The Archaeology of Monticello's South Pavilion and South Wing

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February 2022

Thomas Jefferson MONTICELLO

Monticello Department of Archaeology Technical Report Series Number 7

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ACKNOWLEDGEMENTS

The completion of excavations of the South Pavilion and Wing was due to the contributions and support of many individuals. Dr. Fraser Neiman, Director of Archaeology, provided direction and support throughout the project, including reading and editing multiple drafts of this report. Field Research Manager Crystal O'Connor directly supervised excavations. Senior Archaeological Field Assistant Craig Kelley worked expertly and helped to interpret archaeological findings and process three-dimensional scans. Field crew included Sarah Corkett, Lauren Gryctko, Peggy Humes, Elliott Jones, Sue Ann McCarty, Allison Mueller, and Charlene Rode. They patiently adjusted to ever-changing project deadlines and worked hard to record and document a sensitive and important area. Curator of Archaeological Collections Beatrix Arendt supervised lab analysts and processing and cataloguing of artifacts. She also reviewed early drafts of this report. Her staff included Archaeological Lab Analysts Katelyn Coughlan, Beth Sawyer, and Chris Devine. Lucy Abell, Evan Bell, Erika Chu, Missy Donovan, Halle Earle, Kyle Edwards, Jared Gingrich, Laura Leavitt, Caroline Lowry, Iris Puryear, Anneli Voelker, and John Wilkinson volunteered to wash, sort, label, and bag artifacts. Evan Bell, Erika Chu, Missy Donovan, Jared Gingrich, and Gayle White provided screening support. Sarah Corkett, Peggy Humes, Lauren Gryctko, Craig Kelley, and Allison Mueller digitized site maps. Crystal O'Connor and Craig Kelley generated graphics for this report. Research Archaeologist Derek Wheeler produced Figure 4. Devine, Mueller, and Sawyer photographed artifacts for this report. Wheeler read multiple drafts of this report and contributed institutional knowledge to the project. Mulberry Row Project Manager Jobie Hill provided construction drawings. Steve Bryant, formerly of Kjellstrom and Lee (K&L) Construction, and Peter Bernard also of K&L Construction worked with the archaeology team to create a safe work environment in an active

construction zone. They accommodated our requests for lighting, electricity, and concrete removal on a near weekly basis. John Fox of K&L similarly followed suit. Special thanks to architectural historians Ed Chappell, Willie Graham, Susan Kern, Carl Lounsbury, and Mark Wenger for sharing their knowledge, expertise, and enthusiasm for interpreting the architectural features of the kitchen. Will Rourk from the Scholars' Lab at the University of Virginia laser scanned the South Pavilion cellar twice and worked with the Department to extract data from the scans. Pollen analysis was completed by John Jones of Archaeological Consulting Services, Ltd. Structural engineers Craig Swift and Julie Hang from Keast & Hood went back to the drawing board on numerous occasions to accommodate sensitive areas inside the Pavilion. Trey Tyler from RenderSphere generated digital renderings of the spaces that helped us visualize the rooms more accurately. Gardiner Hallock from Monticello's Restoration Department provided his expertise when asked. Mason Henry Cersley also supplied knowledge of Jefferson-era architecture. Foundation Librarian Jack Robertson and Research Librarian Anna Berkes pulled reports and folders needed to complete research for this report. Work was funded by generous donations from David M. Rubenstein. This project truly was a huge team effort.

INTRODUCTION

Archaeological excavations inside of the South Pavilion and South Wing provide new insights into the implementation of Jefferson's visions for the Monticello landscape and the construction history of these spaces (Figure 1). The South Pavilion was constructed in 1770. It was the earliest brick structure built on Monticello mountaintop. Enslaved cooks prepared meals for Jefferson, his family, and his guests for nearly four decades in the kitchen that was located on the pavilion's ground floor. The South Wing, built forty years later, was immediately adjacent to the South Pavilion. It housed a dairy, three rooms to house enslaved domestic workers, a smokehouse, and a new kitchen, replacing the kitchen in the South Pavilion. Both areas provided services to the main house.

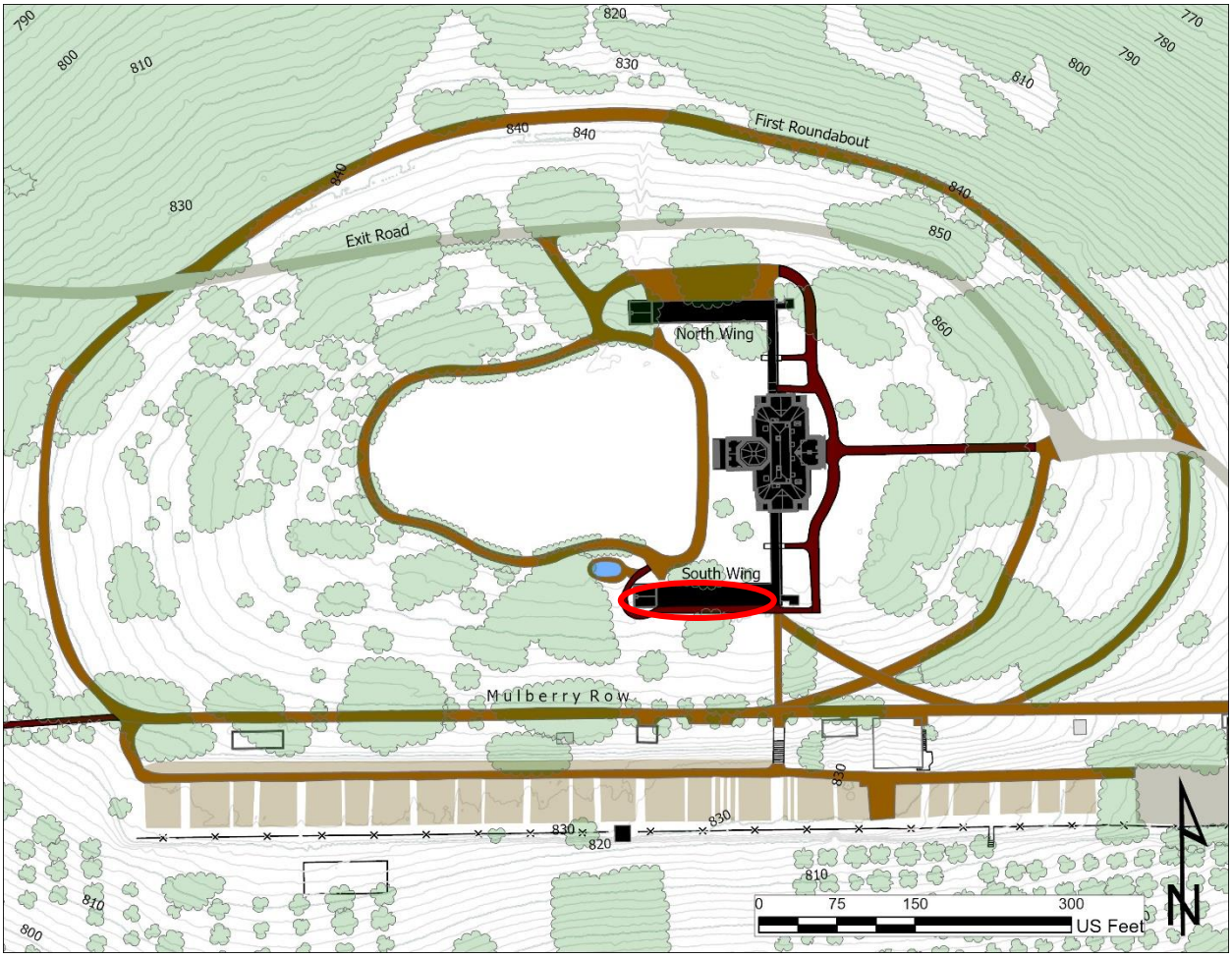


Figure 1: Monticello mountaintop with the South Pavilion and South Wing circled in red.

This report reviews recent excavations that revealed architectural features associated with the first kitchen in the South Pavilion and the later construction of the South Wing. Archaeology reveals the immense transformation of the mountaintop as seen through the changes in the South Pavilion. After a review of the documentary evidence related to the South Pavilion and South Wing, we summarize previous fieldwork and describe our recent excavations and what they reveal about the site's history.

DOCUMENTARY EVIDENCE

Jefferson recorded his visions for his house and surrounding domestic landscape in architectural renderings, sketches, and notes. This section synthesizes the documentary evidence for Jefferson's early conceptions of this landscape, the South Pavilion, and the South Wing.[1]

Historical documents reveal Jefferson's early plans for the organization of the mountaintop. In May of 1768, Jefferson contracted with Albemarle County merchant John Moore to use enslaved workers to "level 250 f. square on the top of the mountain at the N. E. end by Christmas" in preparation for the construction of the first iteration of the mansion house (Bear and Stanton 1997:76, n2), referred to hereafter as Monticello I. The mansion was to sit in the center of that 250-foot square.

While the mansion was being constructed, Jefferson's earliest living quarters were the top story of a square two-story brick building, the South Pavilion. One of Jefferson's first architectural drawings (Jefferson c.1769, 1768-1770a) shows the bottom story of the Pavilion with an arcade extending downhill toward Mulberry Row and a wing divided into service rooms running perpendicular to the arcade (Figure 2, Figure 3, Figure 4). The early plan marked rooms for a laundry, smokehouse, dairy, henhouse, cook's room, storeroom, and a dry well or cold storage cellar. The dry well was identified and excavated between 1979 and 1981 by Monticello's Department of Archaeology under the

[1] An exhaustive documentary history of the mountaintop and Monticello (Pickens 1975; Waddell 1987; McLaughlin 1988; Mesick Cohen Waite 1991:5-133, 175-249, 250-273) and detailed reports about the Wings and Pavilions (Beiswanger 1972; Lucas 1989; Mesick Cohen Waite 1992; Koester 1996 II:52-157) exists elsewhere. Note that this report uses "Wing" to identify the rooms under the south terrace, although researchers have also used the word "Dependency" in reports.

direction of William Kelso. However, excavations did not extend far enough west to determine definitively whether some or all the other service spaces were built.

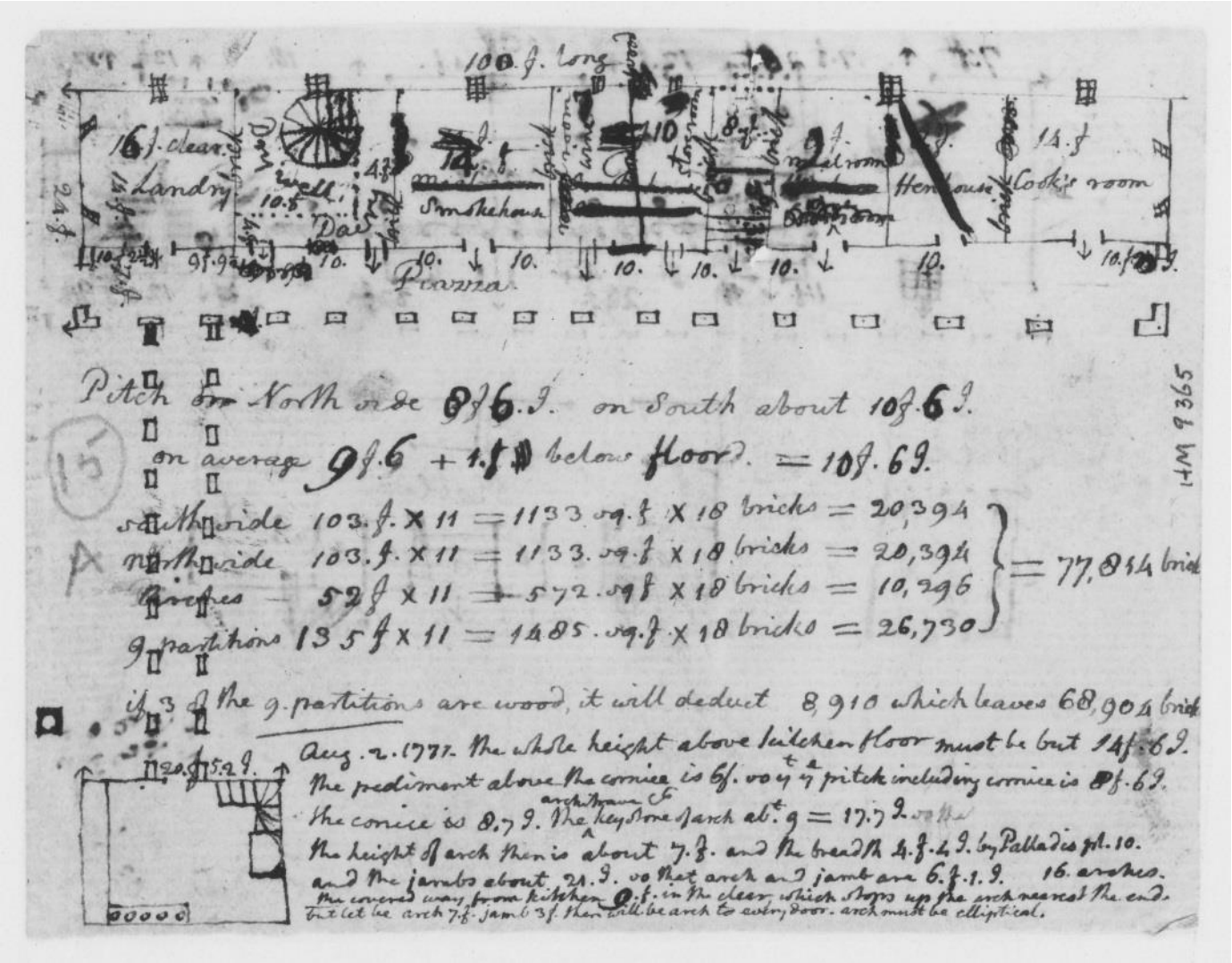


Figure 2: N59 (Jefferson c.1769). The South Pavilion kitchen is drawn in the bottom left corner with a five-burner stew stove, dresser, stairs, and central fireplace. Also drawn is an arcade extending downslope towards Mulberry Row attached to a wing including service spaces running perpendicular to the arcade. See N32 recto (Figure 3) for the measured drawing.

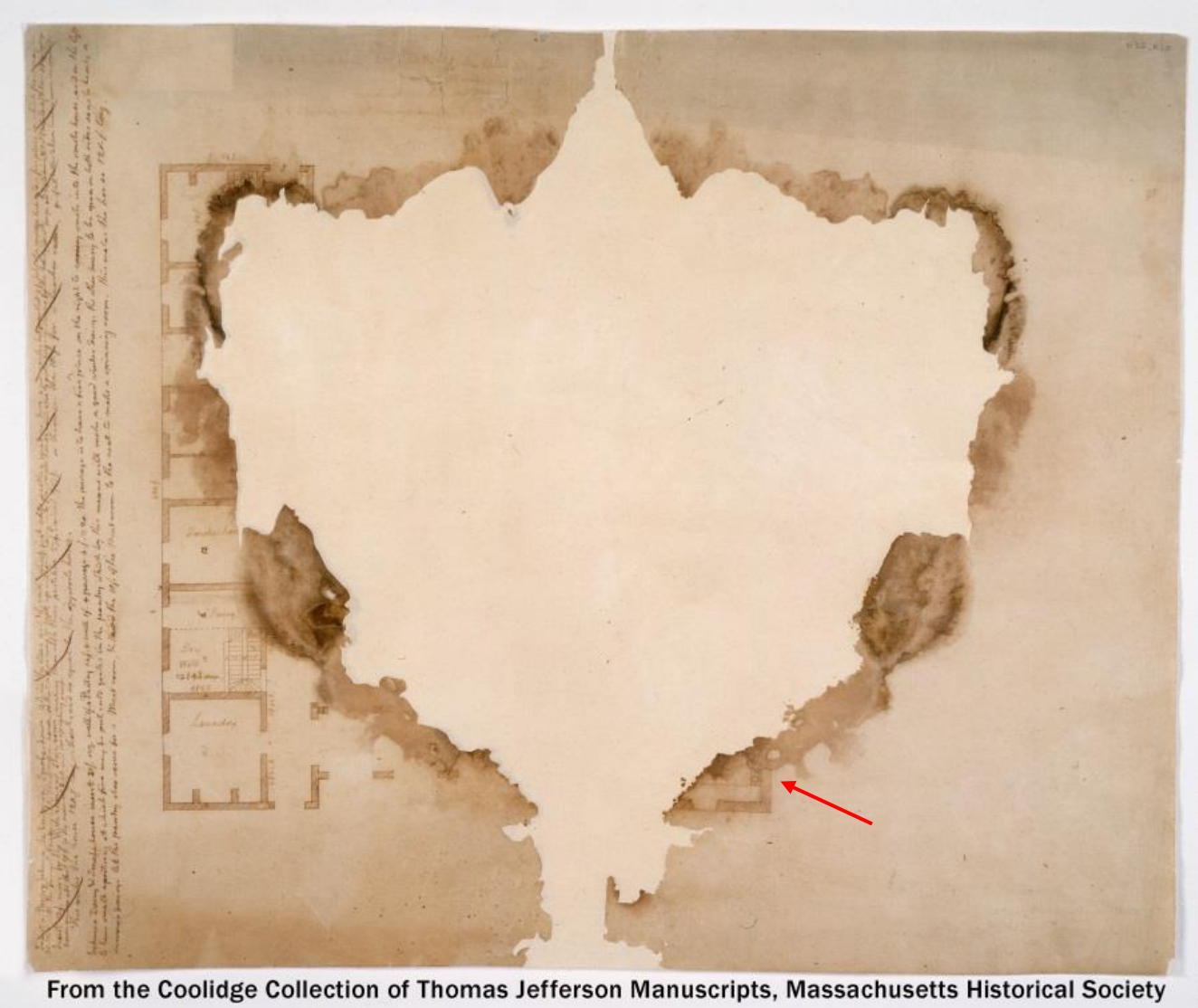


Figure 3: N32 recto (Jefferson 1768-1770a). Document is badly burned but shows a kitchen with at least three holes for a stew stove along with a dresser running along the north wall (see red arrow). This is the measured drawing of N59 (Figure 2).

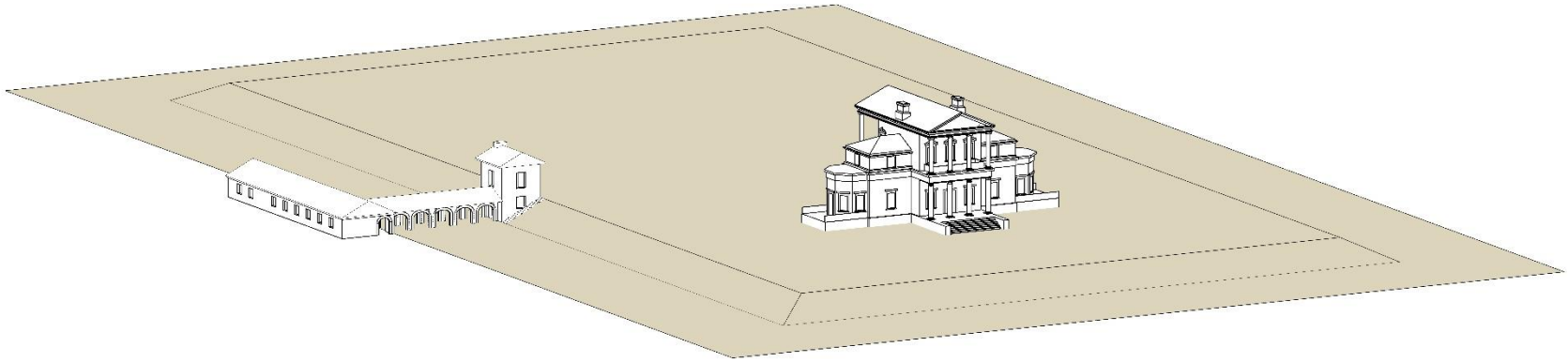


Figure 4: Composite schematic of N59, N32, and N34. Shows the imagined terrace with Monticello I, South Pavilion, arcade, and dependency wing. See Mesick Cohen Waite 1991:10 for the imagined arcade.

Jefferson's plans for the ornamental landscape evolved over time. The 250 foot square whose levelling began in 1768 was planned to be the eastern half of a rectangular terrace that measured 500 feet by 250 feet drawn by Jefferson (Jefferson 1768-1770b, Figure 5). His house was in the center of the eastern half. Given the natural contours of the mountaintop, the rectangular terrace would have required an impossible investment in labor, and it was never built.

In the early 1770s, Jefferson's ideas evolved again to center the main house between two mirrored L-shaped wings (Jefferson n.d.b, Figure 6; Jefferson n.d.c, Figure 7) which projected west of the house and contained spaces for service rooms, including a new kitchen in the corner of the southern L-shaped wing, where the Monticello II kitchen would be built 40 years later. On top of the Wings were flat roofs or terraces which provided a deck from which family members and visitors could view the ornamental landscape. The terraces connected to two two-story pavilions (Jefferson n.d.a, Figure 8). This plan was never executed.

Jefferson moved into the top story of the South Pavilion on November 26, 1770 (Bear and Stanton 1997:212) while the mansion was under construction. His new wife Martha moved into the Pavilion in 1772, and they lived here until around 1775, when they moved into Monticello I.[2]

The ground floor of the Pavilion housed the original kitchen where food was prepared for Jefferson's family and guests by enslaved cooks Ursula Granger between

[2] No one knows when the Jeffersons moved out of the Pavilion, but the best guess is that they started to use parts of the main house around 1772. That hypothesis comes from Jefferson's drawing from around 1772 of the dining room in which he mentions "a beaufet at present" located in the doorway leading to the Parlor (Jefferson 1768-1770c). The presence and notation of the beaufet, which is a sideboard or cupboard, strongly suggests that the unfinished space was furnished and that the Jeffersons were using the dining room (Gardiner Hallock, 7 December 2017, elec. comm.; McLaughlin 1988:161, 412,n162).

1773 and 1789, James Hemings between 1784 and 1796, and later Peter Hemings between 1794 and 1809. They were supported by a staff including scullions and scullery maids who performed duties such as peeling vegetables, processing meat, scrubbing the floor and dishes, and polishing silverware (Stanton 2012:188).

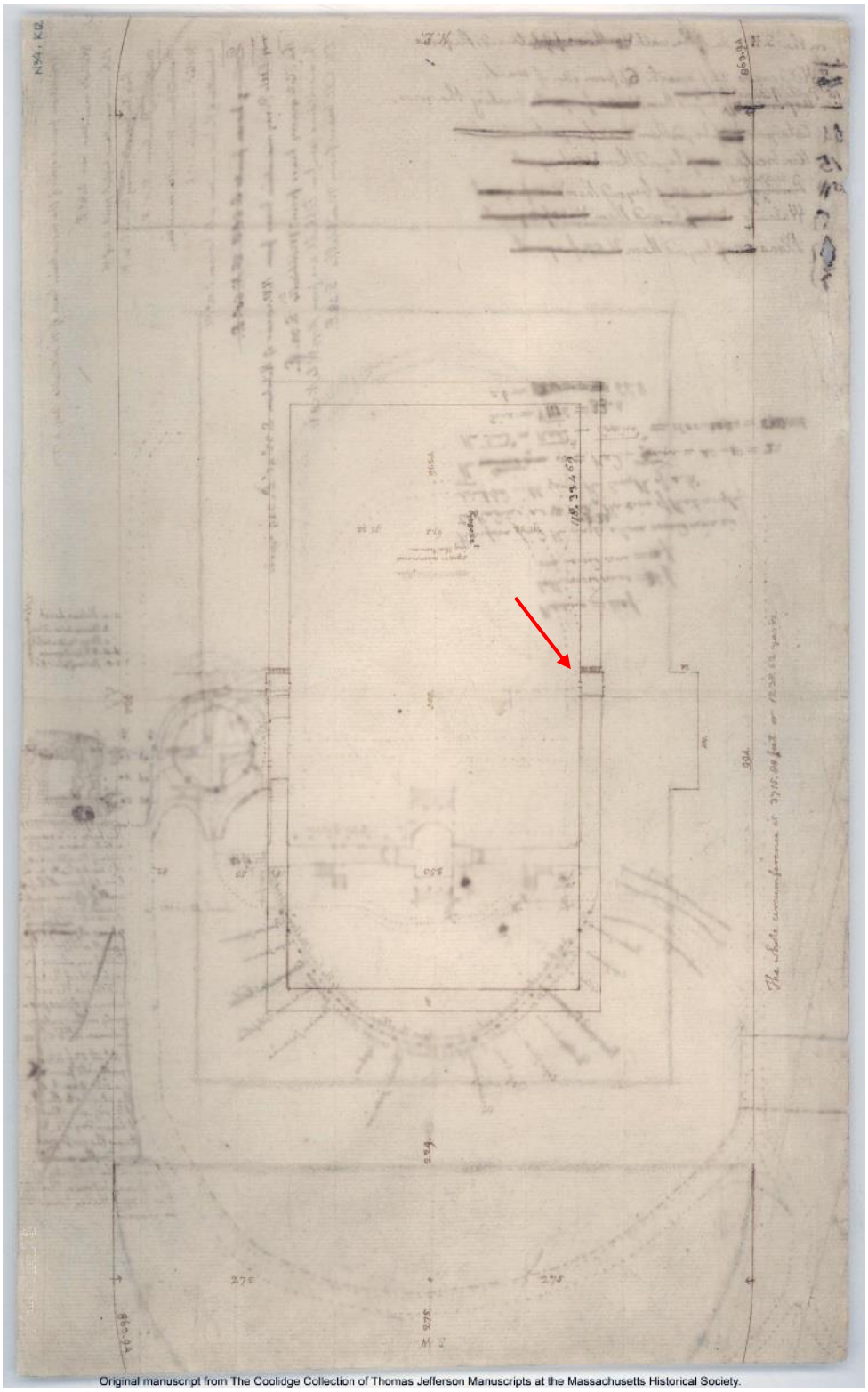


Figure 5: N34 (Jefferson 1768-1770b). Jefferson's concept of the terraced mountaintop. Another drawing, N61, bleeds through from the other side. The rectangular stepout on the right provided space for a colonnade (see N59, Figure 2). Note the red arrow pointing to the steps drawn just above a square, which is the South Pavilion. North is to the left.

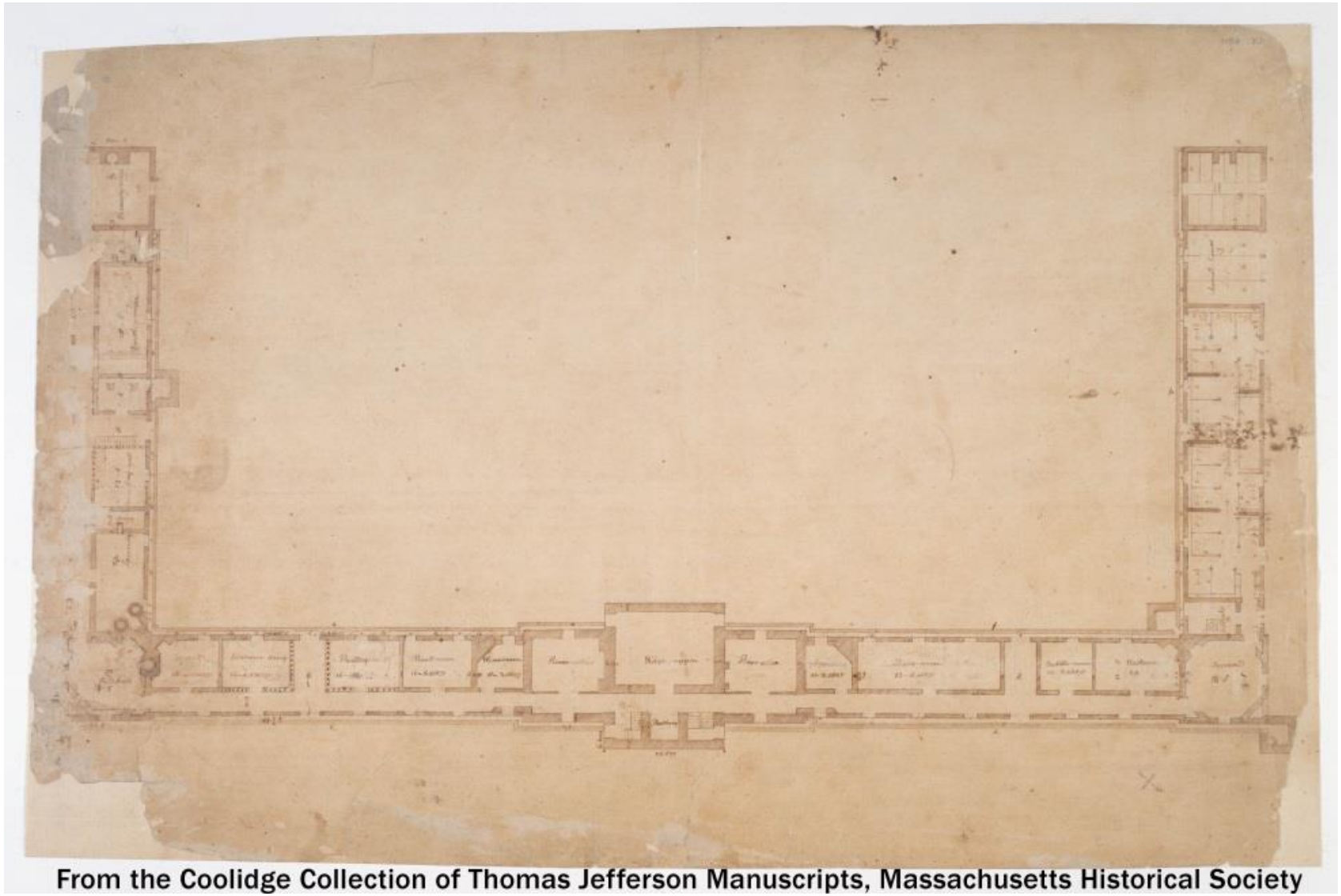


Figure 6: N56, before August 4, 1772 (Jefferson n.d.b). L-shaped wings extend from a centrally located main house. A seven-burner stew stove is labeled in the kitchen in the bottom left corner. Also included are the dimensions of the South Pavilion in what is labeled the "Brewing Room" at the end of the South Wing.

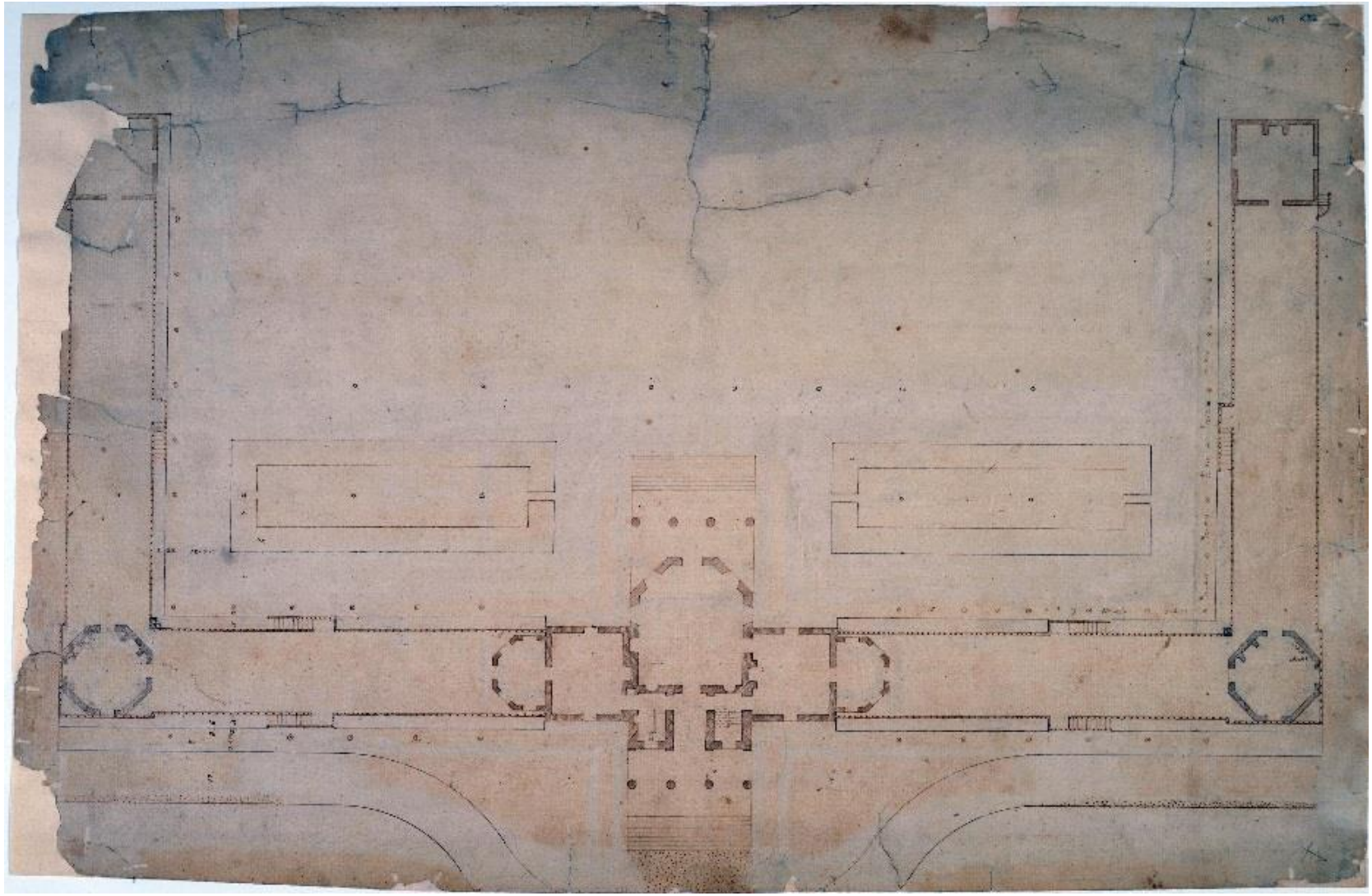


Figure 7: N57 recto, before August 4, 1772 (Jefferson n.d.c). L-shaped wings extend from a centrally located main house.

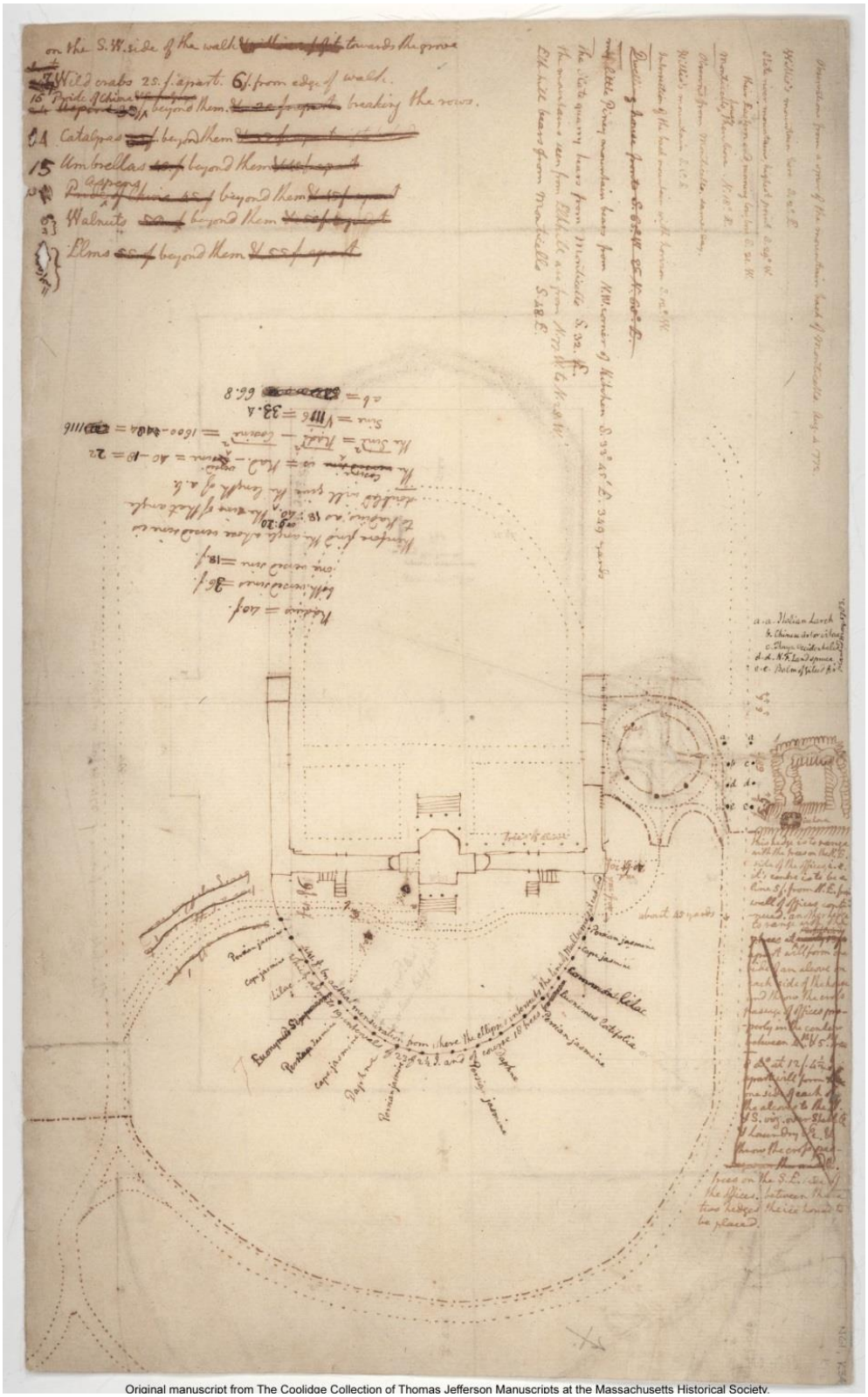


Figure 8: N61, before May 1768 (Jefferson n.d.a). General plan of mountaintop with the L-shaped dependencies, North and South Pavilions, and the main house at the center of the U. On reverse is N34.

Evidence for the design of the South Pavilion comes from two sources. The earliest comes from Jefferson's architectural notes from between 1767 and 1769, where he described "Outhouses 18. F. sq. 10. F. to water table. 12. F. upper story" (Bear and Stanton 1997:26; Beiswanger 1972:3).[3] The 18-foot square cube matches the interior dimensions of what was eventually built.

The second source showing the South Pavilion was Jefferson's *circa* 1769 sketch (Jefferson c.1769, see Figure 2). It included a detail of the South Pavilion kitchen with a central fireplace, corner staircase, dresser, and stew stove. An interior staircase allowed Jefferson's wife Martha to access the lower-level kitchen. It also allowed cooks to bring finished meals to the Jeffersons' living quarters upstairs without having to step outside. Kitchen dressers were sideboards or countertops on which cooks prepared food before service (Lounsbury 1994:123). Stew stoves were the historic equivalent of modern-day cooktops (Figure 9). The stew stove had separate compartments and holes for individual pots or pans that allowed cooks more precise control over the heat required to prepare dishes for fine French cuisine, including sauces such as ragouts and fricassees[4]; egg dishes including omelets and custards; poached or sautéed fish and seafood; and desserts made with melted sugar, such as jams and marmalades (Lounsbury 1994:357, Pinkard 2009:110). Stew stoves also gave cooks the ability to simultaneously cook multiple dishes. Cooks placed saucepans and pots on top of a trivet, which rested above an iron grate, onto which cooks put hot coals taken from the adjacent fireplace. Ashes fell

[3] Jefferson went on to calculate how many bricks would be needed to build each Pavilion.
[4] Both types of sauces were prepared by combining the juices of the main ingredient with other liquids such as bouillon, wine, or cream (Pinkard 2009:107).

through the grate and collected in the cleanouts, and cooks cleaned out the ashes and deposited them elsewhere.

Figure 9: The reconstructed stew stoves in the 1809 kitchen in the South Wing at Monticello. Note the holes on top, on which a trivet was placed to hold a pot. The cleanouts were below.

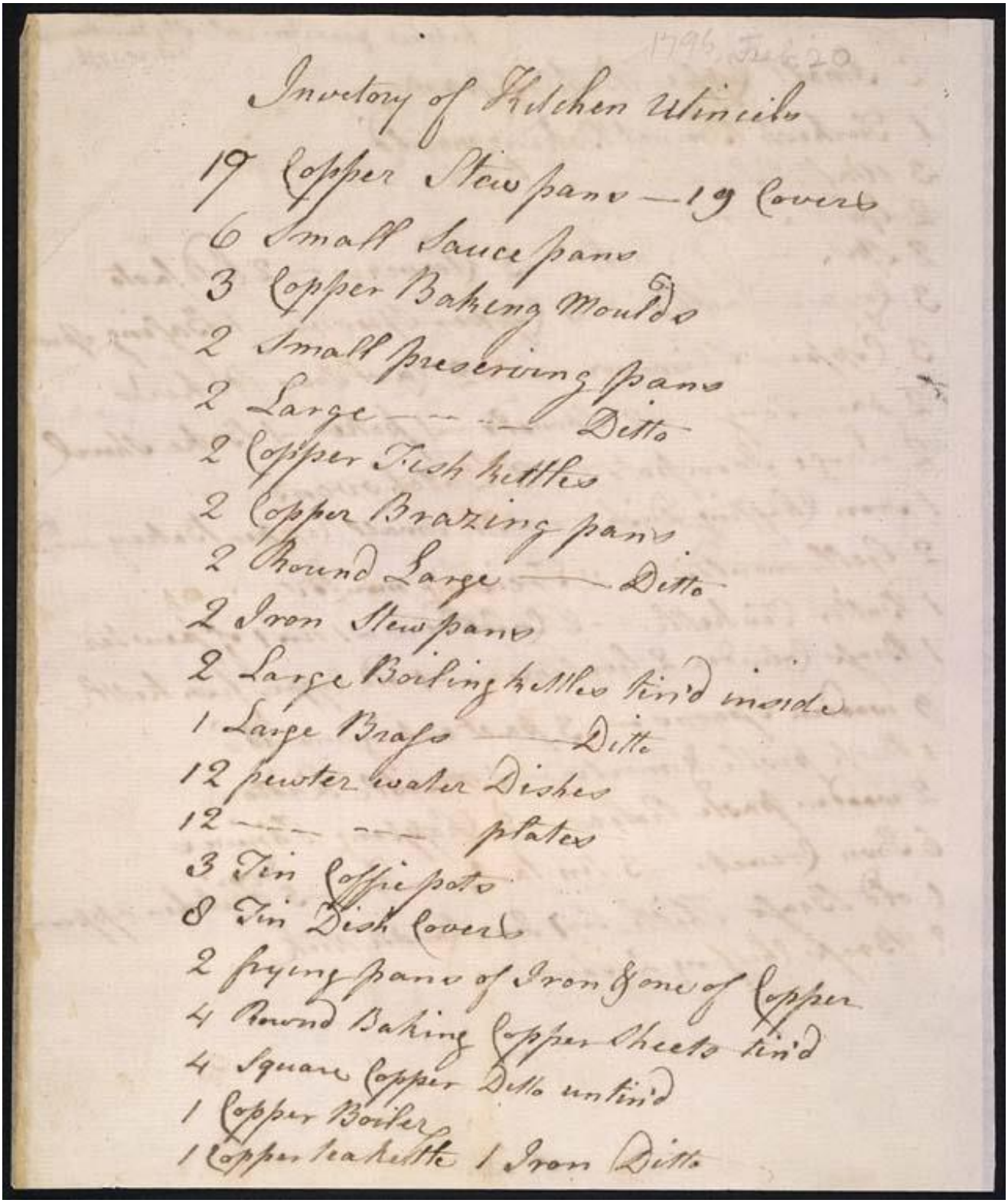
Jefferson was likely first introduced to stew stoves during fashionable dinners at the Governor's Palace, while a student at William and Mary between 1760 and 1762 and while he studied law under George Wythe between 1762 and 1767 (Blackburn 1975:33, 35-39, Dill 1979:20-21, Jefferson 2017:2-3). He would have encountered them again during his residency in the Governor's Palace between 1779 and 1781, and finally during his time as Minister to France between 1784 and 1789 (Malone 1933[1994]:12, 18, 21-24). Jefferson's serious interest in French cuisine prompted him to take nineteen-year-old

enslaved cook James Hemings with him to France in part to be trained in French cooking (Gordon-Reed 2008:169-190). After his return to Monticello with Jefferson in 1789, James trained his brother Peter for three years as part of a bargain to achieve his emancipation in 1796 (Jefferson 1793, Jefferson 1796). Jefferson so enjoyed French cuisine and thought so highly of James' abilities that he tried to hire him as head chef in the President's House in Washington in wake of Jefferson's victory in the election of 1800. After James declined, Jefferson hired French chef Honoré Julien (Stanton 2012:186-187). Enslaved cooks Edith Fossett and Fanny Hern trained under Julien in Washington and cooked for Jefferson at Monticello throughout his retirement (Stanton 2012:187). Jefferson made certain that his cooks knew how to prepare French cuisine and that they had the necessary cooking equipment.

A 1796 inventory of kitchen equipment by James Hemings underscores the high quality of equipment used in the South Pavilion kitchen and the types of cooking taking place. Included first in the list were nineteen copper stew pans and nineteen covers, two copper brazing pans, and six small sauce pans (Hemings 1796, Figure 10, Figure 11). Other items were baking molds and pans; fish kettles; tea kettles and coffeepots; waffle irons; and colanders. Utensils included copper ladles, spoons, and skimmers; wooden spoons; chopping knives; cleavers; and both a brass and a marble mortar and pestle. Objects such as twenty-one small copper baking molds, two jelly molds, a Turkish Bonnet Baking mold, three tin tart molds, and numerous baking pans point to the types of

fine dessert foods Jefferson enjoyed with his family. Jefferson purchased many of these items while abroad in France.[5]

[5] As he prepared to return from diplomatic responsibilities in France, Jefferson shipped home eighty-six crates of goods that he purchased abroad. An inventory documented the contents of each crate and included many of the items in James Hemings' 1796 inventory which apparently had been purchased in France. In crate No. 29 were many kitchen-related items, including, "2 stoves, basins, pots, cauldrons, 12 hot water tins, 4 butler's pantry daybooks, 28 round saucepans, 2 oval ones, 2 small copper frying pans, 3 butler's pantry saucepans, 1 strainer, 1 kettle, 1 coffee mill, 3 waffle irons, 1 coffee pot, 4 tin plated pie pans, 1 sheet-iron camp stove, 2 fish kettles and 1 pair of scales, 19 copper saucepan covers, and various spoons, ladles, cleavers, knives, spits, shovels, tongs, and a poker." Crate No. 33 contained "3 iron kettles;" Crate No. 34 contained, "5 pairs of brass andirons, 3 iron pokers, 2 large tongs, and 2 shovels;" No. 58 contained "30 kitchen aprons;" and No. 62 contained, "a roasting spit, a waffle iron." (Short 1790).



Inventory of Kitchen Utinciles

19 Copper Stew pans — 19 Covers
6 Small Sauce pans
3 Copper Baking Moulds
2 Small preserving pans
2 Large —— Ditto
2 Copper Fish kettles
2 Copper Brazing pans
2 Round Large —— Ditto
2 Iron Stew pans
2 Large Boiling kettles tin'd inside
1 Large Brass —— Ditto
12 pewter water Dishes
12 —— —— plates
3 Tin Coffie pots
8 Tin Dish Covers
2 frying pans of Iron & one of Copper
4 Round Baking Copper Sheets tin'd
4 Square Copper Ditto untin'd
1 Copper Boiler
1 Copper tea kettle 1 Iron Ditto

Figure 10: James Hemings' 1796 list of kitchen equipment, page 1 (Hemings 1796).

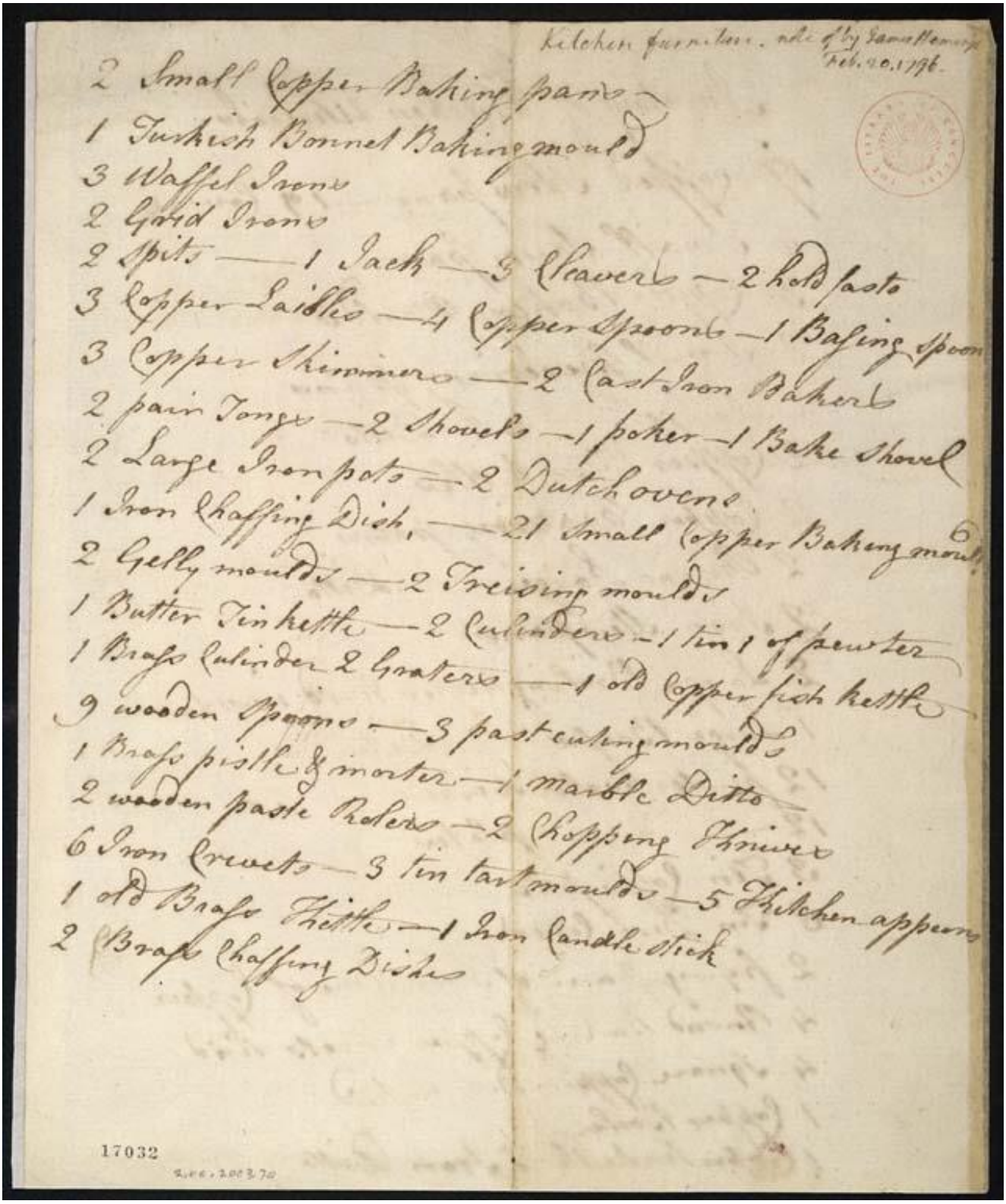


Figure 11: James Hemings' 1796 list of kitchen equipment, page 2 (Hemings 1796).

Other than his early drawings, there are no documents in which Jefferson mentions the stew stoves in the South Pavilion. However, in 1809, Jefferson requested Henry Foxall, an iron foundry owner located in Georgetown, to produce for him the iron grates and cheek inserts for what Jefferson called "stoves or stew-holes" for the new kitchen at the east end of the South Wing at Monticello (Jefferson 1809b).[6] Jefferson's request to Foxall pleaded "I must pray you to do it without delay, if convenient, as they are indispensable in a kitchen." After completing the order, Foxall replied that he produced and sent Jefferson the box-part, or cheeks, and the grates two weeks later (Foxall 1809).

Jefferson's wife Martha was a frequent visitor to the South Pavilion kitchen before her death in 1782. Her accounts from 1772 through 1782 recorded her management and oversight of food-related activities in this space or in nearby yard areas (Jefferson 1772-1782:18-32). For instance, she documented opening barrels of flour; the killing of animals including sheep, turkeys, lambs, shoat (young pig), geese, hogs, and pullets (young hens); brewing of beer; production of both soft and hard soap; purchase of butter, chickens, beef, sheep, and wheat; experimenting with coffee brewing; making pots of butter; opening of casks of butter and breaking loaves of sugar; making candles; listing the house linen, clothes, and "10 Queens china dishes 29 shallow plates 19 deep ditto;" and instructing how to make cream cheese and rennet. Martha oversaw kitchen activity and worked closely with enslaved cook Ursula to make sure menus were suitable for family and guests.

[6] Jefferson's White House chef, Honoré Julien, told him that Foxall had made the iron grill (grates) and box-part (cheeks) for Jefferson's stew stoves (Jefferson 1809b).

After Thomas, Martha, and daughter Martha moved into Monticello I around 1775, the function of the South Pavilion changed only slightly. The top story of the Pavilion accommodated Jefferson's law books until the Book Room in the main house was completed. Later two of Jefferson's grandsons-in-law used the room as a study (Koester 1996 I:164; Jefferson 1796c, 1798, 1808b). The bottom story continued to function as a kitchen until it became a Wash House between 1807 and 1808 in advance of Jefferson's return from the presidency (Jefferson 1796b, Figure 12; Mills 1803, Figure 13; Jefferson 1808c; Jefferson 1807).

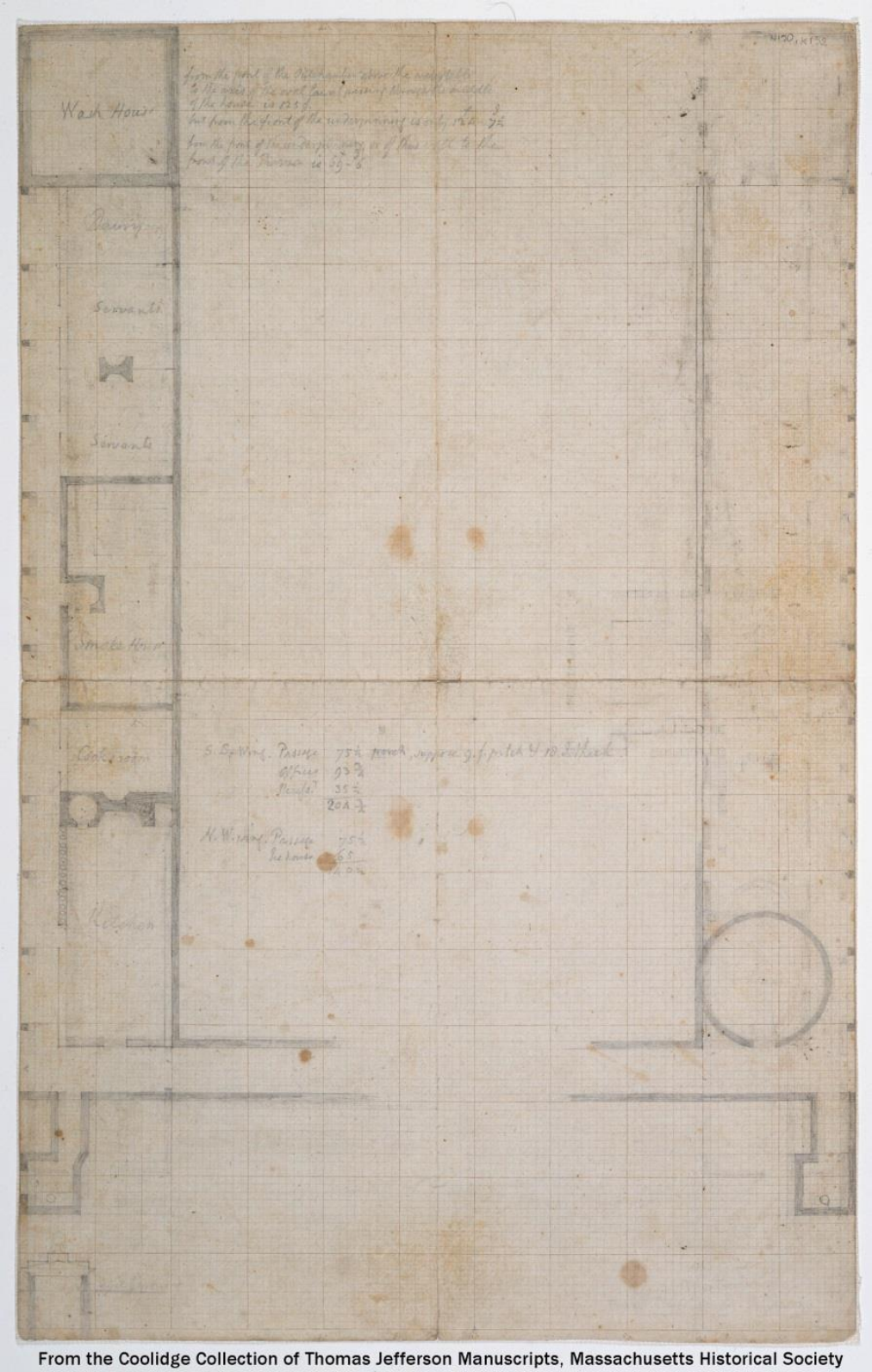


Figure 12: N150 (Jefferson 1796b). Plan of dependencies to accompany the remodeled house. Note that the function of the South Pavilion (top left) is marked as a Wash House. The new kitchen had a set of stew stoves along the south-facing wall.

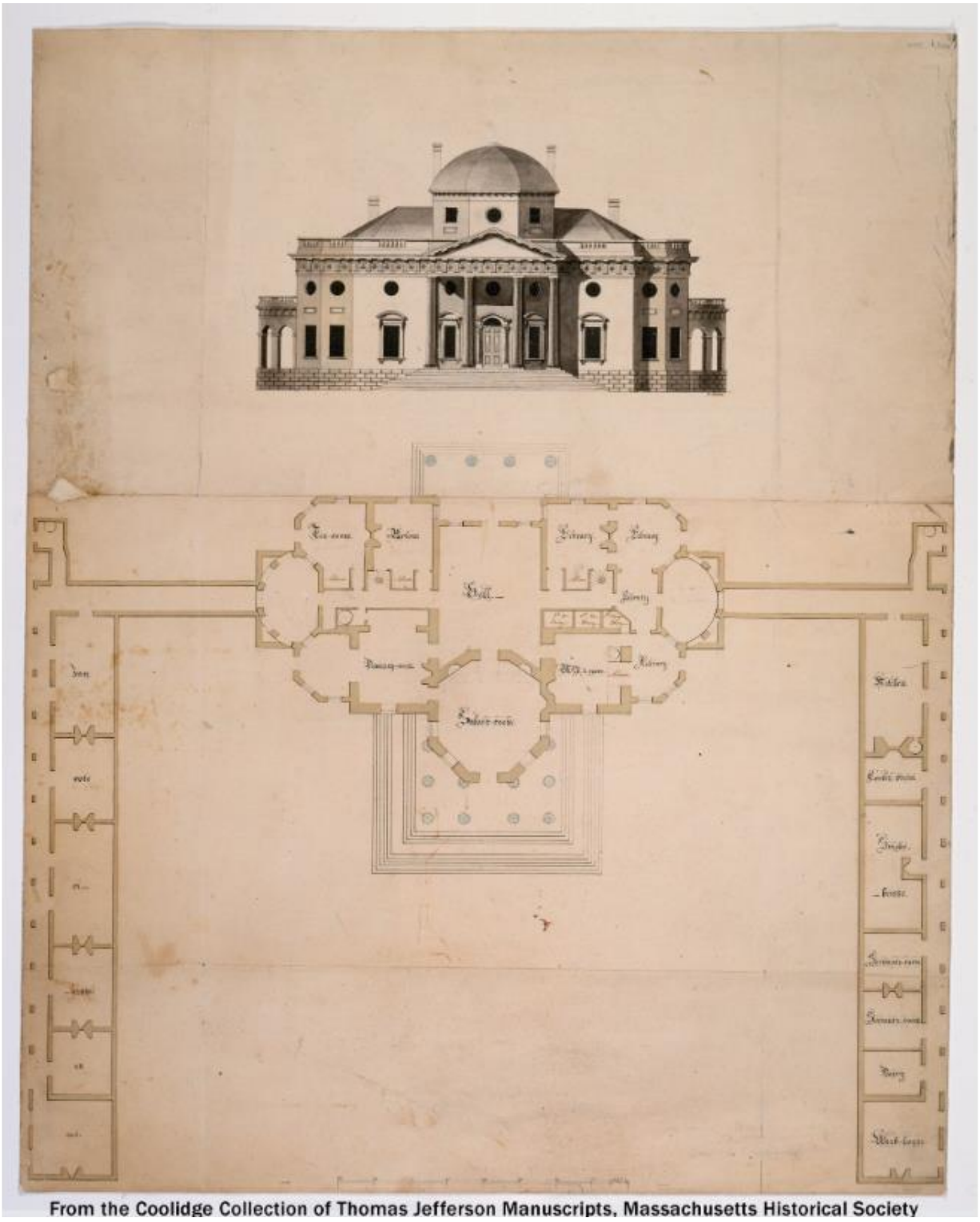


Figure 13: N155 (Mills 1803). Plan and west elevation of Monticello II. Note that Mills included the actual names of the rooms in the South Wing (right side) while only including unintelligible names in the North Wing (left side).

After returning from diplomatic responsibilities in France in 1789, Jefferson began planning a massive remodeling campaign that would more than double the size of his mansion. The new scheme incorporated Palladian and French design ideas that were adapted to Chesapeake slave society. Execution of this new design, referred to here as Monticello II, began in 1796 and was effectively completed in 1809. Massive changes to both the landscape and house took place. Construction included the addition of L-shaped wings that housed domestic and workspaces for enslaved people, including a new kitchen, dairy, and wash house (Jefferson 1796b, Mills 1803). These were vastly simplified versions of the L-shaped wings Jefferson had imagined in the 1770s. The lower level of the South Pavilion continued to function as the main kitchen until around 1808, when a larger kitchen was completed in the recently constructed and abutting South Wing. With the new kitchen complete, the kitchen in the Pavilion was abandoned, and enslaved workers filled the ground floor of the Pavilion with three feet of dirt to raise the floor level to meet that of the newly constructed Wing. The space was converted into a Wash House. A brick floor may have been installed, while the original kitchen door along the south wall was partially bricked in and converted into a window. A door was cut into the east wall, and a large window along the east side was bricked in after the completion of the dairy in the South Wing.

The new South Wing incorporated and concentrated domestic and workspaces previously located along Mulberry Row. The mansion house, completed in 1809, is the culmination and final expression of Jefferson's evolving design for his mountaintop home.

Construction of the North and South Wings began in the winter of 1801 and lasted until 1809. Stonework on the south side began in 1801 (Randolph 1801; Mann Randolph 1801) and on the north by March of 1802 (Jefferson 1802). Enslaved workers dug vertically into subsoil against which masons built the retaining wall for the wings (Mesick Cohen Waite 1992:19). The rooms for each Wing sat below grade and out of view from the main house. The roofs over the offices were flat, creating a terrace or platform from which to access the top floor of the North and South Pavilions. Scholars have some ideas of who lived in the three rooms in the Wing. Peter Hemings, the head cook between 1796 and 1809 (Stanton 2012:186-188), may have lived in the cook's room located right next to the new kitchen once it was completed. When Peter moved out of the cooks' room in 1809 to a cabin along Mulberry Row (Jefferson 1809a), head cook Edy Fossett and her family moved into the space (Stanton 2012:188). Sisters Critta and Sally Hemings likely lived in the neighboring two "servants rooms" (Stanton 2012:176).[7]

The Wash House changed locations to the North Pavilion by 1828 (Koester 1996 I:223-224). Researcher Anna Koester speculates that the location changed due to the failure of the well located in the kitchen yard outside of the South Pavilion Wash House.[8] Once Monticello was sold out of the Jefferson family in 1831, it is unclear how subsequent owners used the South Pavilion basement. There is a possibility that families who worked for the Levy family, including members of the Coleman-Henderson family,

[7] In the 1850s, one of Jefferson's biographers, Henry Randall, recalled that Jefferson's grandson Thomas Jefferson Randolph pointed out on a tour of Monticello that Sally Hemings lived in "a smoke blackened and sooty room in one of the collonades" (Randall 1868).

[8] In May of 1818, Jefferson wrote "the well is found to have in it a plenty of water, and very fine. it has been several years out of use" (Betts 1944:629).

lived in both the top and bottom stories.[9] Their roles included cook, gardener, grounds caretaker, and domestic servants. By 1926, the "Monticello Shop" was opened in the "old Jefferson Laundry"[10] (Souvenir Shop at Monticello 1926).

[9] For instance, Willis Shelton Henderson was born in the cook's room in the South Wing in 1885 (Aurelia Crawford, pers. comm. via email, 19 September 2018). Henderson worked for the Levy family as a cook, waiter, and guide during their ownership of Monticello (Thomas Jefferson's Monticello 2019).

[10] Research was surprisingly unable to confirm whether the Shop was on the bottom or top story of the Pavilion. Board meeting minutes broadly identify the location in the "Servants Quarters" in the South Wing in 1926 and 1927 (Thomas Jefferson Memorial Foundation 1926a, 1926b, 1927). Plans immediately prior to the restoration put the shop in the "Honeymoon Cottage" (Gibboney 1940b, Kimball 1940). The Pavilion's bottom story may have been used as a storeroom (Gibboney 1940a, Grigg 1940, Kimball 1941a) if the shop was located on the top story. Furthermore, son of Shop proprietor Zack Jarman recalled in a written history in 1996 that the Shop was located in the *new* kitchen at the end of the Wing (Jarman 1996). A review of photographs taken between c.1870 and 1929 was also undertaken. Two different signs appear outside of the new kitchen but are too blurry to accurately read. Additional research beyond the above sources to confirm the Shop location was not undertaken.

FIELDWORK

Previous Archaeology

Restoration architect Milton L. Grigg conducted the earliest excavations in the South Pavilion and South Wing in the 1940s ahead of renovations of the spaces. A photograph from inside the Pavilion shows that he excavated three zones: in the northwest corner, in front of the central fireplace dating to the washroom conversion in 1809, and along the south wall (Figure 14). Grigg produced a map and a few notes documenting his work, including relative elevations (Figure 15, Figure 34).

Figure 14: Photograph of Grigg's exploratory excavations in the South Pavilion (Grigg 1941m).

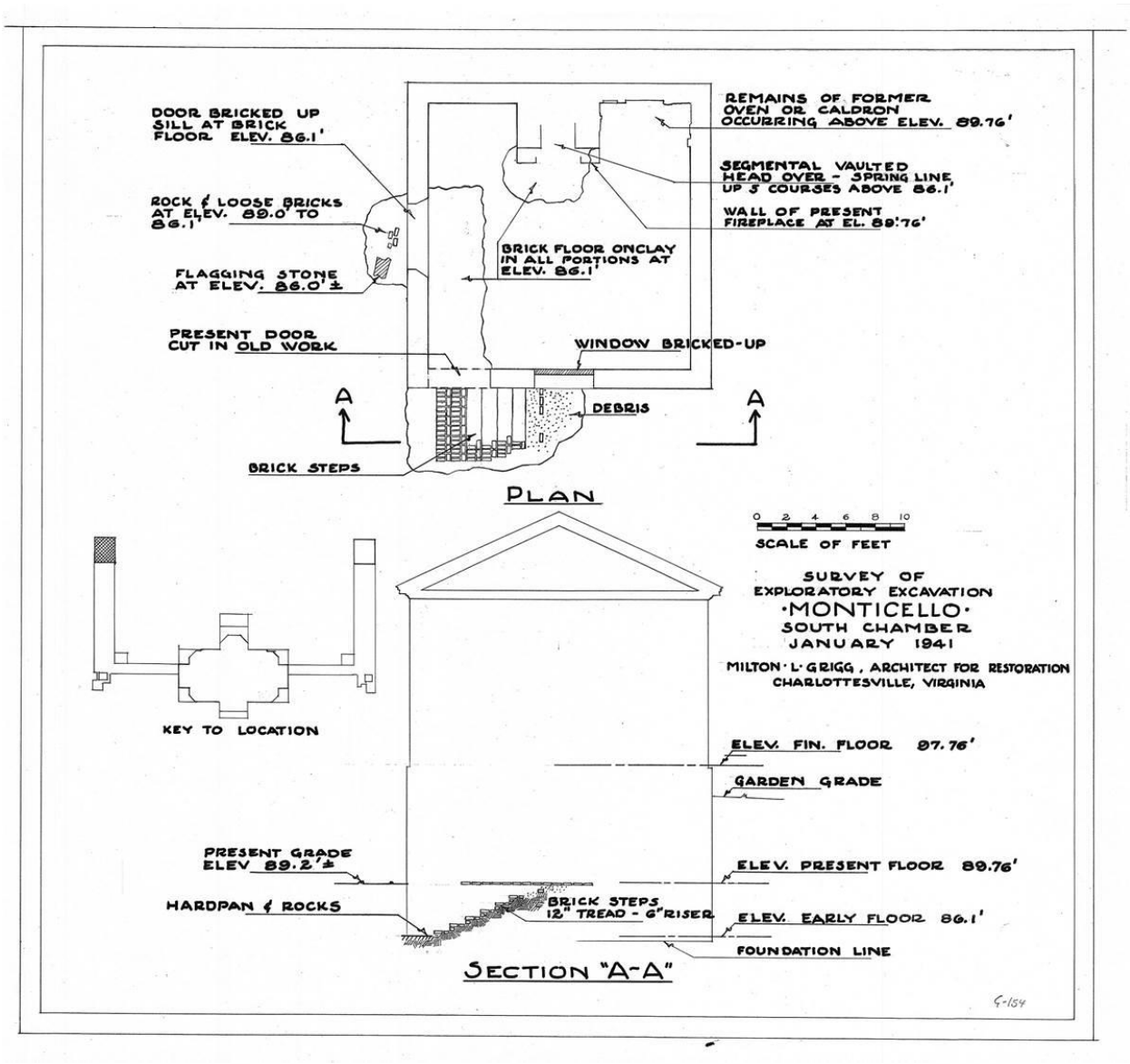


Figure 15: Drawings of Grigg's exploratory excavations from January 1941 (Grigg 1941a).

Grigg did not collect artifacts during his work. He did document architectural remains including a relieving arch under the central fireplace and the brick floor of the

kitchen (Grigg 1941a, 1941c, 1941d, 1941h).[11] He noted "hooks for the crane" still in place and what he wrongly thought was an "oven or caldron" in the northwest corner of the room (Grigg 1941h).

Grigg recorded evidence that the Wash House in the Pavilion had a brick floor prior to restoration of the space (Grigg 1941c; Koester 1996 I:223). It is likely that the original floor material used in the Wash House in 1809 was brick. Specifications for demolition work inside the Pavilion in 1940 say that "The rotted wood flooring in the basement shall be removed, care being taken not to disturb the remaining brick fragments in the Northwest corner by the chimney" (Koester 1996 III:139). A brick floor would match contemporary floors in the Cook's Room and the rest of the Wing, as well as the ground-floor room in the North Pavilion.

Along the exterior of the east wall of the Pavilion, Grigg found brick steps which predate the construction of the Wing and led from the southeast corner of the Pavilion up to the West Lawn (Figure 16). He identified the bricked-in original window on the east wall of the Pavilion. Grigg excavated outside of the building's southern window to test whether the opening was actually a door when the space functioned as a kitchen and found an "unexplained landing or platform at the base of a bricked-up opening" (Grigg 1941d, 1941e).

[11] Grigg incorrectly identified the brick floor as six feet below current grade (Grigg 1941e) but later amended his previous calculation to four feet (Grigg 1941f) and further refined the depth in his drawings titled "Survey of Exploratory Excavation MONTICELLO South Chamber" (Figure 15) to three feet.

Figure 16: Photograph of Grigg's exploratory excavations in the South Wing (Grigg 1941n). Pictured are the brick steps which led from the door of the South Pavilion to the West Lawn. The brick wall to the right is the east wall of the South Pavilion. View southwest.

Grigg also excavated in the South Wing. He tried to find evidence for cooling pits in the Dairy, which would have allowed milk to cool and cream to rise during the cooling process, but he was unsuccessful (Grigg 1941d, 1941i). Furthermore, Grigg dug in the two adjacent slave rooms but did not find anything noteworthy to record.

Following his work, the Thomas Jefferson Memorial Foundation restored the Pavilion as a Wash House in 1941 and installed a brick floor over a concrete and tile substrate (Lee 1941). In the Wing, the east "servants room" was converted to a men's restroom, and a women's restroom was installed in the west "servants room" (Mesick Cohen Waite 1992:232). In anticipation for the nation's bicentennial and increased visitation to Jefferson's home, the Foundation started

major renovations that were completed in 1967 including replacing the wooden terrace that covered the South Wing, moving the men's restroom into the South Pavilion, expanding the women's restroom and installing a fire hydrant into the dairy, replacing the former men's restroom with an equipment room, and running pipes for an extensive heating system from Building E to the main house through the smokehouse (Mesick Cohen Waite 1992:232, 239).

2016-2017 Excavations

Monticello's Department of Archaeology returned to the South Pavilion and South Wing during the winter of 2016 to document any historical features and collect artifacts prior to the restoration and interpretation of the spaces. Excavations in the Pavilion had several goals. The first was to determine if the stew stoves that Jefferson drew on his plans for the Pavilion were ever installed, and if so, when. A second aim was to collect more information on the brick floor identified by Grigg. A third aim was to locate evidence of interior furnishing and finishes that may have been captured and preserved by the 1808 fill. Excavations in the South Wing rooms aimed to identify features like room partitions, subfloor pits, or artifacts to help us better understand the spaces' uses as a Dairy, Smokehouse, and rooms for enslaved domestic workers.

Field and Laboratory Methods

In October of 2016, archaeologists monitored the removal of toilets, sinks, dry wall, tile flooring, electricity, and the HVAC unit in the Pavilion and Wing by contractors from K&L Construction. Mark Wenger of Mesick, Cohen, Wilson, and Baker Architects recorded the architectural features located on the walls of the Pavilion and Wing (MCWB 2017). His report focuses on the post-1808 appearance of these spaces, so the detailed measurements of above-ground features will not be repeated here.

In all, sixteen five-foot quadrats were placed in the South Pavilion, twenty quadrats in the Dairy and east and west "servants rooms," and one quadrat in the Smokehouse.[12] Because of the location of the excavations near the mansion, Monticello's local grid system was used. Originally established by William Kelso, the grid is rotated 23.8 degrees east of true north to match the orientation of the mansion house and surrounding outbuildings and grounds. Not all quadrats were excavated in plan because the walls of the South Pavilion and South Wing intersected them.

In the Pavilion, quadrat numbers included 2581 through 2595 and 2614. In the South Wing, numbers included 2596 through 2612 and 2646 through 2648 (Figure 17). The Smokehouse quadrat was 2613. Quadrats numbers were assigned in the order in which they were opened. Layers and features received consecutive letter designations. One primary datum station was established inside the Pavilion, while three datum stations were established in the Wing to accommodate lines of sight. Appendix 1 includes a complete list of datums and temporary stations. Quadrat location and elevations were recorded using a total station shot in from these temporary stations. When we encountered line of sight issues, elevations were recorded using a line level. Given the tight timeline of the project, to expedite mapping, many features and sediment boundary locations were recorded with the total station, and locational information was transferred to graph paper or Context Record forms.

[12] In the Pavilion, quadrats were placed in areas that would be directly impacted by construction; in the Wing, quadrats were placed in areas with the most likely chance of finding features dating to Jefferson's ownership of Monticello.

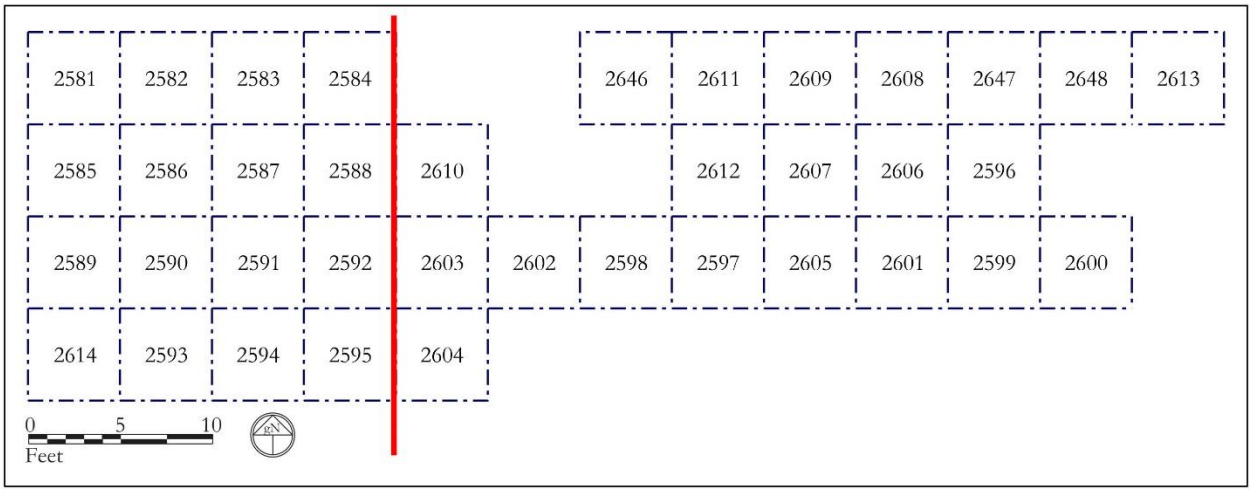


Figure 17: Quadrat map of the South Pavilion and South Wing. Quadrats west of the red line are in the South Pavilion project; quadrats east of the red line are in the South Wing project.

Paperwork accompanying each quadrat included a Context Index, Context Records, Sediment Sample Log when flotation or column samples were taken, a Drawing Log, plan views and wall and feature profiles, a Survey Log when elevations were recorded from local datums, and an Excavation Summary. Drawings of sediment column samples were added to a copy of the profile drawing and accompany the appropriate quadrat paperwork. All drawings were done at a scale of 1-inch equals 1 foot. Digital photographs were taken of most contexts prior to excavations. Additional paperwork for the site includes the site Photo Log, Quadrat Register, and Feature Register.

Excavation took place in the reverse order of deposition, with the most recently deposited stratigraphic unit removed first. All quadrats were excavated stratigraphically by shovel and trowel, and sediment was screened through a ¼" steel mesh. Given the presence of 18th- and 19th-century deposits, some samples were taken for flotation. Several column samples were taken from quadrat side walls and feature profiles to test for the presence and identification of pollen. Artifacts were bagged in the field according to context. Context Records were entered into the

Digital Archaeological Archive of Comparative Slavery (DAACS) database, an online, relational (SQL) database. The DAACS project number for the South Pavilion is 67; the South Wing is 68. Artifacts collected in the field were brought into the Monticello archaeology lab to be cleaned, labeled, and cataloged into DAACS. Artifacts are housed in the archaeology lab at Monticello. Entered data systematically describes both artifacts and the archaeological contexts from which they were excavated. The data are recorded by Departmental staff using a single set of classification and measurement protocols. For more information on specific cataloging protocols, visit www.daacs.org.

Three sediment column samples were taken from the South Pavilion: one from the south profile of quadrat 2588, one from the south profile of 2587, and one from the north profile of Feature 10 in 2582. Several pollen samples were also taken from features or deposits scattered around the area of excavation. Appendix 2 includes the results of the column sample in 2588 and Feature 10.

When the project began in October of 2016, the preliminary exhibit plan was to restore the Pavilion as a Wash House, but we also realized that this was an opportunity to learn more about the original kitchen. Initial excavation aimed to do that. The discovery of the stew stove, dresser, and fireplace was unexpected, and exhibit plans changed to include these features. This required additional excavation to accommodate the interpretation of the kitchen. Excavators worked quickly in order to meet an exhibit opening deadline of June 2018. We also returned to the Pavilion during 2017 to excavate further in the building's southeast corner to accommodate the exhibit's new retaining wall. The back-and-forth nature of excavations and exhibit planning resulted in somewhat confusing paperwork at the time of excavations, in which, for example, contexts which directly correlated with one another in the same quadrat were dug a month apart

from one another and were separated by half of the alphabet. Despite a delay in the completion of some paperwork, stratigraphic relationships and plan views were eventually completed several months after excavations to the best of excavators' abilities.

Select site maps, plan views, and profile drawings for the South Pavilion and South Wing were digitized into Bentley Systems' CAD program MicroStation. Digitized maps were saved in AutoCAD format, and graphics for this report were produced in MicroStation. Maps were generated with a grid based in US Survey Feet. The point data exists within Monticello's local grid system, colloquially known as the "Kelso grid."

To help record architecture, Will Rourk from the University of Virginia's Scholars' Lab scanned the Pavilion twice using the Faro Focus 3D Scanner. In this process, lasers scanned the room and recorded three-dimensional data. Accuracy of each scan was between two and three millimeters. Rourk sent the Department of Archaeology the processed data, which was opened in Faro's SceneLT software and exported and traced into MicroStation. We used the scans to create digital sections of walls and plan views of the original brick floor of the Pavilion using Faro's SceneLT and Bentley's Pointools View software. We combined the sections with our digitized hand drawings to create a comprehensive graphic representation of the excavated area. By using this technology, complex details of the architecture were captured, thereby allowing excavators to focus their limited time on accurately excavating and recording the sediments in the Pavilion.

THE SITE THROUGH TIME

The archaeological record in the South Pavilion and South Wing reflects multiple alterations and improvements that occurred to the spaces. Several 20th-century intrusions disturbed historic deposits in the Pavilion and Wing; intact deposits remained in the Pavilion, but hardly any were left in the Wing. The following section reviews, in order of deposition, the deposits and features archaeologists encountered.

Lithostratigraphic Groups

A major goal of our analysis is to reconstruct the history of the major depositional events responsible for the sediments and stratification that the excavators encountered at the site. A first step in doing this is to group individual contexts into lithostratigraphic groups (stratigraphic groups, or SGs, for short), when there is evidence that the contexts were part of the same depositional or formational event (Stein 1987). We used several criteria to aggregate contexts into SGs. The first is lithological homogeneity, assessed in terms of sediment attributes such as grain size, Munsell values, and the presence, frequency, and size of inclusions, such as brick, charcoal, mortar, and stone. Contexts with similar lithologies that extended continuously across quadrat boundaries were assigned the same SG. We also combined contexts within a quadrat into the same SG if we could not see a distinct stratigraphic contact between them in the quadrat's profile. In other words, we used stratigraphic profiles as a *conservative* check on initial assessments made by excavators as they removed sediments in plan.

Stratigraphic groups correlate with major depositional events that in turn relate to construction, use, and abandonment. SGs were numbered in the order in which they were deposited with lower numbers representing earlier deposits. For instance, in the Pavilion, SG01 is the oldest stratigraphic group representing the earliest construction surface at the site. The

most recent deposit, SG48, represents the debris resulting from demolition of the restrooms in October of 2016. A list of each stratigraphic group and feature and their interpretations are included within each period. SGs in the Pavilion numbered 01 through 48; SGs in the Wing numbered 100 through 110. They were numbered in this way so that the numbers did not repeat if the projects were put into the same Harris Matrix.

Harris Matrix

A Harris Matrix offers a schematic summary of a site's stratigraphy in the form of an acyclic graph in which nodes represent deposits, lines connecting them (technically "edges") represent *non-redundant* stratigraphic relationships, and the vertical position of nodes that are connected to one another represents temporal order. The Harris Matrix is the key to visualizing and understanding the depositional history of the site. To build the site-wide Harris Matrix, we started with the contexts for each quadrat and the stratigraphic relationships among them, as recorded by the excavators. Building a Harris Matrix for each quadrat is an iterative process, as inconsistencies are exposed and then resolved using context records, profile drawings, and photographs. Once a matrix is built for a quadrat, relationships among contexts in different quadrats are established. Where warranted, contexts were assigned to stratigraphic groups. We left contexts that represented deposits that could not be identified in more than one quadrat unassigned to an SG. Stratigraphic groups are identified by their numeric designations (e.g., SG01) followed by interpretations (e.g., mortar surface).

We then used the site's Harris Matrix to construct a relative stratigraphy of chronology of the site. We assigned sets of nodes in the matrix diagram to one of several temporally successive stratigraphic periods when they were linked directly to one another and where the spatial or

architectural relationships amount the deposits represented by the nodes attested to their contemporaneity. We then portrayed the phase assignments on the Harris Matrix. The phased Harris Matrix offers a complete stratigraphic chronology for the site.

The results are shown in Figure 18 and Figure 19. The nodes represent both unassigned contexts and stratigraphic groups while fill colors represent major stratigraphic periods into which they were grouped. Grey boxes represent contexts and SGs that could not be assigned to a stratigraphic period. Several contexts from the South Wing are not represented on the Harris Matrix because they lack stratigraphic relationships. For instance, in quadrat 2647, Context A was the only excavated deposit in that quadrat.

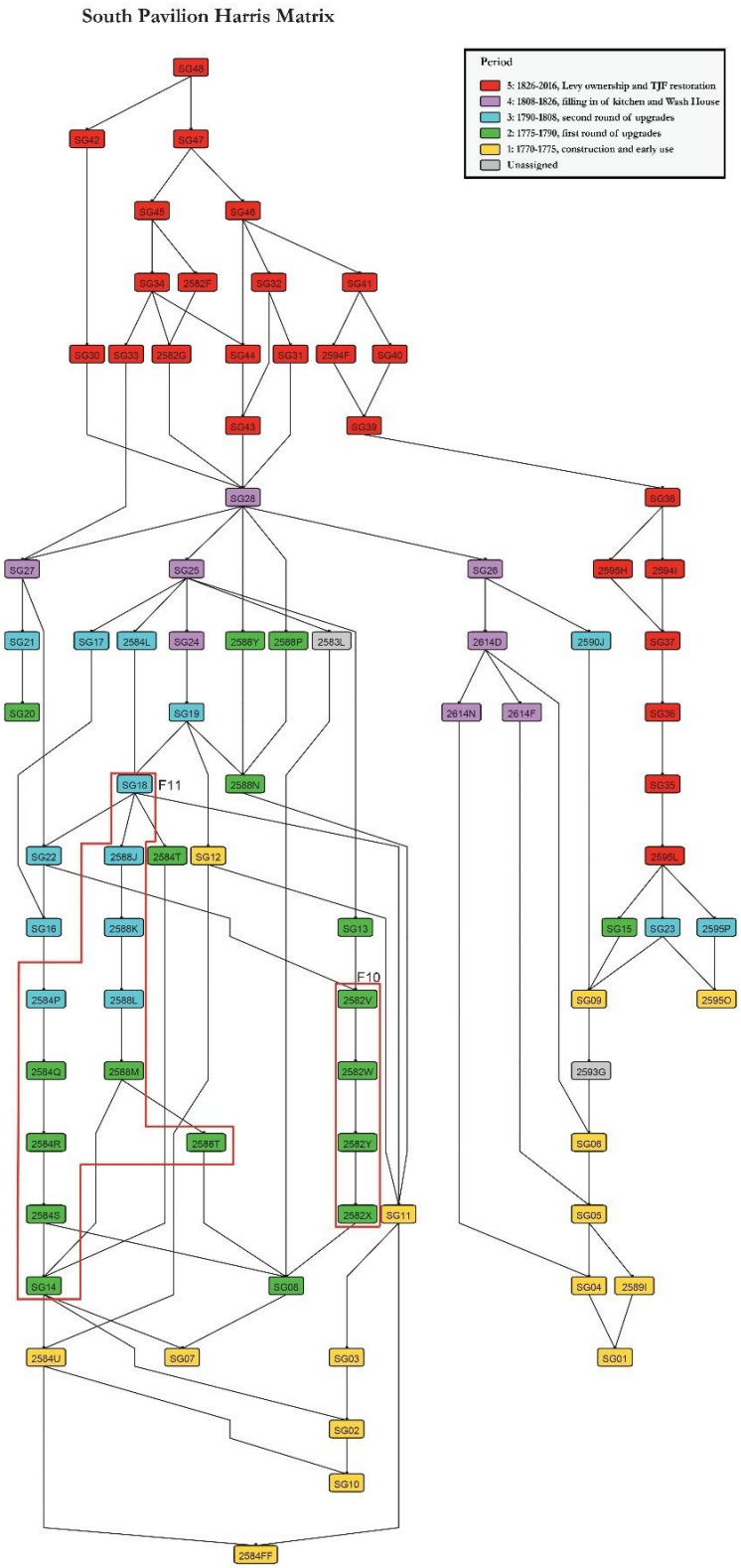


Figure 18: Harris Matrix for the South Pavilion. One SG (SG29) is not represented on the Harris Matrix because it lacks stratigraphic relationships. The nodes are color coded by stratigraphic period.

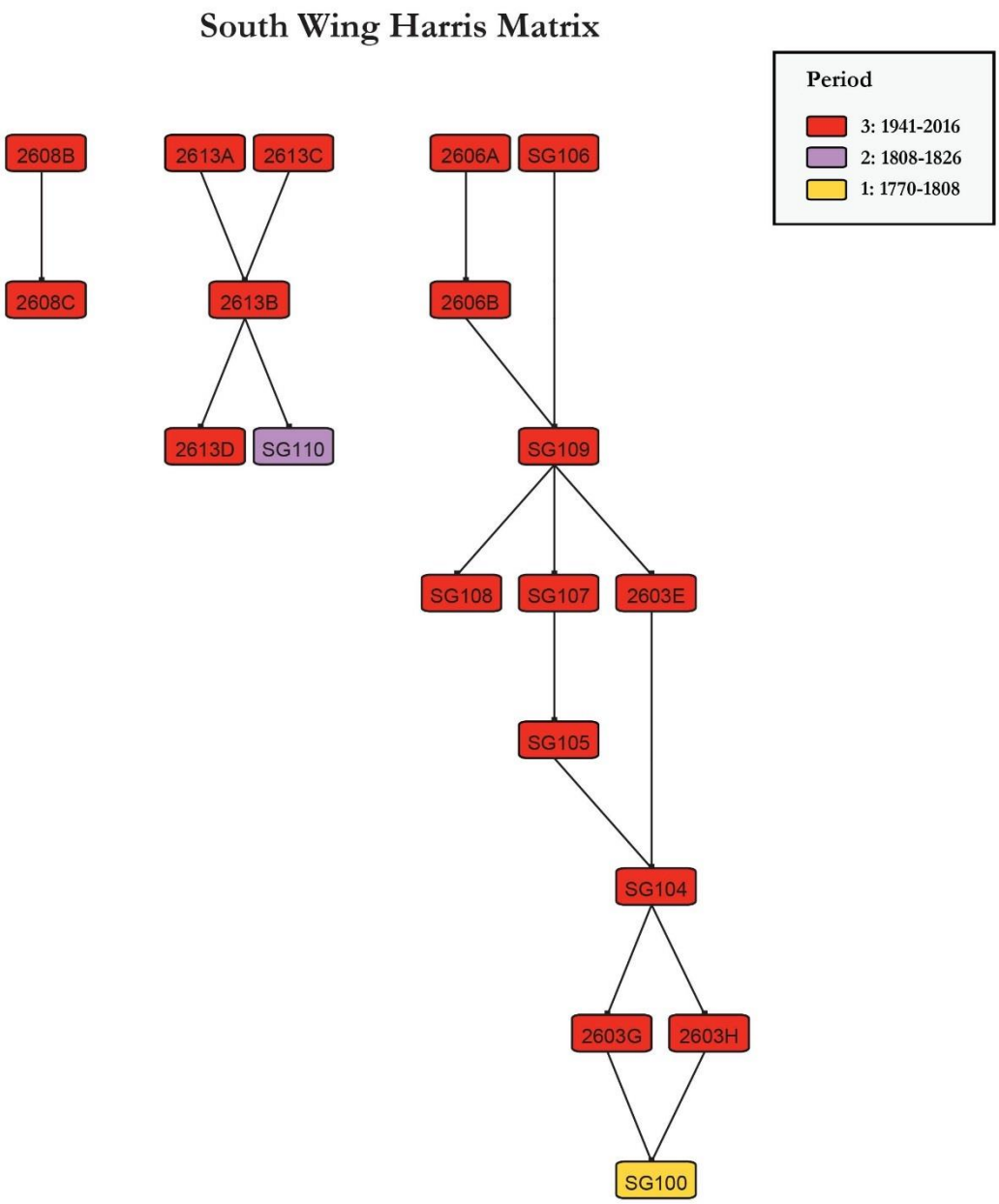


Figure 19: Harris Matrix for the South Wing. Three SGs and one Context are not represented on the Harris Matrix because they lack stratigraphic relationships. They include SGs 101, 102, and 103, and Context 2600B.

South Pavilion

The Department of Archaeology excavated in the South Pavilion from October 2016 to March 2017 and briefly returned in November 2017. Excavation focused on three areas. The first was a trench following the north wall of the Pavilion to search for evidence of a stew stove as shown on N59 (Jefferson c.1769) and to allow space for utilities. We also explored the southwest corner of the building to look for evidence of stairs as seen on N59. Finally, once we discovered the stew stove and a decision was made to make it the focus of an exhibit, we excavated a trench along the south wall in the southeast corner to accommodate structural features for the exhibit's retaining wall. These areas will be referred to in the text as the north trench, the southwest, and the southeast trench. Figure 20 is a plan drawing of the South Pavilion excavations that includes all the historic features found in the South Pavilion from Periods 1 to 4 that will be referenced throughout the text. Figure 21 indicates the location of wall and feature profiles.

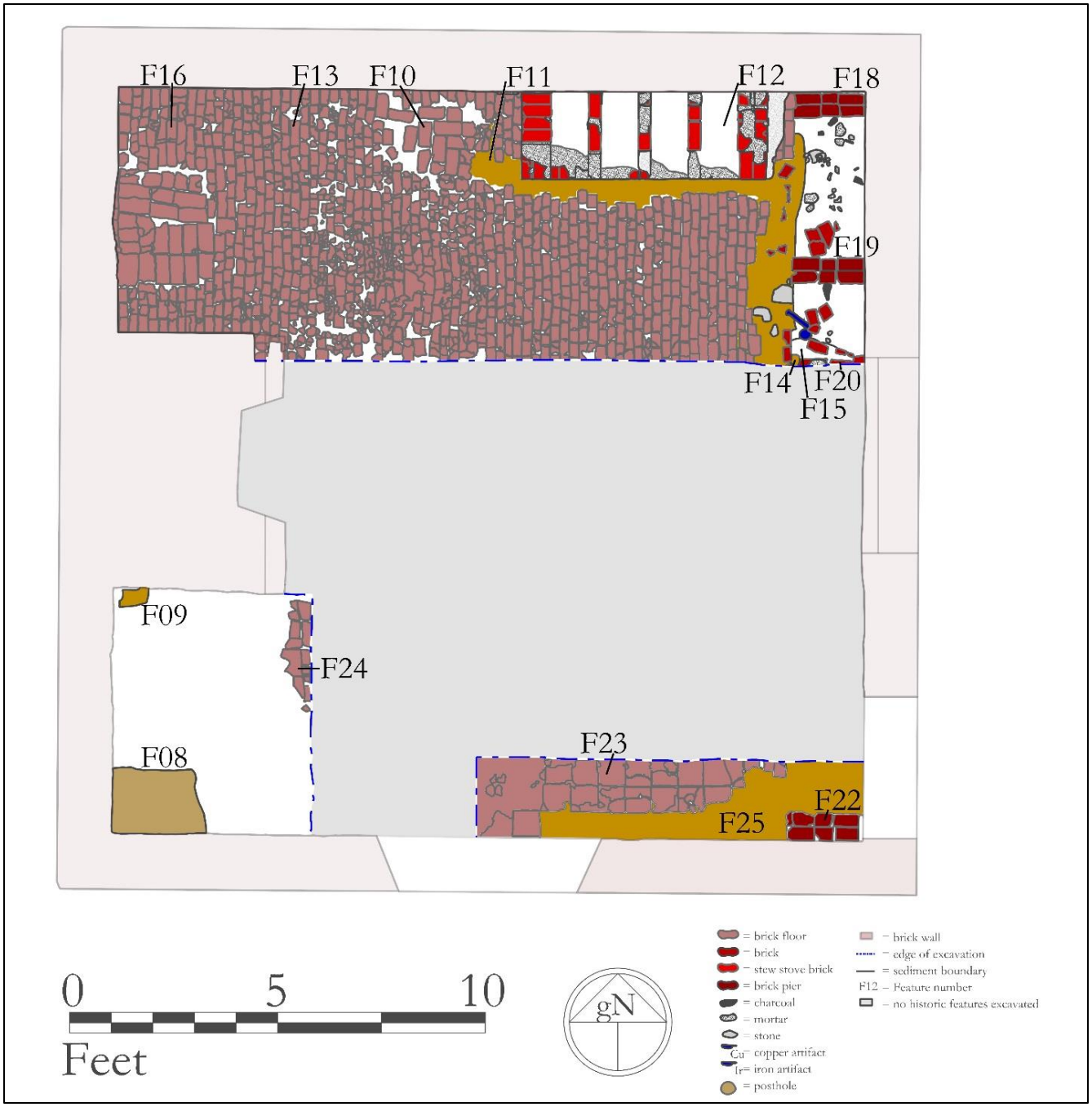


Figure 20: Historic features in the South Pavilion

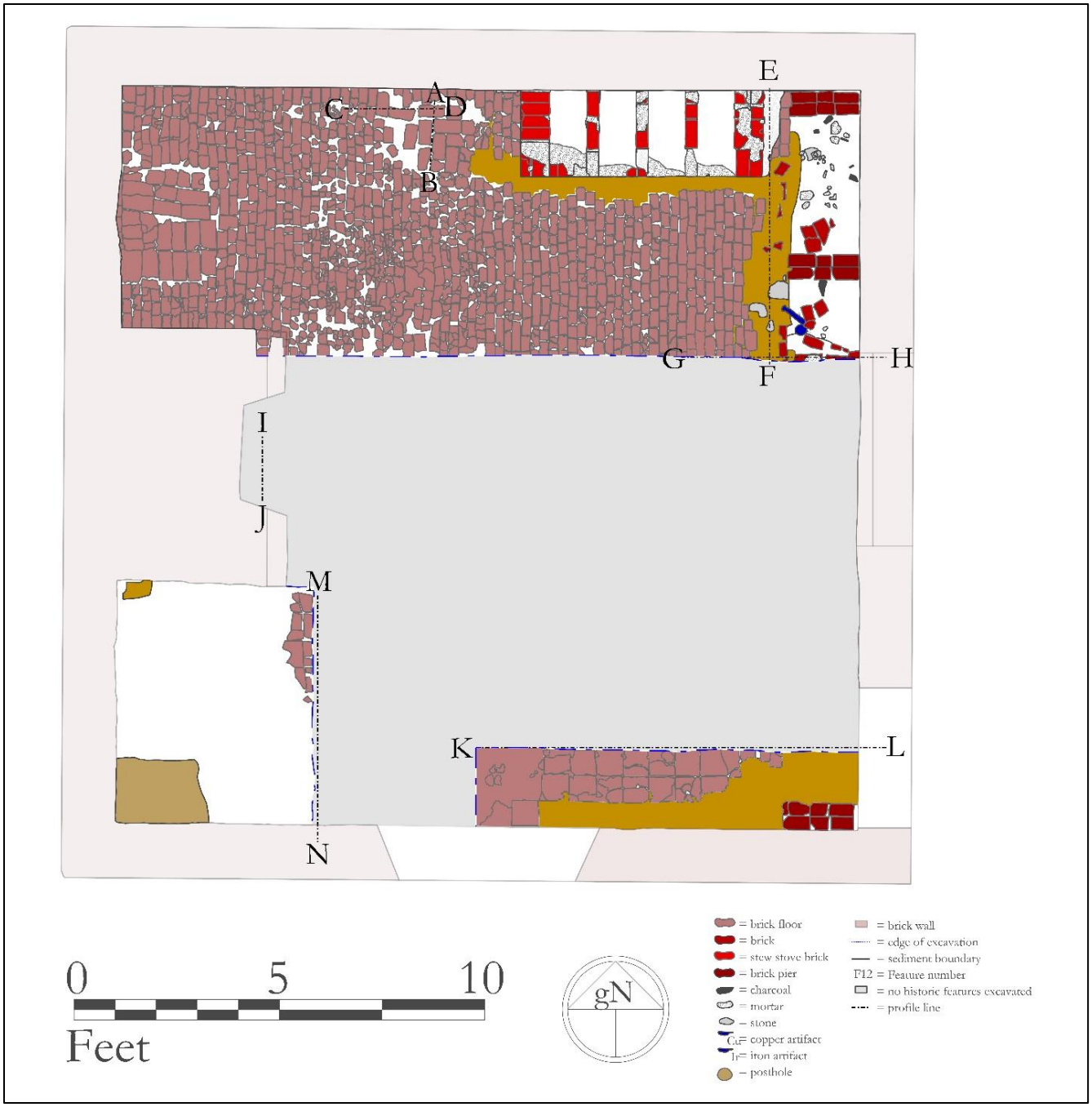


Figure 21: Quadrat wall and feature profile locations indicated by letters. These profile locations are referenced in individual drawings.

Period 1 (1770-c.1775)

A careful reading of the architectural details in the kitchen provides a sequence of modifications which we assigned stratigraphic periods that can in turn be correlated with

documented events. Features related to the earliest version of the kitchen include a fireplace in the northwest corner, a floor consisting of brick pavers, evidence for an earlier stew stove along the north wall, stairs or a ladder in the southwest corner, a bake oven along the west wall, and a dresser along the east wall (Figure 22, Figure 23). Table 2 lists the stratigraphic groups and features included in Period 1.

Figure 22: Period 1 South Pavilion digital rendering (RenderSphere 2017a). View northwest.

Figure 23: Period 1 South Pavilion interior digital rendering (RenderSphere 2017b). View northwest.

The first construction event to take place in the area was the cut into the side of the mountain for the building itself. Following mechanical excavation down to the base of the foundation on the north exterior wall of the Pavilion as part of the 2017 West Lawn Drainage Project, archaeologists saw a small sliver of this builder's trench in the northwest and northeast exterior corners of the building. Masons laid up the brick walls, nearly flush with the cut into B- and C-horizons. A similar building technique was seen during the archaeological excavations at the Joiner's Shop, which was built around the same time.

During the construction of the north wall, masons installed two iron gudgeons. These gudgeons were the anchors for an iron crane from which pots were suspended over the fire for meals made by enslaved cooks, including Ursula Granger (Stanton 2012:118, 305n7).[13] Archaeologists first observed the gudgeons on the interior and later at the base of mechanical excavations on the exterior as part of the West Lawn Drainage Project (Figure 24, Figure 25). The top gudgeon, located 3.75' above the interior floor, was broken, but the lower gudgeon, located 0.9' above the floor, was complete.[14] The gudgeons were located inside of the original fireplace (Figure 26).

[13] Purchased in 1773, Jefferson considered Ursula "a favorite house woman;" she likely worked in this space (Stanton 2012:305n7). In addition to working as a cook, she served as a wet nurse for Martha Jefferson, house maid, laundress, and dairymaid (Stanton 2012:118). Jefferson highly valued her skills, as he provisioned Ursula and her husband George larger food and clothing allotments than their peers (Stanton 2012:123).

[14] The top gudgeon may have been broken during the bathroom installation in 1968, as photographs from 1941 show both gudgeons are complete.

Figure 24: Exterior view of the South Pavilion. Yellow arrows point to the location of the gudgeons found in the West Lawn Drainage project. View south.

Figure 25: Gudgeons discovered on the exterior of the Pavilion during the West Lawn Drainage Project. View south. These gudgeons were built into the north wall of the Pavilion during the building's original construction.

In addition to the gudgeons, architectural remains offered insights into the arrangement of the early kitchen. Horizontal indentations or racking in the brickwork along the north wall, indicate where the breast of the fireplace was bonded into the wall (Figure 26, Figure 27).

Angled brick shows where the arch of the fireplace rested against the north wall. Bricks in the Pavilion's west wall, at the back of the original fireplace, were eroded by heat spalling a cavity and covered with ash and charcoal. Above the cavity, a smoke channel was visible in the west wall, as were two flues and the throat of the fireplace.

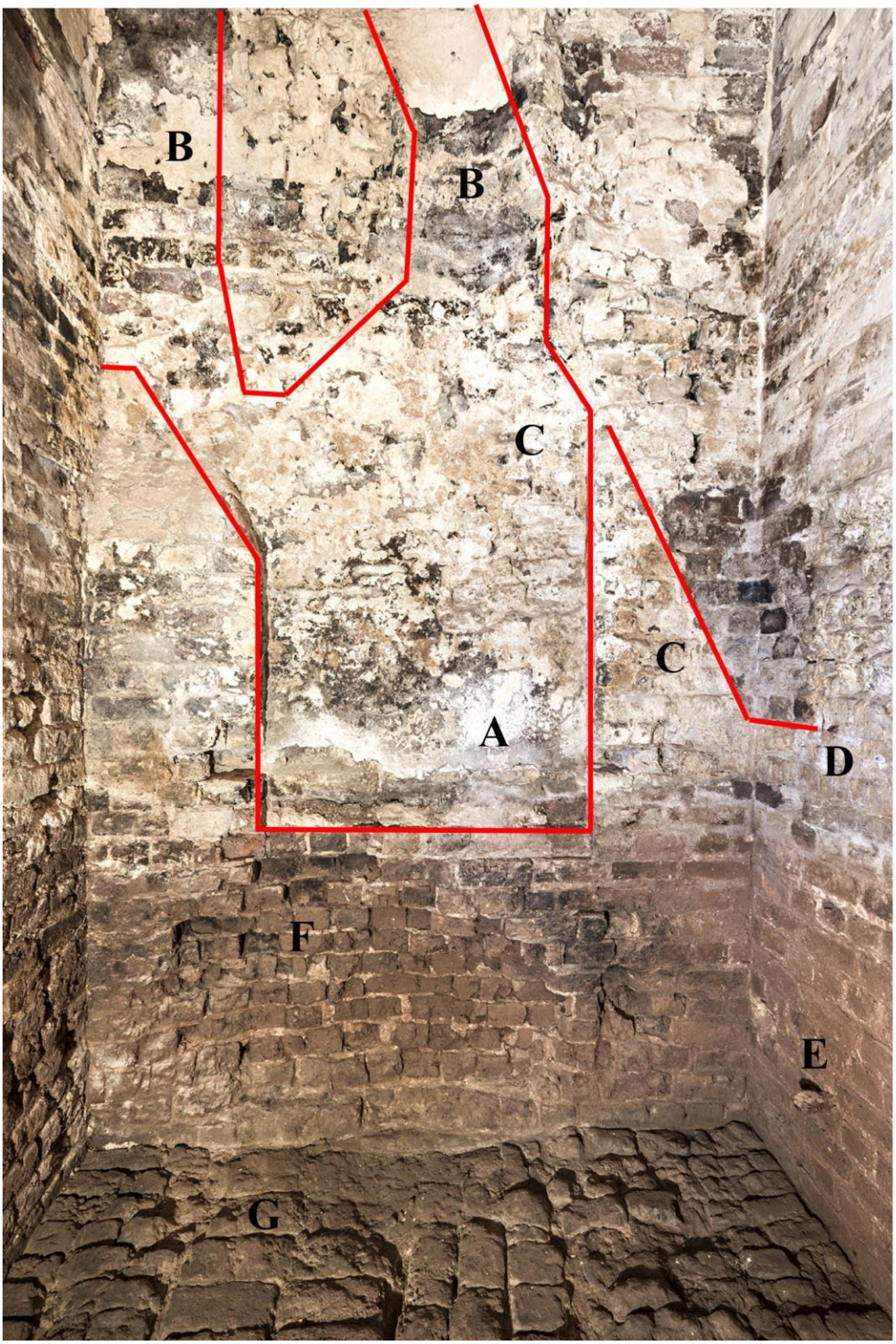


Figure 26: Annotated photo of chimney evidence, west wall (MCWB 2017:30). A is the smoke channel, B notes the flues, C is the throat. On the north wall, D is the spring of the arch, E is the gudgeon, F is the back of the fireplace, and G is the hearth. View west.

Figure 27: Annotated photo of chimney evidence, north wall. A is racking, B is the spring of the arch, and C is the complete gudgeon. View northwest.

Archaeologists excavated sediment from three rectangular, horizontal shafts that the masons had built into the north wall during its construction (Figure 28, Figure 29). These holes were angled from southwest to northeast in plan, on a diagonal with the orientation of the wall, and were spaced about four feet from one another. They were located along the same brick course and emerged on the outside wall below the levels of both the current and Jefferson-era ground surfaces. They originally opened into a linear ditch that ran along the north wall and corresponds to what appears to be a moat or drainage ditch planned and drawn by Jefferson (Figure 30; see Figure 6 and Figure 7). We identified and excavated these holes occurred during the West Lawn Drainage Project (Features 40, 41, and 42) when we excavated the fill in the moat.

The holes are a puzzle. We have never seen anything like them, nor have the architectural historians we have consulted (e.g., Willie Graham, Ed Chappell, Carl Lounsbury). Our current hypothesis is that they were built into the wall as air vents, designed by Jefferson to function alongside the open moat. But why would additional ventilation be required along the north wall? A possible answer is the vents were intended to mitigate the fumes from the stew stove that Jefferson envisaged installing below them. However, the moat was filled in with B-horizon sourced sediment almost immediately after it was constructed. A hard rain would have filled it with water and turned the three vents into spigots spewing water into the kitchen. This consequence, presumably unanticipated by the designer, explains why the moat was immediately filled. By the time the first stew stove was built, the moat had been filled, blocking the vents.

Figure 28: Three holes located along the north wall are circled. These may have been ventilation holes for an early, unrealized set of stew stoves. View north.

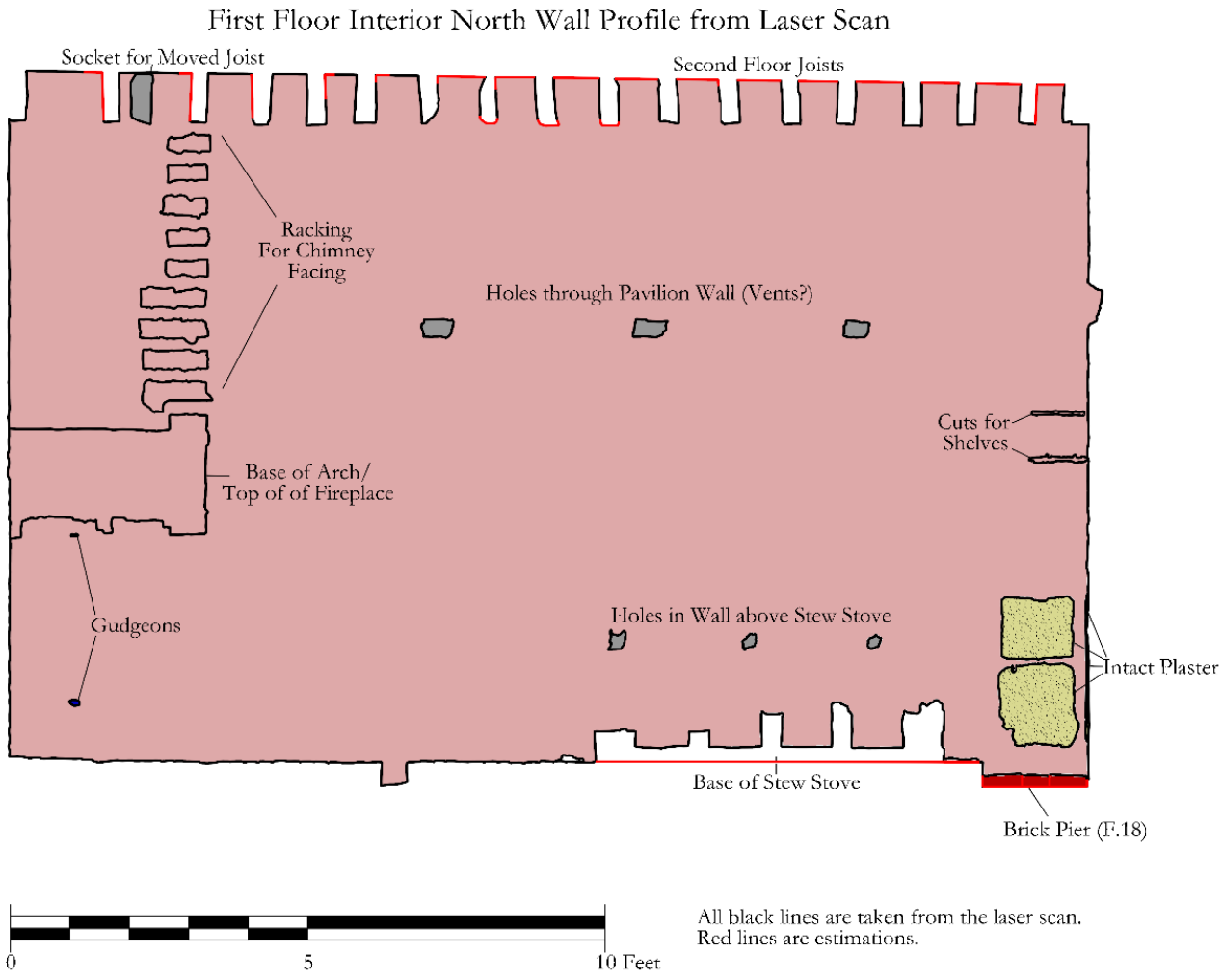


Figure 29: Scale drawing of north wall of Pavilion. The racking, gudgeons, and holes through the Pavilion wall all date to Period 1. The rest of the features will be addressed in later sections.

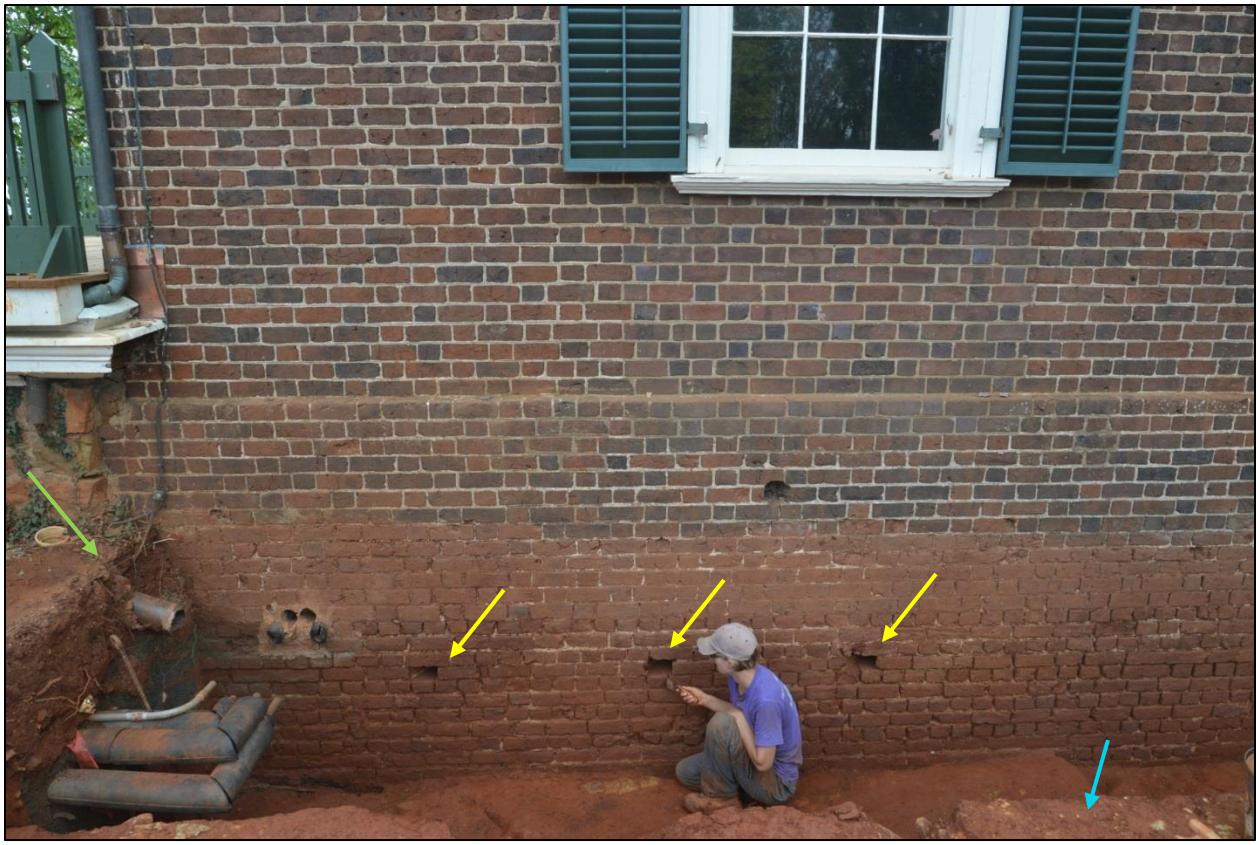


Figure 30: Exterior view of the South Pavilion. Three holes open to the moat and are marked by the yellow arrows. View south. Edge of the moat is indicated by the blue arrow. Ground surface noted on the left by the green arrow.

Back inside of the Pavilion, during construction of the walls, masons dropped bits of mortar in both the southwest and northeast corner of the building (SGs 01, 03). In the northeast corner, a thin deposit of sediment accumulated on top of decomposing bedrock (SG02). To help in construction of the wall, masons put at least one scaffolding post (F09) in the southwest corner.

Since the Pavilion was built into decomposing bedrock, the floor of the cut for the cellar was uneven. Workers attempted to level the surface by laying down deposits of fill. In the southwest corner, a thin layer of leveling fill averaging .05 feet in depth and consisting of a mottled reddish brown silty clay (SG04) raised the surface height, as perhaps the original

excavators dug too deeply in that area. Archaeologists found multiple small, reddish brown silty clay pockets (SG05) intruding that fill; these irregularly shaped, shallow intrusions may have been the result of a construction-related activity. A layer of sandy clay (SG06) was also placed in the southwest, and a dense red clay (SG07) was placed in the northern part of the site to create a level surface for the brick floor.

The original kitchen floor was made of square brick pavers. However, the pavers survived only in the southern quadrats (SG09 in F23, 24) near the door in the south wall. These brick pavers on average measured 0.63 feet square. Most pavers were blackened from overfiring. The pavers immediately in front of the original door along the south wall were crumbled and deteriorated badly from repeated foot traffic. The square pavers stopped two feet from the Pavilion's east wall and about 0.6 feet from the southern wall. They did not extend to the southwest corner of the building. There the brick pavers had been cut into and removed (Figure 31). The removal of the pavers seems to be evidence for a major renovation to the corner stair, but why the construction of a new stair would require floor removal is unclear. A possible clue is the fact that the eastern boundary of the zone from which the pavers were removed swings further east, apparently to encompass the place where a vertical post once stood (Figure 20, Figure 32). We guess that the vertical post may have been a framing element for a stair. The unpaved zone extended about four feet east from the west wall. No part of the brick floor was removed during excavations, but we know that the pavers were only one course deep because of the east profile of 2590 and 2593, where we could see the remaining bricks in cross-section (Figure 33, Table 1).

Figure 31: 2614M, 2589H, 2590I, and 2593J closed. View north. Note the remaining brick pavers along the east profile. These square pavers had been chopped into. Their trajectory seems swerve from northwest to southeast to avoid an extant staircase.

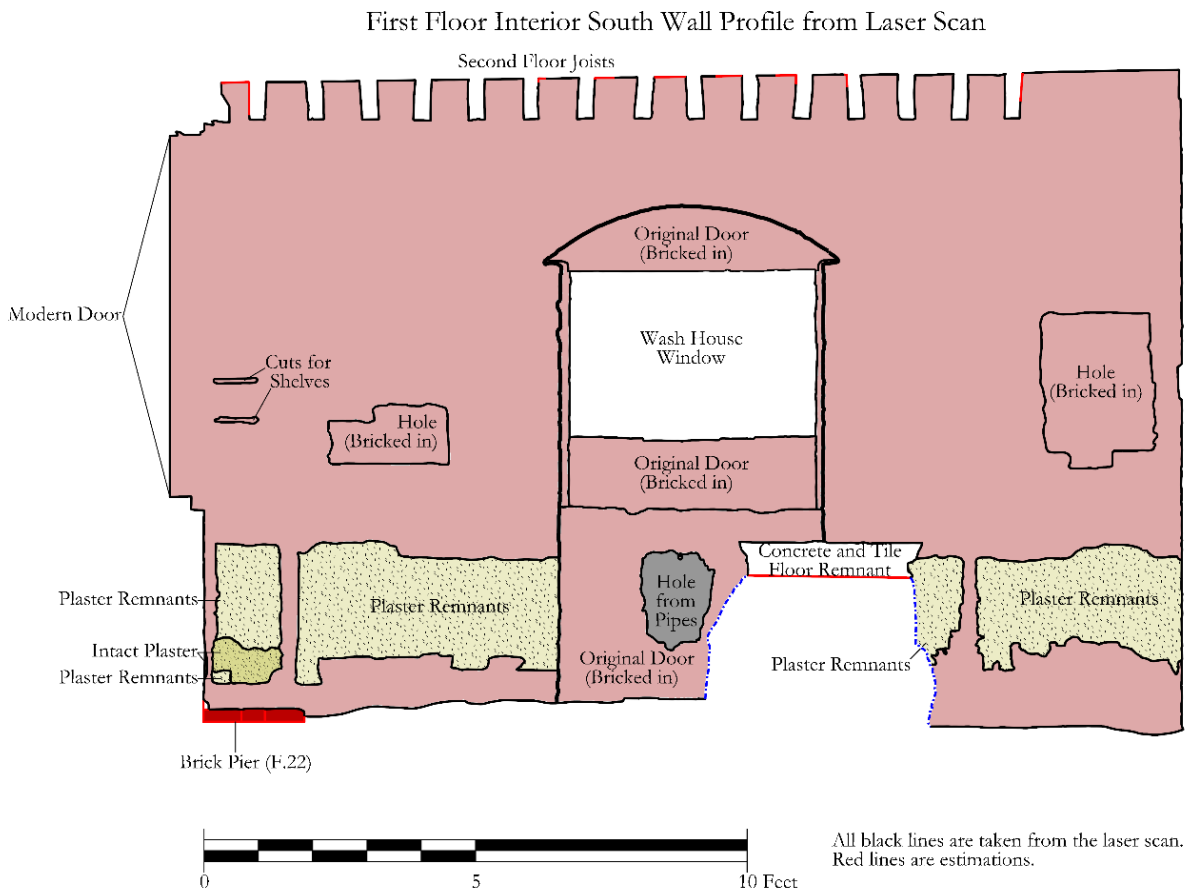


Figure 32: Scale drawing of south wall of Pavilion.

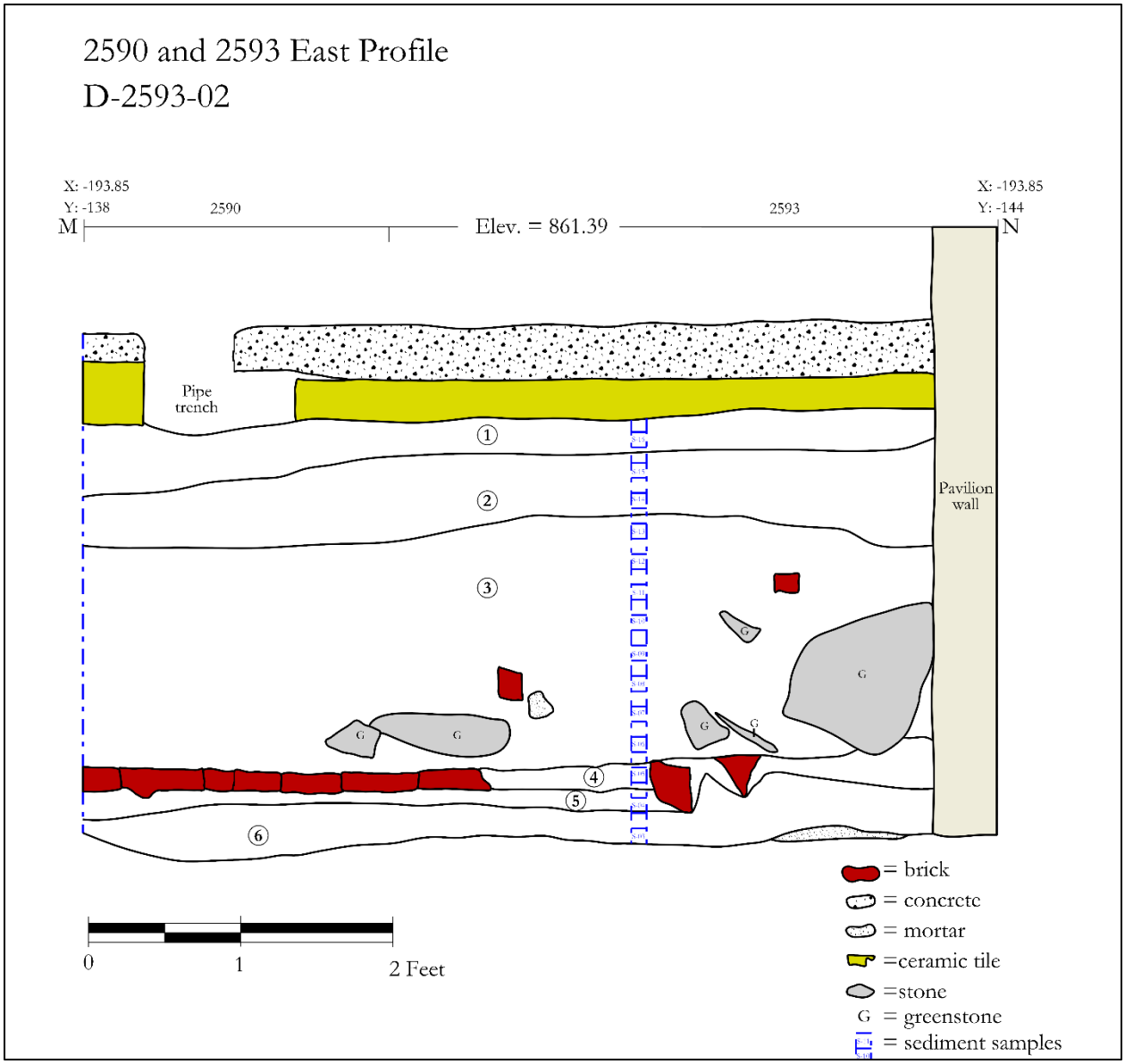


Figure 33: D-2593-02 East profile. Note the brick pavers and their depth on the left side.

Table 1: Contexts, sediment descriptions, SGs, and interpretations for Figure 33.

Number	Context(s)	Munsell	SG	Interpretation
1	2590C, D 2593C, D	Reddish Brown [2.5YR 4/4] Silty Clay Loam, 20% Red [2.5YR 4/8] Silty Clay, 3% Greenstone (2-64mm), 5% Mortar (2-64mm), 1% Charcoal (2-64mm).	48 (2590C, 2593C); 42 (2590D, 2593D)	48: Post-1960's surface cleanup/demolition debris 42: Grigg's backfill in front of the central

				fireplace
2	2590D, 2593E	Dark Reddish Brown [5YR 3/4] Silty Clay Loam, 5% Red [2.5YR 4/6] Silty Clay, 2% Charcoal (1-64mm), 5% Greenstone (2-64mm), 1% Mortar (1-4mm).	42 (2590D); 28 (2593E)	42: Grigg's backfill in front of the central fireplace 28: Final massive fill event
3	2590E 2593E	Reddish Brown [5YR 4/4] Silty Loam, 10% Red [2.5YR 4/8] Silty Clay, 20% Greenstone (>2mm), 2% Brick (64-256mm), 2% Mortar (2-64mm).	28	c. 1809 massive fill event
4	2590G, J 2593F	Dark Reddish Brown [2.5YR 3/4] Silty Clay, 50% Brick (2-256mm).	26 (2590G, 2593F); none for 2590J	26: Brick rubble 2590J: De-facto kitchen refuse
5	2590H 2593H	Dark Reddish Brown [5YR 3/4] Sandy Clay, 1% Charcoal (1-2mm).	06	Sandy clay substrate for brick floor
6	2590I, K 2593J, K	Red [2.5YR 4/8] Clay, 15% Greenstone (2-64mm).	04 (2590I, 2593J); 01 (2590K, 2593K)	04: Leveling fill for brick floor 01: Mortar spatter from construction of Pavilion wall

The square brick pavers were not found in the northern trench. Instead, archaeologists found bricks set on their sides. This raises the question of whether tiles originally extended to north wall, crossing the entire floor. We think it did. The hypothesis that the original floor was composed entirely of square tile bricks is supported by several lines of evidence. First, two brick tiles appear in the floor of MRS-3, a structure along Mulberry Row just west of Building E whose construction dates to the 1770s. Two brick tiles were observed in the stairs running up to the West Lawn outside of the Pavilion. These steps were constructed as soon as the kitchen became functional and the mansion was inhabited. The steps were the route along which enslaved domestics carried meals to the dining room. This implies that square brick pavers were

being used on the Mountaintop in the 1770s and there were surplus tiles after floor construction in the kitchen was complete.

If this is correct, then the brick-on-end floor that we found along the north wall represents a repair. It makes sense that the northern portion of the floor would have required replacement before the southern half. Both the fireplace and the stew stove would have guaranteed the north was the most heavily trafficked portion of the kitchen.

The brick-on-end floor stopped two feet from the east wall, along the entire length of its exposure in the north trench. In this gap rested three sets of six bricks oriented east-west (F18; SG10 in F19; and F22). We suspect each set served as a pier which supported the legs of a dresser, but not all three sets are contemporary. Two sets of brick supports were present in the northern trench, and one set was found in the southeast corner. Each set was comprised of two rows of three bricks laying east-west on axis with the room. Each row consisted of two complete bricks on either end with a smaller brick fragment fit between the larger bricks. These piers provide support for the legs of a dresser, which ran the entire length of the eastern wall.

Under the dresser shelf, excavations identified thin layers of fill. In the northern trench, a gritty brown silty loam (SG11 and 2584U) and a mottled and mortar rich deposit (SG12) covered the exposed bedrock under the dresser. Above the dresser, slats for shelving were cut into the brickwork along the north and south walls (Figure 29, Figure 32). It is not clear which period the slats were installed, but it very well could have been during Period 1.

The final feature in this first Period is the brick arch between the cheek walls that supported the upstairs fireplace. The 2016 excavations did not reopen Grigg's test pit in front of the fireplace. However, Grigg's 1941 photograph and notes recorded this arch (Figure 14, Figure 34). He noted that there was no flue above the arch. This is a critical piece of evidence. It implies

that the arch carried the weight of the architecture above it. Our hypothesis is that the arch supported a bake oven. Bake ovens were universal in the kitchens of elite Virginians in the 18th century. Mason Hugh Chisholm's 1808 installation of the Wash House fireplace would have destroyed most of the oven, and anything that remained would be encased behind the 1809 material. Physical investigation of this hypothesis was not possible given the temporal constraints of the project.

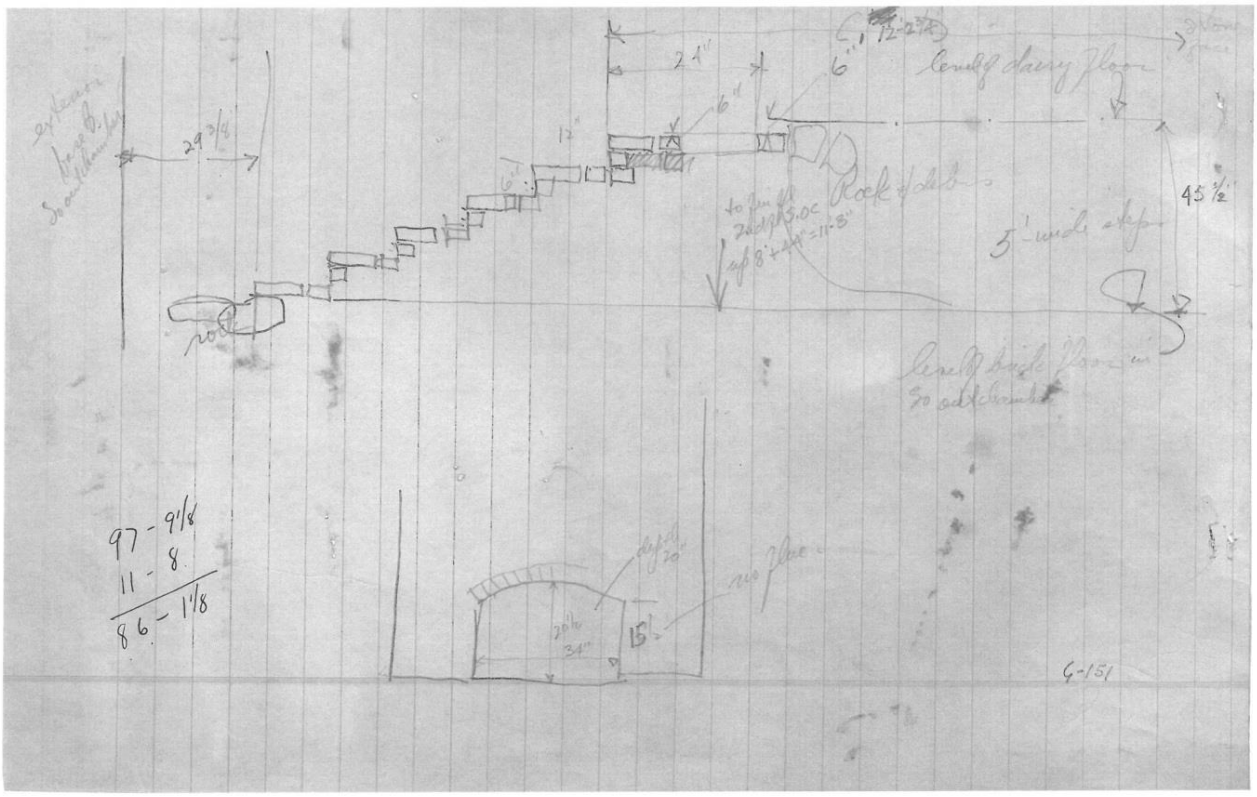


Figure 34: Sketches and notes from Milton Grigg (Grigg 1941b)

Excavations also sought to determine whether an interior set of stairs was in the southwest corner of the building as Jefferson drew them on N59. Grigg noted during restoration of the Pavilion that "marks" from the stairs were found (Koester 1996 I:285-290; Kimball 1941b,

1941c; Grigg 1941g). We found no archaeological evidence for a ladder or an interior flight of stairs, save for the lack of brick flooring tile in the southwest corner.[15] In other examples of kitchens from the period, at least two successive stairs were common. Steep, ladder-like stairs were often replaced by a gentler run, which could only be achieved with a winder stair[16] to fit into the same space.

Access from the second floor to the kitchen was possible via a set of brick stairs that ran from the West Lawn down the east side of the Pavilion. Discovered below grade by Milton Grigg in the early 1940s, the steps went at least to the southeast corner of the Pavilion (Figure 14). The 2016 excavations relocated a portion of the stairs on the exterior of the eastern wall; however, excavations did not extend further south under the existing brick pathway, so we could not confirm Grigg's observations about the southern edge of the stairs.

After the Jeffersons moved from the South Pavilion to Monticello I around 1775, the basement of the Pavilion functioned as the kitchen for another thirty years until it moved into the newly constructed Wing. Enslaved cooks continued to transport food from the kitchen to the dining room in the main house via these stairs. This feature will be described in detail in the South Wing section of this report.

[15] While these changes might not leave much in the archaeological record, the ceiling joists and moving and reinstalling a header often record this change (Dennis Pogue, pers. comm. via email, 13 March 2018).
[16] A winder stair makes a quarter turn around a central post, or newel, in one corner of a room and was often enclosed with partition framing. Near the lower end of the flight, treads were wedge shaped, with their narrow edges terminating at the newel post (Lounsbury 1994:346).

Table 2: Stratigraphic groups and features from Period 1

Feature number	Stratigraphic Group (SG)	Context	Description	Interpretation	Dimensions (feet)	Depth (feet)
--	SG01	2589J, 2590K, 2593K, 2614O	Mortar spatter on bedrock in southwest corner of Pavilion	Mortar spatter from construction of Pavilion wall	--	--
--	SG02	2584Z, 2588S	Reddish brown sediment above bedrock in northeast corner of Pavilion	Work surface during construction of Pavilion walls	--	--
--	SG03	2584Y, 2588R	Mortar spatter on bedrock in northeast corner of Pavilion	Mortar spatter from construction of Pavilion wall	--	--
--	SG04	2589H, 2590I, 2593J, 2614M	Dense mottled reddish brown silty clay in southwest corner of Pavilion	Leveling fill for brick floor	--	--
--	SG05	2589G, 2593I, 2614G, 2614H, 2614I, 2614J, 2614K, 2614L	Small reddish brown silty clay intrusions	Unidentified construction related intrusions	--	--
--	SG06	2589F, 2590H, 2593H, 2614E	Dark reddish brown sandy clay in southwest corner of Pavilion	Sandy clay substrate for brick floor	--	--
--	SG07	2582Z, 2584BB, 2584CC, 2588V	Dense red clay in northeast corner of Pavilion	Leveling fill for brick floor	--	--
F23	SG09	2594N, 2595N	Flat dry laid 8”x8” tile bricks	Tile floor	6.8 x 1.9	*Not excavated*
F24	SG09	2590L, 2593L	Flat dry laid of 8”x8” tile bricks	Tile floor	2.8 x 0.8	*Not excavated*
F19	SG10	2584GG, 2588Z	Six bricks laid flat directly on bedrock and arranged in two rows oriented east/west. Located in northeast corner of Pavilion. Both bricks in the center of each row have been chopped.	Brick pier for Period 1 dresser leg	1.8 x 0.6	*Not excavated*
--	SG11	2584W, 2584X, 2588Q	Gritty brown silty loam under dresser in northeast corner of Pavilion	Fill to level floor under dresser	--	--

--	SG12	2584O, 2584V	Mottled and mortar rich deposit	Fill to level floor under dresser	--	--
F09	--	2589I	Semi-circular, loose reddish brown silty clay intrusion	Possible scaffolding post for wall construction	0.7 x 0.4	0.22
F18	--	2584FF	Six bricks laid flat, arranged in two rows of three bricks each oriented east/west. Located in northeast corner of Pavilion and adjacent to brick floor to the west. Both bricks in the center of each row have been chopped	Brick pier for Period I dresser leg	1.8 x 0.6	*Not excavated*
F22	--	2595O	Six bricks laid flat, arranged in two rows of three bricks each oriented east/west. Located in southeast corner of Pavilion. Both bricks in the center of each row have been chopped.	Southern most brick pier for Period 1 dresser leg	1.8 x 0.7	*Not excavated*

Period 2 (c.1775-1790)

Period 2 modifications of the kitchen included the replacement of a corner ladder with a winder stair; installation of a first stew stove; excavation of a shallow ditch to allow drainage along the north, east, and south walls; and the replacement of the original brick paver floor in the north by bricks laid on end. Table 5 lists stratigraphic groups and features from Period 2.

In the northern excavation trench, replacement bricks were set on edge and aligned north to south (SG08). The bricks covered the entirety of the area exposed by the northern trench, including inside the fireplace in the northwest corner (SG20). They stopped two feet from the east wall. The condition of the bricks across the floor varied with the most deteriorated in front of the original fireplace, an active area constantly exposed to high heat and foot traffic. About

twenty bricks inside the firebox were even later replacements: they laid flat rather than on end and were in better shape than adjacent bricks.

A shallow ditch intruded the brick-on-end floor. The ditch ran east-west parallel to the north wall and then turned 90 degrees just before the dresser and ran to the south (F11). Archaeologists also located the ditch in quadrat 2595 (SG15 in F25), where it made a gentle turn west, ran along the south wall, and ended approximately one foot west of the eastern jamb for the door on the south wall. We completely excavated the ditch in the northern trench (quadrats 2584 and 2588) but left it for future research in the southern block (quadrats 2594 and 2595). The following description of the trench is based on the excavations from 2584 and 2588. After the trench was dug in the northeast corner of the room, a thin layer of sediment interpreted as wash accumulated (SG14) and was sealed by a lump of clay (2584T), probably deposited after cutting through the clay substrate to dig the trench (F11).

This ditch may have functioned to redirect groundwater leaking into the room along the northern wall. It channeled water along the east wall and underneath the dresser, avoiding the west wall with the fireplace, bread oven, and stairs. The ditch would have drained out the doorway in the southern wall. During our excavation, we witnessed regular groundwater infiltration along the northern wall after each heavy rain, resulting in puddles at the bottom of our excavations. Water infiltration and regular flooding would have been significant problems in Jefferson's day, too.

Several deposits that filled an unidentified pit (F10) located less than a foot south of the north wall may also date to this time period. Archaeologists identified this feature due to the irregular, herringbone brick pattern, which sealed it and did not match the pattern of the bricks on end surrounding it. A small clay deposit (SG13) also sealed the feature and may have been a

patch for missing brick. Archaeologists bisected the feature and only removed the western half due to time constraints. Figure 35 and Figure 36 show the eastern and northern profiles (also see Table 3 and Table 4). The pit had an irregular base and bottomed out on bedrock. We hypothesize that the pit connected to the linear ditch (F11), suggesting the pit was a sump to help mitigate flooding. Alternatively, the pit may be the result of builders removing a large piece of bedrock during construction of the Pavilion, and the resulting fill may have settled unevenly, which meant the hole needed more fill. We considered the hypothesis that the pit could have been a subfloor pit or the base of a set kettle, but with an irregular bottom and without any evidence for a fire, these options seem unlikely.

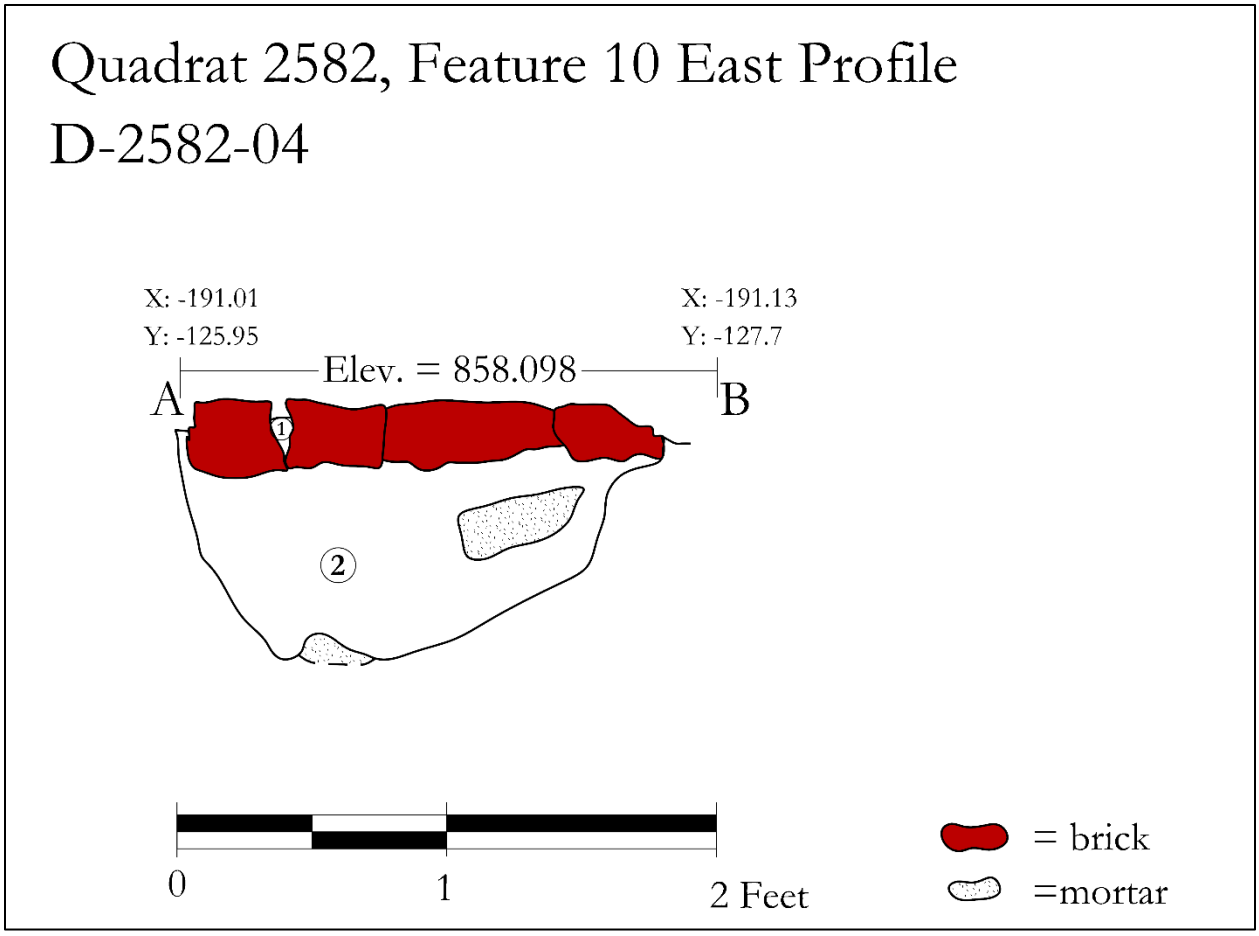


Figure 35: D-2582-04, Feature 10 east profile

Table 3: Contexts, sediment descriptions, SGs, and interpretations for Figure 35

Number	Context(s)	Munsell	SG	Interpretation
1	2582V	Dark Reddish Brown [5YR 3/4] Silty Clay with 2% Brick (1-4mm).	--	Feature 10, Bricks laid flat over fill in unid. pit
2	2582W, Y	Reddish Brown [2.5YR 4/4] Silty Clay, 20% Yellowish Red [5YR 4/6] Silty Clay, 10% Mortar (1-256mm), and 10% Brick (1-64mm).	--	Feature 10, Fill in unid. pit

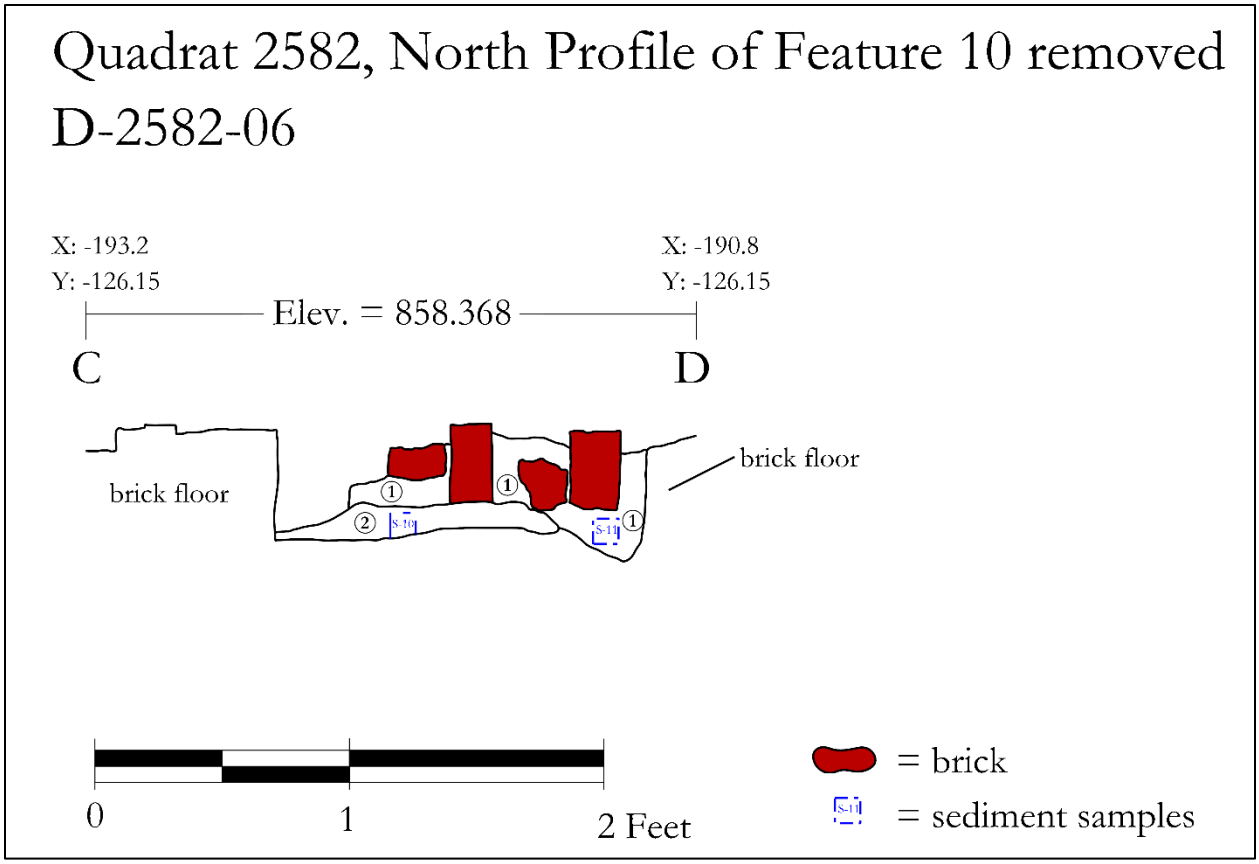


Figure 36: D-2582-06, North profile of Feature 10 removed

Table 4: Contexts, sediment descriptions, SGs, and interpretations for Figure 36

Number	Context(s)	Munsell	SG	Interpretation
1	2582V	Reddish brown [2.5YR 4/4] silty clay, 5% brick (2-64mm), and 1% greenstone (1-2mm).	--	Feature 10, Bricks laid flat over fill in unid. pit
2	2582Z	Dark reddish brown [2.5YR 3/4] clay with 5% decomposing greenstone (1-4mm).	07	Leveling fill for brick floor

Jefferson's first stew stove was apparently installed during this period, as well. This first stove left no masonry remains. However, we highlight two lines of evidence for its existence. First, three small notches cut into the northern wall less than two feet above the surviving stew stove foundation (Figure 37, Figure 38). These holes do not align with the architecture of the

surviving brick foundation of what we believe was the second stew stove installed in the kitchen. We therefore suspect that they were hacked into the wall to key the masonry for an earlier stove into the wall. The second line of evidence is the linear drainage ditch, Feature 11. Its northern edge did not lie against the north wall of the kitchen, but roughly 1.5 feet south of it (Figure 42). Why did the ditch installers leave a 1.5-foot swath of brick floor against the north wall in place? By placing the ditch flush against the wall, they would have minimized chances that people stumbled into it. A compelling hypothesis is that the northern edge of the ditch lay against an existing piece of equipment or architectural element that extended 1.5 feet out from the wall. An earlier stew stove is a likely possibility. From his earliest sketches (N59), Jefferson planned for his kitchen to include a stew stove in this location, so this is a likely spot for an earlier stove. However, this hypothesized earlier stove must postdate the initial construction of the kitchen, since it sat on top of the later brick-on-end floor.

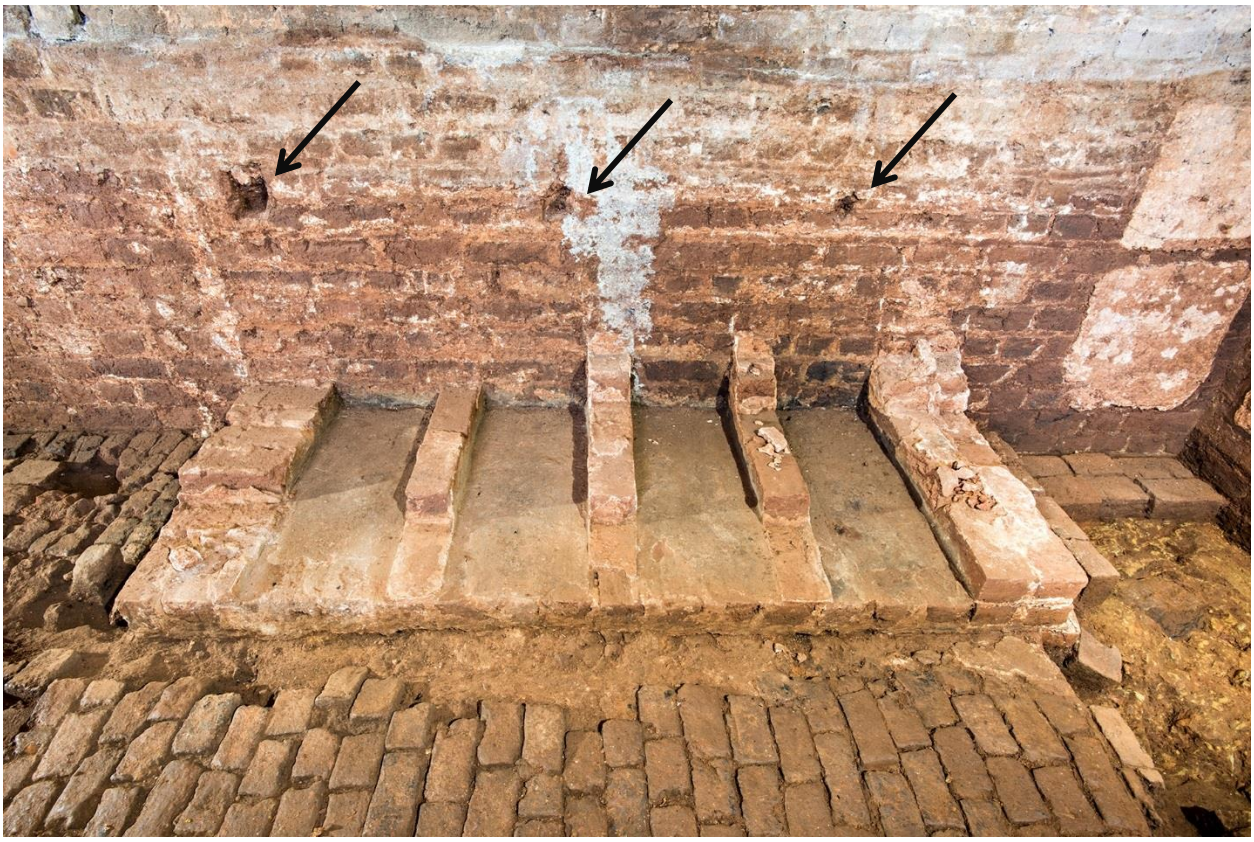


Figure 37: Stew stove from Period 3. View north. The arrows point to evidence for the presence of an earlier Period 2 stew stove. Note the three holes above the current stoves (black arrows).

Figure 38: Stew stove from Period 3. View northeast. The arrows point to evidence for the presence of an earlier Period 2 stew stove. Note the three holes above the current stoves (black arrows).

The unpaved zone along the eastern wall where the dresser sat captured evidence for the space's use. Thin deposits in the drain (F11), including faunal material, represent kitchen-related activity as cooks swept the brick floor clear of debris (2584 Q, R, and S; 2588M and T). Features along the east wall provided support for the presence of several generations of dressers. They include a later brick pier (F20) to support a leg for the dresser (Figure 46). The pier sat on a deposit of sand (F15). Due to the limits of excavations, archaeologists did not expose this brick feature in its entirety. It is notable that this feature aligned with the north edge of the window frame in the east wall. Just west of the pier (F20) archaeologists identified a rectangular intrusion 0.16 feet in depth filled with red clay loam (F14). Its function is opaque.

Table 5: Stratigraphic groups and features from Period 2

Feature number	Stratigraphic Group (SG)	Context	Description	Interpretation	Dimensions (feet)	Depth (feet)
F13	SG08	2582BB, 2583S, 2584EE, 2586O, 2587H, 2588W	Brick floor in north of the Pavilion	Brick floor	11.3 x 7.2	*Not excavated*
F14	--	2855P	Sub-rectangular red clay loam intrusion	Stake hole	0.3 x 0.2	0.16
--	SG13	2582L, 2583M	Dark reddish brown silty clay patch	Fill to replace missing bricks in repair patch (F10)	--	--
F11	--	*see below*	*L-shaped intrusion cut into the brick floor running east/west partially underneath the stew stove. Turns 90º south.*	*Drainage ditch dug to mitigate flooding*	*12.5 x 1.1*	*0.5*
F11	SG14	2584AA, 2588U	Reddish brown silty loam	Fill deposited in drainage ditch to allow installation of stew stove	--	--
F11	--	2584Q	Reddish brown sediment above broken bricks	Pre-stew stove kitchen trash layer	--	--
F11	--	2584R	Dense red clay	Pre-stew stove fill	--	--
F11	--	2584S	Mortar flecked gritty brown sediment between broken bricks	Pre-stew stove kitchen trash; stew stove leveling fill?	--	--
F11	--	2588M	Dark brown eggshell-rich silty loam	First sweeping event	--	--
F11	--	2588T	Small triangle of reddish brown silty clay loam	Clay pressed against brick to stabilize against tottering	--	--
F25	SG15	2594P, 2595Q	Reddish brown and red silty clay	Unexcavated ditch fill in southeast corner of the Pavilion	6.9 x 0.8	*Not excavated*
F16	SG20	2581P, 2585N	Brick hearth	Brick hearth in northwest corner of Pavilion	4.1 x 3.5	0.21
F10	--	*see below*	*Flat, irregularly laid bricks. Roughly rectangular in shape with the longer axis running east-west.*	*Unidentified pit, possibly dug to mitigate a flooding event. Possible sump which may have connected to*	*2.5 x 2.8*	*0.72*

				F11		
F10	--	2582V	Bricks laid flat in red clay	Bricks laid flat over fill in pit	--	--
F10	--	2582W	Silty clay	Fill in pit	--	--
F10	--	2582Y	Reddish brown silty clay with mortar	Fill in pit	--	--
F10	--	2582X	Dark reddish brown silty clay	Fill in pit	--	--
F15	--	2588N	Sand in which two bricks have been laid flat and are oriented east-west	Fill to serve as bed for bricks (F20)	1.8 x 0.7	0.1
F20	--	2588Y	Two bricks protruding from south profile of 2588. Bricks are sitting inside a sandy intrusion (F15). Located south of a ghost in the plaster on the east wall and directly under the north edge of the window.	Two bricks serving an unknown function. Possibly a pier to carry the leg of a dresser.	1.4 x 0.2	*Not excavated*
F25	--	2594O, 2595Q	Linear intrusion along the tile brick floor in 2594 and 2595. Continuation of a trench found in the northern excavations (F11).	Drainage ditch	6.96 x 0.8	*Not excavated*

Period 3 (1790-c.1808)

Architectural changes to the kitchen that date to Period 3 may coincide with the return of Jefferson from a diplomatic appointment in France in 1789 and soon thereafter the beginning of the construction and landscaping campaign that resulted in Monticello II. The South Pavilion kitchen saw a number of important upgrades including the replacement of the dresser and the application of plaster to the walls adjacent to it (Figure 39). Along the north wall of the Pavilion,

workmen removed the hypothesized first stew stove. Jefferson then had constructed a four-compartment masonry stew stove (SG16/F12). To prepare for its construction, builders filled the drainage ditch along the north wall with clay (2584P) to provide a level surface on which to construct the stew stove. They then laid a continuous mortar deposit over the brick floor and the filled ditch. Figure 40 and Figure 41 show the extent of a mortar deposit on which the stove rested. The mortar on the east side was more sloppily applied than the mortar on the west side, as this area was underneath the dresser and not visible. Figure 40, Figure 42 (see also Table 6), and Figure 43 show the east and west profiles of the ditch below the stew stoves revealing that the ditch runs under the stew stove and was not a builder's trench for the stove. Archaeologists recovered a piece of hand-painted pearlware from the trench fill (2584S) (Figure 44).

Figure 39: Period 3 kitchen digital rendering (RenderSphere 2017c). View northwest.

Figure 40: Profile of stew stove in 2583. View east. Note the yellow arrowing pointing to the mortar layer between the brick floor and the stew stove. Masons applied this mortar top of the brick floor to provide a base on which the stew stove rested.

Figure 41: East half of stew stove. View north. Note the yellow arrow pointing to the mortar layer between the brick floor and stew stove. Masons applied this mortar top of the brick floor to provide a base on which the stew stove rested.

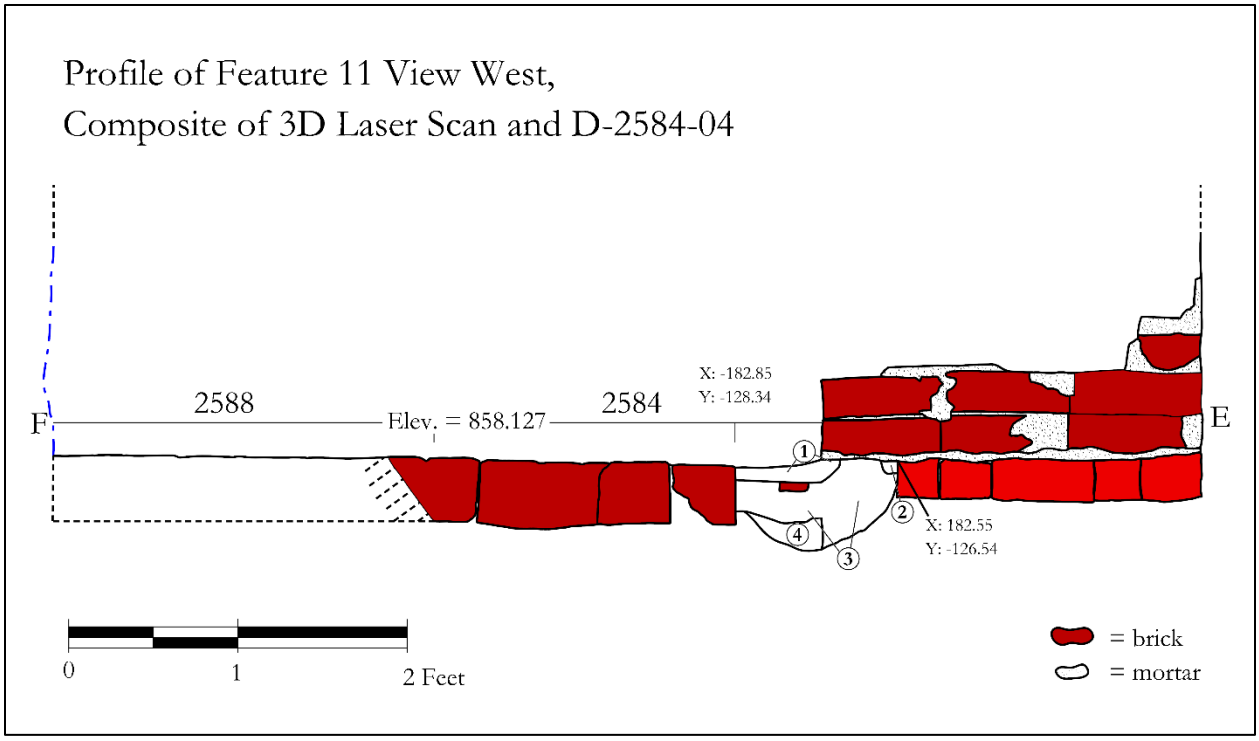


Figure 42: D-2584-04 composite, west profile below stew stove

Table 6: Contexts, sediment descriptions, SGs, and interpretations for Figure 42

Number	Context(s)	Munsell	SG	Interpretation
1	2584P, Q, R	Red [2.5YR 4/6] Clay.	--	2584P: Leveling fill for stew stove construction 2584Q: Pre-stew stove kitchen trash layer 2584R: Pre-stew stove fill
2	Not excavated further	Dark Red [2.5YR 3/6] Clay.	--	--
3	2584S, AA	Dark Reddish Brown [5YR 3/4] Silty Clay Loam, 2% Charcoal (1-64mm), 2% Greenstone (1-64mm), and 3% Brick (4-64mm).	None (2584S); 14 (2584AA)	2584S: Pre-stew stove kitchen trash; stew stove leveling fill? 14: Fill deposited in drainage ditch to allow installation of stew stove
4	2584AA	Reddish Brown [2.5YR 4/3] Silty Clay Loam, 5% Decomposing Greenstone (1-64mm), and 1% Charcoal (1-4mm).	14	Fill deposited in drainage ditch to allow installation of stew stove

Figure 43: Profile of Feature 11 under the stew stove in 2584. View west. See Figure 42 for measured drawing.

Figure 44: Handpainted pearlware from context 2584S, interior and exterior. Possibly Chinese House pattern, which dates between 1775 and 1810 (Maryland Archaeological Conservation Lab 2018, Miller and Hunter 2001:135-161).

The stove (F12) was 5.9 by 2.1 feet in plan (Figure 20, Figure 45). The remains included four compartments, each 0.9 feet wide. The divisions between the compartments are comprised of one row of brick stretchers. The eastern leg is built with two rows of brick stretchers laid side by side while the western leg is built with one row of headers. Each leg measures 0.7 feet wide, and each interior compartment division is 0.3 feet wide (the width of one brick). The bottoms of the compartments were covered with a smooth coat of plaster, presumably to facilitate cleaning ash from them. Ash and charcoal (SG17/F12) lay in each compartment. Archaeologists collected samples from each of the compartments for pollen analysis and wood identification.

Figure 45: Stew stove (F12). 2582J, 2583G, 2584G removed. View north.

To the east of the stove stood a dresser along the east wall. This dresser replaced the earlier versions from Period 2 as evidenced by the remaining plaster that adheres to the east and north walls. Gaps in the plaster indicate the locations of new dresser legs. One of these gaps does not align with the two brick piers associated with Period 2 (Figure 46). Furthermore, archaeologists found a discontinuous thin brown silty clay loam deposit (SG19) underneath the northern (F18) and southern (F22) plaster ghosts, which workers may have placed to level for a new dresser leg.

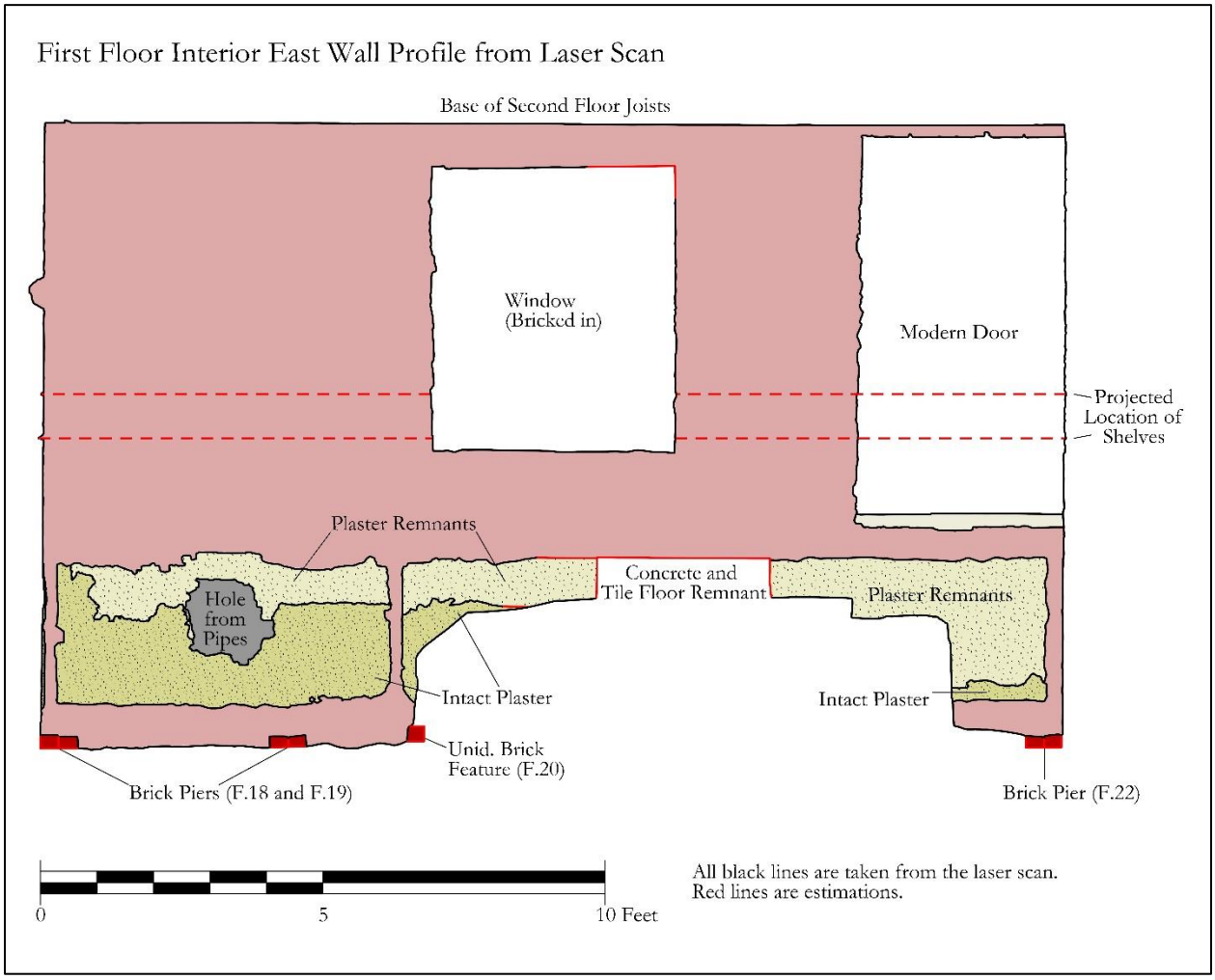


Figure 46: Scale drawing of east wall of Pavilion. Note the alignment of only two of the brick piers (F18, F22) with the gaps in the plaster. We suspect the gaps are ghosts of dresser legs, while the piers supported dresser legs. The fact that neither piers F18 nor F19 align with the gaps implies that the former were associated with earlier dressers.

This and the previous period also saw the accumulation of kitchen-related debris in between the dry-laid bricks that comprised the repaired floor (SGs 22, 23; 2590J, 2595P). Careful excavation of the sediment between each of the bricks in the brick floor revealed fragments of eggshell, bone, and ceramic, the expected remains of an active kitchen processing animals and preparing food. We also found ash adhering to the bricks (SG21/F16) in the fireplace in the northwest corner. Cooks swept kitchen debris into the linear ditch (SG18 and 2588J, K, L), which appeared as thin, laminated layers, in both measured drawing and photographs (Figure 47, Table 7, Figure 48, Figure 49). Sediments contained eggshells, small fragments of animal bones, charcoal, and ash. These deposits slope up toward the southern half of the ditch itself, and archaeologists noted additional deposits in the south. The ditch initially served as drainage, so the artifacts do not document the use of the feature itself, but rather, detritus that accreted as a result of sweeping events. A mortar flecked brown silty clay loam (2584L) east of the stew stove also reflects the space's use as a kitchen due to the high frequency of bone and charcoal fragments.

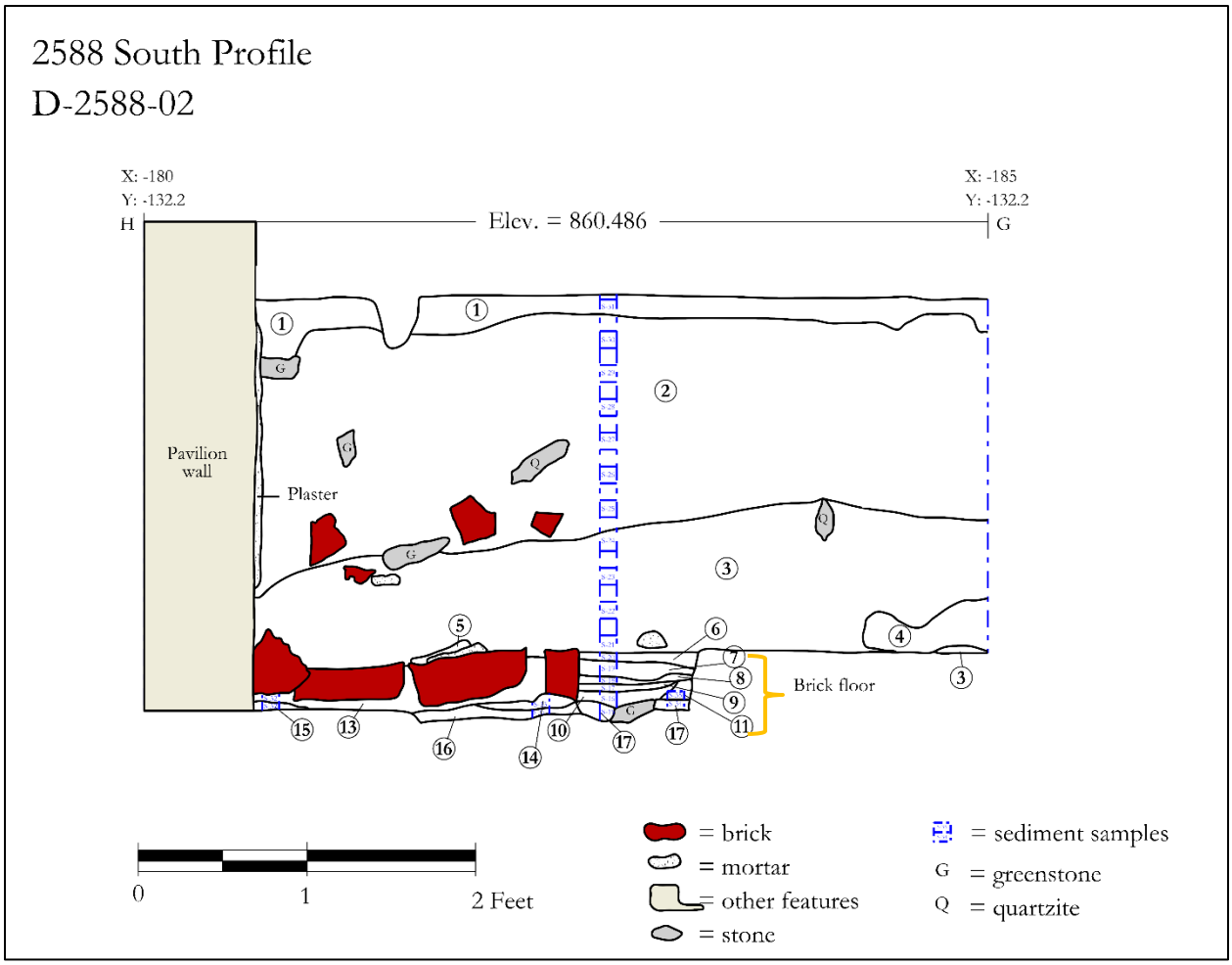


Figure 47: 2588 south profile. The laminated layers from Feature 11 discussed above are indicated by the orange bracket.

Table 7: Contexts, sediment descriptions, SGs, and interpretations for Figure 47

Number	Context(s)	Munsell	SG	Interpretation
1	2588E	Reddish Brown [2.5YR 4/3] Silty Clay Loam, 2% Mortar (1-4mm), 1% Charcoal (1-4mm), and 2% Greenstone (1-4mm).	46	Demolition debris and cleanup under 1940's concrete floor
2	2588F	Yellowish Red [5YR 4/6] Silty Clay, 5% Red [2.5YR 4/6] Silty Clay, 5% Brick (2-256mm), 3% Greenstone (1-256mm), and 1% Mortar (1-64mm).	28	c. 1809 massive fill event
3	2588F	Reddish Brown [2.5YR 4/4] Silty Clay Loam, 3% Greenstone (1-64mm), 1% Brick (1-64mm), and 1% Mortar (1-64mm).	28	c. 1809 massive fill event
4	2588F	Reddish Brown [5YR 4/3] Silty Clay Loam	28	c. 1809 massive

		and 2% Bricks (2-64mm).		fill event
5	2588F	Light Olive Brown [2.5Y 5/4] Sand.	28	c. 1809 massive fill event
6	2588I	Dark Reddish Brown [7.5YR 3/3] Silty Loam and 5% Charcoal (1-64mm).	18	Top layer of kitchen debris swept into drainage ditch
7	2588J	Dark Grayish Brown [10YR 4/2] Sand, 10% Dark Brown [7.5YR 3/3] Silty Loam, 1% Mortar (1-2), and 1% Charcoal (1-4mm).	--	Kitchen debris swept into ditch
8	2588K	Black [7.5YR 2.5/1] Silty Loam and 10% Charcoal (1-64mm).	--	Kitchen debris swept into ditch
9	2588L	Dark Reddish Gray [5YR 4/2] Silty Loam.	--	Kitchen debris swept into ditch
10	2588M, U	Dark Reddish Brown [5YR 3/3] Silty Loam, 5% Charcoal (1-64mm), and 10% Greenstone (1-64mm).	None for 2588M; 14 (2588U)	2588M: First sweeping event; 14: Fill deposited in drainage ditch to allow installation of stew stove
11	2588T	Dark Reddish Brown [2.5YR 3/3] Silty Clay Loam and 3% Charcoal (1-64mm).	--	Clay pressed against brick to stabilize against tottering
12	2588V	Red [2.5YR 4/8] Clay and 1% Charcoal (1-4mm).	07	Leveling fill for brick floor
13	2588S	Brown [7.5YR 4/4] Sand.	02	Work surface during construction of Pavilion walls
14	2588S	Reddish Brown [5YR 4/4] Silty Clay Loam and 5% Charcoal (1-4mm).	02	Work surface during construction of Pavilion walls
15	2588Q	Reddish Brown [5YR 4/4] Silty Clay Loam and 5% Charcoal (1-4mm).	11	Fill to level floor under dresser
16	2588U	Brownish Yellow [10YR 6/8] Silt.	14	Fill deposited in drainage ditch to allow installation of stew stove
17	2588U	Reddish Brown [5YR 4/3] Silty Clay Loam, 20% Reddish Brown 5YR 4/4] Silty Clay Loam, and 10% Greenstone (1-64mm).	14	Fill deposited in drainage ditch to allow installation of stew stove

Figure 48: 2588 south profile. The laminated layers from Feature 11 discussed above are shown in the inset.

Figure 49: 2584 south profile. The laminated layers from Feature 11 discussed above are indicated by the orange bracket. Note the fewer layers in the profile from 2584 compared with that from 2588. No closeup was taken of the laminated layers in this quadrat.

In the southwest corner of the Pavilion, archaeologists found a roughly 2-foot square feature in the southwest corner of the Pavilion (F08). The feature was 0.7 feet deep. The feature may have been a post hole, although the lack of an identifiable post mold and relatively shallow depth are evidence against this interpretation. A second possibility is the feature is a subfloor pit, dug and used by an enslaved kitchen worker to store personal possessions. It would have been located underneath the winder stair that occupied the corner of the room. A vertical gap in the plaster along the south wall, four feet east of the corner, may be evidence for a post that helped support the stair (see Figure 32). Plaster continues to the corner, suggesting that the lower treads of the winder stair were located next to the oven cheek wall, while the upper treads would have

run along the south wall. This configuration would have meant that the area under the stair next to the south wall would have been open to the rest of the room -- hence the wall plaster. The hypothesized subfloor pit would have been accessible from the room but out of the way from heavy traffic.

Table 8 lists the stratigraphic groups and features from Period 3.

Table 8: Stratigraphic groups and features from Period 3

Feature number	Stratigraphic Group (SG)	Context	Description	Interpretation	Dimensions (feet)	Depth (feet)
F08	--	2614D, 2614F, 2614N	Sub-rectangular intrusion in southwest corner of Pavilion	Possible post hole related to stairs in southwest corner or possible subfloor pit	2.2 x 1.7	0.7
F12	SG16	2583R, 2584DD	Brick and mortar stew stove	Brick and mortar stew stove	5.9 x 2.1	*Not excavated*
F12	SG17	2583H, 2583I, 2583J, 2584H	Ash and charcoal in the compartments of stew stoves	Remnants of the coals from cooking on stew stove	--	--
F11	--	*see below*	*L-shaped intrusion cut into the brick floor running east/west partially underneath the stew stove. Turns 90º south.*	*Drainage ditch dug to mitigate flooding*	*12.5 x 1.1*	*0.5*
F11	--	2584P	Red clay ditch fill	Leveling fill for stew stove construction	--	--
F11	--	2588J	Yellowish brown sand	Kitchen debris swept into ditch	--	--
F11	--	2588K	dark brown silty loam	Kitchen debris swept into ditch	--	--
F11	--	2588L	Mottled sand with eggshell	Kitchen debris swept into ditch	--	--
F11	SG18	2584N, 2588I	Dark reddish brown silty loam with large amounts of charcoal	Top layer of kitchen debris swept into ditch	--	--
--	SG19	2584M, 2588O	Brown silty clay loam under plaster ghosts	Possible leveling fill for dresser legs	--	--
F16	SG21	2581J, 2581P, 2582AA, 2585H, 2585M,	Ash and charcoal on and around bricks comprising the hearth	Hearth in northwest corner fireplace	4.1 x 3.5	0.2

		2585N, 2586M, 2586N				
--	SG22	2582K, 2582U, 2583K, 2583Q, 2584K, 2586L, 2587G, 2588H	Sediment and charcoal between bricks of brick floor in north excavation trench	De-facto kitchen refuse	--	--
--	SG23	2594M, 2595M	Sediment and charcoal on top of and in between brick pavers in southeast excavation trench	De-facto kitchen refuse	--	--
--	--	2583L	Dark reddish brown in F11; *overdug and removed from analysis*	Ditch fill	--	--
--	--	2584L	Mortar flecked brown silty clay loam	De-facto kitchen refuse	--	--
--	--	2595P	Dark reddish brown pressed into floor	De-facto kitchen refuse	--	--
--	--	2590J	Dark reddish brown pressed into floor	De-facto kitchen refuse	--	--

Period 4 (c.1808-1826)

Final changes to the South Pavilion during this last period started the year before Jefferson's retirement from the presidency and from public life. To complete his vision for the landscape, Jefferson had the kitchen moved to the eastern-most room in the newly constructed South Wing and had the South Pavilion kitchen filled with three feet of dirt to match the level of the Wing. He altered the function of the Pavilion from a kitchen to a Wash House (Figure 50). Stratigraphic groups from Period 4 can be seen in Table 9.

Figure 50: Period 4 South Pavilion, including a Wash House in the basement, and Wing, digital rendering (RenderSphere 2017d). View northwest.

This phase saw the relocation of the door in the south wall to a new spot along the east wall. Masons bricked in the lower half of the existing door and installed a window in the upper half. Additionally, they bricked in the window on the east wall, because now it opened into the dairy. Mason Hugh Chisholm added two courses of bricks to the cheek walls that originally had supported a relieving arch carrying the first-floor fireplace above and now became the cheek walls of the new fireplace. The deeper opening could accommodate equipment such as large pots

required for the space to function as a Wash House (Jefferson 1796b).[17] Jefferson specified measurements for the new fireplace in the Pavilion, which was large enough for a wash house with an opening of "4 f. 6. I. wide" (Jefferson 1808a).

Laborers disassembled the brick walls of the stew stove prior to filling the kitchen. The absence of complete bricks suggests that workers collected them for use elsewhere. A layer of mortar rubble (SG25) covered the area above and surrounding the stoves. Much of the mortar had flat surfaces from contact with brick masonry comprising the stew stoves.

Sediment was deposited (SG24) just to the west of a set of brick piers and underneath the dresser along the east wall. This reddish-brown silty clay may date to filling in the kitchen itself. Alternatively, it could have provided a level surface that cooks could stand on while working in front of the window.

Finally, Period 4 includes the filling in of the kitchen (SGs 28, 27, 26) to raise the floor. Enslaved workers moved dirt from the Kitchen Yard and dumped it into this room to raise the ground level three feet to match that of the newly constructed South Wing. Most of the fill consisted of a dark reddish brown silty clay. In the southwest corner, decomposing greenstone cobbles and brick bats were present in the fill. A relatively high proportion of the fill was comprised of B and C-horizon sourced sediment which may ultimately have been derived from the massive cut into the mountaintop surface required to build the new South Wing. This final fill event likely took place around 1808 and certainly prior to Jefferson's retirement from the presidency in 1809.

[17] Archaeologists also noticed two bricked-in holes in the south wall, one east and one west of the window. They notified Mulberry Row Project Manager Jobie Hill, who suspected that at the western hole may have been the spot of a drain for the Wash House. See Figure 32 for location and size.

Table 9: Stratigraphic groups and features from Period 4

Stratigraphic Group (SG)	Context(s)	Description	Interpretation
SG24	2584I, 2584J, 2588G	Red clay with mortar inclusions	Rubble from stew stove demolition
SG25	2582J, 2583G, 2583P, 2584G, 2587F	Mortar rubble	Mortar rubble from stew stove demolition
SG26	2589E, 2590G, 2593F, 2614C	Brick rubble	Final massive fill event
SG27	2581G, 2581H, 2581I, 2581O, 2582T, 2585F, 2585G, 2585L, 2586K	Reddish brown clay	Final massive fill event
SG28	2582H, 2582I, 2582R, 2582S, 2583D, 2583E, 2583F, 2583O, 2584D, 2584E, 2584F, 2586J, 2587E, 2587I, 2587J, 2588F, 2588X, 2589C, 2590E, 2593E, 2614B	Dark reddish brown silty clay with dark red clay	Final massive fill event

Period 5 (1826-2016)

Stratigraphic groups and features from Period 5 can be seen in Table 12. During contractor Henry Kersley's stabilization of the Wash House fireplace, he removed cinder block and brick repairs dating to Grigg's 1941 restoration. On the fireplace's floor, archaeologists noted a pocket of hardened ash (SG29 in F17, Figure 51). Archaeologists bisected this deposit (Figure 52, Table 10). It was composed of ash and degrading, burned brick and mortar (Figure 53). This is an ash deposit from use of the fireplace in the 19th and early 20th centuries (Figure 54). Excavations stopped here once brick masonry was reached.

Figure 51: Archaeologist Lauren Gryctko looks at the interior of the Wash House fireplace while setting up for a profile drawing post-excavation.

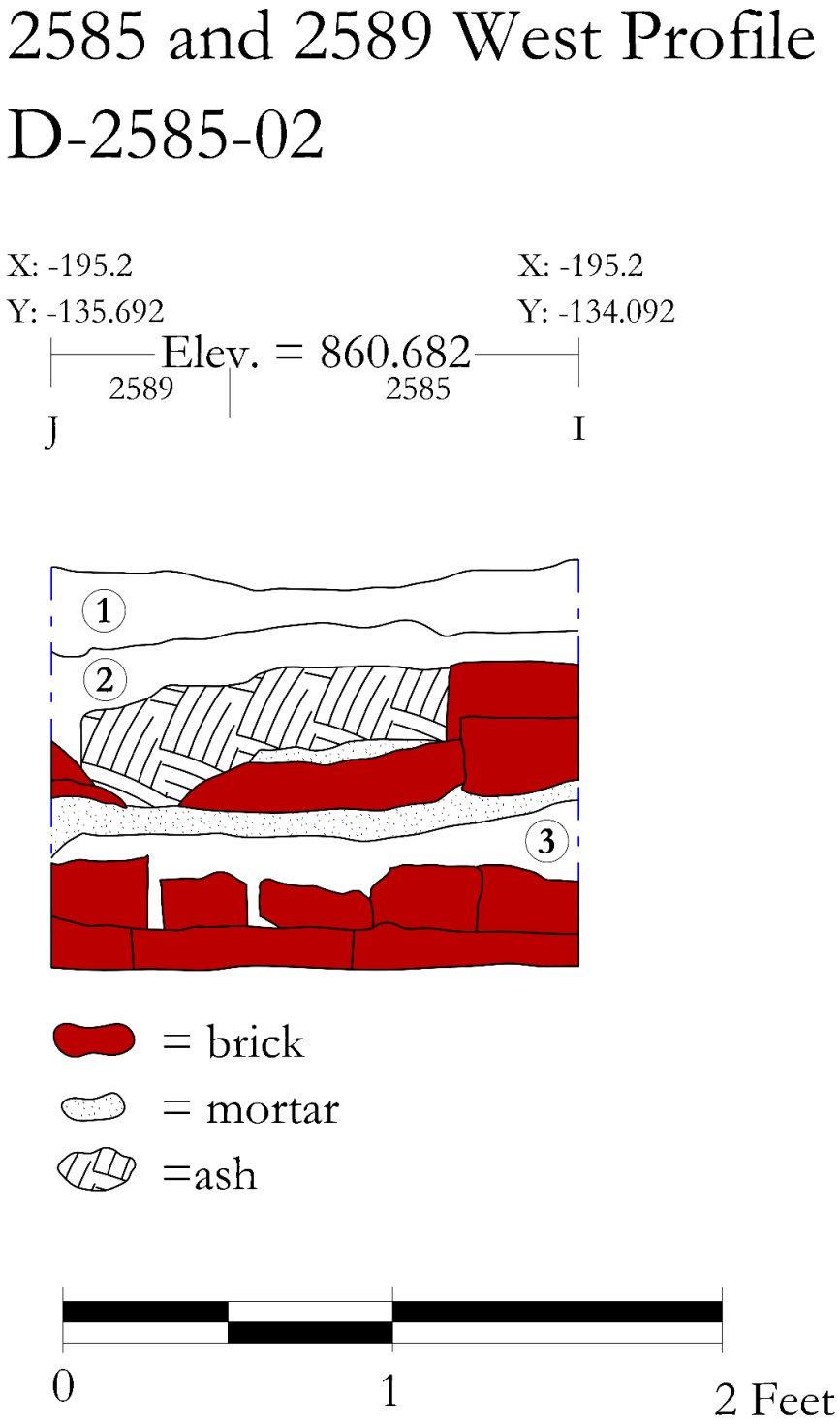


Figure 52: D-2585-02, Feature 17 west profile.

Table 10: Contexts, sediment descriptions, SG, and interpretations for Figure 52

Number	Context(s)	Munsell	SG	Interpretation
1	2585O	Burned brick (4-256mm) and 10% ash.	29	Ash from fires from 19th-early 20th century revealed when 1941 repairs were removed
2	2585O	Brick (4-256mm) and 10% ash.	29	Ash from fires from 19th-early 20th century revealed when 1941 repairs were removed
3	Not excavated	Brick (4-256mm)	--	--

Figure 53: Interior of the central fireplace post-excavation. View west.

Figure 54: South Pavilion as a Wash House digital rendering (RenderSphere 2017e). View northwest.

Before the archaeological investigation of the South Pavilion began, a crew from K&L Construction demolished the men's room that had been installed in the Pavilion in 1967. Their work included pulling down the hanging ceiling, removing toilets and urinals, pulling tile of the walls, removing the HVAC unit, and pulling up the tile floor. Below that was a concrete substrate and ceramic structural block underlayment for the brick floor that Milton Grigg had installed in 1941 when the Wash House was initially restored. The bricks had been removed when by the men's room was installed in 1967. Removal of the demolition debris (SG48) revealed intersecting backfilled trenches that had chopped through the concrete and tile subfloor

(Figure 55, Figure 56). These trenches contained cast iron and copper pipes that served the sinks and toilets. Archaeologists excavated the trenches as Feature 1 (SG47). K&L Construction removed additional portions of the concrete floor, which exposed Grigg's excavations.

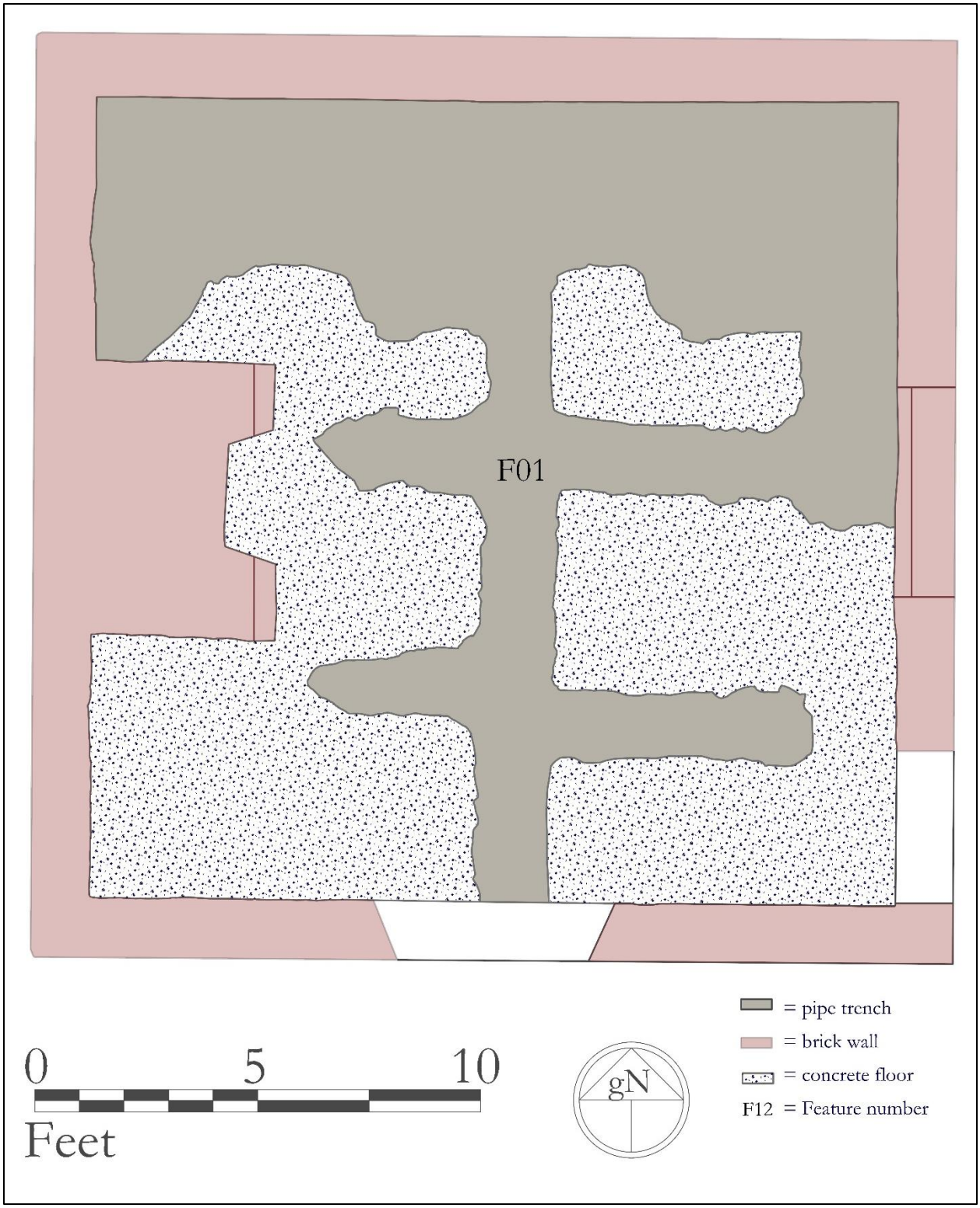


Figure 55: South Pavilion with 20th-century pipe trenches (F01)

Figure 56: Archaeologist Elliott Jones recording the excavation of SG48. View northwest.

Grigg's test holes and their fills (SGs 30-41, also 2594F and I; 2595H and L) intruded the fill that lay undisturbed below the 1967 concrete and tile subfloor (SGs 46, 45, and 44) (Figure 57). In the northwest corner of the Pavilion, excavators removed deposits in Grigg's test hole in two layers (SGs 31-34 in F03), since they understood this cut to be a 20th-century intrusion and they needed to meet project deadlines; a year later in the southeast corner, archaeologists stratigraphically removed Grigg's trench in nine layers (SGs41-35 in F21) to allow researchers the option to test for differentiation within the fill (Figure 58, Table 11). Some of Grigg's backdirt did not make it back into his test holes and was excavated from on top of the 1940's ground surface (SGs 43, 42, and 2582F and G).

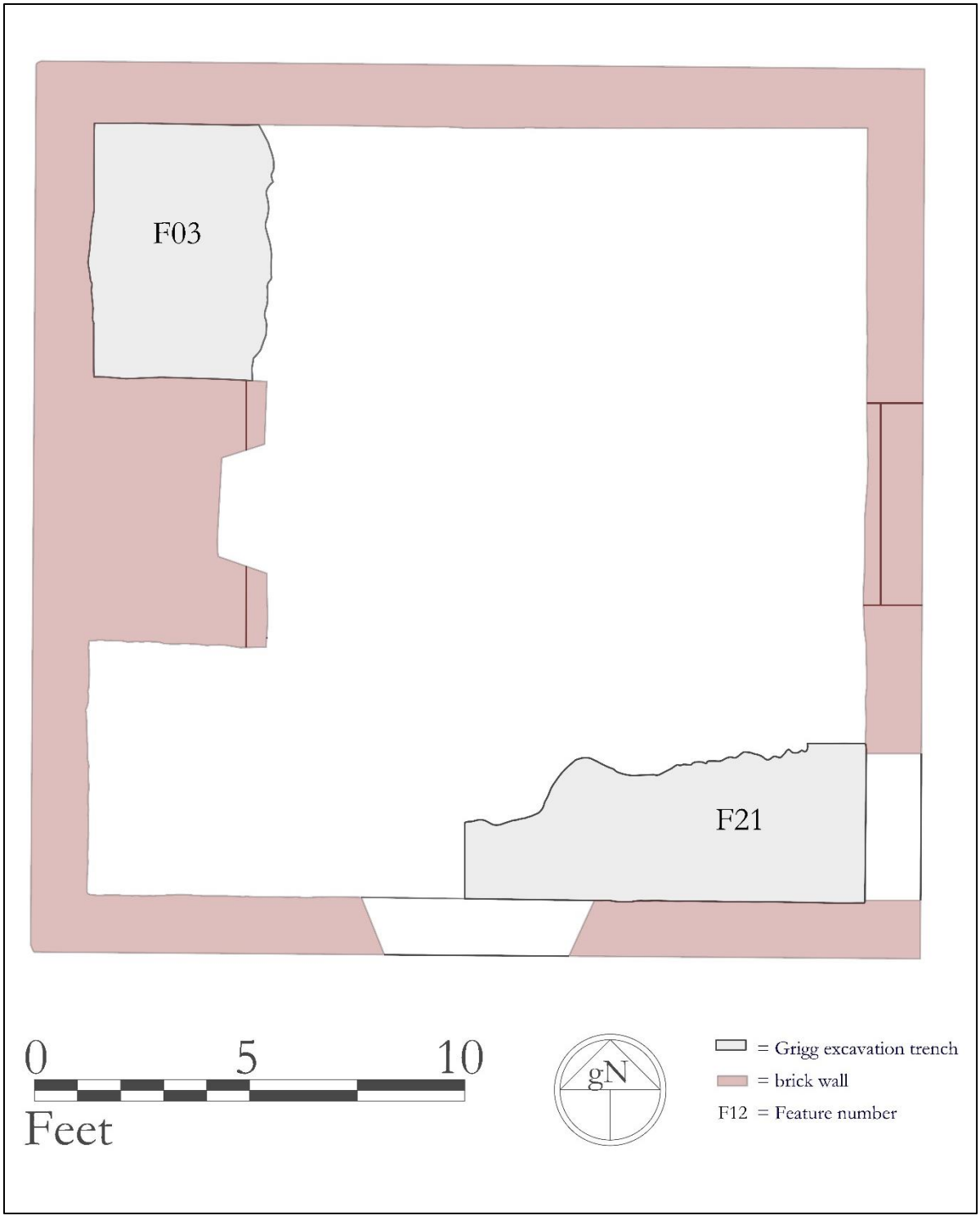


Figure 57: South Pavilion with Grigg's test trenches

2594 and 2595, North profile
D-2594-03

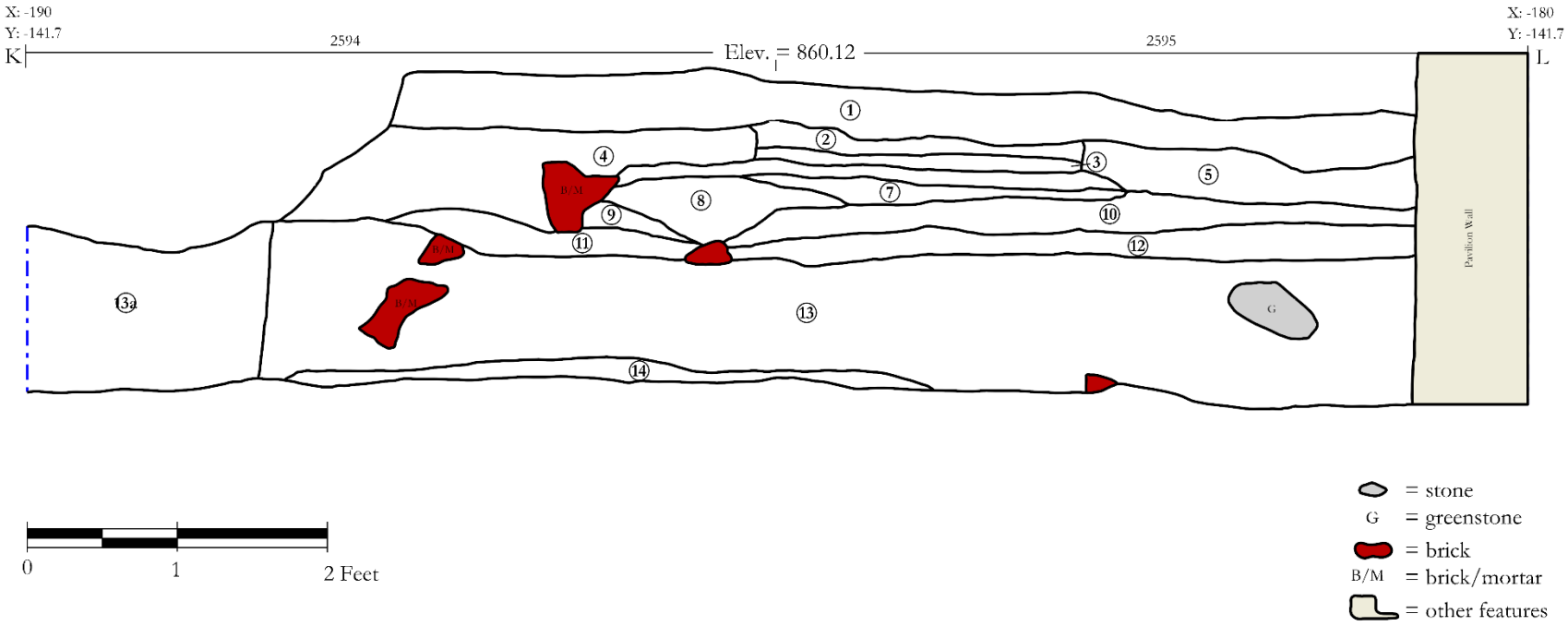


Figure 58: 2594 and 2595 north profile

Table 11: Contexts, sediment descriptions, and SGs for Figure 58

Number	Context(s)	Munsell	SG	Interpretation
1	2594D, 2595D	Yellowish Red [5YR 4/6] Silty Clay, 5% Red [2.5YR 4/6] Clay, 14% Mortar (1-64mm), and 1% Brick (2-4mm).	41	Grigg's 1941 backfill
2	2594E, 2595E	Red [2.5YR 4/6] Clay, 40% Dark Reddish Brown [2.5YR 3/4] Silty Clay, 5% Mortar (1-64mm), and 1% Brick (4-64mm).	40	Grigg's 1941 backfill
3	2594E, 2595E	Dark Reddish Brown [2.5YR 3/4] Silty Clay, 13% Red [2.5YR 4/6] Clay, 50% Mortar (1-64mm), 1% Decomposing Greenstone (2-4mm), and 1% Charcoal (2-4mm).	40	Grigg's 1941 backfill
4	2594E, G, H	Yellowish Red [5YR 4/6] Silty Clay, 10% Red [2.5YR 4/6] Clay, 30% Mortar (1-64mm), 1% Charcoal (2), 1% Decomposing Greenstone (2-4mm), and 2% Brick (4-64mm).	E: 40, G: 39, H: 38	All part of Grigg's 1941 backfill
5	2595E, F	Yellowish Red [5YR 4/6] Silty Clay, 28% Red [2.5YR 4/6] Clay, 1% Brick (2-4mm), 1% Charcoal (2-4mm), and 10% Mortar (1-64mm).	E: 40, F: 39	Both part of Grigg's 1941 backfill
6	2594G, 2595F	Yellowish Red [5YR 4/6] Silty Clay, 30% Red [2.5YR 4/6] Clay, 2% Charcoal (2-4mm), 1% Decomposing Greenstone (2-4mm), 3% Brick (4-64mm), and 24% Mortar (1-64mm).	39	Grigg's 1941 backfill
7	2594G, 2595F	Yellowish Red [5YR4/6] Silty Clay, 10% Red [2.5YR 4/6] Clay, 5% Brick (2-64mm), and 30% Mortar (1-64mm).	39	Grigg's 1941 backfill
8	2594G	Yellowish Red [5YR 4/6] Silty Clay, 5% Red [2.5YR 4/6] Clay, 7% Brick (2-64mm), and 20% Mortar (1-64mm).	39	Grigg's 1941 backfill
9	2594H	Red [2.5YR 4/6] Clay, 10% Yellowish Red [5YR4/6] Silty Clay, 5% Mortar (1-64mm), 1% Charcoal (2-4mm), and 2% Decomposing Greenstone (2-4mm).	38	Grigg's 1941 backfill
10	2594H, 2595G	Yellowish Red [5YR 4/6] Silty Clay, 20% Red [2.5YR 4/6] Clay, 15% Mortar (1-64mm), 2% Brick (1-64mm), and 3% Decomposing Greenstone (2-64mm).	38	Grigg's 1941 backfill
11	2594I	Dark Reddish Brown [5YR 3/4] Silty Clay, 23% Red [2.5YR 4/6] Clay, 1%	--	Grigg's 1941 backfill

		Charcoal (2-4mm), 1% Brick (2-4mm), 1% Decomposing Greenstone (2-4mm), and 4% Mortar (2-64mm).		
12	2595G, H	Dark Reddish Brown [5YR 3/4] Silty Clay, 20% Red [2.5YR 4/6] Clay, 15% Mortar (1-64mm), 1% Charcoal (1-4mm), 2% Decomposing Greenstone (2-4mm).	G: 38, H: none	Both part of Grigg's 1941 backfill
13	2594I, J, L, 2595I, K, L	Reddish Brown [2.5YR 4/4] Silty Clay, 34% Red [2.5YR 4/6] Clay, 5% Decomposing Greenstone (1-256mm), 3% Charcoal (1-2), 3% Brick (1-64mm), and 15% Mortar (1-64mm).	2594J, 2595I: 37; 2594L, 2595K: 35; 2584I, 2595L: none	All part of Grigg's 1941 backfill
13a	--	This portion of the profile is the edge of the Grigg excavation trench. Removal of 2594I, 2594J, and 2594L revealed this profile, but the sediment drawn is unexcavated 1808 fill.	--	--
14	2594L, 2595K	Dark Reddish Brown [5YR 3/4] Silty Clay, 5% Red [2.5YR 4/6] Clay, 2% Brick (2-64mm), and 1% Decomposing Greenstone (2-64mm).	35	Grigg's 1941 backfill

Table 12: Stratigraphic groups and features from Period 5

Feature number	Stratigraphic Group (SG)	Context	Description	Interpretation	Dimensions (feet)	Depth (feet)
F17	SG29	2585O, 2589K	Composed mostly of ash. Brick, burned brick, and mortar were removed with the deposit.	Ash from fires from 19th-early 20th century revealed when 1941 repairs were removed	1.6	0.9
--	SG30	2589D, 2590F	Reddish brown silty clay loam with multiple inclusions	Backfill in Grigg's excavation in front of the central fireplace	--	--
F03	--	*see below*	*Large circular intrusion*	*Backfill in Grigg's 1941 excavation in northwest corner of Pavilion*	*5.9 x 4.3*	*3.0*
F03	SG31	2581N, 2582O, 2585K, 2586F	Mottled dark reddish brown silty clay loam with plaster inclusions	Grigg's 1941 backfill	--	--
F03	SG32	2581M, 2582N, 2585J, 2586E, 2586P	Mottled dark reddish brown silty clay loam without plaster	Grigg's 1941 backfill	--	--
F03	SG33	2581F, 2582E,	Mottled dark reddish	Grigg's 1941	--	--

		2585E	brown sandy clay loam with multiple inclusions	backfill		
F03	SG34	2581E, 2582D, 2585D	Mottled reddish brown sandy clay with multiple inclusions	Grigg's 1941 backfill	--	--
F21	--	*see below*	*Linear intrusion*	*Backfill in Grigg's 1941 excavation in southeast corner of Pavilion*	*10.0 x 2.1*	*2.2*
F21	--	2595L	Yellowish red silty clay	Grigg's 1941 backfill	--	--
F21	SG35	2594L, 2595K	Compact mottled reddish brown clay with few inclusions	Grigg's 1941 backfill	--	--
F21	SG36	2594K, 2595J	Loose mottled dark reddish brown silty clay loam with few inclusions	Grigg's 1941 backfill	--	--
F21	SG37	2594J, 2595I	Firm weak red silty clay with multiple inclusions	Grigg's 1941 backfill	--	--
F21	--	2595H	Loose weak red silty clay loam with red mottling	Grigg's 1941 backfill	--	--
F21	--	2594I	Loose weak red silty clay loam with light mottling	Grigg's 1941 backfill	--	--
F21	SG38	2594H, 2595G	Mottled weak red silty clay with multiple inclusions	Grigg's 1941 backfill	--	--
F21	SG39	2594G, 2595F	Loose reddish brown silty clay loam with multiple inclusions	Grigg's 1941 backfill	--	--
F21	SG40	2594E, 2595E	Dense red clay with mottles and multiple inclusions	Grigg's 1941 backfill	--	--
F21	SG41	2594D, 2595D	Mottled loose dusky red silty clay loam with multiple inclusions	Grigg's 1941 backfill	--	--
--	SG42	2589B, 2590D, 2593D	Dark reddish brown silty clay with multiple inclusions	Grigg's backfill in front of the central fireplace	--	--
--	SG43	2582Q, 2586H, 2586I	Dark reddish brown silty clay loam	Grigg's backfill in front of the central fireplace	--	--
--	SG44	2582P, 2586G	Reddish brown silty clay loam	Possible Grigg-era work surface in front of the central	--	--

				fireplace		
--	--	2582G	Dark reddish brown silty clay loam with inclusions	Grigg's backdirt	--	--
--	--	2582F	Dark reddish brown silty clay loam with inclusions	Grigg's backdirt	--	--
--	SG45	2581D, 2582C, 2583C, 2584C	Dense mottled reddish brown clay loam	Possible Grigg-era work surface along Pavilion's north wall	--	--
--	SG46	2581L, 2582M, 2583N, 2585I, 2586D, 2587D, 2588E, 2594C, 2595C	Mottled red silty clay with stone, mortar, and tile	Demolition debris and cleanup under 1940's concrete floor	--	--
F01	SG47	2581B, 2581C, 2582B, 2583B, 2584B, 2585B, 2585C, 2586B, 2586C, 2587B, 2587C, 2588B, 2588D, 2590B, 2591B, 2592B, 2592C, 2593B, 2594B, 2594O, 2595B	Mottled dark reddish brown silty clay intrusions. Contained a smaller water pipe above a larger waste pipe, all excavated as the same feature.	Pipe trenches installed in 1967 for the men's restroom	18.1 x 16.8	2.42
--	SG48	2581A, 2582A, 2583A, 2584A, 2585A, 2586A, 2587A, 2588A, 2588C, 2591A, 2594A, 2595A, 2589A, 2590A, 2590C, 2593A, 2593C, 2614A	Mottled dark red silty clay with tile and concrete	Post-1960's surface cleanup/demolition debris	--	--

South Wing

In the winter of 2016, archaeologists investigated the South Wing. During work, they tested four rooms designated by Jefferson in N150 as the dairy, two living spaces for enslaved domestic workers, and the smokehouse. These spaces were slated for restoration. Before the excavations began, a crew from K&L Construction removed the walls, floors, ceiling, and fixtures associated with restrooms that occupied the dairy and two living spaces starting in 1941.

Excavations sought to uncover evidence of features like room partitions or subfloor pits. Figure 59 includes all historic features found in the South Wing from the Jefferson era.

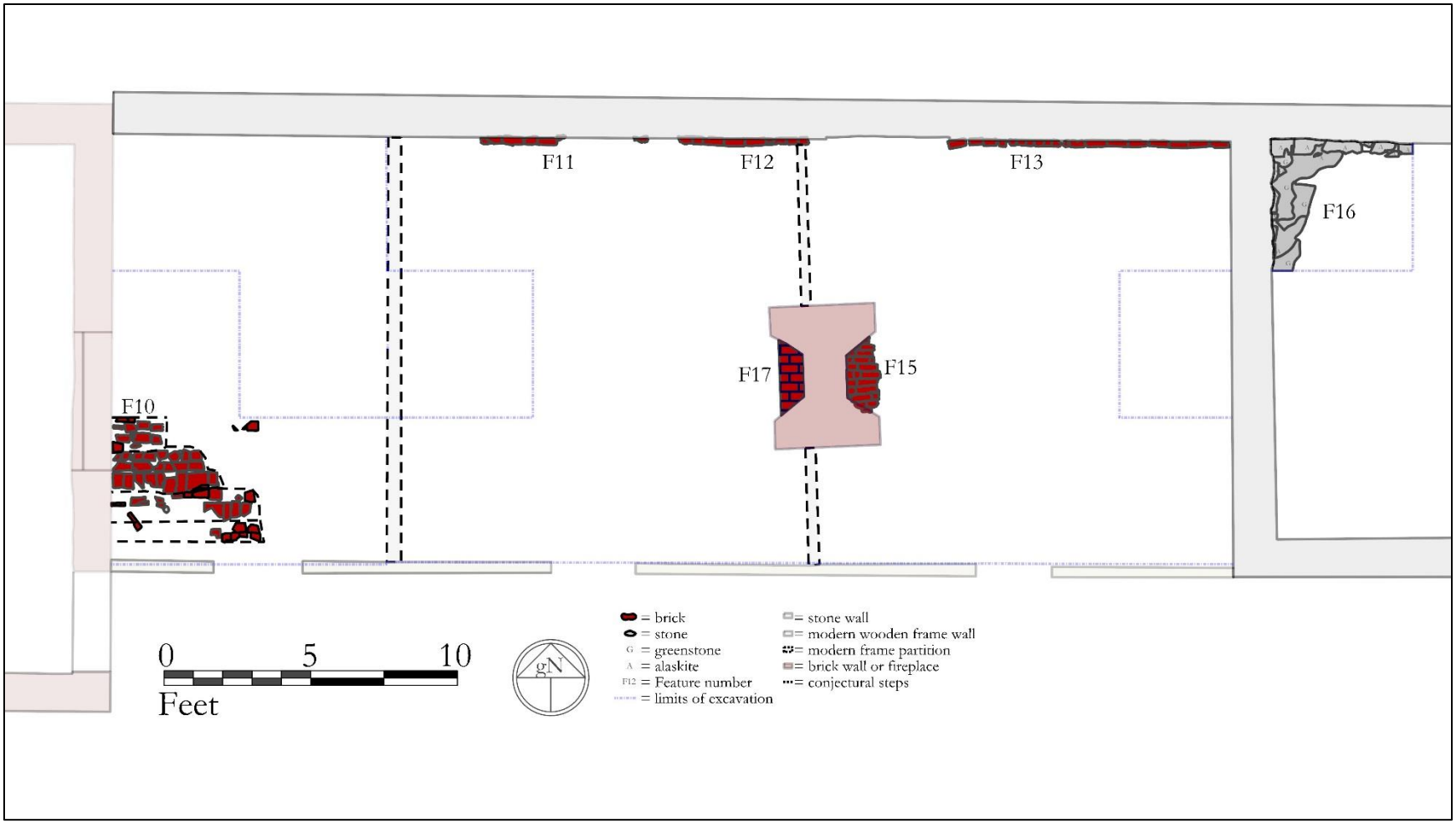


Figure 59: South Wing historic features

Excavations were halted after a month of fieldwork with the discovery of asbestos in the fill of pipe trenches from the 1940s. Excavations shifted to the South Pavilion. We returned to the Wing once the asbestos was abated. Wearing respirators, work continued until we were confident that no Jefferson-era features intruded subsoil. Most of the work entailed documenting the routes of pipe trenches related to the men's and women's restrooms and a fire hydrant. Time constraints precluded excavation of the pipe trenches and other modern features.

Period 1 (1770s)

The earliest feature in the South Wing was a set of brick stairs found, photographed (Figure 16), and drawn by Milton Grigg in 1941 (Figure 15). These stairs allowed enslaved cooks to transport food from the bottom story of the Pavilion to the top story or to the dining room in the main house (Figure 60). Jefferson drew the stairs on his plan for the mountaintop terraces (N34, Figure 5). The excavations uncovered the remains of four treads from stairs (SG100 in F10, Figure 61, Figure 62, Table 13, Figure 63). The treads were comprised of both whole bricks and brick bats. The treads were a single brick thick: each brick was simply laid on the B-horizon surface that had been sculpted level. The orientation of bricks from tread to tread varied, but orientation within each row was consistent. Bricks in the top step were all stretchers, while the rest of the steps had mixed orientations. The top two treads consisted of three rows of brick bats and complete bricks. The two bottom treads consisted of two rows of brick, both partially decayed and whole. One square brick paver was noted in the third tread below ground level and was the same type of paver used in the first kitchen floor.

Milton Grigg drew seven treads (Figure 15, Figure 34). He could see the additional three treads because he dug further south under what is now a brick walkway. He did not document

any square brick pavers. The upper portion of the stairs was removed when the South Wing was built in the early 19th century. See Table 14 for stratigraphic groups and features from Period 1.

Figure 60: Period 1 South Pavilion digital rendering with stairs leading to the West Lawn (RenderSphere 2017f). View northwest.

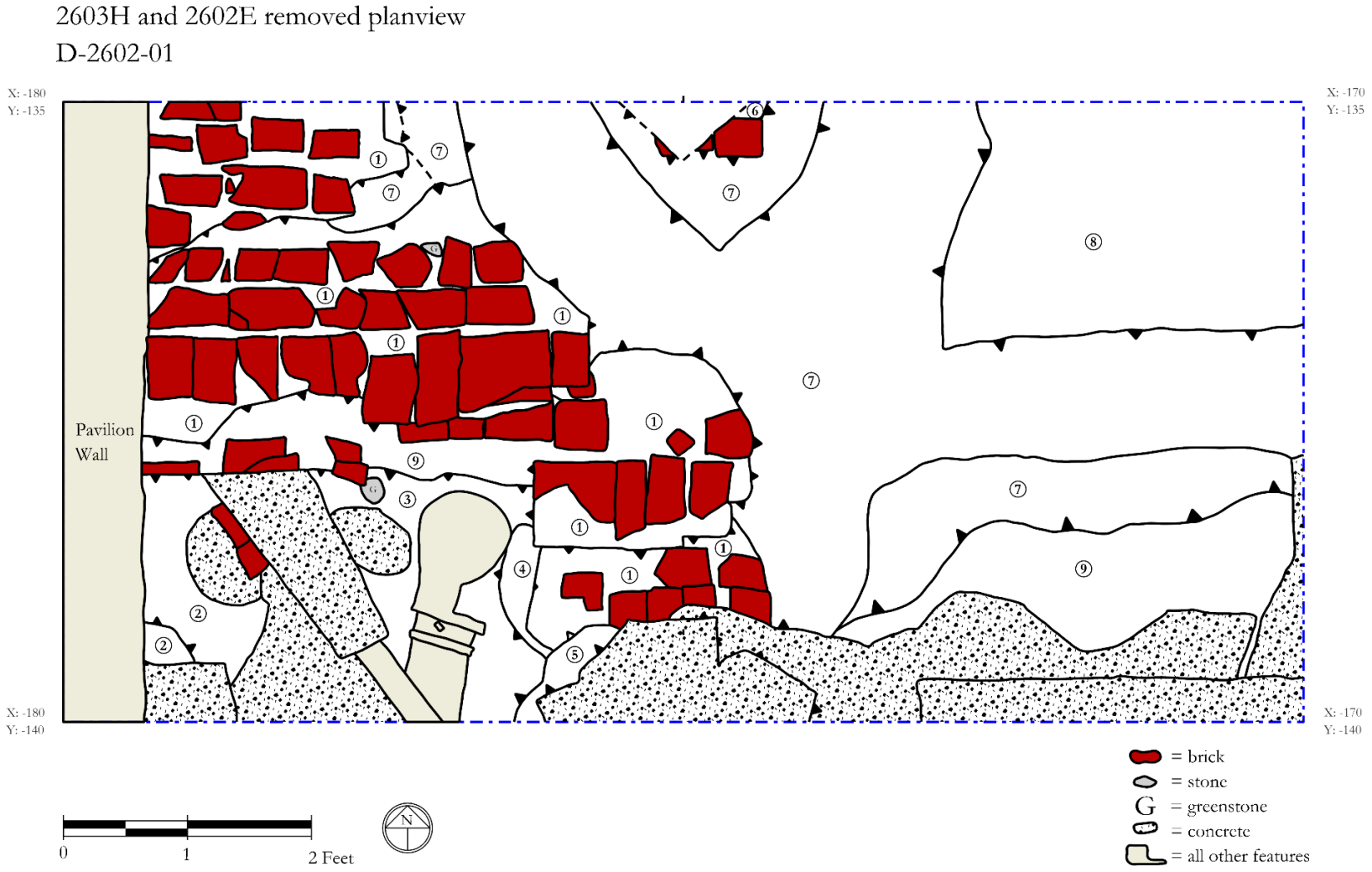


Figure 61: D-2602-01 plan view. View north.

Table 13: Contexts, sediment descriptions, and SGs for Figure 61

Number	Context(s)	Munsell	SG	Interpretation
1	Not excavated	Dark Red [2.5YR 3/6] Silty Clay, 50% Brick (2-4), 7% Greenstone (2-3), and 3% Charcoal (1-3).	--	--
2	Not excavated	Reddish Brown [5YR 4/4] Loamy Sand, 20% Concrete (2-4), 6% Greenstone (1-2), 2% Brick (1-3), and 2% Slate (1-3).	--	--
3	Not excavated	Dark Red [2.5YR 3/6] Silty Clay, 1% Concrete (1-3), 1% Greenstone (1-3), and 1% Mortar (1-2).	--	
4	Not excavated	Red [2.5YR 4/6] Clay.	--	--
5	Not excavated	Yellowish Red [5YR 5/8] Silty Clay Loam, 20% Unmodified Stone (2-4), and 20% Concrete (2-4).	--	--
6	Not excavated	Brick (3-4), 27% Dark Red [2.5YR 3/6] Silty Clay, and 3% Greenstone (2-5).	--	--
7	Not excavated	Red [2/5YR 4/6] Clay and 30% Greenstone (2-5).	--	--
8	Not excavated	Red [2.5YR 4/6] Clay, 5% Greenstone (1-3) and 1% Dark Reddish Brown [5YR 3/4] Sand.	--	--
9	Not excavated	Reddish Brown [5YR 4/4] Silty Clay, 10% Charcoal (1-3), 5% Brick (2-4), 5% Concrete (2-4), and 5% Greenstone (1-4).	--	--

Figure 62: 1770s stairs plan view. 2603H and 2604A removed. View north.

Figure 63: 1770s stairs in profile. View west.

Archaeologists left the stairs *in situ* and covered them with filter fabric. Construction crews placed a concrete footer on top of the bricks to support a new frame wall but first protected the stairs with foam. The new concrete footer cantilevered so as not to rest directly upon the bricks themselves.

Table 14: Stratigraphic groups and features from Period 1

Feature number	Stratigraphic Group (SG)	Context	Description	Interpretation	Dimensions (feet)	Depth (feet)
F10	SG100	2602E, 2603I	Brick stairs. A total of four steps in partiality because of intrusions were revealed.	Brick stairs from 1770 leading from Pavilion to West Lawn	5.0 x 4.2	*Not excavated*

Period 2 (1809-1941)

Construction on the South Wing started in 1801 and was likely completed by 1809 in preparation for Jefferson's retirement from the presidency. The Wing housed a dairy, two rooms for enslaved laborers who worked in the main house, a smokehouse, a cook's room, and a new kitchen. Excavations in the wing were limited to the westernmost four rooms. Masons built the stone walls by first dry-laying footer made of predominantly alaskite boulders (SG110 in F16) to support the wall above. See Table 15 for a complete list of stratigraphic groups and features from Period 2.

The two rooms for enslaved domestics were heated by back-to-back fireplaces sharing a single stack. Archaeologists cleaned and photographed the hearth (F15) in the east room and left it *in situ* (Figure 64). In the west room, mason Henry Cersley removed cinder blocks installed in the 1940s, photographed the remaining hearth (F17), and stabilized the bricks in the chimney stack (Figure 65). The handmade bricks in both hearths were badly deteriorated. In both cases, the bricks were laid on their sides. They were protected before the new exhibits were installed.

Figure 64: Archaeologist Craig Kelley observes Feature 15, the fireplace hearth in the east "servant's room." View west.

Figure 65: The fireplace hearth (Feature 17) in the west "servant's room." View east. The yellow arrow points to a later repair that then was removed by Henry Cersley in February of 2017. The blue arrow points to what is left of the original hearth.

Aside from the chimney itself, we found no subsurface evidence for walls dividing the two rooms for enslaved domestics. Grigg did find evidence of the original frame partitions in the dairy and between the east and west slave rooms. He also found brick floors (Grigg 1941c), although just how much of those floors remained is unclear in his communications with Fiske Kimball. Recent excavations found what remained of the floor, a single row of bricks in both the west and east rooms (SG101 in F11, SG102 in F12, SG103 in F13). When installing the brick floor, Jefferson's masons placed the bricks directly on top of subsoil and laid bricks on their sides with the long ends running east-west. This is the same pattern found in both hearths, and it is likely that the latter were originally continuous with the brick floor in both rooms. This pattern

was also used in the kitchen floor repair and in the small fragment that survived in vestibule of Building E. Archaeologists left the bricks *in situ*. Archaeologists found no evidence of subfloor pits in either the east or west rooms.

Table 15: Stratigraphic groups and features from Period 2

Feature number	Stratigraphic Group (SG)	Context	Description	Interpretation	Dimensions (feet)	Depth (feet)
F11	SG101	2611C, 2646A	Dry-laid bricks on end running east-west located along north wall	Brick floor from c. 1808	2.9 x 0.2	*Not excavated*
F12	SG102	2609C, 2611B	Dry-laid bricks on end running east-west located along north wall	Brick floor from c. 1808	6.3 x .25	*Not excavated*
F13	SG103	2608D, 2647A, 2648A	Dry-laid bricks on end running east-west located along north wall	Brick floor from c. 1808	9.8 x .25	*Not excavated*
F15	--	2606F	Brick hearth	Brick hearth in east slave room	2.9 x 1.4	*Not excavated*
F16	SG110	2613E, 2613F	Alaskite cobbles and boulder footer	Dry-laid footer for smokehouse and South Wing retaining wall	8.0 x 5.0	*Not excavated*
F17	--	2607C	Brick hearth	Brick hearth in west slave room	2.9 x 1.0	*Not excavated*

Period 3 (20th Century)

Most of the deposits excavated in the South Wing date to the 20th century. They were related to the installation of the men's and women's restrooms in the 1940s, the expansion of the women's room in 1967, and the installation of a central heating and air conditioning system in the Smokehouse in 1954. Figure 66 shows features from Period 3 referenced throughout the next section.

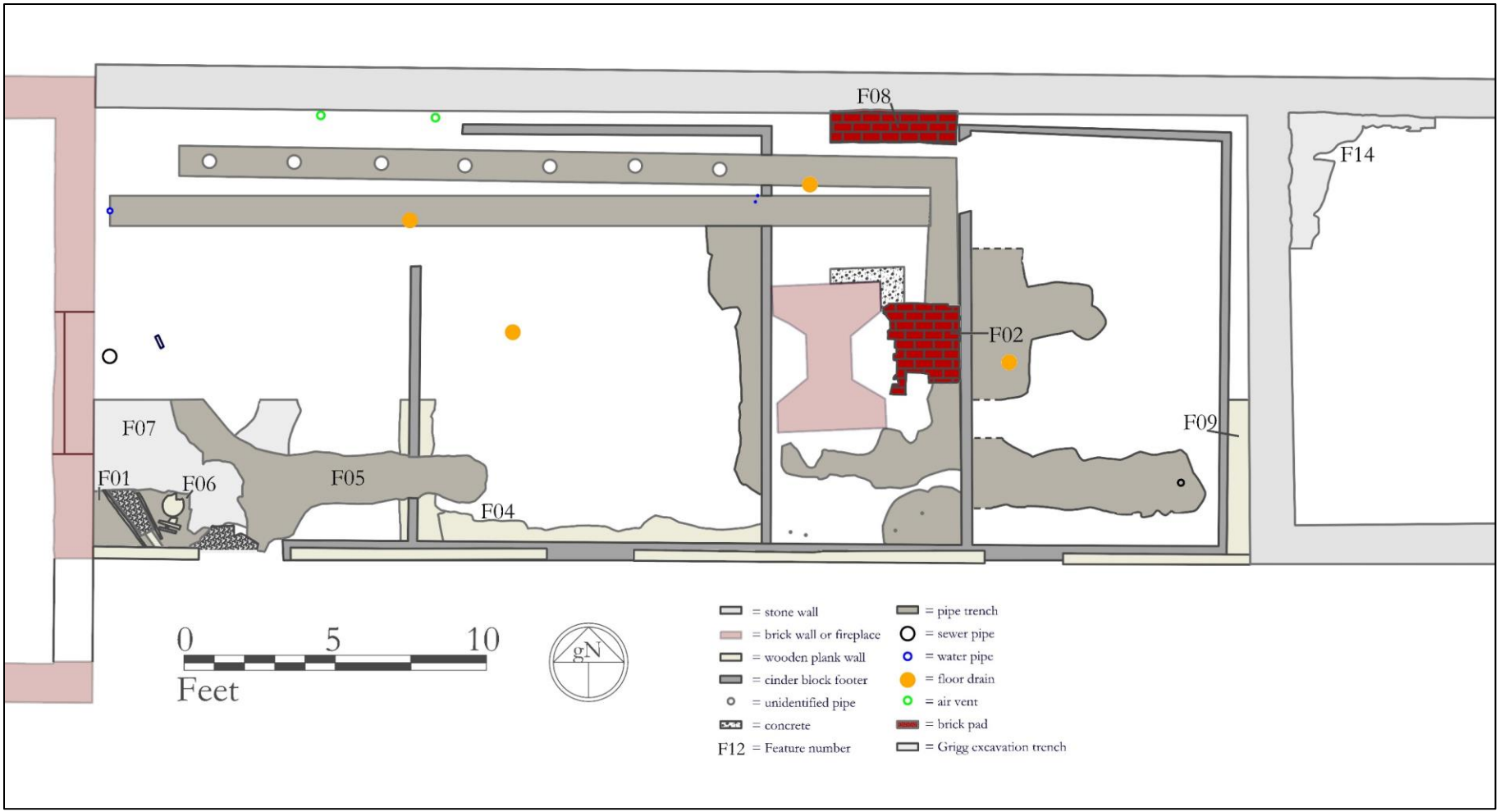


Figure 66: South Wing features from Period 3

In 1941, Milton Grigg's team tested the spaces under the Wing prior to the Thomas Jefferson Memorial Foundation installing a men's restroom in what was the east slave room and a women's restroom in what was the west slave room (Figure 67). Archaeologists excavated one of Grigg's cross trenches in the Dairy, which was oriented northeast to southwest (SG104 in F07), and other Grigg backfill deposits (also 2603G and H) also in the Dairy. Grigg's zig-zag cross trench may have intersected the 1770's stairs.

Figure 67: Photograph from 1941, looking northeast towards the east "servants room" (Grigg 1941k). This image records the rebuilding of the terrace and columns along the Wing and the excavation of dirt in the east and west "servant's" rooms.

Excavators found several pipes and pipe trenches in the dairy associated with the sinks and toilets but only excavated one due to project time constraints (SG107 in F05). Several 20th-century pipe trenches (F01, F05, F06) intruded the stairs. Excavators also noted concrete footers for interior walls in two spots (SG105 in F04, F09) which date to the installation of the restrooms in the 1940s (Mesick Cohen Waite 1992:233). Feature 4 was an east-west running builder's trench for a concrete footer for a wall. Feature 9 was a north-south running builder's trench for the stone wall between the east slave room and the Smokehouse. Archaeologists documented and excavated what remained of pipes and pipe trenches (F06) from a fire hydrant near the 1770's stairs in the dairy. The Thomas Jefferson Foundation (TJF) installed this fire hydrant around the same time as the installation of a sprinkler system in 1971. TJF removed and capped the hydrant around 2011 or 2012 (SG106 in F01) when they switched to a mist system from the sprinkler system for fire suppression.

As part of the 1940's restoration, Grigg installed a brick floor or brick pad on a sand substrate in front of the hearth in the east slave room (F02). All that remained of this floor was flat bricks running east-west and a sandy substrate. Archaeologists noted a similar brick pad in the same room along the north wall (F08) of the east slave room.

Finally, in the northwest corner of the Smokehouse, after removing several thin deposits of post-1941 work (2613A, B, and D), archaeologists excavated what was probably a builder's trench re-dug (F14) by Grigg's crew to repoint or stabilize the existing masonry wall (Figure 68). Excavators removed layers of demolition debris and post-1967 work (SG109) across all quadrats. A complete list of stratigraphic groups and features from Period 3 can be seen in Table 16.

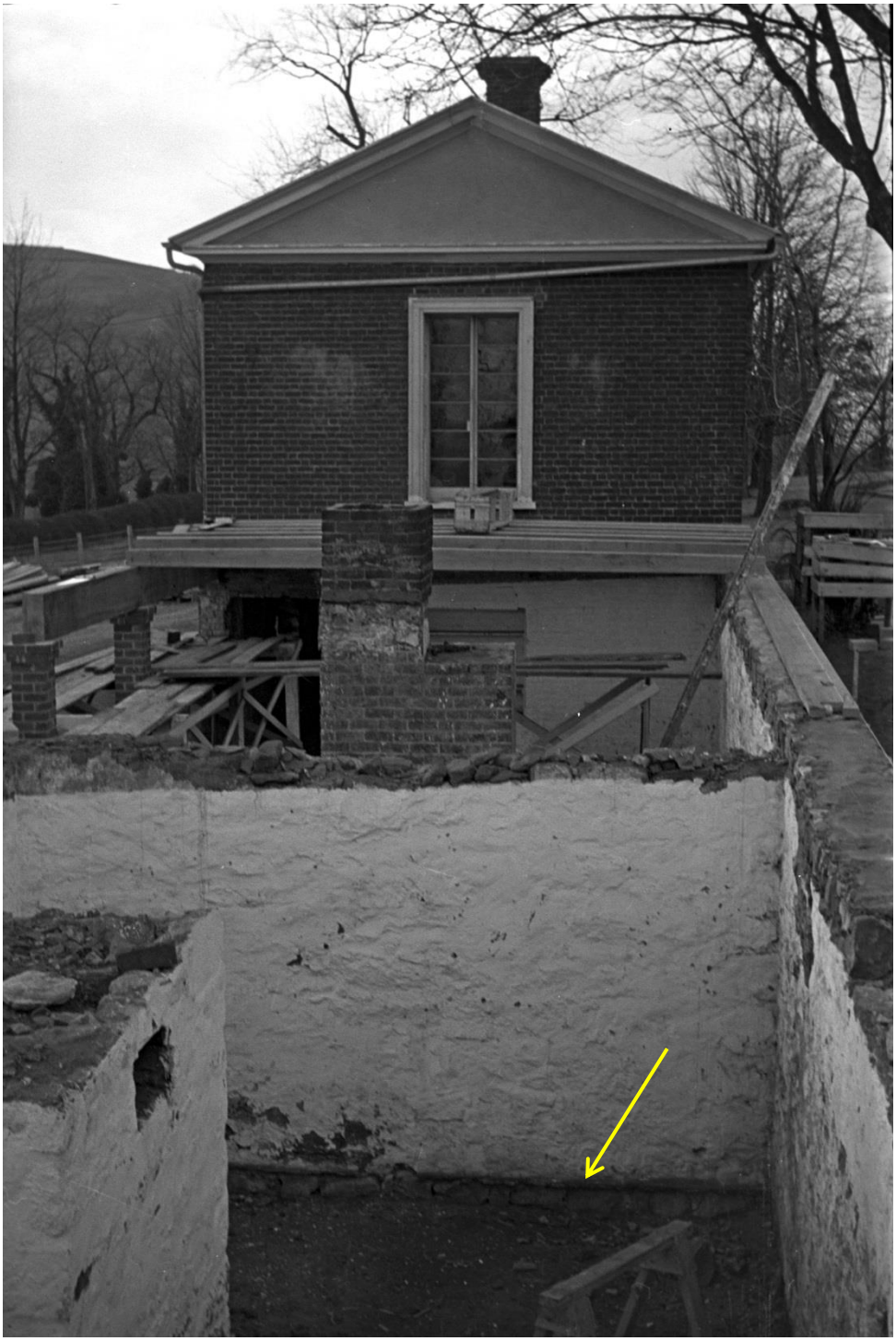


Figure 68: Photograph looking west of Milton Grigg's work in 1941 on the South Wing (Grigg 1941j). Note the stone footer exposed along the base of the wall in the Smokehouse dug by Grigg's team.

Table 16: Stratigraphic groups and features from Period 3

Feature number	Stratigraphic Group (SG)	Context	Description	Interpretation	Dimensions (feet)	Depth (feet)
F07	SG104	2602D, 2603F, 2603G, 2603H	Dark red clay intrusion	Backfill in Grigg's excavation	4.9 x 4.1	0.78
F04	SG105	2598C, 2602C	Linear red and yellowish red silty and sandy clay intrusion running east/west along cinder block wall base. The base of the trench had a concrete footer.	Builder's trench for 1940's cinder block wall	3.7 x 1.5	0.51
F01	SG106	2603A, 2604A	Linear intrusion with blue gravel, dusty blue grey sand, and concrete. The bottom of the trench revealed a pipe with a concrete mold around it and the base of the fire extinguisher pipe that turned 90° south.	Pipe trench for fire hydrant in southwest corner of Wing	3.95 x 2.5	1.43
F05	SG107	2598B, 2602B, 2603D	Sandy clay fill intrusion with one copper and one iron pipe. Copper pipe runs above the iron pipe.	Backfill in pipe trench for 1967 women's restroom expansion. Trench for 4" cast iron pipe and 1" copper pipe	9.0 x 3.5	1.1
--	SG108	2601B, 2606E	Red silty clay	Cap on pipe trench from 1940's restroom installation	--	--
--	SG109	2596A, 2597A, 2598A, 2599A, 2600A, 2601A, 2602A, 2603B, 2603C, 2605A, 2605B, 2606C, 2606D, 2607A, 2607B, 2608A, 2609A, 2609B, 2610A, 2611A, 2612A	Mottled reddish brown and red silty clay with mortar and concrete inclusions	2016 demolition debris and cleaning layer post-1967 construction	--	--
F02	--	2606A, 2606B	Dry-laid bricks set on end and set into sand	Reconstructed brick floor/hearth from 1941	3.0 x 2.1	0.42
F06	--	2603E	Red silty clay semi-circular intrusion around fire extinguisher pipe	Trench for fire extinguisher pipe	1.6 x 1.2	1.39
F08	--	2608B, 2608C	Machine-made, dry laid	Brick floor from	4.2 x 1.1	0.36

			bricks set on end into sand	1941		
F09	--	2600B	Thin, loose, yellowish red sandy clay loam intrusion with greenstone and mortar dust inclusions running north/south	Builder's trench from cinder block	5.0 x 0.6	0.17
F14	--	2613C	Weak red sandy clay loam intrusion along masonry wall	Builder's trench for 1801 masonry wall reexcavated by Grigg in 1941	4.5 x 2.6	0.62

ARTIFACTS, SOUTH PAVILION

A total of 152,712 artifacts were collected and catalogued from the South Pavilion. Most came from either 20th-century intrusions like pipe trenches (Feature 1, n=26,296 artifacts, or 17% of the entire assemblage) and the backfill of Grigg's excavations (Features 3 and 21, n=47,744 artifacts, or 31% of the entire assemblage, totaling nearly a third all artifacts) or the fill brought in by enslaved workers in 1808 to raise the floor level with the adjacent wing (SGs 28, 27, and 26) (n=26,660, or 17% of the entire assemblage). Based on our understanding of the site depositional processes, most of these artifacts were originally discarded in the West Kitchen Yard. The following sections provide counts and relative frequencies for various artifact types. Appendix 3 is an artifact catalog providing counts of artifacts recovered from the Pavilion.

Ceramics

A total of 1,717 ceramics were found in the South Pavilion (Table 17). The assemblage is dominated by Chinese Porcelain (n=445) and whiteware (n=318), which account for 26% and 19%, respectively. When combined, pearlware (n=285) and creamware (n=288, Figure 69) represent a third (33%) of the assemblage. Remaining ware types include but are not limited to Ironstone/White Granite, Porcelaneous/Hard Paste, both British and American Stoneware, Yellow Ware, Black Basalt, Delftware, and a few sherds of Native American pottery.

Table 17: Ceramic ware types and their mean ceramic dates found at the South Pavilion.

Ceramic Ware	MCD Ranges	Sherd Count	Relative Frequency
Porcelain, Chinese	1660-1860	445	0.259
Whiteware	1820-2000	318	0.185
Creamware	1762-1820	288	0.168
Pearlware	1775-1830	285	0.166
Ironstone/White Granite	1840-2000	100	0.058
Refined Earthenware, unidentifiable	NA	65	0.038
Porcelaneous/Hard Paste	1820-2000	57	0.033
British Stoneware	1671-1800	30	0.017
Yellow Ware	1830-1940	30	0.017
Redware	1700-1900	20	0.012
American Stoneware	1750-1920	17	0.01
Delftware, Dutch/British	1600-1802	15	0.009
Porcelain, English Bone China	1794-2000	7	0.004
Porcelain, unidentifiable	NA	7	0.004
Stoneware, unidentifiable	NA	5	0.003
Coarse Earthenware, unidentified	NA	4	0.002
Bristol Glaze Stoneware	NA	3	0.002
Native American	NA	3	0.002
Black Basalt	1750-1820	2	0.001
Buckley-type	1720-1775	2	0.001
Redware, refined	1780-1900	2	0.001
Refined Stoneware, unidentifiable	NA	2	0.001
Tin-Enameled, unidentified	1600-1802	2	0.001
White Salt Glaze	1720-1805	2	0.001
Astbury Type	1725-1775	1	0.001
British Brown/Fulham Type	1671-1775	1	0.001
Canary Ware	1780-1835	1	0.001
Jackfield Type	1740-1790	1	0.001
Rosso Antico	1690-1775	1	0.001
Unidentifiable	NA	1	0.001

Figure 69: Creamware with Royal Pattern edge from context 2584S. The sherd is from SG14/F11 (Period 2 drainage ditch).

Just under half of the ceramics have decoration (n=779, or 45%), the majority of which, when combined, are handpainted blue and overglaze Chinese Porcelain (n=367, or 21%; Figure 70, Figure 71, Figure 72). Ceramic genres, or decoration, among decorated sherds include but are not limited to blue transferprint, sponge/splatter, overglaze, factory made slipware, shell edge, and molded edges (Table 18).

Table 18: Ceramic ware types and genres found on ceramics from the South Pavilion. "Not Applicable" means that a ceramic is undecorated and therefore does not have a Genre.

Ceramic Ware	Ceramic Genre	Count	Relative Frequency
Porcelain, Chinese	Handpainted Blue	312	0.182
Creamware	Not Applicable	261	0.152
Whiteware	Not Applicable	181	0.105
Pearlware	Not Applicable	151	0.088
Ironstone/White Granite	Not Applicable	97	0.056
Porcelain, Chinese	Not Applicable	77	0.045
Porcelain, Chinese	Overglaze, handpainted	55	0.032
Refined Earthenware, unidentifiable	Not Applicable	51	0.03
Pearlware	Transfer Print Under, blue	45	0.026
Pearlware	Handpainted Blue	40	0.023
Porcellaneous/Hard Paste	Not Applicable	34	0.02
Whiteware	Transfer Print Under, blue	33	0.019
British Stoneware	Not Applicable	30	0.017

Whiteware	Sponge/Spatter	26	0.015
Porcellaneous/Hard Paste	Overglaze, handpainted	23	0.013
Redware	Not Applicable	20	0.012
American Stoneware	Not Applicable	17	0.01
Yellow Ware	Not Applicable	17	0.01
Pearlware	Handpainted, Polychrome Warm	16	0.009
Whiteware	Slipware, factory made	15	0.009
Delftware, Dutch/British	Not Applicable	14	0.008
Pearlware	Shell Edge, blue	13	0.008
Yellow Ware	Slipware, factory made	13	0.008
Creamware	Royal Pattern	12	0.007
Refined Earthenware, unidentifiable	Transfer Print Under, blue	11	0.006
Whiteware	Flow, transfer print purple/black	11	0.006
Whiteware	Transfer Print Under, black	11	0.006
Creamware	Molded Edge Decoration, other	9	0.005
Whiteware	Shell Edge, blue	9	0.005
Whiteware	Transfer Print Under, light blue	9	0.005
Pearlware	Slipware, factory made	8	0.005
Pearlware	Shell Edge, green	7	0.004
Porcelain, unidentifiable	Not Applicable	7	0.004
Whiteware	Handpainted, Polychrome Cool	7	0.004
Stoneware, unidentifiable	Not Applicable	5	0.003
Whiteware	Transfer Print Under, purple	5	0.003
Coarse Earthenware, unidentified	Not Applicable	4	0.002
Pearlware	Molded Edge Decoration, other	4	0.002
Porcelain, English Bone China	Not Applicable	4	0.002
Bristol Glaze Stoneware	Not Applicable	3	0.002
Native American	Not Applicable	3	0.002
Whiteware	Flow, transfer print blue	3	0.002
Whiteware	Overglaze, handpainted	3	0.002
Black Basalt	Not Applicable	2	0.001
Buckley-type	Not Applicable	2	0.001
Creamware	Slipware, factory made	2	0.001
Porcelain, English Bone China	Overglaze, handpainted	2	0.001
Refined Stoneware, unidentifiable	Not Applicable	2	0.001
Tin-Enameled, unidentified	Not Applicable	2	0.001
White Salt Glaze	Not Applicable	2	0.001
Whiteware	Transfer Print Under, green	2	0.001
Astbury Type	Not Applicable	1	0.001
British Brown/Fulham Type	Not Applicable	1	0.001

Canary Ware	Not Applicable	1	0.001
Creamware	Bead and Reel	1	0.001
Creamware	Feather Edge	1	0.001
Creamware	Overglaze, handpainted	1	0.001
Creamware	Transfer Print Under, black	1	0.001
Delftware, Dutch/British	Handpainted Blue	1	0.001
Ironstone/White Granite	Flow, transfer print purple/black	1	0.001
Ironstone/White Granite	Molded Edge Decoration, other	1	0.001
Ironstone/White Granite	Victorian Majolica	1	0.001
Jackfield Type	Not Applicable	1	0.001
Pearlware	Sponge/Spatter	1	0.001
Porcelain, Chinese	An Hua	1	0.001
Porcelain, English Bone China	Transfer Print Under, blue	1	0.001
Redware, refined	Not Applicable	1	0.001
Redware, refined	Slipware, factory made	1	0.001
Refined Earthenware, unidentifiable	Shell Edge, blue	1	0.001
Refined Earthenware, unidentifiable	Shell Edge, green	1	0.001
Refined Earthenware, unidentifiable	Slipware, factory made	1	0.001
Rosso Antico	Not Applicable	1	0.001
Unidentifiable	Not Applicable	1	0.001
Whiteware	Flow, unid.	1	0.001
Whiteware	Handpainted, Polychrome Warm	1	0.001
Whiteware	Molded Edge Decoration, other	1	0.001

Figure 70: Chinese porcelain plate, hand-painted blue decoration, including a central landscape and house scene on the base; a stacked/adjacent combination border comprised of fish roe, trellis, and dot bands around the well; and a stacked/adjacent combination comprised of a trellis band, butterflies, and cartouches near the rim. Unidentified pattern that matches objects from other sites at Monticello, including Building *o*, Stewart-Watkins, and Mansion Foundation sites. Sherds are from contexts 2582F, 2583E, 2583F, 2584D, 2586C, 2587B, 2588D, 2588F, 2589C, and 2614B. Sherds come from SG28 (1808 fill); SG47/F01 (1967 pipe trench), and Grigg's backdirt (2582F).

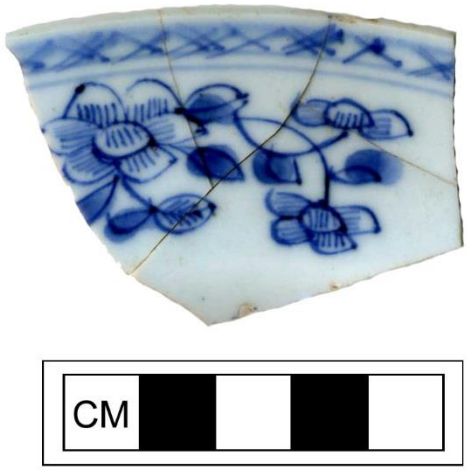


Figure 71: Chinese porcelain flat tableware with hand-painted blue trellis band and botanical elements from context 2588I. The shreds come from SG18/F11 (Period 3 drainage ditch).

Figure 72: Overglaze, handpainted Famille Rose Chinese porcelain plate fragment from context 2591B. The sherd comes from SG47/F01 (1967 pipe trench). Pattern matches a different object from Building *o* that was likely from the same service. While the Famille rose pattern dates from the 1720s–1795 (Litzenburg 2003:36), this example was identified by Senior Curator of Ceramics and Glass Leslie Grigsby at Winterthur to be from the 1770s or 1780s.

Forms were also noted by cataloguers. The forms of the majority of the ceramic fragments recovered are unidentified due to fragmentation: of the 1,717 ceramics, 793 sherds were unidentifiable (46%) (Table 19). Most of the identifiable forms are unidentified tablewares (n=684, or 40%) and can include items such as plates, platters, bowls, and mugs. Unidentified teawares, which can include teabowls, saucers, and teapot fragments, are also present, but at a much smaller percent (5%, n=87). Unidentified utilitarian wares, including milk pan and storage jars, total 63 fragments (4%). Most of these ceramics were found in contexts dating to the 20th century or to the 1808 fill. Few ceramics date to deposits from the use of the Pavilion as a kitchen, making it nearly impossible to tell based on the artifacts if enslaved cooks lived in the space as well as cooked in it.

Table 19: Ceramic forms from the South Pavilion

Ceramic Form	Count	Relative Frequency
Unidentifiable	793	0.462
Unid: Tableware	684	0.398
Unid: Teaware	87	0.051
Unid: Utilitarian	63	0.037
Plate	31	0.018
Saucer	19	0.011
Gastrolith	10	0.006
Serving Dish, unid.	8	0.005
Cup	4	0.002
Mug/Can	4	0.002
Bowl	3	0.002
Chamberpot	3	0.002
Platter	2	0.001
Storage Vessel	2	0.001
Bottle	1	0.001
Flower Pot	1	0.001
Milk Pan	1	0.001
Teacup	1	0.001

Of the 1,717 pieces of ceramics, most sherds were assigned to a flatware (n=718, 42%). Hollow wares account for about a fifth of the assemblage (n=350; 20%). Just over a third of sherds were unable to be assigned as hollow ware or flatware (n=649, 38%) (Table 20).

Table 20: Ceramic vessel categories from the South Pavilion.

Ceramic Vessel Category	Count	Relative Frequency
Flat	718	0.42
Unidentifiable	649	0.38
Hollow	350	0.20

Glass

The varieties of glass vessels range from case bottle glass to wine bottles to stemware. Some of these shards were leaded glass (n=261, 13%) (Table 21). The assemblage (Table 22) is dominated by wine bottles (n=1,136, 56%) (Figure 73).

Table 21: Glass material from glass vessels from the South Pavilion

Glass Material	Count	Relative Frequency
Non-lead	1763	0.870
Lead	261	0.129
Unidentifiable	3	0.001

Table 22: Glass vessel forms from the South Pavilion

Glass Form	Count	Relative Frequency
Bottle, Wine style	1136	0.5604
Bottle, Unidentifiable	371	0.1830
Unidentifiable	292	0.1441
Tableware, unidentifiable	105	0.0518
Container, unidentifiable	85	0.0419
Stemware	14	0.0069
Bottle/Vial, Pharmaceutical	13	0.0064
Bottle, Case	5	0.0025
Tumbler	3	0.0015
Bottle, Mineral/Soda	1	0.0005
Drinking Glass, unidentifiable	1	0.0005
Not Recorded	1	0.0005

Figure 73: Shoulder, neck, and finish of a severely patinated green wine bottle from context 2584D. Lip and string rim are both down-sloped, and neck is bulge-shaped. The shard comes from SG28 (1808 fill).

Mouth blown glass shards (89%, n=1,801) heavily dominate the glass assemblage. There are much smaller amounts of machine made glass shards (n=2, 0.1%), mold blown shards (n=124, 6%), such as a tumbler base with a starburst design (Figure 74), and free blown shards present (n=1, .05%) (Table 23).

Figure 74: Clear leaded tumbler base with molded sunburst design from context 2581E. The tumbler base comes from SG34/F03 (Grigg's backfill).

Table 23: Manufacturing technique of glass vessels from the South Pavilion

Manufacturing Technique	Count	Relative Frequency
Mouth Blown	1801	0.8885
Mold Blown	124	0.0612
Unidentifiable	99	0.0488
Machine Made	2	0.0010
Free blown	1	0.0005

General artifacts

The wide variety of general artifacts recovered from the South Pavilion again document the use of the West Kitchen Yard as a workspace and midden area in addition to capturing the effects of Milton Grigg's 20th-century excavations. Architectural materials recovered from the South Pavilion include mortar fragments (n=61,585; 230,333.2 g); window glass fragments (n=2,146); brick fragments (including bats, fragments, specialty, complete, and water table bricks) (n=57,928; 798,929.2 g); and 4,241 iron nails, including wrought nails (n=1,285); machine-cut nails (n=657); and drawn/wire nails (n=369) (Table 24). One of the bricks recovered (Figure 75) was a water table brick. The presence of mortar on the surface suggests

that it had been used in the first Monticello and was discarded in the kitchen Yard during the expansion campaign in 1796. It has an “X” incised on its surface.

Table 24: Select general artifact from the South Pavilion

General Artifact Form	Count	Weight (g)
Mortar, architectural	61,585	230,333.2
Brick Bat	154	140,559
Brick Fragment	9,816	489,733.3
Brick, specialty unid.	13	8,813.8
Brick, water table	1	393.8
Brick, whole	1	2,506.1
Brick/Daub	47,943	156,923.2
Window glass	2,146	--
Wrought nails	1,285	--
Machine-cut nails	657	--
Drawn/Wire nails	369	--
Not a wire nail	1,179	--
Unidentified nail	751	--

Figure 75: Water table brick with mortar and an incised X from context 2589B. The brick comes from SG42 (Grigg's backfill). The presence of mortar may suggest that this brick was from Monticello I.

Other notable artifacts from the South Pavilion capture late 18th to early 19th-century life at Monticello. For instance, a possible bone comb tine or bone toothpick (Figure 76), a carved bone ornament perhaps for an earring of curtain (Figure 77), 13 toy marbles, 1 glass thermometer rod (Figure 78), 1 quartz crystal (Figure 79), and 3 toothbrush heads were recovered.

Figure 76: Unidentified bone from context 2582E. The left end is rounded off while the other end is broken off. It is possibly part of a comb tine or part of a bone toothpick. This comes from SG33/F03 (Grigg's backfill).

Figure 77: Carved bone ornament from context 2589D. There is a hole in the hut-shaped extension, suggesting that this artifact hung from another element, possibly like a dangling earring or some type of decoration hanging from a curtain. The ornament comes from SG30 (Grigg's backfill).

Figure 78: Blown glass thermometer rod from context 2588D. The thermometer comes from SG47 (1967 pipe trench).

Figure 79: Clear quartz crystal from context 2585D. The crystal comes from SG34/F04 (Grigg's backfill).

Other artifacts could document this space's use as a Wash House and place in which clothing was repaired or mended. Alternatively, these activities could have easily taken place in the yard space outside of the kitchen or Wash House. There are 2 cloth or bale seals, 2 crinoline clamps (Figure 80), 41 beads (22 jet, 18 glass, and 1 shell) (Figure 81), 3 clothing eyes (Figure 82), one clothing fastener, 8 clothing hooks, 7 thimbles, 138 straight pins, and 111 buttons (44 porcelain, 24 bone, 16 shell, 15 copper alloy, 8 iron, 2 glass, and 2 hard rubber).

Figure 80: A copper alloy crinoline clamp from context 2586H. It was a fastener used to affix the tape attachments to the hoops on a bustle crinoline. The fastener comes from SG43 (Grigg's backfill).

Figure 81: Dark blue barrel-shaped wound glass bead with 21 cut/ground facets from context 2585D. The bead comes from SG34/F03 (Grigg's backfill).

Figure 82: Copper alloy clothing fastener eye from context 2585I. The eye comes from SG46 (2016 demolition debris).

Other iron or pewter objects recovered from the South Pavilion include a wrought iron strap hinge (Figure 83), a copper alloy mortar base (Figure 84), five chains (Figure 85), a brass pull on a stopper for a whiskey decanter or bottle (Figure 86), and six utensils (two two-piece forks, two two-piece knives, one two-piece unidentified utensil, and one unidentified knife) (Figure 87).

Figure 83: Wrought iron strap hinge pre-conservation from context 2588Q. The strap comes from SG11 (Period 1 fill).

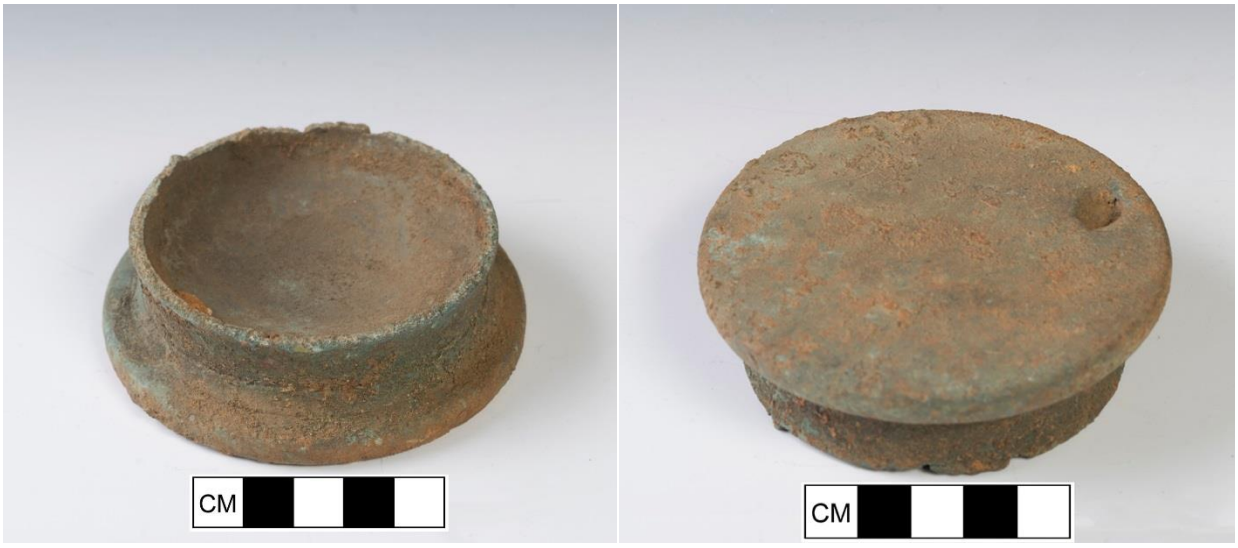


Figure 84: Cast brass mortar base from a mortar and pestle from context 2588Q. The base comes from SG11 (Period 1 fill).

Figure 85: Wrought iron chain fragments post-conservation from context 2585D. The chains are from SG34/F03 (Grigg's backfill).

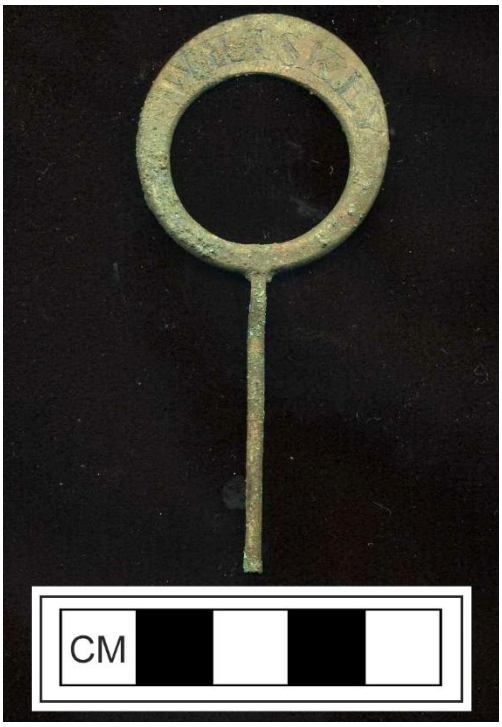


Figure 86: Brass pull on a stopper for a whiskey decanter or bottle from context 2586F. The pull comes from SG31/F03 (Grigg's backfill). This pull has a long tang that would have been anchored in a cork plug. The word "WHISKEY" is hand engraved on one surface of the pull.

Figure 87: Iron utensil knife blade and part of the tang from context 2584G. There is one and possibly two pins where the handle attached to the blade. According to Noel Hume, this style of curved blade dates to the mid-18th century (Noel Hume 1970:182). This knife is from SG25 (mortar rubble). Two-tined wrought iron fork fragment including the tines and part of the stem from context 2584J. The fork is from SG34 (possible stew stove deconstruction).

Faunal artifacts

Faunal material in the South Pavilion totals 7,475 pieces of bone weighing 2,188.6 grams. Four butcher marks were present on two of these bone fragments (Figure 88). Finally, 2,862 eggshell fragments were recovered (Figure 89).

Figure 88: Mammal bones with butcher marks from contexts 2583B (SG47/F01, 1967 pipe trench) and 2581E (SG34/F03, Grigg's backfill).

Figure 89: Eggshell fragments from context 2588I, which is from SG18/F11 (Period 3 drainage ditch).

Seriation Chronology

Correspondence analysis (CA), a multivariate ordination method, offers a way to visualize the statistical similarities among assemblages in ceramic ware type frequencies (Neiman et al. 2003). Correspondence analysis allows us to better place layers in time and date phases of occupation, use, and abandonment in the kitchen. Of the 1,717 ceramics found, only 1,534 are used in the CA analysis; SGs, Features, or Contexts with sample sizes less than five sherds and ceramic ware types with no manufacturing dates were removed from the data set. Additionally, one SG was removed as an outlier, SG18 in F11 due to the relatively high presence of Delftware in this grouping (n=9).

The CA summarizes variation among assemblages by plotting their locations or score on two underlying dimensions. The resulting plot captures 64% of the variation (Figure 90) among the assemblages, so we can reliably use these two variables.

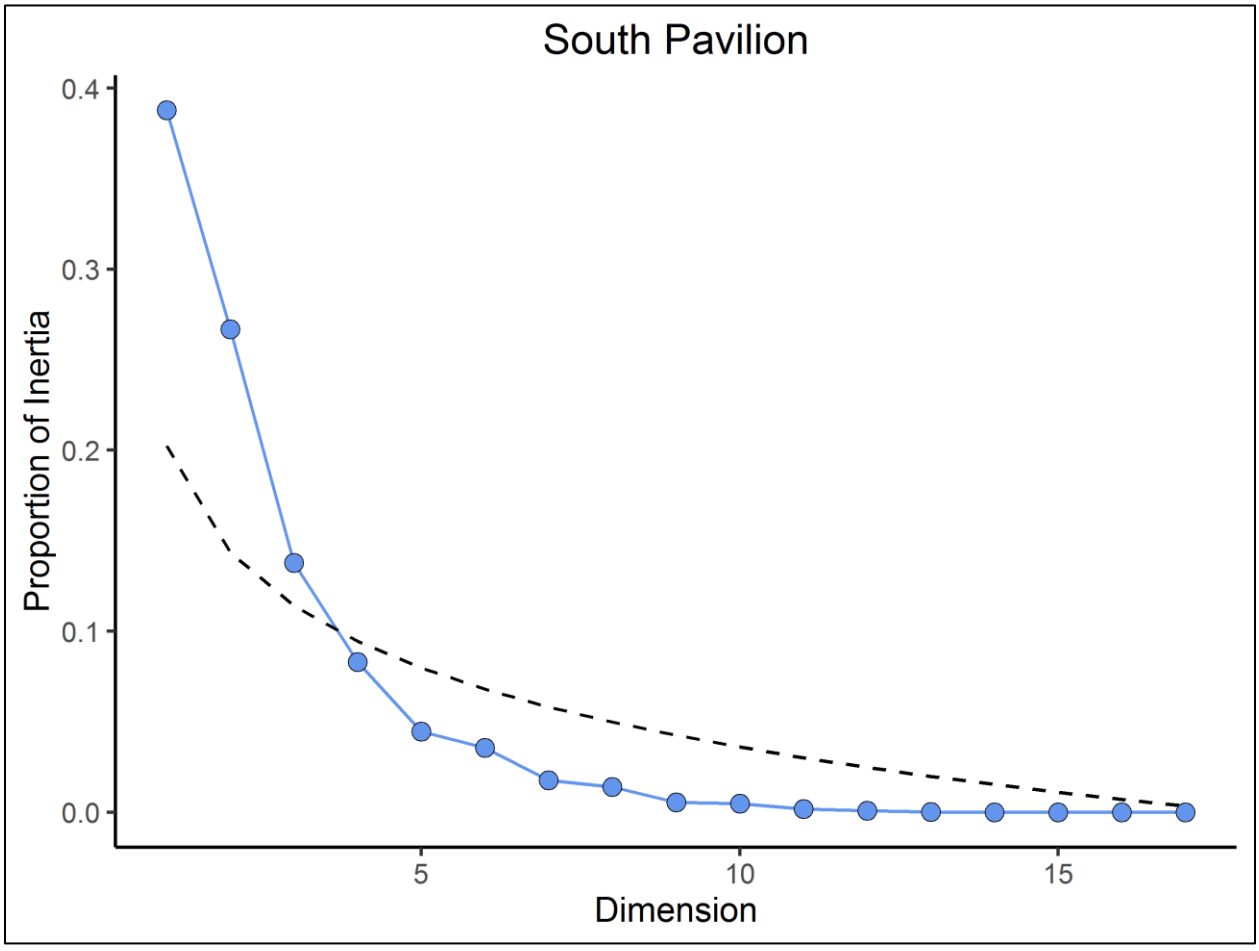


Figure 90: The inertia plot shows that Dimensions 1 and 2 account for 64% of the variation.

The CA plot shows three distinct clusters in assemblages from the South Pavilion (Figure 91) driven by particular ware types (Figure 92). In the assemblage plot, each dot represents an assemblage, and assemblages that are closer together have the most similar ware type relative frequencies. Cluster 1 includes the 1808 fill (SGs 26, 28, 2582F) and ash from the hearth in the

northwest corner fireplace (F16/SG21). Cluster 2 includes sediment used to level the floor under the dresser (SG11), trench fill in front of the stew stove (2583L), and fill of the unidentified pit to the west of the stew stoves (2582Y/F10). Finally, Cluster 3 mostly includes 20th-century intrusive deposits, such as Grigg's backfill and pipe trenches. The exception is SG22, which is the fill between the bricks in the brick floor. SG22 contains five sherds of Chinese Porcelain, six sherds of creamware, one sherd of redware, and thirteen sherds of pearlware. There are no later dating ceramics in SG22, but there are also no earlier dating ceramics like Delftware to push SG22 further left (earlier) on the plot.

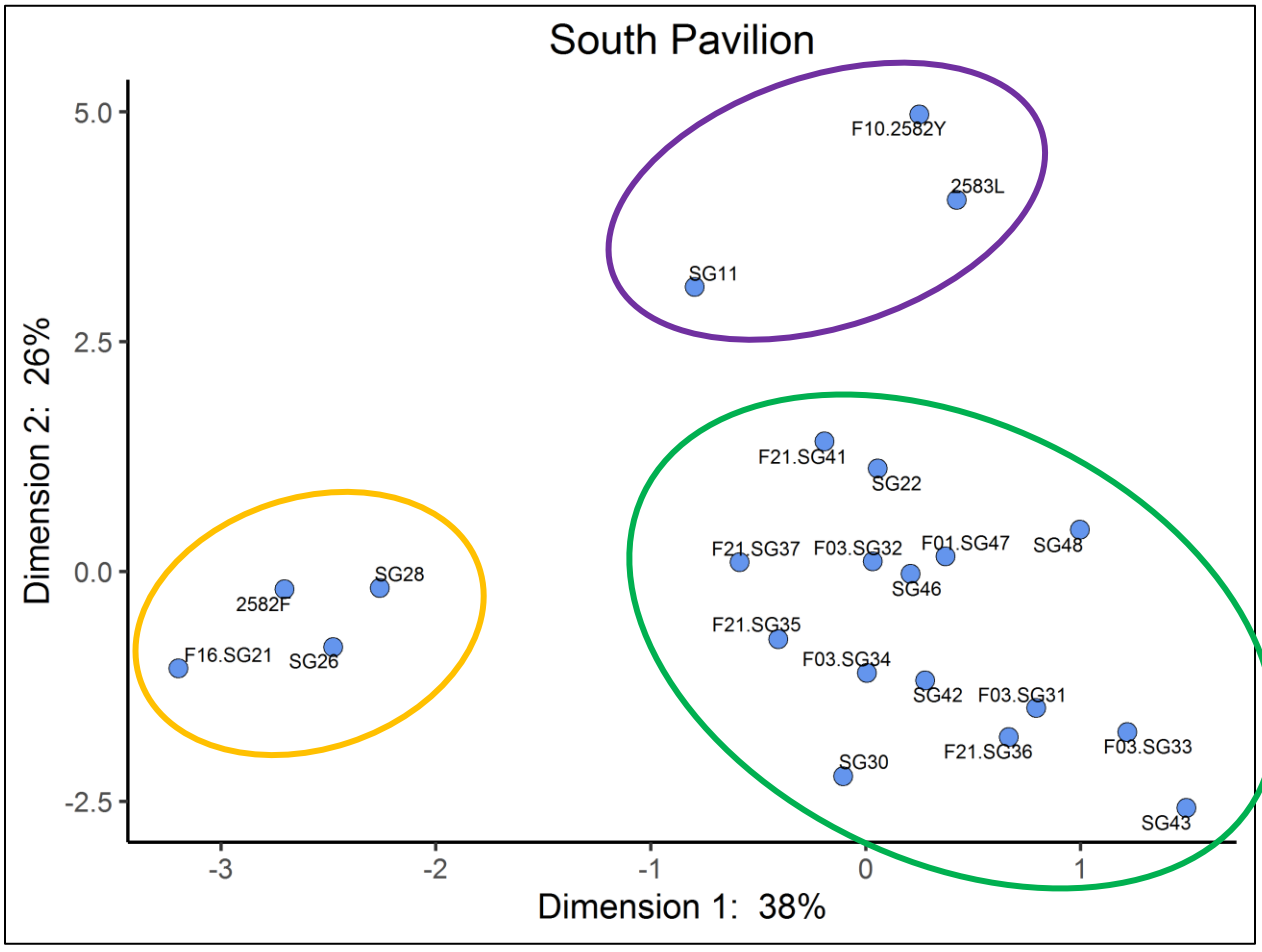


Figure 91: Correspondence analysis. Dimension 1 versus Dimension 2 scatter plot. Note the three clusters. Orange is Cluster 1; purple is Cluster 2; green is Cluster 3.

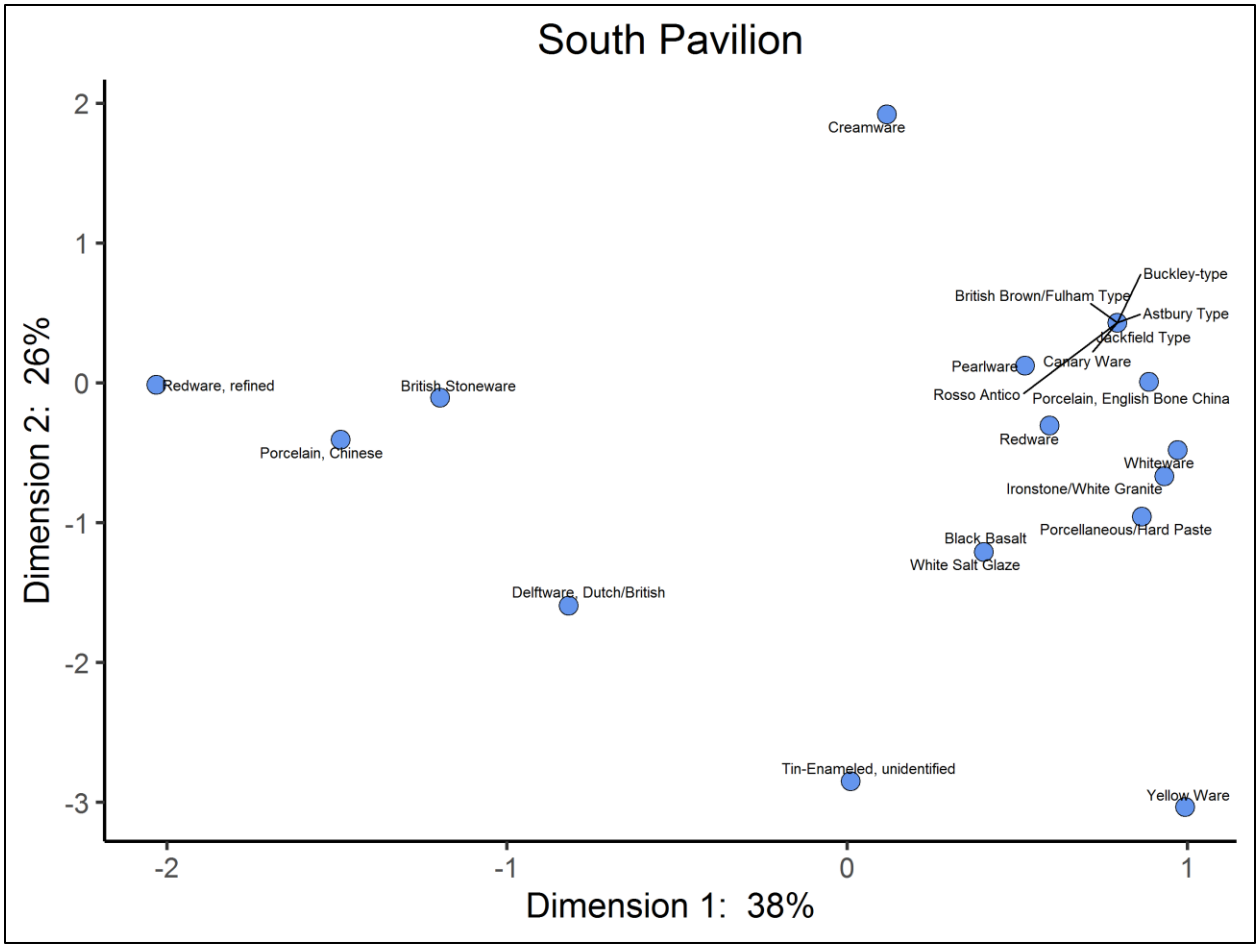


Figure 92: Dimension 1 versus Dimension 2 with Ware Types

In addition, a blueMCD (Best Linear Unbiased Estimator Mean Ceramic Dates) was calculated for each stratigraphic group or context. BlueMCDs are weighted MCDs, which take manufacturing date ranges into consideration with weight placed on ware types that have tight production dates over wares like Chinese Porcelain. In plotting the Dimension 1 scores against each SG's blueMCD date, we see a distinct linear pattern emerge (Figure 93). This linear pattern clearly shows that time as represented by the blueMCD is a primary factor affecting the dimension 1 score. Deposits with earlier dating ceramics are at the bottom left of the plot, and deposits with later dating ceramics are towards the top right of the plot. The exceptions are SG11

(sediment used to level the floor under the dresser), 2582Y/F10 (fill in the pit to the west of the stew stoves), and 2583L (trench fill), and SG22 (sediment in between bricks in the brick floor).

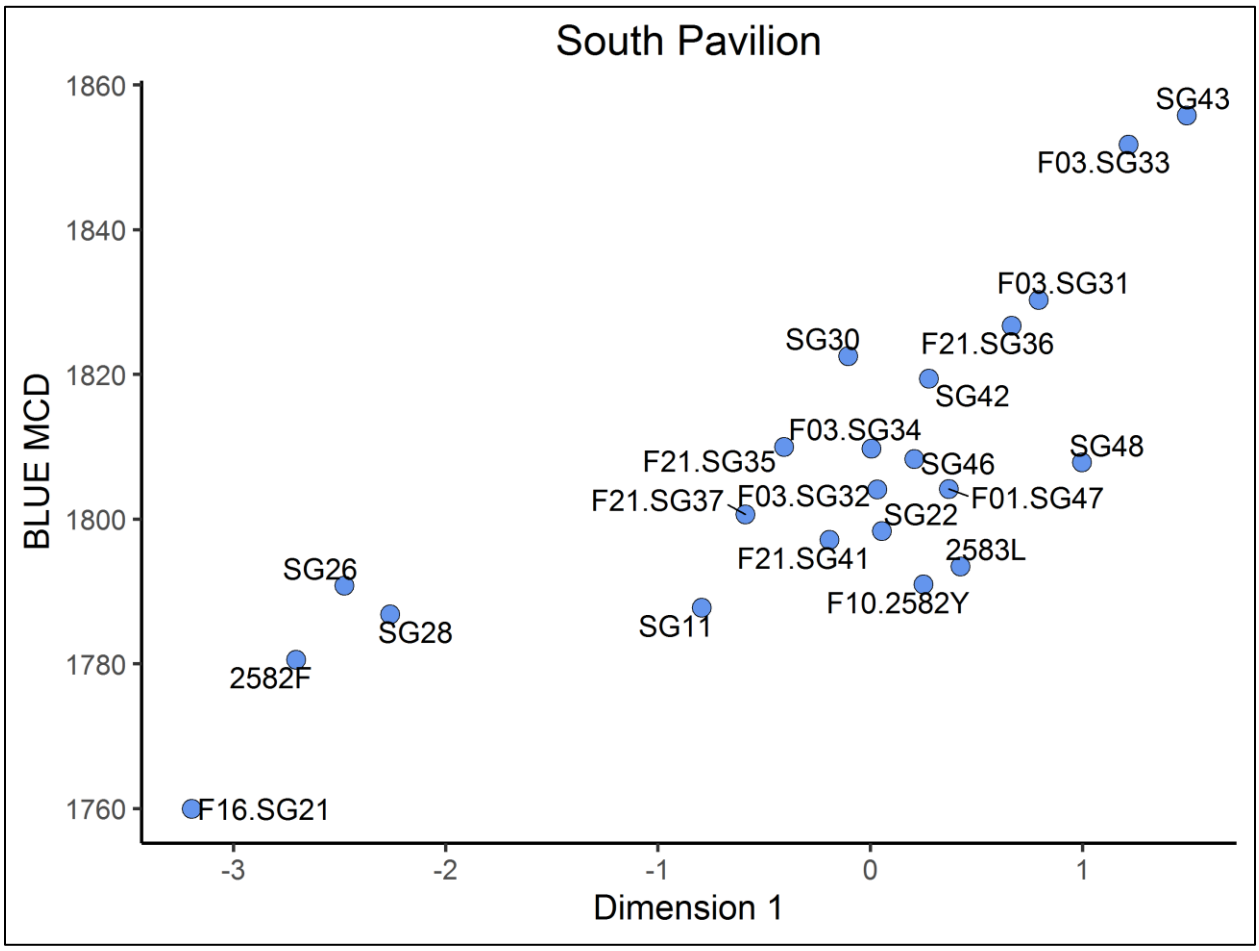


Figure 93: Dimension 1 versus blueMCD plot

The frequency seriation (Figure 94) tests the goodness of fit of the model when the assemblages are ordered on the Dimension 1 scores. The seriation shows that deposits with later dating ceramics are near the top of the diagram, and deposits with earlier dating ceramics are near the bottom. The battleship shaped curves are particularly noticeable with Chinese porcelain, pearlware, whiteware, and yellowware.

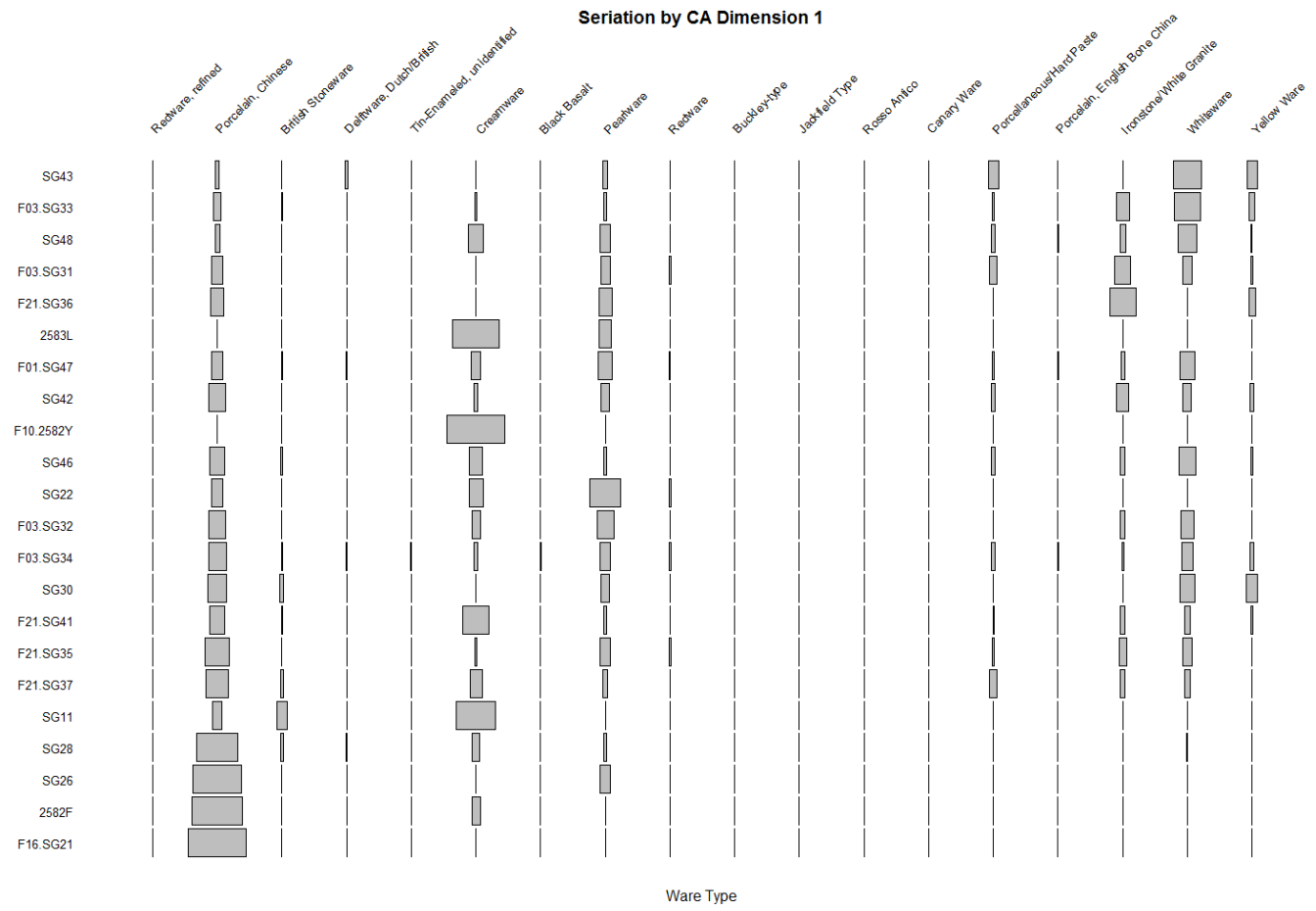


Figure 94: Frequency seriation ordered by CA scores.

To divide the site into phases, we computed a histogram of Dimension 1 scores (Figure 95). Based on the dips in ceramic counts observed in this histogram, where the vertical axis measures ceramic assemblage size, we divided the South Pavilion into two phases with a break at -1.5 (Figure 96). Each phase is a group of assemblages that have similar CA scores, similar MCDs, or both, and are therefore inferred to be broadly contemporary.

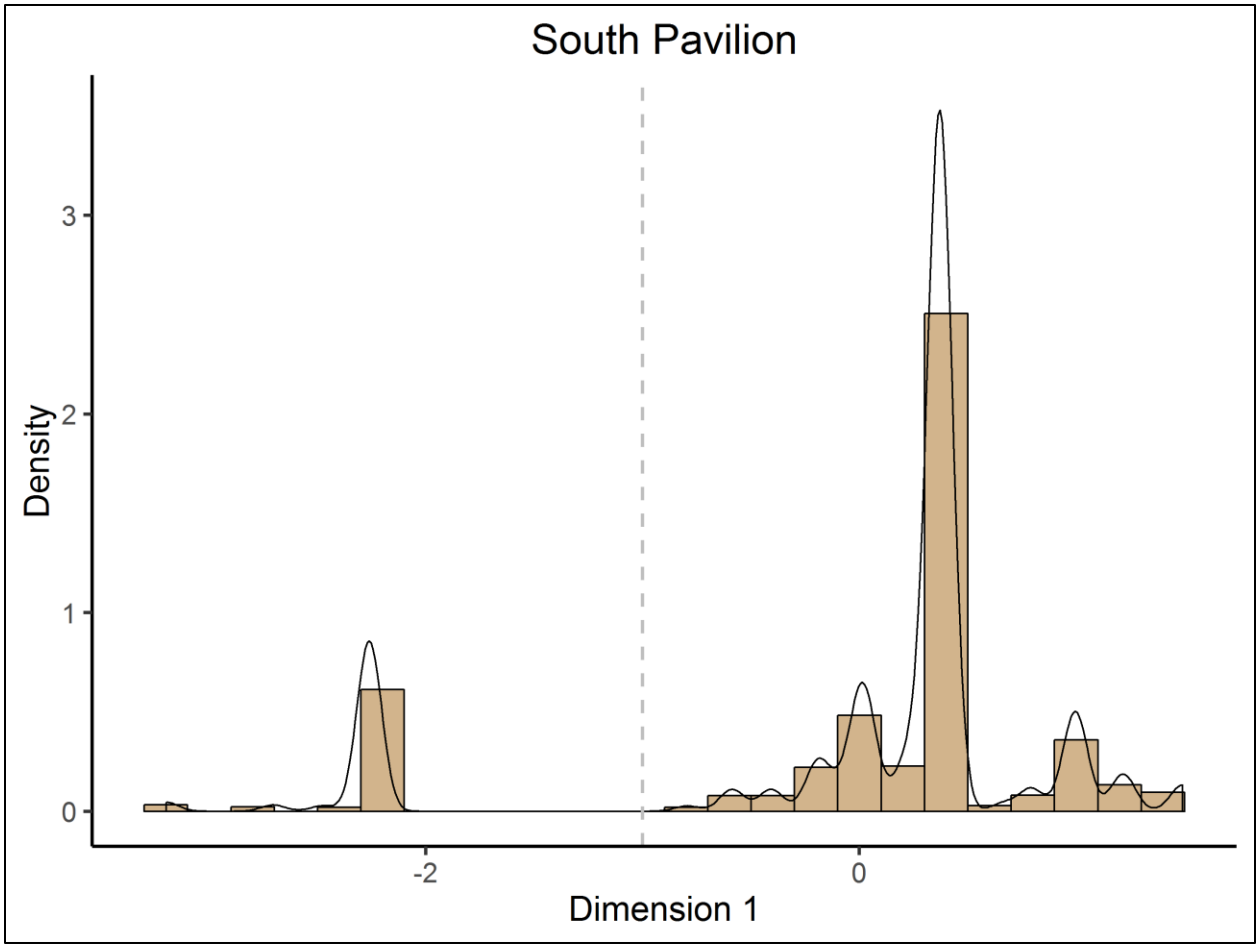


Figure 95: Weighted histogram of ceramics from the South Pavilion plotted along CA Dimension 1. The vertical line indicates phase divisions. The value set for the phase was set at -1.5.

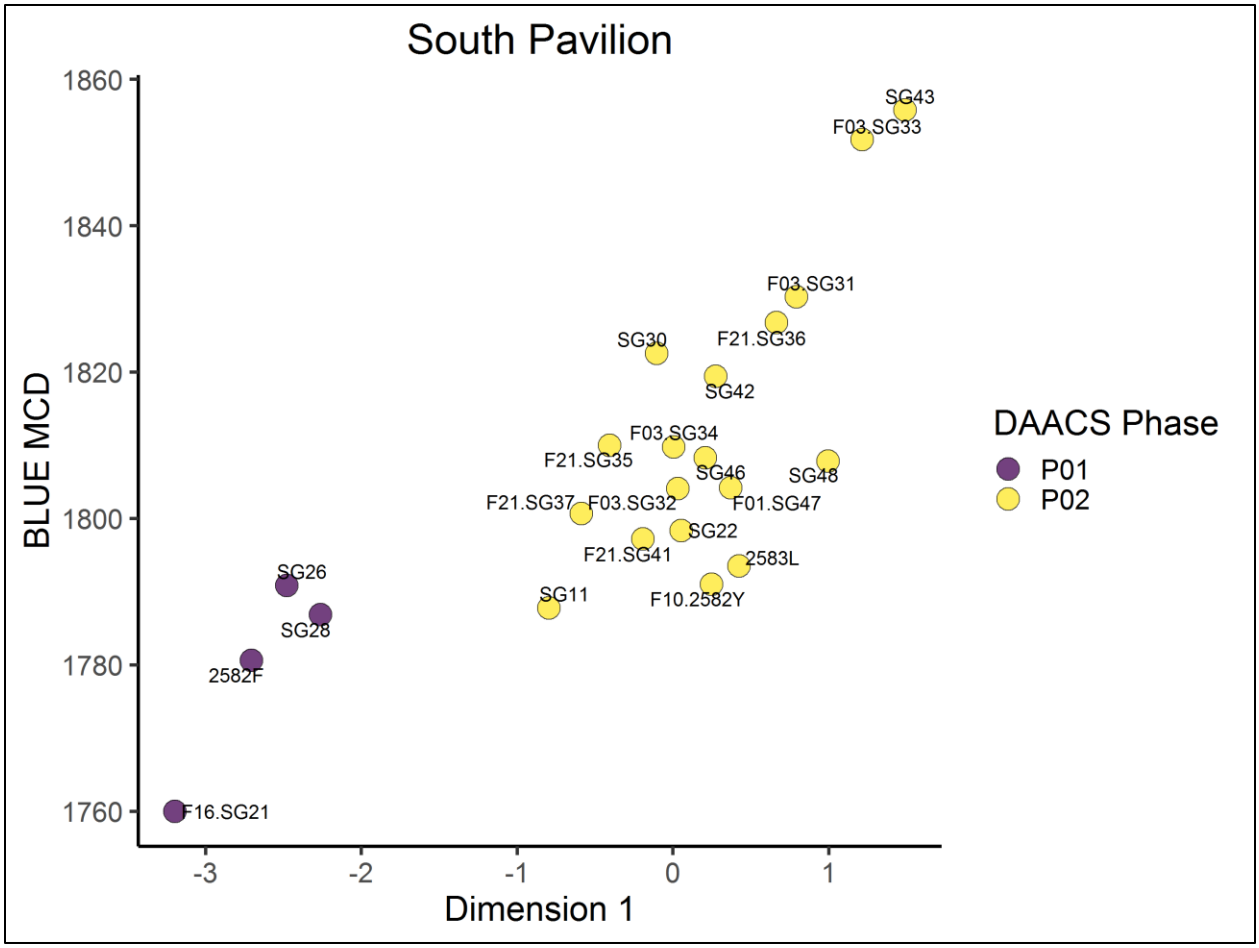


Figure 96: CA Dimension 1 scores for assemblages plotted against Mean Ceramic dates with assigned phases.

A closer examination of the artifacts collected from different contexts that were incorporated into the CA can also inform us about the activities taking place in the South Pavilion. For instance, SG22, which is the sediment between the bricks in the brick floor, included straight pins, eggshells, and Chinese porcelain (Figure 97). The assemblage from the 1808 fill (SGs 26, 27, and 28) and Grigg's backfill (SGs 30-43), which intruded into SG22 and probably included sediment and artifacts derived from it, included a relatively large quantity of small finds, such as toothbrushes, slate pencils, marbles, and beads (Figure 98). Since we know that Grigg excavated through the 1808 fill, this assemblage informs us as to which activities were

taking place in the kitchen yard or the types of artifacts that were discarded in this room when it served as a Wash House and possibly living quarters in the 19th and 20th centuries.

Figure 97: Artifacts from SG22, from context 2588I (SG18/F11, or Period 3 drainage ditch), which include eggshells, straight pins, and Chinese Porcelain.

Figure 98: Notable finds from multiple SGs in the South Pavilion. Thimble (context 2581E), toothbrush (context 2581B), upholstery tack (context 2588D), marbles (context2584B), gaming piece (2587B), unidentified pewter disc (context 2588Q), slate pencils (context 2581C; with hatching: context 2583B), swizzle stick (context 2588D), beads (red: context 2587C; blue: context 2585D), porcelain doll hand (context 2585D), buttons (bone: contexts 2589B, 2581C, 2595D; metal: 2581C), and iron strap hinge (context 2588Q).

ARTIFACTS, SOUTH WING

A total of 9,906 artifacts were collected and catalogued from the South Wing. None of the recovered artifacts came from Jefferson-era deposits. Appendix 4 is an artifact catalog providing counts of artifacts recovered from the Wing.

Ceramics

A small number of ceramics (n=68) were found in the South Wing (Table 25), the low number a result of brick floors in the spaces which were kept clean, previous excavations by Milton Grigg, installation of bathrooms, and removal of those bathrooms. Most of the assemblage consists of Ironstone/White Granite (n=19), which accounts for 28%. Pearlware (n=9) and whiteware (n=8) are also nearly equally represented in the assemblage (13% and 12%, respectively).

Table 25: Ceramic ware types and their mean ceramic dates from the South Wing.

Ceramic Ware	MCD Ranges	Sherd Count	Relative Frequency
Ironstone/White Granite	1840-2000	19	0.28
Pearlware	1775-1830	9	0.13
Whiteware	1820-2000	8	0.12
Redware	1700-1900	7	0.1
Creamware	1762-1820	6	0.09
Porcelain, Chinese	1660-1860	6	0.09
Refined Earthenware, unidentifiable	NA	3	0.04
American Stoneware	1750-1920	2	0.03
Porcelain, English Bone China	1794-2000	2	0.03
Porcelaneous/English Hard Paste	1820-2000	2	0.03
Refined Earthenware, modern	NA	1	0.01
Stoneware, unidentifiable	NA	1	0.01
Westerwald/Rhenish	1650-1775	1	0.01
Yellow Ware	1830-1940	1	0.01

The forms of the majority of the ceramic fragments recovered are unidentified due to fragmentation: of the 68 ceramics, 27 sherds were unidentifiable (40%) (Table 26). Most of the identifiable forms are unidentified tablewares (n=25, or 37%) and can include items such as plates, platters, bowls, and mugs. Unidentified utilitarian wares, which can include milk pans and storage jars, are also present, but at a much smaller percent (9%, n=6). Most of these ceramics were found in contexts dating to the 20th century, making it impossible to assign these sherds to periods of occupation.

Table 26: Ceramic forms from the South Wing

Ceramic Form	Count	Relative Frequency
Unidentifiable	27	0.40
Unid: Tableware	25	0.37
Unid: Utilitarian	6	0.09
Flower Pot	3	0.04
Unid: Teaware	3	0.04
Cup	2	0.03
Saucer	2	0.03

The ceramic assemblage is rather small and came from heavily disturbed deposits. Of the 68 pieces of ceramics, about half of the sherds were assigned to a hollow ware (n=33, 49%) (Table 27). Flat wares account for about a quarter of the assemblage (n=18; 26%), and the remaining quarter of sherds were unable to be assigned to a hollow ware or flatware (n=17, 25%).

Table 27: Ceramic vessel categories from the South Wing

VesselCategory	Sherd Count	Relative Frequency
Hollow	33	0.49
Flat	18	0.26
Unidentifiable	17	0.25

Glass

In the South Wing, 112 glass vessel fragments include wine bottle glass and mineral/soda bottle glass. The assemblage (Table 28) contains wine bottles (n=24, 21%). Only a few of these shards were leaded glass (n=10, 9%).

Table 28: Glass vessel forms from the South Wing. *These shards were catalogued as 'Not Recorded' in the database for Form.

Glass Form	Count	Relative Frequency
Modern machine-made glass*	44	0.39
Bottle, Wine style	24	0.21
Container, unidentifiable	14	0.12
Unidentifiable	14	0.12
Bottle, Unidentifiable	10	0.09
Tableware, unidentifiable	5	0.04
Bottle, Mineral/Soda	1	0.01
Stemware	1	0.01

Machine-made glass shards (46%, n=52) dominate the glass assemblage, but there is a similar amount of mouth blown shards (40%, n=45) and an even smaller amount of mold blown glass shards (n=16, 14%) (Table 29).

Table 29: Manufacturing technique of vessels from the South Wing

Manufacturing Technique	Count	Relative Frequency
Machine Made	52	0.46
Mouth Blown	45	0.40
Mold Blown	16	0.14

General Artifacts

Twentieth-century construction and bathroom expansions in the South Wing contributed to the mix of general artifacts recovered. Architectural materials were present in the South Wing. This category includes mortar fragments (n=380; 1201.9 g); window glass fragments (n=137); brick fragments (including bats, fragments, complete bricks, and brick/daub) (n=7,366; 86,826.7g); and 443 iron nails, including wrought nails (n=34); machine-cut nails (n=113); and drawn/wire nails (n=88) (Table 30:). Eighty-seven pieces of bone were recovered from the South Wing weighing a total of 206.63 grams.

Table 30: Select general artifact from the South Wing

General Artifact Form	Count	Weight (g)
Mortar	380	1201.9
Brick Bat	19	15,056.3
Brick Fragment	971	44,889.4
Brick, whole	3	7,041.9
Brick/Daub	6,373	19,839.1
Window glass	137	--
Wrought/Forged nail	34	--
Machine-cut nail	113	--
Drawn/Wire nail	83	--
Not a wire nail	107	--
Unidentified nail	106	--

SUMMARY

Archaeological excavations in the South Pavilion and South Wing presented a unique opportunity to advance our understanding of activities that took place in these areas along with the people who lived and worked in them. These buildings and spaces provided services to Jefferson, his family, and guests that were essential for the daily operation of the household. The Harris Matrix summarized the depositional history of the sites. When used in tandem with the documentary record, artifacts, and architectural features, a timeline emerges of the use and evolution of the kitchen and Wing.

Milton Grigg's excavations in 1941 focused on the architectural features of the Pavilion (the stairs, fireplace, and relieving arch under the central fireplace). He did not collect artifacts he must have encountered. Exercising more stratigraphic control and equipped with research questions, recent excavations sought to identify historic features that pointed to space division and room usage and better understand each site's depositional history.

Excavations in the South Pavilion kitchen relocated architectural evidence related to the use of the space as a kitchen and other features indicative of changes that took place within the space over a period of forty years. Our discoveries in the South Pavilion included the two iterations of stew stoves, at least two periods of dressers, the original tile floor and the repair of its northern half, the locations of the fireplace and adjacent oven, a drainage ditch, the remains of wall plaster, and the location of the stair.

Although fewer historic features and artifacts were recovered in the South Wing, the stairs leading from the basement of the Pavilion up to the West Lawn show how enslaved cooks accessed the Monticello I dining room once the Jefferson family moved out from the top story of the Pavilion. Furthermore, features dating to the construction of the Wing, such as the remnants

of brick floors and brick hearths found in the rooms for domestic workers point to standards of accommodation in these enslaved people's living spaces that matched what was found in the service spaces in which some of them worked (e.g., the kitchen).

Part of the kitchen was left unexcavated for future researchers. In what remains, there are many questions that could be addressed. For instance, what does the interface look like where the bricks-on-end and the original tile floor meet? Can excavators find additional evidence for what we suspect was an oven atop the relieving arch underneath the gable chimney? Are there additional piers for dresser legs along the east wall that could help us understand what the successive dresser looked like? If excavators removed the 1808 fill in arbitrary tenth of foot increments, would any sort of temporal or spatial differences in the artifacts be observed?

Results of the archaeological excavations particularly in the South Pavilion not only far exceeded expectations but, on a practical level, also informed the new exhibit designs. The discovery of original kitchen architecture, recovery of thousands of artifacts originating in the kitchen yard, and recordation of features in the Wing such as the brick stairs, floor, and hearths contributed significantly to our ability to tell the lives of the enslaved cooks and domestic workers who worked and lived in these spaces. Our appreciation of the lives of enslaved laborers, one of the interpretive goals at Monticello, has been enhanced and been given a space in which to interpret their stories. Furthermore, we have a better understanding of how Jefferson's architectural design for these spaces were executed. The key finding here is that Jefferson's interest in stew stove technology and the production of French cuisine that it enabled was serious enough to motivate the construction of two successive stew stoves. The earlier stove may predate his trip to France. The later stove may have been built upon his return based on design specifications from James Hemings, drawing on his culinary training in Paris. The second

stew stove is almost certainly the one that was used by James Hemings and, after James left Monticello a free man, by his brother Peter.

APPENDIX 1: DATUMS AND TEMPORARY STATION LOCATIONS

Name	X	Y	Z
Temp Stn. 1	-188.439	-184.735	859.205
Temp Stn. 2	-132.888	-195.009	857.786
Temp Stn. 3	-190.878	-136.665	860.756
Temp. Stn. 4	-190.01	-140.021	860.731
Temp. Stn. 5[2]	-189.978	-129.99	859.441
Temp stn 5[2]	-189.979	-129.981	859.395
Temp Stn. 6	-152.034	-128.299	861.289
Tempstn7	-156.939	-138.034	861.295
Temp Stn #8	-147.365	-133.486	861.113
Temp Stn#10	-118.095	-133.719	861.294
Temp Stn #11	-117.167	-133.112	861.37
Temp Stn 12	-187.741	-130.941	860.774
Temp Stn 13	-190.841	-138.86	859.956
Temp Stn #14	-191.281	-131.704	860.118
Temp. Stn. 15	-259.065	-154.271	862.973
Temp. Stn. 16	-188.455	-183.739	859.279
Temp. Stn. 17	-190.883	-136.684	860.742

APPENDIX 2: POLLEN ANALYSIS

We collected 64 pollen samples from the South Pavilion. The 23 samples used in this analysis are listed and described in Table 31. These samples include sediment from a column in the south profile of 2588 (Figure 99; Figure 47 for the measured drawing) and two samples from the pit in 2582 (Feature 10; Figure 100; Figure 36 for the measured drawing). We wanted to see whether taxon frequencies in pollen from the 1808 fill differed from frequencies in layers dating to the use of the space as a kitchen.

Figure 99: 2588 column sample. View south. See Figure 47 for the measured drawing.

Figure 100: 2582 column sample. View north. The yellow arrows mark sample locations. See Figure 36 for the measured drawing.

Table 31: Sample numbers, interpretations, and SGs for the sediment samples taken in the South Pavilion. * indicates that the sample was dropped from analysis due to low pollen counts (pollen counts > 100). Each pollen sample needed at least 200 grains to be included in the analysis.

Sample	Interpretation	Feature#/SG
2582Z-S-10	Leveling fill for brick floor	SG07
2582Y-S-11	Fill in unidentified pit, possibly related to trying to mitigate a flooding event	F10
2588U-S-15	Fill deposited in drainage ditch to allow installation of stew stove	F11/SG14
2588M-S-16	Kitchen debris swept into ditch	F11
2588L-S-17	Kitchen debris swept into ditch	F11
2588K-S-18	Kitchen debris swept into ditch	
2588J-S-19	Kitchen debris swept into ditch	
2588I-S-20	Top layer of kitchen debris swept into ditch	F11/SG18
2588F-S-21	Final massive fill event	SG28
2588F-S-22*	Final massive fill event	SG28
2588F-S-23*	Final massive fill event	SG28

2588F-S-24*	Final massive fill event	SG28
2588F-S-25*	Final massive fill event	SG28
2588F-S-26	Final massive fill event	SG28
2588F-S-27	Final massive fill event	SG28
2588F-S-28	Final massive fill event	SG28
2588F-S-29	Final massive fill event	SG28
2588F-S-30	Final massive fill event	SG28
2588E-S-31	Demolition debris and cleanup under 1940's concrete floor	SG46
2588Q-S-32	Fill to level floor under dresser	SG11
2588S-S-33*	Work surface during construction of Pavilion walls	SG02
2588V-S-34	Leveling fill for brick floor	SG07
2588T-S-35	Clay pressed against brick to stabilize against tottering	F11

We employed correspondence analysis or CA, a multivariate ordination method that helps identify patterns of assemblage variation in taxon frequencies (**Error! Reference source not found.** and Figure 102). The CA plot shows a single cluster with three distinct outliers (2588F-S-27, 2588F-S-21, and 2588J-S-19). While two of the outliers are from the 1808 fill (2588F-S-21, 2588-S-27), the other (2588J-S-19) was collected from the drainage ditch (F11) and represents kitchen accretion layers.

Taxa that distinguish S-21 include *Centaurea* (knapweed) and *Caryophyllaceae* (pink family or carnation family); taxa pulling S-19 include flower like *Ranunculaceae* (buttercups) and *Malvaceae* (mallows) along with crops such as *Trifolium* (clover) and *Fagopyrum* (buckwheat), and plants from the *Lamiaceae* family (mint) and *Brassicaceae* (mustard family). The taxon distinguishing S-27 is *Aesculus* (including species such as buckeye and horse chestnut).

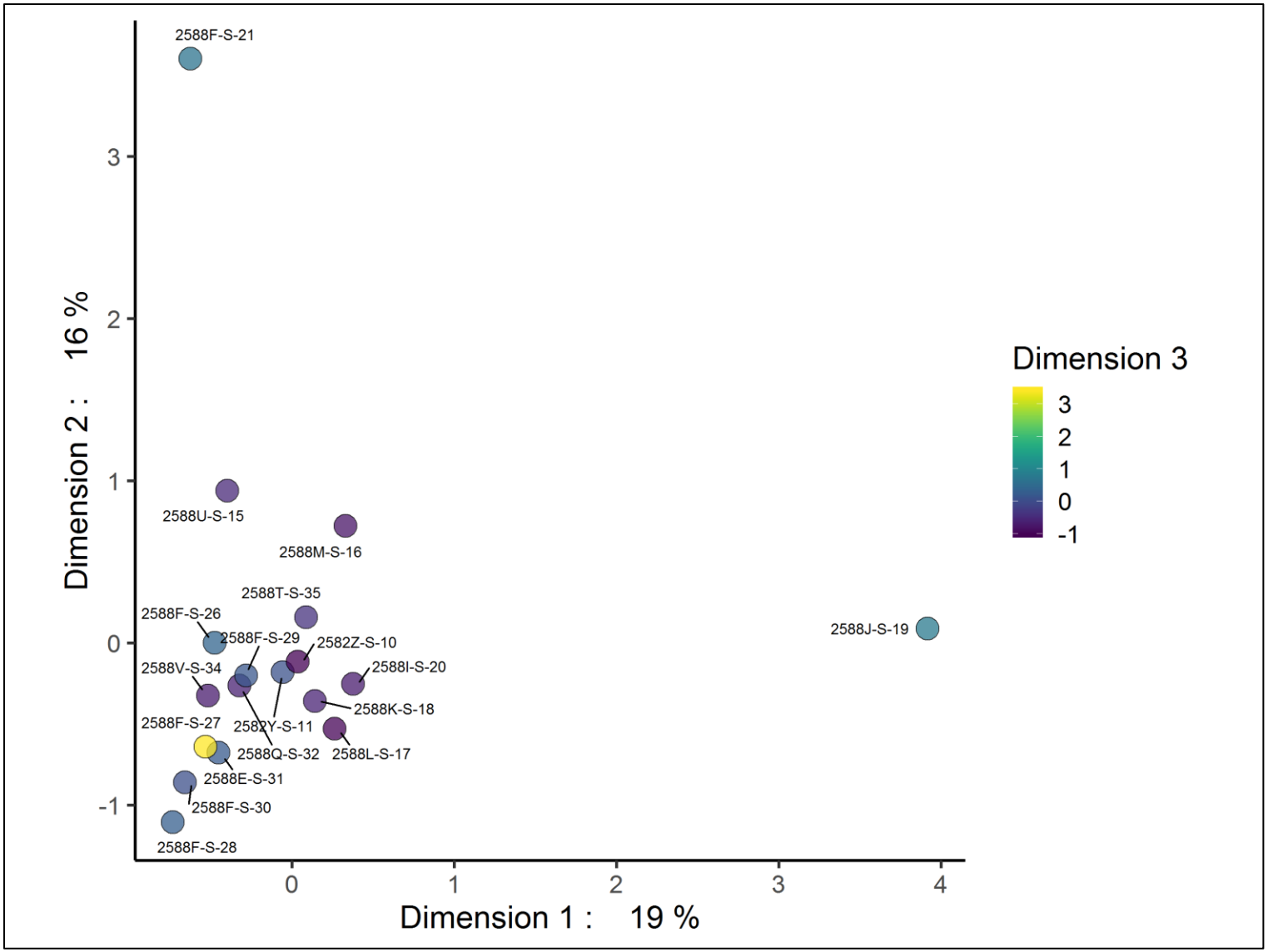


Figure 101: Correspondence analysis of pollen data from the South Pavilion.

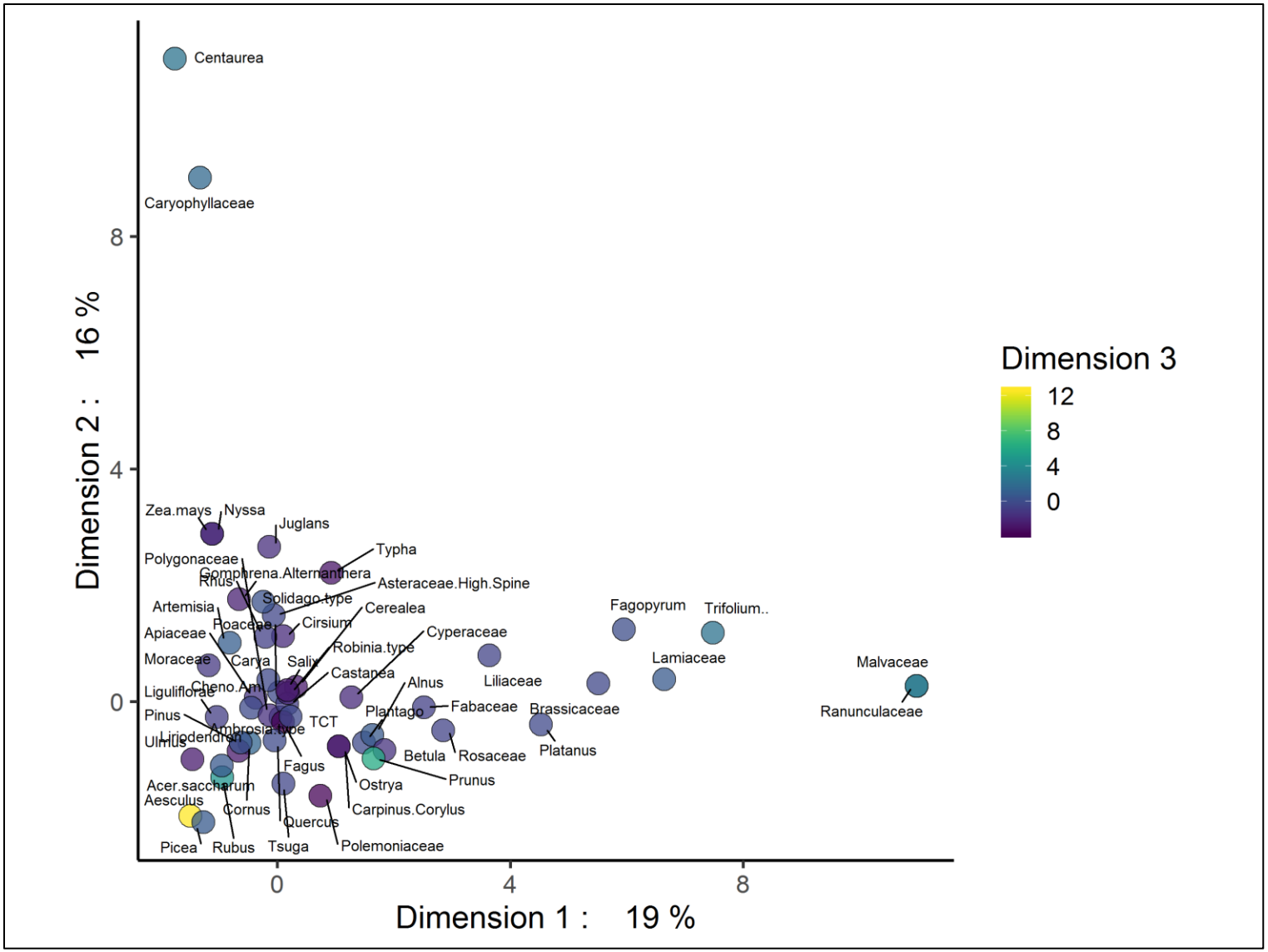


Figure 102: Correspondence analysis of pollen taxa from the South Pavilion.

Based on the locations of the points in the Dimension 1 versus Dimension 2 CA scores plot (Figure 103), one pattern that emerges is that samples taken from the 1808 fill cluster in the lower left of the plot (except for the S-21 and S-27 outliers). They are circled in red in Figure 103. Samples taken from the ditch cluster more towards the upper right of the plot (except for the S-19 outlier). They are circled in blue on the plot. One hypothesis is that pollen found in deposits associated with the ditch were carried into the kitchen; pollen found in the 1808 fill were derived from a different location: the spot from which the fill was taken. Pollen taxa that are associated with the 1808 fill include trees and weeds (*Asculus*, buckey/horse chestnut; *Ulmus*, elm; *picea*, spruce; *Rubus*, brambles; *Acer saccharum*, sugar maple; *Liriodendron*, poplar; and *Liguilflore*, aster (Figure 102). Many of the pollen taxa from the ditch are related to food: *Brassicaceae*, mustard; *Lamiaceae*, mint; *Fagopyrum*, buckwheat; *Fabaceae*, legumes; and *Zea.mays*, corn. The pollen diagrams, then, allow us to better understand the trees, shrubs, and weeds present in the landscape outside of the kitchen in addition to the types of herbs and vegetables used in the kitchen.

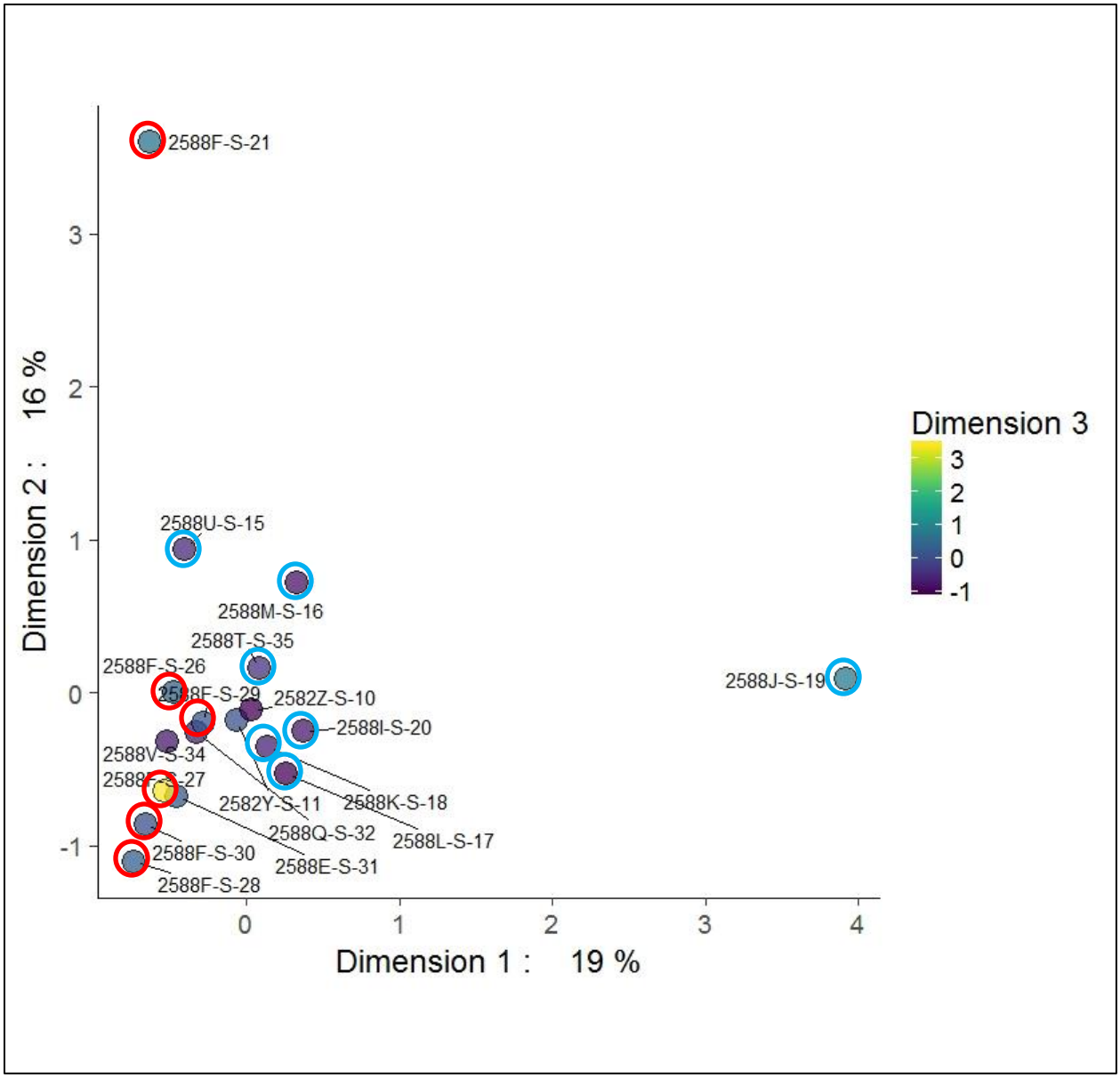


Figure 103: Correspondence analysis of pollen data from the South Pavilion. A red circle indicates the sample is from the 1808 fill. The blue circles indicate the sample is from the drainage ditch.

APPENDIX 3: ARTIFACT CATALOG, SOUTH PAVILION

Total Count	Artifact Type	Artifact Category
2	Bead, Barrel	Bead
2	Bead, Disc	Bead
17	Bead, Faceted	Bead
19	Bead, Sub-Spherical	Bead
1	Bead, Tubular	Bead
1	Buckle, Unidentifiable	Buckle
86	Button, 1 Piece	Button
2	Button, 1 Piece, domed	Button
2	Button, 1 Piece, semi-domed	Button
4	Button, 2 Piece	Button
1	Button, 2 Piece, domed	Button
2	Button, 2 Piece, semi-domed	Button
4	Button, Blank/Mold	Button
1	Button, FD convex back	Button
8	Button, Flat Disc	Button
1	Button, Ring	Button
17	American Stoneware	Ceramic
1	Astbury Type	Ceramic
2	Black Basalt	Ceramic
3	Bristol Glaze Stoneware	Ceramic
1	British Brown/Fulham Type	Ceramic
30	British Stoneware	Ceramic
2	Buckley-type	Ceramic
1	Canary Ware	Ceramic
4	Coarse Earthenware, unidentified	Ceramic
288	Creamware	Ceramic
15	Delftware, Dutch/British	Ceramic
100	Ironstone/White Granite	Ceramic
1	Jackfield Type	Ceramic
3	Native American	Ceramic
285	Pearlware	Ceramic
445	Porcelain, Chinese	Ceramic
7	Porcelain, English Bone China	Ceramic
7	Porcelain, unidentifiable	Ceramic
57	Porcellaneous/Hard Paste	Ceramic
20	Redware	Ceramic
2	Redware, refined	Ceramic

65	Refined Earthenware, unidentifiable	Ceramic
2	Refined Stoneware, unidentifiable	Ceramic
1	Rosso Antico	Ceramic
5	Stoneware, unidentifiable	Ceramic
2	Tin-Enameled, unidentified	Ceramic
1	Unidentifiable	Ceramic
2	White Salt Glaze	Ceramic
318	Whiteware	Ceramic
30	Yellow Ware	Ceramic
6	Bird	Faunal
340	Bony Fish	Faunal
3	Cartilagenous Fish	Faunal
7	Chicken	Faunal
2	Domestic Pig	Faunal
2	Even-Toed Ungulate	Faunal
3	Hare or Rabbit	Faunal
55	Mammal	Faunal
1	Medium Mammal	Faunal
1	Mud Turtle	Faunal
7054	Other Vertebrate	Faunal
1	White-Tailed Deer	Faunal
80	Architecture, unid.	General Artifacts
2	Bolt	General Artifacts
18	Bottle Cap, crown	General Artifacts
1	Bottle Stopper	General Artifacts
12	Boulder (>250mm)	General Artifacts
1	Bracket	General Artifacts
154	Brick Bat	General Artifacts
47943	Brick/Daub	General Artifacts
9816	Brick Fragment	General Artifacts
13	Brick, specialty unid.	General Artifacts
1	Brick, water table	General Artifacts
1	Brick, whole	General Artifacts
1	Bullet Casing	General Artifacts
27	Can	General Artifacts
215	Casting Waste	General Artifacts
103	Cement, portland	General Artifacts
267	Cement, unidentified	General Artifacts
5	Chain	General Artifacts
15	Charcoal	General Artifacts
54	Cinder/Coke	General Artifacts
2	Clamp, crinoline	General Artifacts

84	Coal	General Artifacts
54	Cobble (64-250mm)	General Artifacts
1	Coil	General Artifacts
2	Coin, American	General Artifacts
1	Coin, Canadian	General Artifacts
25	Corrosion/Rust	General Artifacts
1	Crystal	General Artifacts
3	Daub	General Artifacts
22	Disc	General Artifacts
1	Doll, limb	General Artifacts
2	Drainpipe	General Artifacts
2862	Eggshell	General Artifacts
1	Escutcheon	General Artifacts
3	Eye, clothing	General Artifacts
1	Fastener, clothing	General Artifacts
1	Fastener, misc.	General Artifacts
1	Gaming Piece	General Artifacts
84	Glass, plate	General Artifacts
5	Grommet	General Artifacts
6	Handle, unidentified	General Artifacts
55	Hardware, unidentified	General Artifacts
1	Hasp, padlock	General Artifacts
1	Hinge, "H"	General Artifacts
1	Hinge Pin	General Artifacts
1	Hinge, strap	General Artifacts
1	Hinge, unidentified	General Artifacts
8	Hook, clothing	General Artifacts
1	Hook, unidentifiable	General Artifacts
3	Jewelry, other	General Artifacts
1	Key, lock	General Artifacts
7	Lamp Chimney	General Artifacts
1	Lamp, globe	General Artifacts
1	Lamp Part, other	General Artifacts
1	Light Bulb	General Artifacts
2	Link, chain	General Artifacts
1	Lock, padlock	General Artifacts
1	Machinery, unidentified	General Artifacts
13	Marble, toy	General Artifacts
1	Mesh	General Artifacts
5	Mirror	General Artifacts
328	Modern Artifacts	General Artifacts
61585	Mortar, architectural	General Artifacts

1	Mortar, kitchen/pharmacy	General Artifacts
4246	Nail	General Artifacts
29	Nail Rod	General Artifacts
4	Nail Rod Binder	General Artifacts
5	Nut, hardware	General Artifacts
3	Nutshell, unid.	General Artifacts
1	Ornament, misc.	General Artifacts
3	Parasol/Umbrella, other	General Artifacts
434	Pebble (4-64mm)	General Artifacts
1	Pencil, lead	General Artifacts
4	Pencil, slate	General Artifacts
1	Pin, other	General Artifacts
138	Pin, straight	General Artifacts
22	Pipe, other	General Artifacts
1	Pit, unidentified	General Artifacts
4220	Plaster	General Artifacts
4	Ring, unidentified	General Artifacts
1	Rivet, clothing	General Artifacts
3	Rope	General Artifacts
113	Scrap/Waste	General Artifacts
1	Screw, philips head	General Artifacts
5	Screw, slotted head	General Artifacts
7	Screw, unidentified	General Artifacts
1	Seal	General Artifacts
2	Seal, cloth or bale	General Artifacts
5	Seed, unidentified	General Artifacts
350	Sheeting	General Artifacts
1	Shell, clam	General Artifacts
2	Shell, marine unidentifiable	General Artifacts
2	Shell, oyster	General Artifacts
3	Shell, unid.	General Artifacts
2	Shell, walnut	General Artifacts
7	Shoe, heel	General Artifacts
19	Shot, bird	General Artifacts
185	Slag	General Artifacts
1	Slate, unidentified	General Artifacts
5	Slate, writing	General Artifacts
6	Spike	General Artifacts
1	Staple, round	General Artifacts
1	Staple, unidentified	General Artifacts
14	Strapping	General Artifacts
1	String	General Artifacts

10	Tack, Unidentified	General Artifacts
7	Tack, upholstery	General Artifacts
1	Thermometer	General Artifacts
7	Thimble	General Artifacts
6	Tile, floor	General Artifacts
196	Tile, unidentified	General Artifacts
1	Tool, unidentified	General Artifacts
3	Toothbrush	General Artifacts
3	Tube	General Artifacts
574	Unidentified	General Artifacts
3	Washer	General Artifacts
2146	Window Glass	General Artifacts
3	Window Glass, privacy	General Artifacts
4	Window Glazing	General Artifacts
135	Wire	General Artifacts
1	Wire, barbed	General Artifacts
10	Wood	General Artifacts
5	Bottle, Case	Glass
1	Bottle, Mineral/Soda	Glass
371	Bottle, Unidentifiable	Glass
13	Bottle/Vial, Pharmaceutical	Glass
1136	Bottle, Wine style	Glass
85	Container, unidentifiable	Glass
1	Drinking Glass, unidentifiable	Glass
1	Not Recorded	Glass
14	Stemware	Glass
105	Tableware, unidentifiable	Glass
3	Tumbler	Glass
292	Unidentifiable	Glass
1	Boulder (>250mm)	Lithics
120	Cobble (64-250mm)	Lithics
8	Flake	Lithics
1	Flake, cortical	Lithics
4306	Pebble (4-64mm)	Lithics
3	Shatter	Lithics
7	Tobacco Pipe, Bowl Fragment	Tobacco Pipe
12	Tobacco Pipe, Stem	Tobacco Pipe
1	Tobacco Pipe, Stem, Bowl	Tobacco Pipe
1	Utensil, 2 Piece: Unid	Utensil
2	Utensil, Fork, 2 Piece	Utensil
2	Utensil, Knife, 2 Piece	Utensil
1	Utensil, Knife, unid.	Utensil

APPENDIX 4: ARTIFACT CATALOG, SOUTH WING

Total Count	Artifact Type	Artifact Category
1	Bead, Faceted	Bead
7	Button, 1 Piece	Button
2	American Stoneware	Ceramic
6	Creamware	Ceramic
19	Ironstone/White Granite	Ceramic
9	Pearlware	Ceramic
6	Porcelain, Chinese	Ceramic
2	Porcelain, English Bone China	Ceramic
2	Porcellaneous/Hard Paste	Ceramic
7	Redware	Ceramic
1	Refined Earthenware, modern	Ceramic
3	Refined Earthenware, unidentifiable	Ceramic
1	Stoneware, unidentifiable	Ceramic
1	Westerwald/Rhenish	Ceramic
8	Whiteware	Ceramic
1	Yellow Ware	Ceramic
3	Even-Toed Ungulate	Faunal
2	Mammal	Faunal
82	Other Vertebrate	Faunal
6	Architecture, unid.	General Artifacts
5	Axe, mortising	General Artifacts
2	Bolt	General Artifacts
2	Bottle Cap, crown	General Artifacts
19	Brick Bat	General Artifacts
6373	Brick/Daub	General Artifacts
971	Brick Fragment	General Artifacts
3	Brick, whole	General Artifacts
2	Can	General Artifacts
1	Cap/Lid	General Artifacts
24	Casting Waste	General Artifacts
18	Cement, portland	General Artifacts
136	Cement, unidentified	General Artifacts
0	Charcoal	General Artifacts
317	Cinder Block	General Artifacts
8	Cinder/Coke	General Artifacts
6	Coal	General Artifacts
1	Cobble (64-250mm)	General Artifacts

1	Coin, American	General Artifacts
1	Corrosion/Rust	General Artifacts
2	Disc	General Artifacts
1	Drainpipe	General Artifacts
8	Hardware, unidentified	General Artifacts
1	Hinge, "T"	General Artifacts
1	Knife, unid.	General Artifacts
13	Lamp Chimney	General Artifacts
1	Marble, toy	General Artifacts
64	Modern Artifacts	General Artifacts
380	Mortar, architectural	General Artifacts
448	Nail	General Artifacts
7	Nail Rod	General Artifacts
6	Nut, hardware	General Artifacts
5	Paint Chip	General Artifacts
9	Pebble (4-64mm)	General Artifacts
5	Pipe, other	General Artifacts
33	Plaster	General Artifacts
1	Pulley	General Artifacts
12	Scrap/Waste	General Artifacts
3	Screw, philips head	General Artifacts
3	Screw, slotted head	General Artifacts
3	Screw, unidentified	General Artifacts
28	Sheeting	General Artifacts
1	Shotgun Shell	General Artifacts
1	Shot, round	General Artifacts
56	Slag	General Artifacts
1	Spike	General Artifacts
1	Staple, round	General Artifacts
5	Staple, square	General Artifacts
2	Staple, unidentified	General Artifacts
9	Strapping	General Artifacts
1	Tile, floor	General Artifacts
39	Tile, unidentified	General Artifacts
1	Tube	General Artifacts
44	Unidentified	General Artifacts
1	Valve Cap	General Artifacts
1	Washer	General Artifacts
137	Window Glass	General Artifacts
1	Window Glass, privacy	General Artifacts
16	Wire	General Artifacts
2	Wood	General Artifacts

1	Bottle, Mineral/Soda	Glass
10	Bottle, Unidentifiable	Glass
24	Bottle, Wine style	Glass
14	Container, unidentifiable	Glass
44	Not Recorded	Glass
1	Stemware	Glass
5	Tableware, unidentifiable	Glass
14	Unidentifiable	Glass
18	Cobble (64-250mm)	Lithics
359	Pebble (4-64mm)	Lithics
3	Shatter	Lithics
1	Tobacco Pipe, Bowl, Rim	Tobacco Pipe

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