Archaeological Investigations of Monticello's North Wing (44AB89)

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INTRODUCTION

This report synthesizes archaeological excavations under the North Wing at Monticello. The North Wing was constructed during the first decade of the nineteenth century and was in use by 1809 (Figure 1). Our current best evidence suggests that Jefferson used the wing to house vehicles including his chariot, double and single phaetons, gig, and sulky, and a few horses. After a review of the documentary evidence, we summarize previous and recent fieldwork and describe the site's depositional history using artifact-based chronology. Much of the archaeological record from the Jefferson and Levy eras under the North Wing was destroyed by architect Milton Grigg's exploration of the area in the 1930s and the subsequent restoration. Recent excavations offer an opportunity to highlight the wing's role in Jefferson's vision for the mountaintop landscape.[1]

[1] The assigned DAACS project name was North Dependencies Stables.

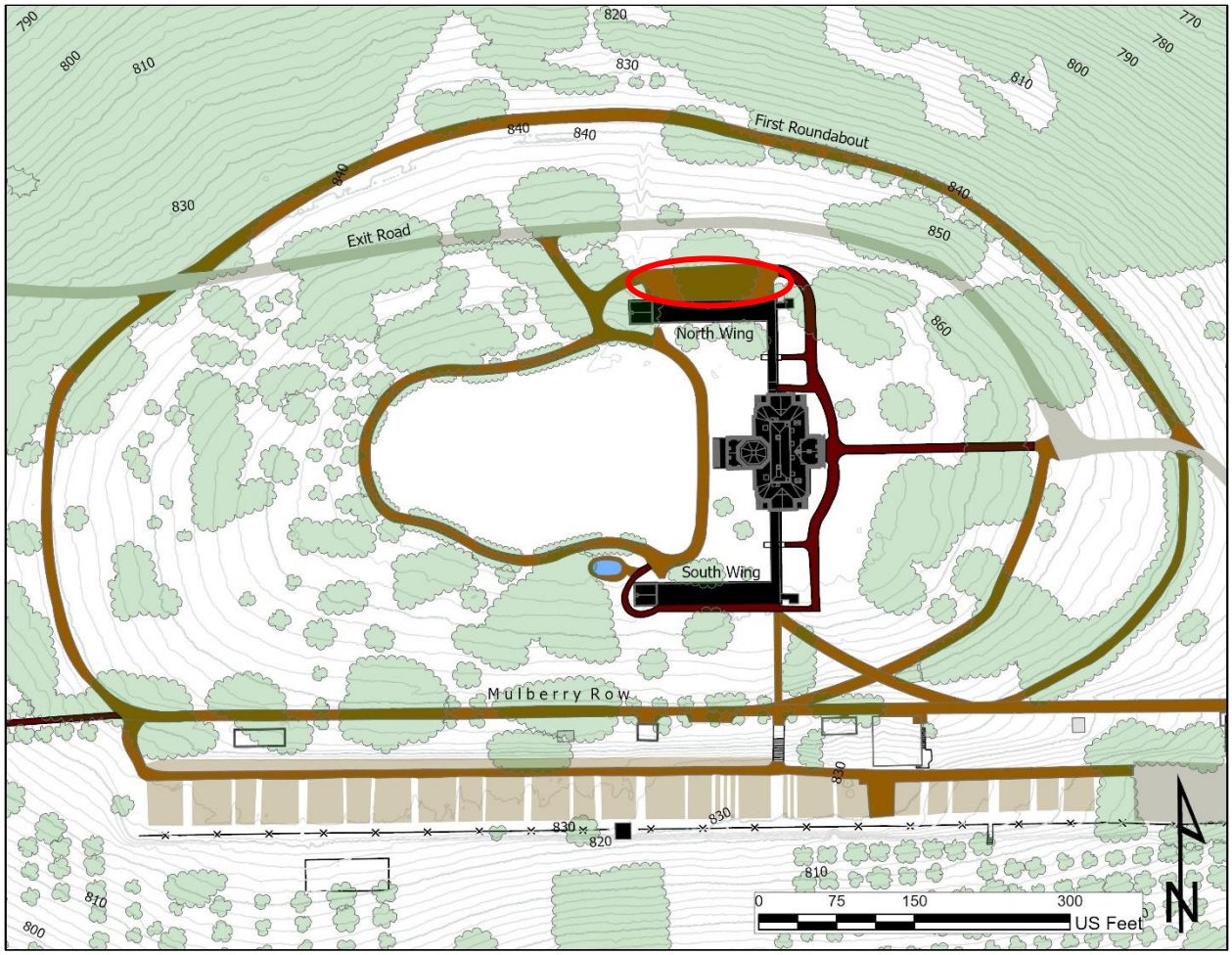

Figure 1: Monticello mountaintop with the North Wing circled in red.

DOCUMENTARY EVIDENCE

This section synthesizes the documentary evidence for Jefferson's early conceptions of the mountaintop landscape and the North Wing. In May of 1768, Jefferson contracted with Albemarle County merchant John Moore to use enslaved workers to "level 250 f. square on 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). The house was to sit in the center of that 250 foot square. Jefferson's plans for the ornamental landscape evolved over time. The 250 foot square was the eastern half of an imagined rectangular terrace that measured 500 feet by 250 feet drawn by Jefferson (Jefferson 1768-1770c, Figure 2). In the early 1770s, Jefferson's ideas evolved again to center the main house between two mirrored L-shaped wings (Jefferson n.d.a, Figure 3; Jefferson 1772, Figure 4) which projected to the west of the house and contained spaces for a variety of service rooms. On top of the wings were flat rooves or terraces which provided a deck from which family members and visitors could view the ornamental landscape. Each terrace connected to a two-story pavilion (Jefferson 1768, Figure 5).

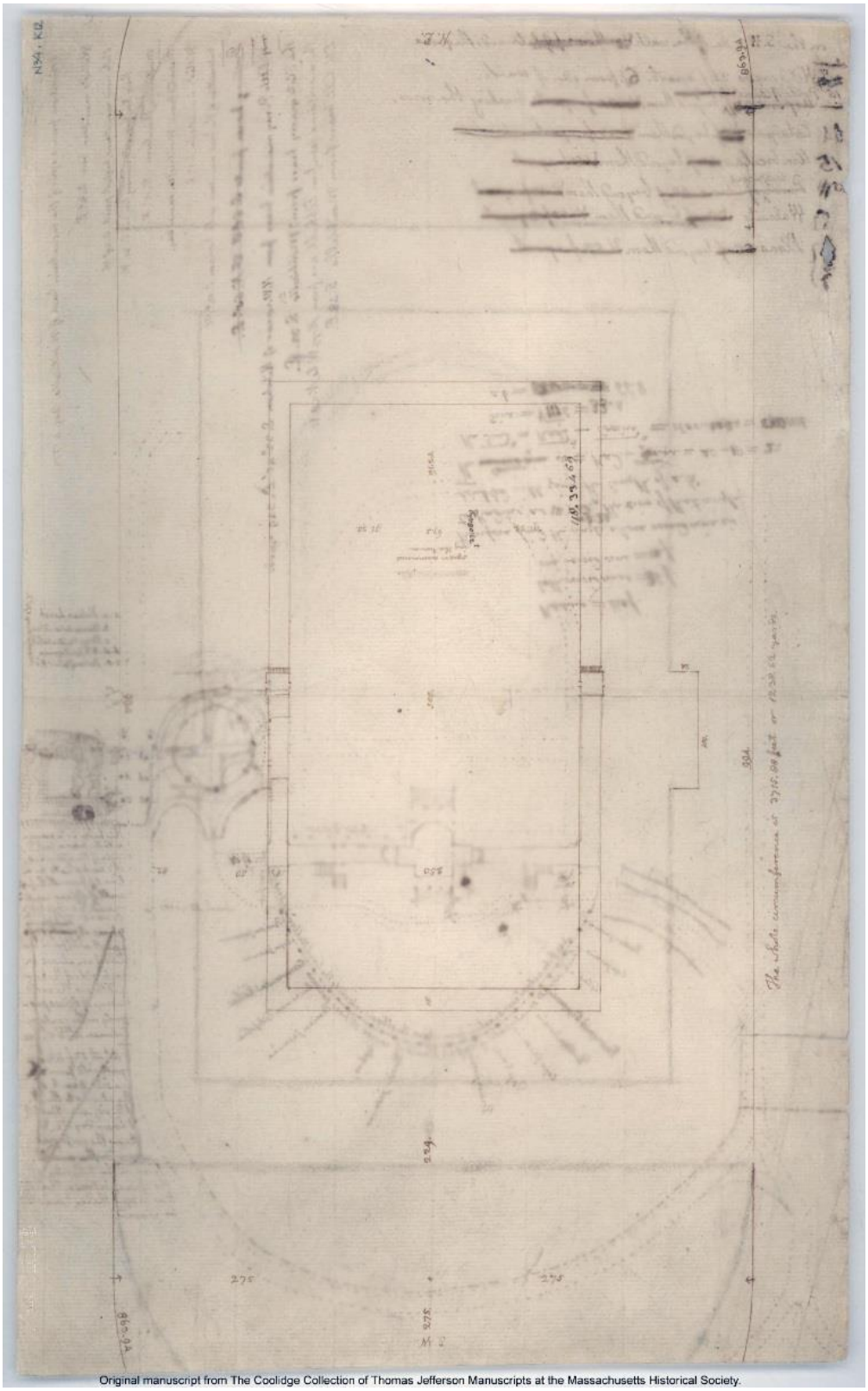

Figure 2: N34 (Jefferson 1768-1770c). Jefferson's concept of the terraced mountaintop. Another drawing, N61, bleeds through from the other side.

Figure 3: N56, before August 4, 1772 (Jefferson n.d.a). L-shaped wings extend from a centrally located main house. Note the saddle room, stables, and chariot room on the north side of the house, to which the red arrow points.

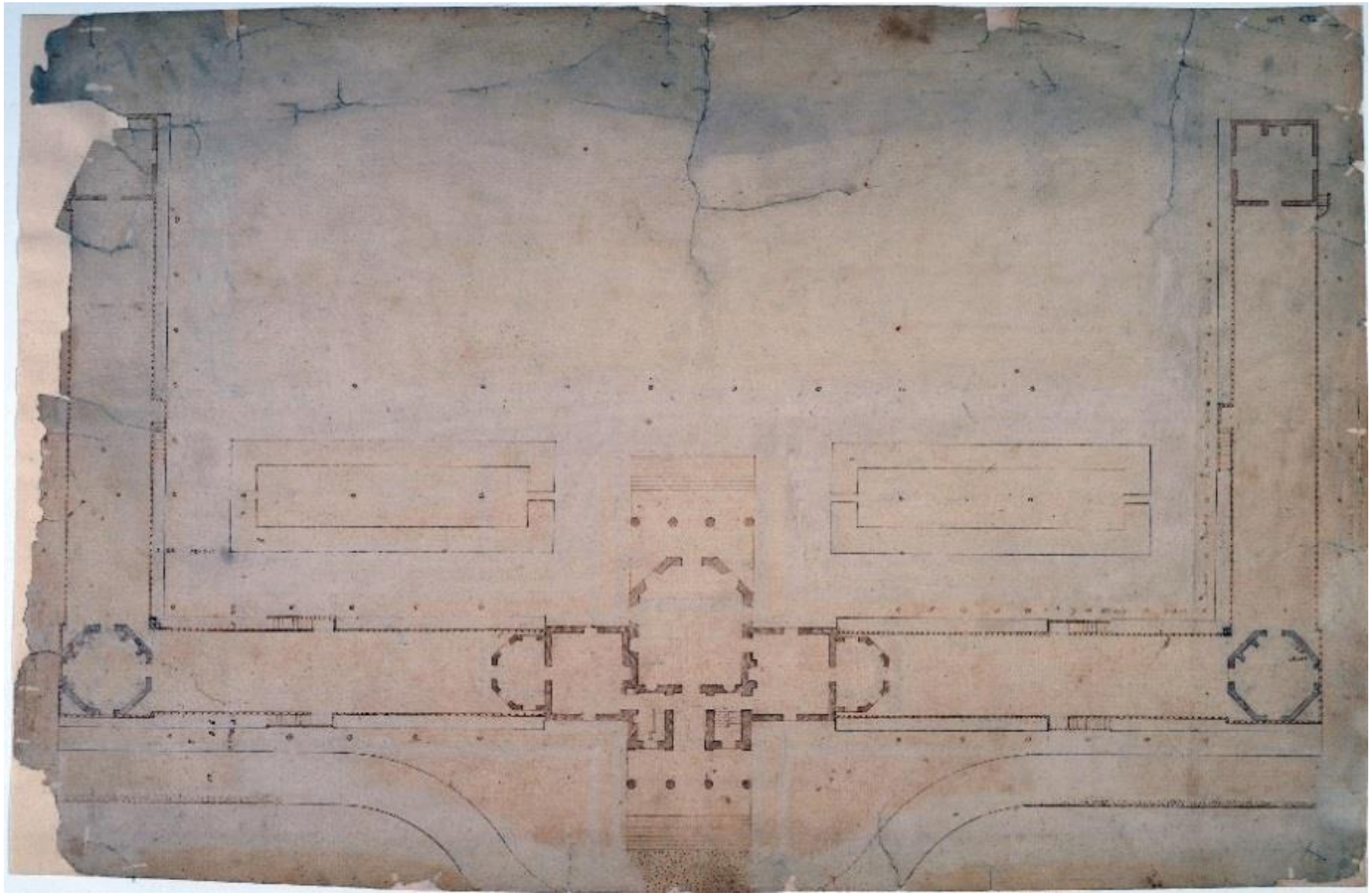

Figure 4: N57 recto, before August 4, 1772 (Jefferson 1772). L-shaped wings extend from a centrally located main house.

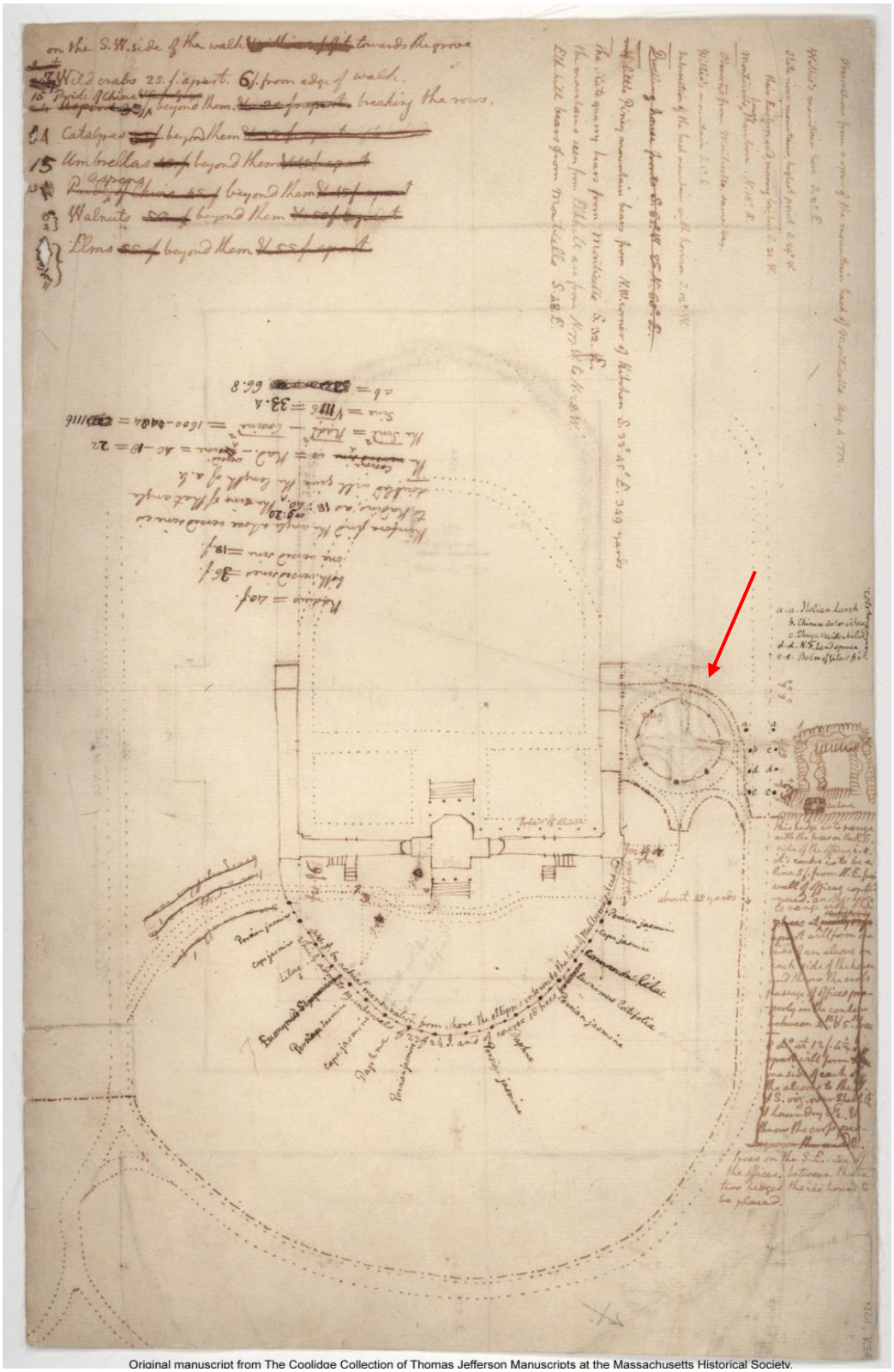

Figure 5: N61, before May 1768 (Jefferson 1768). General plan of mountaintop with the L-shaped dependencies, North and South Pavilions, and the main house at the center of the U. The red arrow points to the envisioned carriage turnaround. On reverse is N34.

Jefferson's ideas for the wing on the north side of the house evolved from the late 1760s until the actual construction on the wing in the first decade of the nineteenth century. Jefferson's early design ideas for the wing included several study plans (Jefferson n.d.a, Figure 6; Jefferson 1768-1770b, Figure 7; Jefferson n.d.a, Figure 3; Jefferson 1783-1784, Figure 8), all dating to the late 1760s and early 1770s. On all the drawings, the majority of the space in the wing is devoted to horse stalls. They also include one room – and in one case two rooms – to house carriages, variously labelled "Chariot-house," "Chariot-room," and "coach room." The early versions also contained rooms with other diverse functions, including housing "servants," fattening chickens, and storing corn. All these plans were likely influenced by examples of his peers' stables and especially by English pattern books which illustrated plans and elevations suitable for British elite aspirants, e.g., James Gibbs (1728) and Robert Morris (1757).

An early sketch shows the way in which Jefferson envisioned the yard on the north side of the house (Jefferson 1768). Next to the North Wing, Jefferson drew a carriage turnaround. Although he never implemented the carriage turnaround, the drawing attests to the early association of the North Wing with horses and carriages.

Two later drawings of the wings by Jefferson and by contemporary architect and artist, Robert Mills, suggest that by the 1790s Jefferson had grown less certain about how to divide and use the space in the North Wing. Jefferson's 1796 plan (Jefferson 1796, Figure 9) is a scale drawing executed just as Jefferson embarked on the building campaign that would double the size of the house and lead to the construction of the wings. While he delineated and identified spaces in the South Wing as they would actually be built, Jefferson did not indicate any partitions or specify the use of spaces on the north side. Mills' 1803 drawing (Mills 1803, Figure 10) also shows the house and wing. It matches Jefferson's draft for the South Wing. However in

the North Wing, Mills drew a series of rooms with fireplaces. One suspects they are entirely his invention, in the absence of any concrete specification from Jefferson, a suspicion that is confirmed by the nonsense labels he penned for each space.

As actually built, the space under the North Wing was mostly devoted to housing carriages, not horses. We now turn to a description of the construction process.

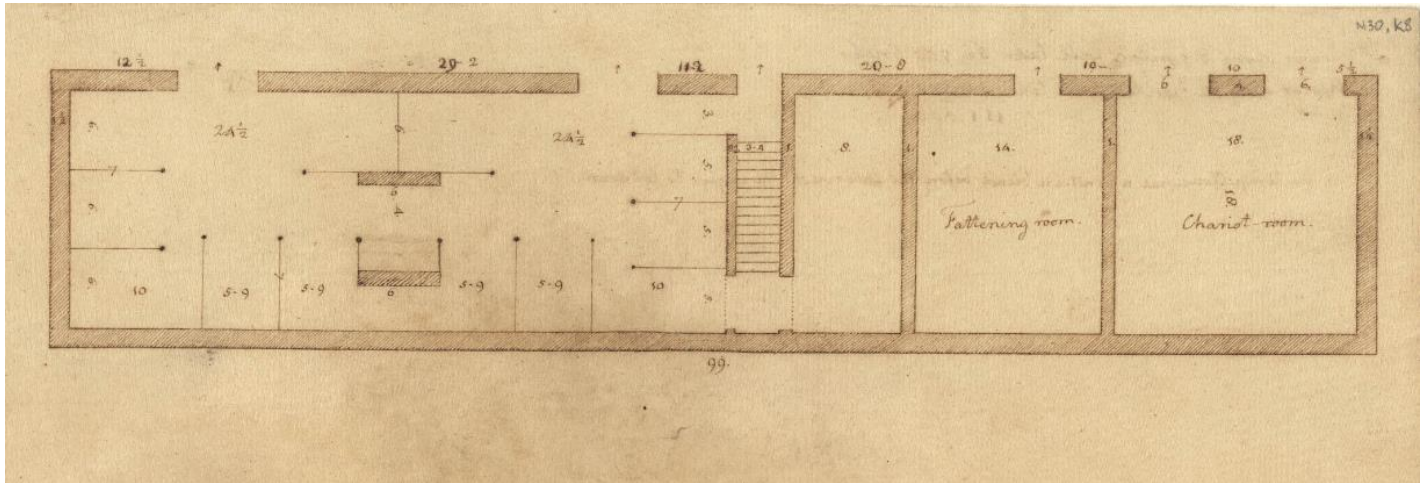

Figure 6: N30 recto (Jefferson 1768-1770a). Study plans for Monticello's dependencies. Note that in this plan, Jefferson included a Chariot room and what look to be stalls for horses.

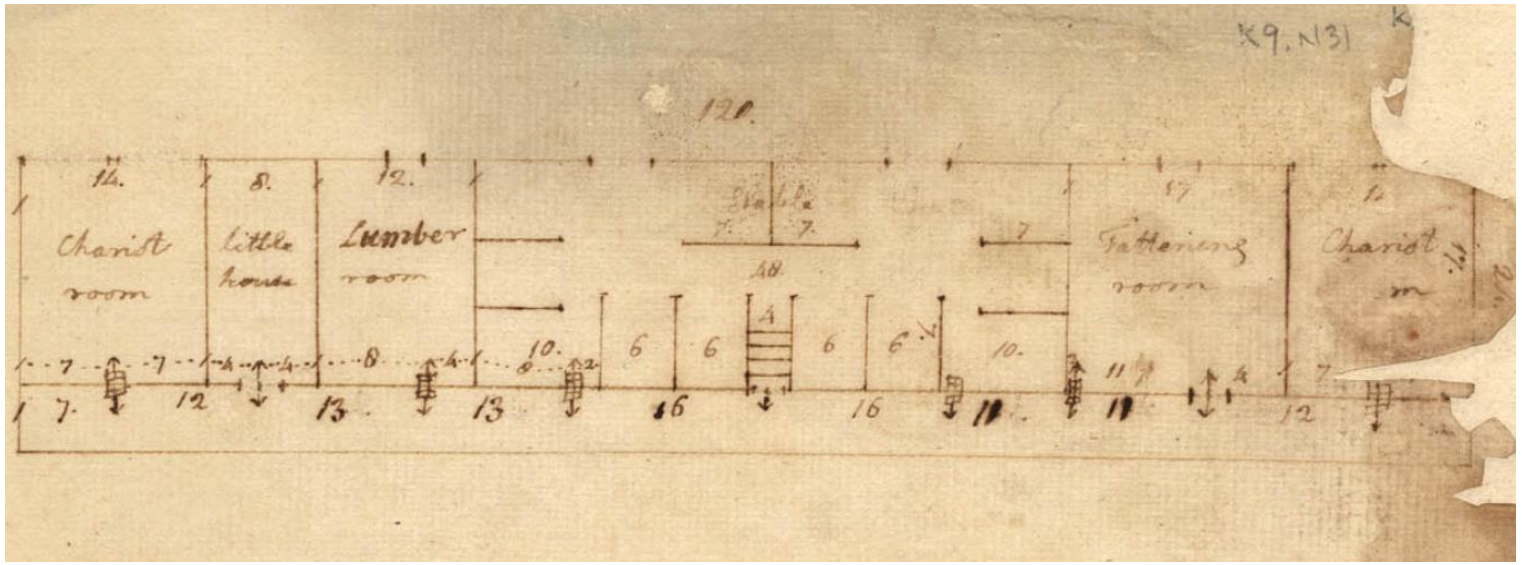

Figure 7: N31 (Jefferson 1768-1770b). Study plan for Monticello's dependencies. Note that in this plan, Jefferson included two Chariot rooms and a Stable with stalls for horses.

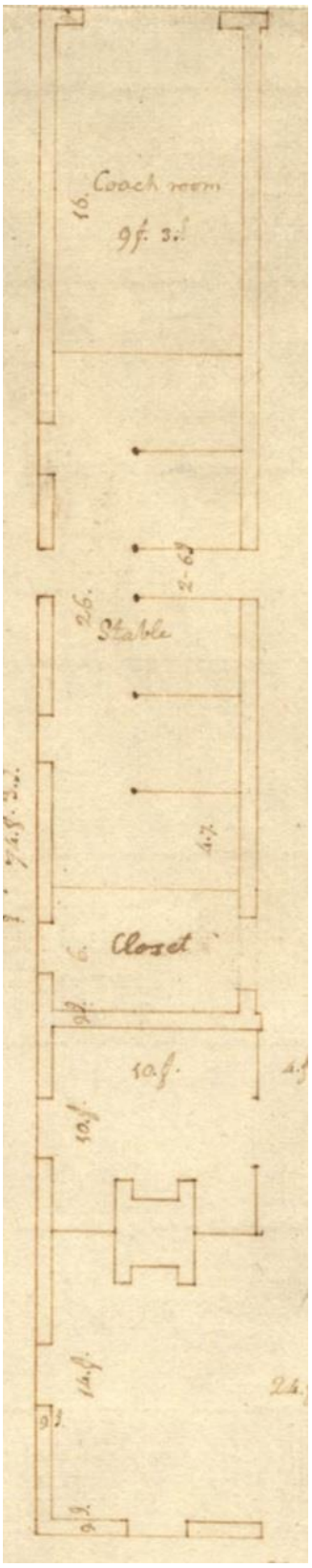

Figure 8: N449 (Jefferson 1783-1784). Miscellaneous service areas study plan, trimmed. Note the coach room and stables with lines indicating horse stalls.

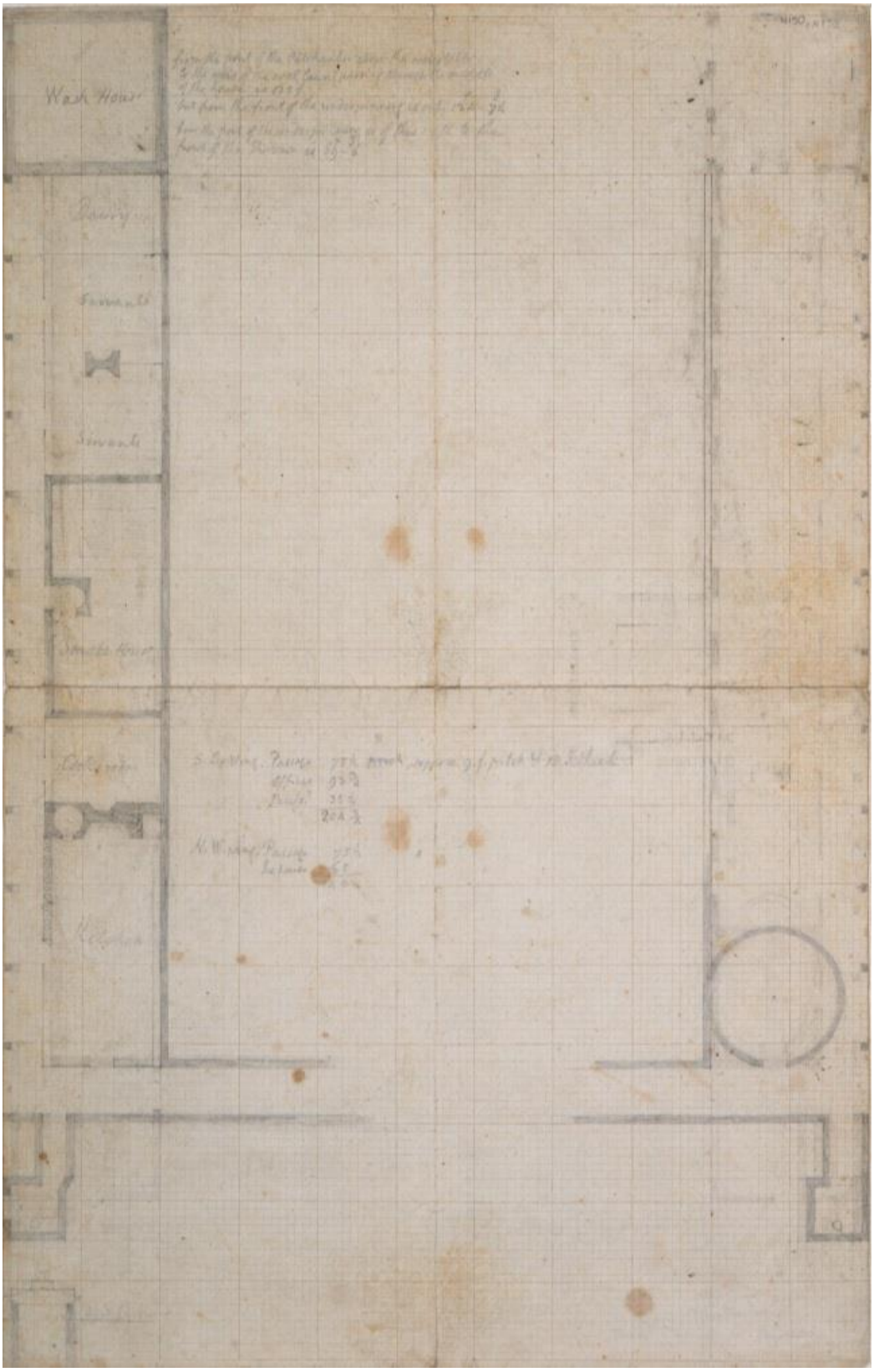

Figure 9: N150 (Jefferson 1796). Scaled drawing for north and south wings. Rooms are specified on the south side (left side) but not on the north (right). Jefferson also drew partitions on the south side. He left the north undivided.

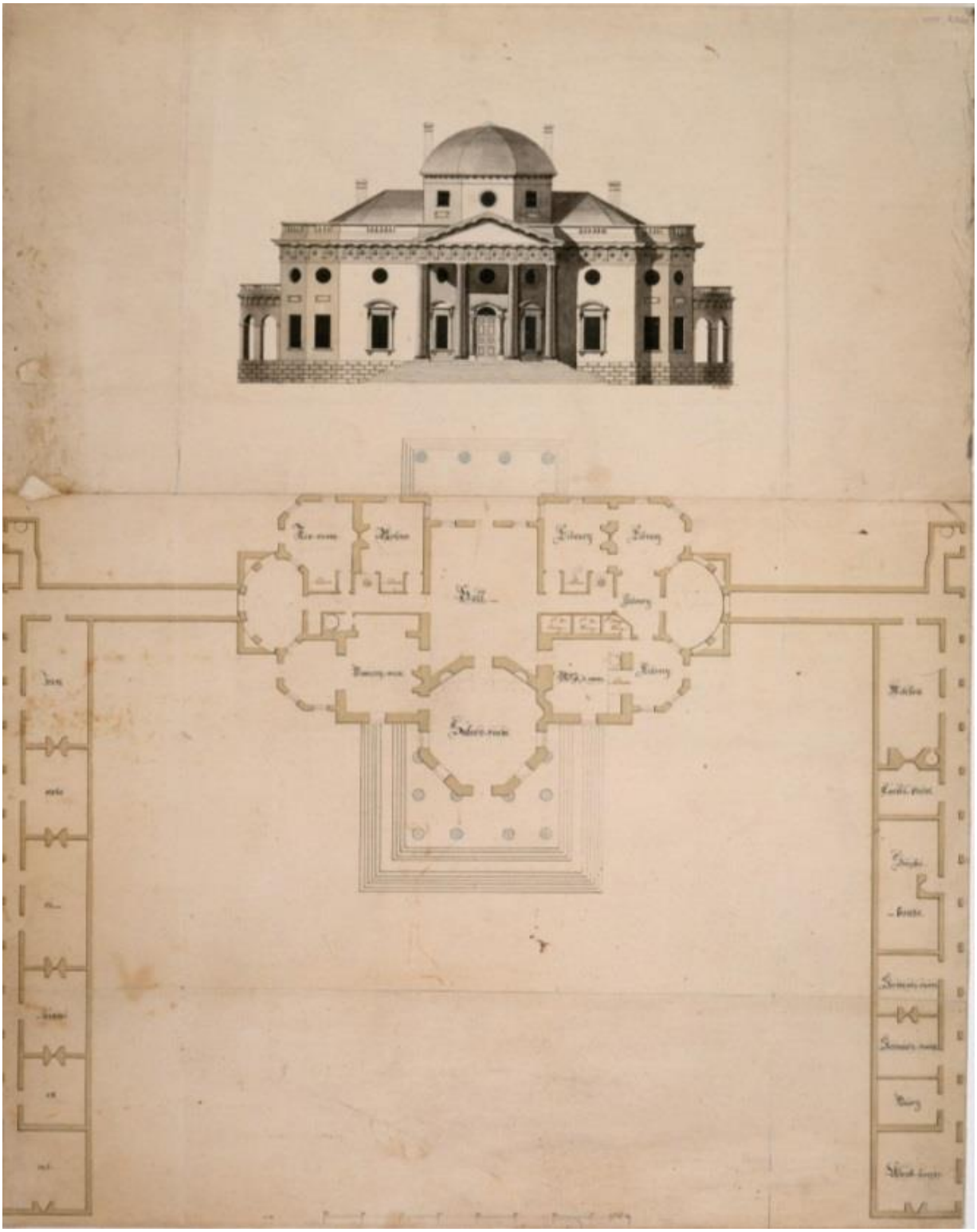

Figure 10: Second version of Monticello by Robert Mills, N155 (Mills 1803). Mills included fireplaces on the north side (left side) even though they did not exist. He also wrote unintelligible words inside of each room in the North Wing.

To build the North Wing, laborers first made a vertical cut into the mountain, against which masons built a stone retaining wall. Excavation on the Mountaintop was a difficult task as described in Jefferson's account from December of 1770 of the excavations of the wine cellar underneath what would become the main house:

> Four good fellows, a lad & two girls of abt. 16. each in 8½ hours dug in my cellar of mountain clay a place 3.f.deep, 8 f. wide & 16½ f. long = 14 2/3 cubical yds. under these disadvantages, to wit: a very cold snowy day which obliged them to be very often warming; under a cover of planks, so low, that in about half the work their stroke was not more than 2/3 of a good one; they eat their breakfast in the time which one of them went to cook; they were obliged to keep one or two constantly hawling away the earth to prevents it's rolling in again. From this I think a <*tolerable*> midling hand in 12. hours (including his breakfast) would dig & haul away the earth of 4 cubical yds., in the same soil (Bear and Stanton 1997:36-7).

To calculate how long it took for a similar work crew consisting of the same seven laborers, we can use Jefferson's calculations for excavation of the wine cellar. We estimate that the wedge dug for the wing was 8.21 feet deep, 145 feet wide, and 20 feet long, which equals 441 cubic yards. It would have taken 30 days for the same work crew to excavate the area for the wing.

In 1802, construction of the North Wing followed completion of stonework on the South Wing and All Weather Passage[2] the previous winter by masons Joseph Moran and William Maddox (Bear and Stanton 1997:1050,n7, 1072,n64, 1080; Randolph 1801a; Randolph 1801b; Jefferson 1802a). Jefferson was not onsite since he was serving as president during that time. He communicated to many of his overseers and workmen via letters. He wrote to joiner James Dinsmore, who worked at Monticello between 1798 and 1809 (Bear and Stanton 1997:985) and probably supervised the manufacture and installation of any wooden partitions in the north wing, on March 19, 1802:

[2] The All-Weather Passage was a covered tunnel that linked the cellar of the house with the north and south wings. In the cellar were various store rooms, including the wine cellar, ware room, and beer cellar.

> As I suppose Mr. Lilly[3] is digging the NorthWest offices & Ice house I will now give further directions respecting them. The eves of those offices is to be of course exactly on the level of those on the South East side of the hill. But as the North West building is chiefly for coach houses, the floor must be sunk 9. feet deep below the bottom of the plate to let a coach go under it… (Jefferson 1802a).

This letter indicates that the north side was modeled on the already constructed South Wing and that workmen directed by overseer Lilly dug the cuts. In the same letter, Jefferson requested that the partitions in the South Wing were to be "of inch plank, planed on both sides, & square jointed." Perhaps, then, the partitions were also made of plank on the north side. Documentary evidence remains silent about exactly how the North Wing was partitioned. This is likely because the matter remained unresolved until Jefferson returned to Monticello after his retirement from the presidency. Letters outlining the interior layout were then unnecessary, resulting in the lack of documentary evidence. Another possibility for the gap in the documentary record is that Jefferson communicated directly to Dinsmore during one of his visits to Monticello during the presidency.

In the above mentioned 1802 letter to Dinsmore, Jefferson specified that the new structure to be "chiefly for coach houses" rather than stables for housing horses. In another letter to Dinsmore dated June 22, 1802 (Jefferson 1802b), Jefferson included a sketch showing the north wing and ice house (Figure 11).

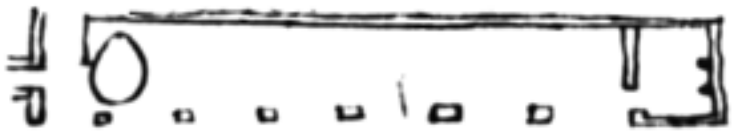

Figure 11: Sketch included in letter from Jefferson to joiner James Dinsmore, 22 June 1802 (Jefferson 1802b). Jefferson drew the ice house as a circle, the masonry walls as lines, and the brick columns as squares but did not divide the space in the Wing.

[3] Gabriel Lilly was the overseer at Monticello from 1800 until 1805 (Bear and Stanton 1997:1021).

An undated memorandum which Jefferson's *Garden* and *Farm Books* editor Edwin Morris Betts dated to around 1802 (Jefferson n.d.b, Figure 12) corroborates the coach room interpretation. Jefferson wrote that there were to be nine coach rooms, or cells in the wing. A "chariot, dble Phaeton, single do, gigg, sulky" would occupy four cells, with the gigg and sulky sharing a cell due to their smaller size, two cells for stranger's carriages, two for horses, and one for a store room, totaling nine cells in all (Beisweinger 2003:3, Figure 13). The notes specified dimensions for the partitions based on the existing north pavilion, passage, ice house, and space adjoining the ice house, allowing about ten feet per cell.

Instructions from Jefferson to Charlottesville merchant James Leitch (Bear and Stanton 1997:1253, n62) in 1809 also suggest that Jefferson had decided the North Wing would be largely occupied by coach rooms (Jefferson 1809). In the letter, he ordered different locks for various doors. For the doors of the "8 coachrooms," Jefferson ordered "4. Single locks to open with the same key." Furthermore, he said that the "double lock" on "my stable," the "strangers stable," and the "saddle room" (or store room) should all be locked with the same key. It is unlikely that the letter to Leitch referred to the newly constructed Stone Stables located on Mulberry Row. The rooms specified are nearly identical to Jefferson's plans for the North Wing laid out in N540 (Figure 12).

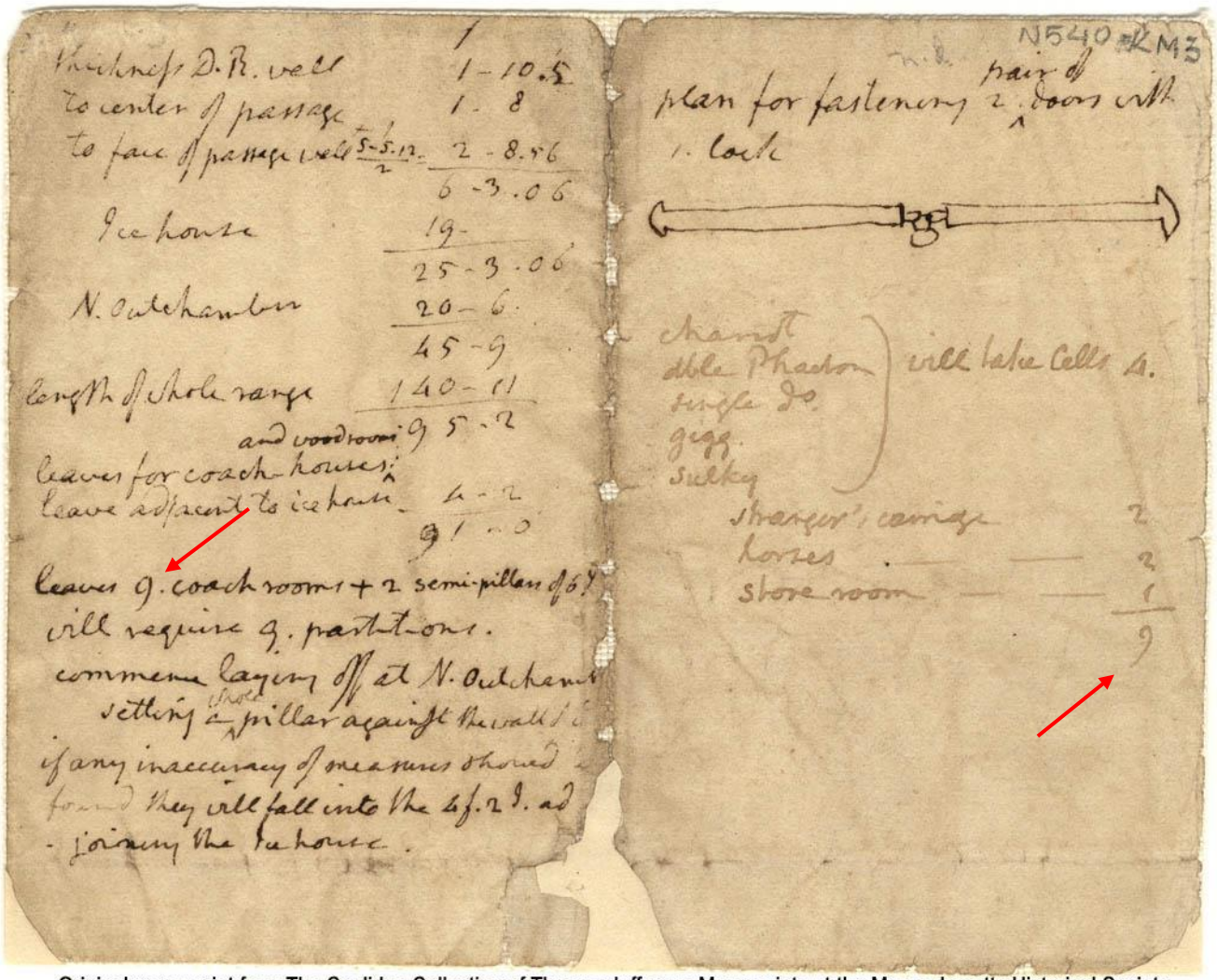

Figure 12: N540 (Jefferson n.d.b). Jefferson's specifications for locks for the "9 coach rooms" in the North Wing.

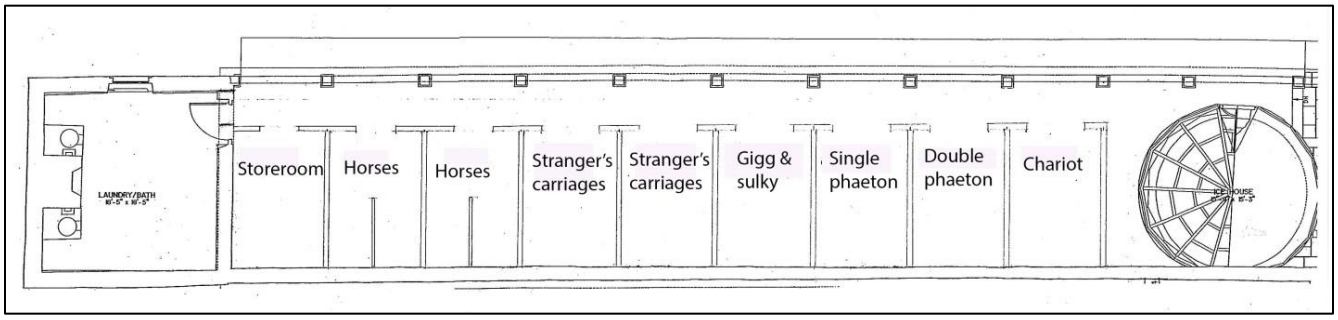

Figure 13: Monticello's former architectural historian William Beisweinger's conjectural layout of the North Wing Stables based on N540.

Descriptions from family members further substantiate the coach house layout. Jefferson's granddaughter Cornelia Jefferson Randolph drew a plan of Monticello around 1826 and labeled the center of the north office wing "Terrace" (Randolph 1826, Figure 14). To the right of the terrace, she wrote "under this [terrace] carriage houses".

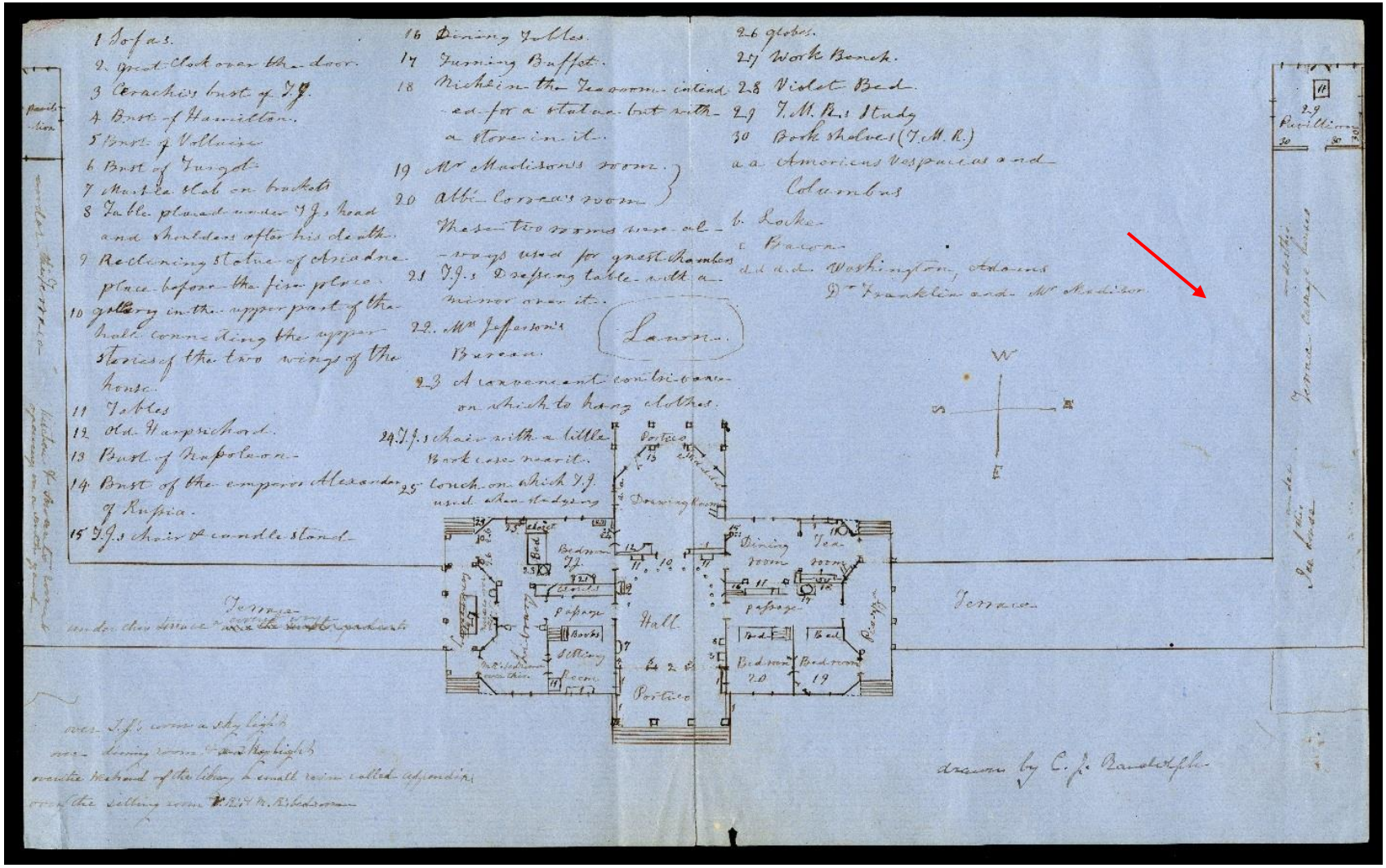

Figure 14: Plan of the first floor of Monticello by Cornelia Jefferson Randolph (Randolph 1826). Note the red arrow pointing to writing on the North Wing: "under this [terrace] carriage houses."

In a different exchange and speaking in the first person, Thomas Mann Randolph wrote to his son-in-law Nicholas Trist in early spring 1828 asking whether he could move into the North Pavilion and requested use of one of the "carriage houses" in his letter:

> …[Thomas Mann Randolph] wants only a place for his horse; the cellar under the house [pavilion]; one of the carriage houses for his fuel which he will procure himself; and a small spot for a garden, to be enclosed by him… (Randolph 1828).

Trist responded:

> The Nth. Pav. is therefore at your service, even on the terms proposed…The room beneath, now used, as heretofore, for a wash-house shall be evacuated; and one of the carriage houses appropriated for yr. fuel, as either of the stables you may select, shall be for yr. horse…" (Trist 1828).

Trist's response of "either of the stables" also supports Jefferson's undated notes (Jefferson n.d.b) where he specified that there were two cells for horses. It might also refer to the fact that there are two stables – the North Wing and the Mulberry Row Stone Stables - but viewing this letter in light of the other sources, it seems that Trist was referring to the stables in the North Wing.

It is unlikely that rooms under the North Wing were used as housing for enslaved people. There are no traces of fireplaces in the North Wing unlike on the south side, although the option was certainly possible during warmer months. Following Jefferson's death, it is unclear how subsequent Monticello owners including James Barclay and Uriah and Jefferson Monroe Levy and their families used the area in and around the North Wing. Visitors to Monticello in the nineteenth century following Jefferson's death noted the deterioration of the house and remarked on the state of the rooves: in 1912, Charlottesville lawyer and jurist R. T. W. Duke, Jr., recalled a visit to Monticello from 1865, in which "The floor of the porch… was absolutely broken to pieces" (Leepson 2001:106-107). One of the Levy's overseers, Thomas Rhodes, remembered that the terraces "had gone to rot" (Leepson 2001:107). By the early 1930s, aerial photographs

confirmed the North Wing lacked a roof. The wooden roof and partitions had collapsed by about 1870 (Mesick Cohen Waite Architects 1992:274, Figure 15). The North Wing was the focus of the first large restoration project in the late 1930s of the newly founded Thomas Jefferson Memorial Foundation (TJMF).

A review of the documentary research reaffirms the monumental task that enslaved laborers faced in excavating the space on the north side of the house to realize Jefferson's landscape visions. The documentary evidence supports the hypothesis that most of the space in the North Wing was devoted to storing coaches.

Figure 15: Aerial view of Monticello mountaintop, view east, ca. 1927-1928 (Wide World Photos 1930). Arrow points to the North Wing roof, which had collapsed.

FIELDWORK

Previous Archaeology

Between 1937 and 1938, restoration architect Milton L. Grigg conducted excavations at the North Wing with advice from Fiske Kimball, the Chairman of the Restoration Committee of the Thomas Jefferson Memorial Foundation (TJMF). Excavations occurred prior to the reconstruction of the north privy, ice house, corn room, stables, and coach house based on N56. Grigg's aim was to determine the interior configuration as designed by Jefferson before TJMF restored the wing. By the 1930s, roof framing and any interior partitions had vanished. All that remained was the hole for the ice house, the stone retaining wall, and the basement room of the North Pavilion (Bear 1961:7).

The only report on Grigg's excavation is his letter to Curator of the Thomas Jefferson Foundation (TJF) James Bear on November 2, 1961, in which Grigg described excavations consisting of "a grid of trenches dug over the area, a series of check ditches below the original grade to determine if any footings had been overlooked (none were) and a further excavation along the south face of the brick retaining wall to discover possible locations of any step foundation" (Grigg 1938b; Bear 1961:7). The configuration of the trenches is documented by several photographs taken at the time of excavations (Figure 16). Like contemporary architects who excavated at Colonial Williamsburg, Grigg used cross trenches in hopes of maximizing his chances of finding brick or masonry walls.

Figure 16: Milton Grigg's cross-trenches at the North Wing from 1937 (Grigg 1937).

Grigg also noted that they discovered an

…easily identified layer, approximately 1" thick, of organic material clearly indicating in its relationship with the sandy, rocky subgrade (undoubtedly the original finished floor surface). All who saw this agreed that this was stable litter. In amplification of your reference to the wooden partition construction and mud sills, not only were these found but the nails were extant indicating the position of the partition material above. These mud sills were carefully plotted in a survey and the location of the nails were plotted with the result that the quite readable pattern of the location of the studding and of door openings could be determined (Grigg 1961:1).

In a taped interview with Monticello researchers in 1980, Grigg defined a mud sill as buried timber as opposed to a sill resting on supports like a beam (Grigg 1961:1, Mesick Cohen Waite Architects 1992:281, n13). His team also identified brick column bases, which held up the roof, and parts of the wooden partition, or mud sills (Grigg 1961:7). Excavators recovered and bagged artifacts, including a large quantity of sheet iron roofing (Bear 1961:7) and an iron coach handle (Grigg 1938a). They concluded from their excavations that "this portion was used as a stable and coach house" based on the artifacts recovered and their documentary research. Unfortunately, all artifacts recovered from this excavation are missing.

Grigg produced five sketches during and after the dig, numbered by Beisweinger as G-92, 93, 94, 95, and an unnumbered sketch. The unnumbered drawing from January 9, 1937, entitled "Monticello – Griggs sketch of finds in week of Jan 3, 37" includes a sketch of a soil profile and the location of the log sill and several piers. G-92 is titled "Monticello Record of Location of Artifacts on North Terrace Excavations" (Grigg and Johnson 1938a, Figure 17). The drawing includes about ninety circles with numbers inside, which might correspond with tags tied on to artifacts and bags which presumably held artifacts including bricks and pieces of metal as seen in a photograph. Grigg drew where he thought the original sill for the north wall of the wing was located in addition to nine piers. G-93 (Grigg and Johnson 1938b, Figure 18), titled "Excavated Sill," includes measurements of what Grigg identified as the log sill. G-94 (Grigg and Johnson 1938c, Figure 19) is a detailed drawing of the sill with nail locations found in and around the sill. Despite Grigg's arguments for interior partitions in his 1961 letter to Bear, his drawings do not record physical evidence for them. His most important contributions were the discovery of the mud sill, brick piers, and the absence of interior masonry or brick walls.

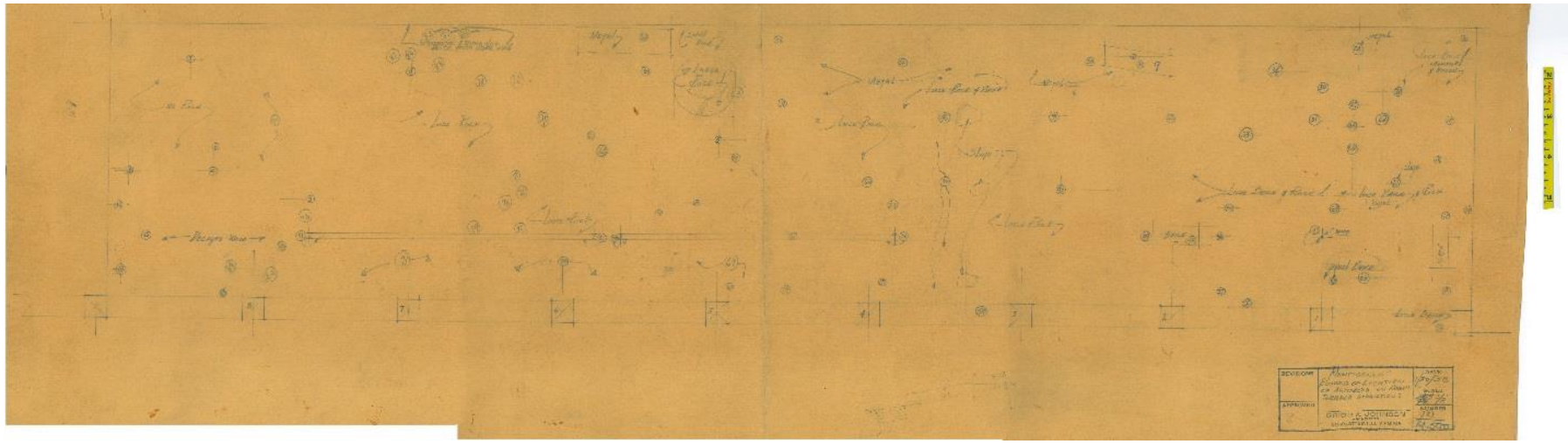

Figure 17: G-92, "Monticello," Record of Location of Artifacts on North Terrace Excavations (Grigg and Johnson 1938a).

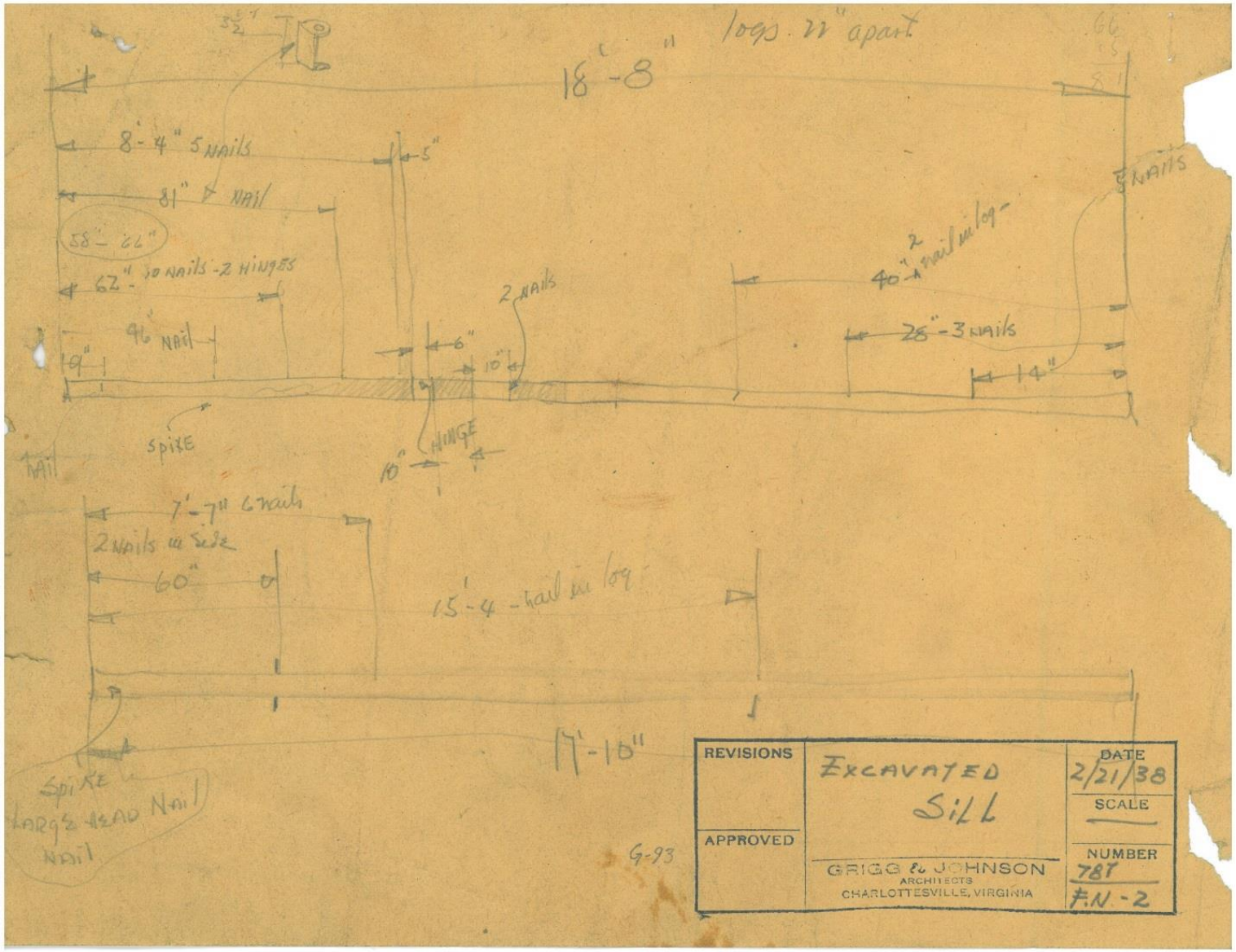

Figure 18: G-93, Excavated Sill (Grigg and Johnson 1938b).

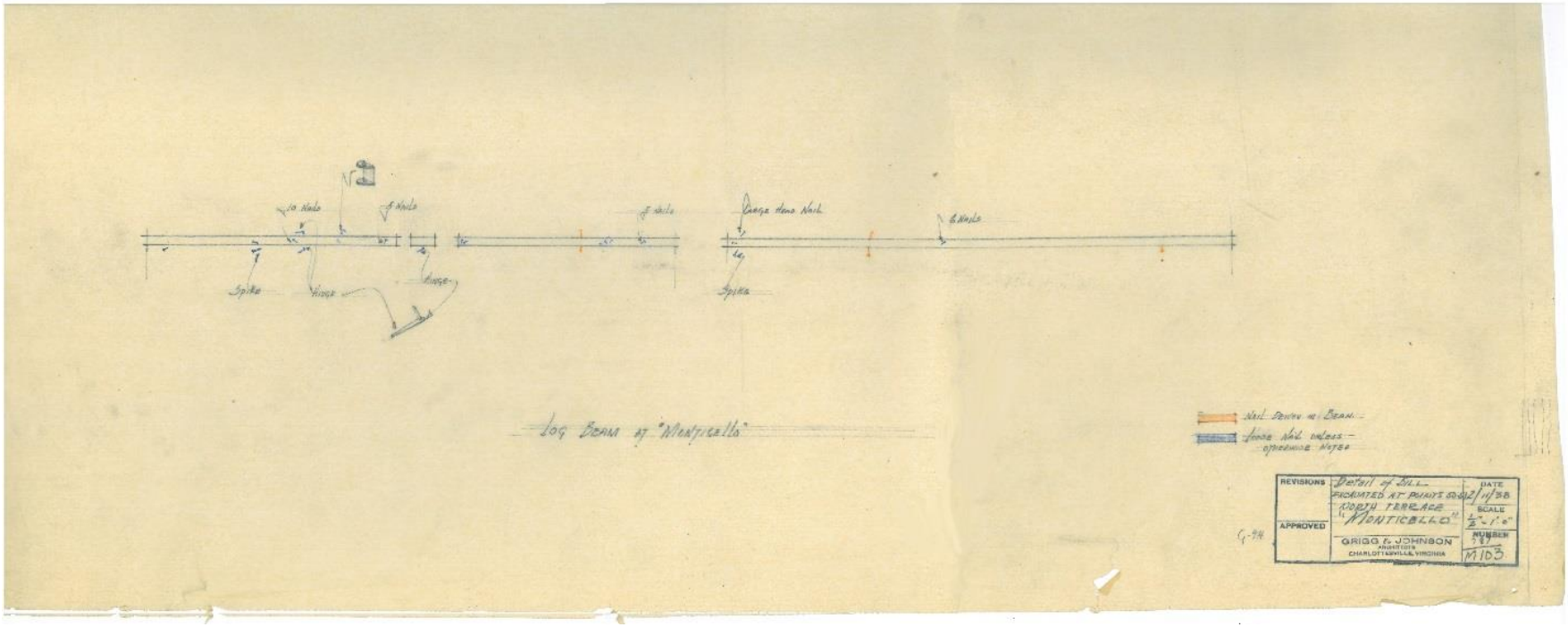

Figure 19: G-94, Detail of Sill Excavated at points 50-51. North Terrace "Monticello" (Grigg and Johnson 1938c).

Grigg and Kimball justified their final restoration design which emphasized horse stalls by pointing to several lines of evidence including Jefferson's drawings, notes, and letters; archaeology completed by Grigg; and studies of the stables at John Hartwell Cocke's nearby Upper Bremo Plantation. Grigg used Bremo's stables to design the renovations because he thought they were completed with advice from Jefferson's joiners John Neilson, who worked at Monticello between 1805 and 1809, and James Dinsmore, who Jefferson employed between 1798 and 1809 (Mesick Cohen Waite Architects 1992:274; Grigg 1961:2).

Edwin Morris Betts, editor of Jefferson's papers, challenged Grigg and Kimball's restored wing plan. Betts discovered the undated document N540, where Jefferson listed measurements for partitions for coach rooms (Mesick Cohen Waite Architects 1992:278, 281, n18). Betts thought it unlikely that twelve horse stalls would have existed so close to the dining room (Bear 1961:9). Based on a careful reading of the documentary record explained above, it seems that Grigg and Kimball were incorrect in their interpretation, and Betts' interpretation of the space used as coach houses was more accurate.

2014-2015 Excavations

Monticello's Department of Archaeology excavated nearly the entire area inside the North Wing during the winter of 2014 to document any historical features and collect artifacts prior to the construction of new exhibit spaces, a gift shop, and restrooms. Excavations sought to determine whether evidence of the original partitions remained and if the arrangement of the space changed over time.

Field and Laboratory Methods

In the North Wing, a total of fifty-five quadrats were excavated (Figure 20). Not all quadrats were fully 5'x5' in size because the wing's stone retaining wall and twentieth-century wooden partitions dividing the space into bays intersected them. The terms bay and Carriage Bay

are used throughout the fieldwork section of this report, but these are parts of Grigg's now vanished restoration. Because of the location of 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.

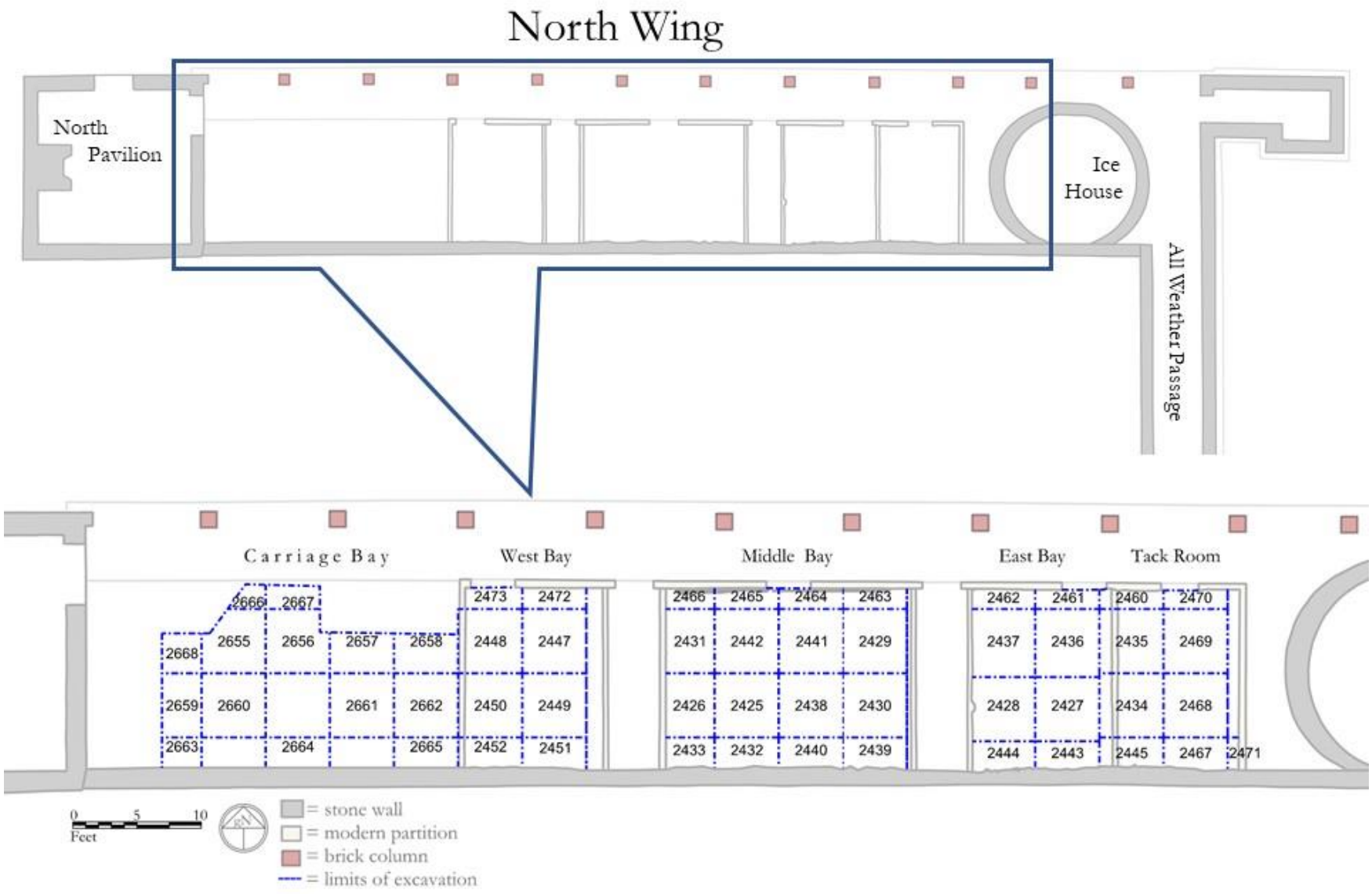

Figure 20: Quadrat map of the North Wing

In the Wing, quadrats numbers range from 2425 to 2445, 2447 to 2452, 2460 to 2473, and 2656 to 2668. Quadrat numbers were assigned in the order in which they were opened. Layers and features received consecutive letter designations. Several datums were established for the Wing because walls and partitions obstructed direct lines of sight. Quadrat location and elevations were recorded using a total station shot in from these temporary stations. Most elevations were recorded with a total station, but when we encountered line of sight issues, elevations were recorded using a line level. A complete list of datums and temporary stations are recorded in Appendix 1.

Paperwork accompanying each quadrat included a Context Index, Context Records, Sediment Sample Log when 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. Several column samples were taken from quadrat side walls 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 North Dependency Stables is "52". 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.

Select site maps, plan views, and profile drawings for the North 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."

THE SITE THROUGH TIME

The archaeological record in the North Wing reflects multiple alterations that occurred to the space. Because of Grigg's excavations, few historic strata remained intact in the Wing. Layers of sediment were extremely thin and powdery due to the lack of precipitation for about seventy-five years. Archaeologists discovered a few early nineteenth century features, and a layer including a few nineteenth-century ceramics. Grigg's cross-trenches intruded this layer. Twentieth-century intrusions like postholes disturbed deposits 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 lithostratigrpahic 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 context 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 use and restoration efforts. SGs were numbered in the order in which they were deposited with lower numbers representing earlier deposits. For instance, in the wing, SG01 is the oldest stratigraphic

group representing a transition to subsoil at the site. The most recent deposit, SG16, represents the ground surface at the time of excavation in November 2014. A list of each stratigraphic group and feature and their interpretations are included within each period. SGs in the Pavilion number 1 through 16. Several feature numbers were skipped when multiple features were merged. For example, the Grigg cross trenches were excavated in four bays and given a separate feature number in each bay. However, this feature is one contiguous trench and was therefore assigned to the same feature during post-excavation analysis.

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., SG10) followed by interpretations (e.g., reddish brown silty clay loam, or incipient A horizon).

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 21. The nodes represent both unassigned contexts and stratigraphic groups while fill colors represent major stratigraphic periods into which they were grouped. Unassigned contexts are identified by their individual context numbers (e.g., 2425D).

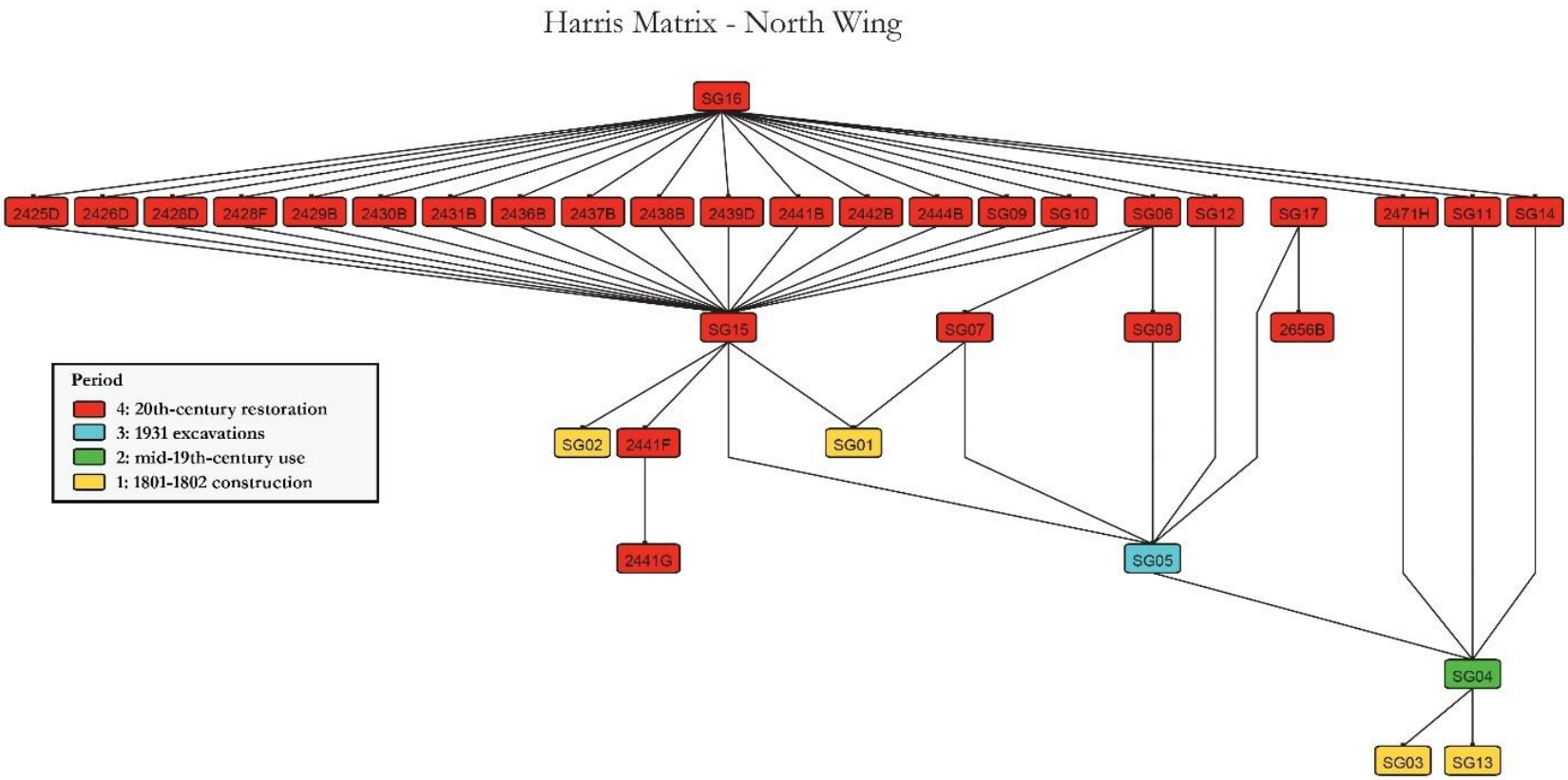

Figure 21: Harris Matrix for the North Wing

North Wing

In November of 2014, the Department of Archaeology began excavations in the North Wing and continued through early January of 2015. Archaeologists worked in each of the four bays and later returned to test the Carriage Bay in May of 2016. The wooden horse stalls were removed by Monticello's Restoration Department before excavations, but the structurally supportive partitions remained in place during the excavation.

Period 1 (c.1801-c.1835)

The stratigraphy inside of the wing shows significant modifications to the area since Jefferson's ownership of Monticello. As a result, not much remained dating to Jefferson's occupation. The first construction event for the Wing was the vertical cut into the hillside, against which masons built the stone retaining wall using alaskite boulders. SG01 represents a thin transition to subsoil layer, a loose red silty clay, and was only present in the central bay. A small builder's trench for the wall intruded subsoil (SG02 in F20; SG13 in F23) and was found in the tack room and the central bay (Figure 22). An unidentified pit (SG03 in F24) (Figure 23) in the Tack Room may have been a posthole for scaffolding that provided additional height for masons pointing the wall with mortar. Because of the lack of early nineteenth-century features such as postholes or builder's trenches for partitions, it seems that partitions in the Wing were likely framed on sills that rested on the ground as Grigg inferred. A complete list of stratigraphic groups and features associated with Period 1 is in Table 1.

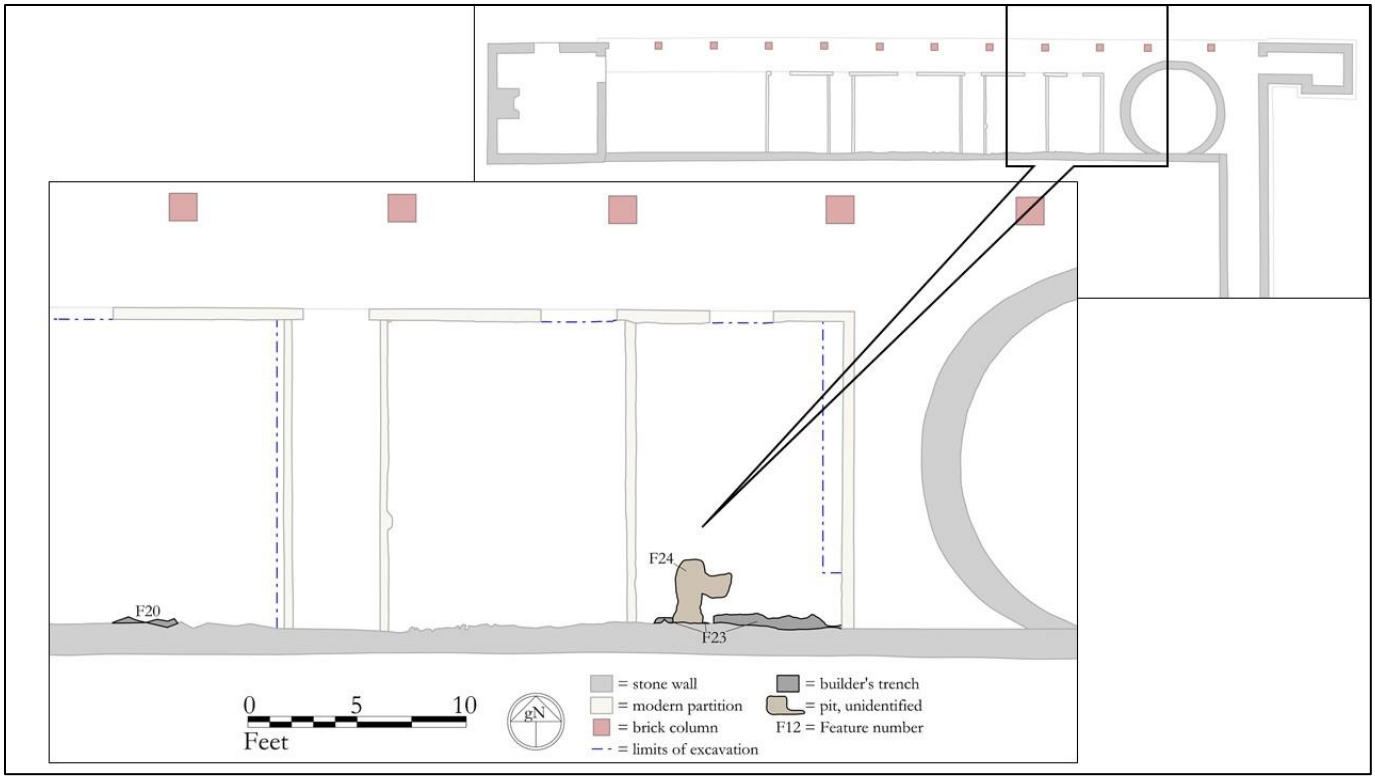

Figure 22: Period 1 features

Figure 23: Feature 23 (2434I, 2445H, and 2467G) closed, view south.

Table 1: Stratigraphic groups and features from Period 1

Feature number	Stratigraphic Group (SG)	Contexts	Description	Interpretation	Dimensions (feet)	Depth (feet)
--	SG01	2460E, 2461D	red silty clay	transition to subsoil	--	--
F20	SG02	2439C, 2440C	dark red loose clay	possible builder's trench along wall running east-west	0.55’ x 5.0’	0.07’
F24	SG03	2434I, 2445H, 2467G	red silty clay with modified stone	unidentified pit, possibly a posthole	2.7’ x 1.4’	0.34’
F23	SG13	2445G, 2467E, 2471F	linear intrusion along south wall	east-west builder’s trench along south wall	7.1’ x .45’	0.19’

Period 2 (c.1835-1937)

Period 2 saw the sale of Monticello into the Levy family. One thin layer of sediment (SG04) remained from their use of the Wing. This layer was a red clay with decomposing

greenstone. The deposit did not extend across the entire Wing but only in the Tack Room, the western most bay, and in two quadrats in the largest bay, perhaps due to Grigg's excavations. Table 2 lists the stratigraphic group from Period 2.

Table 2: Stratigraphic groups from Period 2

Stratigraphic Group (SG)	Contexts	Description	Interpretation
SG04	2434F, 2435F, 2435G, 2442E, 2445E, 2447E, 2447F, 2448F, 2449C, 2450D, 2451B, 2452B, 2460J, 2463E, 2467D, 2467F, 2468D, 2468E, 2469D, 2470E, 2470F, 2471G, 2472D, 2472E, 2473D	red clay with decomposing greenstone	trash midden

Period 3 (c.1937-1938)

Period 3 documents Milton Grigg's archaeological explorations of the Wing. His cross trenches intruded subsoil and were identified in each bay (SG05 in F17, Figure 24). The fill in each trench consisted of a red silty clay loam with large decomposing greenstone cobbles, a result of Grigg digging into C-horizon and removing and then returning the cobbles when he backfilled the trenches. Two profiles, the first from the far west bay and the other from the Tack Room, document Grigg's cross trenches intruding the nineteenth-century midden (Figure 26, Figure 27, Table 3, Figure 28, Table 4). Table 5 lists the single stratigraphic group and one feature from Period 3.

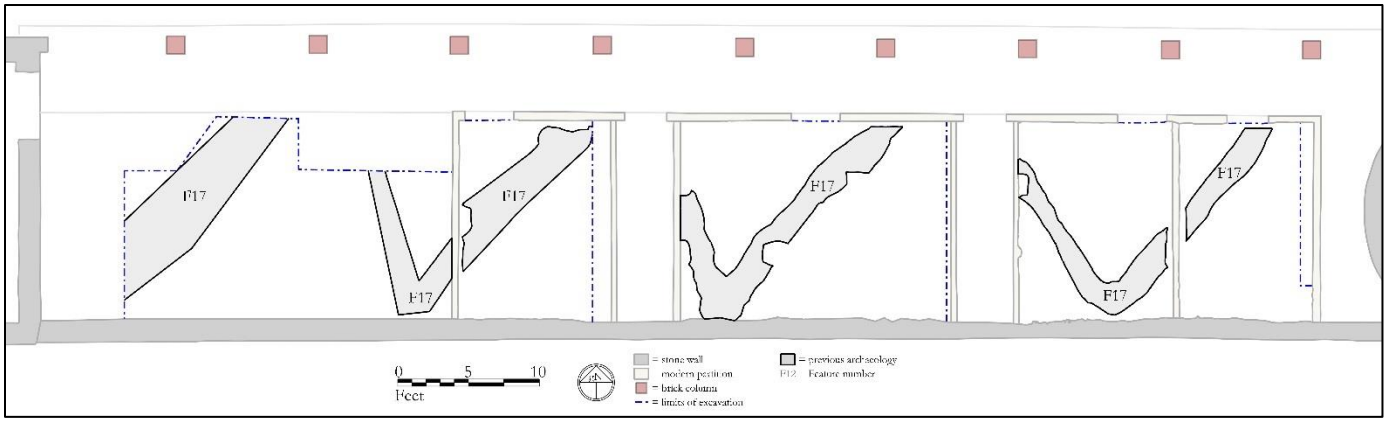

Figure 24: Period 3 features

Figure 25: Feature 17, Grigg's cross trenches removed in 2434, 2435, 2437, 2443, 2444, 2445, 2447, and 2448, view south.

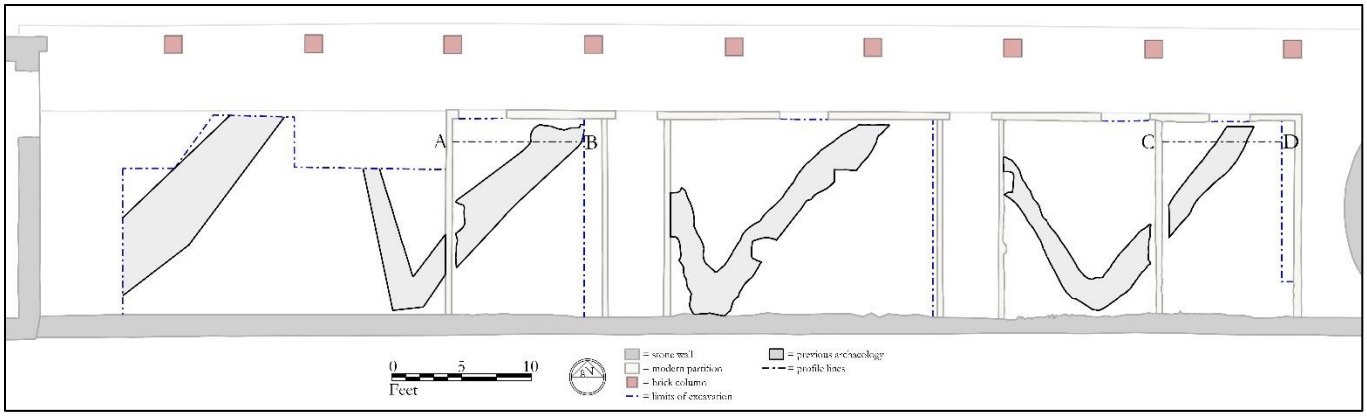

Figure 26: Location of profile lines in the North Wing

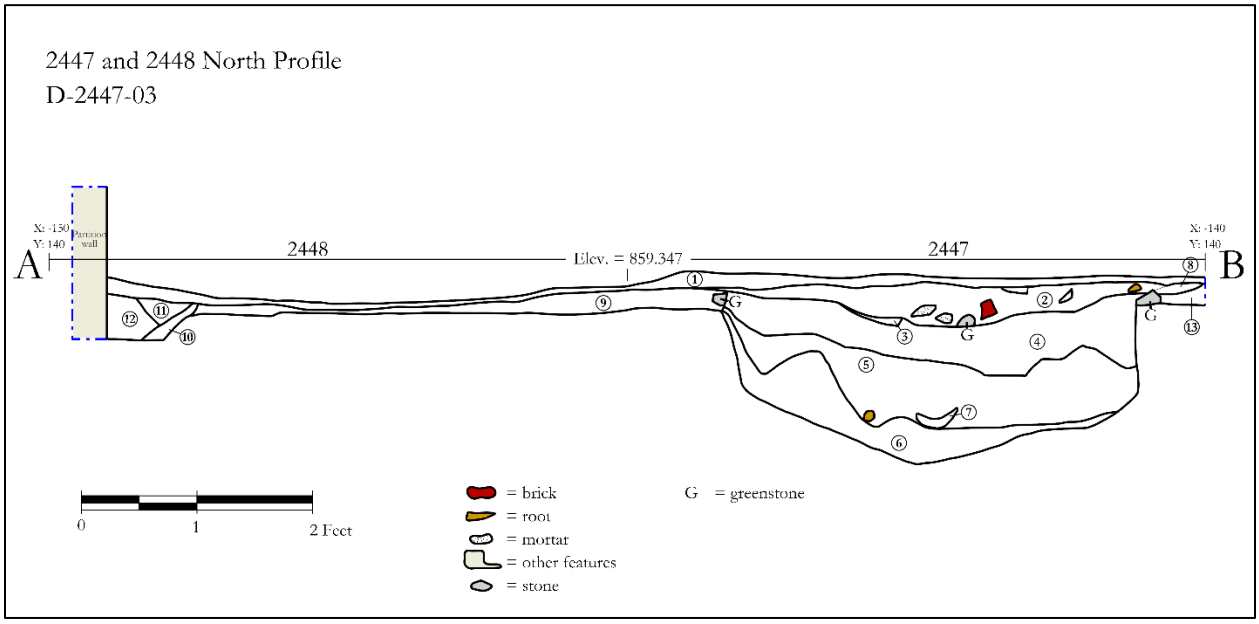

Figure 27: D-2447-03. One of Grigg's cross trenches cuts through the thin nineteenth-century midden.

Table 3: Contexts, sediment descriptions, SGs, and interpretations for Figure 27.

Number	Context(s)	Munsell	SG	Interpretation
1	2447A, 2448A	Dusky Red [10R 3/4] Sandy Loam, 35% Gravel (1-64mm), 5% Mortar (1-64mm).	16	ground surface with pea gravel
2	2447C	Reddish Brown [2.5YR 5/8] Silty Clay, 20% Red [2.5YR 5/8] Silty Clay, 15% Weak Red [10R 4/4] Silty Clay, 20% Mortar (1-64mm), 3% Brick (1-64mm), 2% Unmodified Stone (1-64mm).	05	Grigg's cross trenches
3	2447C	Reddish Brown [5YR 4/4] Silty Loam, 16% Red [2.5YR 5/8] Silty Loam, 2% Mortar (1-4mm), 2% Unmodified Stone (1-4mm).	05	Grigg's cross trenches
4	2447C	Weak Red [10R 4/4] Clay, 28% Red [2.5YR 5/8] Clay, 30% Unmodified Stone (1-64mm), 2% Mortar (1-4mm).	05	Grigg's cross trenches
5	2447D	Red [10R 4/6] Clay, 20% Red [10R 5/8] Silty Clay, 20% Unmodified Stone (1-64mm).	05	Grigg's cross trenches
6	2447D	Red [10R 4/6] Clay, 10% Unmodified Stone (1-64mm).	05	Grigg's cross trenches
7	2447D	Dusky Red [10R 3/4], 18% [2.5YR 4/6], 2% Unmodified Stone (1-4mm).	05	Grigg's cross trenches
8	2447C	Weak Red [10R 4/4] Sandy Loam, 20% Dark Reddish Gray [10R 3/1] Sandy Loam, 18% Red [2.5YR 5/8] Sandy Loam, 2% Unmodified Stone (not recorded).	05	Grigg's cross trenches
9	2447E, 2448F	Weak Red [10R 4/4] Silty Clay, 12% Red [2.5YR 5/8] Silty Clay, 3% Unmodified Stone (1-64mm).	04	trash midden
10	2448D	Weak Red [10R 4/3] Sandy Loam, 2% Unmodified Stone (1-4mm).	08	builder's trench with root along partition wall
11	2448C	60% Red [10R 4/6] Silty Clay, 35% Red [2.5YR 5/8] Silty Clay, 5% Unmodified Stone (1-64mm).	08	builder's trench with root along partition wall
12	2448C	60% Red [2.5YR 4/6] Silty Clay, 35% Red [2.5YR 5/8] Silty Clay, 20% Unmodified Stone (1-64mm).	08	builder's trench with root along partition wall
13	2447D	Weak Red [10R 4/4] Silty Clay, 12% Red [2.5YR 5/8] Silty Clay, 3% Unmodified Stone (1-64mm).	05	Grigg's cross trenches

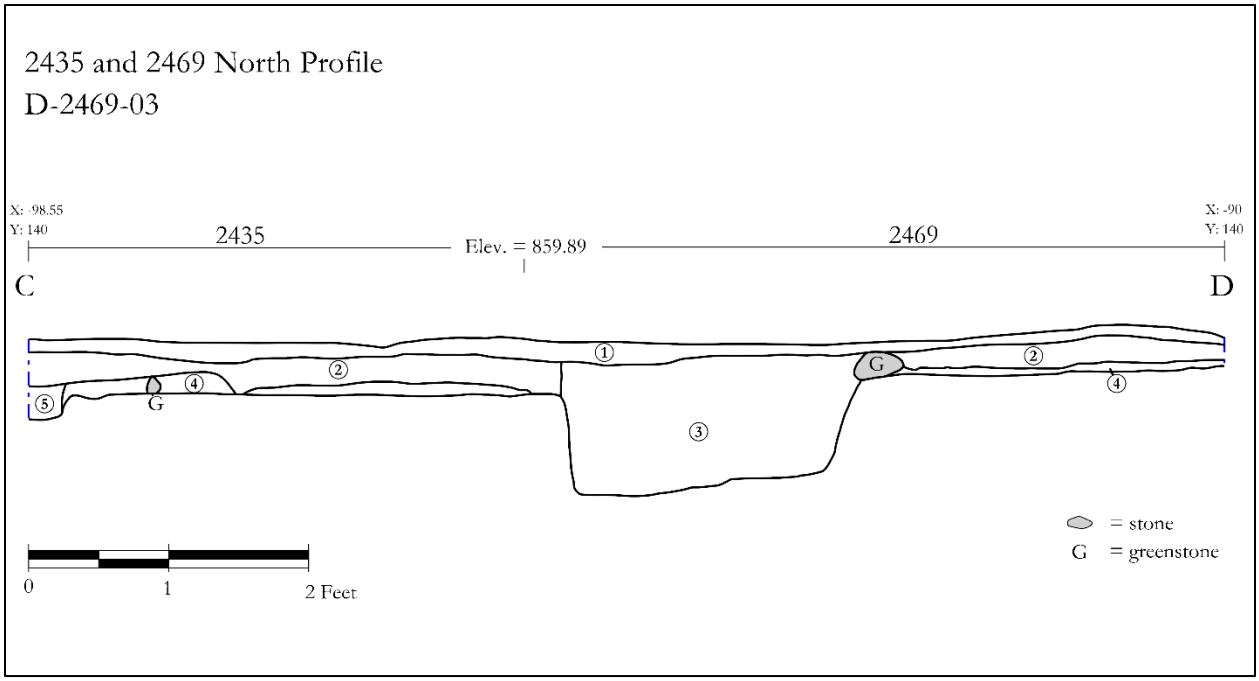

Figure 28: D-2469-03. One of Grigg's cross trenches cuts through the thin nineteenth-century midden.

Table 4: Contexts, sediment descriptions, SGs, and interpretations for Figure 28.

Number	Context(s)	Munsell	SG	Interpretation
1	2469A, 2435A	Reddish Brown [2.5YR 4/4] Silty Clay, 45% Red [2.5YR 4/8] Silty Clay, 5% Gravel (1-64mm).	16	ground surface with pea gravel
2	2469B, 2435F,G	Dark Red [2.5YR 3/6] Silty Clay Loam, 30% Yellowish Red [5YR 4/6] Silty Clay Loam, 20% Greenstone (>1mm).	16 (2469B) 04 (2435F, G)	2469B: ground surface with pea gravel 2435F, G: trash midden
3	2435D, 2469C	Dark Red [2.5YR 3/6] Silty Clay, 10% Dark Reddish Brown [2.5YR 3/4] Silty Clay, 3% Greenstone (1-64mm), 1% Mortar (1-2mm).	05	Grigg's cross trenches
4	2469D, 2435F,G	Red [2.5YR 4/6] Silty Clay, 5% Greenstone (1-64mm).	04	trash midden
5	2435E	Red [2.5YR 4/6] Silty Clay, 1% Concrete (1-2mm), 1% Greenstone (1-2mm).	07	north-south builder's trench

Table 5: Stratigraphic groups and features from Period 3

Feature Number	Stratigraphic Group (SG)	Contexts	Description	Interpretation	Dimensions (feet)	Depth (feet)
F17	SG05	2425F, 2426F, 2427E, 2427F, 2428G, 2429D, 2431E, 2432D, 2433F, 2434D, 2434H, 2435D, 2437D, 2441E, 2442D, 2443D, 2443E, 2444D, 2447C, 2447D, 2448E, 2450E, 2463D, 2464C, 2469C, 2470D, 2472C, 2655A, 2656A, 2657A, 2658A, 2659A, 2660A, 2661A, 2662A, 2663A, 2665A, 2666A, 2667A, 2668A	red silty clay loam with decomposing greenstone	Grigg's cross trenches	80' x 2'	1.14'

Period 4 (1938-2014)

Period 4 records the Thomas Jefferson Memorial Foundation's construction of a new stable exhibit with horse stalls in the late 1930s (Figure 29). Several builder's trenches were constructed to support the partitions dividing the stalls (SG06, SG07, SG08). Postholes were dug, into which concrete was poured to support the wooden stalls and new roof (SG09 in F03; SG10 in F08; SG11 in F29; SG12 in F34; F01, 02, 04, 05, 06, 07, 09, 10, 12, 13, 14, 15, 16, and 21) (Figure 30). Another posthole (F27) and mold (F26) helped to support a partition. A machine-made brick and mortar rubble pile only two tenths in depth filled in a shallow depression, perhaps the result of workmen filling a hole left from Grigg's work (SG14 in F40). A layer of compact red silty clay with decomposing greenstone (SG15) was present in some places in the Wing. The ground surface layer was removed first on the site (SG16). This layer consisted of yellowish red silty clay with pea gravel. Stratigraphic groups and features from Period 4 are listed in Table 6.

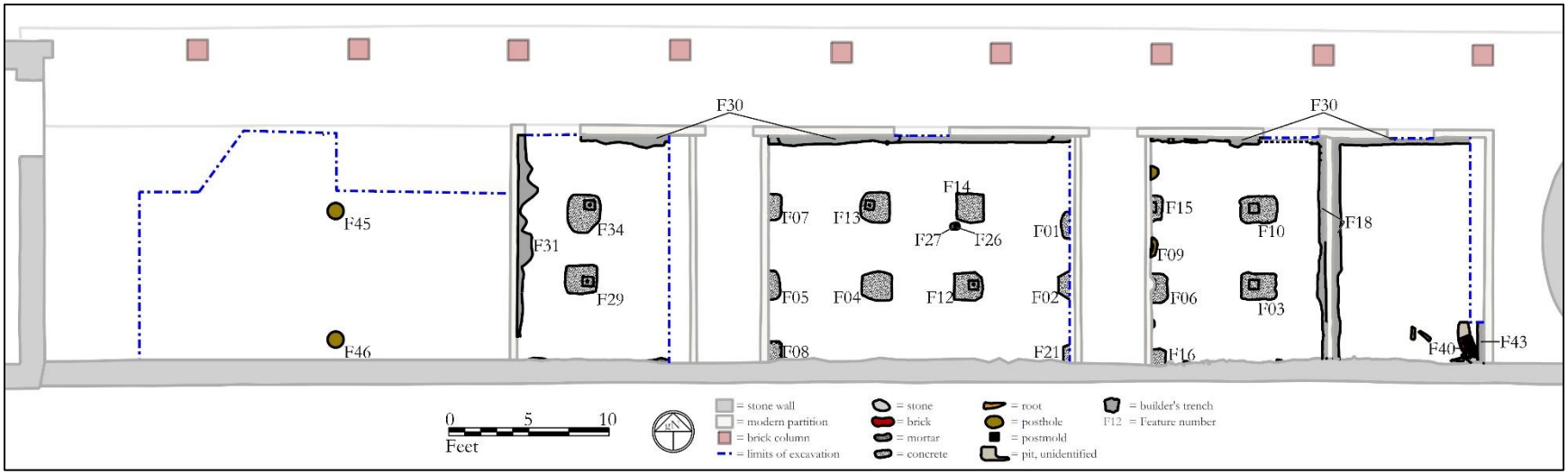

Figure 29: Period 4 features

Figure 30: Features 04, 12, 13, and 14, concrete postholes, view south.

Table 6: Stratigraphic groups and features from Period 4

Feature number	Stratigraphic Group (SG)	Contexts	Description	Interpretation	Dimensions (feet)	Depth (feet)
F30	SG06	2460C, 2460I, 2461B, 2462B, 2463B, 2464D, 2465B, 2466B, 2470C, 2472B, 2473C	linear red silty clay intrusion	east-west builder's trench	55' x .5'	0.58'
F18	SG07	2434E, 2434G, 2435E, 2445D, 2445F, 2460D, 2460H	compact red silty clay loam/silty clay/red clay with decomposing greenstone	north-south builder's trench	13.9' x 1.4'	0.49'
F31	SG08	2448C, 2448D, 2450C, 2450F, 2452C, 2473B	red silty clay loam intrusion	builder's trench with root along partition wall	13.5' x 0.55'	0.91'
F03	SG09	2427C, 2428C	rectangular feature surrounding	posthole	4.4' x 3.3'	0.37'

			twentieth-century posthole			
F08	SG10	2433C, 2433D	mottled reddish brown clay loam	1930s concrete post	1.25’ x 0.95’	0.96’
F29	SG11	2449B, 2450B	red silty clay	1930s concrete post	1.95’ x 2.35’	0.20’
F34	SG12	2447B, 2448B	red silty clay	1930s concrete post	2.4’ x 1.9’	.14’
F40	SG14	2467C, 2471C, 2471E	brick and mortar rubble	rubble filling shallow depression	1.75’ x 1.15’	0.18’
--	SG15	2425E, 2426E, 2427D, 2428E, 2429C, 2430C, 2431D, 2432C, 2433E, 2436C, 2437C, 2438C, 2439B, 2440B, 2441D, 2442C, 2443C, 2444C, 2461C, 2462C, 2463C, 2465C, 2466C	compact red silty clay loam/silty clay/red clay with decomposing greenstone	post-Grigg fill with decomposing greenstone	--	--
--	SG16	2425A, 2425B, 2425C, 2426A, 2426B, 2426C, 2427A, 2427B, 2428A, 2428B, 2429A, 2430A, 2431A, 2431C, 2432A, 2432B, 2433A, 2433B, 2434A, 2434B, 2434C, 2435A, 2435B, 2435C, 2436A, 2437A, 2438A, 2439A, 2440A, 2441A, 2441C, 2442A, 2443A, 2443B, 2444A, 2445A, 2445B, 2445C, 2447A, 2448A, 2449A, 2450A, 2451A, 2452A, 2460A, 2460B, 2460F, 2460G, 2461A, 2462A, 2463A, 2464A, 2464B, 2465A, 2466A, 2467A, 2467B, 2468A, 2468B, 2468C, 2469A, 2469B, 2470A, 2470B, 2471A, 2471B, 2471D, 2472A, 2473A	yellowish red/red/dark red silty clay with pea gravel	ground surface with pea gravel	--	--
--	SG17	2655B, 2656C, 2657B, 2658B, 2659B, 2660B, 2661B, 2662B, 2663B, 2664B, 2665B, 2666B, 2667B, 2668B	--	2016 cleaning pass of demolition debris	--	--
F01	--	2429B	dark reddish	1930s concrete	1.40’ x 0.75’	0.01’

			brown sandy clay	posthole		
F02	--	2430B	reddish brown silt	1930s concrete post	1.45’ x 0.45’	0.01
F04	--	2425D	mottled silty clay	1930s concrete post	1.90’ x 1.80’	0.11’
F05	--	2426D	mottled red clay	1930s concrete post	1.88’ x 0.85’	0.10’
F06	--	2428D	dark reddish brown clay loam	1930s concrete post	1.90’ x 1.10’	0.15’
F07	--	2431B	red silty clay	1930s concrete post	1.60’ x 0.90’	0.03’
F09	--	2428F	red silty clay	posthole	0.55’ x 0.45’	0.70’
F10	--	2436B	yellowish red silty clay loam	1930s concrete post	1.90’ x 1.50’	0.40’
F12	--	2438B	dark reddish brown clay	1930s concrete post	2.50’ x 2.05’	0.19’
F13	--	2442B	reddish brown sandy clay	1930s concrete post	1.70’ x 1.60’	0.30’
F14	--	2441B	reddish brown sandy loam	1930s concrete post	2.00’ x 1.75’	0.12’
F15	--	2437B	reddish brown sandy loam	1930s concrete post	1.90’ x 0.60’	0.09’
F16	--	2444B	dark reddish brown silty clay	1930s concrete post	1.25’ x 1.00’	0.09’
F21	--	2439D	dark red clay	1930s concrete post	1.00’ x 3.50’	0.08’
F26	--	2441F	wood	postmold	0.25’ x 0.15’	0.13’
F27	--	2441G	reddish brown intrusion	posthole	0.6’ x 0.4’	0.85’
F45	--	2656B	round, silty intrusion	1940’s restoration posthole	1.0’ x 1.0’	*Not excavated*
F46	--	2664A	round, silty intrusion	1940’s restoration posthole	1.0’ x 1.0’	0.5’

Archaeologists returned to the Carriage Bay located on the far west side of the Wing in May of 2016 after demolition and the removal of the brick and underlying concrete floors exposed the B-horizon. Following Grigg’s restoration, a brick floor had been installed in this space. We suspected that the aera was significantly disturbed by the installation of the floor, so prior to the floor’s removal, archaeologists removed nine bricks randomly distributed around the

space. The bricks rested on a concrete floor, and both were removed prior to taking nine samples with a soil auger (Table 7). The samples revealed the brick and concrete floors sat directly on B-horizon. Following the demolition of the brick and concrete floor in the Carriage Bay, archaeologists troweled the area in a cleaning pass (SG17) to document any extant features. They recorded two of Grigg's cross-trenches (a continuation of F17) and two twentieth-century postholes (F45, F46) intruding subsoil. Only F46 was excavated. Quadrats were assigned post-excavation (2655-2668). We found that Grigg's excavation and restoration efforts destroyed any remaining intact eighteenth- and nineteenth-century stratigraphy in the Carriage Bay area.

Table 7: List of bricks removed from the Carriage Bay.

Brick Number	Easting	Northing	Sediment Description	Depth
1	-162.66	136.158	97% red (2.5YR4/6) clay with 3% manganese [1]	0.5' below surface, 0.9' in corer
2	-168.368	136.158	82% red (2.5 YR 4/6) clay with 15% saprolite [1-2] and 3% manganese [1-2]	not recorded
3	-157.327	142.484	Not recorded	0.8' below surface
4	-161.578	146.491	95% red (2.5YR4/6) clay with 5% saprolite	0.75' below base of concrete, brick/concrete 0.6' thick
5	not recorded	not recorded	Unable to acquire soil sample	gravel and sand to 0.95; below top of brick
6	not recorded	not recorded	Unable to acquire soil sample	gravel and sand to 0.85' below top of brick
7	not recorded	not recorded	99% red (2.5YR 4/6) clay with 1% manganese [1-2]	total depth 0.3', soil sample 0.65'-0.3' below top of brick
8	not recorded	not recorded	100% dark red (2.5YR3/6) clay	sample 0.75' below top of brick, 0.75' to 0.5' below
9	not recorded	not recorded	99% dark red (2.5YR4/6) clay with 1% manganese	total depth 1.1' below top of brick, sample 0.85' to 1.1' below top of brick

ARTIFACTS

A total of 10,995 artifacts were collected and catalogued from the North Wing. While most of the artifacts were in twentieth-century layers, some artifacts were from an intact mid-nineteenth-century stratum. Selected domestic artifacts from the project, including small sherds of transfer-printed pearlware, mortar, slate, cut nails, an American stoneware storage vessel sherd, green bottle glass, a copper button, animal bone, and a utensil fragment raise the possibility that enslaved African Americans accompanying Jefferson's visitors slept and ate in the Wing. On the other hand, the artifacts may have been broken in the main house, including its cellar rooms, and discarded in the wing. The massive disturbance to their original spatial patterning, caused by Grigg's excavation and restoration, makes it impossible to evaluate these hypotheses. Appendix 2 includes an artifact catalog.

Ceramics

A total of 406 ceramics were found in the North Wing (Table 8, Figure 31). The assemblage is dominated by pearlware (n=192) and creamware (n=62), which account for 47% and 15%, respectively. Whiteware also has a fair presence, consisting of 11% (n=46) of the assemblage. This reflects a lower rate of deposition during the second quarter of the nineteenth century. The very low frequencies of Ironstone/White Granite (n=6; 1.5%) are compatible with the collapse of the North Wing at midcentury. The remaining ware types in the assemblage include stoneware such as Rosso Antico, black basalt, and American stoneware (Figure 32).

Table 8: Ceramic ware types and their mean ceramic dates found at the North Wing Stables.

Ceramic ware	MCD ranges	Sherd Count	Relative Frequency
Pearlware	1775-1830	192	0.473
Creamware	1762-1820	62	0.153
Whiteware	1820-2000	46	0.113
Porcelain, Chinese	1660-1860	30	0.074
Porcellaneous/English Hard Paste	1820-2000	16	0.039
Refined Earthenware, unidentifiable	NA	14	0.034
Porcelain, unidentifiable	NA	8	0.02
American Stoneware	1750-1920	7	0.017
Redware	1700-1900	7	0.017
Ironstone/White Granite	1840-2000	6	0.015
Coarse Earthenware, unidentified	NA	4	0.01
Porcelain, English Bone China	1794-2000	4	0.01
Bristol Glaze Stoneware	NA	3	0.007
Rosso Antico	1690-1775	3	0.007
British Stoneware	1670-1800	2	0.005
Black Basalt	1750-1820	1	0.002
Stoneware, unidentifiable	NA	1	0.002

Figure 31: Examples of decorated porcelain and refined earthenwares from the North Wing.

Figure 32: Stoneware sherds (clockwise from bottom left): Rosso Antico base and body sherd (2428B), American stoneware (2425C) and Black Basalt (2425C). All three pieces of stoneware are from SG16 (2016 ground surface).

Just under half of the ceramics have decoration (n=183, or 45%). Genre types among decorated sherds include but are not limited to transfer-printed pearlware and whiteware, factory made slipware on creamware, pearlware, and whiteware, sponge/spatter on whiteware, and handpainted Chinese porcelain (Table 9).

Table 9: Ceramic Wares and Genres from the North Wing Stables.

Ceramic Ware	Stylistic Genre	Count	Relative Frequency
Pearlware	Transfer Print Under, blue	86	0.212
Pearlware	Not Applicable	81	0.2
Creamware	Not Applicable	49	0.121
Whiteware	Not Applicable	26	0.064
Porcelain, Chinese	Not Applicable	15	0.037
Creamware	Slipware, factory made	13	0.032
Whiteware	Transfer Print Under, blue	13	0.032
Pearlware	Slipware, factory made	12	0.03
Porcelain, Chinese	Handpainted Blue	12	0.03
Porcellaneous/Hard Paste	Not Applicable	9	0.022
Porcelain, unidentifiable	Not Applicable	8	0.02
Refined Earthenware, unidentifiable	Not Applicable	8	0.02
American Stoneware	Not Applicable	7	0.017
Redware	Not Applicable	7	0.017
Ironstone/White Granite	Not Applicable	6	0.015
Porcellaneous/Hard Paste	Overglaze, handpainted	5	0.012
Coarse Earthenware, unidentified	Not Applicable	4	0.01
Pearlware	Handpainted Blue	4	0.01
Refined Earthenware, unidentifiable	Transfer Print Under, blue	4	0.01
Whiteware	Slipware, factory made	4	0.01
Bristol Glaze Stoneware	Not Applicable	3	0.007
Pearlware	Shell Edge, blue	3	0.007
Pearlware	Shell Edge, green	3	0.007
Porcelain, Chinese	Overglaze, handpainted	3	0.007
Rosso Antico	Not Applicable	3	0.007
British Stoneware	Not Applicable	2	0.005
Pearlware	Handpainted, Polychrome Warm	2	0.005
Porcelain, English Bone China	Overglaze, handpainted	2	0.005
Refined Earthenware, unidentifiable	Slipware, factory made	2	0.005
Whiteware	Transfer Print Under, light blue	2	0.005
Black Basalt	Not Applicable	1	0.002
Pearlware	Molded Edge Decoration, other	1	0.002
Porcelain, English Bone China	Molded Edge Decoration, other	1	0.002
Porcelain, English Bone China	Not Applicable	1	0.002
Porcellaneous/Hard Paste	Transfer Print Over	1	0.002
Porcellaneous/Hard Paste	Transfer Print Under, polychrome	1	0.002
Stoneware, unidentifiable	Not Applicable	1	0.002
Whiteware	Sponge/Spatter	1	0.002

Forms (Table 10) were also noted by cataloguers. The forms of most of the ceramic fragments recovered are unidentifiable due to fragmentation: of the 406 ceramics, 194 sherds were unidentifiable (n=194, or 48%). The majority of the identifiable forms are tablewares (n=159, or 39%). Tablewares include items such as plates, platters, bowls, and mugs. Teawares, such as teabowls, saucers, and teapot fragments, are also present, but at a much smaller percent (7%, n=29).

Table 10: Ceramic forms found at the North Wing Stables.

Ceramic Form	Sherd Count	Relative Frequency
Unidentifiable	194	0.4778
Unid: Tableware	159	0.3916
Unid: Teaware	29	0.0714
Unid: Utilitarian	10	0.0246
Flower Pot	6	0.0148
Mug/Can	3	0.0074
Gastrolith	2	0.0049
Saucer	1	0.0025
Storage Vessel	1	0.0025
Wash Basin	1	0.0025

Of the 406 pieces of ceramics, most sherds could not be assigned to a hollow ware or a flatware (n=177, 44%) (Table 11). Flat wares account for just under a third of the assemblage (n=123; 30%). Just under a quarter of sherds were assigned to a hollow ware (n=106, 26%).

Table 11: Ceramic vessel categories from the North Wing Stables.

Ceramic Vessel Category	Count	Relative Frequency
Unidentifiable	177	0.44
Flat	123	0.30
Hollow	106	0.26

Glass

The varieties of glass vessels are fairly limited at the North Wing. The assemblage (Table 12) is dominated by wine bottles (n=1,869; 88%). Mold blown glass shards (98%; n=2,084) heavily dominate the glass assemblage, but there are smaller amounts of machine made glass shards (n=15, 1%) and mold blown shards (n=20, 1%) present, as well (Table 13). A small percentage of the shards from the entire assemblage were leaded glass (n=101, 5%).

Table 12: Glass vessel forms from the North Wing Stables.

Glass Form	Count	Relative Frequency
Bottle, Wine style	1869	0.8795
Unidentifiable	101	0.0475
Bottle, Unidentifiable	74	0.0348
Tableware, unidentifiable	59	0.0278
Container, unidentifiable	12	0.0056
Stemware	6	0.0028
Tumbler	2	0.0009
Bottle, Case	1	0.0005
Bottle/Vial, Pharmaceutical	1	0.0005

Table 13: Manufacturing Technique of vessels from the North Wing Stables.

Manufacturing Technique	Count	Relative Frequency
Mouth Blown	2084	0.981
Mold Blown	20	0.009
Machine Made	15	0.007
Unidentifiable	6	0.003

General Artifacts

Architectural materials were present at the North Wing. This category includes mortar fragments (n=2,558; 8,709 g); brick in various forms (including bats, fragments, column,

specialty, whole, and brick/daub totaling 337 and weighing 15,576g); window glass fragments (n=904); wrought nails (n=194), machine-cut nails (n=113), and wire nails (n=42) (Table 14).

Table 14: Select general artifacts from the North Wing Stables.

General Artifact Form	Count	Weight (g)
Brick Bat	4	3688.2
Brick Fragment	188	7476.01
Brick, column unidentified	1	339.4
Brick, specialty unid.	1	656.4
Brick, whole	1	2573.3
Brick/daub	142	842.9
Mortar	2,558	8,709
Window glass	904	--
Wrought/Forged nail	241	--
Machine-cut nail	169	--
Drawn/Wire nail	54	--
Indeterminate nail	227	

A few finds worth noting include a soapstone[4] pencil (Figure 33). Horse-related materials were few, but one horseshoe was discovered (Figure 34). While contexts from which these artifacts were recovered all date to the twentieth century, they help to underscore the fact that artifacts and features found at the North Wing indicate that the area was heavily disturbed by twentieth-century restoration efforts.

[4] Soapstone is a "massive metamortphic rock composed primarily of talc and serpentine" (Frye 1986:269).

Figure 33: Soapstone "pencil" likely used by craftsmen to mark measurements or designs on metal and other materials from 2443A. There are cut marks on the implement. The pencil is from SG16 (2016 ground surface).

Figure 34: Horseshoe fragments from 2468C. These horseshoe fragments are from SG16 (2016 ground surface).

Seriation Chronology

We ran Correspondence Analysis (CA) to see whether we could detect a chronological signal behind variation in ceramic ware type frequencies among assemblages from different deposits in the North Wing. Correspondence analysis, a multivariate ordination method, offers a way to visualize the similarities among assemblages in ware type frequencies (Neiman et al. 2003). Of the 406 ceramics found, only 236 are used in the CA analysis; SGs, Features, or Contexts with sample sizes less than five and ceramic ware types with no manufacturing dates

were removed from the data set. Additionally, two contexts were removed as outliers: context 2430C contained Ironstone/White Granite, and 2435A contained Redware and English Bone China.

The CA allows us to visualize variation among assemblages by plotting their locations or scores on two axes that represent underlying dimensions of variation. We ran the plots based on contexts rather than SGs to see whether we might detect any sort of spatial patterning in the bays. The CA solution for two dimensions or axes captures 40% of the total variation (Figure 35) among the assemblages. In the plot, each dot represents an assemblage, and assemblages that are closer together are more similar than those that are far apart. The plot of the assemblage scores on the two axes reveals no clear spatial patterning (Figure 36). On the "corresponding" plot of ware-type scores, ware types are plotted close the assemblages in which they are most frequent (Figure 37). No relationship between the ware-type scores and their manufacturing dates is apparent. That implies that there are no clear chronological differences among the assemblages: they are a chronological jumble. The lack of underlying spatial or temporal pattern is almost certainly due to Grigg's archaeological work and subsequent restoration.

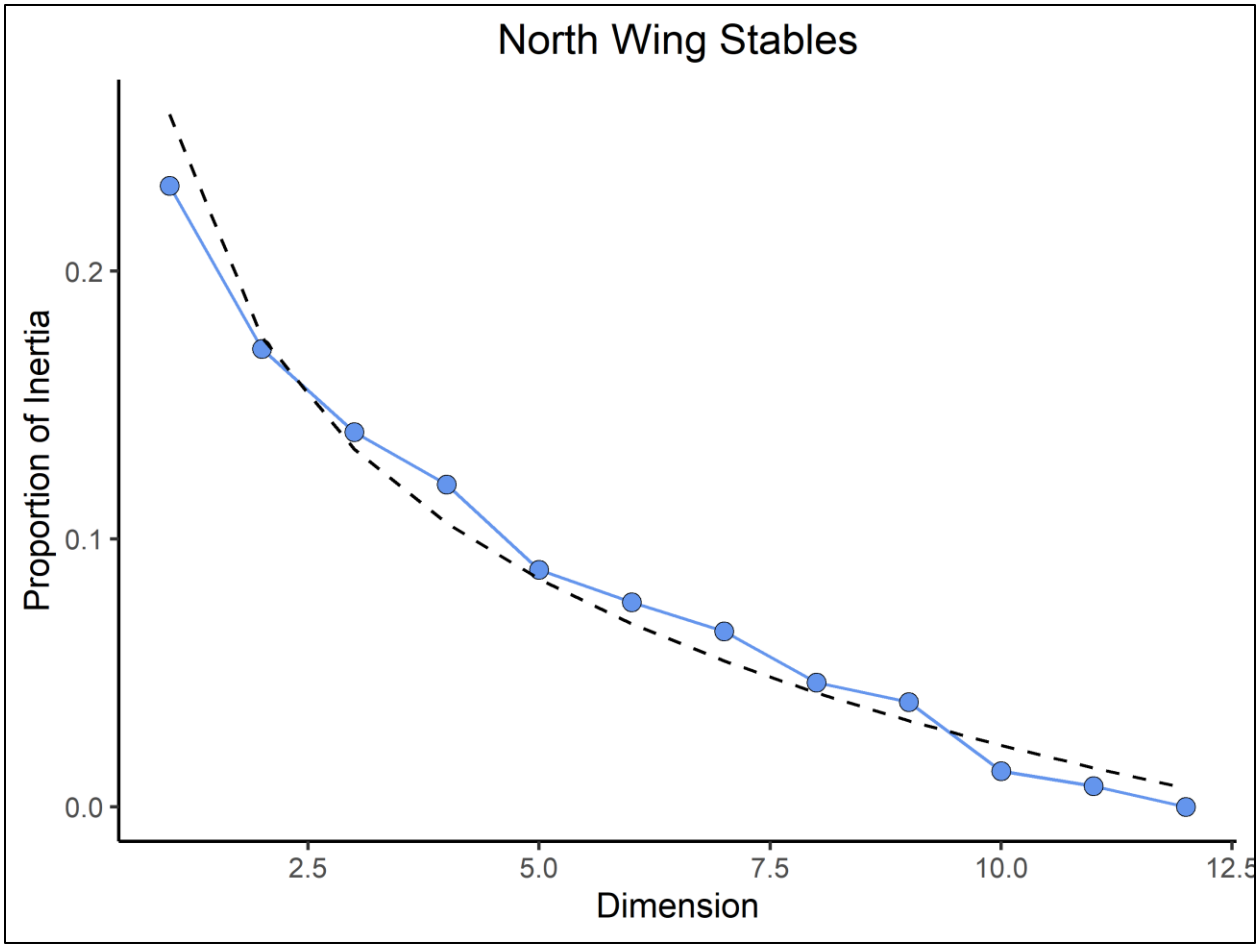

Figure 35: The inertia plot shows that Dimensions 1 and 2 account for 40% of the variation.

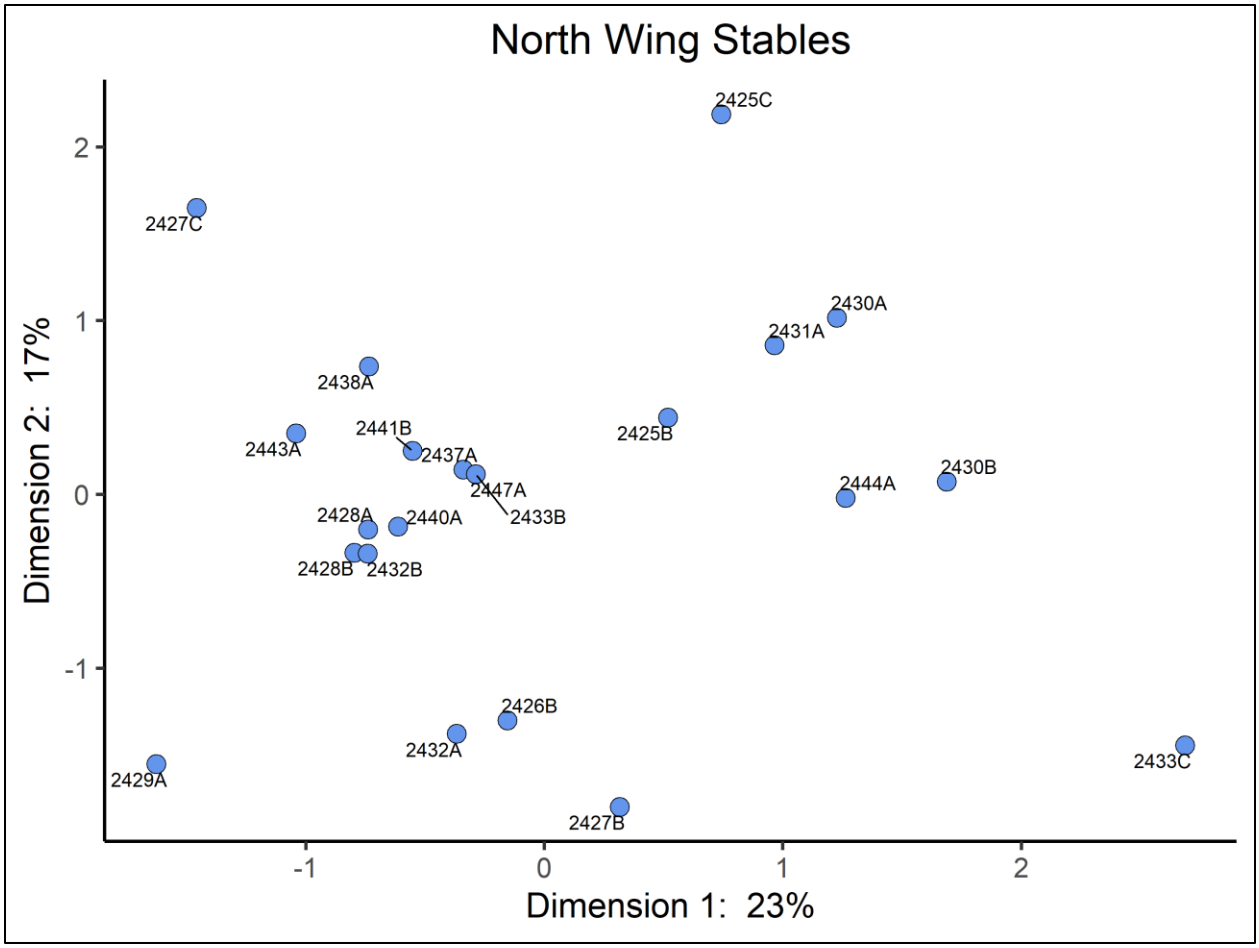

Figure 36: Correspondence analysis. Dimension 1 plotted against Dimension 2 scores.

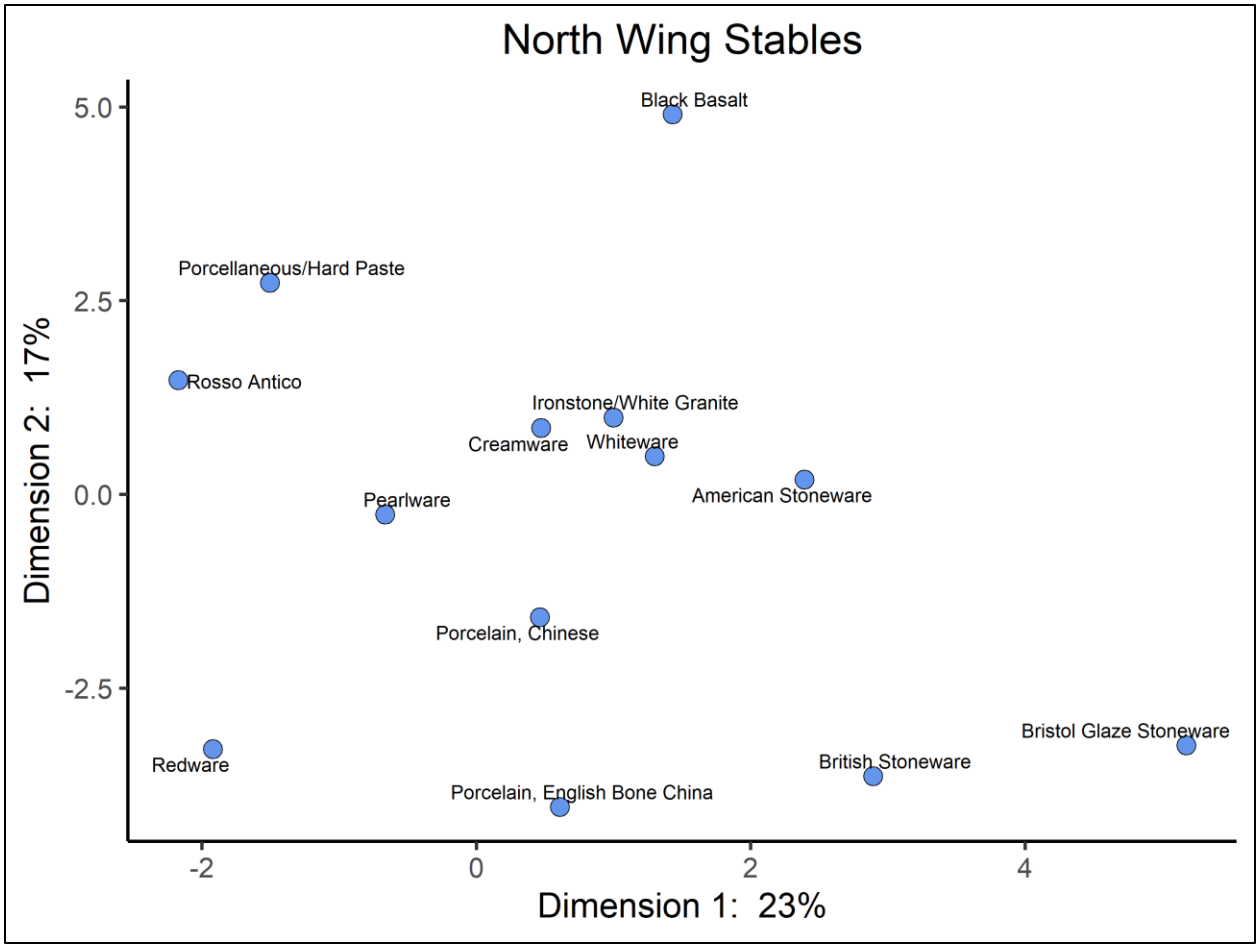

Figure 37: Dimension 1 verses Dimension 2 with Ware Types.

While the correspondence analysis only takes into account ceramics, treating the SG as a whole can also inform us about the activities taking place in the North Wing when the sediment in that SG was deposited. For instance, SG04, which is the Levy-era midden, included slate, green wine bottle glass, faunal material, and ceramics such as pearlware and porcellaneous (Figure 38).

Figure 38: Variety of artifacts from SG04, including an iron loop on a small rod possibly used as a guide; pearlware and porcellaneous ceramics; wine bottle glass; large mammal molar; worked bone; copper alloy and iron finial; and architectural slate. Contexts include 2449C, 2452B, 2463E, 2467D, and 2468D.

SUMMARY

Archaeological excavations in the North Wing presented an opportunity to further our understanding of the organization and arrangement of the space in which Jefferson stored his coaches and a few horses. The construction of this wing prior to Jefferson's retirement from the presidency was part of the fulfillment of his vision for his mountaintop landscape. The Harris Matrix summarized the depositional history of the site. The archaeological record reflects an area heavily impacted by twentieth-century disturbances. Most deposits dated to the twentieth century. All sediment was extremely dry and powdery, likely due to the wing roof, which was present since at least 1939, preventing wind and rain from reaching the sediment. A thin, fine ground surface layer of accumulated twentieth-century materials sealed post-1939 fill. The fill layer consisted of compact red silty clay loam and red clays with decomposing greenstone. This layer sealed two types of twentieth-century features: concrete-filled postholes designed to support partitions between the restored horse stalls and builder's trenches for the wooden sills of the Wing. Archaeologists also discerned the outlines of Grigg's backfilled cross trenches. In two of the five excavated bays, the Grigg trenches cut through a thin layer of sediment containing early to mid-nineteenth-century artifacts. This layer dates to the Levy family's tenure at Monticello. In the central bay and east bay, the trenches were identified cutting through subsoil. In some areas of subsoil, veins of decaying greenstone bedrock appeared. Because no evidence existing pointing to Jefferson-era postholes or builder's trenches for partitions, partitions within the Stable were likely framed on sills that rested on the ground surface.

Despite the scarcity of early nineteenth-century features associated with the construction or the arrangement and use of the space as the Stables, archaeological excavations remind us of the North Wing's part in contributing to Jefferson's conspicuous consumption strategies. The original excavation of the space in order to construct the wing was an enormous undertaking.

Slave labor powered and implemented Jefferson's visions for his landscape. Historic documents remind us that the North Wing housed coaches and a few horses. Finally, evidence of twentieth-century restoration efforts was ubiquitous. Grigg's cross-trenches tested the space before restoration efforts began, and concrete postholes supported the new roof and partitions.

APPENDIX 1: DATUMS AND TEMPORARY STATIONS LOCATIONS

Name	X	Y	Z
WestLawnDatum	-449.069	3.222	867.207
NorthDependencyLawnDatum	-123.609	196.204	858.121
Temp St 1	-125.817	138.889	859.207
Temp St 2	-93.044	138.004	859.281
2441 localdatum	-121.843	141.268	859.241
localdatum05	-139.348	140.754	859.292
Temp St 3	-123.726	132.381	859.094
2569 localdatum	-89.557	140.533	859.263
localdatuwestbay	-139.360	140.729	859.287

APPENDIX 2: ARTIFACT CATALOG, NORTH WING STABLES

Total Count	Artifact Type	Artifact Category
1	Bead, Sub-Spherical	Bead
2	Button, 1 Piece	Button
1	Button, 1 Piece, domed	Button
1	Button, 2 Piece	Button
1	Button, 2 Piece, domed	Button
1	Button, Flat Disc	Button
7	American Stoneware	Ceramic
1	Black Basalt	Ceramic
3	Bristol Glaze Stoneware	Ceramic
2	British Stoneware	Ceramic
4	Coarse Earthenware, unidentified	Ceramic
62	Creamware	Ceramic
6	Ironstone/White Granite	Ceramic
192	Pearlware	Ceramic
30	Porcelain, Chinese	Ceramic
4	Porcelain, English Bone China	Ceramic
8	Porcelain, unidentifiable	Ceramic
16	Porcellaneous/Hard Paste	Ceramic
7	Redware	Ceramic
14	Refined Earthenware, unidentifiable	Ceramic
3	Rosso Antico	Ceramic
1	Stoneware, unidentifiable	Ceramic
46	Whiteware	Ceramic
4	Bird	Faunal
93	Mammal	Faunal
21	Other Vertebrate	Faunal
41	Architecture, unid.	General Artifacts
1	Bolt	General Artifacts
1	Bottle Cap, crown	General Artifacts
4	Brick Bat	General Artifacts
1	Brick, column unidentified	General Artifacts
142	Brick/Daub	General Artifacts
188	Brick Fragment	General Artifacts
1	Brick, specialty unid.	General Artifacts
1	Brick, whole	General Artifacts
2	Bullet Casing	General Artifacts
1	Cap/Lid	General Artifacts
2	Casting Waste	General Artifacts

274	Cement, portland	General Artifacts
1248	Cement, unidentified	General Artifacts
8	Charcoal	General Artifacts
45	Cinder/Coke	General Artifacts
196	Coal	General Artifacts
17	Cobble (64-250mm)	General Artifacts
1	Coil	General Artifacts
17	Coin, American	General Artifacts
1	Coin, unidentified	General Artifacts
3	Corrosion/Rust	General Artifacts
1	Disc	General Artifacts
1	Foil	General Artifacts
1	Fuse	General Artifacts
24	Glass, plate	General Artifacts
8	Hardware, unidentified	General Artifacts
2	Horseshoe	General Artifacts
3	Lamp Chimney	General Artifacts
5	Light Bulb	General Artifacts
44	Modern Artifacts	General Artifacts
2559	Mortar, architectural	General Artifacts
719	Nail	General Artifacts
1	Nail Rod Binder	General Artifacts
2	Paint Chip	General Artifacts
222	Pebble (4-64mm)	General Artifacts
1	Pencil, slate	General Artifacts
27	Plaster	General Artifacts
1	Point, triangular	General Artifacts
1	Pot	General Artifacts
1	Scissors	General Artifacts
13	Scrap/Waste	General Artifacts
50	Screen, window	General Artifacts
33	Screw, philips head	General Artifacts
3	Screw, Robertson	General Artifacts
2	Screw, slotted head	General Artifacts
13	Screw, unidentified	General Artifacts
284	Sheeting	General Artifacts
2	Shell, snail	General Artifacts
9	Shell, unid.	General Artifacts
2	Shell, walnut	General Artifacts
1	Shot, round	General Artifacts
49	Slag	General Artifacts
1	Slate, writing	General Artifacts
1	Snap	General Artifacts

4	Spike	General Artifacts
1	Staple, round	General Artifacts
1	Staple, unidentified	General Artifacts
14	Strapping	General Artifacts
7	Tar Paper	General Artifacts
1	Tile, roofing	General Artifacts
4	Tool, unidentified	General Artifacts
2	Tube	General Artifacts
53	Unidentified	General Artifacts
1	Washer	General Artifacts
904	Window Glass	General Artifacts
4	Window Glass, privacy	General Artifacts
1	Window Glazing	General Artifacts
4	Wire	General Artifacts
5	Wood	General Artifacts
1	Writing Implement	General Artifacts
1	Bottle, Case	Glass
74	Bottle, Unidentifiable	Glass
1	Bottle/Vial, Pharmaceutical	Glass
1869	Bottle, Wine style	Glass
12	Container, unidentifiable	Glass
6	Stemware	Glass
59	Tableware, unidentifiable	Glass
2	Tumbler	Glass
101	Unidentifiable	Glass
13	Cobble (64-250mm)	Lithics
2	Flake	Lithics
1028	Pebble (4-64mm)	Lithics
7	Shatter	Lithics
1	Utensil, 2 Piece: Unid	Utensil

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