existence at least as early as 1927. The pond presently is cracked in several places and does not hold water well.

Treatment - The fish and plants should be temporarily removed, and the cracks repaired with cement compatible with the existing material. The basin should then be cleaned and coated to the waterline with clear epoxy resin, refilled, and the fish and plants returned.

Maintenance - Clean and inspect periodically. Top off water during hot, dry summer months.

Use - Continue use as a visual amenity. A wide planting border is suggested to help keep visitors away from the pond.

### Lion Urn

Description - The origin of this carved sandstone object is unknown. It may have been a well cover or part of a fountain.

Treatment - None required. Analysis by a curator might be helpful in determining the origin of this object.

Maintenance - None required. Do not attempt to clean this object.

Use - Visual amenity.

### Pergola

Description - Surrounding the lion urn is a pergola made of wooden lintels on brick piers and concrete column and covered with roses.

Treatment - Restore or replace lintels. Repair deteriorated brickwork.

Maintenance - Period inspection.

Use - Visual amenity.

### Gate

Description - Brick piers support a wrought iron gate. A wrought iron fence flanks the piers and connects to the garden wall.

Treatment - Repair decayed bricks. Attach fence to piers.

Maintenance - Periodic inspection.

Use - Visual amenity.

#### Garden Wall

Description - A seven-foot wall surrounds the formal garden area of Chatham. The wall is approximately eight inches thick made of brick laid up in Flemish bond. Numerous areas suffer from deteriorated brick due to the use of soft brick and portland cement.

Treatment - Several hundred square feet of brick require replacement.

Maintenance - Periodic inspection.

Use - Continue present function as a visual amenity.

#### Statue of Ceres

Description - This object is the companion to the Statue of Flora.

Treatment - Cleaning with mild soap and warm water, using a stiff non-metallic bristle brush.

Maintenance - Periodic inspection.

Use - Continue present use as a visual amenity.

#### Greenhouses

Description - The newer building of the two greenhouses was constructed in 1935, according to plans and contract documents now in the possession of the National Park Service. The construction date of the older greenhouse is unknown. Both Pratts had a passion for fresh flowers, and Mrs. Pratt was at one time active in the Virginia Garden Club.

Both structures are composed of a greenhouse proper attached to a clapboard potting shed. Beneath this latter area of the older greenhouse is a cellar housing a boiler which produces hot water for heating the greenhouses. Adjacent to the furnace room, under the gravel walk between the buildings, is a concrete coal bin, now empty. Hot water supplied by the boiler is circulated to pipes which run under the benches of both houses and to a heated outside frame.

The greenhouses are made of brick to about three feet in height; then glass above. The older greenhouse is a wooden structure with plain glass and side vents. The newer greenhouse is constructed of manufactured metal framework with curved glass eaves and a vented ridge.

Treatment - None required.

Maintenance - Periodic inspection and painting.

Use - These structures were functioning greenhouses in spring 1975, and may be reactivated at any time. It is recommended that they be returned to use as soon as possible.

### Dairy Barn

Description - Originally a dairy barn, the structure is now used for storage and as a tool shed. No documentation is available to fix a construction date for the barn. An interview with William Key Howard, son of Allen Randolph Howard who owned Chatham between 1909 and 1914, indicated that both the dairy barn and the milk house were in their present locations during that period. The barn, furthermore, is included in a 1922 landscape plan, and architectural evidence points to a late 19th or very early 20th century construction date for both structures.

The dairy barn has a post and beam structure with clapboard siding and a five-year-old asphalt shingle roof. The floor is concrete, and the stalls are still intact. The two attached storage sheds, are later

additions to the central structure. A small gabled loft is located in the center of the building. The windows have been reduced in size as indicated by the double sills on the north side.

A corrugated steel-roofed shed is located to the west.

Treatment - Demolish the steel sheds on the west side. No other treatment required.

Maintenance - Periodic inspection. Painting when required.

Use - The dairy barn is appropriate for storage and for vehicle parking.

This structure should be a subject for future study. Modifications to the existing fabric should be undertaken only after study by a qualified professional.

#### Milk House

Description - This building is mentioned by Mr. Howard as being in place in 1908, and architectural evidence indicates an early 20th century date for the milk house. The interior consists of two rooms equipped with water-chilled milk coolers, separated by a small storeroom. The facility has been non-functional for at least 25 years, having been used during that period as a staff toilet and storage space.

The building is made of rusticated concrete block, sometimes called cast stone, simulating ashlar masonry construction. A pediment over the entry, supported by two concrete block columns, is flanked by a small sash window on each side. The walls show extensive shear cracking, probably due to settlement at the east and west ends of the structure, and there is also a crack and minor lateral displacement in the west pediment column. The roof is an asphalt shingle construction installed about 1965. The cornice, windows, and millwork are slightly damaged in places.

Treatment - Shear cracking appears to be due to settlement. Underpinning, soil stabilization, or a combination of both may be necessary to correct this condition. One of the porch columns also requires reinforcement. The woodwork should be repaired and painted. There are indications that the exterior walls of the building were originally painted or whitewashed. Further study should be devoted to the original exterior appearance before action is taken regarding the walls.

Maintenance - Periodic inspection. Painting when required.

Use - The milk house is an important interpretive element of the Chatham story, forming a functional system with the pastures and dairy barn. Exterior stabilization and use as a visual element at Chatham is recommended.

#### Cave Remains

Description - The remains of a man-made indentation are located in the side of the north ravine. The walls show marks of a stone axe or chisel. It was noted in the inventory of 1797 that Chatham possessed an ice house, and this feature may have served that function. The roof of the indentation has collapsed, covering the floor and making investigation of that area impossible without removing a considerable amount of debris.

#### Sewage Treatment Tank

Description - A three-stage sewage treatment tank is located on the rim of the north ravine, west of the milk house. The operation of this facility is discussed in the aforementioned mechanical engineer's report.

#### Graves

Description - Granite markers inscribed "Unknown. U.S.A. 1862" locate the places where by tradition workers during the 1930s uncovered

human remains, assumed to be part of the Union burials carried out at Chatham during the Battle of Fredericksburg. See Chatham Site Sketch (Appendix A) for approximate locations of these graves.

Treatment - The remains should be exhumed for archeological investigation to determine whether they are in fact human and military burials, and the disposition of the remains should be determined by management.

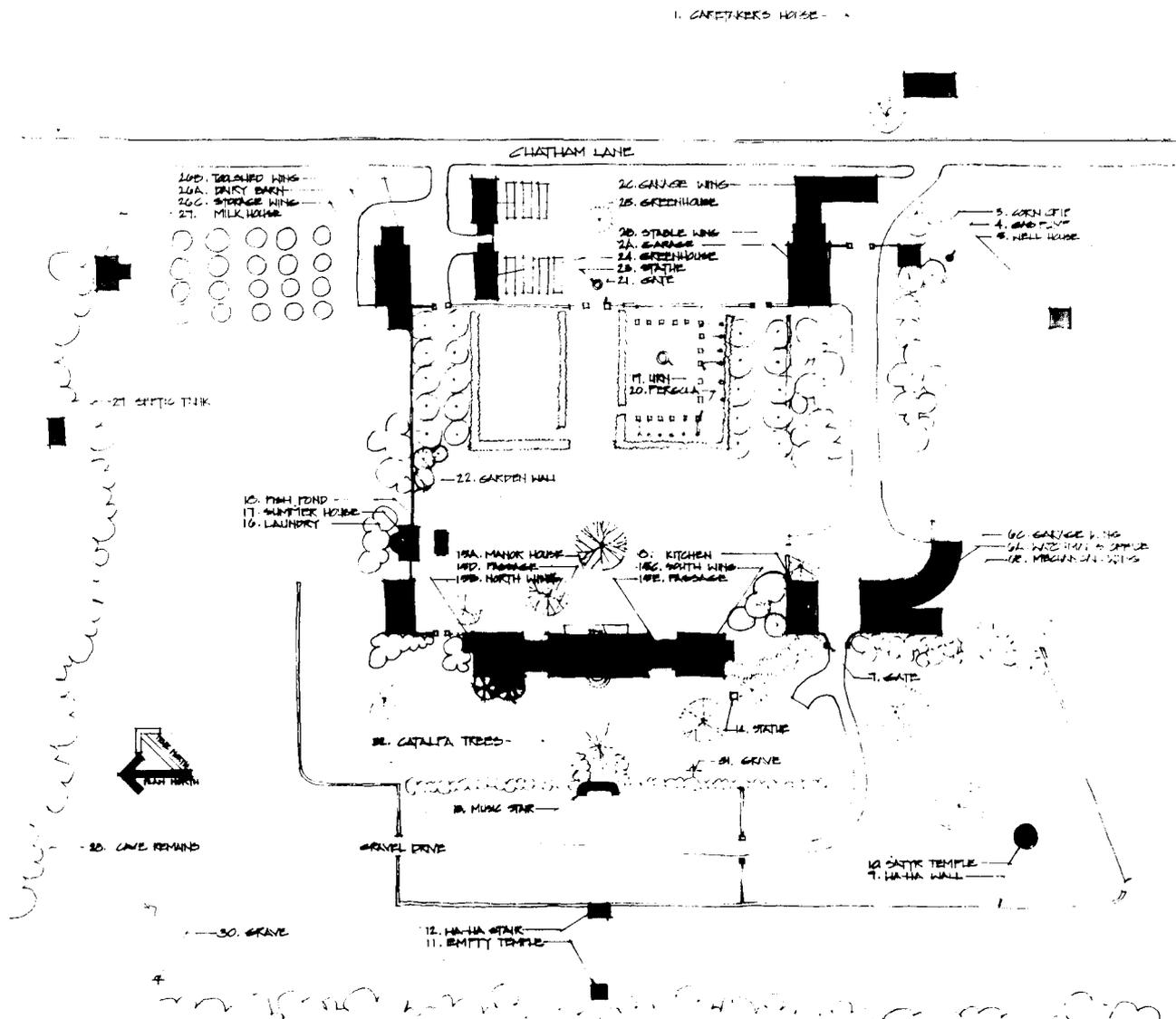
### Catalpa Trees

Description - The 1862 photographs show these two trees, mature even then, in place during the battle. This is the only historic vegetation known to be in existence during the historic period which still survives.

Treatment - The trees should be cared for by qualified professionals to prolong their life. They should be replaced with the same species in the same location after their demise.

APPENDIXES

A. CHATHAM SITE SKETCH  
1976



Chatham Site Sketch

NOTE:  
 1. ALL DIMENSIONS ARE IN FEET  
 2. ALL DIMENSIONS ARE TO FACE UNLESS NOTED OTHERWISE  
 3. ALL DIMENSIONS ARE TO CENTER UNLESS NOTED OTHERWISE  
 4. ALL DIMENSIONS ARE TO SCALE

PREPARED	DRAWING NO.
DESIGNED	22004
DRAWN	NO.
CHECKED	SHEET
DATE	5
	OF 28

B. MUTUAL ASSURANCE SOCIETY OF VIRGINIA INSURANCE  
POLICIES FOR CHATHAM, 1796-1859

N. 178

Form of the Declarations for Assurance.

I the underwritten William Fitzhugh residing at Chatham in the county of Stafford do hereby declare for Assurance in the Mutual Assurance Society against Fire on Buildings of the State of Virginia, established the 26th December, 1795, agreeable to the several acts of the General Assembly of this State, to wit:

My free Buildings are at Chatham situated between ... and ... Their dimensions, situation and contiguity to other buildings or wharves, what the walls are built of, and what the buildings are covered with, are specified in the hereunto annexed description of the said Buildings on the plan, signed by me and the appraisers, and each valued by them as appears by their certificate here under, to wit:

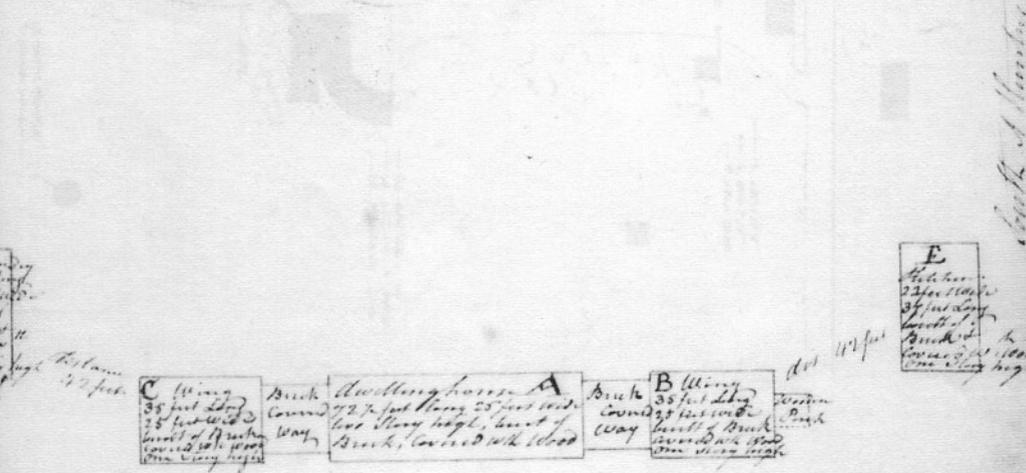
The dwelling do. marked A.	at 8000 Dollars,	say eight thousand	Dollars
The Wing do. B.	at 4500 do.	four thousand five hundred	do.
The do. C.	at 4500 do.	four thousand five hundred	do.
The do. D.	at 1800 do.	eighteen hundred	do.
The do. E.	at 1800 do.	eighteen hundred	do.
The do. F.	at do.	do.	do.
The do. G.	at do.	do.	do.

say Twenty thousand four hundred Dollars in all.

I do hereby declare and affirm that the above mentioned property is not, nor shall be insured elsewhere, without giving notice thereof, agreeable to the policy that may issue in my name, upon the filing of this declaration, and I provided the whole sum do not exceed four-fifths of the verified value, and that I will abide by, observe, and adhere to the Constitution, Rules and Regulations as are already established, or may hereafter be established by a majority of the insured, present in person, or by representatives, at a general Meeting to be agreed upon for the said Assurance Society. Witness my hand and seal at ... the ... day of May 1796

WE the underwritten, being each of us House Owners, declare and affirm that we have examined the above mentioned property of William Fitzhugh Esq. and that we are of opinion that it would cost us ... Dollars to build the same, and is now actually worth ... Dollars in ready money, and will command the same as above specified to the best of our knowledge and belief.

The foregoing valuation done to induce form before me, a Magistrate for the said ... of ... Given under my hand this ... day of May in the year 1796



West - River Rappahannock

No 2095. The buildings they now are in this declaration  
 Are now actually worth  
 2800  
 170  
 2970 Dollars as stated in

West  
 East South  
 West North

Re-valuation of the Buildings insured for declaration

Re-valuation of the Buildings insured for declaration  
 No 2095, as per endorsement hereon

the underwritten William Fitzhugh  
 residing at the City of Alexandria in the County of Fairfax  
 Assurance in the Mutual Assurance Society against Fire on Buildings of the State of Virginia.  
 do hereby declare for

the Land of Robert Smith North and Hal of Robert  
 Lewis South in the County of Stafford  
 situated between  
 dimensions  
 are specified in the hereto annexed description of the said Building on the plat, signed by me and the appraisers  
 are valued by them, as appears by their certificate hereunder, to wit:

marked	Dollars		Doll.
The Building House	A at 3700	Three thousand seven hundred	do.
The Brick Wings	B at 2500	Two thousand five hundred	do.
The Wells	C at 4500	Four thousand five hundred	do.
The Laundry	D at 1800	One thousand eight hundred	do.
The Kitchen	E at 1600	One thousand six hundred	do.
The	F at		do.
The	G at		do.
The	H at		do.
26500			

do hereby declare, and affirm, that I hold the above-mentioned Building with the land on which it stands in fee-simple, and that I am not, nor shall be insured elsewhere, and that I will abide by, observe and adhere to the Constitution, Rules, and Regulations, which are already established, or may hereafter be established by a majority of the Insured, present in person, or by representatives, or by the majority of the property Insured, represented either by the persons themselves, or their proxy duly authorized, or their Deputy, as established by law, at any General Meeting to be held by the said Assurance Society; or which are or hereafter may be established by the President and Directors of the Society. Witness, my hand and seal this Twenty eighth day of November 1855

Wm. Fitzhugh Special Agent. H. K. Lough

We the underwritten, being each of us Freeholders, declare and affirm, that we have examined the above-mentioned Buildings of Wm. Fitzhugh and that we are of opinion that they would cost in cash Twenty five thousand Dollars to build the same, and that now (after the deduction of Two thousand Dollars) they are actually worth Seventy thousand Dollars in ready money, as above specified to the best of our knowledge and belief, and the said subscriber hath acknowledged before us his above signature, and we verily believe the Building herein described is not over-valued.

Wm. Banks Special Agent. Philip Lipscomb

Brick Wing on the West side of the Building 23 feet wide covered with Wood.  
 This part of the Building is 23 feet high, 23 feet long, and covered with wood.  
 This part of the Building is 23 feet high, 23 feet long, and covered with wood.  
 Brick Wing on the East side of the Building 23 feet wide covered with Wood.

Philip Lipscomb  
 William Taylor

The Special Agent will write nothing on this margin.

No. 1330. { Revaluation of Building formerly declared for Assurance by William Fitzhugh, as per declaration No. 979.

I the underwritten Churchill Jones

residing at Chatham in the county of Stafford do hereby declare for assurance in the Mutual Assurance Society against fire on buildings of the State of Virginia, my five buildings on my farm called Chatham now occupied by myself situated between the Rappahannock River on the West and the Survey of Webb Deubar & William Jones on the North & East

in the County of Stafford Dimensions, Situation and Contiguity to other Buildings or Wharves, what the walls are built of, and what the Buildings are covered with, are specified in the hereunto annexed description of the said Buildings on the Plat signed by me and the Appraisers, and are valued by them, as appears by their Certificate hereunder, to wit :

	MARKED.	DOLLARS.		Dollars.
The dwelling house	A at	9000.	Say Nine Thousand	do.
The wing to Colts	B at	4800.	Four thousand eight hundred	do.
The Colts stable	C at	4800.	Four thousand eight hundred	do.
The Laundry	D at	1400.	Fourteen hundred	do.
The kitchen	E at	1200.	Twelve hundred	do.
The	F at			do.
The	G at			do.
The	H at			do.

\$ 30600.

Say Twenty Thousand Six hundred Dollars in all. I do hereby declare and affirm, that I hold the above-mentioned building with the land on which they stand in fee simple and that they, and nor shall be insured elsewhere, and that I, my heirs and assigns will abide by, observe and adhere to the constitution, rules and regulations, which are already established, or may hereafter be established by a majority of the insured, present in person, or by representatives, or by a majority of the property insured, represented either by the persons themselves, or their proxy duly authorised, or their deputy, as established by law, at any general meeting to be held by the said Assurance Society; or which are or hereafter may be established by the Standing Committee of the Society. Witness my hand and seal this 12 day of January 1818

Teste, Churchill Jones & Son

A.R. Taylor Special Agent.

WE the underwritten, being each of us Freeholders, declare and affirm, that we have examined the above-mentioned building of Messrs Churchill Jones and we are of opinion that they would cost in cash Twenty Two Thousand dollars to build the same, and that now (after the deduction of fourteen hundred dollars for decay or bad repair) are actually worth Twelve Thousand six hundred dollars in ready money, as above specified to the best of our knowledge and belief. As witness our hands.

I the undersigned do hereby certify that I verily believe the buildings herein described are not over-valued.

Robert Ellis W. Robinson

A.R. Taylor Special Agent.

North, The Survey of William Jones

Handwritten notes on the left side of the page, including 'Rappahannock River' and other details.

117. Laundry built at North end with assistance of 22-137.

Handwritten notes on the right side of the page, including 'Churchill Jones' and 'Robert Ellis'.

South, The Survey of W. Deubar Jones

Town of  
No. 2865

Revaluation of 6 Buildings formerly declared for Assurance by Churchill Jones as per declaration No. 1330, 1331

I the underwritten Churchill Jones

residing at Chatham in the county of Stafford do hereby declare for assurance in the Mutual Assurance Society against fire on buildings of the State of Virginia my six buildings on my lots at Chatham now occupied by myself situated between the land of Alexander Walker on the North and that of Henry Thompson on the South

in the County of Stafford Dimensions, Situation, and Contiguity to other Buildings or Wharves, what the walls are built of, and what the Buildings are covered with, are specified in the hereunto annexed description of the said Buildings on the Plat signed by me and the Appraisers, and are valued by them, as appears by their Certificate hereunder, to wit:

	MARKED,	DOLLARS.	Say	DOLLARS.
The Dwelling house	A at	6000	Six Thousand	do.
The Dining & sitting	B at	3000	Three Thousand	do.
The Dining & sitting	C at	3000	Three Thousand	do.
The Laundry	D at	1000	One Thousand	do.
The Kitchen	E at	1000	One Thousand	do.
The Mill house	F at	3000	Three Thousand	do.
The	G at			do.
The	H at			do.
		\$ 17000.		

Say, Seventeen Thousand Dollars

I do hereby declare and affirm, that I hold the above mentioned buildings with the land on which they stand in fee simple and that they are not, nor shall be insured elsewhere, and that I and my heirs and assigns will abide by, observe and adhere to the constitution, rules and regulations, which are already established, or may hereafter be established by a majority of the insured, present in person, or by representatives, or by a majority of the property insured, represented either by the persons themselves, or their proxy duly authorized, or their deputy, as established by law, at any general meeting to be held by the said Assurance Society; or which are or hereafter may be established by the Standing Committee of the Society. Witness my hand and seal this 30<sup>th</sup> day of May 1821.

Teste,

A. Taylor, Special Agent.

Churchill Jones, Seal

WE, the underwritten, being each of us Freeholders, declare and affirm, that we have examined the above mentioned buildings of Messrs Churchill Jones and we are of opinion that they would cost in cash to build the same, and that now (after the deduction of repair) are actually worth dollars for decay or bad dollars in ready money.

I the undersigned do hereby certify that I verify believe the buildings herein described are as above specified to the best of our knowledge and belief.

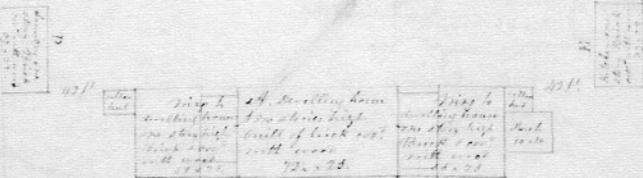
A. Taylor, Special Agent.

William Thorne  
J. Robinson

East a Public Road

These buildings are within less than half a mile of the limits of the Corporation of Providence. The latter line separates the boundaries of the lots of not more than 2 acres of Land - A, B, C, D, E, F, G, H, are contiguous to each other - D, E, F, G, H, to no house windows - A, B, C, D, E, F, G, H.

Churchill Jones  
William Thorne  
J. Robinson



357  
53  
1247  
187

my ad. this out nothing write will Agent Special The

No. 9279 } Revaluation of Buildings formerly declared for Assurance by  
 Churchill Jones } per Declaration No. 2865  
 of the underwritten John Coalter

residing at \_\_\_\_\_ in the county of Stafford, do hereby declare for Assurance in the **MUTUAL ASSURANCE SOCIETY** against Fire on Buildings of the State of Virginia, my building is now occupied by myself situated between on the East side of the Rappahannock River opposite the town of Surmest's Ferry.

in the county of Stafford, the dimensions, situation and contiguity to other buildings or wharves, what the walls are built of, and what the building is covered with, are specified in the herunto annexed description of the said building on the plat signed by me and the appraisers, and are valued by them, as appears by their certificate hereunder, to wit:

	MARKED	
The Sawing	A at \$ 6750	Say Six thousand Seven hundred fifty Dollars.
The Sawing	B at 625	Six hundred twenty five do.
The Mill	C at 625	Six hundred twenty five do.
The Mill	D at 2000	Two thousand do.
The	E at	do.
The	F at	do.
The	G at	do.
The	H at	do.

\$10000

Say Ten thousand dollars. I do hereby declare and affirm, that I hold the above-mentioned building with the land on which they stand in fee simple and that they are not, nor shall be insured elsewhere, and that I and my heirs and assigns will abide by, observe and adhere to the constitution, rules and regulations, which are already established, or may hereafter be established by a majority of the insured, present in person, or by representatives, or by a majority of the property insured, represented either by the persons themselves, or their proxy duly authorized, or their deputy, as established by law, at any general meeting to be held by the said Assurance Society; or which are, or hereafter may be established by the Standing Committee of the Society. Witness my hand and seal this 10th day of November 1856.

Teste, Thornton Special Agent. John Coalter

We, the underwritten, being each of us freeholders, declare and affirm, that we have examined the above-mentioned building of John Coalter and we are of opinion that they would cost in cash to build the same, and are now actually worth Ten thousand dollars in ready money, as above specified, to the best of our knowledge and belief. As witness our hands.

I, the undersigned, do hereby certify that I verily believe the building herein described are not over-valued.

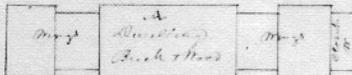
Thornton Special Agent

East

The walls of the buildings numbered on the plat marked A B C are of Brick, and with Wood. D of Stone covered with Wood. A & D are not contiguous to any. B to one of Wood. C to 2 of Wood & one of Brick and Wood.

John Coalter

Thornton Special Agent



West the Rappahannock River

No. 12,285 } Revaluation of Buildings formerly declared for Assurance by  
 John Woalter per Declaration No. 9279

margin  
 this  
 on  
 will  
 Agent  
 Special  
 The

We the underwritten Hannah Woalter, widow of Elizabeth Woalter  
 of John K. Bryaw & her children and John Woalter, dau. of David Woalter, Mrs. H. J. Woalter  
 residing at Chatham in the county of Stafford do hereby declare for Assurance  
 in the Mutual Assurance Society against Fire on Buildings of the State of Virginia, Building 3 on  
 the Chatham Estate, last of the County of Stafford, now occupied by  
 the said Mrs. Hannah Woalter situated between the Chatham Estate north  
 and east, the old stage road to Petemas Creek & north and the top  
 of a natural river west.

in the county of Stafford the dimensions, situation and contiguity to other Buildings or Wharves, what the walls  
 are built of, and what the Buildings are covered with, are specified in the hereunto annexed description of the said Building, on  
 the plat signed by us and the appraisers, and are valued by them, as appears by their certificate hereunder, to wit:

	MARKED.	
The Dwelling	A at	\$6750 Say Six thousand seven hundred fifty Dollars.
The Laundry	B at	625 " Six Hundred twenty five do.
The Kitchen	C at	625 " Six Hundred twenty five do.
The	D at	do.
The	E at	do.
The	F at	do.
The	G at	do.
The	H at	do.

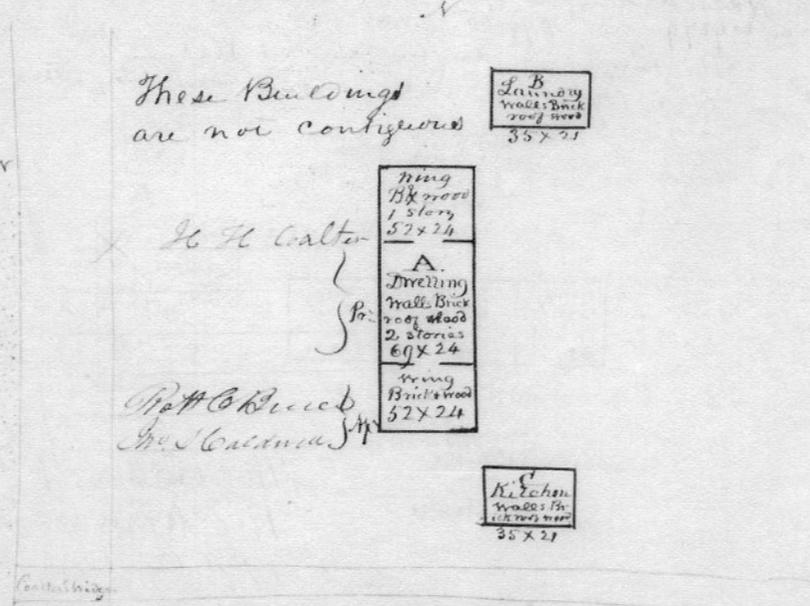
Say Eight thousand <sup>8000</sup> Dollars

We do hereby declare and affirm, that we hold the above-mentioned Building with the land on which  
 stand in the fee simple and we are of opinion that having regard to their local situation,  
 and that they are not, nor shall be insured elsewhere, and that their heirs and assigns will abide by  
 observe and adhere to the constitution, rules and regulations, which are already established, or may hereafter be established by a  
 majority of the insured, present in person, or by representatives, or by a majority of the property insured, represented either by the  
 persons themselves, or their proxy duly authorized, or their deputy, as established by law, at any general meeting to be held by the  
 said Assurance Society; or which are, or hereafter may be established by the Standing Committee of the Society. WITNESS  
 hand and seal this 20 day of December 1861 H. H. Woalter

Test, H. H. Woalter Special Agent.

We, the underwritten, being each of us freeholders, declare and affirm, that we have examined the above-mentioned Building  
 of the brick walls, stone walls and we are of opinion that having regard to their local situation,  
 state of repair, and the present cost of building, they are now actually worth Eight  
 thousand Dollars in ready money, as above specified, to the best of our knowledge and belief.  
 As witness our hands.

I, the undersigned, do hereby certify that I verily believe the Building herein described are not over-valued.  
 P. C. Bruce  
 J. C. Williams  
 SPECIAL AGENT.



No. 15384 } Revaluation of Building declared for Assurance by Mrs. H. Coalter  
 of the Heirs of John Coalter as per Declaration No. 12285

We, the underwritten J. P. Hile and B. J. Herndon Special Agent, and Appraisers, do hereby certify that we have viewed and revalued the Building heretofore declared for Assurance, in the Mutual Assurance Society against Fire on Buildings of the State of Virginia, by Mrs. H. Coalter and the Heirs of John Coalter as per their Declaration for Assurance, Numbered 12285.

The said Building is at present owned by Mrs. Hannah Coalter and the Heirs of John Coalter and are occupied by Mrs. H. Coalter residing at

That place situated on the Hatam lands east of Wappamock river between Fredericksburg & Falmouth in the County of Stafford.

We further certify, that their dimensions, situation and contiguity to other Buildings or Wharves, what the walls are built of, and what the Building is covered with, are specified in the hereto annexed description of the said Building on the plat signed by us: And we, the undersigned Appraisers, have valued the said Building, and certify their actual value to be, as expressed in our certificate hereunder, to wit:

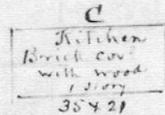
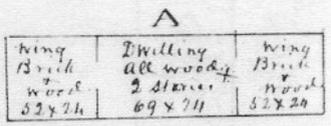
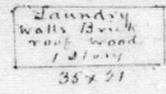
The	MARKED.	Value
The Dwelling	A at 86' 0" long	Six thousand seven hundred fifty dollars
The Laundry	B at 46' 2 1/2"	Six hundred & twenty five dollars
The Kitchen	C at 67' 5"	Six hundred & twenty five dollars
The	D at	do.
The	E at	do.
The	F at	do.
The	G at	do.
The	H at	do.

Say Eight thousand dollars  
 Witness our hands, this 15 day of October one thousand eight hundred and fifty, J. H. Herndon Special Agent for the M. A. Society, B. J. Herndon Appraiser, residing in

We, the underwritten, being each of us freeholders, declare and affirm, that we have examined the above-mentioned Building of Mrs. H. Coalter & Heirs of John Coalter, and we are of opinion that having regard to their local situation, state of repair, and the present cost of building, they are now actually worth Eight thousand dollars in ready money, as above specified, to the best of our knowledge and belief.

As witness our hands. I, the undersigned, do hereby certify that I verily believe the Building therein described are not over-valued.  
 B. J. Herndon  
 J. P. Hile  
 Special Agent

The Buildings described in this Plat are contiguous one to each other in any other



This building came straight all Brick w/ wood

B. J. Herndon Sp. Agt.  
 J. P. Hile Appr.

Roads from Falmouth east into Stafford

No. 18974 Revaluation of Building declared for Assurance by Hannah Coalter  
 of the Heirs of J Coalter as per Declaration No. 15384

We, the undersigned B.S. Hendon & M. Hendon Special Agent, and Appraisers, do hereby certify that we have viewed and revalued the Building heretofore declared for Assurance, in the Mutual Assurance Society against Fire on Buildings of the State of Virginia, by Mrs H Coalter & the Heirs of J Coalter as per Declaration for Assurance, Numbered 15384

That the said Building is at present owned by J. Horace Lacey and is occupied by him That it is situated on the East bank of the Rappahannock river in Chatam Estate opposite the town of Fredericksburg in the County of Stafford

We further certify that their dimensions, situation and contiguity to other Buildings or Wharves, what the walls are built of, and what the Building is covered with, are specified in the herunto annexed description of the said Building on the plat signed by us: And we, the undersigned Appraisers, have valued the said Building, and certify that its actual value to be, as expressed in our certificate hereunder, to wit:

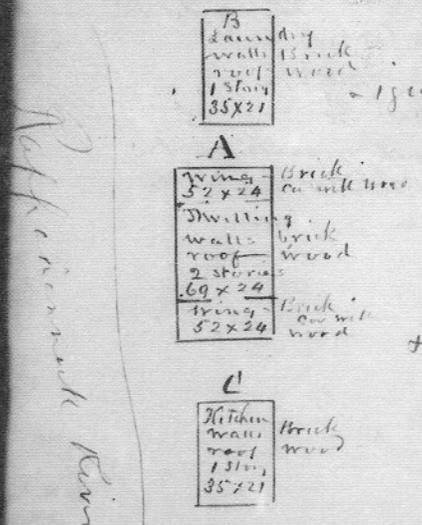
	MARKED.		
The Dwelling	A at \$6750	Say Six thousand Seven Hundred	1645 Dollars
The Laundry	B at 625	Six Hundred Twenty five	do.
The Kitchen	C at 625	Six Hundred Twenty five	do.
The	D at		do.
The	E at		do.
The	F at		do.
The	G at		do.
The	H at		do.

Say Eight thousand Dollars in all  
 Witness our hands, this 15 day of Dec one thousand eight hundred and 57

B.S. Hendon Special Agent for the M. A. Society  
 B.S. Hendon Appraiser, residing in ...  
 M. Hendon Appraiser, residing in ...

We, the undersigned, being each of us freeholders, declare and affirm, that we have examined the above-mentioned Building of J. H. Lacey and we are of opinion that having regard to their local situation, state of repair, and the present cost of building, they are now actually worth Eight thousand dollars in ready money, as above specified, to the best of our knowledge and belief.

As witness our hands.  
 I, the undersigned, do hereby certify that I verily believe the Building herein described is not over-valued.  
 B.S. Hendon SPECIAL AGENT.



Letter A of this Plat is Containing 1 Building entirely wood  
 Letter B is contiguous to 1 Building entirely wood  
 Letter C is contiguous to 3 Buildings entirely wood + 1 other brick and will wood

Chatham - Stafford

Road to White oak & c

No. 20 522 } Revaluation of Buildings formerly declared for Assurance by Mrs Hannah  
 Walter of the Heirs of Dr. Poatier Declaration No: 18974

I the undersigned J Horace Lacy residing at Chatham in the county of Stafford do hereby declare for Assurance in the Mutual Assurance Society against Fire on Buildings of the State of Virginia, my three Building \$ on the Chatham lands

now occupied by myself situated between the railroad on the East and the Rappahannock river on the West, and opposite to Fredricksburg in the county of Stafford

the dimensions, situation and contiguity to other Buildings or Wharves, what the walls covered with, are truly specified on the annexed plat of the said Building \$ valued by the appraisers, as appears by their certificate hereto attached, to wit:

MARKED.

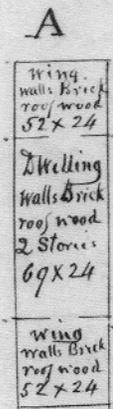
The Dwelling	A at \$10,000	Say Ten thousand	Dollars.
The Laundry	B at 625	Six Hundred & twenty five	do.
The Kitchen	C at 625	Six Hundred & twenty five	do.
The	D at		do.
The	E at		do.
The	F at		do.
The	G at		do.
The	H at		do.

Say \$11,250 Eleven thousand two Hundred & fifty Dollars

I do hereby declare and affirm, that I hold the above-mentioned Building \$ with the land on which they stand in fee simple and that they are not, nor shall be insured elsewhere, and that I and my heirs and assigns will abide by, observe and adhere to the constitution, rules and regulations, which are already established, or may hereafter be established by a majority of the insured, present in person, or by representatives, or by a majority of the property insured, represented either by the persons themselves, or their proxy duly authorized, or their deputy, as established by law, at any general meeting to be held by the said Assurance Society; or which are, or hereafter may be established by the Standing Committee of the Society. WITNESS my hand and seal this 15<sup>th</sup> day of December 1889

Test. J M Herndon J Horace Lacy  
 SPECIAL AGENT. B  
 Laundry walls brick roof wood 52 x 24

Rappahannock River



The Building marked A in this Plat is contiguous to no other Building that marked B is contiguous to 1 Building entirely wooden The Building marked C is contiguous to 3 Buildings entirely wooden and to 1 Building of Brick core with wood



C. 1797 FEATURE INVENTORY

## CHATHAM FEATURE INVENTORY, 1797

From an advertisement to sell, February 14, 1797  
Fred'sburg & Falmouth Advertiser

1. Brick house w/9 rooms + entry wall, 2 stairs, passages, dry cellars, Main House & 2 wings
2. Kitchen & larder-brick
3. Laundry & Housekeeper's room with cellar, brick
4. Store house, brick
5. Smoke house, brick
6. Dairy, stone
7. Spring house, stone
8. Stable for 30 horses
9. Coach house for 4 carriages
10. Barns - unspecified
11. Granary
12. Cow-house - unspecified - for 36 cattle, "apartments" for fattening veal, mutton, & lamb
13. Overseer's House
14. Blacksmith's shop
15. Quarters for 50 laborers
16. Merchant Mill - stone
17. Miller's house
18. Fisheries
19. Ferry
20. Quarry
21. Ice House

## Agricultural assets

1. Pleasure & Kitchen gardens
2. Fruit trees: apples, pears, walnuts, chestnuts, cherries, peaches, plums, nectarines, apricots, grapes, figs, raspberries, gooseberries, strawberries, and currants
3. Hay: "three heavy crops" per year
5. Peach orchard
6. Apple & Pear orchard
7. Vegetable garden

D. · PAINT ANALYSIS STUDY

PAINT STUDY  
FOR  
CHATHAM  
FREDERICKSBURG NATIONAL MILITARY PARK  
VIRGINIA

Prepared by  
Sarah M. Sweetser  
Architectural Assistant

DENVER SERVICE CENTER  
HISTORIC PRESERVATION DIVISION  
NATIONAL PARK SERVICE  
UNITED STATES DEPARTMENT OF THE INTERIOR  
DENVER, COLORADO

June 1976

## INTRODUCTION

The paint analysis of the main house at Chatham, Fredericksburg, Virginia, was undertaken to assist the architect in establishing the construction sequence of the structure, as well as to determine its historical paint schemes.

This analysis was conducted by mechanical means; that is, the paint chips were examined under a microscope using a scalpel blade to separate the layers. The paint colors were all keyed to the Munsell Color System. Separate glossy color samples may be purchased from:

Munsell Color Company  
2441 North Calvert Street  
Baltimore, Maryland 21218

For accuracy, these chips should be matched in north sky daylight.

On the accompanying schedules, notations of "film" next to a color indicate that the paint layer was exposed for a long period of time such that the oil migrated to the surface forming a discolored film or skin. With this factor known, the Munsell number has been coded as much as possible to the original color.

Notations of "soil" indicate a substantial dirt layer on top of the paint layer, likewise indicating prolonged exposure and discoloration. Again the prescribed Munsell number represents a close approximation of the original appearance of the paint.

### Interior Paint Analysis

The original finish coat throughout the mansion and wings is consistently dark green (10GY 3/2) indicating that the entire structure was built at one time. However, the absence of a white lead primer (5Y 3/2) in the main entrance hall, Room 105, and dining room, Room 103,

may indicate these rooms, the largest, were the last to be completed. The original woodwork in the drawing room, Room 104, was removed during the Civil War. The present paneling was installed in the 1920s and, therefore, was not a subject of this study.

The dark green bottom layer of paint found throughout the house was exposed for a long period of time, probably during the entire residency of the first owner, William Fitzhugh, ca. 1770-1806. In some places, this finish coat had worn away, exposing the primer coat which in turn developed its own surface film and dirt layer. Due to the early hand-ground manufacture of the paint and its age, the color has probably changed considerably from its first appearance. Therefore, the Munsell number attribution used here is for dating purposes only. Any attempt at restoration of this color should only be made after further analysis.

The first known interior alteration was indicated by a sliding door in the stable which proved to have been salvaged from the main house, when the doorway between the main entrance hall, Room 105, and the drawing room, Room 104, was modified to its present state. The paint layers on both sides of this door and the interior west entrance architrave match the scheme of the main entrance hall paneling starting with the third finish layer and continuing through to the seventh. This would indicate that the square archway with fluted pilasters and sliding doors was not original to the house, but was added probably by the third family to own the house, the Coalters, after 1825. It was removed by the Devores in the 1920s. Except for one last layer of exterior paint put on when the door was moved to its present location, the paint colors on both sides of the sliding door are identical. Thus, it seems that the now lost wood paneling in the drawing room had been painted to match the hall during the ownership mentioned.

The removal of the north stair to the second floor was the next major interior alteration, as determined by the paint layers of a soffit board now enclosed in the attic of Room 103. Subsequent to this, the wainscot paneling from the second floor hall, Room 202 (where the bathroom has now been installed), was relocated on the west wall of Room 103b when the old first floor stair hall was enclosed.

It is possible that Lacy retained the house much as it had been when his aunt lived there and that it is the third finish paint layer that was exposed during the Civil War. If this is true then one of the next owners grained the woodwork in the main entrance hall, drawing and dining rooms, and upstairs hall. In the main entrance hall, the panels under the side lights of both doors were added at this time, as well as many of the doors which share the same molding profiles.

The passageway halls to both the north and south wings have been treated similarly throughout the history of the house.

It appears that the Devores did some paint removal on the paneling of the library fireplace wall, Room 111, but this is the only instance of paint removal in the house found to date.

#### Exterior Paint Analysis

The first indication of alterations outside the house came from a piece of the exterior cornice found in the attic. It still had two wrought iron nails protruding from it, indicating its 18th century date, but only one layer of white paint which was alligatored and dirty. It is possible that this piece was part of the original cornice which had to be removed when the two-story porch was added. If this is true, then the lack of paint layers indicates that the porch was added very early--possibly by the second owner, Major Churchill Jones, as early as 1806. Small as this sample may be, there is nothing on or around the house to suggest that the original exterior trim color of the brick house was anything other than white. Photographs taken during the Civil War substantiate this conclusion.

After the Civil War, however, photographs show that the brick walls were painted a light color, found to be mustard yellow (2.5Y 7/5) and the wood trim was painted a dark color. The only dark paint available on any of the samples taken was a dark red (10R 3/6) (except for dark green on some door trim). This red layer was not very dirty, and probably was not exposed a long time before the walls were painted a red

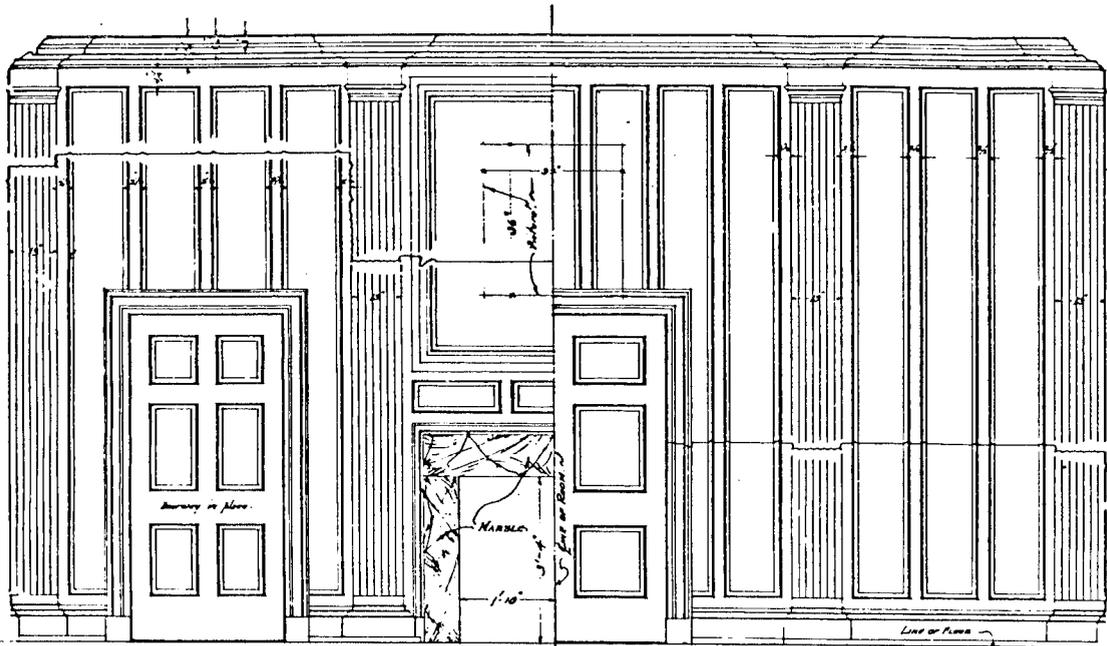
brick color (2.5YR 3/4) and the trim color was returned to white. The mortar joints were not struck out with white. This combination was retained until the Devores removed the porch and painted the brick walls white. The Pratts continued the all white color scheme until the present.

The only deviation from this wall and trim chronology was evidence that the west porch columns, first floor, were sand painted. The columns from the east porch should be examined for this same treatment.

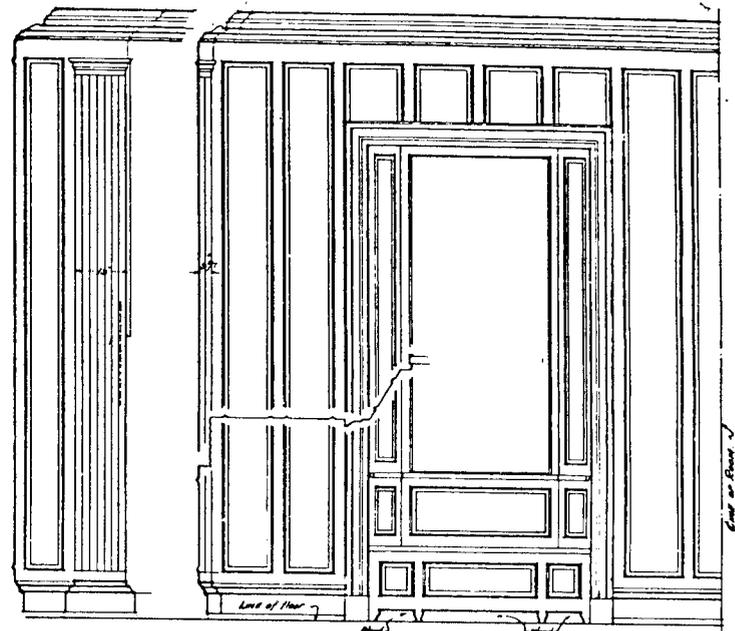




E. THE OLIVER H. CLARKE DRAWINGS



ONE HALF ELEVATION OF WEST WALL  
SHOWING PART OF MANTEL AND FIREPLACE.

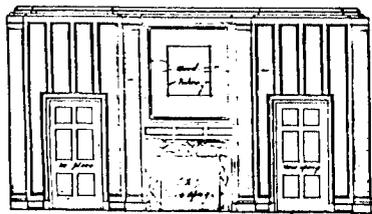


ONE HALF ELEVATION OF EAST  
WALL. (SHOWING PART OF SLIDING DOORS)

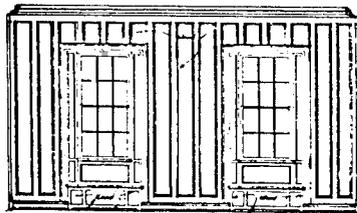
ELEVATION-SIDE  
OF CHIMNEY BREAST.

ONE HALF (TYPICAL) ELEVATION  
OF NORTH AND SOUTH WALLS.

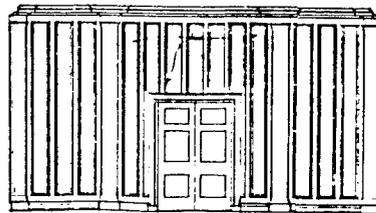
SCALE 3/4" = 1'-0"



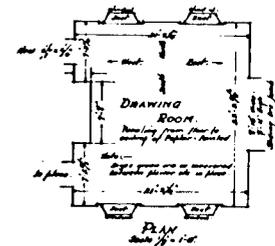
WEST WALL.



TYPICAL OF NORTH  
AND SOUTH WALLS.



EAST WALL.



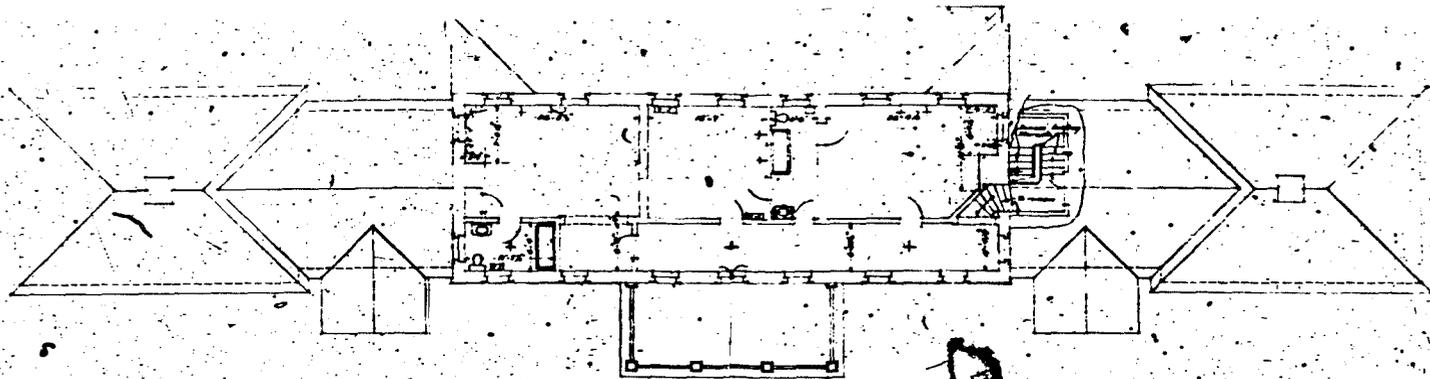
SHEET No. OF

DETAILS OF DRAWING ROOM.

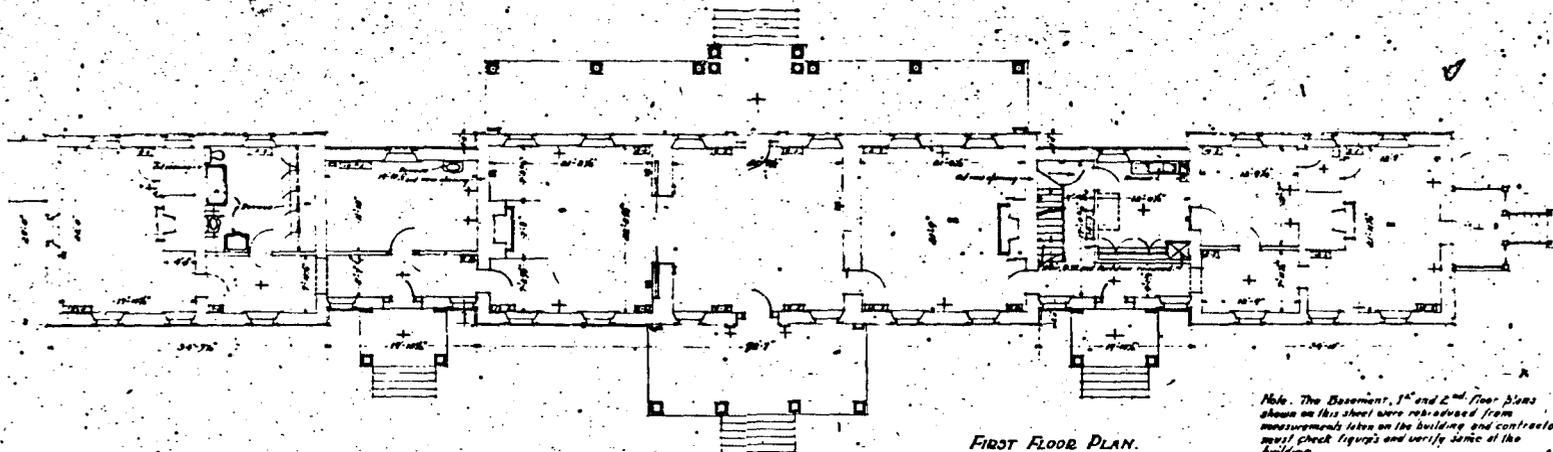
ALTERATIONS  
COUNTRY RESIDENCE  
OF  
COLONEL & MRS. D. B. DEVORE,  
NEAR  
FREDERICKSBURG,  
VIRGINIA.

HISTORIC  
GHATHAM  
STAFFORD COUNTY,  
VIRGINIA.

Oliver H. Clarke,  
ARCHITECT.  
1000 VERMONT AVENUE,  
WASHINGTON,  
D. C.

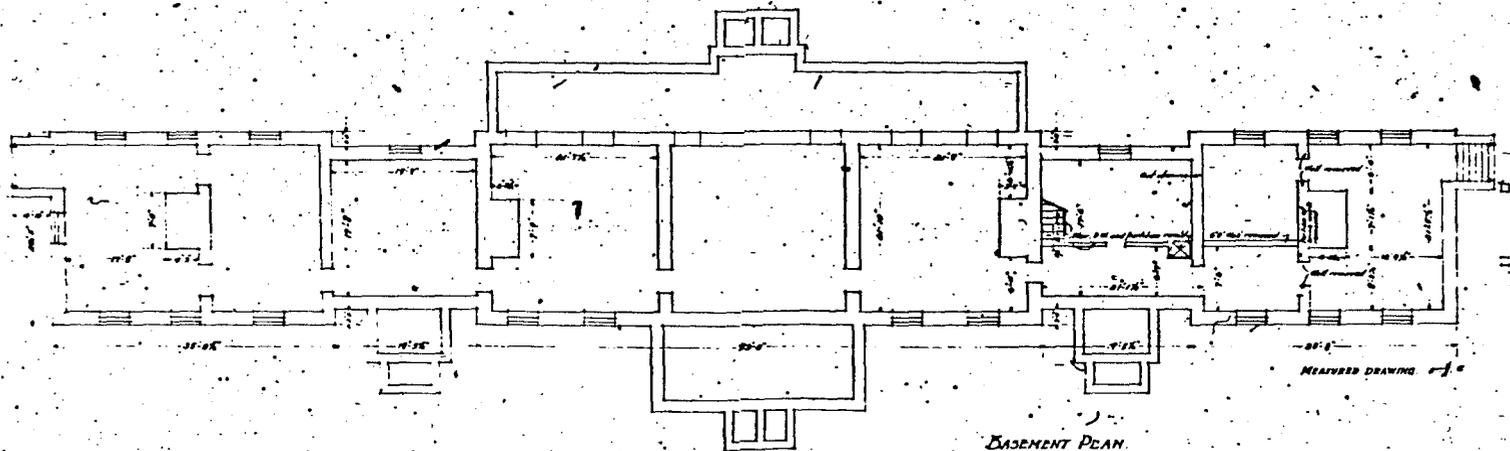


SECOND FLOOR PLAN.



FIRST FLOOR PLAN.

Note: The Basement, 1<sup>st</sup> and 2<sup>nd</sup> floor plans shown on this sheet were re-adviced from measurements taken on the building and contractor must check figures and verify same at the building.



BASEMENT PLAN.  
Scale 1/4" = 1'-0"

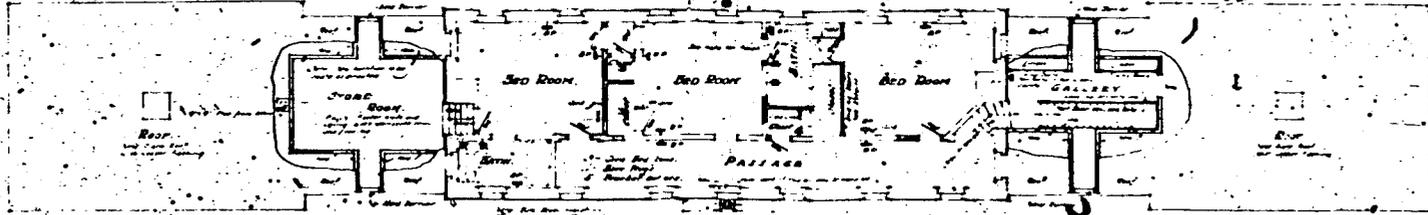
MEASURED DRAWING 7/10

SHEET No. OF  
ALTERATIONS,  
COUNTRY RESIDENCE

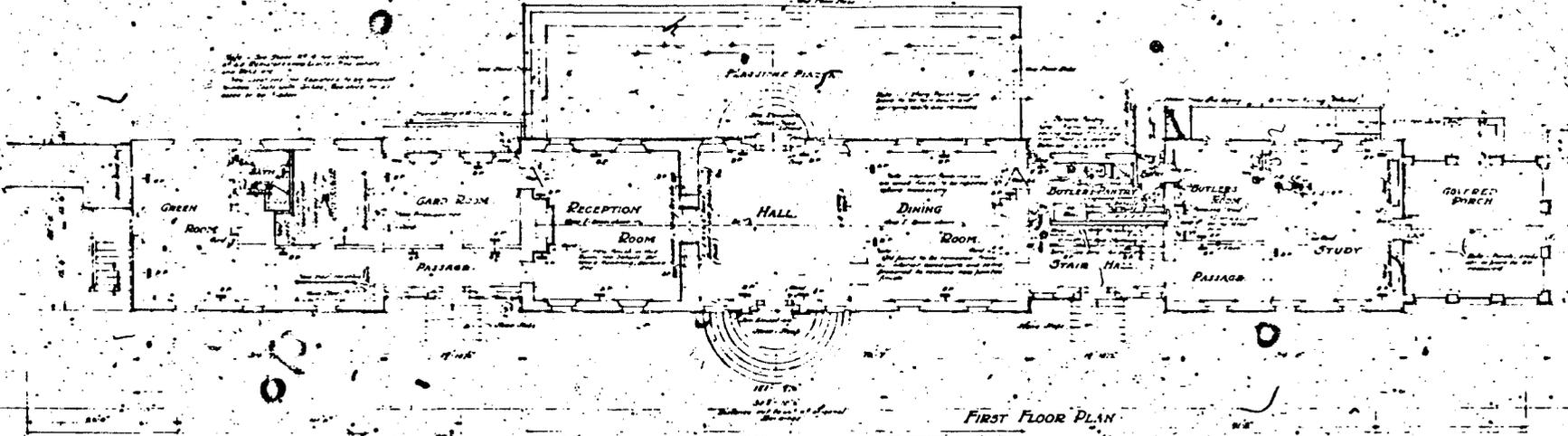
FREDERICKSBURG,  
VIRGINIA.

HISTORIC  
CHATHAM,  
STAFFORD COUNTY,  
VIRGINIA.

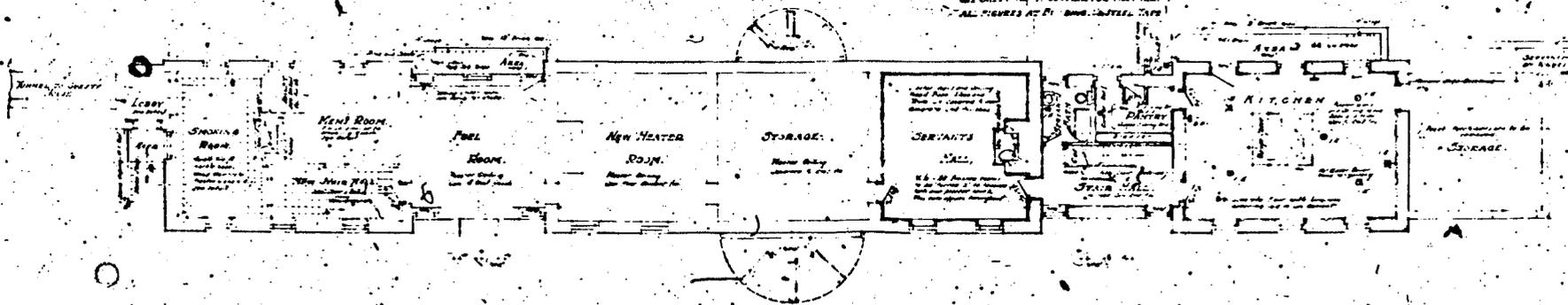
John H. Carter  
ARCHITECT  
No. 1000



SECOND FLOOR PLAN.



FIRST FLOOR PLAN



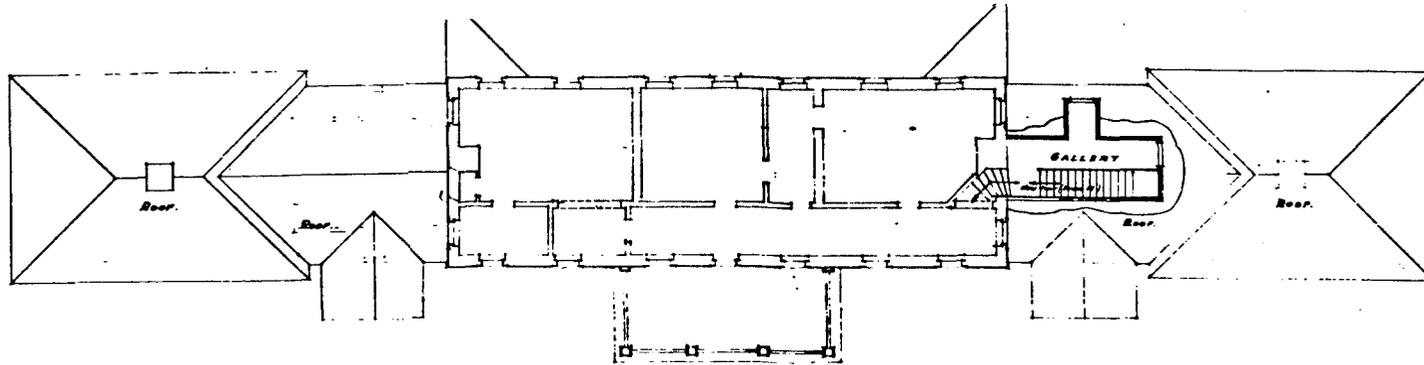
BASEMENT PLAN.

ALTERATIONS  
COUNTRY RESIDENCE

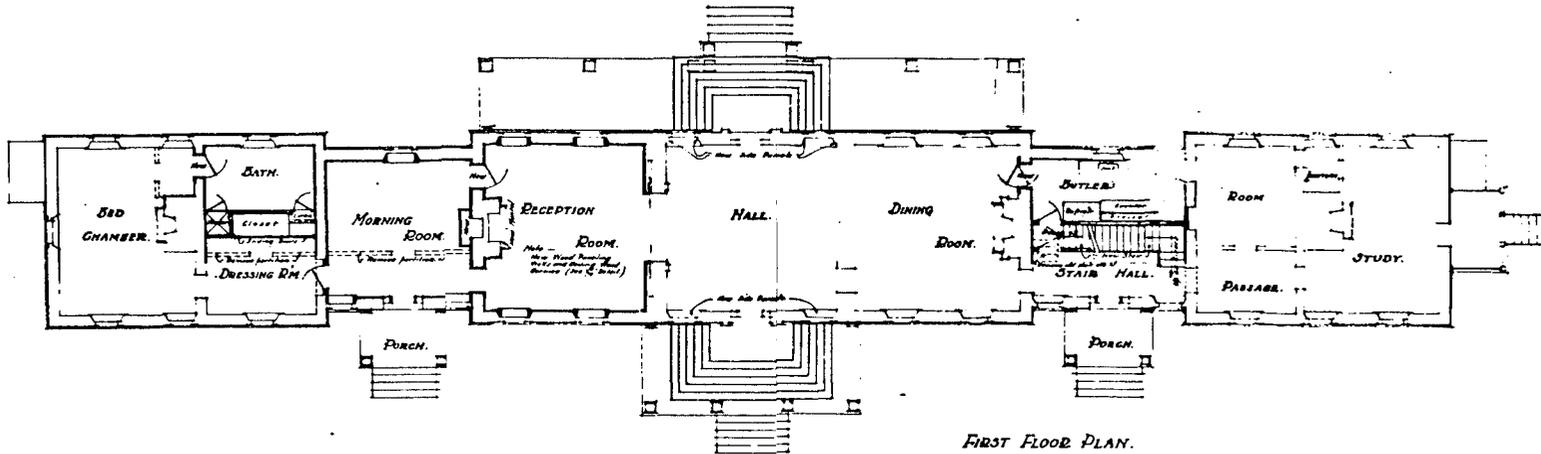
FREDERICKSBURG,  
VIRGINIA.

HISTORIC  
GHATHAM  
STAFFORD COUNTY,  
VIRGINIA.

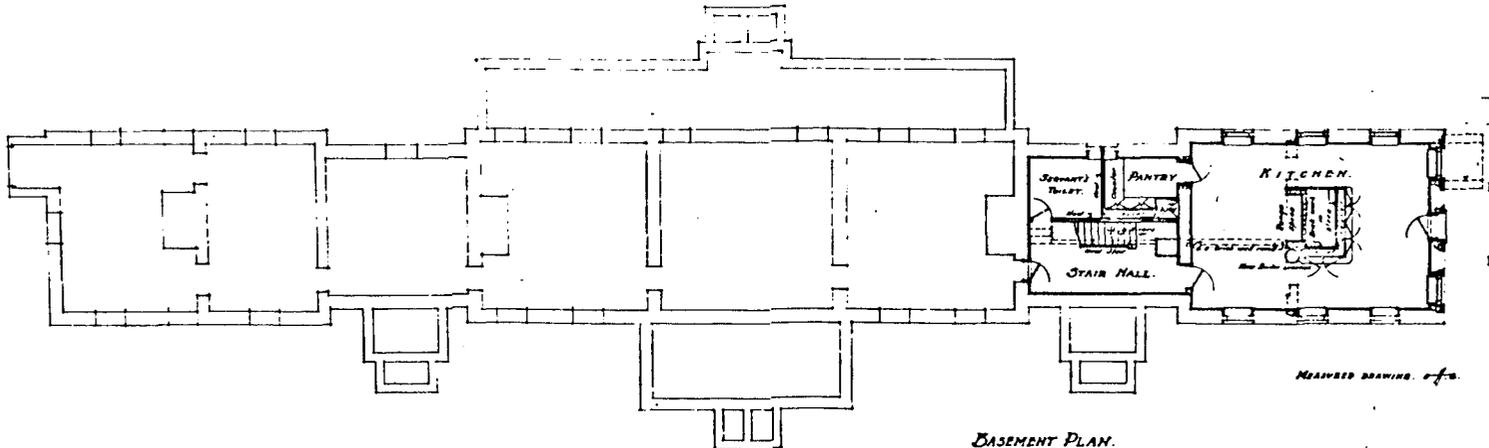
Oliver H. Clarke  
ARCHITECT  
WASHINGTON,  
D. C.



SECOND FLOOR PLAN.



FIRST FLOOR PLAN.



BASEMENT PLAN.  
Scale 1/4" = 1'-0"

MEASURED DRAWING. C.F.S.

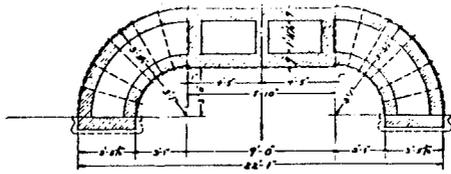
SHEET No. OF

ALTERATIONS.  
COUNTRY RESIDENCE  
OF  
COLONEL & MRS D.B. DEVORE.  
NEAR  
FREDERICKSBURG,  
VIRGINIA.

HISTORIC  
"CHATHAM."  
STAFFORD COUNTY,  
VIRGINIA.

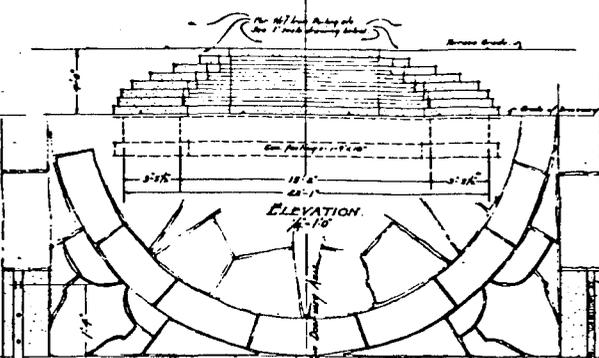
Oliver H. Clarke  
ARCHITECT.  
1000 VERMONT AVENUE,  
WASHINGTON

4



PLAN  
Scale 1/4" = 1'-0"

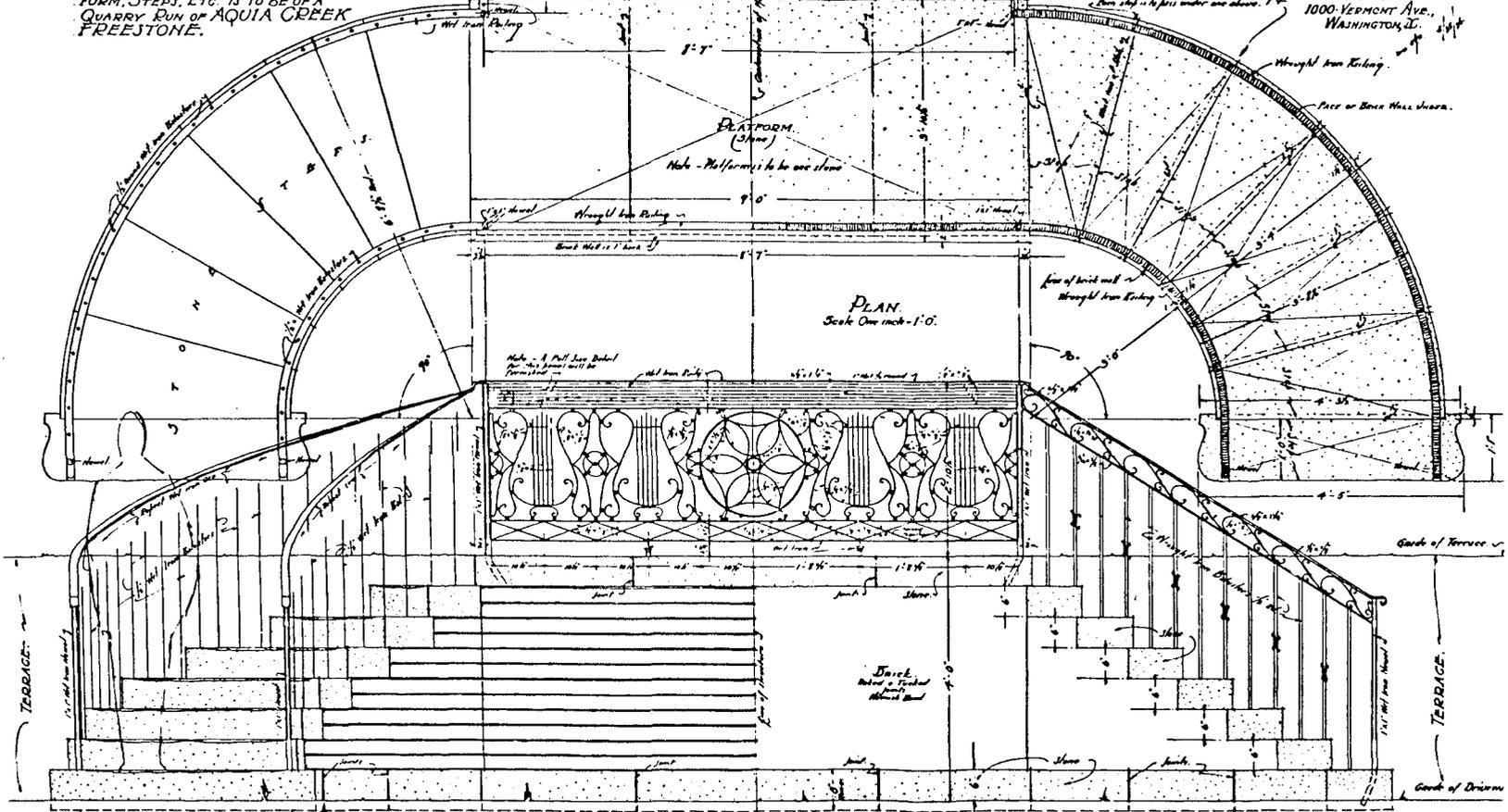
NOTE: - THIS STRUCTURE IS TO BE  
ERECTED ON AN AXIS WITH THE  
MAIN DOORWAYS AND IN THE FIRST  
TERRACE.  
ALL STONE REQUIRED FOR PLAT-  
FORM, STEPS, ETC. IS TO BE OF A  
QUARRY RUN OF AQUIA CREEK  
FREESTONE.



ELEVATION  
Scale 1/4" = 1'-0"

ONE QUARTER AND  
ONE INCH SCALE—  
DETAILS OF STEPS,  
PLATFORM AND  
HAND WROUGHT-  
WROUGHT IRON  
RAILING-NEWELS  
AND ETC.

By *Henry Clarke*  
ARCHITECT  
1000 VERMONT AVE.  
WASHINGTON, D.C.



PLAN  
Scale One inch = 1'-0"

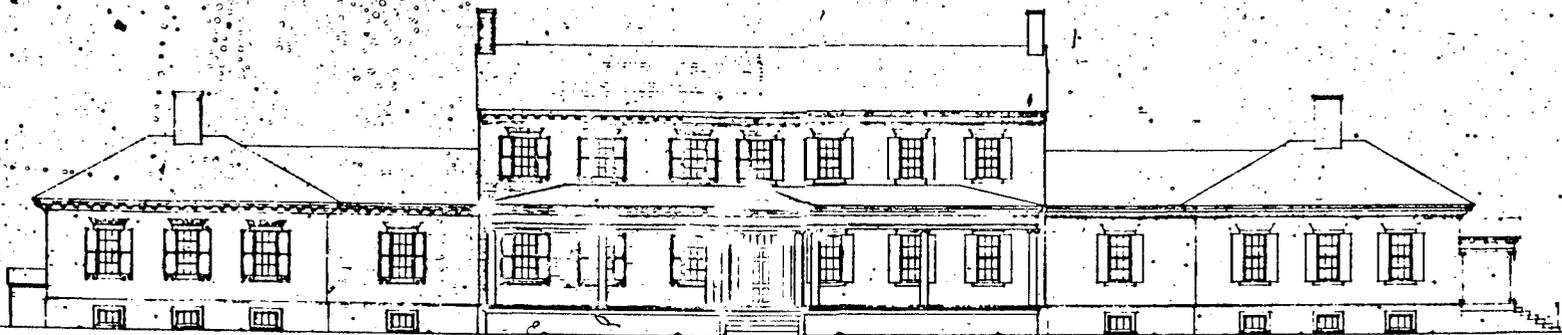
ELEVATION  
Scale One inch = 1'-0"

~ WALK HEAD ~  
(MAIN ENTRANCE)  
GHATHAM MANOR  
ESTATE OF  
COLONEL & MRS D. B. DEVORE,  
STAFFORD COUNTY, VA.

Appendix 5



ELEVATION.



MEASURED DRAWING. *af.*

ELEVATION.  
*Scale 1/4" = 1'-0"*

SHEET No. 01

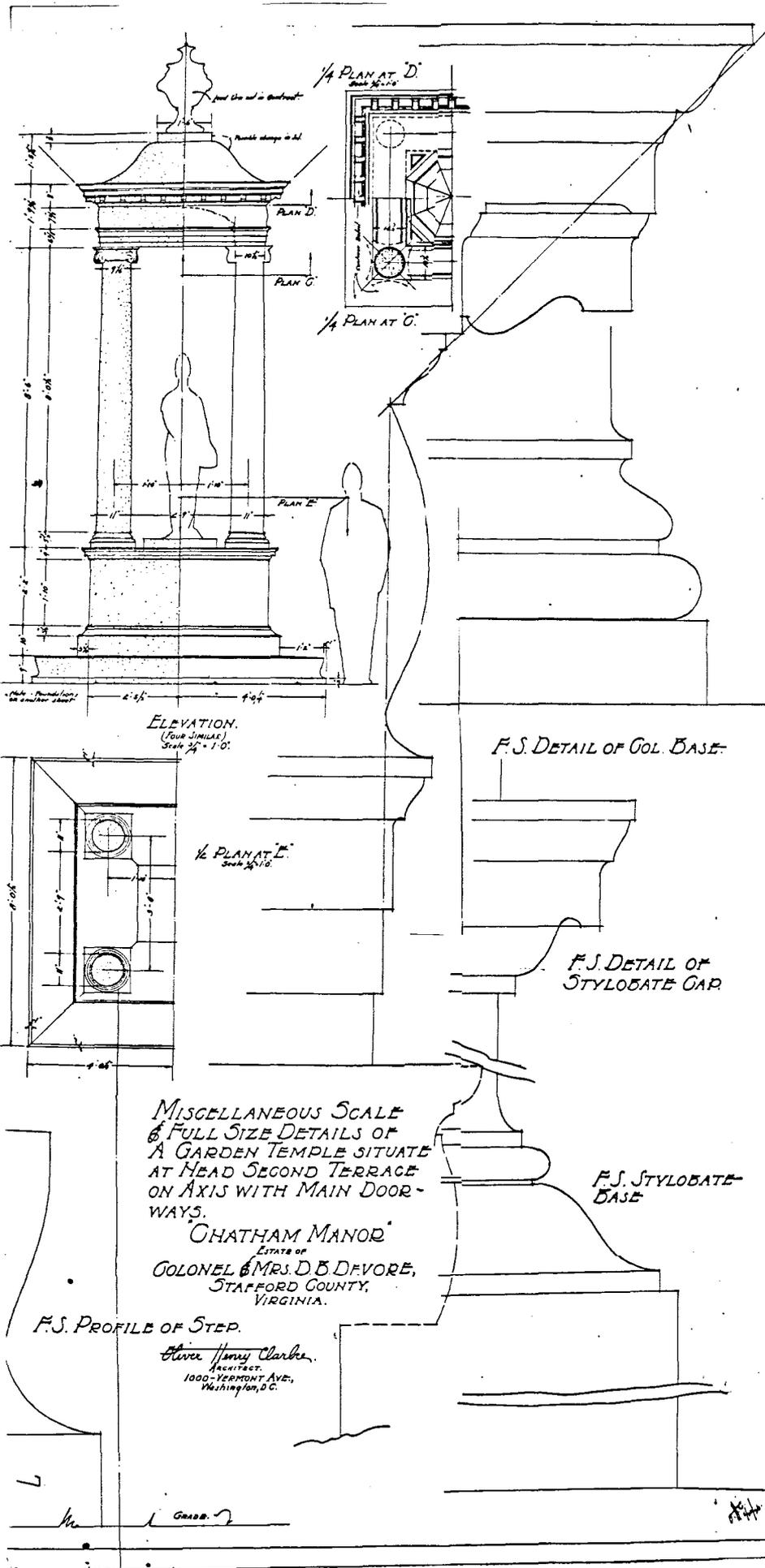
*Measured drawing of house as it stood Dec. 1926. *af.**

ALTERATIONS  
COUNTRY RESIDENCE  
  
FREDERICKSBURG,  
VIRGINIA.

HISTORIC  
**'CHATHAM'**  
STAFFORD COUNTY,  
VIRGINIA.

*Oliver H. Clarke*  
ARCHT. & ENGR.  
WASHINGTON,  
D. C.

6



ELEVATION.  
(Four SIMILAR)  
Scale 3/4" = 1'-0".

F.S. DETAIL OF COL. BASE.

1/2 PLAN AT E.  
Scale 3/4" = 1'-0".

F.S. DETAIL OF STYLOBATE CAP

MISCELLANEOUS SCALE  
& FULL SIZE DETAILS OF  
A GARDEN TEMPLE SITUATE  
AT HEAD SECOND TERRACE  
ON AXIS WITH MAIN DOOR-  
WAYS.

F.S. STYLOBATE  
BASE

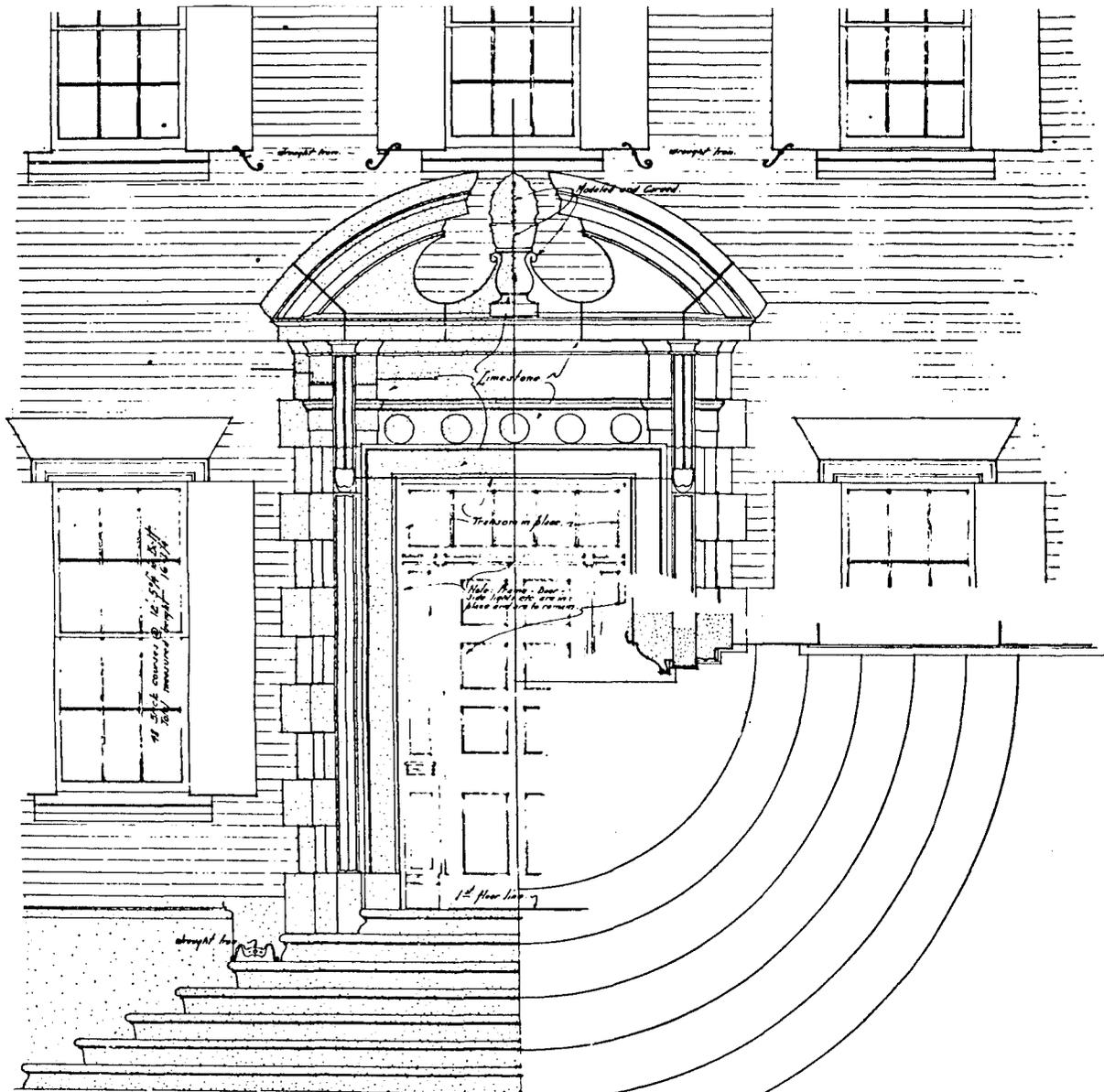
CHATHAM MANOR  
ESTATE OF  
COLONEL & MRS. D.B. DEVORE,  
STAFFORD COUNTY,  
VIRGINIA.

F.S. PROFILE OF STEP.

Oliver Henry Clarke,  
ARCHITECT.  
1000 VERMONT AVE.,  
WASHINGTON, D.C.

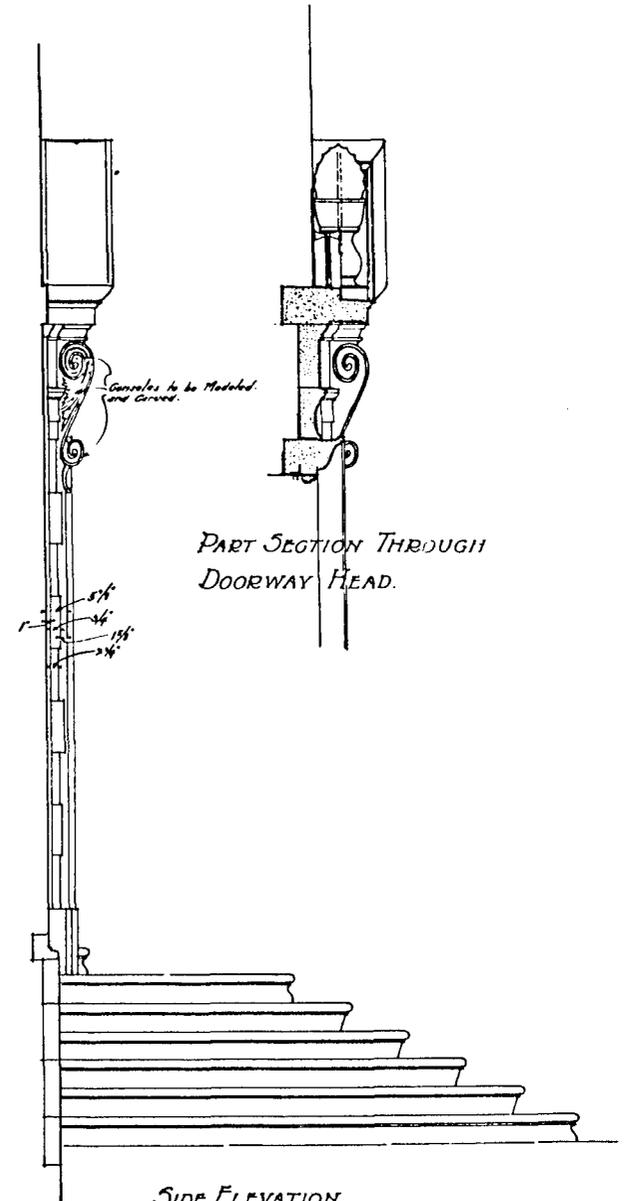
GARD.

A.C.



ONE HALF ELEVATION OF DOORWAY.

PART PLAN OF DOORWAY-STEPS-ETC.



PART SECTION THROUGH DOORWAY HEAD.

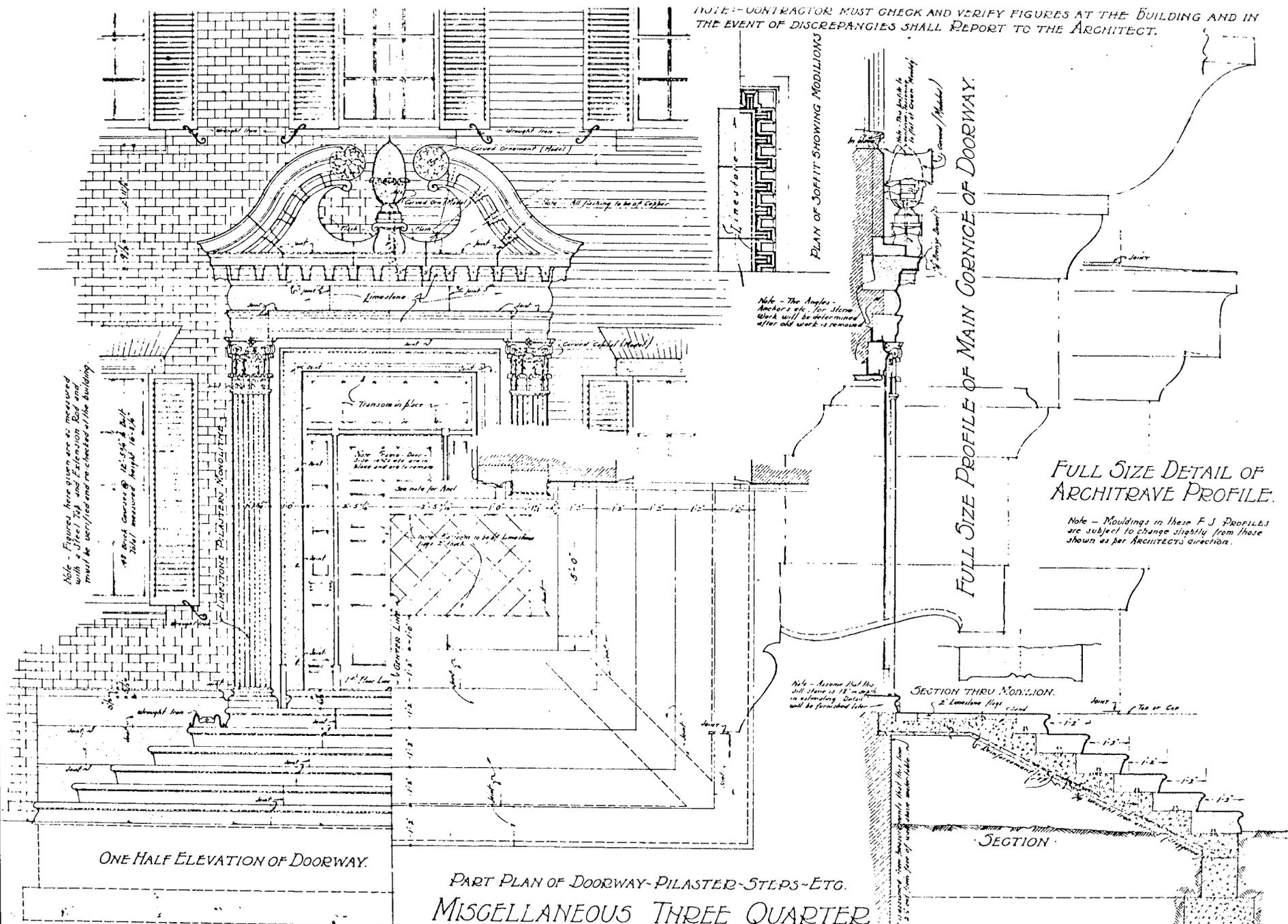
SIDE ELEVATION.

MISCELLANEOUS THREE QUARTER  
 INCH DETAILS OF NEW LIMESTONE  
 ENTRANCE DOORWAY-STOOP-STEPS-  
 ETC, GNATHAM, STAFFORD COUNTY, VA.

Oliver H. Clarke  
 ARCHITECT  
 1000 - VERMONT AVE.,  
 WASHINGTON,  
 D. C.

8.

NOTE: CONTRACTOR MUST CHECK AND VERIFY FIGURES AT THE BUILDING AND IN THE EVENT OF DISCREPANCIES SHALL REPORT TO THE ARCHITECT.



Note - Figures here given are as measured with 1/8 inch rule and checked at the building. All back corners @ 12.5° & built 200' measured length 16.5'

Note - The Angles Anchors etc. for Stone work will be determined after old work is removed

Note - This detail is a part of cornice moulding

FULL SIZE DETAIL OF ARCHITRAVE PROFILE.

Note - Mouldings in these F.S. PROFILES are subject to change slightly from those shown as per Architects direction.

Note - Assume that the sill stone is 18" high in estimating. Detail will be furnished later.

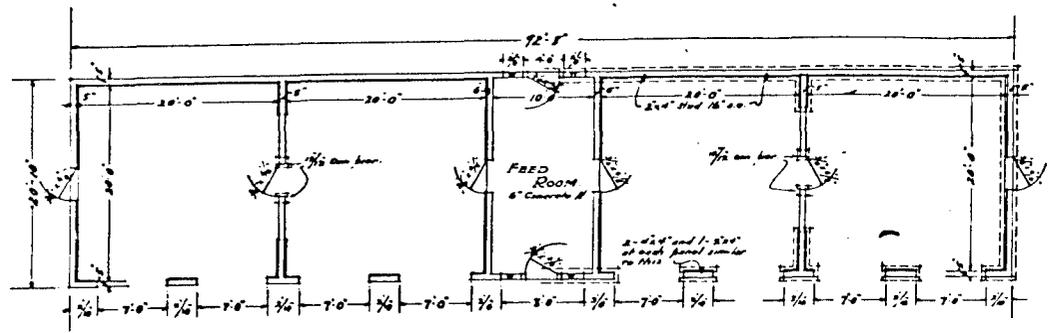
ONE HALF ELEVATION OF DOORWAY.

PART PLAN OF DOORWAY-PILASTER-STEPS-ETC.  
 MISCELLANEOUS THREE QUARTER  
 INCH DETAILS OF NEW LIMESTONE  
 ENTRANCE DOORWAY-STOOP-STEPS-  
 ETC. "GNATHAM," STAFFORD COUNTY, VA.

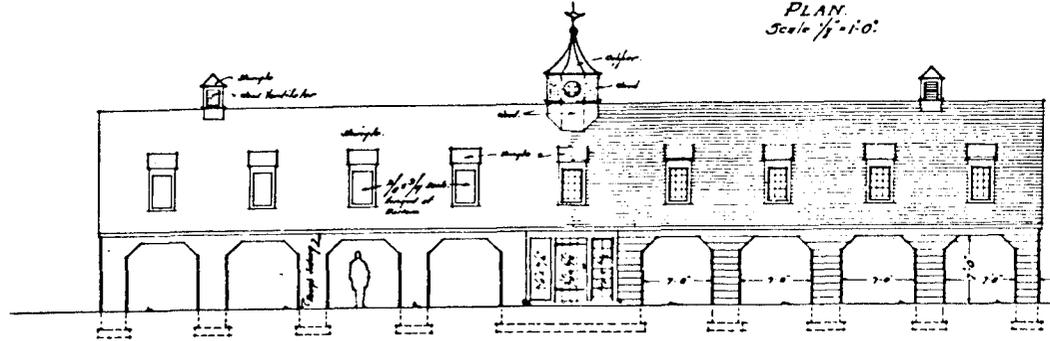
ALTERATIONS  
 COUNTRY RESIDENCE.  
 OF  
 COLONEL & MRS. D. B. DEVORE.  
 NEAR  
 FREDERICKSBURG,  
 VIRGINIA.

Oliver H. Charles  
 ARCHITECT.  
 1000 - VERMONT AVE.,  
 WASHINGTON, D. C.

9 1/11

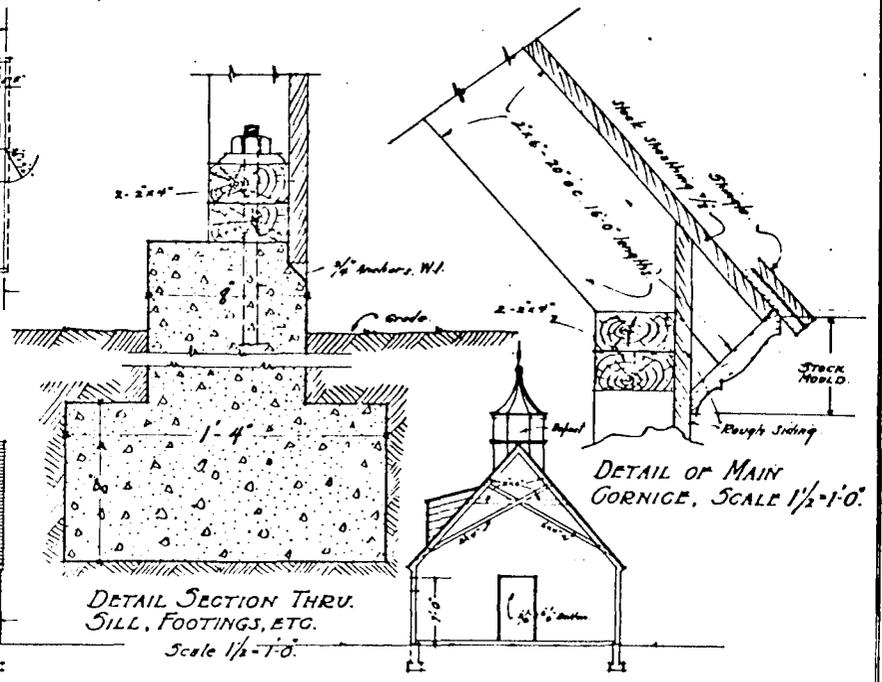


PLAN  
Scale 1/4" = 1'-0"



ELEVATION.

Scale 1/8" = 1'-0"



DETAIL SECTION THRU  
SILL, FOOTINGS, ETC.  
Scale 1/2" = 1'-0"

DETAIL OF MAIN  
GORNICE, SCALE 1/2" = 1'-0"

SECTION.

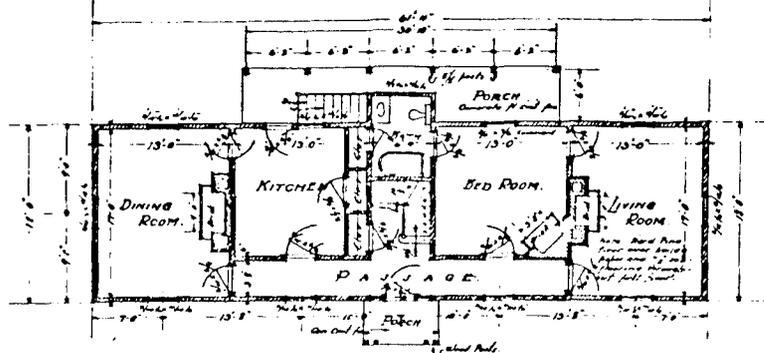
FARM BUILDINGS.  
"CHATHAM MANOR",  
ESTATE of  
COLONEL & MRS. D. B. DEVORE,  
Stafford County,  
Virginia.

Oliver Clarke  
ARCHT. ECT.

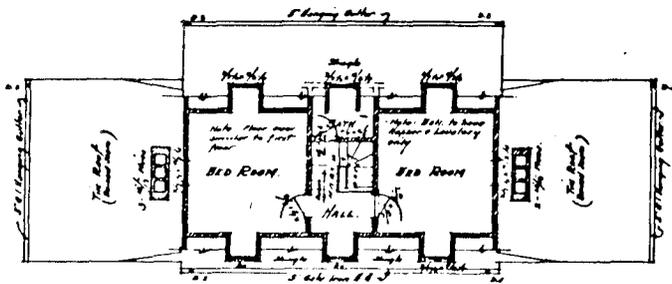
Washington,  
D. C.

H. J. ...

A. W. ...

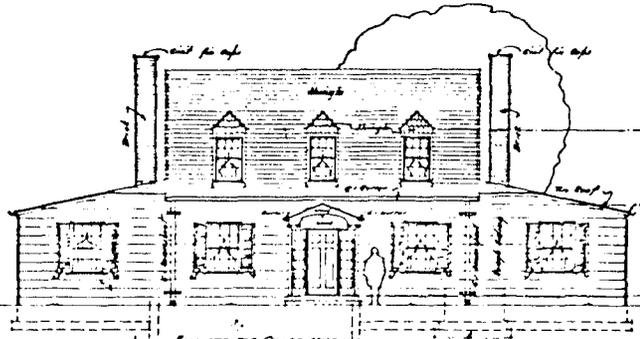


FIRST FLOOR PLAN.

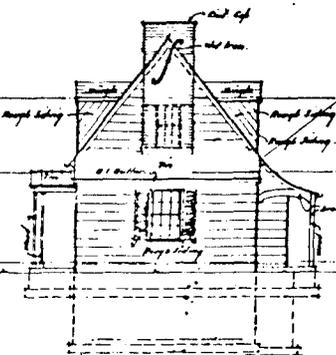


SECOND FLOOR PLAN.

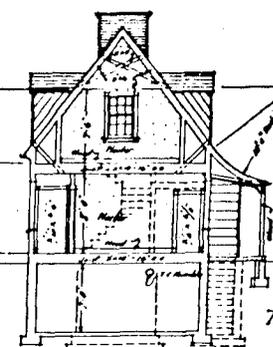
Scale  $\frac{1}{4}'' = 1'-0''$ .



FRONT ELEVATION.



END ELEVATION.



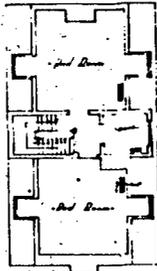
TRANSVERSE SECTION

NEW  
FARMERS COTTAGE.  
"GHATHAM MANOR."  
ESTATE OF  
COLONEL & MRS D. B. DEVORE,  
STAFFORD CITY,  
VIRGINIA.

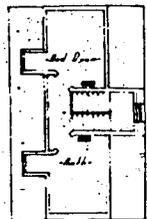
Oliver H. Clarke  
ARCHITECT

WASHINGTON,  
D.C. 4/14/20

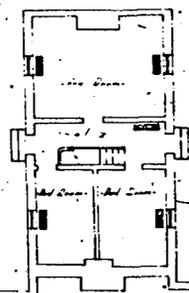




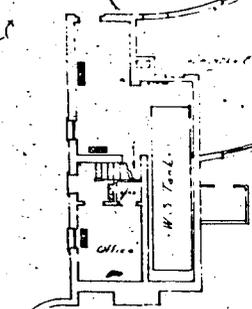
Seavers' Quarters  
1st Floor Plan



Office  
2nd Floor Plan

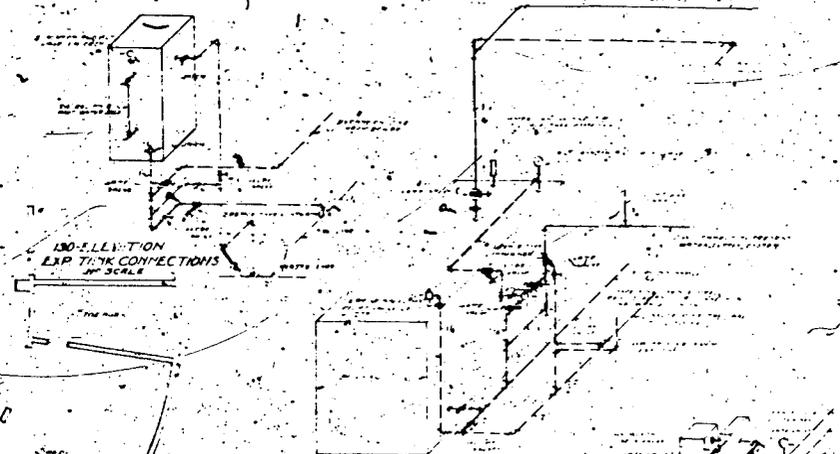


Seavers' Quarters  
1st Floor Plan



Office  
1st Floor Plan

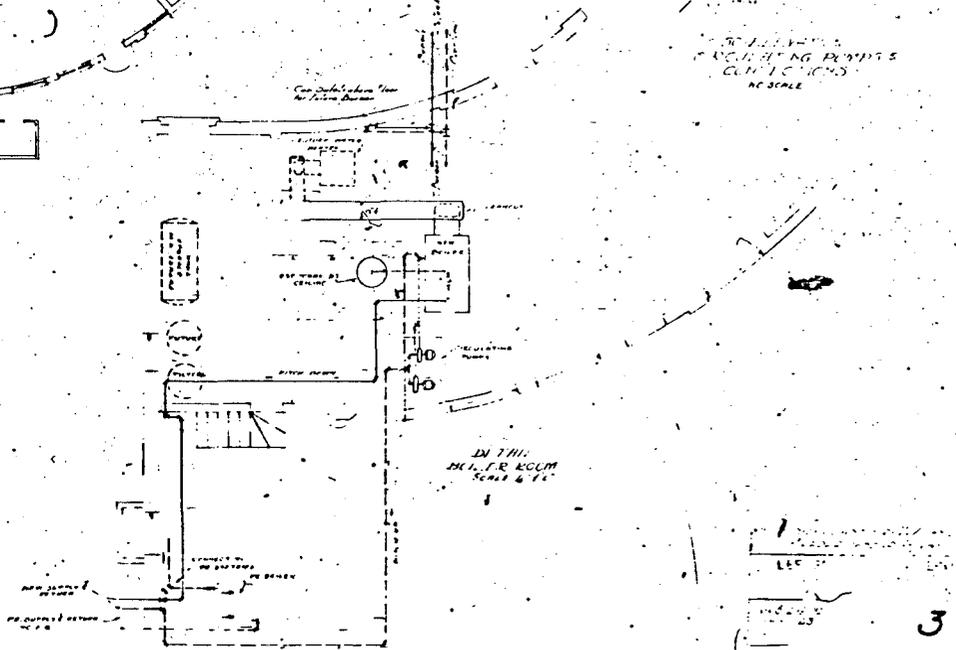
Scale 1/4" = 1'-0"



ISOMETRIC  
LAP TRACK CONNECTIONS  
NO SCALE

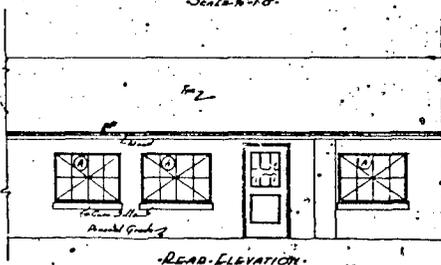
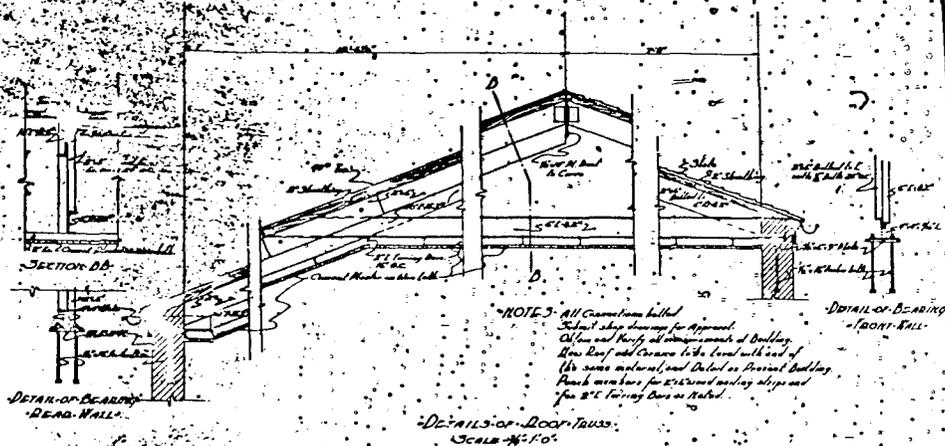
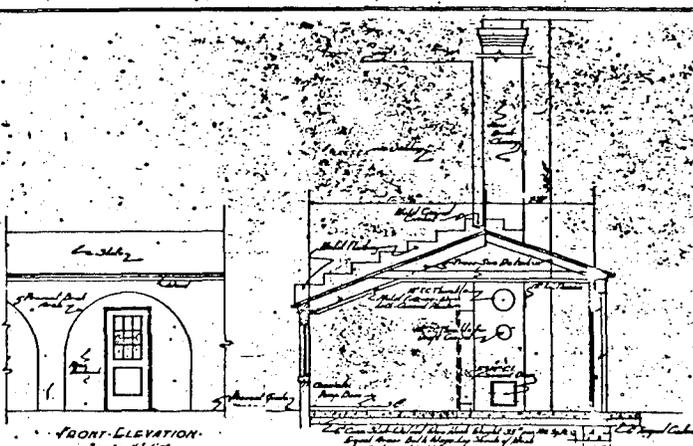
ISOMETRIC  
SOIL TIE CONNECTIONS  
FROM EXISTING  
NO SCALE

ISOMETRIC  
ANCHORING BOLTS  
CONNECTIONS  
NO SCALE



IN THE  
MILLER ROOM  
Scale 1/4" = 1'-0"



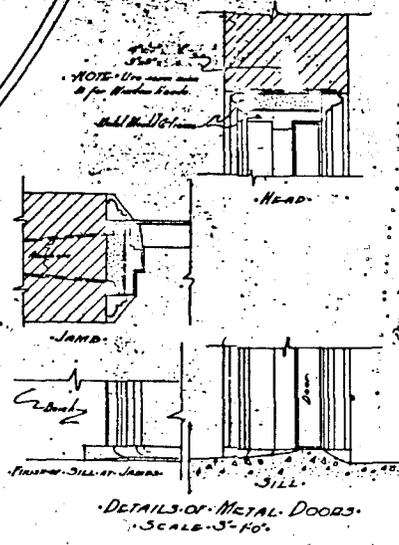
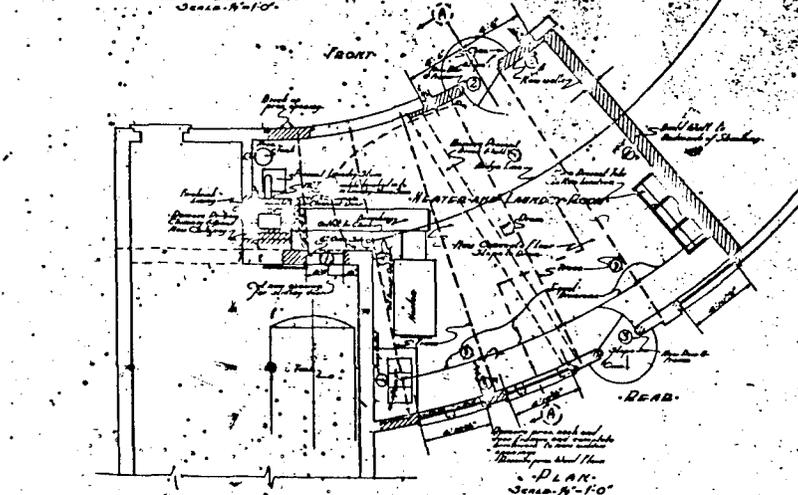


SCHEDULE OF DOORS

No.	Loc.	Spec.	Size	Material	Glass	Finish	Remarks
1	Front	See List	6'0" x 7'0"	Wood	None	See List	See List
2	Front	See List	6'0" x 7'0"	Wood	None	See List	See List
3	Front	See List	6'0" x 7'0"	Wood	None	See List	See List

SCHEDULE OF WINDOWS

No.	Loc.	Spec.	Size	Material	Glass	Finish	Remarks
1	Front	See List	6'0" x 7'0"	Wood	None	See List	See List
2	Front	See List	6'0" x 7'0"	Wood	None	See List	See List
3	Front	See List	6'0" x 7'0"	Wood	None	See List	See List

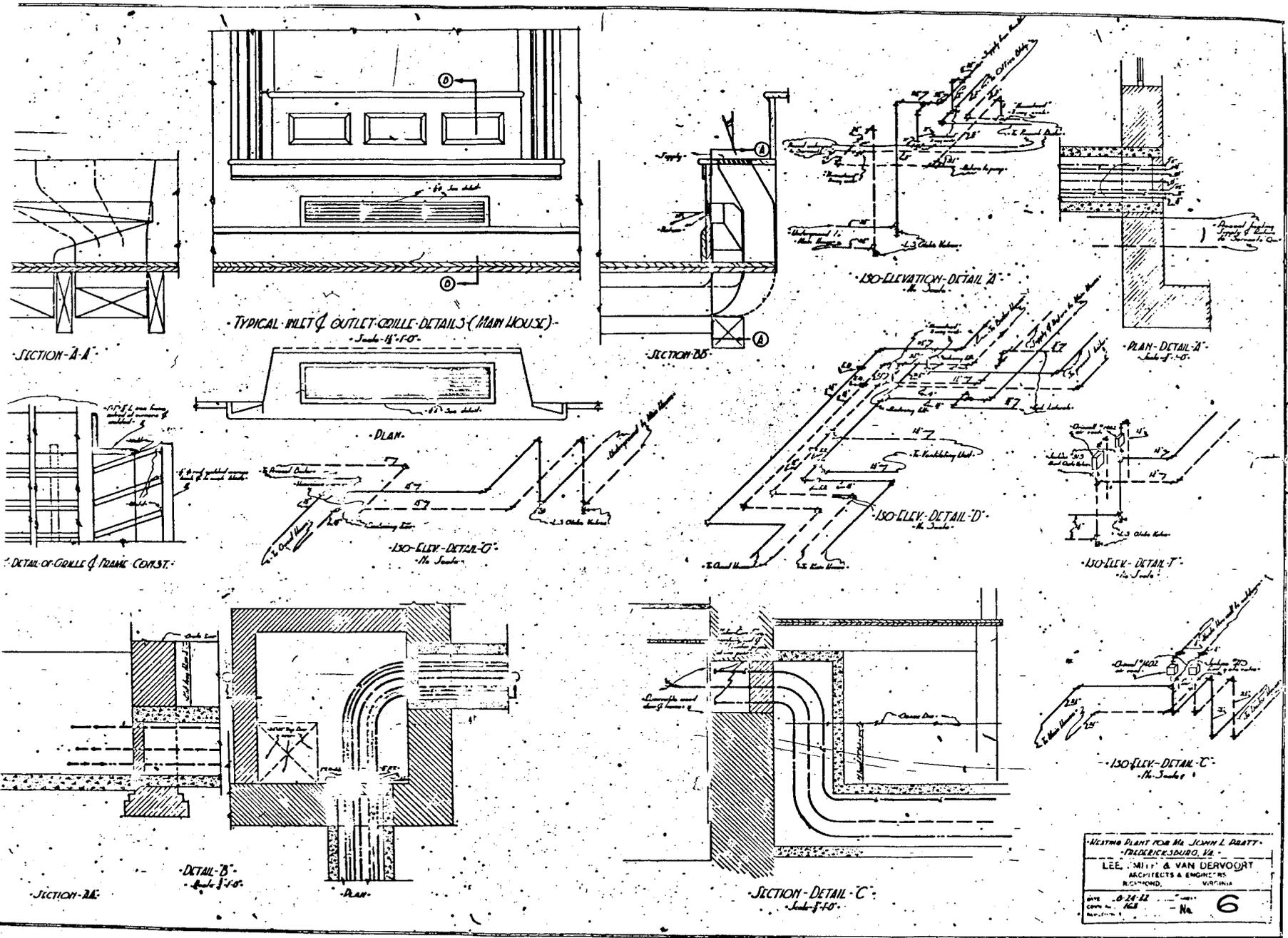


NOTE: Obtain and verify all Measurements of Building.

HEATING PLANT FOR RD. BUNK. BLDG.  
FERRISBURG, VA.

LEE, SMITH & VAN DERVOORT  
ARCHITECTS & ENGINEERS  
RICHMOND, VIRGINIA

DATE: 12/23/32  
DRAWN BY: JLS



TYPICAL INLET & OUTLET COILS - DETAILS (MAIN HOUSE)  
Scale: 1/4" = 1'-0"

SECTION - A - A

SECTION - B - B

ISO-ELEVATION-DETAIL A  
No. Scale

PLAN-DETAIL A  
Scale: 1/4" = 1'-0"

PLAN

ISO-ELEV-DETAIL D  
No. Scale

ISO-ELEV-DETAIL D  
No. Scale

ISO-ELEV-DETAIL T  
No. Scale

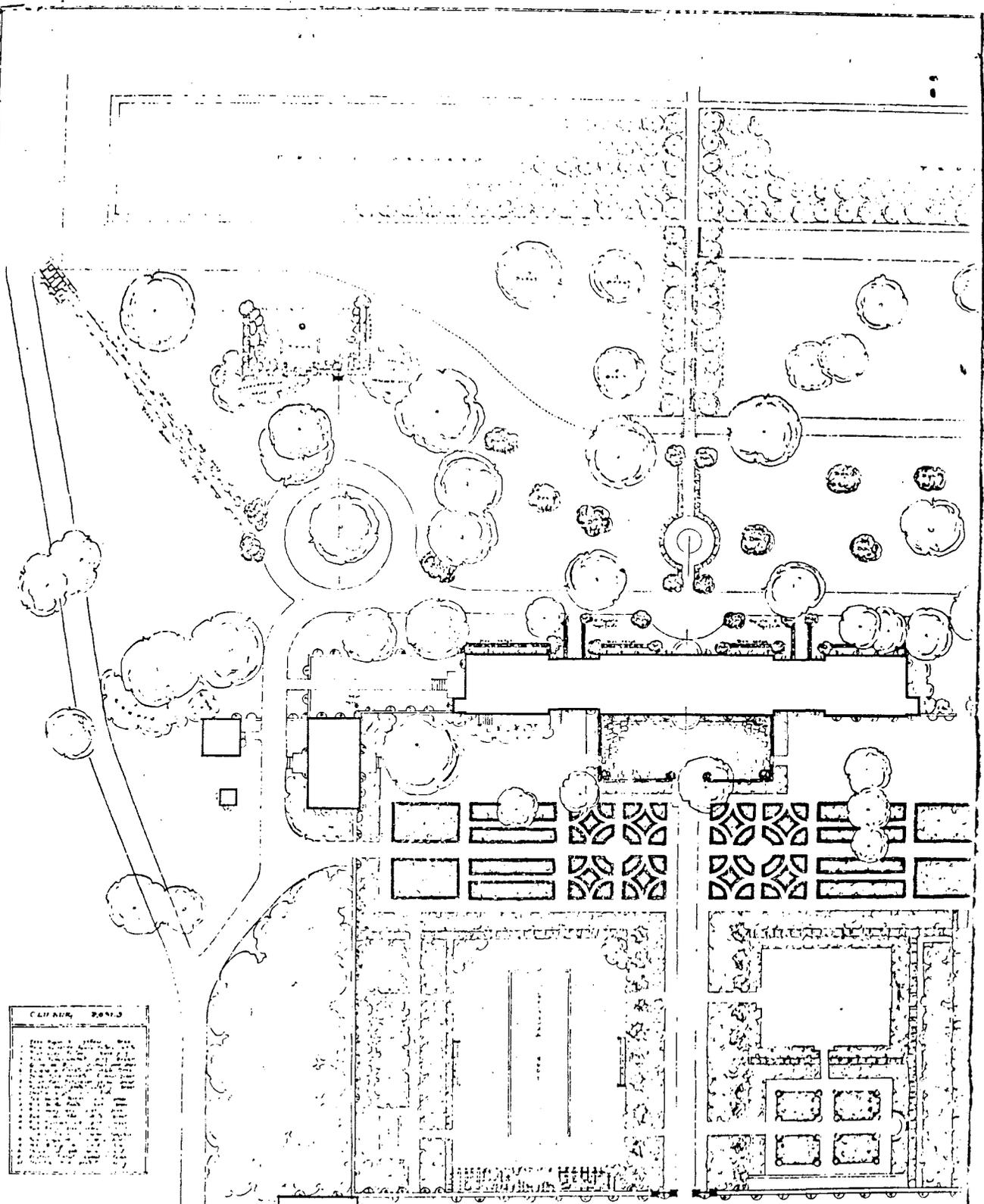
DETAIL OF COILS & FRAMING CONST.

DETAIL - B -  
Scale: 1/4" = 1'-0"

SECTION - DETAIL - C -  
Scale: 1/4" = 1'-0"

ISO-ELEV-DETAIL C  
No. Scale

HEATING PLANT FOR MR. JOHN L. DEATTY  
BRIDGESBORO, VA.  
LEE, MILL & VAN DERVOORT  
ARCHITECTS & ENGINEERS  
RICHMOND, VIRGINIA  
DATE: JUNE 28, 1922  
COPY NO. 168  
No. 6



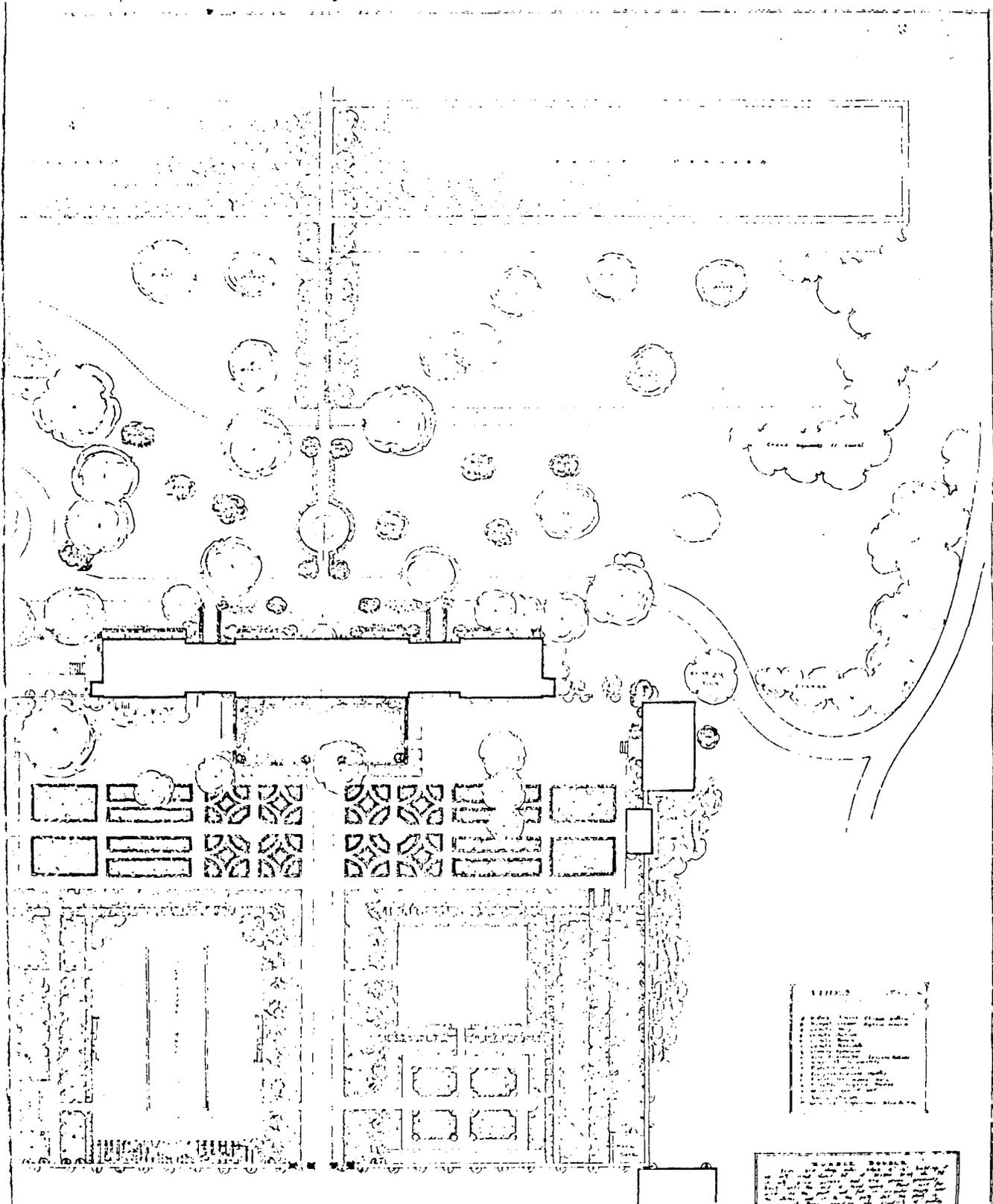
CLIPPING POINTS

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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VINE AND SHRUB PLAN FOR  
**CENTISAM**  
 MRS DANIEL DEVORE  
 FREDERICKSBURG - VIRGINIA

ELLEN SHIPMAN  
 LANDSCAPE ARCHITECT

NEW YORK CITY  
 MARCH 1921



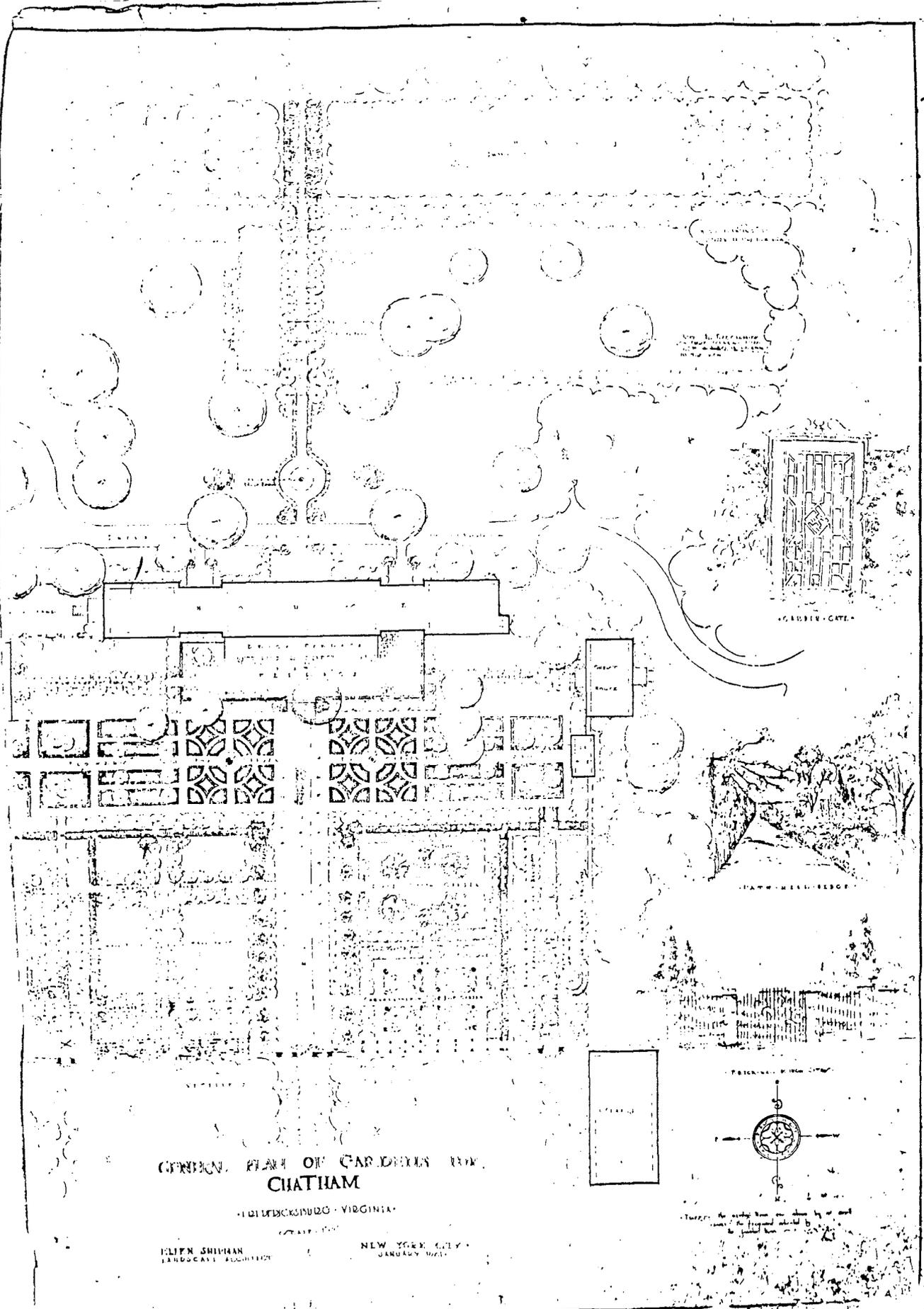
VINE AND SHRUB PLAN FOR  
**GRANTHAM**  
 HOSPITALITY DEPT.  
 FORT LEE, VIRGINIA

ELLEN CHIDMAN  
 LANDSCAPE ARCHITECT

NEW YORK CITY  
 MARCH 1961

NO.	PLANT	QTY.	REMARKS
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NO.	PLANT	QTY.	REMARKS
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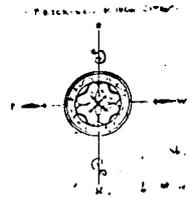


GENERAL PLAN OF GROUNDS FOR  
**CHATHAM**

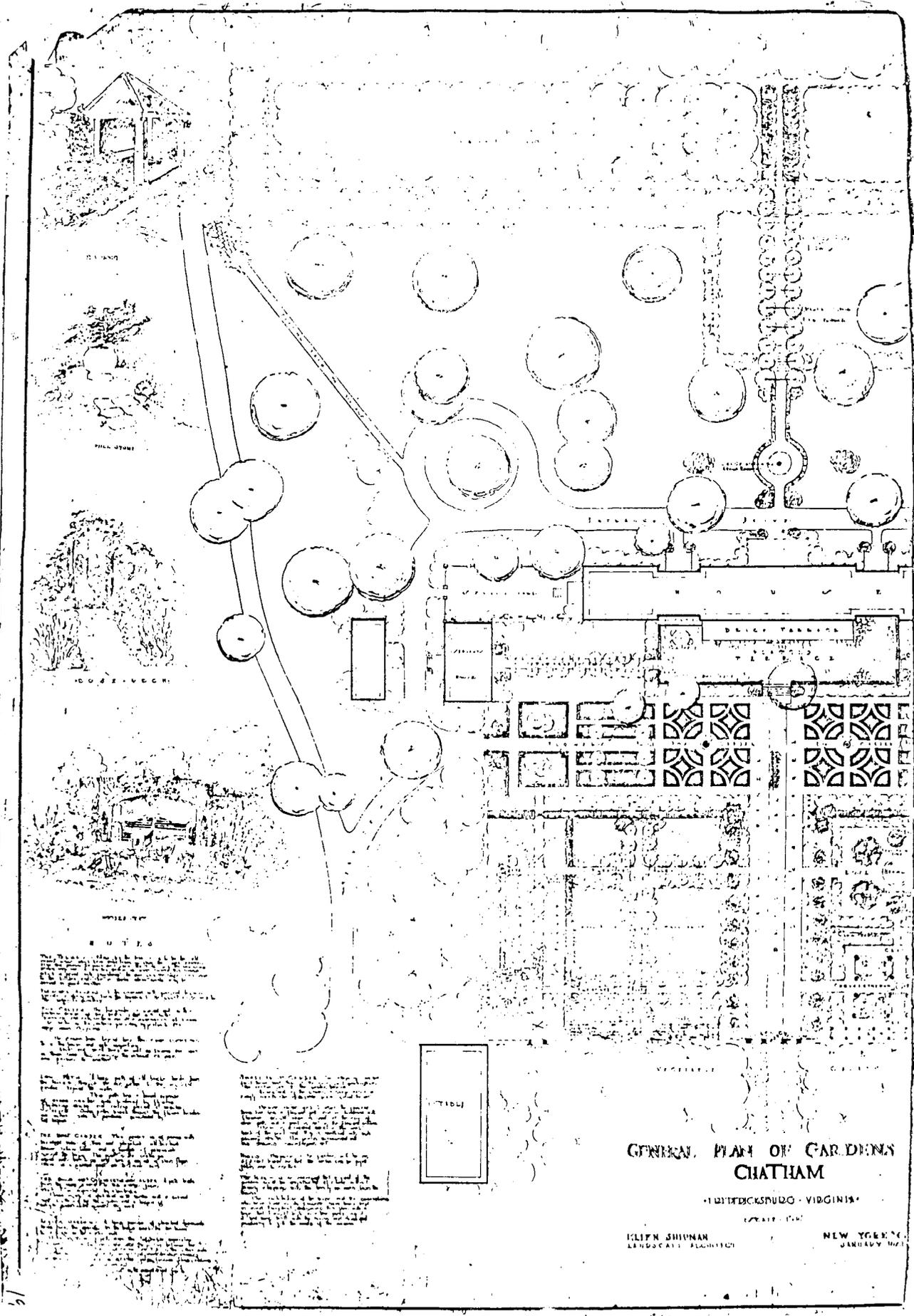
HENRIC, VIRGINIA

ELLEN SHIMAN  
 LANDSCAPE ARCHITECT

NEW YORK CITY  
 JANUARY 1921



Scale: 1" = 100'



GENERAL PLAN OF GARDENS  
CHATHAM

HEATHERBROOK - VIRGINIA

SCALE 1/4" = 1'

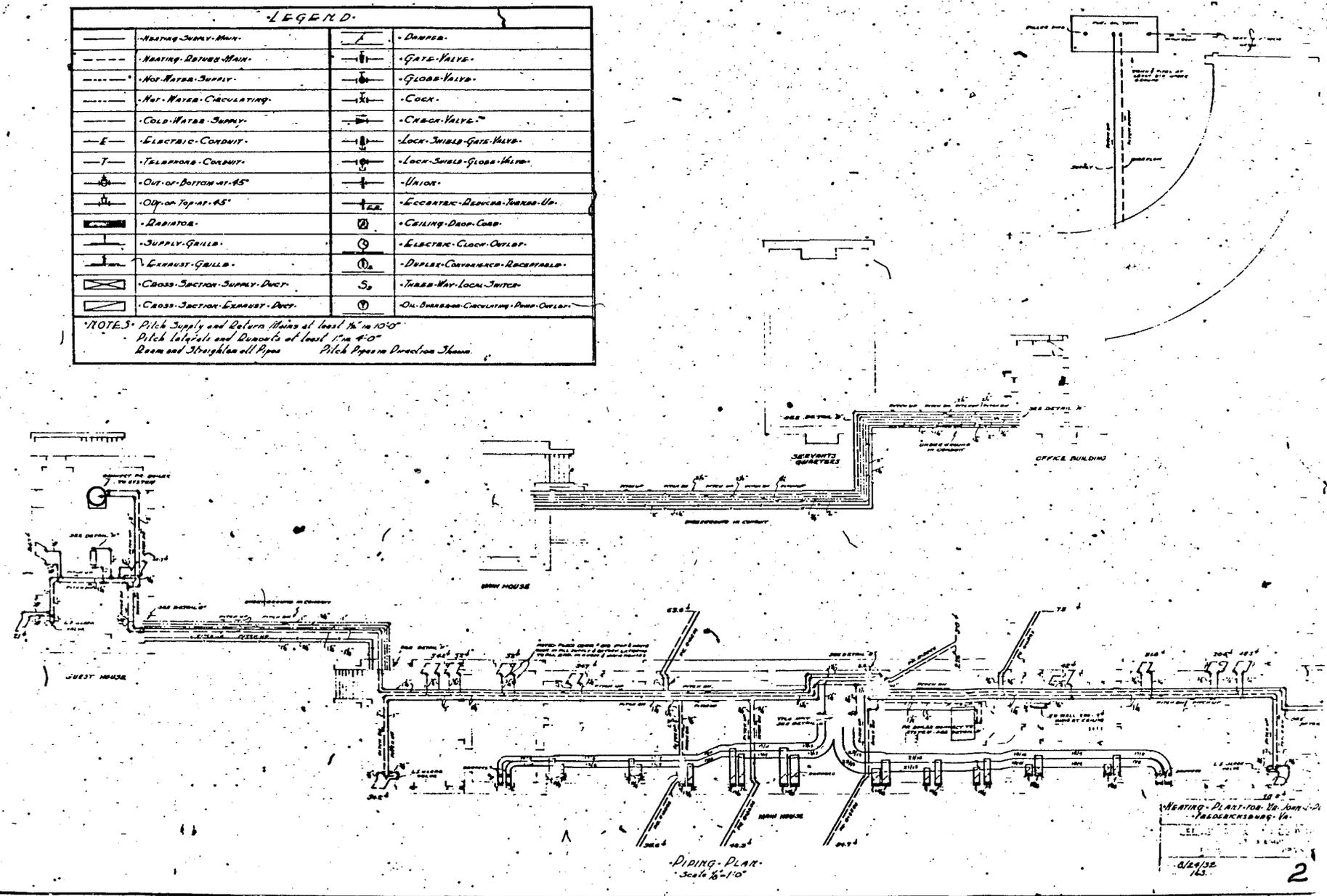
KLIFTON SHUMAN  
LANDSCAPE ARCHITECT

NEW YORK  
JANUARY 1921



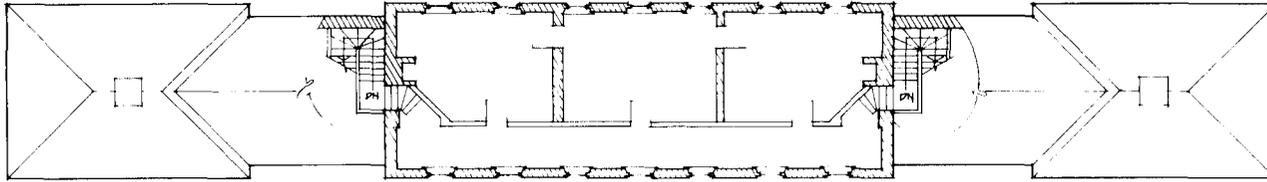
LEGEND.			
	HEATING SUPPLY MAIN		DRAIN
	HEATING RETURN MAIN		GATE VALVE
	HOT WATER SUPPLY		GLOBE VALVE
	HOT WATER CIRCULATING		COCK
	COLD WATER SUPPLY		CRACK VALVE
	ELECTRIC CONDUIT		LOCK SHIELD GATE VALVE
	TELEPHONE CONDUIT		LOCK SHIELD GLOBE VALVE
	OUT OF BOTTOM AT 45°		UNION
	OUT OF TOP AT 45°		ECCENTRIC REDUCER TURNS UP
	RADIATOR		CEILING DROP COOP
	SUPPLY GRILLS		ELECTRIC CLOCK OUTLET
	EXHAUST GRILLS		DEPLET CONTAINER RECEIVABLE
	CROSS SECTION SUPPLY DUCT		THREE-WAY LOCAL SWITCH
	CROSS SECTION EXHAUST DUCT		OIL BARBERS CIRCULATING PUMP OUTLET

NOTE 3. Pitch Supply and Return Mains at least 1/8" in 100'  
 Pitch laterals and Drains at least 1" in 4'-0"  
 Run and Straighten all Pipes Pitch Pipes in Direction Shown.

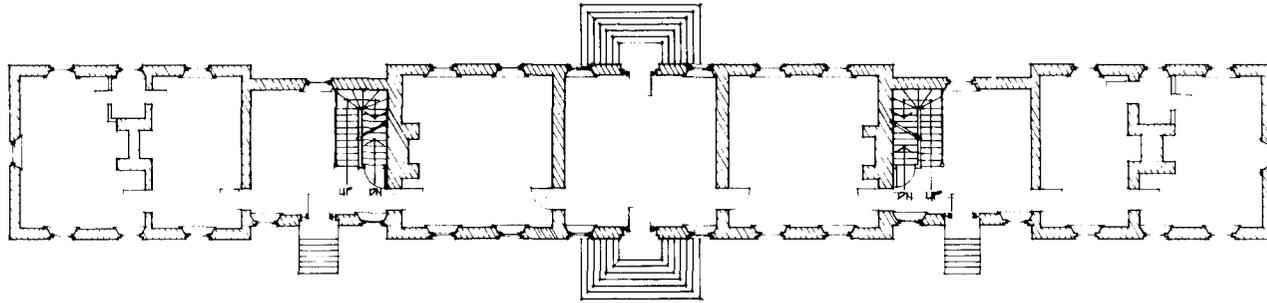


HEATING PLAN FOR THE HOUSE  
 TRACED BY H. B. BROWN  
 1915  
 2

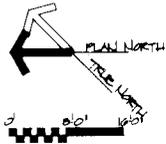
F. CONJECTURAL RESTORED PLAN, CHATHAM  
PLANTATION HOUSE, 1770



SECOND FLOOR PLAN  
SCALE: 1/8" = 1'-0"



FIRST FLOOR PLAN  
SCALE: 1/8" = 1'-0"



Conjectural Restored Plan  
1770

plan  
second  
first

Fredericksburg & Spotsylvania County Battlefields Memorial,  
National Military Park & Cemetery  
Historic Architecture Branch • Denver Service Center

Chatham Historic Structure Report

PREPARED BY R. H. HARRIS	DRAWING NO. 3769
DESIGNED BY R. H. HARRIS	DATE 12-7-76
CHECKED BY S. J. HARRIS	SHEET 5
DATE 12-7-76	

## G. STRUCTURAL ENGINEERING REPORT

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE

SHEET..... OF .....

MADE BY J. WONG

COMPUTATION SHEET

CHECKED BY.....  
(INITIAL AND DATE)

GPO 841-849

Subject: CHATHAM

FREDERICKSBURG, VA.

- ANALYSIS OF PROJECTED LOADING

INDEX

- I. FIRST FLOOR - - - - - SHTS. 1-7
- II. SECOND FLOOR - - - - - SHTS. 8-12
- III. FOUNDATION - - - - - SHTS 13-20
- IV. SUMMARY - - - - - SHT. 21

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE

SHEET 1 OF 21

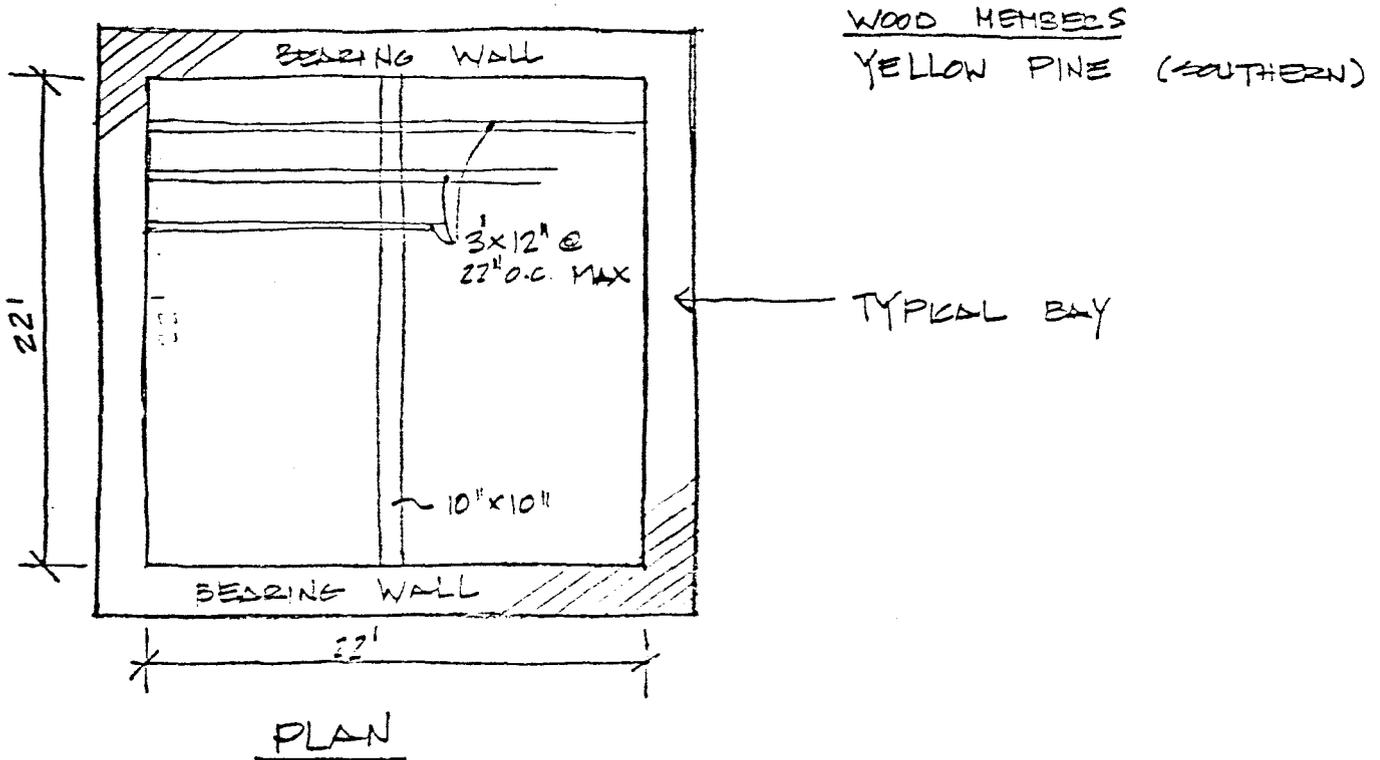
MADE BY T. WONG 6/23

CHECKED BY \_\_\_\_\_  
(INITIAL AND DATE)

GPO 841-849

COMPUTATION SHEET

Subject: CHATHAM - 1ST FLR. LOADING



LOADS:

D.L. - T.&G FLOORING - 4 psf  
PARTITIONS & EXHIBITS - 10 psf  
ELEC & MECH DUCTS - 5 psf  
19 psf

L.L. - PUBLIC USE SPACE - 100 psf

T.L. = 119 psf

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NATIONAL PARK SERVICE

SHEET 2 OF 21MADE BY T. WONG G/EECHECKED BY \_\_\_\_\_  
(INITIAL AND DATE)

GPO 841-849

## COMPUTATION SHEET

Subject: CHATHAM - 1<sup>ST</sup> FLR. LOADING T.L. = 119 psf

JOISTS - 3"X12" YELLOW PINE -  $F_b = 1750$  psi  
@ 22" o.c.  $F_v = 90$  psi  
 $E = 1.8 \times 10^6$  psi

- 3"X12" @ 22" WILL SUPPORT WHAT LOAD?

$$A = 3 \times 12 = 36 \text{ in}^2$$

$$S = \frac{bd^2}{6} = \frac{3(12)^2}{6} = 72 \text{ in}^3$$

$$I = \frac{bd^3}{12} = \frac{3(12)^3}{12} = 432 \text{ in}^4$$

- MOMENT -  $F_b = \frac{M}{S}$   $F_b = 1750$  psi  
 $S = 72 \text{ in}^3$

$$\Rightarrow M = F_b S = (1750)(72) = 126000 \text{ in} \cdot \text{lbs} = 10,500 \text{ ft} \cdot \text{lbs}$$

$$M_{\text{max}} = \frac{wl^2}{8} \quad l = 11'$$

$$\Rightarrow w = \frac{8M}{l^2} = \frac{8(10500)}{11^2} = 694.2 \text{ psf. @ 12" o.c.}$$

AT 22" o.c  $w = 694.2 \left( \frac{12}{22} \right) = \boxed{378.7 \text{ psf}} \rightarrow 119 \text{ psf T.L. (O.K.)}$

EXIST.  
USE 3"X12" JOISTS @ 22" - REPLACE ROTTED JOISTS

- SHEAR -  $F_v = \frac{3V}{2bd}$   
 $\Rightarrow V_{\text{allow}} = \frac{(2bd)(F_v)}{3} = \frac{2(36)(90)}{3} = \boxed{2160 \text{ lbs.}}$

$$V_{\text{max}} = \frac{wl}{2} = \frac{119(11)}{2} = 654.5 \text{ lbs.} < 2160 \text{ lbs (O.K.)}$$

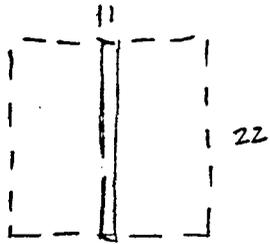
$$w_{\text{allow}} = \frac{2V}{l} = \frac{2(2160)}{11} = 392.73 \text{ psf}$$

COMPUTATION SHEET

Subject: CHATHAM - 1<sup>ST</sup> FLR. LOADING

SUMMER BEAM - 10" X 10" -  $F_b = 1750$  psi  
 $l = 22'$   $F_y = 90$  psi  
 $E = 1.8 \times 10^6$  psi

LOAD (PROJECTED FOR NEW USE):



$$w = (119 \text{ psf})(11) = \boxed{1309 \text{ lb/ft}}$$

$$W = (1309 \text{ lb/ft})(22) = 28,800 \text{ lb.}$$

- 10" X 10" BEAM WILL SUPPORT WHAT LOAD ?

$$A = 10 \times 10 = 100 \text{ in}^2$$

$$S = \frac{bd^2}{6} = \frac{10(10)^2}{6} = 166.7 \text{ in}^3$$

$$I = \frac{bd^3}{12} = \frac{10(10)^3}{12} = 833.3 \text{ in}^4$$

- MOMENT:  $F_b = \frac{M}{S}$

$$\Rightarrow M = F_b S$$

$$= (1750 \text{ psi})(166.7 \text{ in}^3) = 291725 \text{ in} \cdot \text{lbs} = 24310.4 \text{ ft} \cdot \text{lbs.}$$

$$M = \frac{wl^2}{8}$$

$$\Rightarrow w = \frac{8M}{l^2} = \frac{8(24310.4)}{(22)^2} = \boxed{401.8 \text{ lb/ft}} < 1309 \text{ (N.G.)}$$

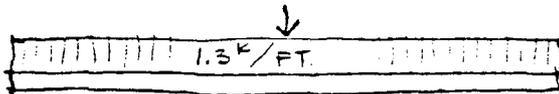
SINCE SOME OF THE SUMMER BEAMS HAVE CRACKS,  
 ASSUME THAT ALL OF THE LOADS WILL BE SUPPORTED  
 BY SOME OTHER STRUCTURAL SYSTEM. AT A LATER DATE,  
 SPECIFIC CALCULATIONS SHOULD BE DONE FOR EACH BEAM,  
 WITH CORRESPONDING SIZING OF SUPPORT MEMBERS

COMPUTATION SHEET

Subject: CHATHAM - 1<sup>ST</sup> FLOOR LOADING

- SUPPORT OF SUMMER BEAM

$P = 128.8 \text{ K}$



$l = 8'$

WALL OR PIPE COL.  $\frac{2}{2}$   
 $R_1$   
 $\frac{P}{4} = \frac{28.8}{4} = 7.2 \text{ K}$

$22'$   
 $R_2$   
 $\frac{P}{2} = \frac{28.8}{2} = 14.4 \text{ K}$

WALL (SEE SHT. 6) OR PIPE COL. (1) COLUMNS  
 $R_3$   
 $\frac{P}{4} = \frac{28.8}{4} = 7.2 \text{ K}$   
a) STEEL  
b) WOOD

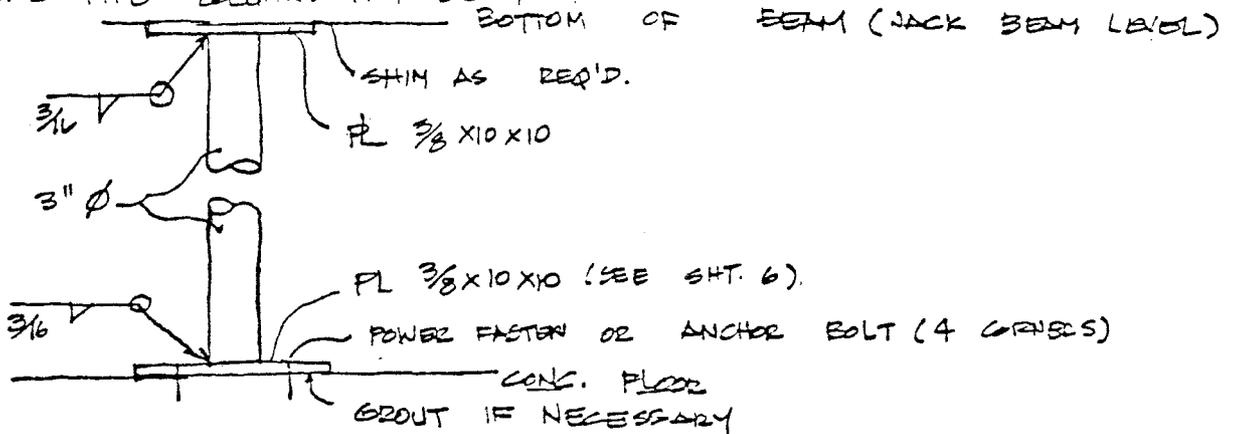
OR

WALL  $\frac{1}{2}$   $R_1$   $\frac{1}{3}$   $R_2$   $\frac{2}{3}$  WALL  
 $4.8 \text{ K}$   $\frac{P}{3} = \frac{28.8}{3} = 9.6 \text{ K}$   $\frac{P}{3} = \frac{28.8}{3} = 9.6 \text{ K}$   $4.8 \text{ K}$

\* ASSUME ADEQUATE BEARING AT WALLS (SEE SHT. 6)

1a) STEEL -  $l \sim 8'$

- 3" PIPE COLUMN HAS A CAPACITY OF 34 K  
CAN USE 1- 3" PIPE COLUMN AT MIDPOINT IF CRACK OCCURS THERE. IF SHEAR CRACKS OCCUR AT MORE THAN ONE PLACE MORE PIPE COLUMNS MAY BE REQ'D.



DETAIL 1

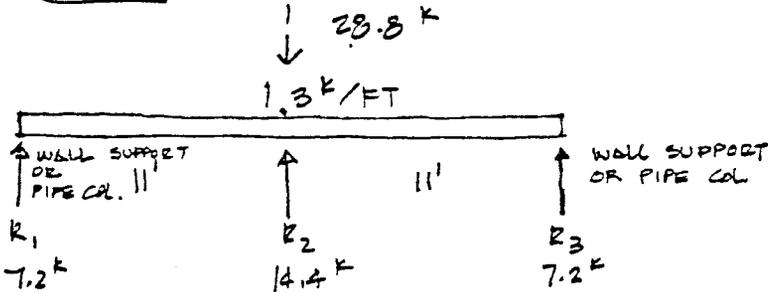
UNITED STATES  
DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE

SHEET 5 OF 21  
MADE BY T. KONG - 7/23  
CHECKED BY \_\_\_\_\_  
(INITIAL AND DATE)  
GPO 841-849

COMPUTATION SHEET

Subject: CHATHAM - 1ST FLOOR LOADING  
SUPPORT OF SUMMER BEAM (CONT.)

1b) WOOD -  $l \sim 8'$



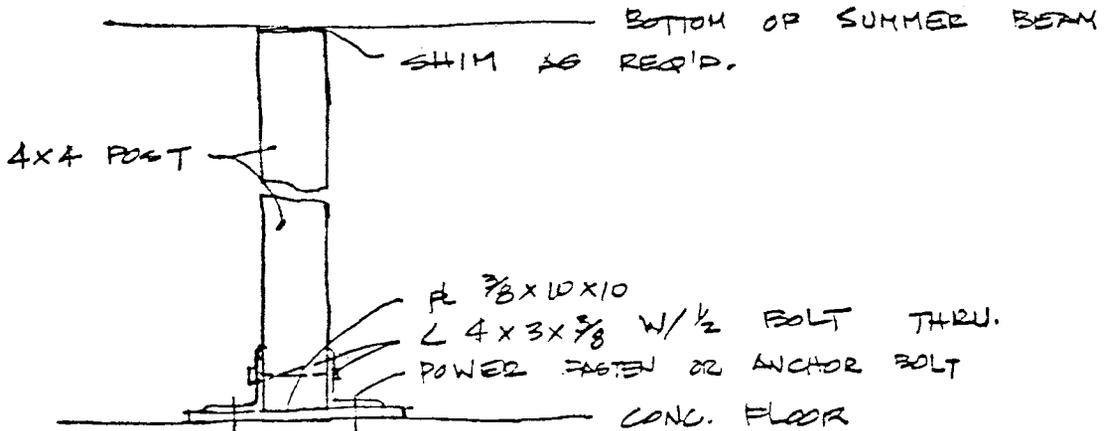
\* ASSUME ADEQUATE BEARING AT WALL (SEE SH. 6)

DESIGN OF SQUARE COLUMN TO SUPPORT 14.4 k LOAD  
 $l = 8'$        $F_c = 1250 \text{ psi}$

$$\frac{l}{d} = \sqrt{\frac{.30 E}{F_c}} = \sqrt{\frac{30(1.8 \times 10^6)}{1250}} = 20.78' > X \quad \text{FOR SHORT COLUMN ACTION} \quad (8)$$

$$F_c = \frac{P}{A} \Rightarrow \Delta = \frac{P}{F_c} = \frac{14400}{1250} = 11.52 \text{ in}^2$$

$$A_{4 \times 4} = 12.25 \text{ in}^2 > 11.52 \quad \therefore \text{USE } 4 \times 4 \text{ COL.}$$



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SHEET 6 OF 21

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COMPUTATION SHEET

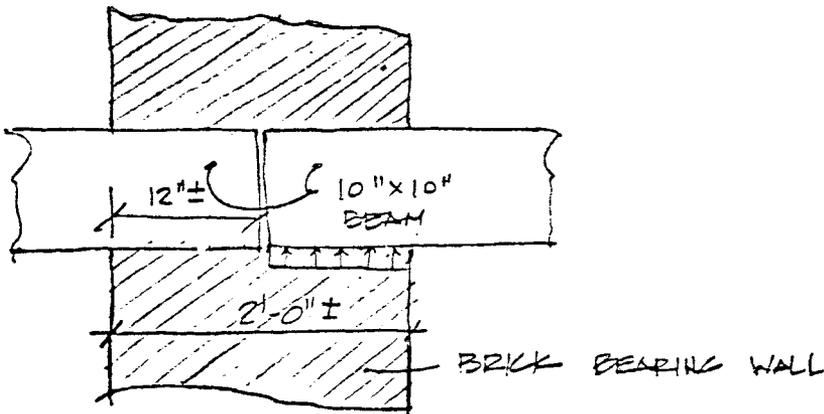
Subject: CHATHAM - 1ST FLOOR LOADING

1) BASE PLATES:

ASSUME 2000 PSI CONG.

$$A = \frac{14,400}{2000} = 7.2 \text{ in}^2 < 100 \text{ in}^2 \text{ (O.K.)}$$

\* 2) SUMMER BEAM BEARING CAPACITY AT BEARING WALL



DETAIL C BEARING WALL - ASSUMED

$$A_{\text{BEARING}} = 12 \times 10 = 120 \text{ in}^2$$

STEEL HANDBOOK <sup>SECT.</sup> 1.5.5 -  $F = 0.25 \text{ ksi} \rightarrow 250 \text{ psi}$   
 (ALLOWABLE BEARING STRESS FOR BRICK)

$$\text{BEARING CAPACITY} = 120 \times 250 = 30,000 \text{ lbs} > 7200 \text{ lbs (O.K.)}$$

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NATIONAL PARK SERVICE

SHEET 7 OF 21MADE BY T. WONG 7/23/51CHECKED BY \_\_\_\_\_  
(INITIAL AND DATE)

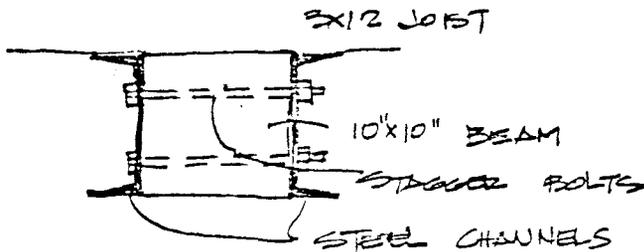
GPO 841-849

## COMPUTATION SHEET

Subject: CHATHAM - 1ST FLOOR LOADING

2) ADDITIONAL BEAM TO EXIST 10'x10" SUMMER BEAM

FOR EXAMPLE:



THIS METHOD WOULD BE MORE EXPENSIVE THAN THE  
COLUMN, <sup>SYSTEM</sup> BUT WOULD PERMIT THE ROOM TO REMAIN OPEN.  
\*

SPECIFIC CALCULATIONS MAY BE DONE AT A LATER  
DATE IF THIS METHOD IS CHOSEN.

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE

SHEET 8 OF 21

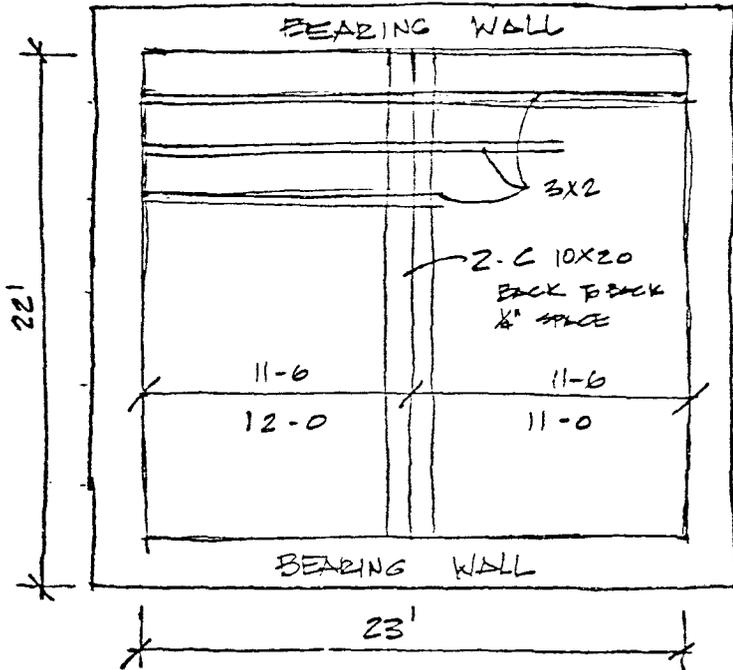
MADE BY J. WONG - 7/25/1

CHECKED BY \_\_\_\_\_  
(INITIAL AND DATE)

GPO 841-849

COMPUTATION SHEET

Subject: CHATHAM - 2ND FLOOR LOADING



PLAN

LOADS:

D.L.

- WOOD FLOORING - 4 psf
- PARTITION & EXHIBITS - 10 psf
- ELEC & MECH DUCTS - 5 psf
- PLASTER CEILING - 8 psf
- D.L. = 27 psf

L.L.

- OFFICE USE - 50 psf

T.L. = 77 psf

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NATIONAL PARK SERVICE

SHEET 9 OF 21  
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CHECKED BY \_\_\_\_\_  
(INITIAL AND DATE)

## COMPUTATION SHEET

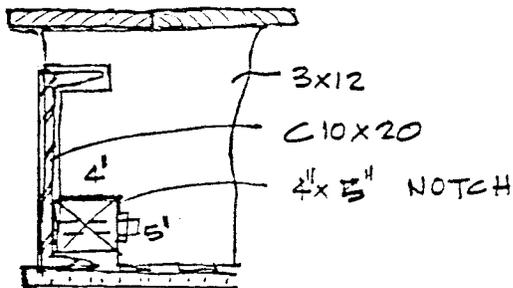
GPO 841-849

Subject: CHATHAM - 2<sup>ND</sup> FLOOR LOADING - T.L. = 77 psf

3x12 @ 20" O.C. (MAX)  
w/ NOTCH

YELLOW PINE  $\leftarrow$  DEAD LOAD +  
50# LIVE LOAD  
 $F_b = 1750 \text{ psi}$   
 $F_y = 90 \text{ psi}$

$l = 12'-0''$  (MAX)



- 3" x 12" WILL SUPPORT WHAT LOAD?

$$\left. \begin{aligned} A &= 36 \text{ in}^2 \\ S &= 72 \text{ in}^3 \\ I &= 432 \text{ in}^4 \end{aligned} \right\} \text{SHT. 2}$$

- MOMENT -  $F_b = \frac{M}{S}$        $F_b = 1750 \text{ psi}$   
 $S = 72 \text{ in}^3$

O.K. BY SHT. 2

CAPACITY APPROX. 330 psf FOR JOISTS

- CHECK SHEAR

REDUCTION BY NOTCH

$$V = \left( \frac{2 F_y b d'}{3} \right) \left( \frac{d'}{d} \right)$$

$$\begin{aligned} F_y &= 90 \text{ psi} \\ b &= 3'' \\ d &= 12'' \\ d' &= 12 - 5 = 7'' \end{aligned}$$

$$V_{\text{max}} = \frac{20}{12} \frac{(12 \times 77)}{2} = 770 \text{ lbs.}$$

$$V_{\text{allow}} = \left[ \frac{2(90)(3 \times 7)}{3} \right] \left[ \frac{7}{12} \right] = 735 \text{ lbs.} < 770 \text{ lbs.}$$

$$\% = \frac{770 - 735}{770} = 4.5\% \text{ OVER} \rightarrow \text{ALLOWABLE FOR TIMBER DESIGN}$$

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE

SHEET 10 OF 21MADE BY T. WONG - 7/23/71CHECKED BY \_\_\_\_\_  
(INITIAL AND DATE)

GPO 841-849

## COMPUTATION SHEET

Subject: CHATHAM 2<sup>ND</sup> FLOOR LOADING

## - CHECK DEPLETION

L.L. = 50 psf

D.L. = 27 psf

T.L. = 77 psf

$$\Delta_{L.L.} \leq \frac{l}{360} = \frac{12(12)}{360} = 0.4''$$

$$\Delta_{L.L. \max} = \frac{5}{384} \frac{wl^4}{EI}$$

$$= \frac{5 (50) (12)^4 (1728)}{384 (1.8 \times 10^6) (432)} = 0.03'' < 0.4 \text{ (O.K.)}$$

$$\Delta_{T.L. \max} \leq \frac{l}{240} = \frac{(12)(12)}{240} = 0.6''$$

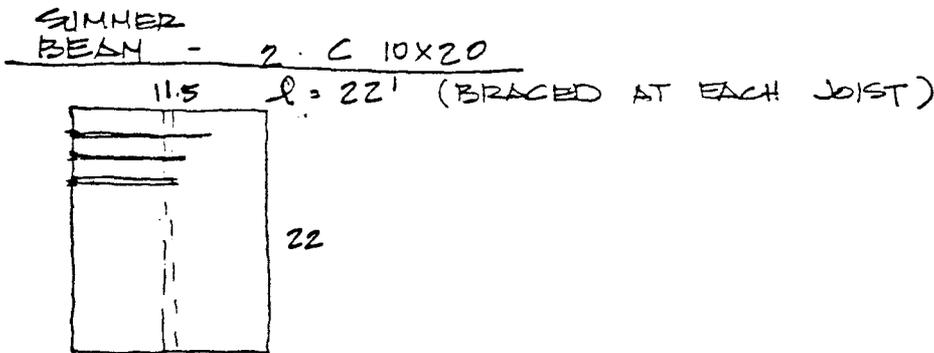
$$\Delta_{T.L.} = \frac{5}{384} \frac{wl^4}{EI}$$

$$= \frac{5 (77) (12)^4 (1728)}{384 (1.8 \times 10^6) (432)} = 0.05 < 0.6 \text{ (O.K.)}$$

- O.K. TO USE EXIST. 3x12 JOISTS

COMPUTATION SHEET

Subject: CHATHAM - 2ND FLOOR LOADING



LOAD (PROJECTED FOR NEW USE)

$$w = (77 \text{ psf})(11.5') = 885.5 \text{ lb/ft}$$

$$W = (885.5)(22) = 1948.1 \text{ lb.}$$

2 - C 10X20 WILL SUPPORT WHAT LOAD ?

$$A = 2(588) = 11.76 \text{ in}^2$$

$$S_x = 2(15.8) = 31.6 \text{ in}^3$$

$$I_x = 2(78.9) = 157.8 \text{ in}^4$$

- MOMENT:

$$S = \frac{M}{F_b} \Rightarrow M_{\text{ALLOW}} = S F_b \quad \text{ASSUME } F_b = .66 F_y \quad F_y = 36$$

$$= (31.6)(24) \quad = .66(36) = 24 \text{ ksi}$$

$$= 758.4 \text{ k.in} = \underline{63.2 \text{ k.ft}}$$

$$M_{\text{max}} = \frac{wl^2}{8}$$

$$= \frac{885.5(22)^2}{8} = \underline{53.6 \text{ k.ft}} < 63.2 \text{ k.ft} \quad (\text{O.K.})$$

- CHECK COMPACT SECTION:

$$b_f = 2(2.74) = 5.48 \text{ in}$$

$$d = 10''$$

$$t_f = 2(.436) = .872 \text{ in}$$

$$t_w = 2(.375) = .75 \text{ in.}$$

$$\frac{b_f}{2t_f} < 8.7 ; \quad \frac{5.48}{2(.872)} = 3.14 < 8.7 \quad (\text{O.K.})$$

$$\frac{d}{t_w} < 68.7 ; \quad \frac{10}{.75} = 13.19 < 68.7 \quad (\text{O.K.})$$

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SHEET 12 OF 21MADE BY T. WONG . 7/23/CHECKED BY \_\_\_\_\_  
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## COMPUTATION SHEET

Subject: CHATHAM - 2<sup>ND</sup> FLOOR LOADING - SUMMER BEAM (CONT.)- CHECK DEFLECTION  $l = 22'$ 

L.L. = 50 psf

D.L. = 27 psf

T.L. = 77 psf

$$\Delta_{L.L.} \leq \frac{l}{360} = \frac{22(12)}{360} = .73''$$

$$\Delta_{max} = \frac{5}{384} \frac{wl^4}{EI}$$

$$E = 30 \times 10^6 \quad (36 \text{ ksi STEEL})$$

$$\Delta_{L.L. max} = \frac{5(50)(22)^4(1728)}{384(30 \times 10^6)(157.8)} = 0.05'' < .73'' \quad (O.K.)$$

$$\Delta_{T.L.} \leq \frac{l}{240} = \frac{22(12)}{240} = 1.1''$$

$$\Delta_{T.L. max} = \frac{5(77)(22)^4(1728)}{384(30 \times 10^6)(157.8)} = 0.08'' < 1.1'' \quad (O.K.)$$

†  $\therefore$  O.K. TO USE EXIST 2-C10X20 BEAM -

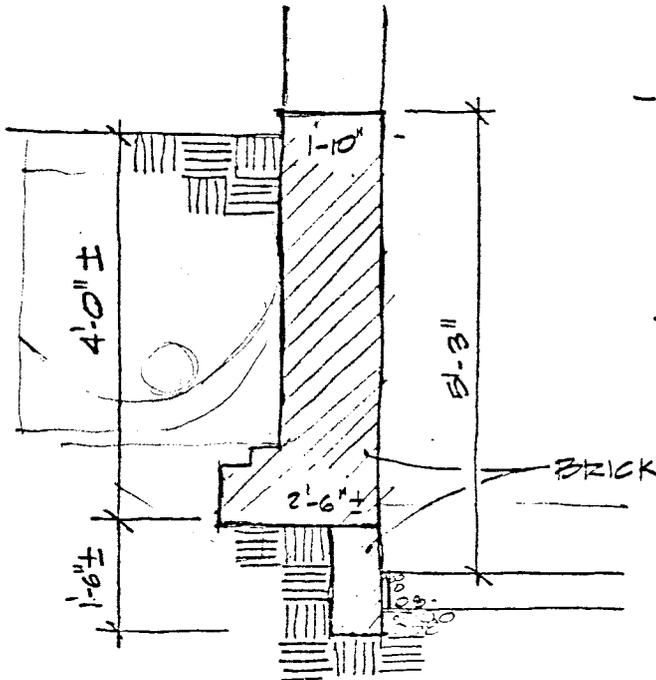
† NOTE: IT HAS BEEN NOTED THAT THESE SUMMER BEAMS ARE DEFLECTING AS INDICATED IN THE CEILING BELOW. SINCE DEFLECTION IS MINIMAL BY CALCULATION, IT IS RECOMMENDED THAT FURTHER INVESTIGATION BE DONE.

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SHEET 13 OF 21  
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COMPUTATION SHEET

Subject: CHATHAM - FOUNDATION



- SOIL - HARD CLAY  
SPEC 2900 ± p. 455 (UBC)  
† ALLOW FOR PRESSURE - 1500 PSF  
LATERAL BEARING - 150 lbs/ft

† THIS FIGURE IS CONSERVATIVE.  
MORE ACCURATE FIGURES SHOULD  
BE OBTAINED FROM A THOROUGH  
SOIL INVESTIGATION.

FOUNDATION SECTION

- CHECK CAPACITY OF FOUNDATION UNDER NEW PROJECTED LOADS

LOADS:

		PSF	
ROOF -	D.L. -	22	$(30 + \frac{8}{14.4}(20))$
	L.L. -	<u>41</u>	
	T.L. -	63	
2 <sup>ND</sup> FLR	D.L. -	27	
	L.L. -	<u>50</u>	
	T.L. -	77	
1 <sup>ST</sup> FLR	D.L. -	19	
	L.L. -	<u>100</u>	
	T.L. -	119	

ROOF LOADS:

D.L. - SLATE SHINGLES	10 psf
SHEATHING	2 psf
RAFTERS & BISTS	2 psf
PLASTER	8 psf
L.L. - WIND (HORIZ)	20 psf
- SNOW (VERT.)	30 psf

ROOF PITCH  $\frac{8}{12}$

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## COMPUTATION SHEET

Subject: CHATHAM - FOUNDATION

1) IS EXIST. FOUNDATION SIZE SUFFICIENT FOR PROJECTED NEW LOADS

$$2'-6" \times 1" \text{ (SEMENT)} = 2'-6" \text{ } \# \text{ AREA (EXT. WALL)}$$

191

$$20\% \text{ REDUCTION OF L.L.} \Rightarrow .80(41+50+100) = 153 \text{ psf}$$

$$\text{D.L.} \Rightarrow (22+27+19) = \underline{68} \text{ psf}$$

$$\text{T.L.} = 221 \text{ psf}$$

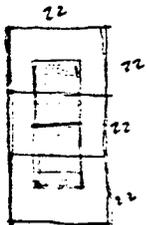
CALC. INT. BEARING WALLS FIRST

a) INTERIOR BEARING WALLS (2'-0" THICK - BRICK)LOAD ON BEARING WALLS WILL BE FROM 1<sup>ST</sup> & 2<sup>ND</sup> FLOORS ONLY

$$20\% \text{ REDUCTION OF L.L.} \Rightarrow .80(50+100) = 120$$

$$\text{D.L.} \Rightarrow (27+15) = \underline{48}$$

$$\text{T.L.} = 168 \text{ psf}$$



$$A_b = 22' \times 11' = 242 \text{ ft}^2$$

$$W_{\text{T.L.}} = 168(242) = 40.7 \text{ K}$$

$$W_{\text{BRICK}} = (20')(2')(22')(115 \text{ pcf}) = 101.2 \text{ K}$$

$$\text{TOTAL PROJECTED LOAD} = 101.2 + 40.7 = 141.9 \text{ K}$$

$$b_{\text{REQ'D.}} = \frac{141.9 \text{ K}}{1.5(22)(2)} = 2.15 \text{ ft.} \sim 2.0 \text{ ft. (O.K.)}$$

$\therefore$  INTERIOR BEARING WALLS ARE SUFFICIENT FOR THE NEW LOADS.

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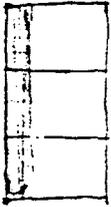
GPO 841-849

## COMPUTATION SHEET

Subject: CHATHAM - FOUNDATION

b) EXTERIOR FOUNDATION WALLS: 2'6" BEARING AREA  
LOAD FROM 1ST & 2ND FLOORS + ROOF

T.L. 221 psf (FROM SHT. 4)



$$W_{T.L.} = 221(6') = 1326 \text{ lb/ft}$$

$$W_{BRICK} = 30'(115) 2' = 6900 \text{ lb/ft}$$

$$\text{ALLOW. FDN. PRESSURE} = 1500 \text{ psf}$$

$$b_{\text{REQ'D.}} = \frac{1326 + 6900}{1500} = 5.5 \text{ FT} > 2.5' \quad (\text{N.G.})$$

- ☒ THE 1500 PSF ALLOW. FDN. PRESSURE IS CONSERVATIVE AS NOTED BEFORE. SINCE THIS BLDG. HAS EXISTED FOR MANY YEARS W/O ANY RECOGNIZABLE <sup>SOIL</sup> FAILURE, IT IS ASSUMED THAT THE ALLOW. FDN. PRESSURE IS GREATER THAN 1500 PSF, ESPECIALLY SINCE THE SIZE OF THE EXIST. FDN. WALL IS SMALLER THAN REQ'D. FOR BRICK ONLY ( $\frac{6900}{1500} = 4.6'$  VS.  $2.5'$ ). THEREFORE, IT IS STRONGLY RECOMMENDED THAT TEST BORES BE TAKEN BY... A QUALIFIED SOILS TESTING FIRM. AFTER TESTING IS FINISHED, A MORE ACCURATE CALCULATION CAN BE DONE, & SIZING AS REQ'D.

ALSO, SINCE THERE ARE OTHER BLDGS. ON THE SITE, IT IS FEASIBLE TO HIRE SUCH A FIRM FOR A COMPLETE INVESTIGATION. IT IS ASSUMED THAT THESE OTHER BLDGS WILL BE USED AT SOME TIME.

ESTIMATE OF SOILS TESTING + REPORT - \$5,000.00 - \$6,000.00

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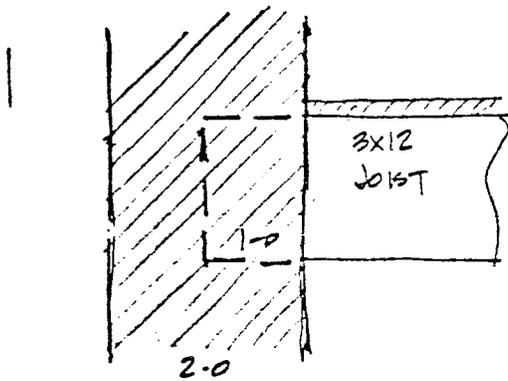
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## COMPUTATION SHEET

Subject: CHATHAM - FOUNDATION

2) IS BRICK BEARING CAPACITY SUFFICIENT FOR PROJECTED NEW LOADS?

ALLOWABLE WORKING STRESS ( $F_m$ ) = .25 ksi = 250 PSI

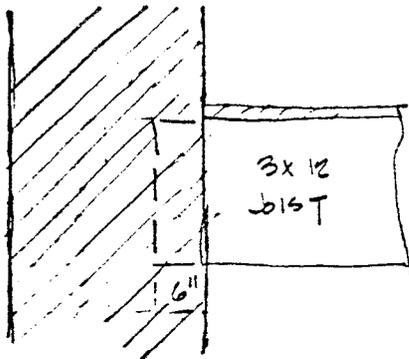
1ST FLR

$$A_b = 3 \times 12 = 36 \text{ in}^2$$

$$T.L. = 119 \text{ lbs/ft}$$

$$W_{\text{max}} = \frac{20}{12} (119)(6') = 1190 \text{ lb}$$

$$W_{\text{allow}} = 250(36) = 9000 \text{ lb} > 1190 \text{ (O.K.)}$$



2ND FLR

$$A_b = 3 \times 6 = 18 \text{ in}^2$$

$$T.L. = 77 \text{ lbs/ft}$$

$$W_{\text{max}} = \frac{20}{12} (77)(6') = 770 \text{ lbs}$$

$$W_{\text{allow}} = 250(18) = 4500 \text{ lb} > 770 \text{ (O.K.)}$$

NOTE: MIN. BEARING FOR WOOD ON MASONRY IS 4" (UBC. SEC 2516)

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SHEET 17 OF 21

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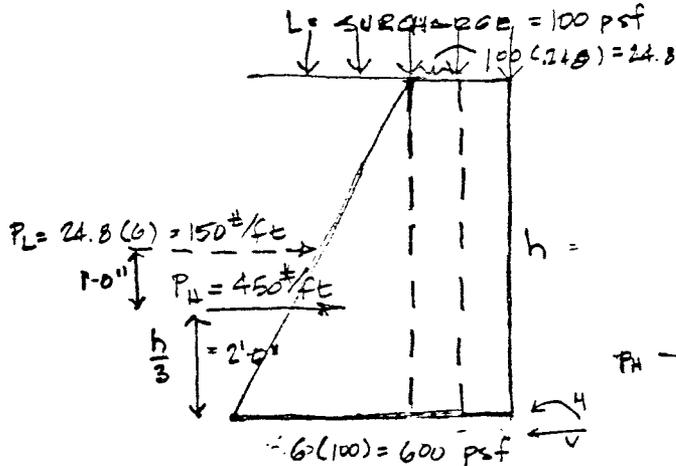
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GPO 841-849

COMPUTATION SHEET

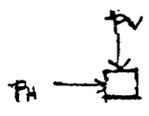
Subject: CHATAM - FOUNDATION

3) REPAIR OF BULGING FOUNDATION WALLS.



$h = 6.0' \pm$

EARTH WEIGHT - 100 pcf  
ALLOW. LATERAL BEARING. 150 lbs/ft.



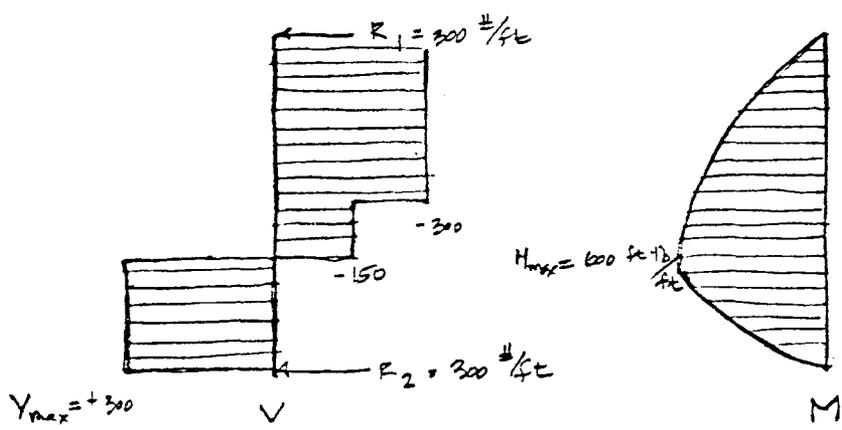
$\phi (\text{CLAY}) = 37^\circ$   
ANGLE OF INTERNAL FRICTION

$P_H = P_V \tan^2(45^\circ - \frac{\phi}{2})$   
 $= P_V \tan^2(45^\circ - \frac{37^\circ}{2})$   
 $= P_V \tan^2(26.5)$

$P_H = .248 P_V$

$w_e = 100(24.8) = 24.8 \text{ pcf}$

$P_H = \frac{wh^2}{2} = \frac{w_e h^2}{2} = \frac{24.8(6)^2}{2}$   
 $= 450 \text{ #/ft}$



ASSUME SIMPLE SUPPORTS

- FOUNDATION STABILIZATION SYSTEM MUST BE ABLE TO RESIST A MAX. LATERAL PRESSURE OF  $150 + 450 = 600 \text{ #/ft}$ .

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COMPUTATION SHEET

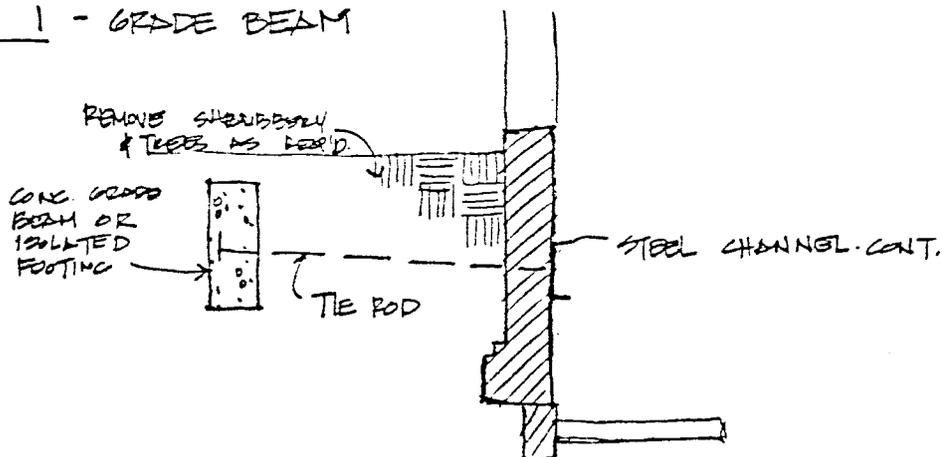
Subject: CLATHAM - FOUNDATION

FOUR POSSIBLE BRACING ALTERNATIVES ARE:

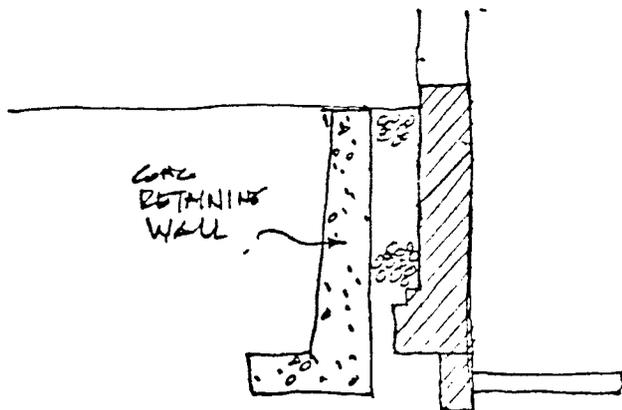
- 1) <sup>EXT.</sup> GRADE BEAM W/ TIE RODS TO FDN. WALL
- 2) EXTERIOR RETAINING WALL
- 3) INTERIOR PILASTERS OR WALL
- 4) INTERIOR WOOD OR STEEL CROSS-BRACING

ALL SYSTEMS WILL REQUIRE CALCULATIONS FOR PROPER SIZING  
SHOWN BELOW ARE SCHEMATIC SKETCHES FOR EACH SYSTEM

ALT. 1 - GRADE BEAM



ALT. -2 - RETAINING WALL



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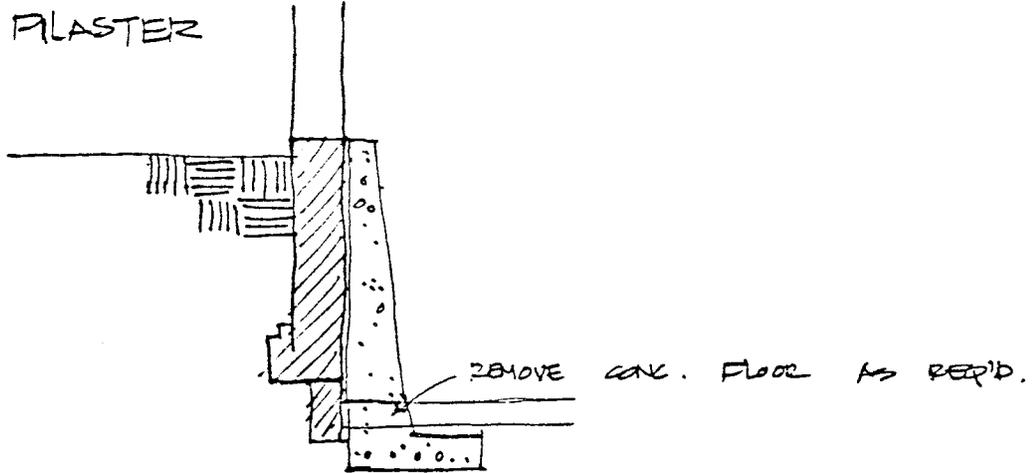
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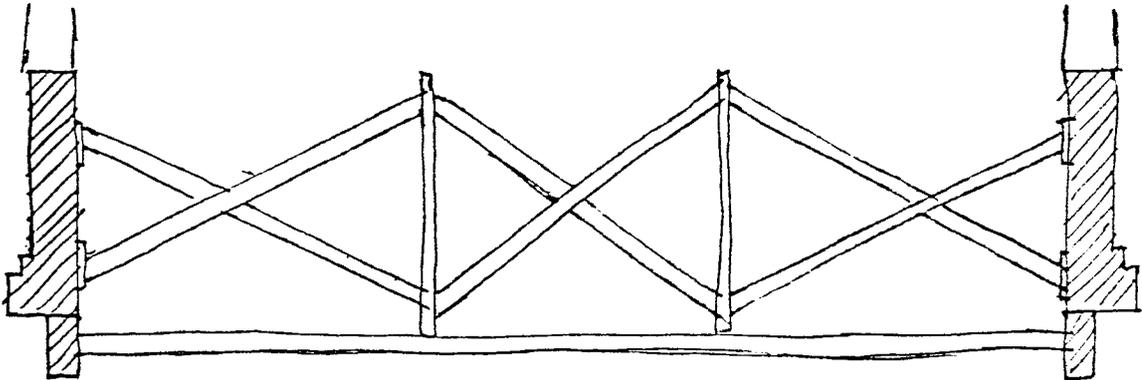
COMPUTATION SHEET

Subject: CHATHAM - FOUNDATION

ALT 3 - PLASTER



ALT. 4 - CROSS-BRACING



- LOCATIONS FOR EACH ALTERNATE VARY WITH EXTENT OF FAILURE

- IT IS RECOMMENDED THAT EITHER ALT. 1 (GRADE BEAM) OR ALT 3 (PLASTER) BE USED.

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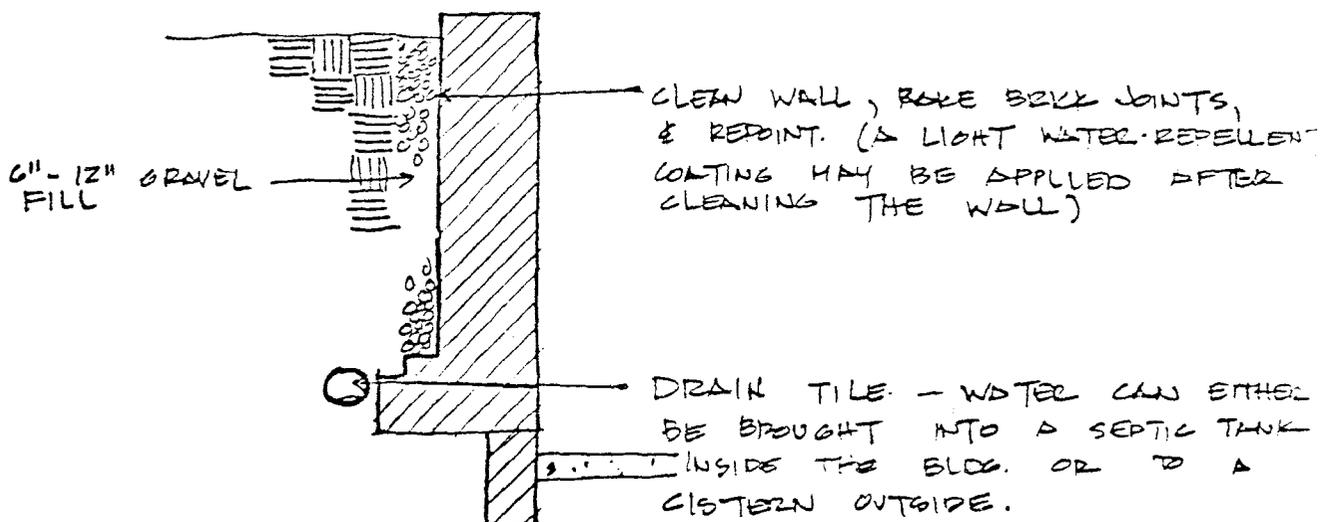
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(INITIAL AND DATE)

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## COMPUTATION SHEET

Subject: CHATHAM - FOUNDATION

REGARDLESS OF WHICH METHOD IS CHOSEN, IT IS IMPORTANT TO REPAIR THE EXIST. BRICK FOUNDATION. IT IS THEREFORE RECOMMENDED THAT THE FOLLOWING PROPOSAL BE ADOPTED. TO ARREST FURTHER FOUNDATION PROBLEMS

FOUNDATION SECTION

RECOMMENDED REPAIR

UNITED STATES  
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## COMPUTATION SHEET

Subject: SUMMARY: CHATHAM

## I) FIRST FLOOR

- A) EXIST. JOISTS ARE ADEQUATE - REPLACE THOSE JOISTS WHICH ARE ROTTING.
- B) SUMMER BEAMS ARE STRUCTURALLY INADEQUATE. A SIMPLE BRACING SYSTEM WOULD BE STEEL OR WOOD POSTS. EACH SUMMER BEAM SHOULD BE INVESTIGATED TO DETERMINE THE NEEDED SUPPORT.

## II) SECOND FLOOR

- A) EXIST JOISTS ARE ADEQUATE - IF POSSIBLE, INVESTIGATE CONDITION OF EACH JOIST.
- B) SUMMER BEAMS (2 10x20) - CALCULATIONS SHOW THAT THESE ARE ADEQUATE. HOWEVER, SINCE SOME DEFLECTION HAS OCCURRED, FURTHER INVESTIGATION SHOULD BE DONE.

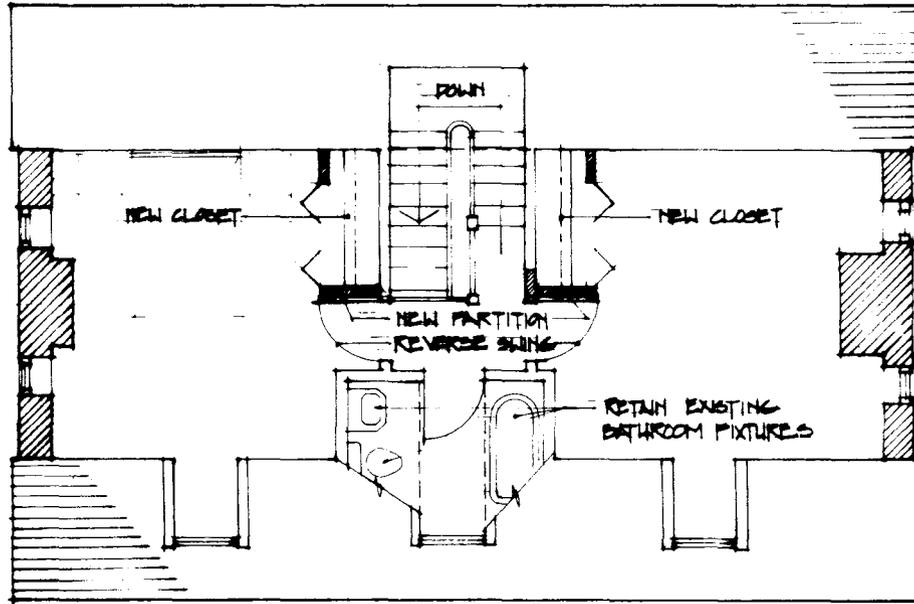
## III) FOUNDATION

- A) BRACING OF EXIST. FDN. WALLS IS DEFINITELY REQUIRED WHERE BOWING OCCURS. OTHER AREAS SHOULD BE INVESTIGATED TO DETERMINE IF AND HOW MUCH BRACING IS REQUIRED. IT IS RECOMMENDED THAT EITHER A GRADE BEAM OR PILASTER SYSTEM BE ADOPTED IN AREAS REQUIRING SUPPORT.
- B) TREATMENT OF THE EXIST. BRICK FOUNDATION WALL IS IMPERATIVE TO PREVENT FURTHER DAMAGE. EXIST SHRUBS AND TREES NEAR THE BUILDING ARE AN AREA OF CONCERN. REMOVABLE OF THESE WOULD PROVE HELPFUL FOR THE PRESERVATION OF THE BUILDING.

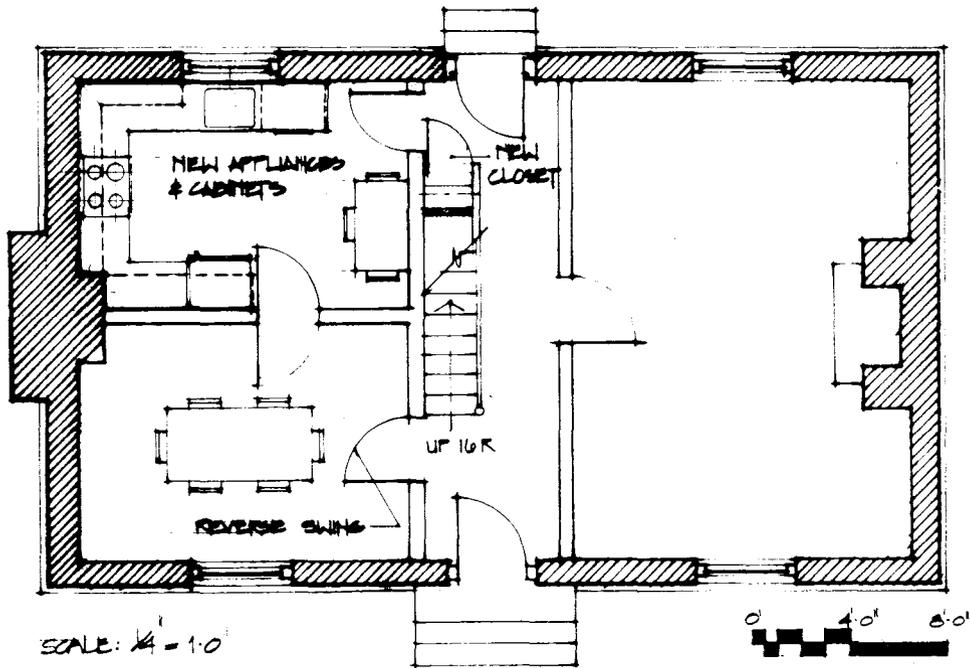
## IV. ROOF

- NO WORK WAS DONE ON THIS IN THIS REPORT. HOWEVER, SOME INVESTIGATION SHOULD BE DONE TO DETERMINE THE ADEQUACY OF THE ROOF

H. PROPOSED RESIDENCE PLAN, KITCHEN  
(ADAPTATION OF STRUCTURE TO PARK STAFF RESIDENCE)



SECOND FLOOR PLAN



FIRST FLOOR PLAN

# Proposed Residence Plan

EXISTING CONDITIONS DRAWINGS, CHATHAM, AUGUST 1976



EAST ELEVATION  
SCALE: 1/8" = 1'-0"



WEST ELEVATION  
SCALE: 1/8" = 1'-0"



# Existing Conditions

August 1976

elevation

east  
west

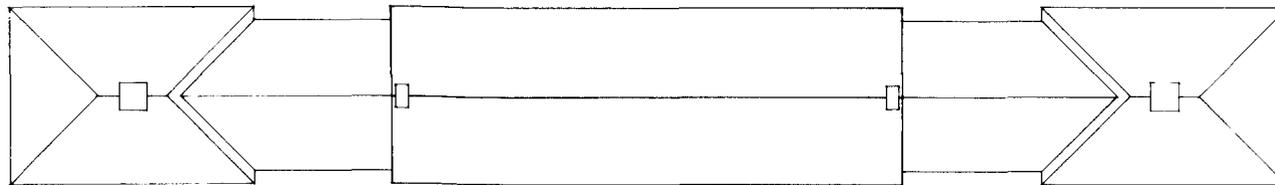
Fredericksburg & Spotsylvania County Battlefields Memorial,  
National Military Park & Cemetery

# Chatham Historic Structure Report

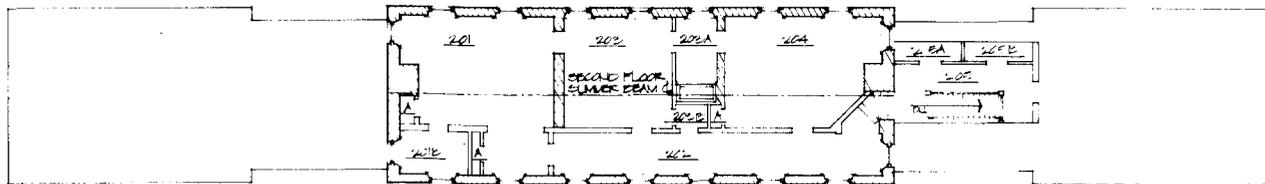
Historic Architecture Branch • Denver Service Center

PREPARED	DRAWING NO
DESIGNED	3/26
REVIEWED	28002
DRAWN	PROG
CHECKED	NO
DATE	SHEET
	3
	OF 3

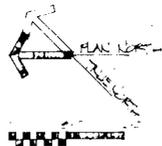
DEC 1974



ROOF PLAN  
SCALE: 1/8" = 1'-0"



SECOND FLOOR PLAN  
SCALE: 1/8" = 1'-0"



Existing Conditions  
August 1976

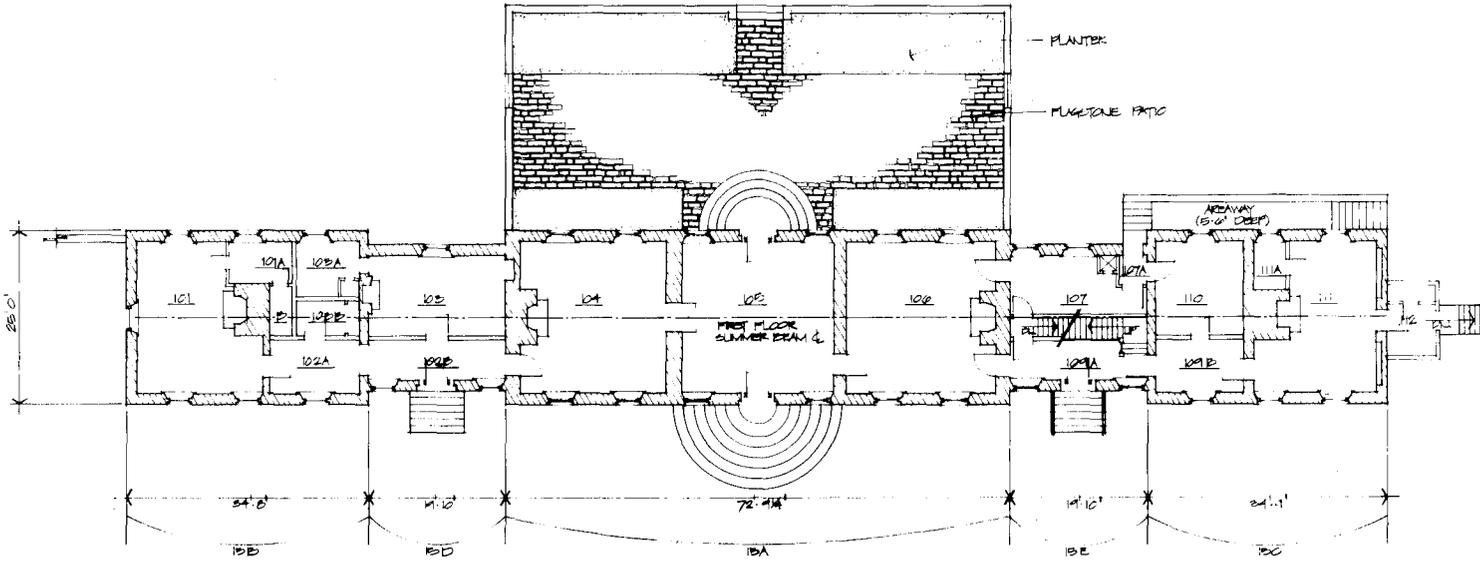
plan  
roof  
second

Fredericksburg & Spotsylvania County Battlefields Memorial,  
National Military Park & Cemetery

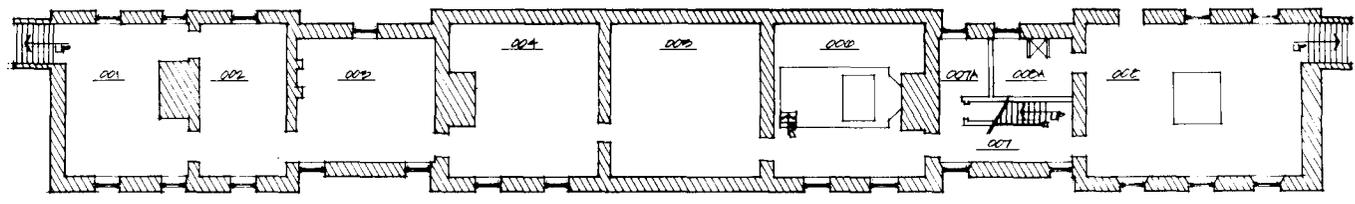
# Chatham Historic Structure Report

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DESIGNED BY	3140
DRAWN BY	18001
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DATE	SHEET
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	OF 8



FIRST FLOOR PLAN  
 SCALE: 1/8" = 1'-0"

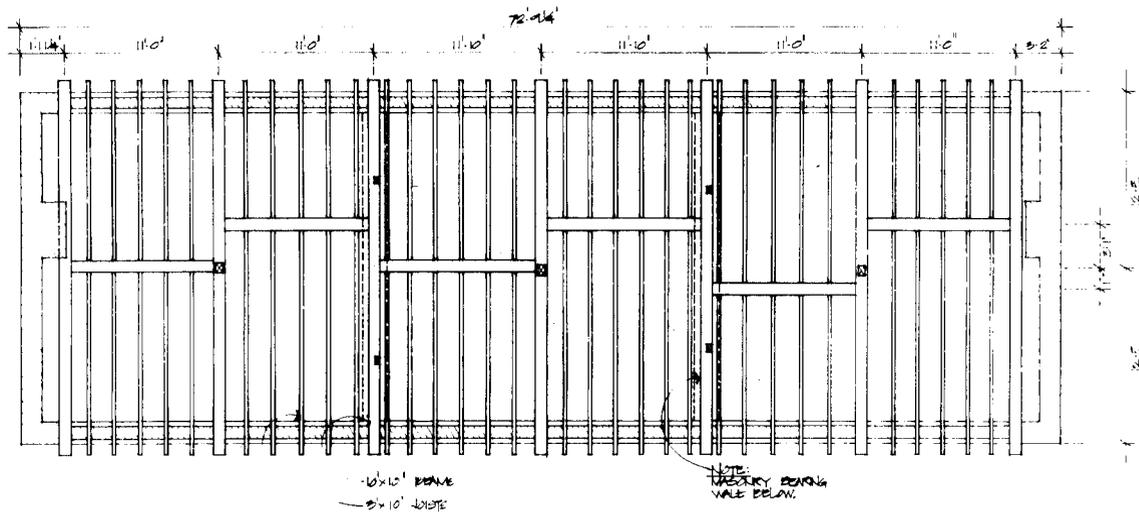


BASEMENT FLOOR PLAN  
 SCALE: 1/8" = 1'-0"

**Existing Conditions**  
 August 1976

plan  
 first  
 basement

PREPARED	DRAWING NO.
DESIGNED	5210
CHECKED	2800
DATE	1/1
	SHEET
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	OF 2



ROOF FRAMING PLAN  
SCALE: 1/4" = 1'-0"

plan  
roof

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National Military Park & Cemetery

# Chatham Historic Structure Report

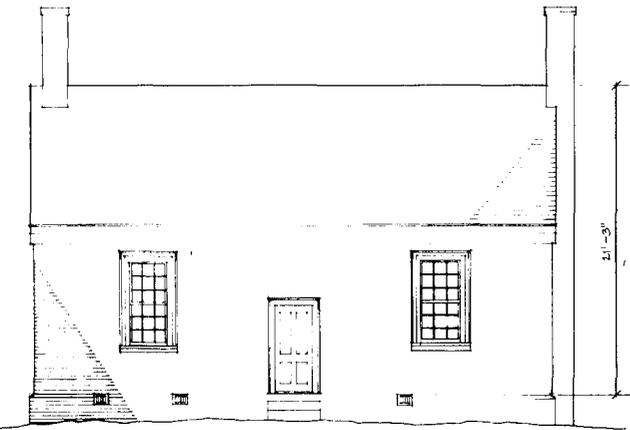
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CHECKED	28002
DATE	
PAC. NO.	
SHEET	4
	OF 8



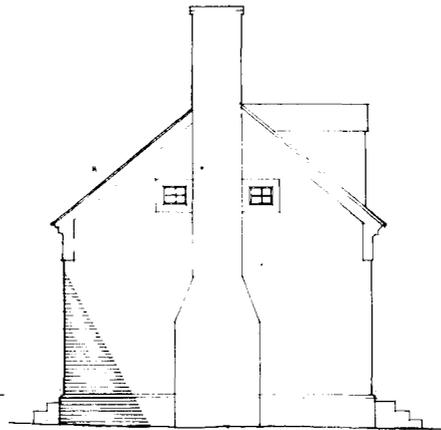
SOUTH ELEVATION

EAST ELEVATION

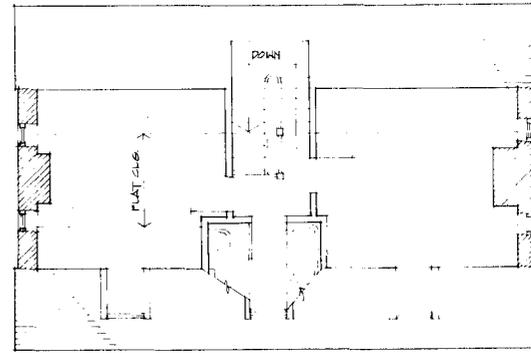


NORTH ELEVATION

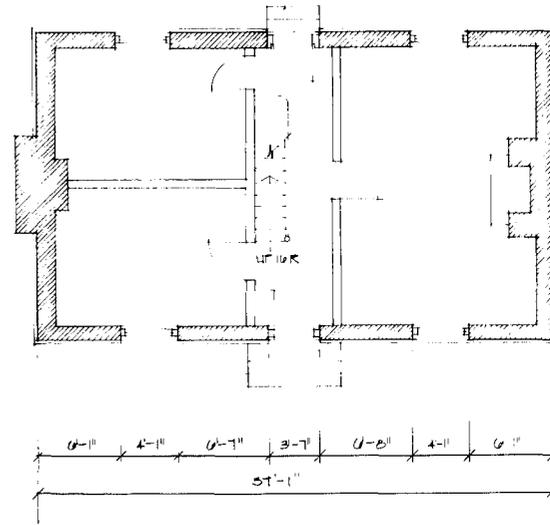
ELEV 1/4"=1'-0"



WEST ELEVATION



SECOND FLOOR PLAN



FIRST FLOOR PLAN

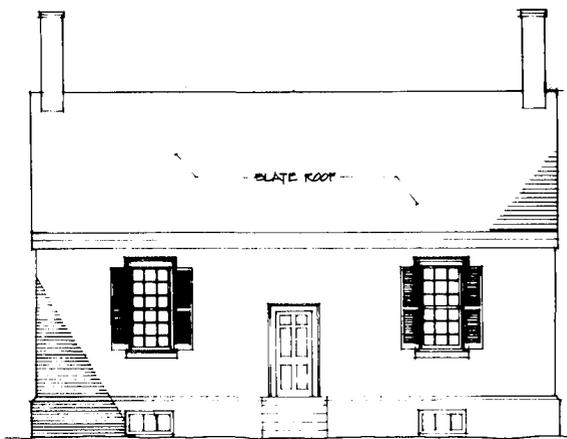
Feature 8 - Kitchen  
**Existing Conditions**  
 August 1976



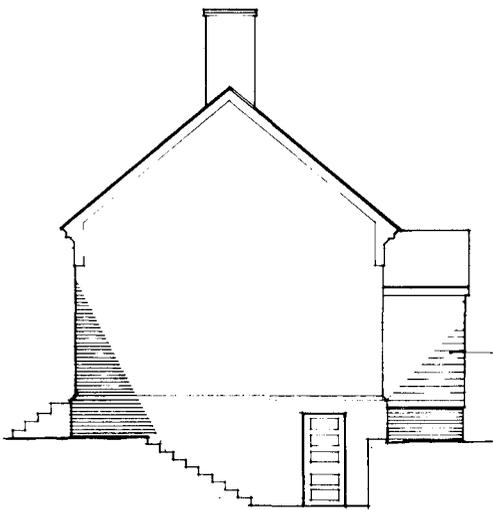
Fredericksburg & Spotsylvania County Battlefields Memorial,  
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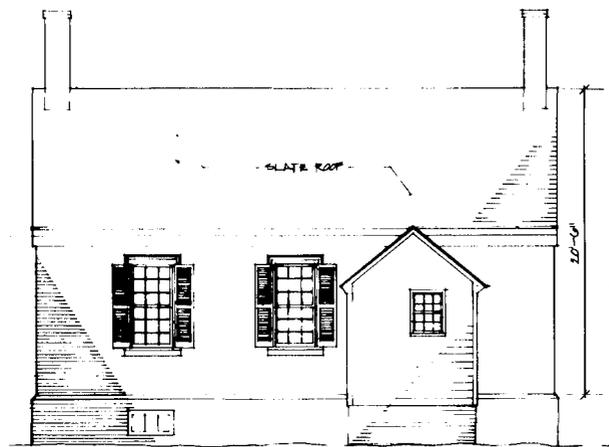
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DATE	



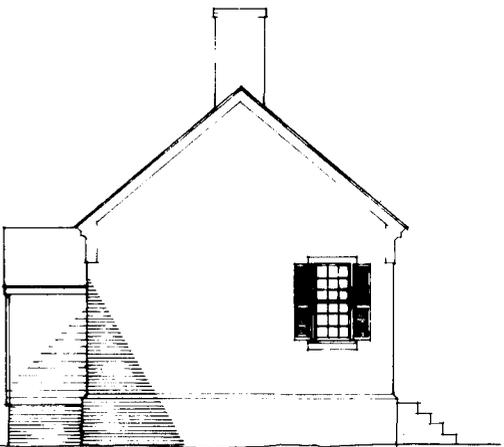
SOUTH ELEVATION



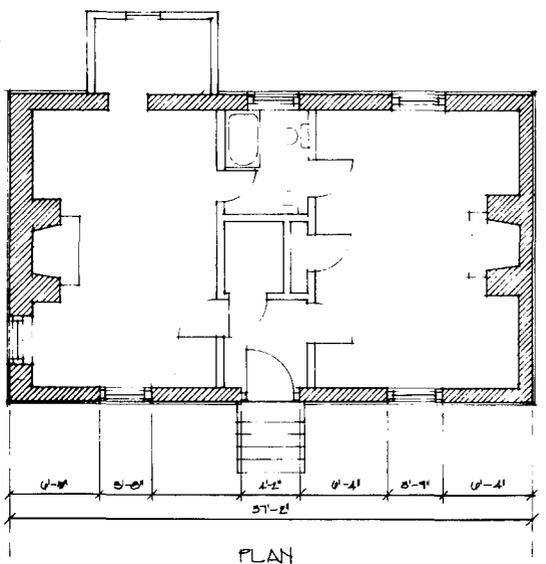
EAST ELEVATION



NORTH ELEVATION



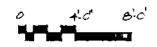
WEST ELEVATION



PLAN

SCALE: 1/4" = 1'-0"

Feature 16 - Laundry  
**Existing Conditions**  
 August 1976



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**Chatham Historic Structure Report**  
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DESIGNED	326
DRAWN	28001
CHECKED	NO
DATE	SHEET
	8
	OF 8

PHOTOGRAPHS



1. Westover. Charles City County, Virginia. South elevation. Constructed ca. 1730.  
Courtesy of Historic American Buildings Survey.



2. Sabine Hall. Richmond County, Virginia. Constructed ca. 1730. The porch is a later addition. Courtesy of Historic American Buildings Survey.



3. Harewood, Jefferson County, West Virginia. Constructed in 1756. . Courtesy of National Register of Historic Places.



4. Brandon, Prince George County, Virginia. Constructed ca. 1765-70. Courtesy of Historic American Buildings Survey.



5. Battersea, Petersburg, Dinwiddie County, Virginia. Constructed ca. 1765-70. Courtesy of National Register of Historic Places.



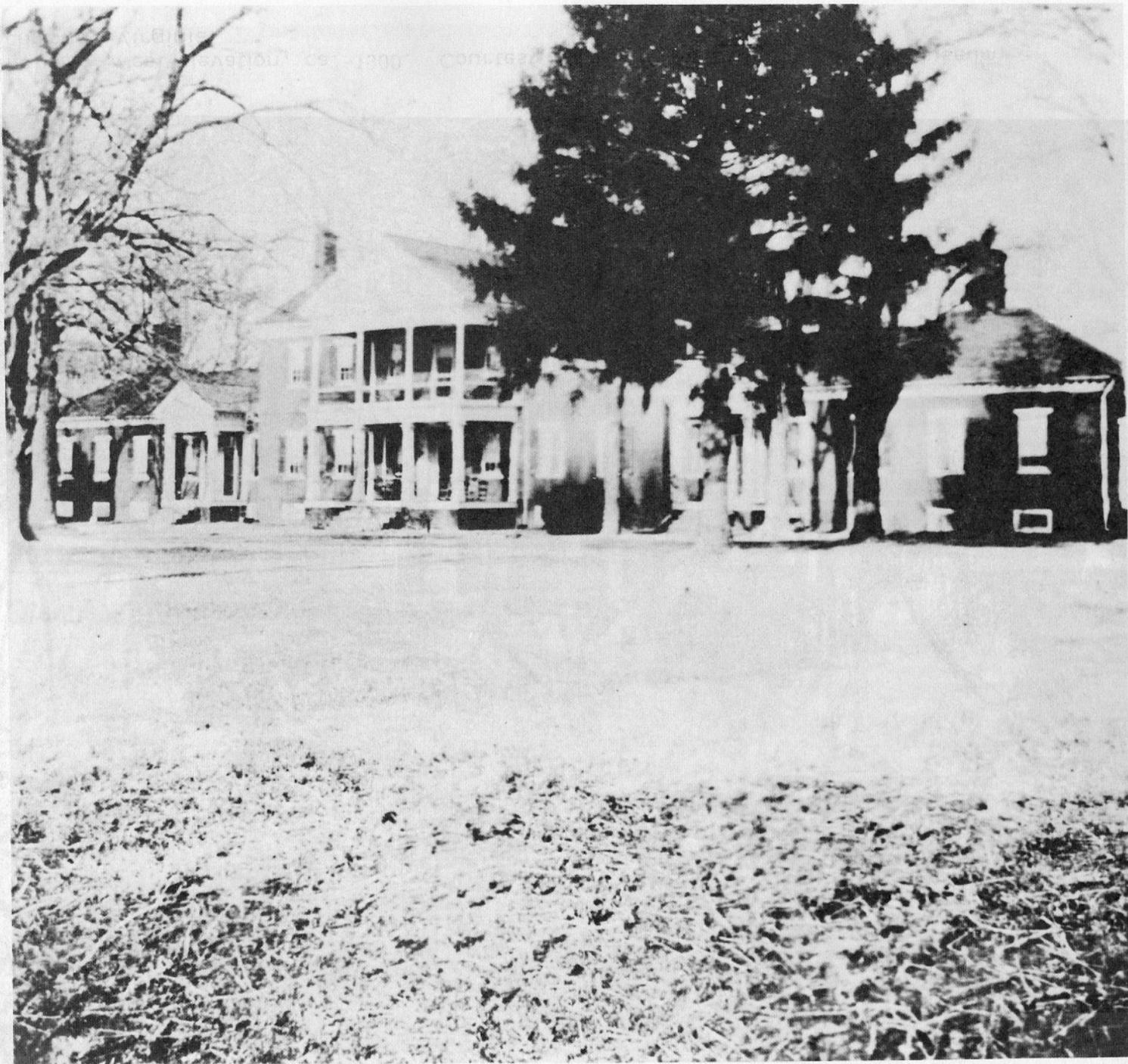
6. Chatham. West elevation, March 1863. T. H. O'Sullivan, photographer. Signal Corps photograph. Courtesy of the Library of Congress.



7. Chatham. West elevation, Spring 1863. T. H. O'Sullivan, photographer. Signal Corps photograph. Files of Fredericksburg and Spotsylvania County Battlefields Memorial National Military Park.



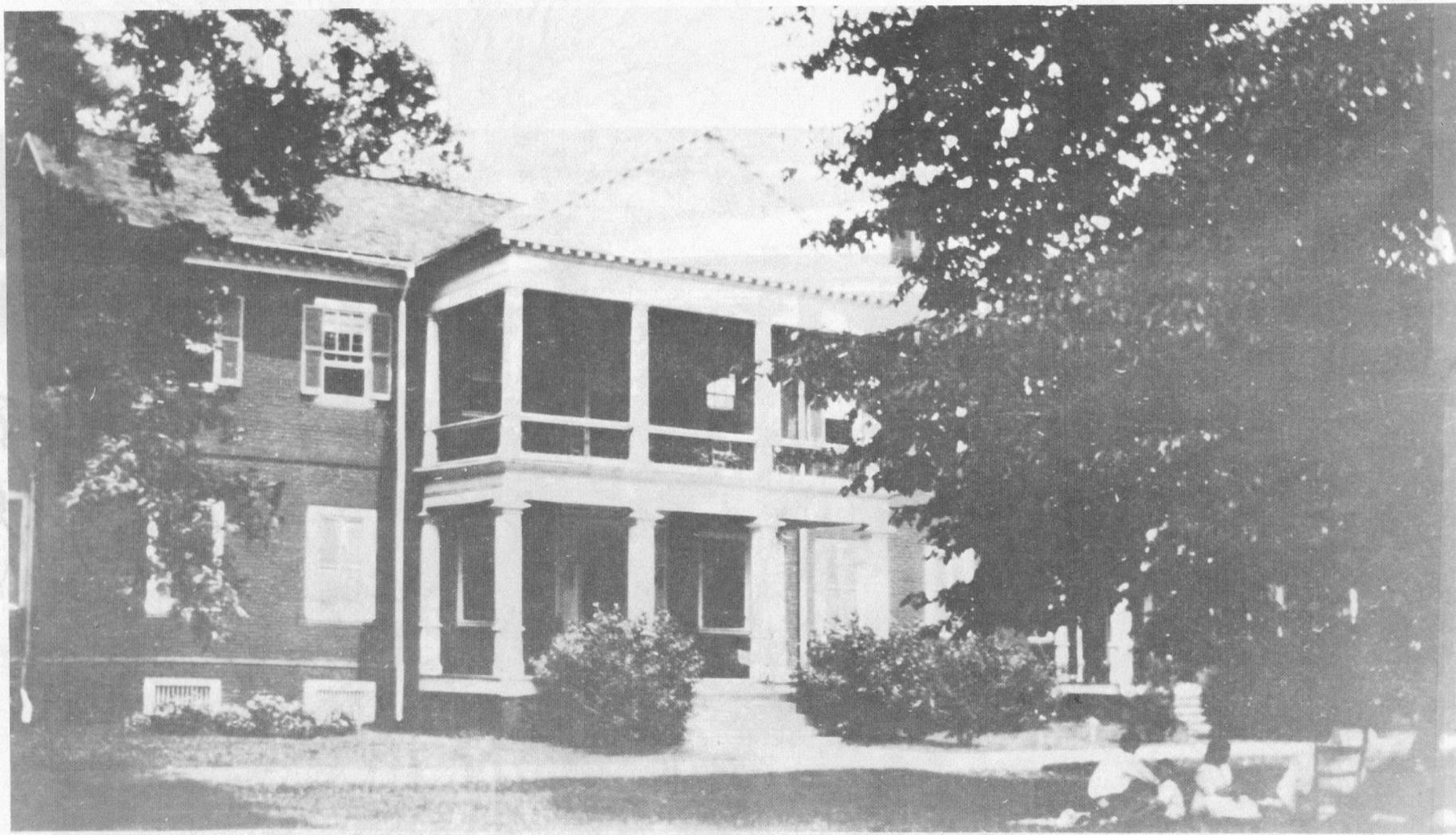
8. Chatham. West elevation, ca. 1900. Courtesy of Cook Collection, Valentine Museum, Richmond, Virginia.



9. Chatham. West elevation, ca. 1909-13. Files of Fredericksburg and Spotsylvania County Battlefields Memorial National Military Park (supplied by William Key Howard, Fredericksburg, Virginia).

Howard, Fredericksburg, Virginia)  
and Spotsylvania County Battlefields Memorial National Military Park (supplied by William Key  
11. Chatham, West elevation, ca. 1909-13 (from original color post card). Files of Fredericksburg

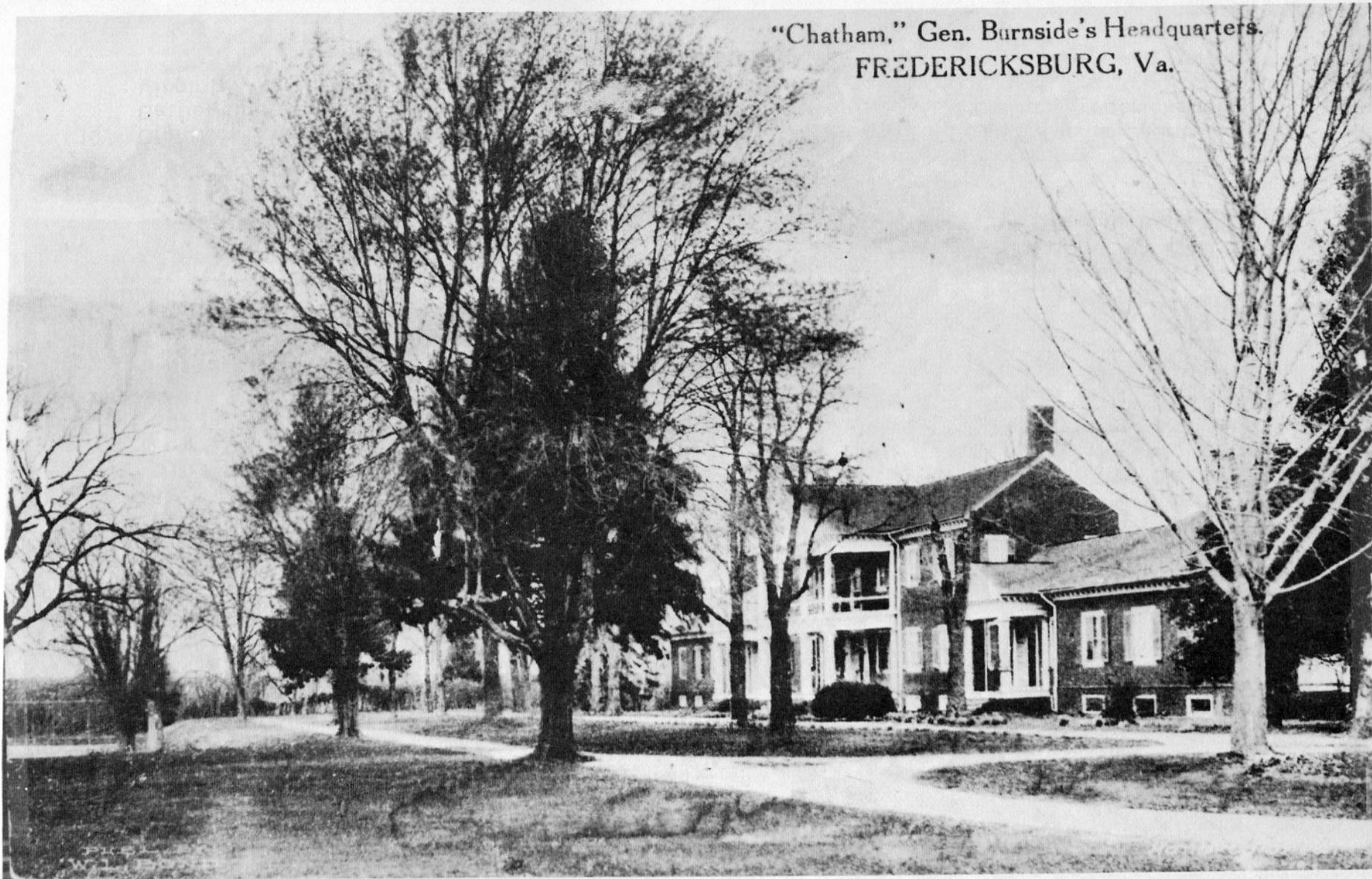
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10. Chatham. West elevation, ca. 1909-13. Files of Fredericksburg and Spotsylvania County Battlefields Memorial National Military Park (supplied by William Key Howard, Fredericksburg, Virginia).

FREDERICKSBURG VA  
SPOTSYLVANIA COUNTY BATTLEFIELDS MEMORIAL NATIONAL MILITARY PARK

"Chatham," Gen. Burnside's Headquarters.  
FREDERICKSBURG, Va.



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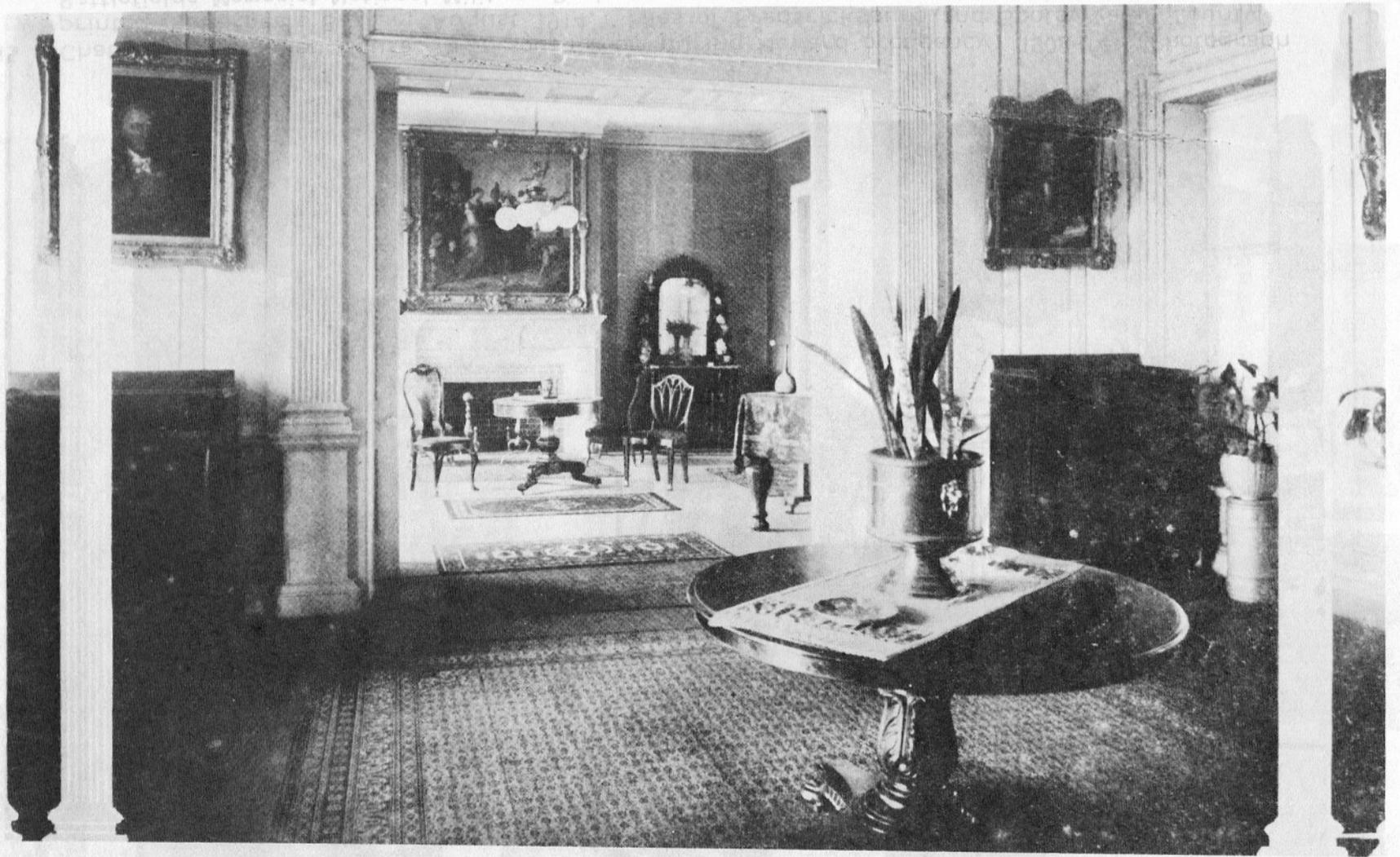
11. Chatham. West elevation, ca. 1909-13 (from original color post card). Files of Fredericksburg and Spotsylvania County Battlefields Memorial National Military Park (supplied by William Key Howard, Fredericksburg, Virginia).



12. Chatham. West elevation, ca. 1910. Courtesy of Cook Collection, Valentine Museum, Richmond, Virginia.

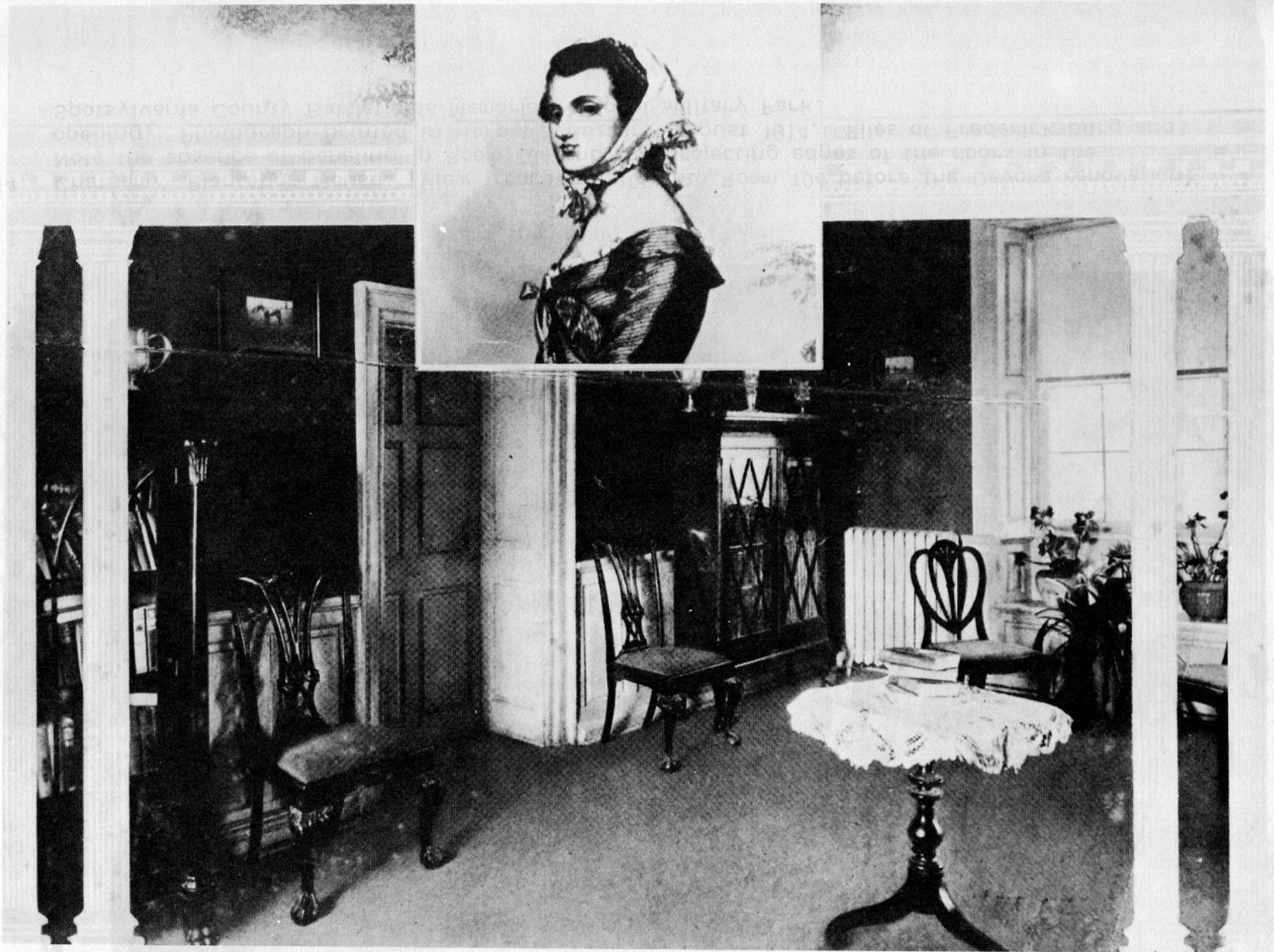


13. Chatham. west elevation, printed in Harper's Bazaar, August 1914. Files of Fredericksburg and Spotsylvania County Battlefields Memorial National Military Park.



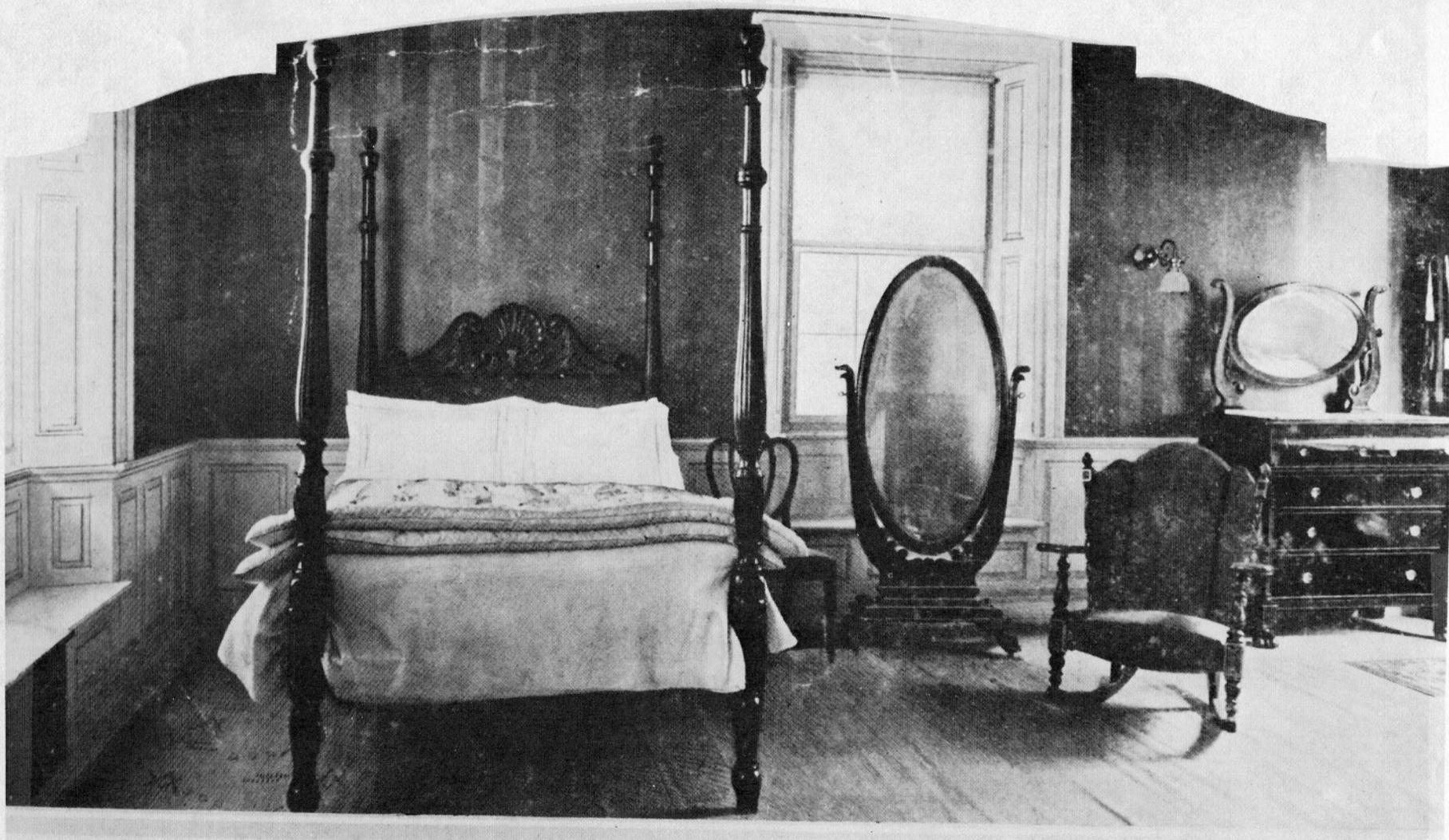
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14. Chatham. Plantation House. View from Room 105 into Room 104 before the Devore renovation. Note the absence of paneling in Room 104 and the projecting edges of the doors in the opening. Photograph printed in Harper's Bazaar, August 1914. Files of Fredericksburg and Spotsylvania County Battlefields Memorial National Military Park.



15. Chatham. Plantation House. Far south room during Howard occupancy, 1909-14. Photograph printed in Harper's Bazaar, August 1914. Files of Fredericksburg and Spotsylvania County Battlefields Memorial National Military Park.

13. Chatham. West elevation, printed in Harper's Bazaar, August 1914. Files of Fredericksburg and Spotsylvania County Battlefields Memorial National Military Park.



16. Chatham. Plantation House. Far north bedroom during Howard occupancy, 1909-14. Photograph printed in *Harper's Bazaar*, August 1914. Files of Fredericksburg and Spotsylvania County Battlefields Memorial National Military Park.



17. Chatham. West elevation, ca. 1927. Francis Benjamin Johnston, photographer. Courtesy of the Library of Congress.



18. Chatham. West elevation, ca. 1927. Francis Benjamin Johnston, photographer. Courtesy of the Library of Congress.



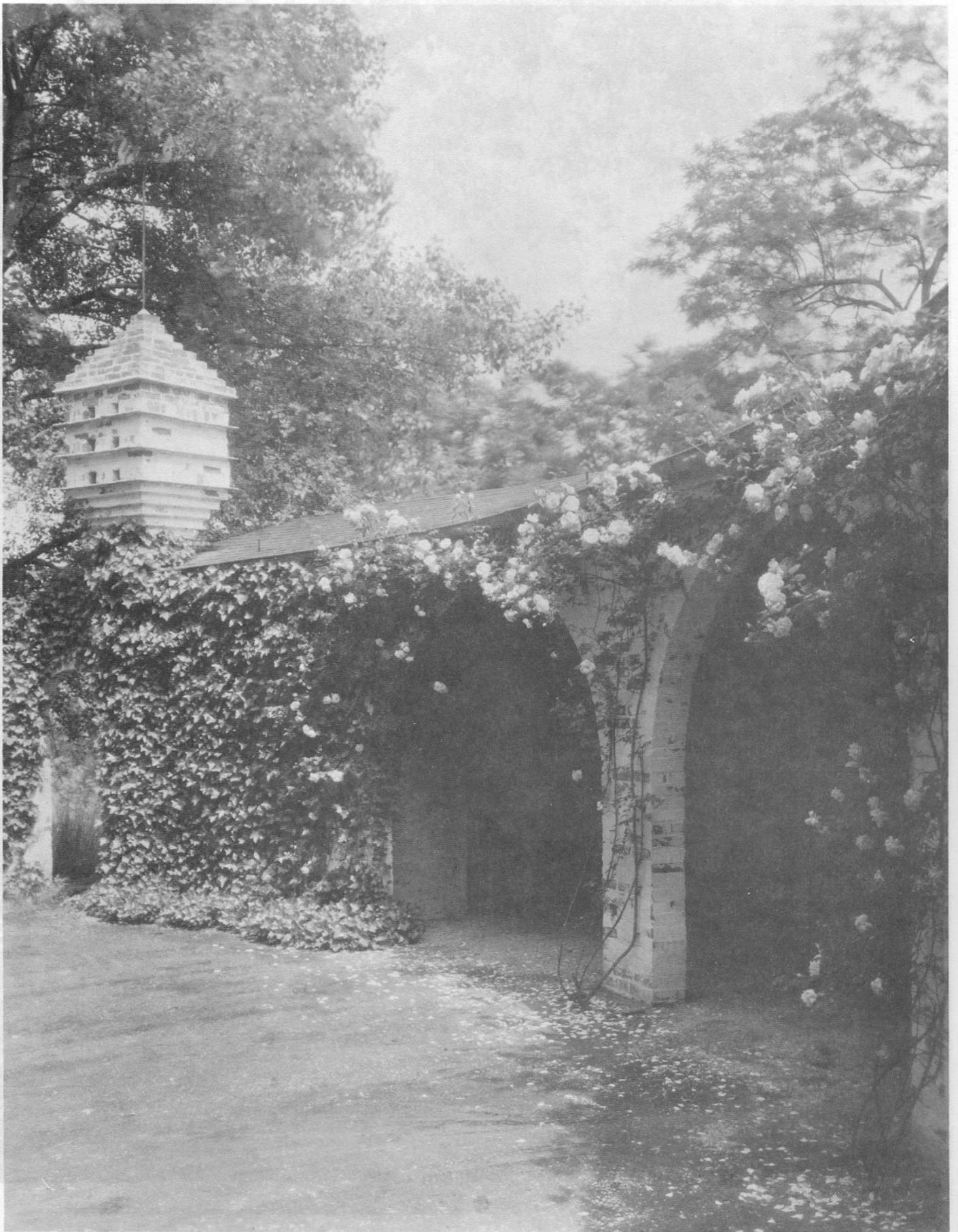
19. Chatham. East elevation, ca. 1927. Francis Benjamin Johnston, photographer. Courtesy of the Library of Congress.



20. Chatham. Plantation House. Dining Room, fireplace, and paneling, ca. 1927. Francis Benjamin Johnston, photographer. Courtesy of the Library of Congress.



21. Chatham. Plantation House. Dining room, ca. 1927. Francis Benjamin Johnston, photographer. Courtesy of the Library of Congress.



22. Chatham. Carriage shelter and dove-cote, ca. 1927. Francis Benjamin Johnston, photographer. Courtesy of the Library of Congress.



23. Chatham. Garden view with sculpture, ca. 1927. Francis Benjamin Johnston, photographer. Courtesy of the Library of Congress.



24. <sup>116</sup> Chatham. Crosswalk of parterre and rear garden walk, ca. 1927. Francis Benjamin Johnston, photographer. Courtesy of the Library of Congress.



23. Chatham. Garden view with sculpture, ca. 1927. Francis Benjamin Johnston, photographer. Courtesy of the Library of Congress.

25. Chatham. Outbuildings from garden, ca. 1927. Francis Benjamin Johnston, photographer. Courtesy of the Library of Congress.



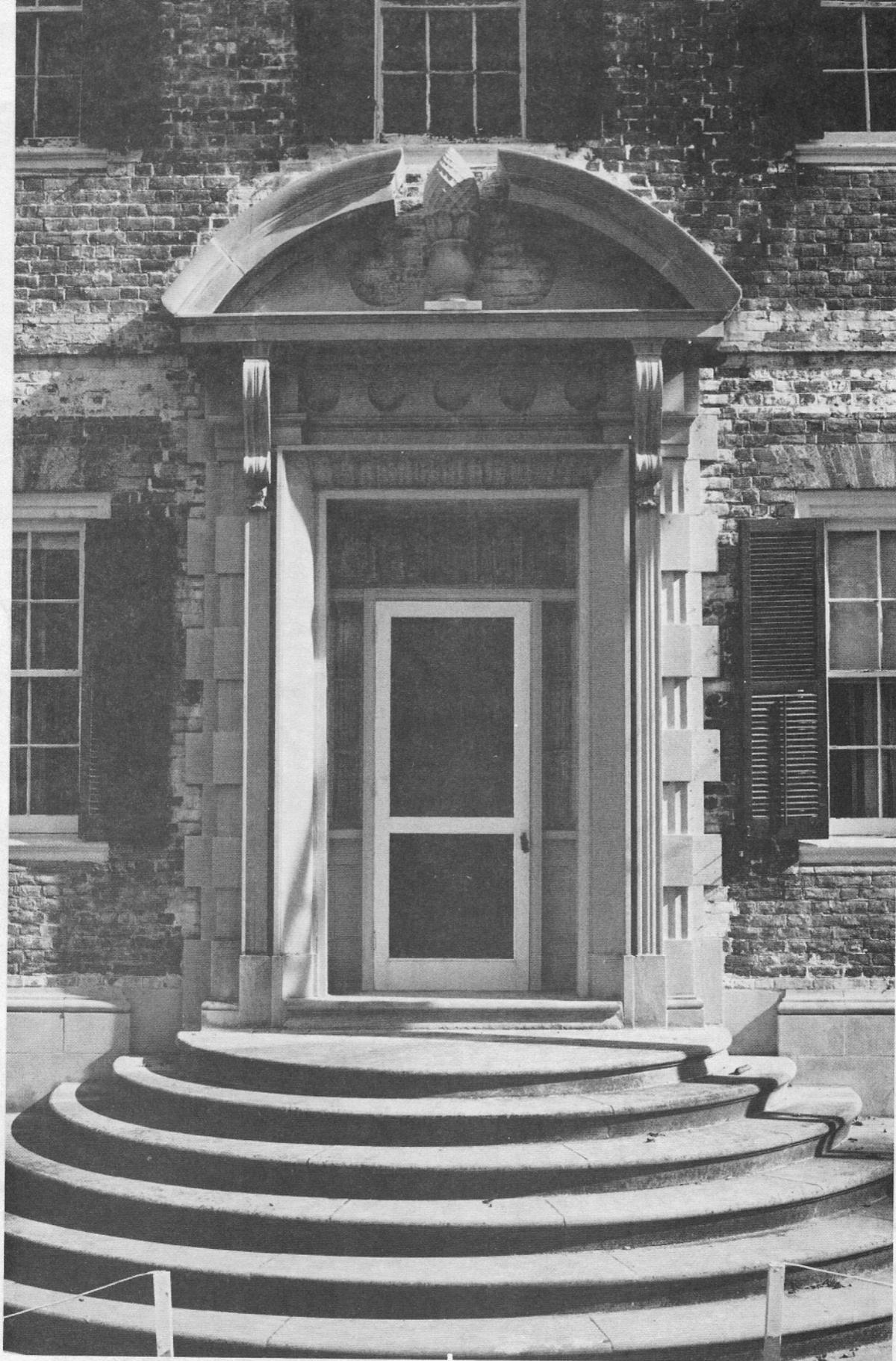
26. Chatham. Garden parterre, ca. 1927. Francis Benjamin Johnston, photographer. Courtesy of the Library of Congress.



27. Chatham. Rose Garden Walk, ca. 1927. Francis Benjamin Johnston, photographer. Courtesy of the Library of Congress.



28. Chatham. Plantation House. West elevation. Photograph by Gerald Karr, 1976.

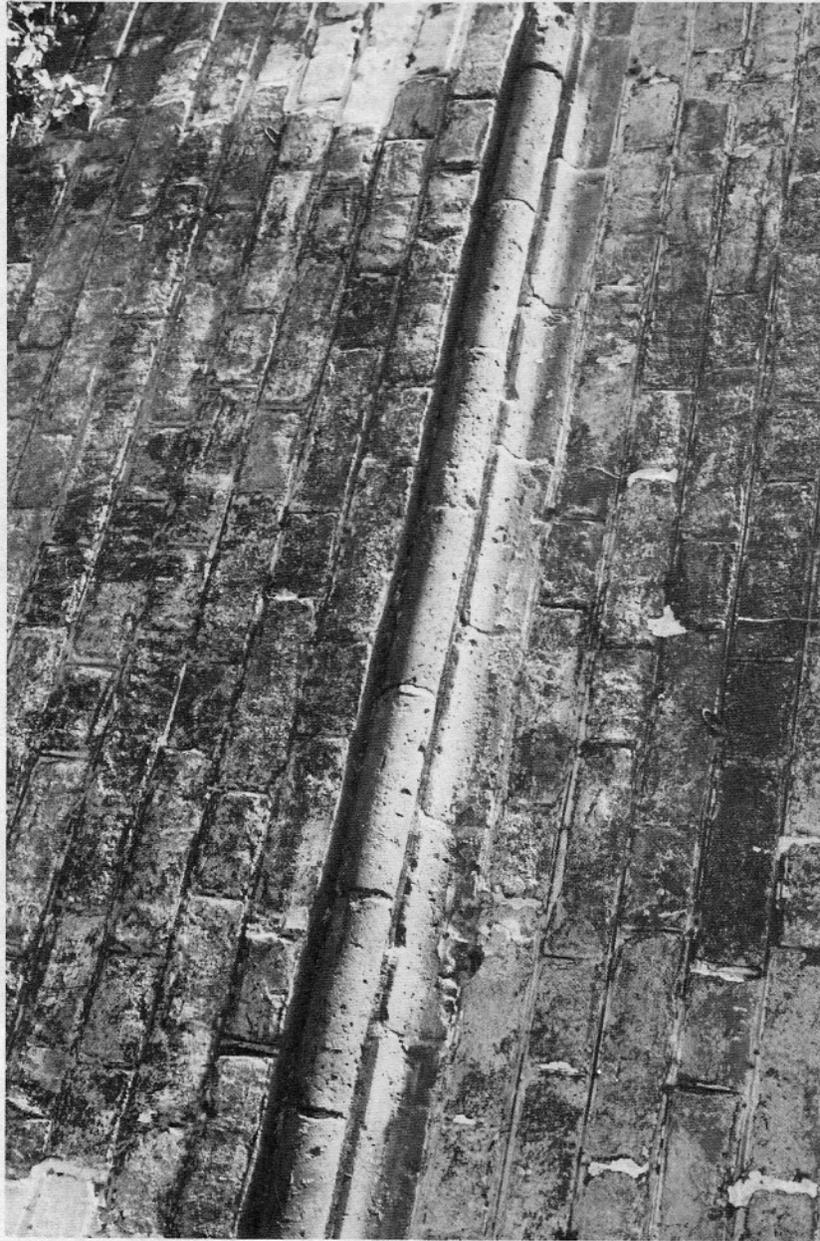


29. Chatham. West frontispiece. Photograph by Gerald Karr, 1976.

29. Chatham. Plantation House. West frontispiece. Photograph by Gerald Karr, 1976.



30. Chatham. Plantation House. East frontispiece. Photograph by Gerald Karr, 1976.



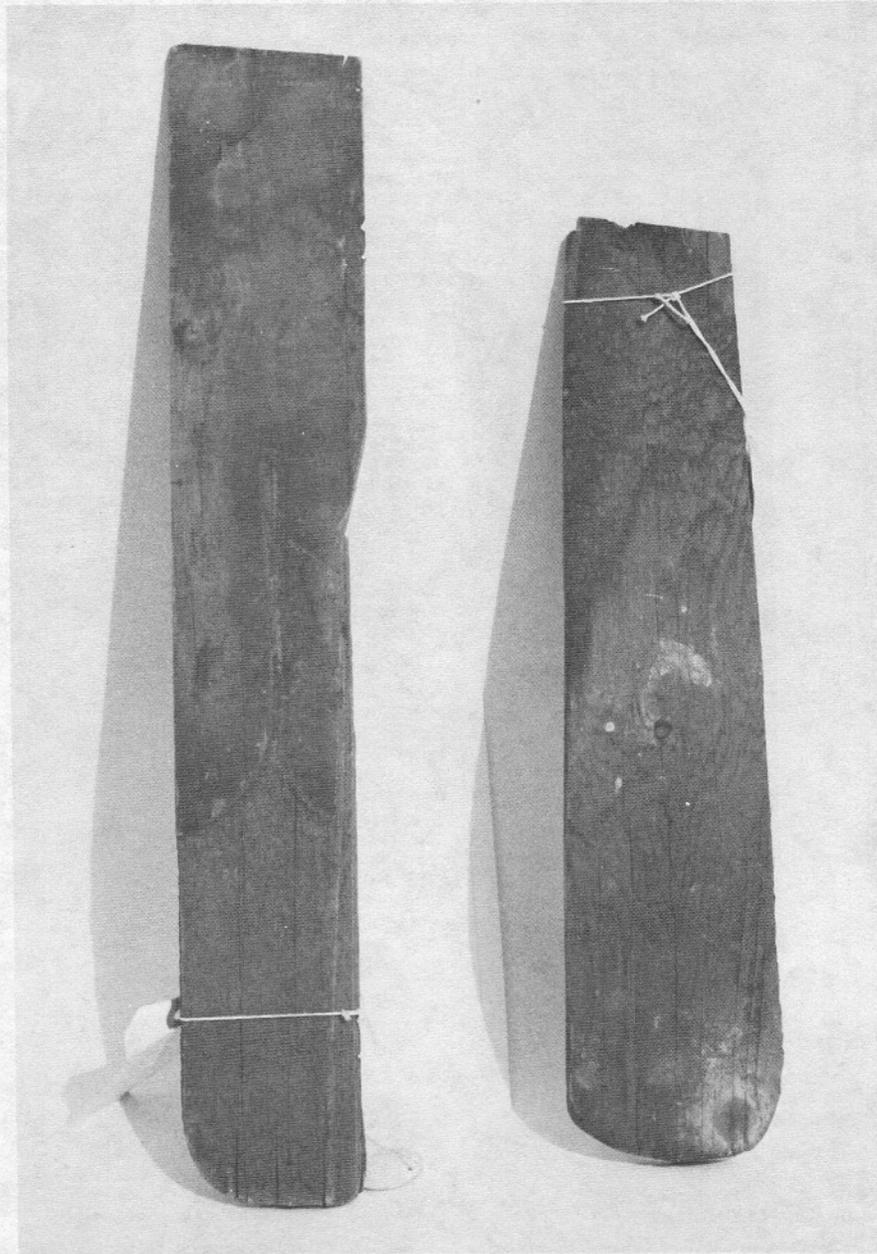
31. Chatham. Plantation House. East elevation. This section of ovolo and cove water is among the best preserved. Note that Flemish bond is employed below. Photograph by Gerald Karr, 1976.



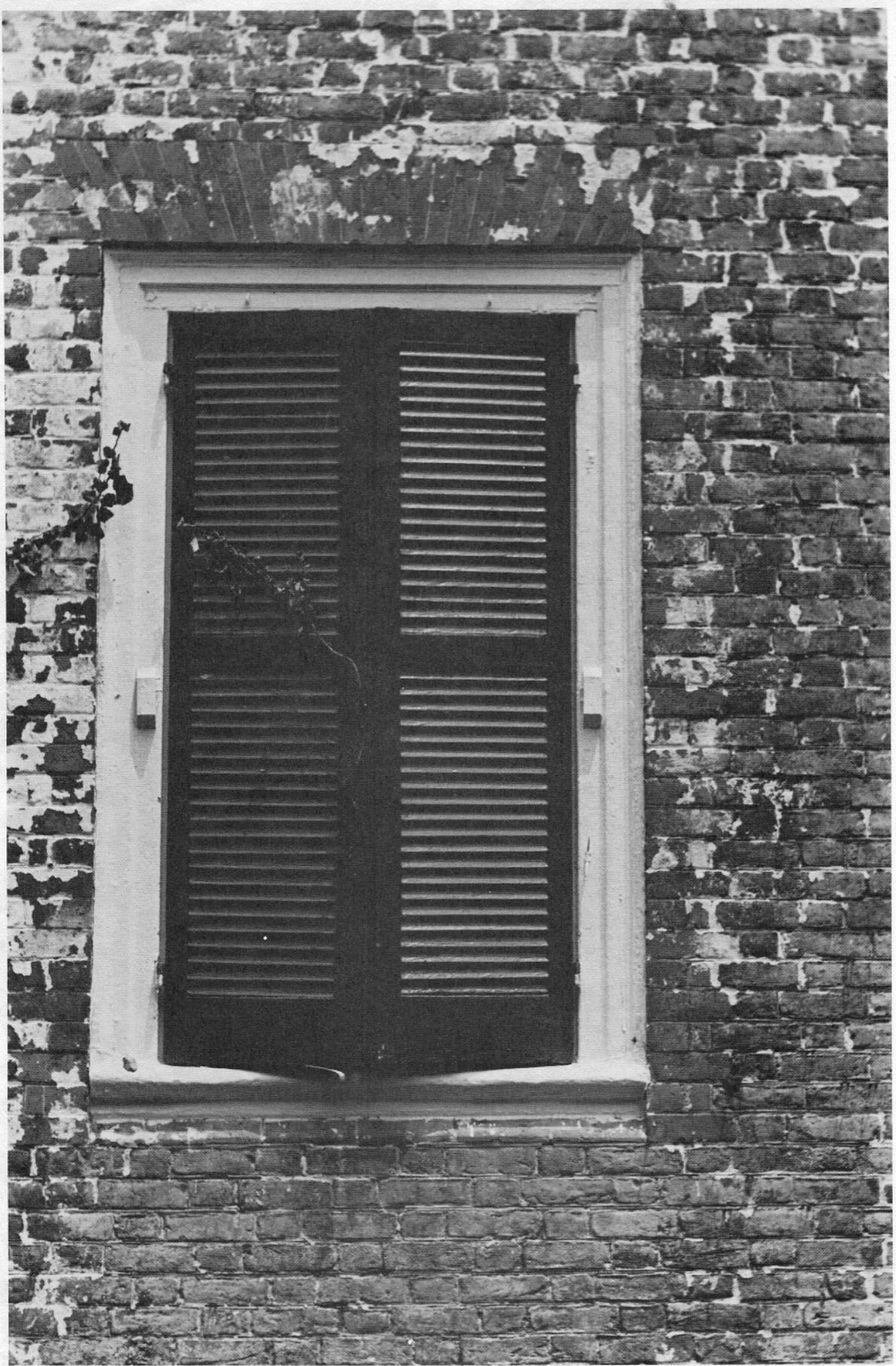
32. Chatham. Plantation House. Detail of jack arch over typical west window. The horizontal joints in the arch are merely inscribed in the brick to simulate mortar joints. Photograph by Gerald Karr, 1976.



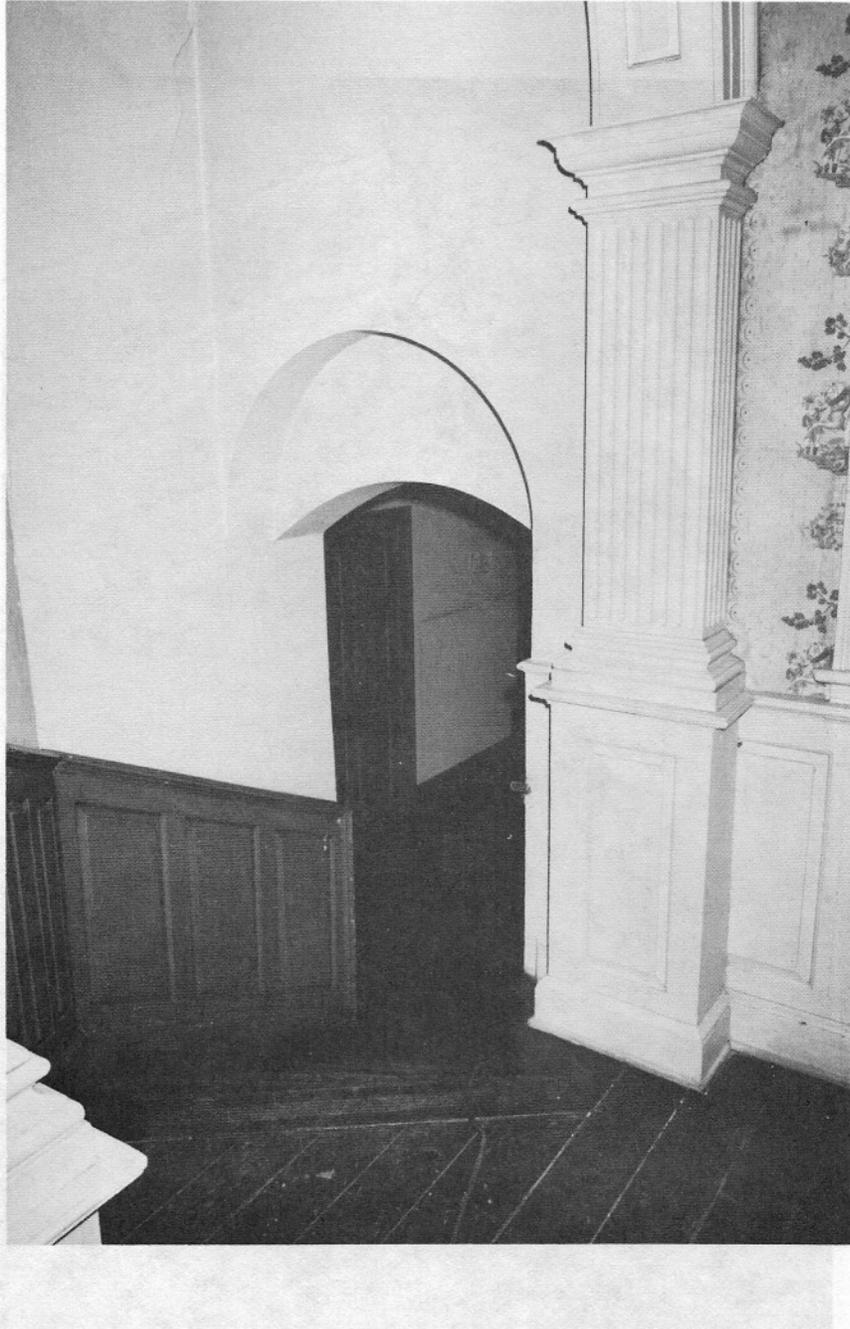
33. Chatham. Plantation House, Northwest corner, showing the rubber-brick corners employed throughout the building. Note also the extraordinary condition of the original bracketed cornice. Photograph by Gerald Karr, 1976.



34. Chatham. Plantation House. Shingles found in the attic during architectural investigation. The one on the left has the mark of erosion where it was exposed. The right shingle was never installed. Photograph by Gerald Karr, 1976.



35. Chatham. Typical first-floor window. The frame, sill, and trim are original. Note the rubbed brick jack arch and jambs. Photograph by Gerald Karr, 1976.



36. Chatham. Plantation House. Room 202, looking down diagonal stair into Room 205. Photograph by Gerald Karr, 1976.

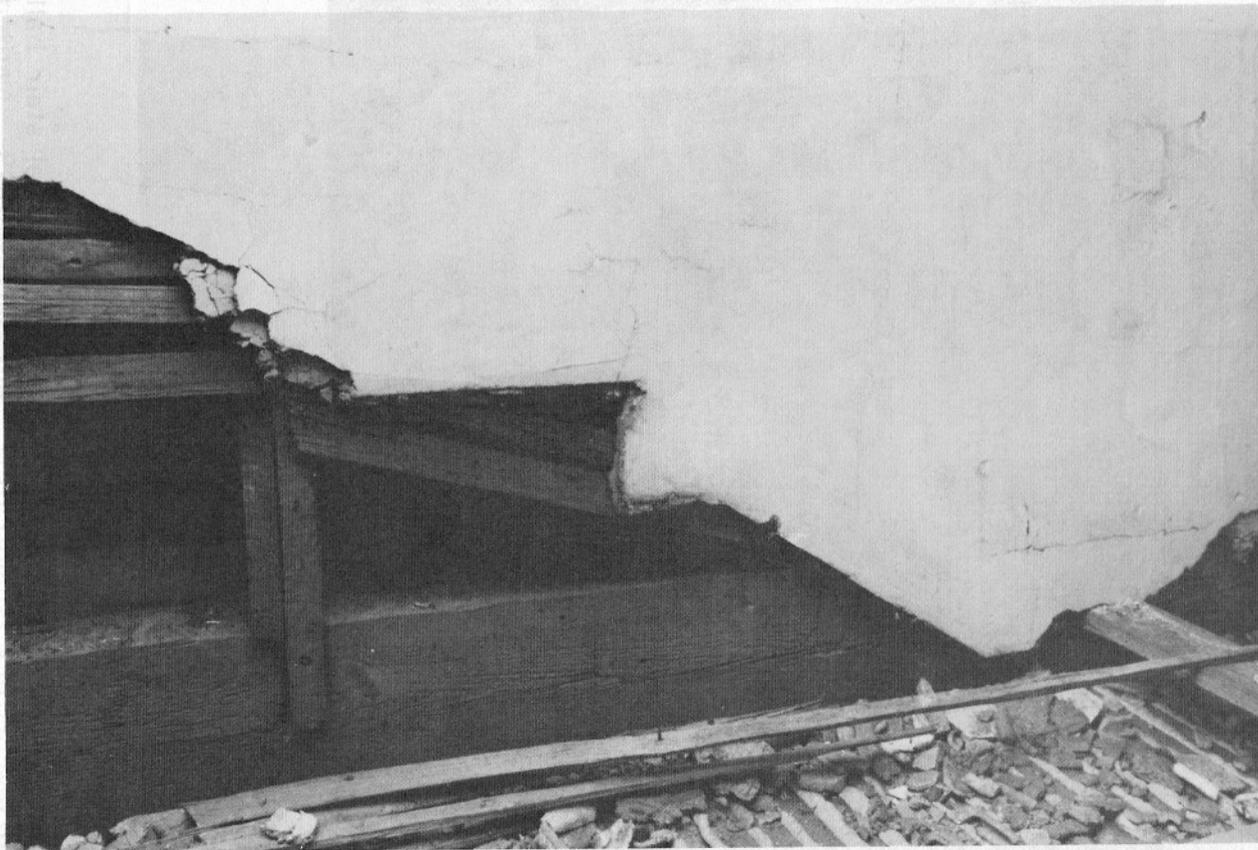


37. Chatham. Plantation House. Juncture of central portion of house with south passage below grade showing keying of brick courses at corner. Photograph by Gerald Karr, 1976.

35. Chatham. Typical first-floor window. The frame, sill, and trim are original. Note the rubbed brick lintel arch and jambs. Photograph by Gerald Karr, 1976.



38. Chatham. Plantation House. Remains of original stair hall at the ceiling level. Photograph by Gerald Karr, 1976.



39. Chatham. Plantation House. Remains of original stair hall at the ceiling level. Photograph by Gerald Karr, 1976.



40. Chatham. Plantation House. This door, located on the south wall of Room 111, reveals marks of the original rimlock when subjected to raking light. Photograph by Gerald Karr, 1976.



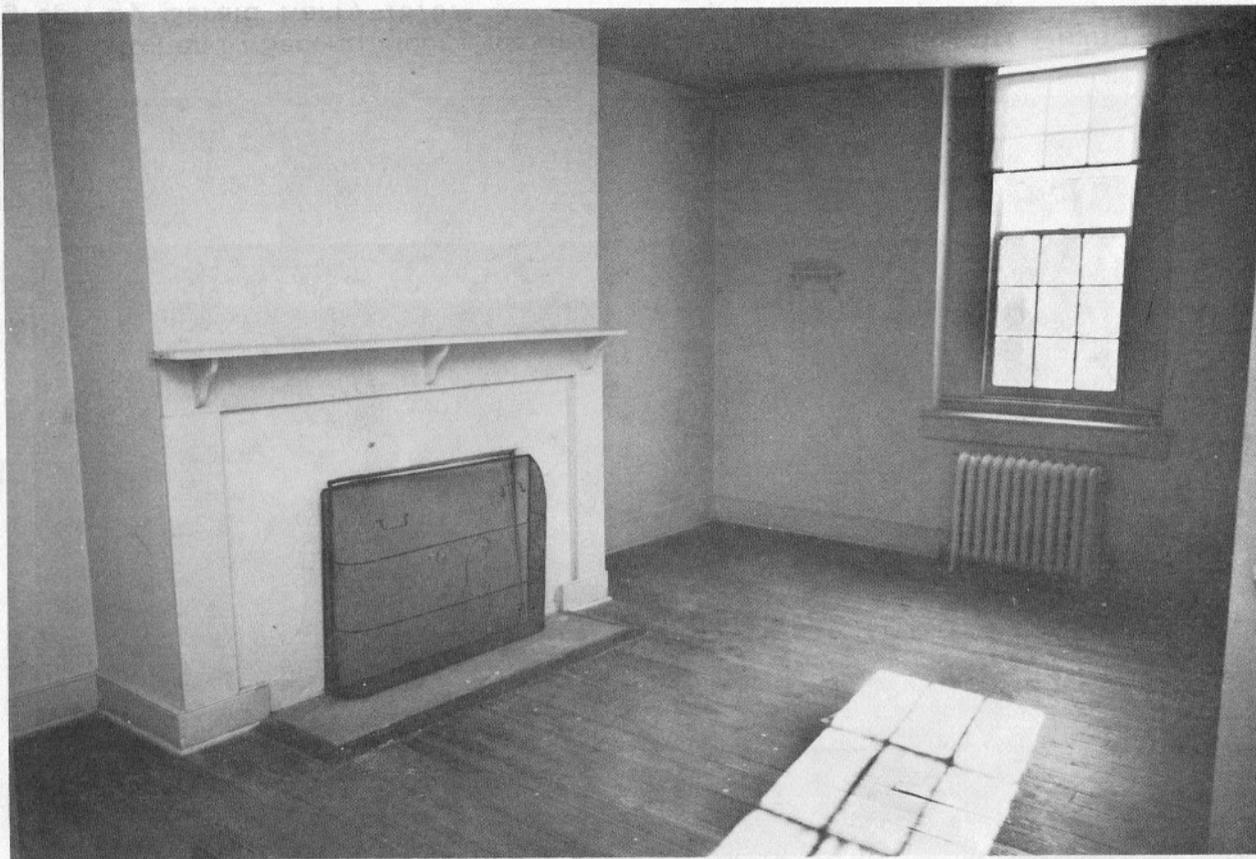
41. Chatham. Plantation House. Attic looking south showing original kingpost. Note that the post has pulled away from the summer beam below. The quilted seaweed insulation is also shown. Photograph by Gerald Karr, 1976.



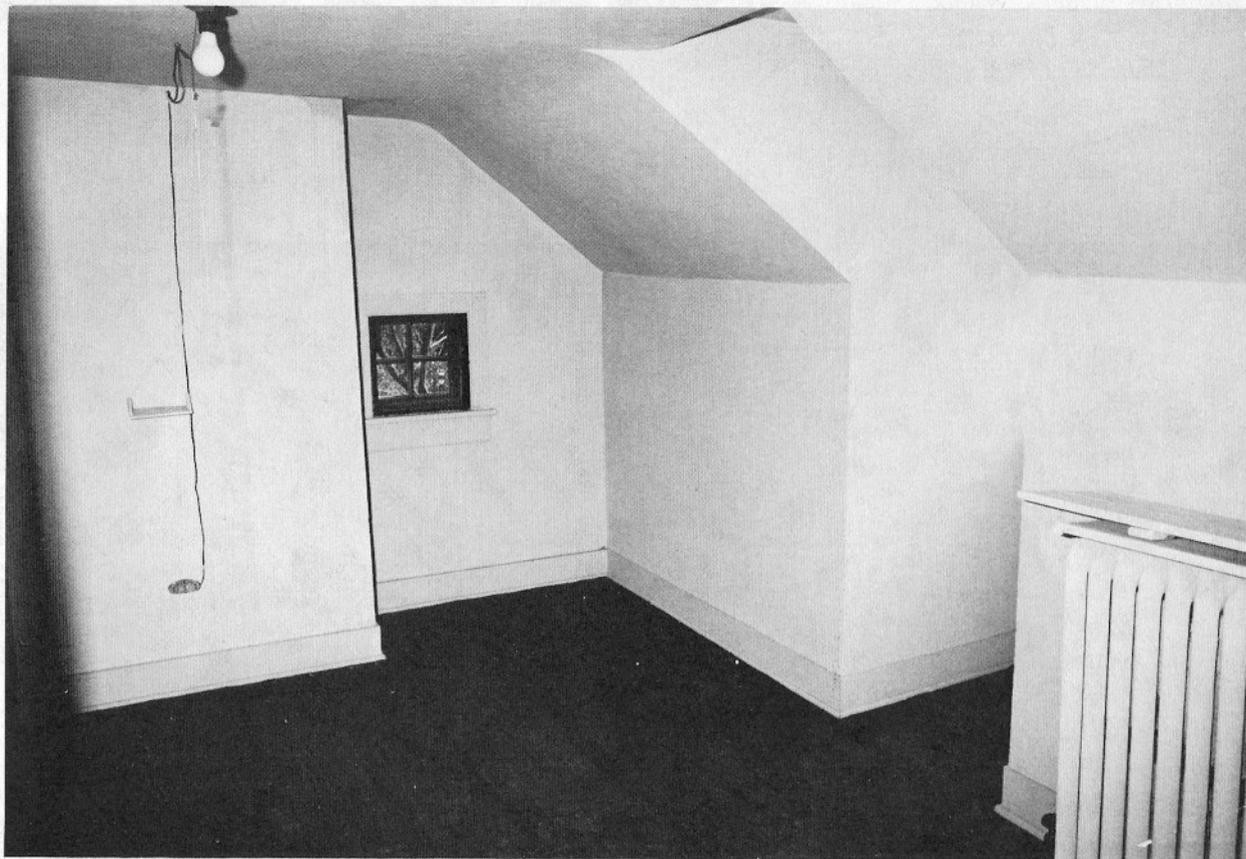
42. Chatham. Laundry. South elevation. Photograph by Gerald Karr, 1976.



43. Chatham. Kitchen. South elevation. Photograph by Gerald Karr, 1976.



44. Chatham. Kitchen. First floor, east room. Photograph by Gerald Karr, 1976.



45. Chatham. Kitchen. Second floor, looking east. Note the makeshift wiring arrangement. Photograph by Gerald Karr, 1976.

43. Chatham. Kitchen. South elevation. Photograph by Gerald Karr, 1976.



46. Chatham. Kitchen. Stair hall looking north. Photograph by Gerald Karr, 1976.

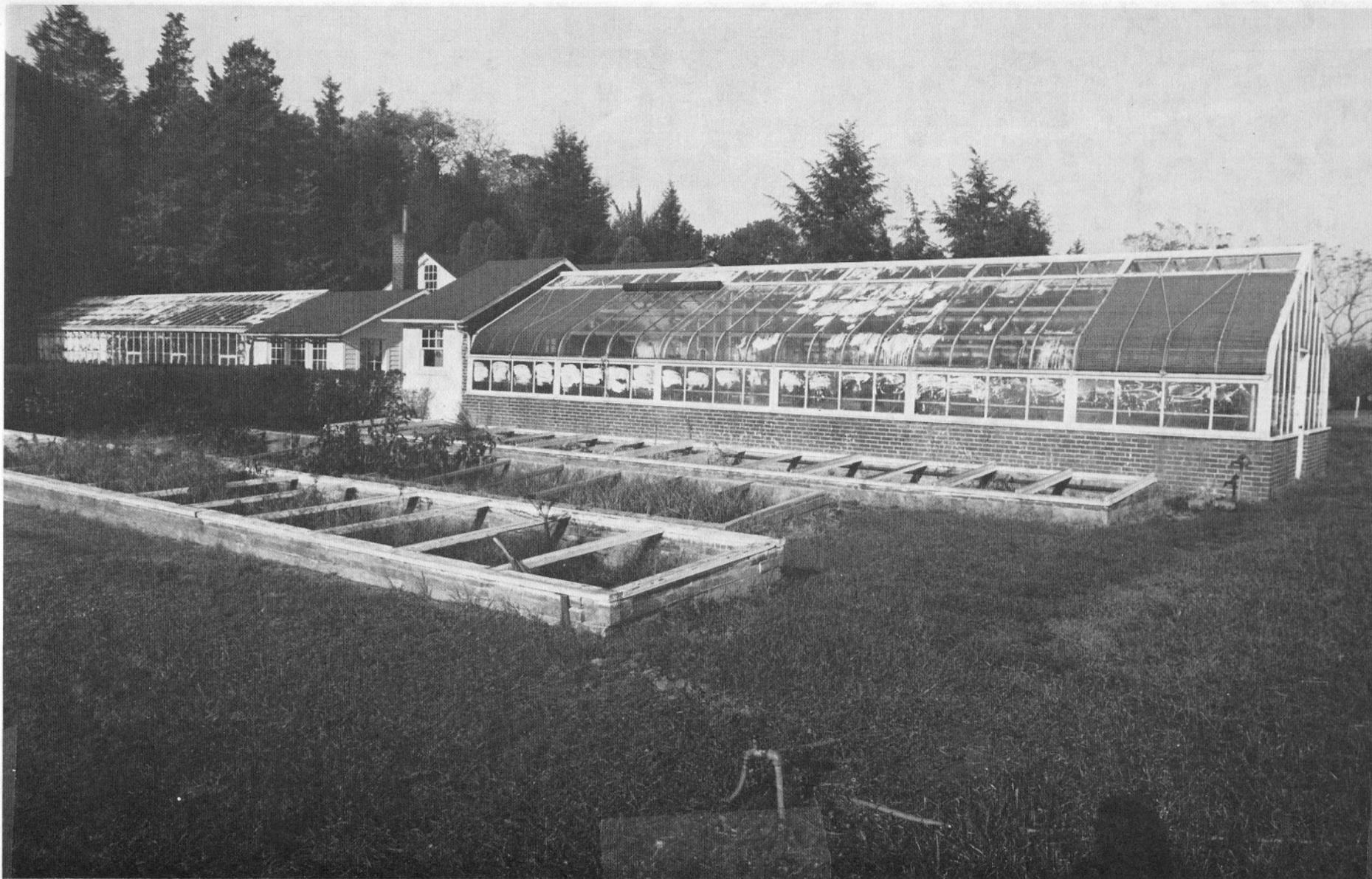


47. Chatham. Summer House. South elevation. Photograph by Gerald Karr, 1976.



48. Chatham. Watchman's Office. North elevation. Photograph by Gerald Karr, 1976.

50. Chatham. Milk House. South elevation. Photograph by Gerald Karr, 1976.

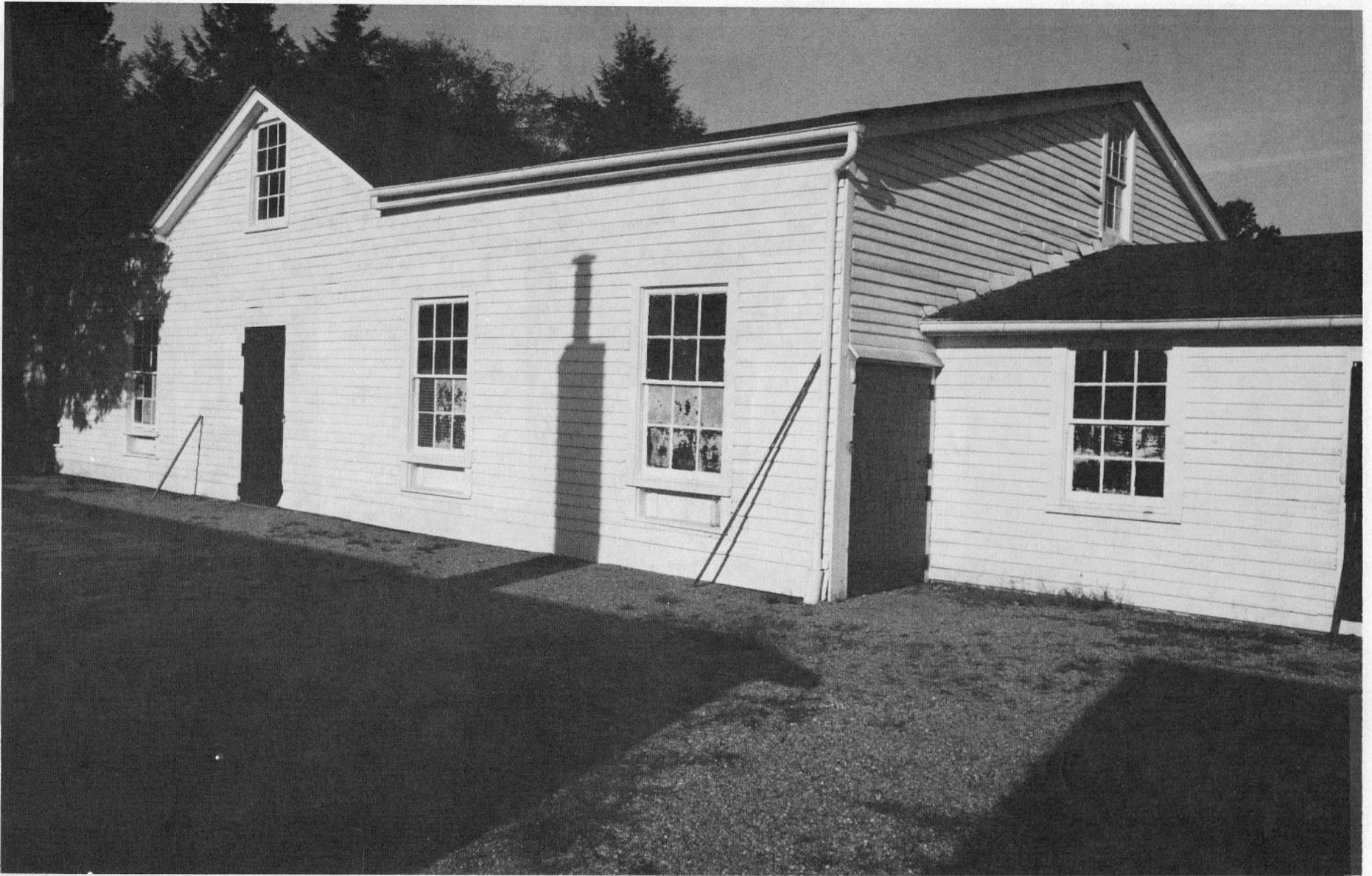


49. Chatham. Greenhouses. The building to the right was built by Pratt in 1935. Photograph by Gerald Karr, 1976.



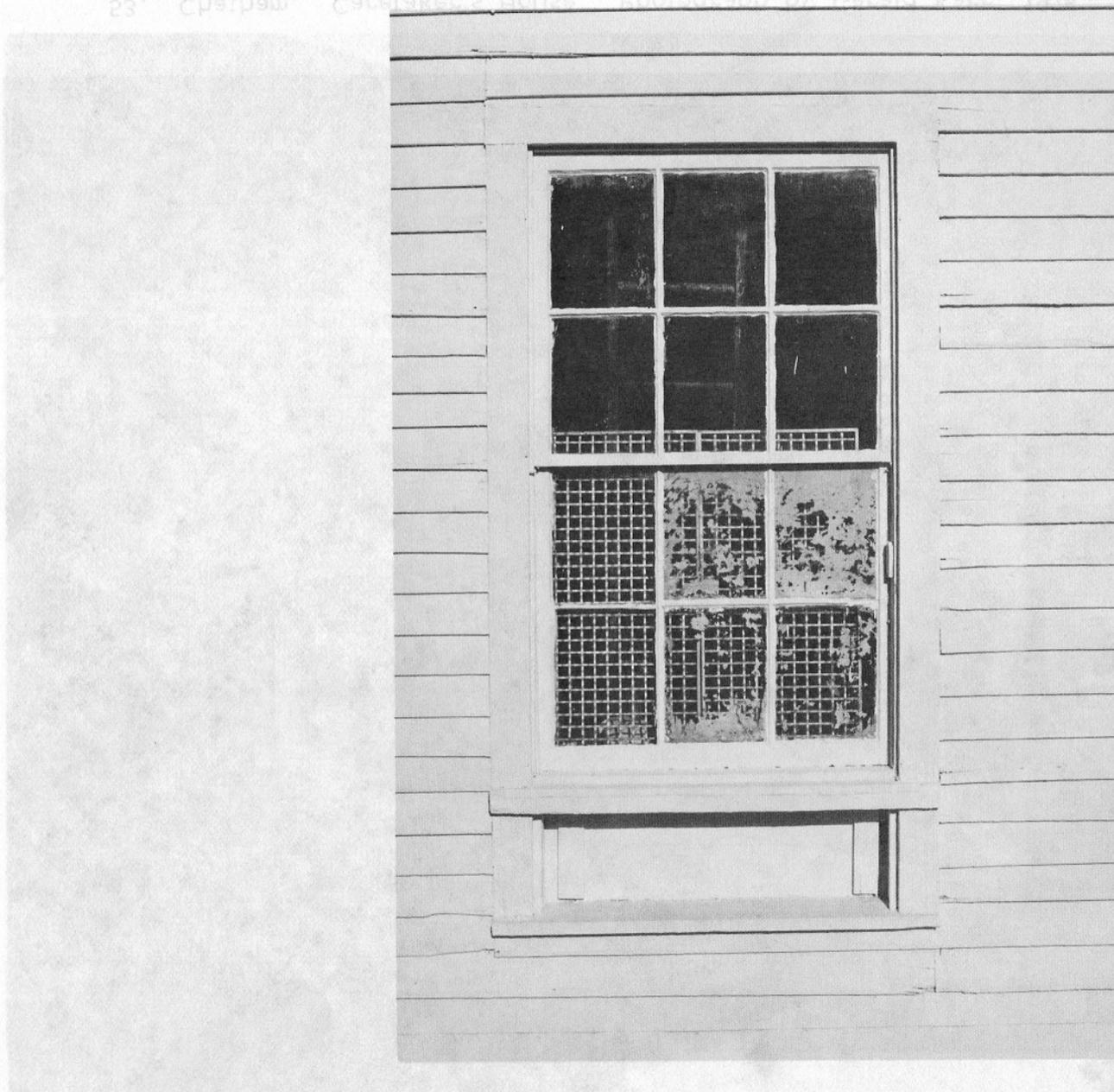
52 50. Chatham. Milk House. South elevation. Photograph by Gerald Karr, 1976. Gerald Karr, 1976

20° Chatham Milk House south elevation Photograph by Gerald Karr, 1976



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51. Chatham. Dairy Barn. Looking west. Photograph by Gerald Karr, 1976. Photograph by Gerald Karr, 1976.



54. Chatham. Garage/Stable. East elevation. Photograph by Gerald Karr, 1975.

52. Chatham. Dairy Barn. Window detail showing the modified sill. Photograph by Gerald Karr, 1976.



53. Chatham. Caretaker's House. Photograph by Gerald Karr, 1976.



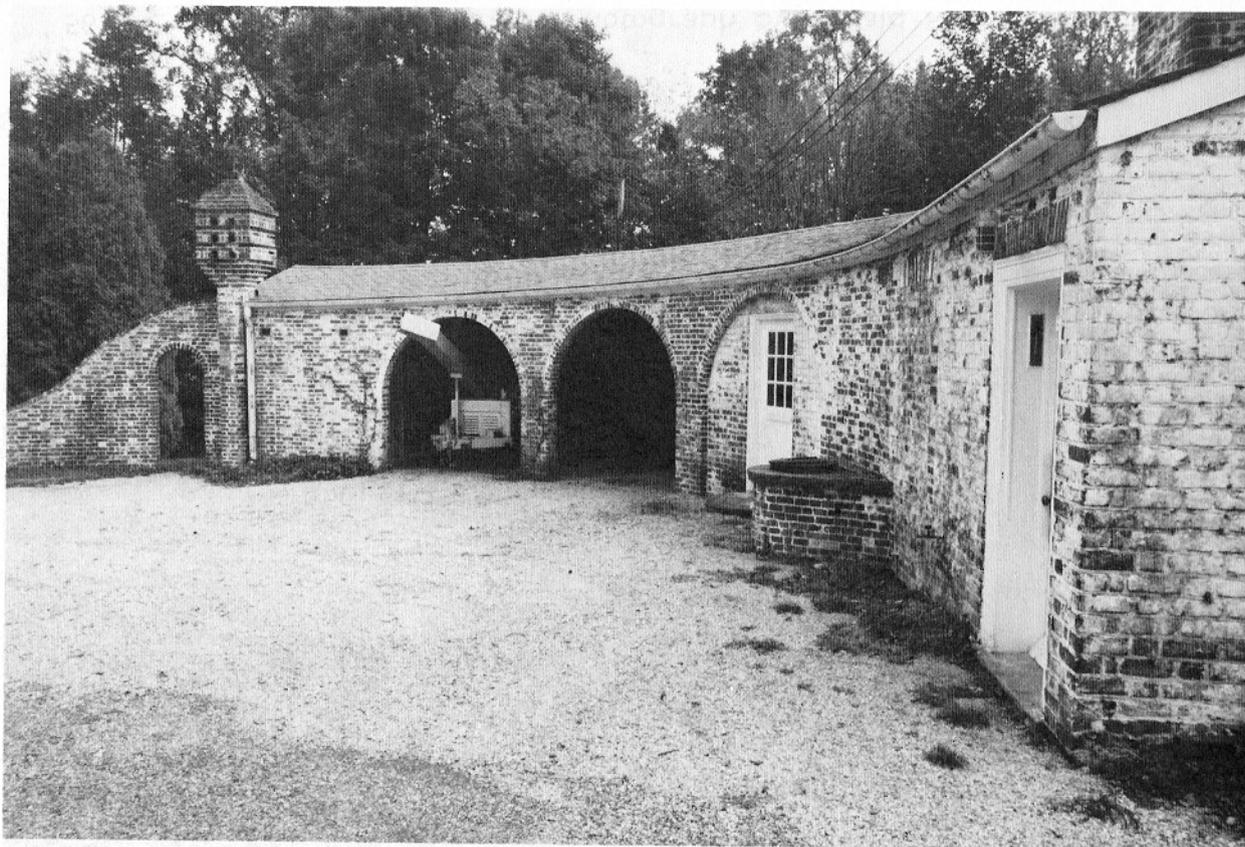
54. Chatham. Garage/Stable. East elevation. Photograph by Gerald Karr, 1976.



55. Chatham. Garage/Stable. This door at the east end of the stable wing is from the large doorway between Rooms 104 and 105 in the Plantation House. Photograph by Gerald Karr, 1976.



56. Chatham. Garage wing. Photograph by Gerald Karr, 1976.



57. Chatham. Garage Wing. The object at the left end of the structure is a dove cote. Photograph by Gerald Karr, 1976.



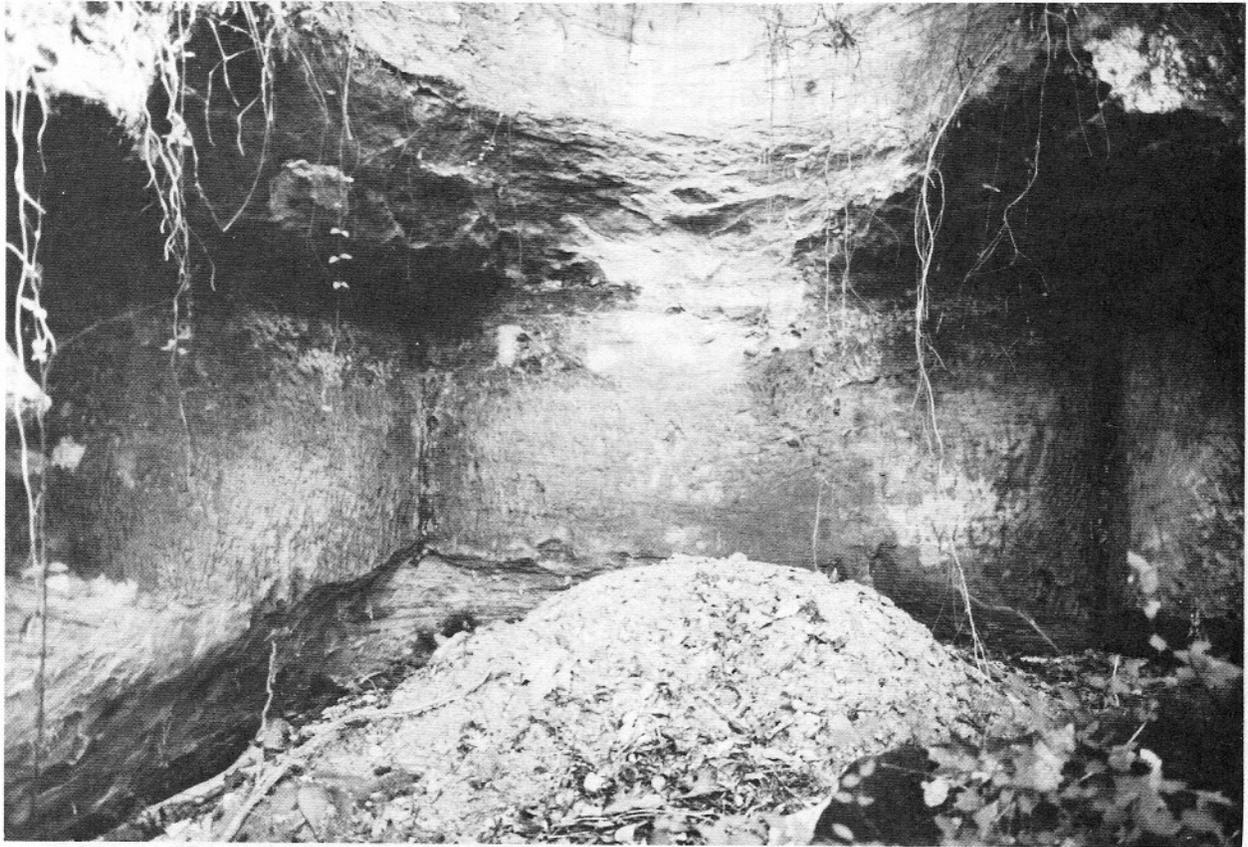
58. Chatham. Corn Crib. This was a 20th century addition to Chatham's farm operation. Photograph by Gerald Karr, 1976.



59. Chatham. Gas Pump. Photograph by Gerald Karr, 1976.



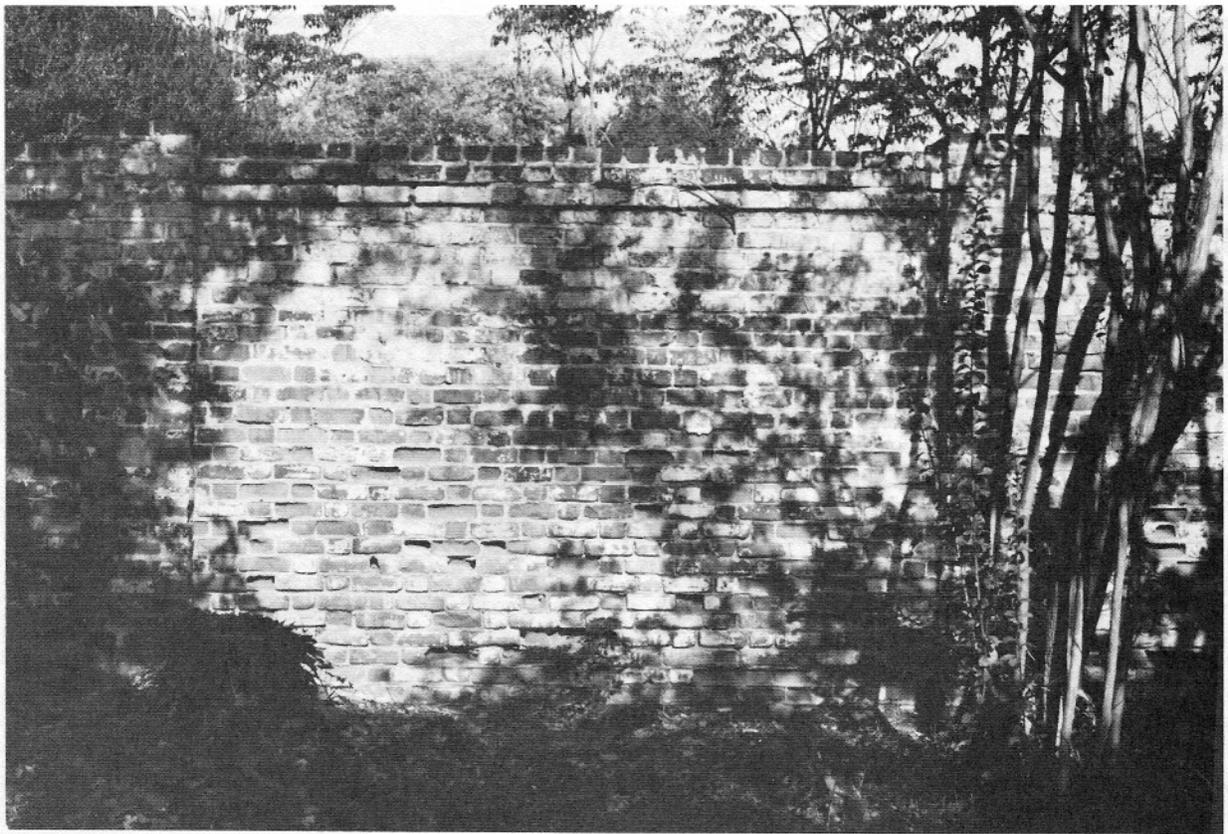
60. Chatham. Lily Pond. Photograph by Gerald Karr, 1976.



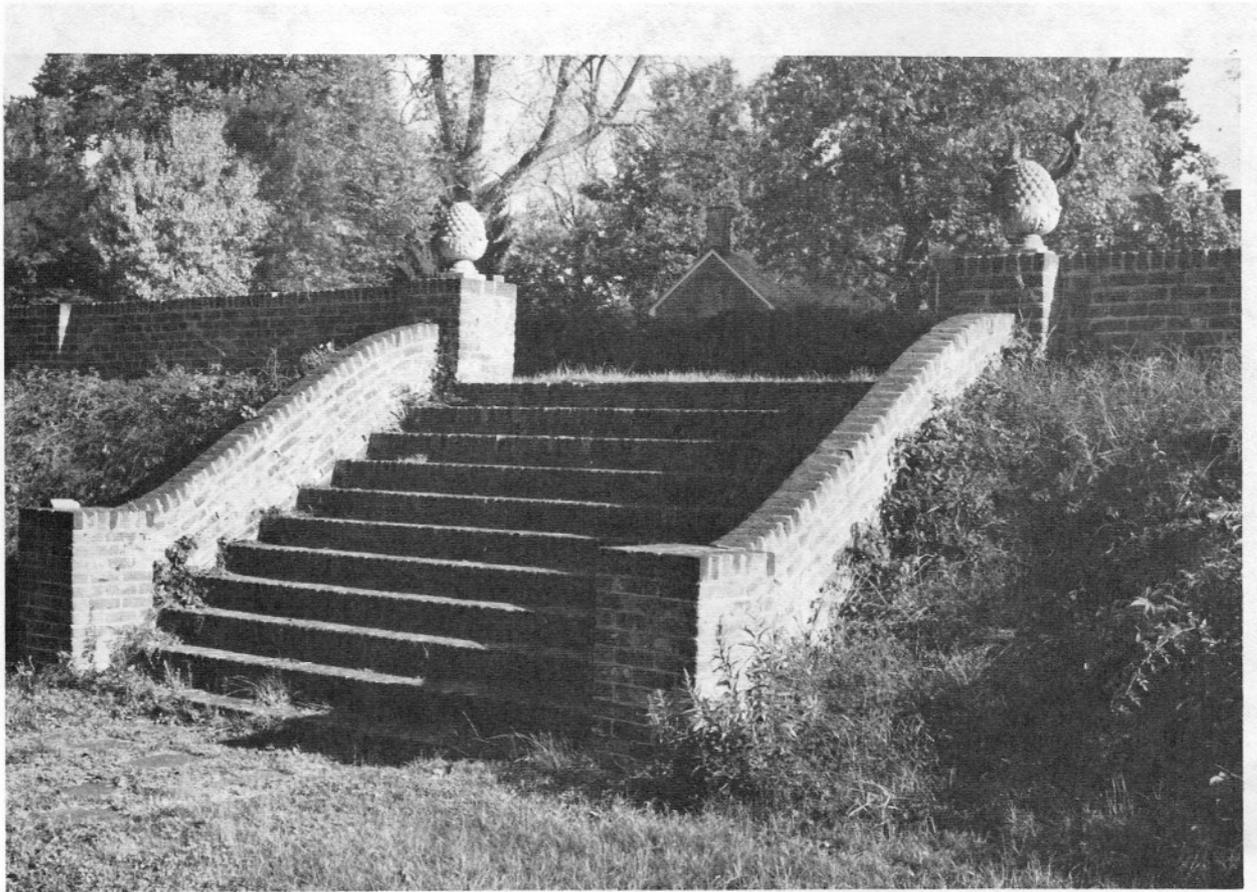
61. Chatham. Cave Remains. Possibly an ice house. The roof of the cave collapsed or was broken in reportedly during the Pratt residence. Photograph by Gerald Karr, 1976.



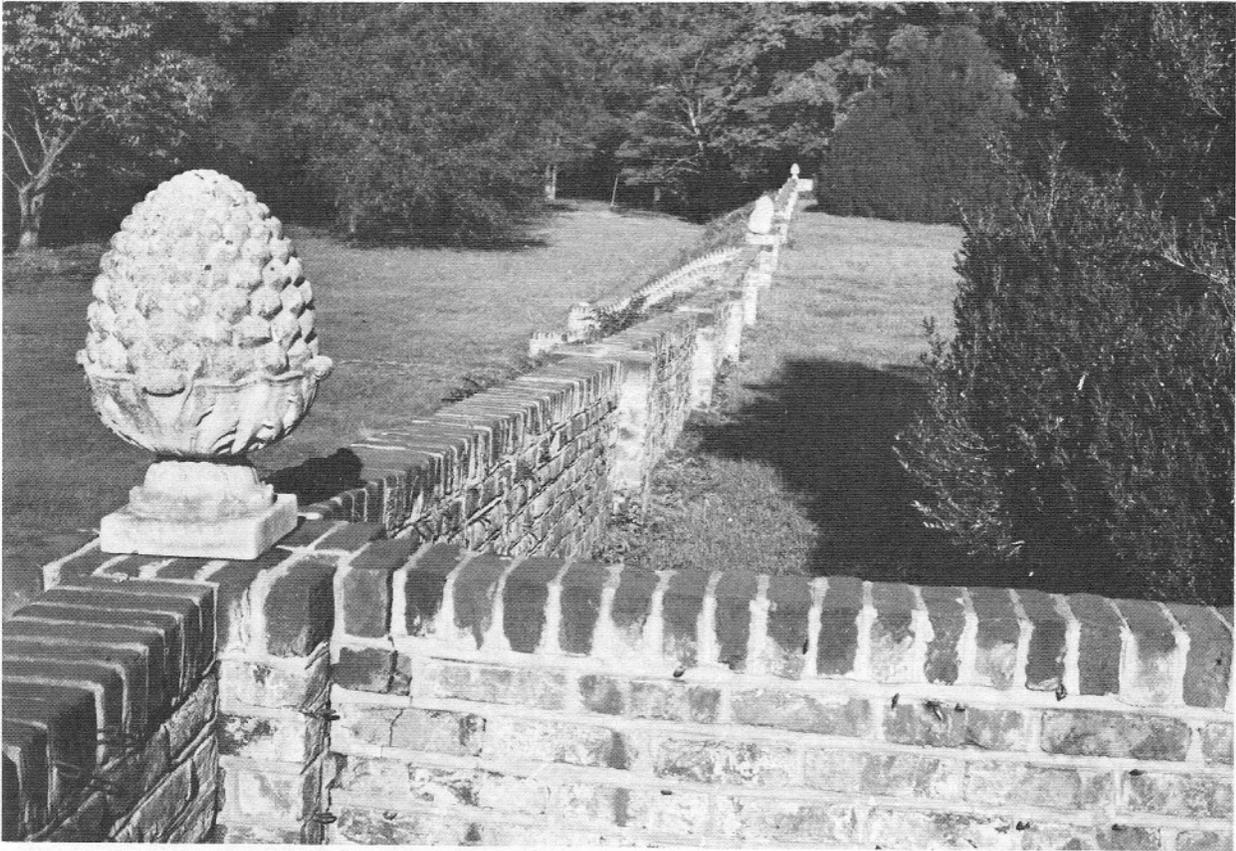
62. Chatham. Gate. The dark bricks are voids where the material has eroded away. Photograph by Gerald Karr, 1976.



63. Chatham. Garden Wall. The deteriorated area is typical throughout the wall. Photograph by Gerald Karr, 1976.



64. Chatham. Ha-Ha Stair. Photograph by Gerald Karr, 1976.



65. Chatham. Ha-Ha Wall. The ornamental pineapples are not fastened securely to the wall. Photograph by Gerald Karr, 1976.



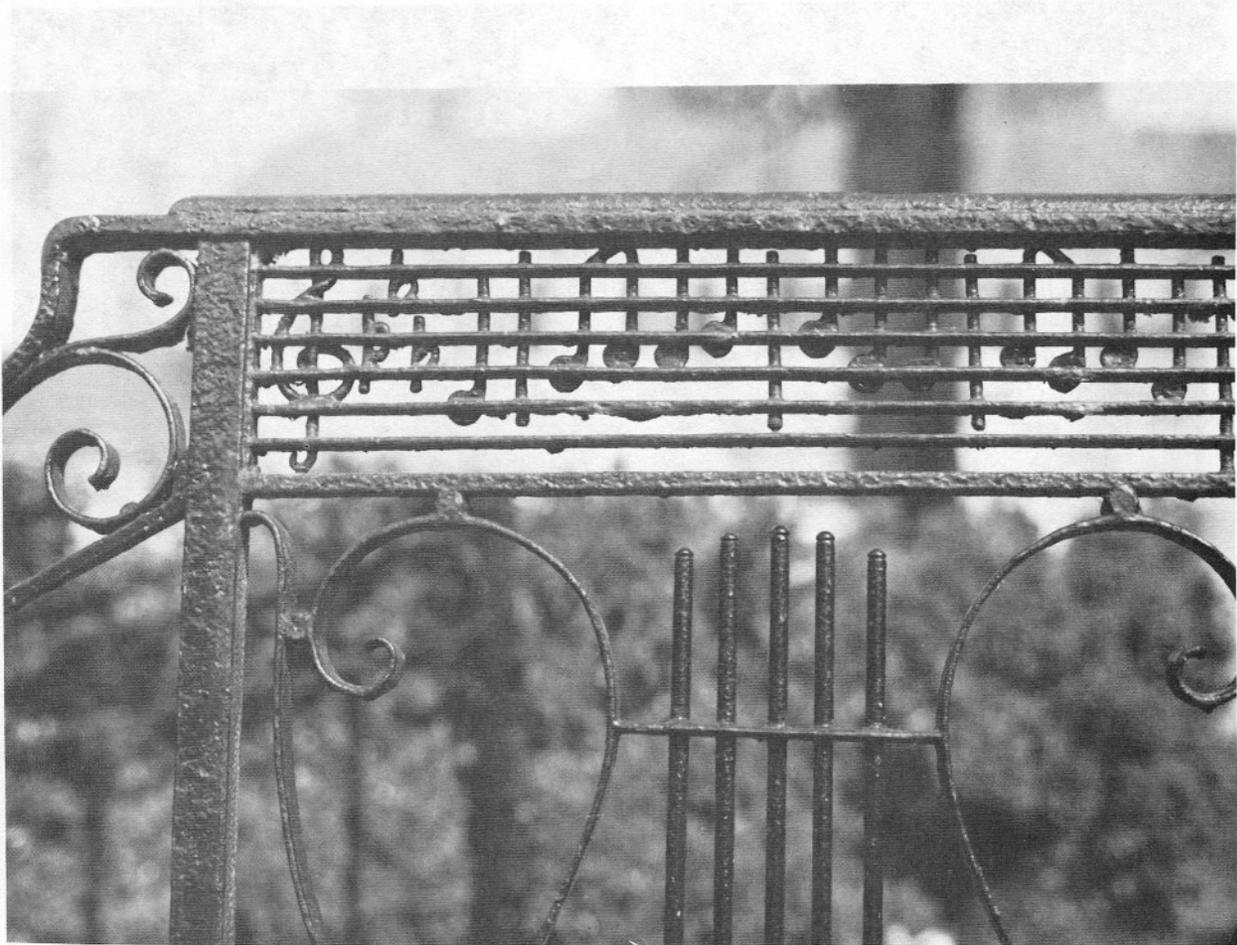
66. Chatham. Pergola. View from roof of Plantation House showing garden layout. Photograph by Gerald Karr, 1976.



67. Chatham. Pergola. The lintels which spanned from the ionic columns, left, to the brick piers have been removed. Photograph by Gerald Karr, 1976.



68. Chatham. Music Stair. Photograph by Gerald Karr, 1976.

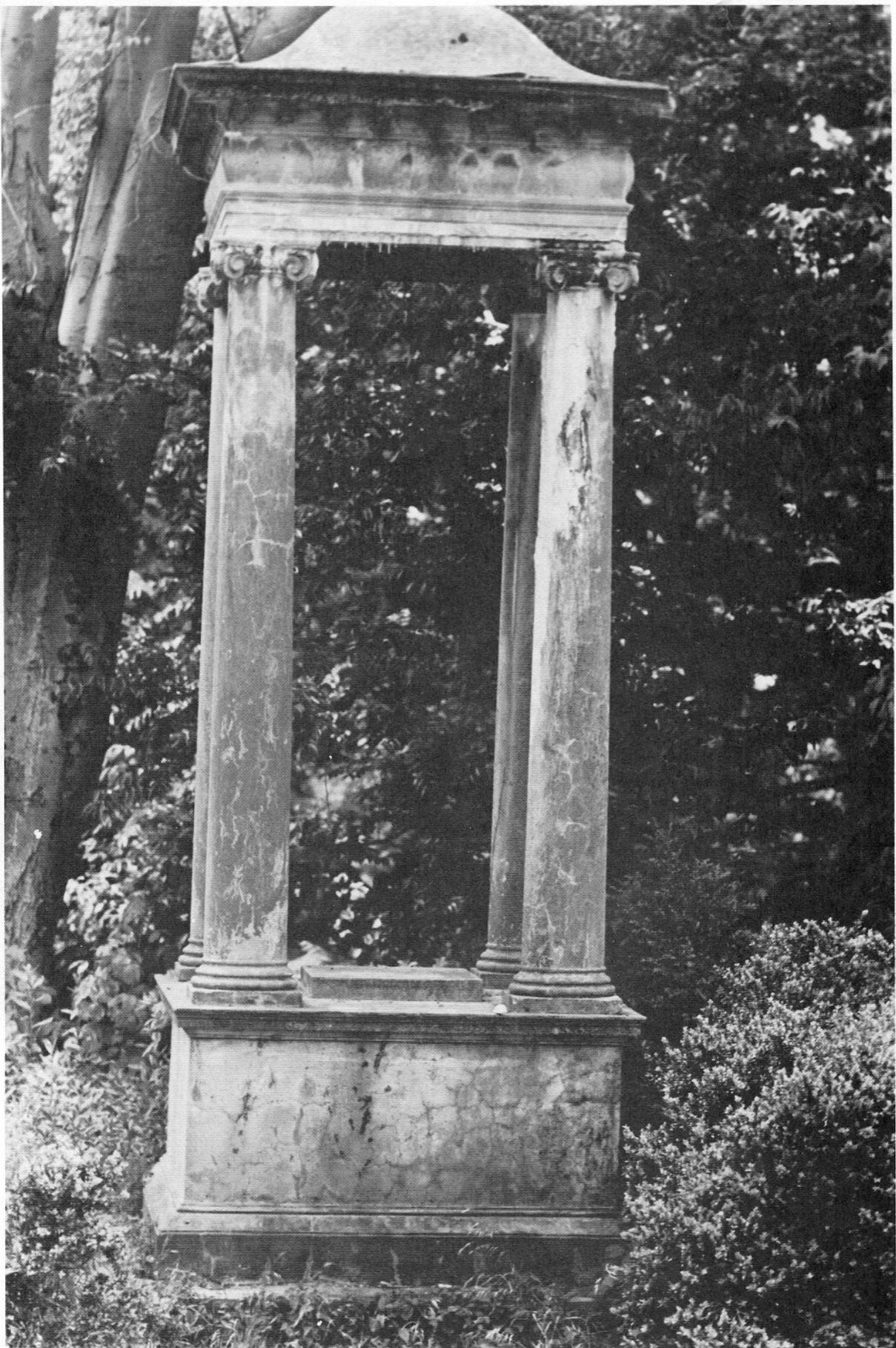


68. Chatham. Music Stair. Photograph by Gerald Karr, 1976.

69. Chatham. Music Stair. Detail of the score incorporated into the ornamental ironwork. Photograph by Gerald Karr, 1976.



70. Chatham. Urn. An object of unknown age and purpose, possibly a well-cap, the urn now serves solely decorative purposes. Photograph by Gerald Karr, 1976.



71. Chatham. Empty Temple. The severe water damage from leaks through the roof is apparent on the right column. Photograph by Gerald Karr, 1976.



72. Chatham. Statue of Ceres. Photograph by Gerald Karr, 1976.



73. Chatham. Statue of Flora. Photograph by Gerald Karr, 1976.



74. Chatham. Satyr Temple. Looking south. Photograph by Gerald Karr, 1976.



75. Chatham. Grave Marker. The remains of a Union soldier are alleged to lie under this marker. Photograph by Gerald Karr, 1976.

As the Nation's principal conservation agency, the Department of the Interior has basic responsibilities to protect and conserve our land and water, energy and minerals, fish and wildlife, parks and recreation areas, and to ensure the wise use of all these resources. The Department also has major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

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