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Chapter Six

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CHAPTER SIX

Documentary Research--Lot 14

This lot (18'7" X 70'7"/10") falls within the bounds of Lucas Van Tienhoven's 1687 Water Lot Grant measuring 32' X 95' (Liber A p53). Lot 13 originated in the western section of this same water lot. However, the measurements for all the water lot grants and the present day lot lines total in such a way that a section of Lot 14, measuring approximately 10' X 70', falls within Evert Duyckinck's 1687 Water Lot Grant. This discrepancy is no longer apparent by the late 18th century, at which point a clear chain of title emerges (L52 p157,300).

The minutes of the Common Council place Van Tienhoven here in 1693 (see entry for July 11, 1693) but by 1697 the original parcel had been subdivided into two sections along its north/south axis. The eastern section (corresponding roughly to Lot 14) measured approximately 16' X 95' and belonged to John Varick, a baker. In 1697 he obtained a Water Lot Grant to fill an additional 16' X 45'4"/46' (Liber A p239). Varick's "house" is listed in the tax assessment records from 1703 to 1709. The assessments are unavailable after this date and when they resume in 1721 Simeon Soumaine is listed as an occupant until 1724. The structure is presumably a private residence. Tax assessment records are unavailable from 1724 until 1790. The 1791-1795 city

directories list the shoemakers Matthew and Richard Larner at this address. In 1808-09 the property is described in the tax assessment records as a vacant lot and in 1810 a new structure was erected. Lot 14 housed a series of merchants and dry goods stores throughout the 19th century.

The Varick family owned the lot until 1814. The property then passed to the merchants James Tuttle, George Sharp, John Johnson and William Halstead (L105 p426,428). The same group owned Lot 13 (L107 p110), Lot 15 (L115 p149) and Tuttle owned Lot 11 (L105 p1452). Lot 14 belonged to them until 1818 (L107 p112, L126 p128) and they also appear as occupants in the directories and tax assessments. The lot passed through a series of owners during the 19th century as follows: John Aspinall 1818-21 (L151 p172), Marcellus Van Geisen 1821-42 (L316 p335), Harvey Weed 1842-1881 (L1576 p440) and Mary Augustus Benedict 1881-1889 (L2248 p306).

The 1860 tax assessment records describe a four story building measuring 18'7" X 66'. The backyard would have been 3'2" across the breadth of the lot. Although there are only two documented building episodes in Lot 14 (before 1860) it is possible that an additional undocumented structure replaced Varick's original 17th century residence prior to the ca. 1810 building described in the tax assessment records. It should also be noted that the lot line discrepancy mentioned above might reflect surveyors' errors, problems in interpreting the title history or else actual boundary realignments that would

result in more recent buildings crosscutting the foundation walls of the earliest 17th century buildings.

Excavation - Lot 14

North Portion

Early in the project a shovel test (ST 3) was placed in the northern portion of Lot 14. The stratigraphy revealed by this test suggested the presence of occupational deposits and/or an early floor at this location. Therefore a five by four foot test cut (TC O) was placed in Lot 14 north of wall #1 during the exploratory phase of the project. The deposits encountered were of sufficient interest that this lot became one of the major foci of activity during the mitigation phase.

The portion of Lot 14 discussed in this section was within the walls of an early structure built on this lot. The east and west walls of this structure underlay the later Lots 13/14 and 14/15 boundary walls. A total of 520 square feet were enclosed within the area bounded by these lot walls, wall #1 (the rear wall of the main portion of the early house), and the Pearl Street base line. One hundred and seventy nine square feet of this area (34.4%) were excavated. During the mitigation phase, TC O was extended so that the southeast corner of the foundation walls of the early structure were exposed (Figures 65, 66, 67, 68). Four additional excavation units TC Y (Figures 69, 70), AD (Figures 71, 72), Z (Figure 73), and AH (Figure 74) were placed north of TC O in a

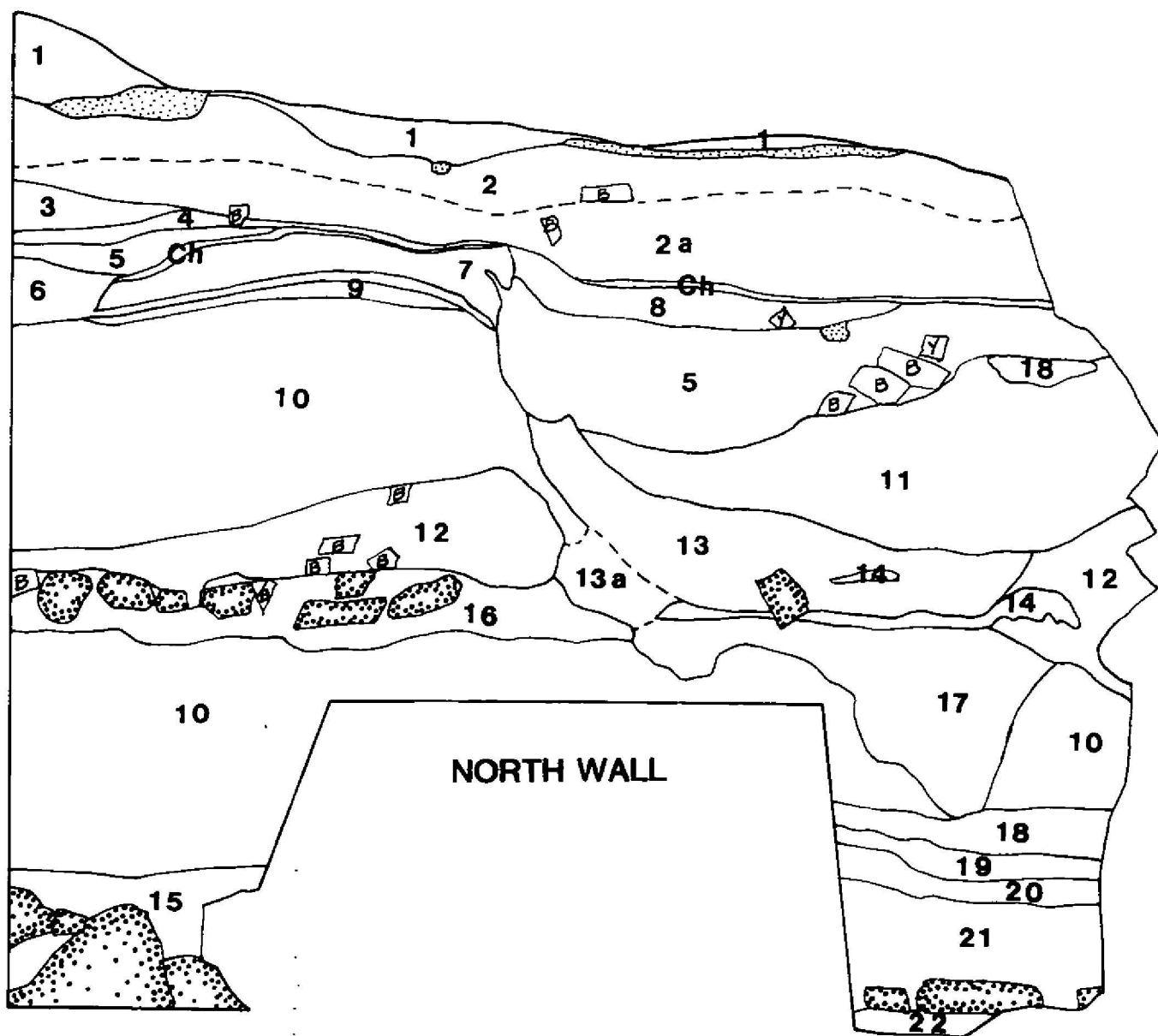
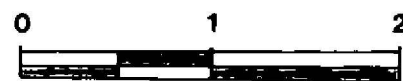


FIG 66

TEST CUT O



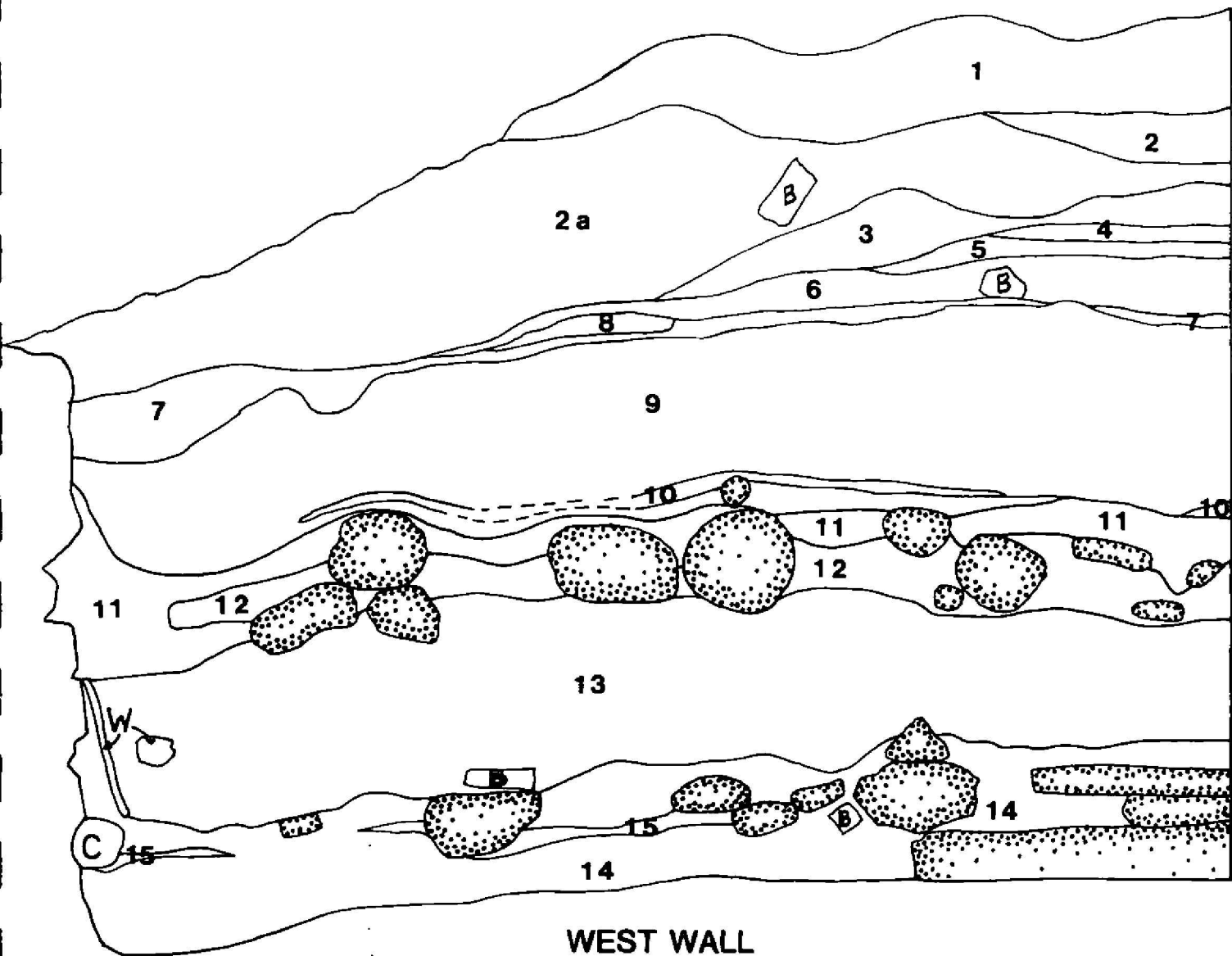


FIG 67

TEST CUT O

Figure 65. Test Cut O; East Wall

1. brown sandy overburden
2. red silt
3. brown sandy silt with rubble
4. grayish-brown sandy silt with rubble
5. ash and charcoal
6. red sand
7. yellow decomposed mortar
8. red sand
9. black silt
10. yellow sandy silt with mortar, brick, and charcoal
11. yellowish-brown sandy silt with mortar, brick, and charcoal
12. dark brown sandy silt with charcoal
13. white sand

Figure 66. Test Cut O, Extension; North Wall

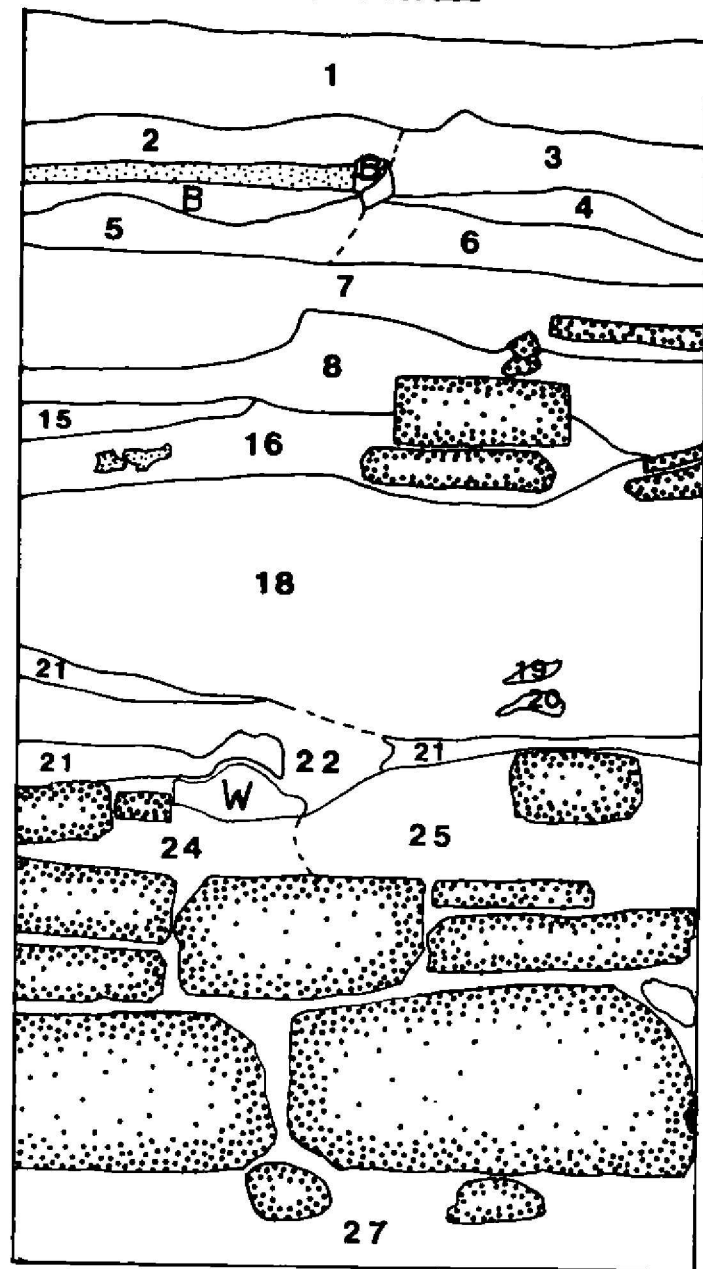
1. brown sandy overburden
2. hard-packed red-brown silty sand with rubble
- 2a. hard-packed red-brown silty sand with rubble and charcoal
3. gray sandy silt with charcoal and shell
4. red sand with pockets of mortar
5. black silt
6. ash and charcoal
7. brown sand with charcoal
8. black sandy silt with mortar
9. mixed red sand and mortar
10. red sand
11. yellow-brown silt with brick rubble
12. decomposing mortar
13. mixed red and brown sand with charcoal
14. white sand
15. gray-blue clay
16. red sand with mortar
17. red sand mottled with yellow silt, mortar, and charcoal
18. gray sand

Figure 67. Test Cut O, Extension; North Wall

1. brown sandy overburden
2. hard-packed red-brown silty sand with rubble
- 2a. hard-packed red-brown silty sand with rubble and charcoal
3. gray sandy silt with charcoal and shell

4. red sand with pockets of mortar
5. black silt
6. ash and charcoal
7. hard-packed yellow sand
8. gray sand with charcoal and brick
9. red sand
10. decomposing mortar
11. gray clay
12. brown sand
13. red sand
14. gray-brown sand with shell
15. black organic material

NORTH WALL



EAST WALL

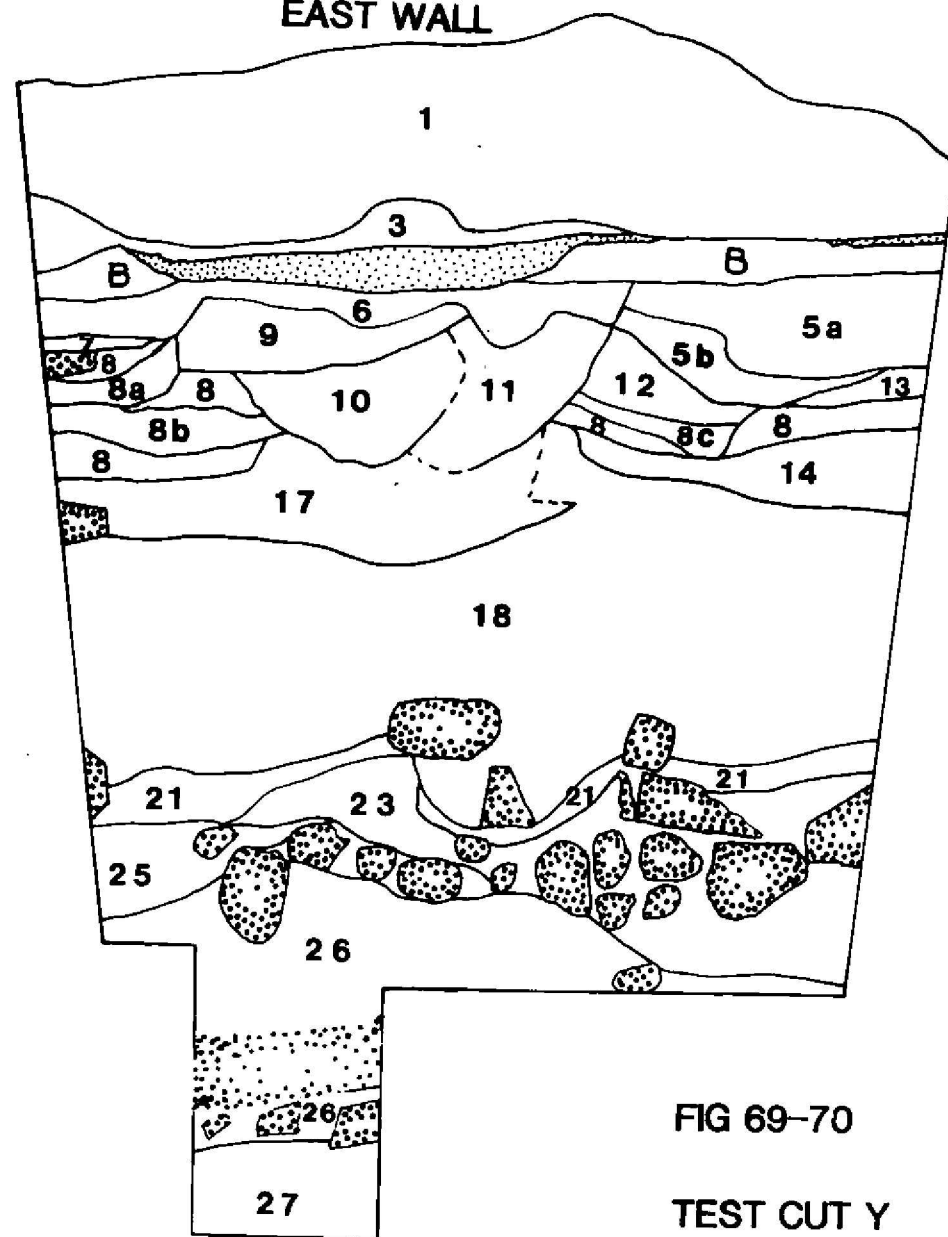


FIG 69-70

TEST CUT Y



Figures 69-70. Test Cut Y

1. brown sandy overburden with construction debris
2. pink sand with construction debris
3. pink sand mottled with brown and with brick and mortar
4. hard-packed yellow-brown sand
5. dark red-brown sandy silt with decomposed brick
- 5a. red-brown sandy silt
- 5b. red-brown sandy silt with black-brown mottling
6. blackish-brown sandy silt
7. yellow-brown sandy silt with mortar and charcoal
8. mixed brown sand and gray ash with charcoal
- 8a. gray ash with charcoal
- 8b. gray ash with charcoal and shell
- 8c. charcoal
9. red-brown sand with ash
10. yellow-brown sand mottled with red and with concentrations of charcoal
11. red sand mottled with yellow-brown silt and charcoal
12. gray-beige sandy ash with mortar
13. gray ash with burned plaster
14. charcoal and light gray ash with shell
15. light gray silty ash with charcoal
16. gray silty ash with charcoal and mortar
17. mixed red sand and yellow silt with ash and charcoal
18. red sand
- 19-21. blue-gray clay
22. tan sand with red sand lenses
23. red sand
24. gray sandy silt with shell
25. brown sandy silt
26. grayish-brown silt with shell
27. greenish-brown silt with lenses of tan gravelly sand and red sand

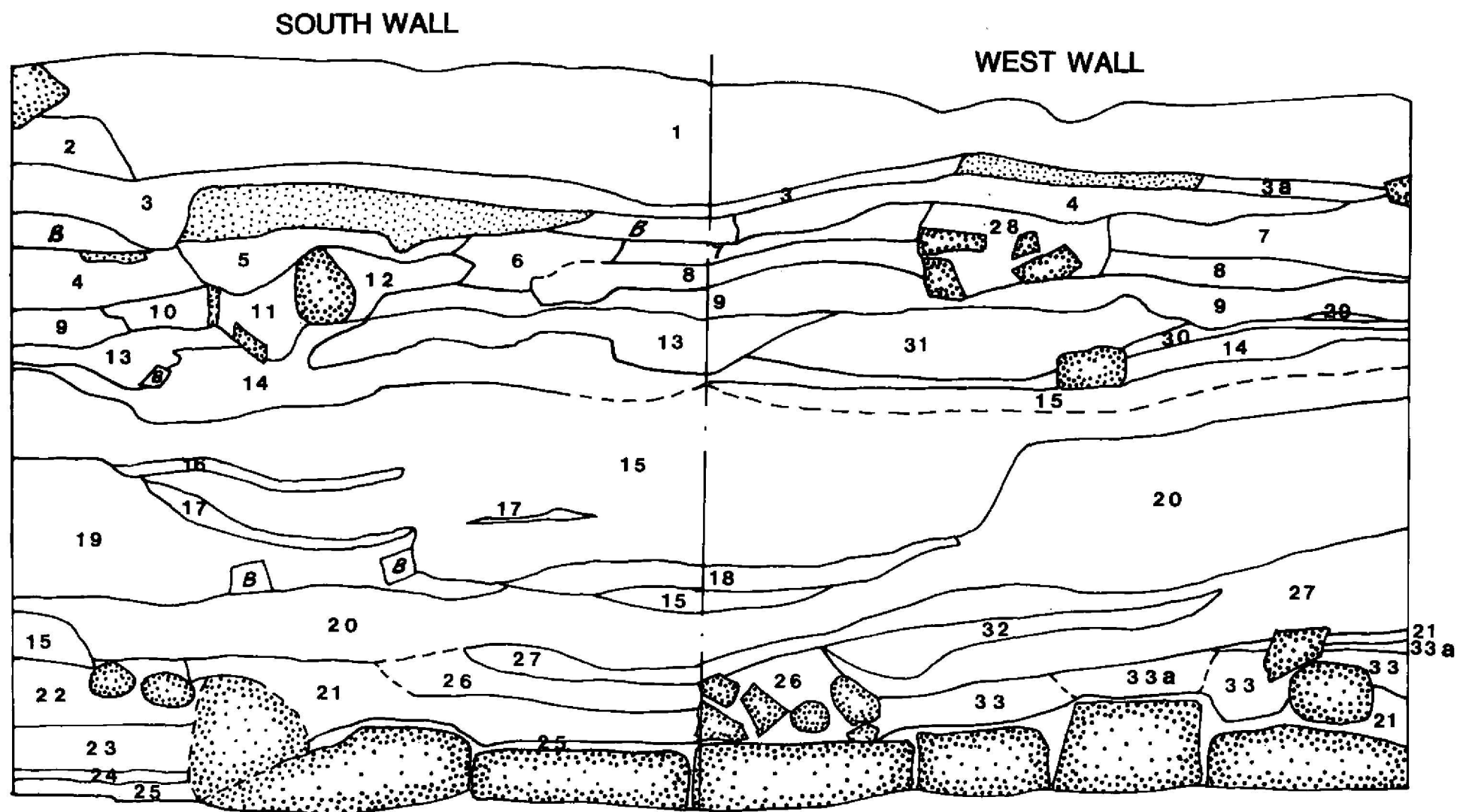


FIG 71-72
TEST CUT AD



Figures 71-72. Test Cut AD

1. brown sandy overburden with construction debris
2. brown sandy silt with charcoal
3. pink sand
- 3a. pink sand with mortar
4. reddish-brown sandy silt with brick
5. red-brown silt
6. dark brown sand mottled with charcoal and red silt
7. brownish-gray sand with charcoal
8. brown sandy silt with charcoal and brick
9. black ash and brown sand
10. mixed yellow silt and gray sand
11. gray sand mottled with yellow silt
12. mixed yellow silt and gray sand with rocks
13. charcoal and white sand lenses
14. mixed yellow-brown silt, gray ash, and charcoal
15. red sand
16. gray silty sand
17. gray silty sand with yellow mortar
18. blue-gray clay
19. yellow mortar with brick
20. gray sandy silt with shell
21. yellow sand
22. gray silt with shell
23. tan gravelly sand with lenses of red and gray sands
24. orange sand
25. dark gray clay
26. gray silt with shell
27. grayish-yellow sand
28. red-brown silt with rocks
29. light gray sandy ash
30. tan sand
31. light gray silty ash
32. gray sand with mortar and shell
33. brownish-gray silty sand with shell
- 33a. brownish-gray silt with shell

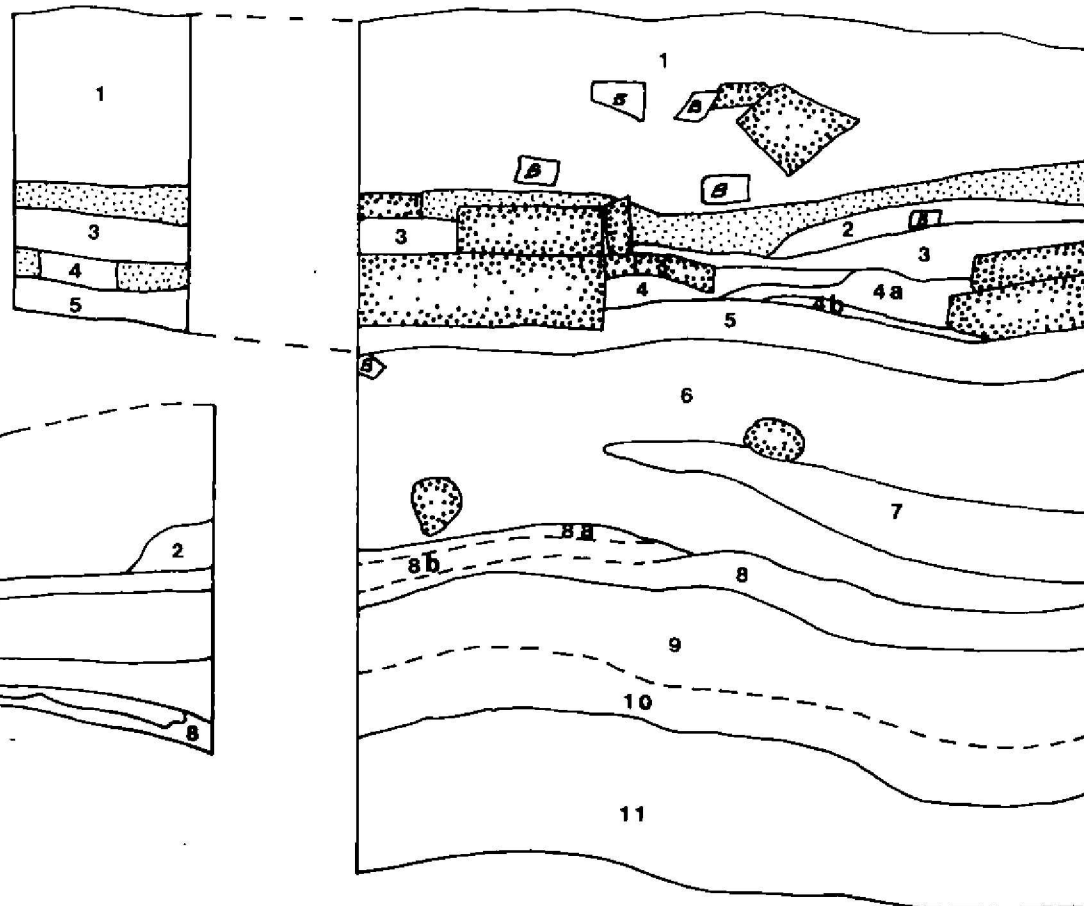


FIG 73

TEST CUT Z

EAST WALL

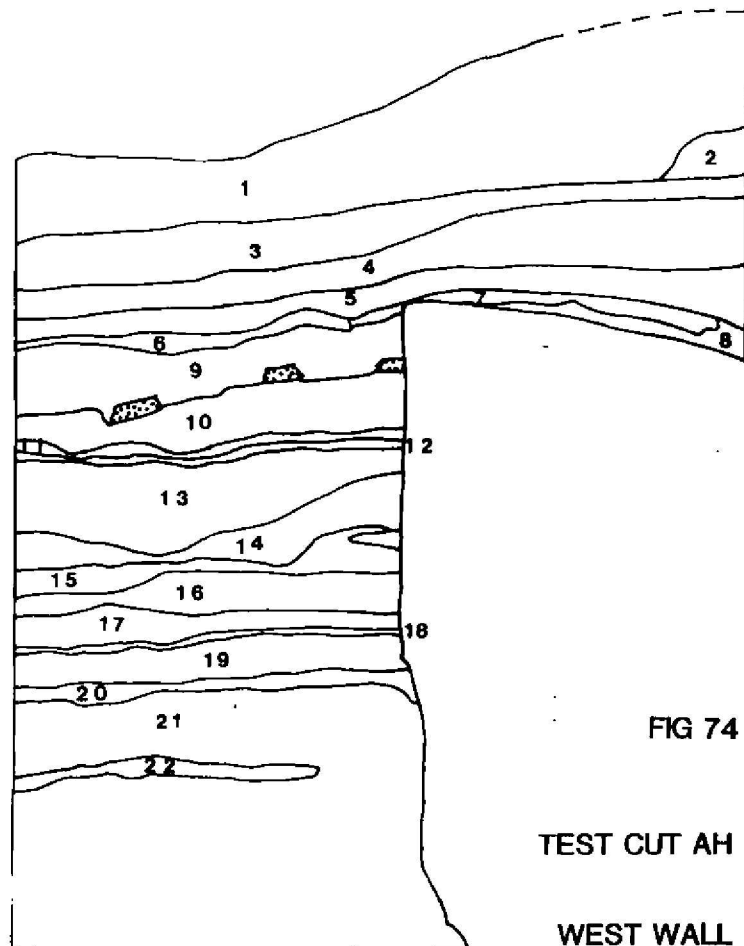
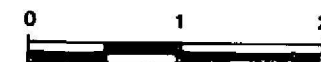


FIG 74

TEST CUT AH

WEST WALL

Figure 73. Test Cut Z

1. fill: hard-packed brick, mortar, and stone
2. brick and red silty sand
3. black ash
4. gray clayey silt and ash
5. red sand
6. brown clayey sand with shell
7. red sand mottled with yellow-green fine sand
8. dark brown clayey silt
9. light brown sand
10. light brown sand with streaks of orange
11. light brown sand with rocks and green clayey silt

Figure 74. Test Cut AH

1. rubble
2. concrete
3. gravel bed
4. yellow sand with whole and crushed brick
5. black silt with ash
6. brown silt with charcoal
7. crushed brick and burned mortar
8. brown silt
9. gray silt with ash, charcoal, and shell
10. red sand
11. light brown silty sand
12. light brown sand
13. light brown sandy silt with shell
14. yellow brown silt with charcoal
15. lenses of clay and silt
16. medium brown clayey silt
17. yellow brown sand
18. brown silt
19. yellow brown sand
20. clayey silt
21. red sand
22. clay-silt lens

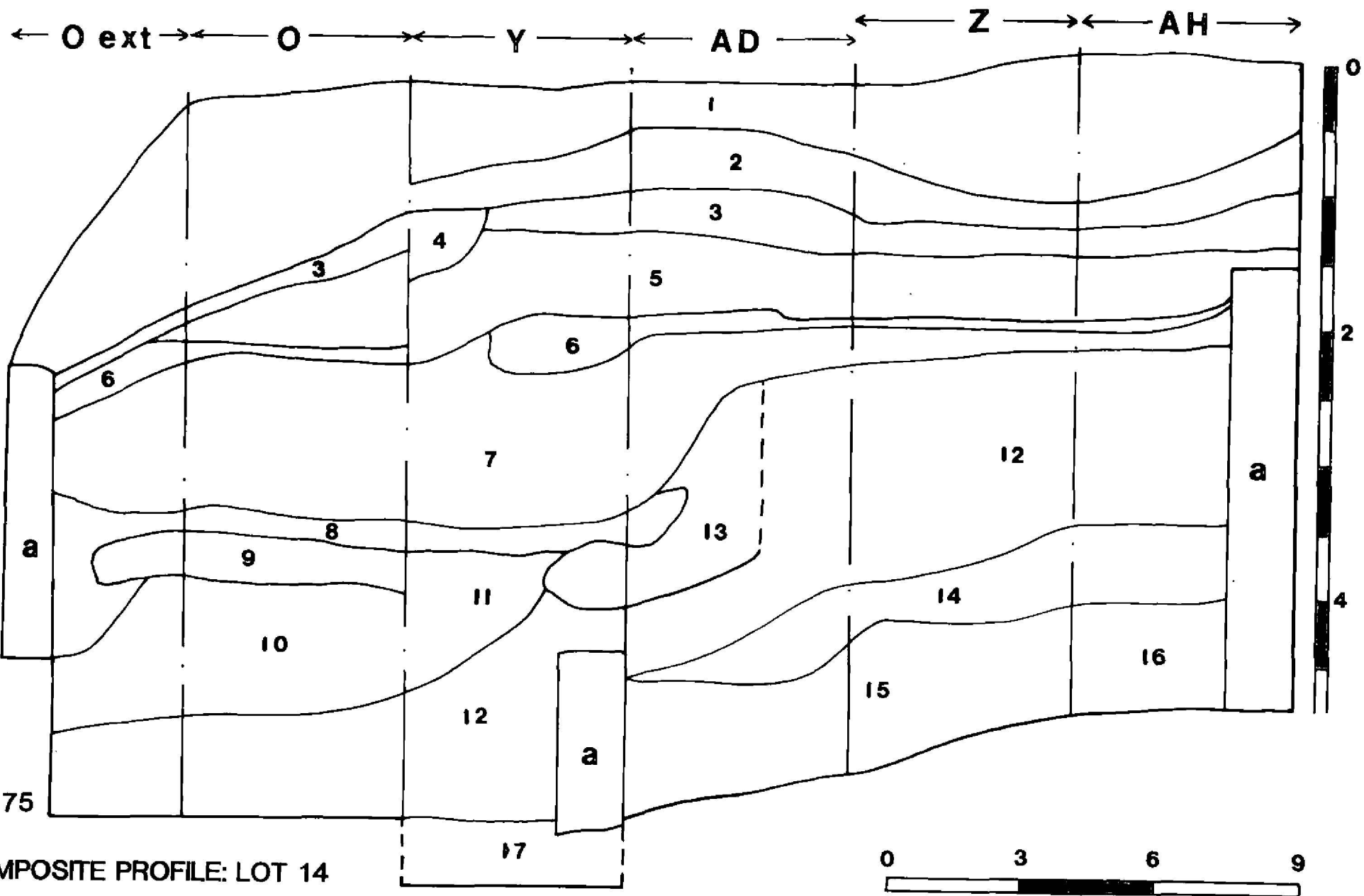


Figure 75. Composite profile: Lot 14

1. sand with rubble
2. mortar/brick (floor #2)
3. brownish-gray/black sandy silt ("transitional layer")
4. reddish-brown sandy silt
5. gray and black silt with ash ("midden")
6. yellow-brown silt and gray ash (floor #1)
7. red sand
8. bluish-gray clay
9. brown sand with rocks
10. red sand
11. red sand with rocks
12. gray-brown sandy silt with shell
13. grayish-yellow sand
14. bands of sand and silt
15. grayish-yellow/ light brown sand with rocks
16. light brown/ reddish-brown sand
17. greenish-brown silt

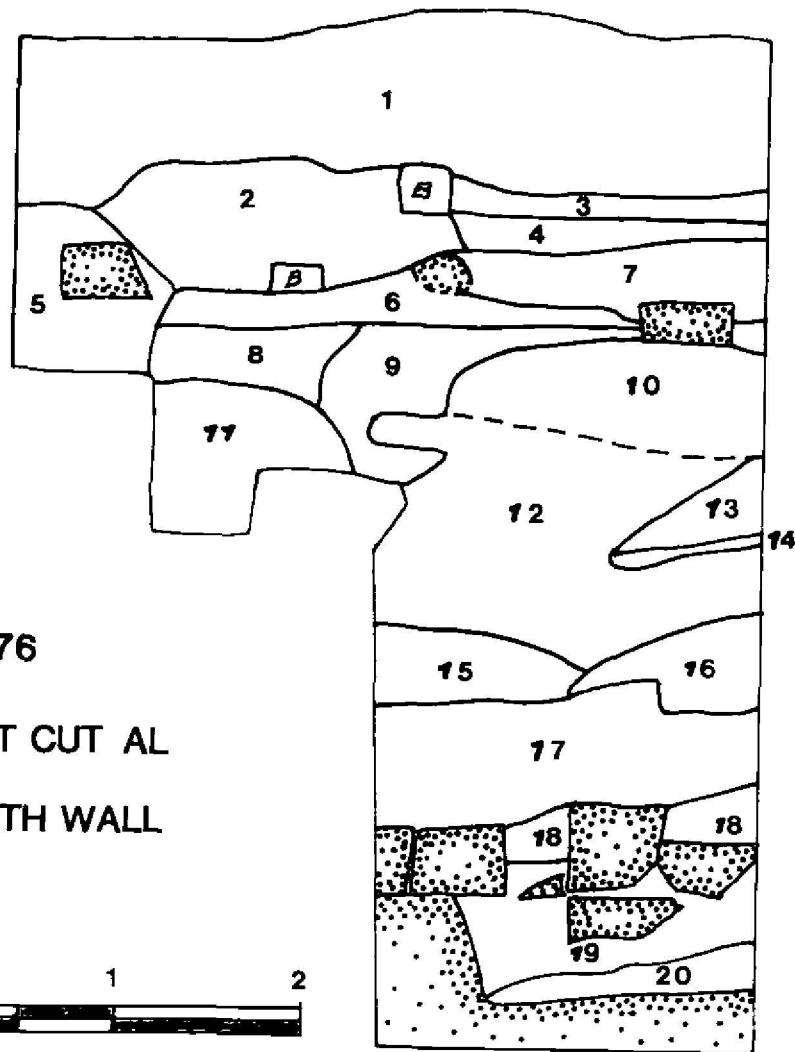


FIG 76

TEST CUT AL
NORTH WALL

Figure 76. Test Cut AL

1. rubble
2. pink sand with brick
3. pink sand
4. mortar
5. collapsed area
6. red sand
7. reddish-brown sand with brick and mortar
8. mortar
9. yellow silty sand with yellow silt
10. yellow-brown silty sand with charcoal
11. light brown sandy silt
12. brown silty sand with charcoal
13. gray silt with ash and charcoal
14. charcoal
15. tan sand with mortar
16. red sand
17. green with light gray clay
18. gray clay
19. light brown sand
20. light brown silty sand

"checkerboard" pattern so as to provide a continuous north/south profile along a line located approximately half way between the east and west foundation walls. A simplified composite profile along this axis is included as Figure 75. .

An additional excavation unit (TC AL) was placed so as to extend TC Y westward to the Lot 13/14 boundary wall.

Prior to excavation, the concrete basement floor of the latest structure to stand on Lot 14 (floor #3) and the underlying gravel bedding had been removed by power equipment. The excavations encountered a second mortar floor (floor #2), some 4-14 inches below the level of the later concrete floor. Clearing operations prior to excavation had disturbed most of the deposits between these two floors.

Beneath the second mortar floor, the excavations encountered an 8-12 inch thick layer which consisted primarily of a black silty soil containing burnt wood and charcoal with inclusions of a grayer ashy soil. It is likely that this deposit represents a midden deposited in the basement of a structure which stood on this lot. This deposit did not immediately underlie mortar floor #2 in most of the test cuts. A layer of brown sandy silt was located between the mortar floor and the deposit of black silt and gray ash. This layer was thinner in the north part of the excavated area, becoming thicker toward the south with a maximum thickness of approximately four to five inches. In the northernmost test cut (TC AH) this brown silt layer was not present, with the

black silt beginning immediately beneath the mortar floor.

A thin yellowish line was noted in the profiles of most of the test cuts. This may represent the decaying remains of an earlier mortar floor (floor #1). This floor probably represented the basement floor of the structure which stood on Lot 14 during the deposition of the midden. At this time, wall #1 probably still marked the rear wall of this structure. Excavation by both manual methods and power equipment south of wall #1 indicated that the midden deposit did not extend south of this point. Mortar floor #2 was laid down after the deposition of the midden had ended. At this time, the rear wall of the structure standing on Lot 13 may have been located further to the south than wall #1. This rear wall may have been the one observed in the walls of BT #2, approximately 55-60 feet south of the Pearl Street baseline (see below).

A layer of red sand was encountered beneath floor #1 and the midden deposit. This layer was only two to four inches thick in the northern part of the excavated area, becoming gradually thicker to a point $17\frac{1}{2}$ feet south of the Pearl Street baseline ($15\frac{1}{2}$ feet north of wall #1). From this point south to wall #1 the red sand stratum increased in thickness to 14-18 inches.

South of the point noted above where the red sand layer thickened, the latter layer was underlain by a stratum of mortar or clay. In the eastern portion of the lot, this stratum consisted of hard packed yellow mortar with imbedded

brick. This deposit was 8-10 inches thick toward the east, narrowing to only two inches in the middle of the lot. Just east of the north-south line in the middle of the lot along which our composite profile is drawn, the deposit of mortar ended but at the same elevation a layer of clay, some two to three inches thick, was present. Numerous cobbles were imbedded in the underlying sand and covered by the clay. These cobbles also underlay the mortar in the eastern portion. The clay/mortar stratum ended just north of the south wall of TC AD. As noted above, the overlying red sand stratum was substantially thinner north of this line.

A deposit of red/brown sand containing large quantities of rock underlay the mortar/clay layer. The base of the former stratum sloped downward from north to south in TC Y but was fairly level in TC O.

In the northern portion of the excavated area, a stratum of gray sandy silt containing substantial quantities of oyster shell underlay the red sand stratum (which in turn underlay mortar floor #1). In the southern portion of the area, this same gray silt stratum was encountered beneath the red brown sand with rocks. Thus the stratigraphic sequence in the northern portion of the area was: mortar floor #1--red sand (thin)--gray silt with shell, while in the southern portion the sequence was: mortar floor #1--red sand (thicker)--clay/mortar-brown/red sand--gray silt. In TC Y (in the southern portion of the area) a greenish brown silt layer was

noted beneath the gray silt with shell. The excavations in TC O did not reach a sufficient depth to encounter this layer.

In the northern portion of TC Y we encountered what appeared to be a low stone wall near the bottom of the excavation unit. This wall consisted of two layers of dry laid stone running east-west. The base of the wall rested on the green brown silt encountered at the bottom of the exposed stratigraphic sequence. The gray silt with shell abutted this wall in TC Y and a thin layer of this soil apparently overlay the wall. The west and south profiles of TC AD indicate the presence of a single layer of stones at about the same depth as the wall uncovered in TC Y. However, the sand stratum in which these stones were embedded contained many rocks throughout and the layer of stones was not part of the wall. Although we were not able to more thoroughly explore the extent of the wall, probes indicated that it ended just east of the east wall of TC Y and did not turn to the north or south at that point. It should be noted that the dividing line between the differing stratigraphic sequences noted above occurred just north of this wall.

North of the stone wall uncovered in TC Y a stratum of sandier soil underlay the gray sandy silt with shell. This stratum did not appear to be present south of the wall. The green/brown silty soil which underlay the gray silt south of the wall appears to underlie the sandy stratum north of the wall. In addition, the excavation records suggest that bands

of silt may have been present at the top of the sand stratum north of the wall.

(Figure 7b)
TC AL extended TC Y to the west and exposed the Lot 13/14 boundary wall as well as the west wall of the early foundation. The east-west stone wall uncovered in TC Y extended westward beneath the west wall of the early foundation. The base of the early foundation wall was at the level of the top of the east-west wall. This is not indicated on the TC AL profile since the stratigraphic excavation of this unit did not extend to the base of the wall. However, the top of the wall was exposed and photographs clearly show the relationship of the two walls.

The top of the west foundation wall of the early structure was approximately 30 inches below the surface of TC AL. The base of the cut stone wall of the later structure (the Lot 13/14 boundary wall) overlay the western part of the earlier wall and extended approximately 9-10 inches above it. A thin layer of soil was present between the base of the later wall and the top of the earlier one. The stratigraphy indicated that a trench had been dug through the midden deposit and the underlying red sand to install the later wall.

The earlier foundation wall extended to a depth of some 60 inches below the TC AL surface. It was intersected at a depth of approximately 50 inches by the layer of gray clay with stones discussed above. The excavators noted a layer of stones in TC AL at the base of the midden stratum at the same

level as the top of the early foundation wall.

The southern portion of an intrusive pit was excavated in TC O and O extension. The pit appears to have been dug after the deposition of the midden. It was dug through the midden, red sand and mortar layers into the brown/red sand beneath. The pit intersected the eastern foundation wall and extended westward a maximum distance of four feet from the wall. It also extended 24-28 inches southward from the north wall of TC O and O extension. The northernmost boundary of this pit apparently lay within the unexcavated area between TC O and TC AD, as the pit was not present in the latter test cut. The internal stratigraphy of the pit suggests that it was not dug for garbage disposal but was probably excavated and then backfilled. It may have been dug to repair a portion of the eastern foundation wall, although this was not apparent from an examination of the wall. However, the repairs could have occurred in the portion of the wall adjoining the unexcavated part of the pit.

There were at least two additional areas of disturbance to the midden deposit which should be noted. The northeast corner of TC AD appears to have been disturbed, with a concentration of stones present in this area at the level of the midden. Photographs suggest a possible excavation in this area which disturbed the midden and deposited the stones.

Profile drawings also suggest that a disturbance in the form of an east-west trench which was dug starting beneath

floor #2, runs through TC Y and the southwest corner of TC AL. It should further be noted that our ST #3 was within the boundary of TC O. This shovel test had been backfilled prior to the excavation of the test cut. The excavators noted the soil difference in this area, however, and the disturbed material was excavated separately.

Summary of Stratigraphy

The excavations in the northern part of Lot 14 suggest that there were several episodes of filling at this location. The east-west stone wall at the base of the stratigraphic sequence in TC AL and TC Y may have functioned as a bulkhead or retaining wall and marked the southernmost extent of the first filling episode. It is also possible that this wall was intended to be the rear wall of the early foundation but that it was decided to enlarge the house after the construction of the wall had begun. In any case additional fill was deposited before the construction of the early foundation walls began. Thus the foundation construction on Lot 14 began after the initial filling, and at a higher elevation than the earlier east-west retaining wall.

The base of the east-west retaining wall, which rested on the green/brown silt stratum, may mark the original river bottom surface at this location, although this surface may have been under water only at high tide. Since the water lot grants for Lots 13 and 14 were both obtained by the same individual (Lucas van Tienhoven) this early retaining wall may

have extended into Lot 13. However, the excavations in the latter lot did not reach the depth necessary to have uncovered this wall.

The first filling episode would have deposited the sand fill north of the retaining wall. The large boulder uncovered in TC AH was most likely of glacial origin (see Appendix X), with the fill deposited around it. It should be noted that large boulders were also present near the Pearl Street base line in Lot 13.

The surface of the land was raised by the deposition of the gray sandy silt with shell. It is possible that this deposition ended on a line defined by the early east-west retaining wall with the fill overflowing the wall and sloping downward from this point southward. A second episode of landfill (sandy) would then have been deposited south of the east-west wall and the foundation walls constructed. Additional fill was then deposited against the foundation walls, and at a level approximately two feet above the wall base, the mortar/clay level was deposited and additional clay packed against the wall. The function of the mortar and clay deposit may have been to seal out water and dampness from the structure. Additional red sand fill was then deposited to bring the surface approximately to the top of the foundation wall. A thinner layer of the red sand was also deposited above the gray silty fill in the north part of the lot, presumably to level off the surface prior to construction of

the house superstructure and the basement floor.

Another possible interpretation of the stratigraphy is that the gray silt landfill stratum originally continued at the same elevation south of the early east-west wall as north of it. At a later date the entire portion of the lot between the early east-west wall and the location of the rear foundation wall would have been dug out to a depth slightly below the base of the foundation wall. The red/brown sand would have been deposited, the foundation wall constructed, and the mortar/clay and red sand deposited as discussed above.

Although none of the test cuts placed north of the early east-west wall intersected the east or west foundation wall, field notes indicate that the portion of the eastern foundation wall near the Pearl Street baseline ended at a higher elevation than the portion exposed by TC 0 and 0 extension. This suggests the possibility that the house was extended further to the north after the initial construction. This could also explain why the mortar/clay layer was only present in the southern portion.

Subsequent to the construction of mortar floor #1, there was an accumulation of trash in the basement of the house. It should be noted that burned wood was found at the top of this deposit, suggesting that a later wooden basement floor (floor 1a) was laid down on top of the midden, and may subsequently have been burned. As discussed below, the artifactual evidence raises the possibility that this burning

was caused by the fire of 1778 which affected a large portion of lower Manhattan. After the fire, additional material was deposited which may have derived from the building burned in the fire. Mortar floor #2 may have been associated with the next building to be constructed, which extended further to the south than the earlier structure. Concrete floor #1 with its gravel bedding would have been deposited later, probably in association with the final construction phase on Lot 14.

Dating of the Deposits

Mortar Floor #2

Sixty two dated ceramic sherds were excavated immediately below mortar floor #2. These yielded a mean ceramic date of 1790.26. However, this deposit contained 15 whiteware sherds (19% of the diagnostic sherds). This might imply that the mortar floor was deposited after 1810, which is also supported by the presence of a fragment of a 19th century beer/ale bottle fragment in TC Z. However, it should also be noted that while there were 43 creamware sherds in this deposit, only two pearlware sherds were present. This suggests the possibility that the whiteware sherds originated in the material overlying the floor.

"Transitional" Deposit

We have referred to the brown soil between the midden and the overlying mortar floor #2 as the "transitional" deposit. It was originally thought that this deposit represented the top of the midden. It is likely that the excavated material

contains some artifacts from the surface of the midden, but analysis of the artifacts suggests that this was a separate and later deposit. The 113 dated ceramic sherds recovered from this deposit yielded a mean ceramic date of 1745.3, approximately 35 years later than the date calculated for the midden. Unlike the underlying midden deposit, this material contains a high proportion of creamware (31.5% of the diagnostic sherds). The deposit contained no pearlware sherds, and only two sherds of 19th century ceramic types. The latter are most likely intrusive. The cumulative frequency curves for the ceramics from this assemblage are consistent with a deposition beginning after the termination of the underlying midden creation event and ending before the introduction of pearlware c. 1780. If this material was deposited much after 1780 we would expect a larger percentage of pearlware sherds to be present.

Thus, the ceramic evidence is consistent with the identification of this deposit as debris from the demolition of a building burned in the fire of 1778. The presence of the whiteware sherds noted above also suggests that the overlying mortar floor #2 which sealed this deposit may have been constructed earlier than suggested. If mortar floor #2 was, in fact, constructed in the 19th century it is likely that its construction destroyed an earlier floor which had sealed the "transitional" deposit. Seven of the 51 measurable pipe bores from the latter deposit (13.7%) were #4, further reinforcing

the idea that this deposit is later than the underlying midden. Only 1.5% of the measurable bores from the latter deposit were #4.

The sharp difference in artifact densities between the transitional deposit and the underlying first level of the midden deposit supports the ceramic and pipe evidence that these are separate deposits. The transitional deposit contained a much lower non-architectural; architectural ratio than the first midden level and a much higher building material density. This supports the inference made previously that this deposit represents building demolition debris which was present on the lot prior to the construction of a new building and the associated mortar floor #2. The fact that 30% of the bone fragments and 15% of the bottle glass fragments from this deposit were burned (a much higher percentage than in the underlying deposit) supports the inference that the demolition of the extant building took place during the fire of 1778. Among the artifacts from this deposit were 245 gunflints and 34 additional lithic fragments, perhaps associated with gunflint manufacture, all of which were recovered from TC Z. This is interesting in view of the hypothesized date of the burning of a structure at this location during the revolution. Only two gunflints were recovered from the underlying midden deposit. Also notable were the 96 buttons recovered from this deposit, found in TC Z. Except for two metal buttons all of these were made of

bone and appeared to have been burned.

Midden Deposit

The midden deposit yielded 408 dated ceramic sherds. Fourteen creamware sherds and one pearlware sherd were included among these ceramics. However, it is likely that these were intrusive into the deposit. All but one of the creamware sherds were recovered from the first of three levels excavated within the deposit. Seven of the 14 creamware sherds came from the first excavated level in a single test cut, TC Y. The profile drawings clearly show an intrusive event at the top of the midden in this test cut and other intrusive events are indicated in the records of the other test cut.

Because the first midden level of TC Y was obviously contaminated by the intrusive event previously mentioned, the sherds from this level were excluded from the mean ceramic date calculation. The calculated date was 1708.8 years. This date may be somewhat skewed since approximately 31% of the dated sherds were delftware, which has a mean date of manufacture of 1700. However, a number of the decorated sherds could be identified as 18th century types.

Analysis of the ceramic types present and the cumulative frequency curves suggest that accumulation of the midden deposit began in the early 18th century. Only 12.7% of the sherds consisted of 17th century type red earthenwares. Accumulation of the deposits may have ended in the 2nd quarter

of the 18th century. Fifty of the sherds recovered from the deposit were identified as mottled brown glaze yellowware, a ceramic type manufactured from 1660 to 1750 with the greatest popularity in the 18th century. Thirty five other sherds were British brown salt glazed stoneware, manufactured from 1690-1790. Only 12 white salt glazed stoneware sherds were present. Eight of these were slip-dipped white salt glazed stoneware, manufactured between 1715 and 1775 with the other white salt glaze sherds having manufacturing dates between 1720 and 1805. If deposition of the midden continued much beyond the 1730s it is likely that more white salt glazed sherds would have been present.

Ninety one percent of the 203 measurable pipe stem bores from the midden deposit were either #5 or #6, which is consistent with an early 18th century deposition. Of the 14 identifiable maker's marks, only one belonged to a 17th century pipe maker (William Evans). Eleven of the marks are variations of the Tippet mark. Two pipe fragments have both the RT mark and an Evans cartouche. These are dated to 1698-1720 which is consistent with a beginning deposition date in the early 18th century.

Eighty of the 84 dated bottle glass fragments are dated to 1690-1730/40, with four dating to 1730-1760. This is also consistent with the dates of deposition discussed above. In addition, the first midden level excavated in test cut AD yielded a glass bottle ownership seal with the embossed date

1715 and the initials TD. The date supports the inference that deposition of the midden began early in the 18th century. The initials TD, however, do not accord with any of the identified owners of the lot.

Composition of the Deposit

The midden deposit contained a number of personal artifacts including two buttons, two straight pins, a buckle, probably from a shoe, four glass beads, five fragments from a bone comb, a sewing thimble, six marbles, and three slate pencils. The deposit is also characterized by the presence of 924 fragments from ceramic "crucibles." These are circular artifacts with a triangular hollow portion. The crucibles appear to be of several sizes. A whole one recovered from TC O was one and three fourths inches in height with a diameter at the top of one and three fourths inches. While several crucibles were recovered from excavations in Lot 13, these differed from those recovered from Lot 14. Five hundred and seventy five of the 924 crucible fragments were recovered from the first excavated level of the midden deposit in TC AH. The presence of 28 crucible fragments from the transitional deposit overlying the midden lends support to the hypothesis noted above that some of the midden material was excavated with the overlaying deposit. It is also interesting to note that a number of egg shell fragments were recovered from TC O and AH, with a major portion of one shell being recovered from the former test cut.

The ratio of non-architectural to architectural artifacts is much higher for the midden deposit (6.34) than for the artifacts recovered from the overlaying transitional deposit (2.6), the transitional deposit underlying the midden which is discussed below (3.5), or the average ratio for the landfill deposits excavated in this portion of Lot 14 (1.78). The midden deposit also contained bone and marine shell densities of 46.6 pieces/c.u. ft. and 807.7 gms./cu.ft., compared with 15.2 pieces/cu.ft. and 173 gms./cu.ft., respectively for the overlying transitional deposit. All but one of the landfill deposits had lower bone and marine shell densities than the midden deposit. One of the landfill strata had a slightly higher bone density (47.7 pieces/cu.ft.), and one had a higher marine shell density (2222.0 gms./cu.ft.) than those in the midden.

The above figures tend to support the identification of the midden as a deposit of domestic debris, rather than material deposited as a result of structural demolition. The lower density of building materials in the midden deposit (788.6 gms./cu.ft.) than in the overlying transitional deposit (143,322 gms./cu.ft.) also tends to support this conclusion. However, the density of building materials in the midden deposit is higher than for all but one of the landfill deposits, which had a density of 929 gms. of brick and mortar/cu.ft. The densities for the other landfill deposits ranged from 62 to 366 gms./cu.ft. The presence of the

moderate densities of brick and mortar in the domestic midden deposit could represent debris from the construction or repair of the house in which the midden accumulated. This material would have become mixed with the trash which accumulated during the occupation of the house. Some of this material could also have been deposited by the intrusive events mentioned previously.

Analysis of Midden Deposition

Four of the seven test units placed in the north portion of Lot 14 involved the excavation of three separate levels within the midden deposit. Two midden levels were excavated in two of the other test cuts. These levels were analyzed separately in order to determine whether the deposit was accretional. The first excavated level, excluding the disturbed material from TC Y, yielded a mean ceramic date of 1706.5 (if the disturbed material from TC Y is included, the date becomes 1712.7). The second and third levels yielded dates of 1711.6 and 1710.7 respectively. Analysis of the categories of ceramics present and the cumulative frequency curves also yield results which are inconsistent with those expected if the midden had accumulated gradually over a long period of time and was subsequently undisturbed. For example, 16.5% of the diagnostic sherds from the first midden level are 17th century earthenware types with the percentage for the second and third levels being 6.9% and 2.6%. This is the opposite of the pattern which would be expected if deposition

was vertically accretional.

It is possible that deposition of the midden was horizontally, rather than vertically, accretional. That is, some portions of the basement could have been used for the deposition of refuse before others. There appears to be more variation in ceramic types among the test cuts than among the various excavated levels. The mean ceramic dates for TC Y and AD are somewhat later than for the other test cuts, with TC Z and O extension having the earliest mean dates. Test Cuts O, AL and AH yielded substantially fewer dated sherds than the other three test cuts. The later mean dates for TC Y and AD are in keeping with a very low percentage of 17th century ceramic types in these test cuts, with a higher proportion of mottled brown yellowware and British brown stoneware. Test Cuts Z and O extension have higher percentages of 17th century types and early 18th century types (mainly slipwares) and lower percentages of the mottled yellowware and British brown stoneware.

The lack of vertical variation in the ceramic composition of the midden could be interpreted as due to disturbance of the deposit and consequent mixing of material. However, the overall distribution of artifacts does not support this interpretation. The lowest of the three levels excavated in four of the test cuts had a much lower density of material in all categories, except for marine shell, than the two uppermost levels. The NA/A ratio is progressively lower with

depth, being 8.0 for the uppermost, 5.2 for the second and 4.3 for the lowest level. However, the density of building materials is highest for the second level (11617 gms./cu.ft.), with the first level having 645 gms./cu.ft. and the third, 354 gms./cu.ft. The bone density is also much higher for the second level, 87 pc./cu.ft., compared with 40.6 and 23.6 pcs./cu.ft. for the first and third levels respectively. If the uniformity in mean ceramic dates was due to post-depositional mixing of the deposit, the artifactual and faunal composition would also be expected to be more uniform than indicated by the above figures. (It should be noted that the first level excavated in the midden deposit in TC Y, which shows indications of containing intrusive material, was excluded from the above analysis.)

Intrusive Pit

Artifacts excavated from the pit which was dug through the midden deposit in TC O and O extension were analyzed separately from the midden deposit. Forty dated sherds yielded a mean ceramic date of 1761.1. Fifty-five percent of the diagnostic sherds were creamware, with no pearlware or 19th century type ceramic sherds present. The ceramic profile suggests that this pit was excavated from the transitional level above the midden. This in accord with the stratigraphic evidence.

Transitional Deposits Below Midden

In TC O extension, Y, AD, Z and AH, some excavated

contexts apparently contained material from both the base of the midden and the top of the underlying red sand deposits. These contexts may also have contained the remains of a mortar floor which underlay the midden. These deposits yielded 81 sherds with a mean ceramic date of 1703.2, intermediate between the dates for the midden and red sand deposits. The transitional deposits had a higher proportion of delftware sherds (78.6%) than either the overlying midden or underlying sand. They are similar to the midden in having a small percentage of 17th century earthenwares and a similar percentage of slipware sherds. However, they yielded only three mottled yellowware sherds (3.6% of the diagnostic sherds). The proportions of pipe stem bore diameters are also intermediate between those characterizing the midden and red sand deposits. The artifact data also suggest that these excavated contexts may contain material from both the overlying midden and the underlying sand.

Red Sand and Clay/Mortar Deposit Beneath Midden

The red sand immediately underlying the midden yielded 47 ceramic sherds with a mean date of 1681.1. No 18th century ceramic types were recovered from this deposit, in contrast with the midden deposit which contained 42.7% 18th century type ceramics. The three slipware sherds (5.3% of the diagnostic sherds) were consistent with the percentage of slipwares generally present in the late 17th century landfill deposits. In addition, there were no #5 pipe stems recovered

from the red sand, as opposed to the midden deposit in which 52.2% of the pipe stems recovered were #5. This red sand deposit had a very low artifact density, 2.9 per cu./ft. The bone and shell densities were also low.

The sixteen dated sherds recovered from the clay/mortar deposits which underlay the red sand in the south portion consisted of 17th century earthenware and delftware sherds. While two of the 22 measurable pipe bores were #5, 90.9% consisted of #6, 7 and 8 bores. If the deposition of the clay and mortar was associated with the construction of the early building on Lot 14, this must have occurred immediately after the landfilling. Deposition of the midden may have begun shortly after this and continued through the period of occupation of the structure.

Sand and Silt Land-fill Deposits

The sand and silt deposits underlying the red sand and clay/mortar strata generally contain ceramic and smoking pipe assemblages with characteristics consistent with the landfill deposits from the site. Mean ceramic dates from the various strata range from 1679.4 to 1698.7. The overall mean ceramic date from the deposits of sandy and silty landfill (748 sherds) is 1683.6. The Binford pipe stem date (721 measurable bores) is 1661.7 years. The smoking pipe maker's marks from these deposits are also consistent with those recovered from the other land-fill deposits on the site and are attributable to 17th century manufacturers.

The gray silt deposit in the northern part of the lot was characterized by a very high shell density (2222 gms./cu.ft.). Analysis of the artifacts recovered from the landfill deposits in the southern portion of the area under discussion indicates that the sand immediately underlying the clay/mortar deposit can be divided into two separate deposits. The upper portion of the sand had a fairly low density of artifacts, bone and shell while the lower deposit had a fairly high artifact and bone density and a shell density higher than the overlying deposits.

It should be noted that the lowest deposit of sand in the northern portion of the lot (Test Cuts Z and AH) is the only deposit to have a greater quantity of yellow brick (356 gms.) than red brick (19 gms.). This pattern has been noted at the base of the fill and the top of the "river bottom" deposits elsewhere on the site.

In each of the landfill deposits underlying the clay/mortar stratum there is at least one ceramic sherd of an 18th century type. A total of 16 of the 748 sherds recovered from these deposits are in this category (2.1%). It is likely that the presence of these sherds is due to intrusive events and/or excavation errors. Eight of these sherds were recovered from TC O extension. These may have been associated with the pit which was dug through the midden deposit in this excavation unit. Of the other 18th century sherds in the landfill deposits, five were recovered from TC Z, two from AH

and one from AD. It should also be noted that some fragments of the ceramic "crucibles" which characterized the midden deposit were found in the red sand underlying the midden, the clay/mortar layer and the fill strata beneath the clay/mortar layer. This provides further evidence that intrusive events occurred which were not recorded during the course of the excavations.

South Portion of Lot 14

TEST CUT U

During the exploratory phase of the project, BT #2 was placed in Lot 14 south of wall #1. The trench exposed what appeared to be a wooden bulkhead, consisting of planks supported by a wooden post. The bulkhead ran in an east-west direction and was located approximately 52 feet south of the Pearl Street baseline. Test Cut U was subsequently placed adjacent to the east side of this backhoe trench in order to expose more of the bulkhead and to stratigraphically excavate the landfill deposits to the north and south.

Clearing operations using power equipment had deposited five to six inches of overburden at the location of TC U. This was removed prior to the excavation. It should be noted that mortar floor #2, mentioned in the discussion of the excavations north of wall #1, was not detected during the excavation of TC U. However, the elevation of this floor was approximately the same as the elevation of the base of the overburden at the location of TC U, and it is possible that

the clearing operations removed this floor in the vicinity of TC U. The elevations of the midden and transitional deposits excavated north of wall #1 were below the elevation at which the excavation of TC U began. Excavation of this test cut confirmed that these deposits did not extend to the southern part of Lot 14.

At approximately 21 inches below the opening depth of TC U, a layer of north-south oriented wood planking was encountered extending three feet outward from the south wall of the test cut (Figure 77). Another plank, oriented east-west, overlay the north-south planking in an area which extended between 6 and 14 inches north of the south wall of TC U. This overlying plank was bordered by a row of stones on either side. The construction was almost identical with the planking excavated in TC W in Lot 13. Examination of these locations on the site map indicates that the east-west planking in both test cuts is within a foot of being perfectly aligned and the north-south planking is within two to three inches of being at the same elevation. The differences in alignment and elevation would appear to be within the overall limits of mapping error. It thus appears likely that the wooden features in Test Cuts U and W are portions of the same construction. This construction may have also extended to the east into Lot 15 (see discussion of TC S).

The TC U east wall profile indicates the presence of a pit, filled with dark brown silty sand, immediately above the

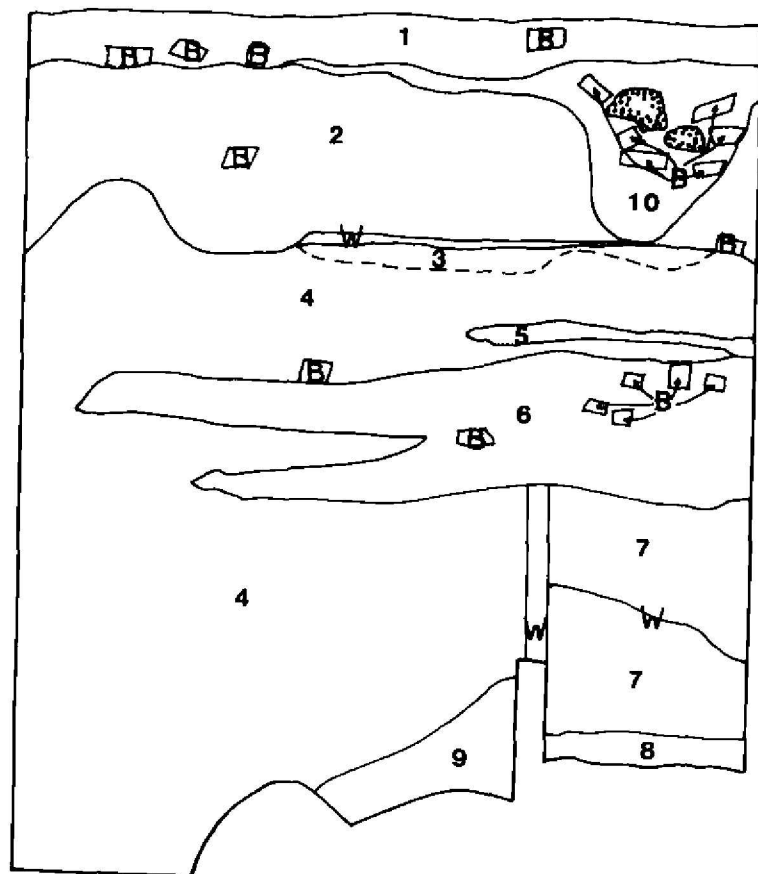
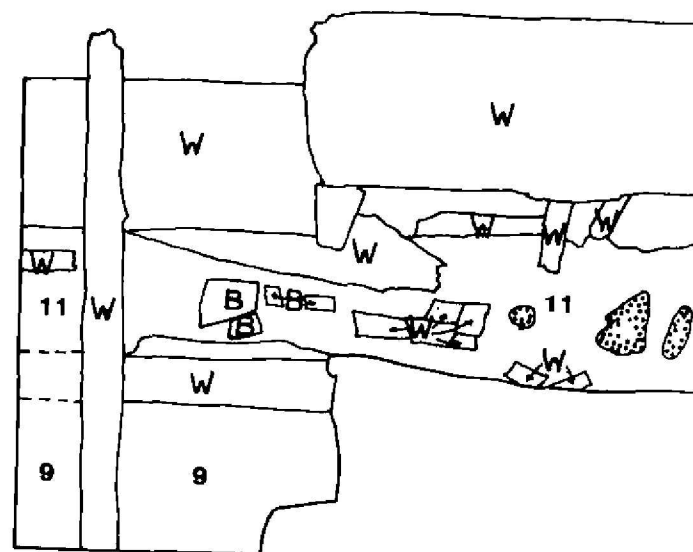


FIG 77 TEST CUT U EAST WALL

FIG 77a

U EXTENSION

SOUTH WALL



Figures 77-77a. Test Cut U, Extension

1. tan sand and silt with rubble
2. mottled medium brown and green sandy silt with brick fragments
3. brown silt mottled with black
4. green silt
5. dark gray clay
6. mottled medium gray-brown and green sandy silt with brick fragments
7. red sand
8. tan sand
9. gray clay
10. dark brown silty sand

east west planking (hereafter referred to as the "trough"). However, the west profile (actually the east profile of BT #2 drawn prior to the excavation of TC U shows a layer of yellow-brown mottled silty sand between the bottom of the pit and the trough. It should be noted that a similar "pit" was also located above the trough-like planking noted in TC W in Lot 13 and TC S in Lot 15.

The most likely explanation for the presence of these features is that the north-south planking and trough were installed at the same time. As discussed below, their most likely function was to provide drainage. At a later time, additional soil was deposited to raise the elevation of the land. At this time a trench may have been dug above the trough through the new fill to maintain the drainage function. It is possible that at some points the wooden trough was not fully exposed by this trench, with a thin layer of the later fill remaining above the wood at the bottom of the trench. At a still later time the trench was filled in.

The stratigraphic interpretation of these features is complicated by the fact that photographs suggest that another, intrusive trench may have been dug to install the north-south planking and the overlying trough. Thus, there may have been two superimposed intrusive trenches, the first dug through the earlier landfill to install the planking and trough and the second to re-expose the wooden trough after it had been covered by a later landfilling episode. The fact that the

earlier trench extended almost the full north-south extent of TC U may have prevented the excavators from noting it. A thin layer of brown silt which underlay the north-south planking may have been associated with its installation.

The 17th century landfill deposits began beneath the brown silt at a depth of approximately 20-24 inches below the surface of the test cut. The uppermost landfill stratum consisted of approximately six to ten inches of greenish sandy silt. This was underlain by up to 12 inches of brown silty sand except in the northeast corner of the test cut, in which the greenish sandy silt continued downward. The top of the bulkhead planking was encountered 17 inches north of the south wall of TC U at the base of the brown silty sand stratum. North of the bulkhead, additional greenish sandy silt continued downward beneath the deposit of brown silty sand. South of the bulkhead, however, the latter deposit was underlain by a lens of tan sand and a stratum of red sand. A small lens of the red sand was also present north of the bulkhead.

The soil beneath the bulkhead construction apparently represents the river bottom deposits. This soil consisted of a gray clayey silt with a thin layer of gray/green sandier silt overlying the clay in some areas.

The bulkhead consisted of one to two inch thick planks approximately one foot wide. The section exposed by TC U and BT #2 included the intersection of two of these planks, at

which point the two overlapped. Backhoe Trench #2 exposed one of the vertical posts, approximately three inches in diameter, which supported the planks in an upright position. Additional posts were subsequently uncovered as described below.

Other planks lay flat on the clayey silt beneath the upright planks, extending about two feet to the north. A log, approximately eight inches in diameter, underlay this planking. Except for the boards directly under the upright planks, which appeared to have been purposely placed in this position, there was no apparent patterning to the boards and logs north of the bulkhead. The probable function of the bulkhead was to support the landfill during the filling process, perhaps to prevent its being washed away by tidal action.

The fact that the deposit of brown silty sand immediately above the bulkhead extended both north and south of it, while different deposits were encountered to the north and south beneath the level of the top of the bulkhead planking suggested the possibility that there were three episodes of land-filling. The first episode would have created the land to the north, with the bulkhead serving to support the fill. The second would have created a land surface south of the bulkhead at the same elevation as that to the north. A third filling episode or episodes represented by the brown silty sand and green silt would have raised the level of the land surface both north and south of the bulkhead.

While this may have been the actual filling sequence at the location of TC U, it is probable that no appreciable time elapsed between deposition of the various loads of fill. This is suggested by the fact that the same green silty soil was present both above and below the brown sand and at the top of the bulkhead in the northeast corner of the test cut. In addition, the stratigraphy shown in the west profile of BT #2 is very different than that shown in the east profile of the trench and described in the excavation records of TC U. On the west side of the backhoe trench, layers of mottled medium brown sand and silt and light brownish red sand with rust-colored mottling replace the green silt and brown silty sand strata uncovered in TC U. In addition, the eastern profile shows no difference in the soil types north and south of the bulkhead. The most probable explanation for the presence of the different soil types is the deposition of separate loads of fill, taken from various sources, during the filling process.

Dating of the Deposits

North-South Planking and Above

The mean ceramic date for the 14 dated sherds recovered from the thin layer of brown silt excavated below the north-south planking is 1710.9 years, and the pipe stem date (based on ten measurable bores) is 1706.1. One piece of dated bottle glass was manufactured between 1680 and 1730/40. The initial date of manufacture for six of the 14 dated sherds was later

then 1690. These include one sherd of blue glazed delft, one Westerwald stoneware sherd and four sherds of British Brown stoneware. These date suggest that the planking was installed in the early post-landfilling period probably during the early 18th century occupation of the structure whose foundation walls were exposed in the northern portion of Lot 14. This plank feature is also seen in Test Cuts W and S in Lots 13 and 15 where the material immediately overlying it seems to date to slightly later in the 18th century.

The material excavated above the north-south planking (exclusive of the intrusive trench immediately above the east-west trough) yielded mean ceramic dates between 1712 and 1721. However, these deposits also contained three creamware and four pearlware sherds, which represent 9.4% of the 74 dated sherds recovered. Analysis of the ceramic types present in this deposit and the cumulative frequency curves suggest that this material represents redeposited fill. The presence of pearlware and absence of later ceramic types suggests a deposition not too long after the end of the Revolution.

The intrusive trench above the trough contained one whiteware sherd, as well as earlier types. This lends some support to the inference that this trench was filled-in in the 19th century. The topmost excavated context, immediately beneath the shovelled out overburden, contained three sherds of 19th century type ceramics. These may have originated in the overburden.

Landfill Deposits

Of the two soil types which constituted the landfill deposits above the level of the wooden bulkhead, the brownish silty sand contained a much greater artifact density (24.5 per cu.ft.) than the green silt (9.0 per cu.ft.) and also contained a much higher density of marine shell than the latter deposit. The mean ceramic date obtained from the 100 dated sherds recovered from the brown silty sand is 1687.4 and the Binford date from 68 measurable pipe bores is 1678.1. The green silt yielded only 10 dated sherds and 10 measurable bores. It is interesting to note that all of the 78 measurable pipe bores recovered from these two landfill deposits were larger than #5 (5/64 inch). In contrast, 20.5% of the 83 measurable pipe bores recovered only from the deposits above the landfill were #5.

The landfill deposits below the level of the top of the bulkhead yielded only 18 datable ceramic sherds and 13 pipe bores. All of the artifacts are consistent with a late 17th century deposition. These artifacts present no convincing evidence that the fill north of the bulkhead was deposited significantly earlier than that to the south. The most significant difference in the assemblages excavated north and south of the bulkhead is the greater density of building material (largely brick) excavated to the south (7335 grams/cu.ft. as opposed to 132 gms./cu.ft. north of the bulkhead). Four of the five maker's marks on the pipe

fragments excavated from the landfill deposits are attributable to 17th century pipe makers (HG, WE, EB, CB). The sixth mark (AIB) is of unknown date.

The gray silt and clay beneath the bulkhead was not screened. Therefore, there may have been bias in the selection of artifacts which were retained. The 80 measurable pipe bores yielded a Binford date of 1664. This early date is consistent with a pre-landfill deposition. The mean ceramic date, however, is 1692.1 based on 33 dated sherds which is more comparable with the dates obtained from landfill deposits. It should be noted that 47.1% of these sherds are 17th century-type earthenwares, as opposed to 36.9% of the sherds from the overlying landfill deposits which are in this category. One sherd from the gray silt and clay deposits which was identified as pearlware was obviously intrusive into this deposit. Four pieces of bottle glass from the clay and silt were dated to 1680-1730/40, consistent with both the late pre-landfill and the landfill periods. These deposits yielded, among other items, a lead weight, which may have functioned as a fishing sinker.

Exposure of Bulkhead and Associated Construction

Our plan of excavation involved the exposure and recording of the full extend of the bulkhead, using power equipment, subsequent to the testing of the landfill on either side of the bulkhead in TC U. However, due to a severe thunderstorm on the last day available for excavation on the

Pearl Street portion of the site, we were unable to carry out this exploration to the extent planned. We were able to expose the bulkhead construction from the location of TC U eastward to the Lot 14/15 boundary.

The construction of the bulkhead in this area was similar to that uncovered in BT #2 and TC U--planking supported by wooden posts. We encountered the easternmost vertical supporting post approximately four feet west of the Lot 14/15 boundary. This post was approximately five inches in diameter. We encountered another wooden feature abutting this post on the east side and extending to the north and south. This feature consisted of adjacent wooden boards, laid flat, some four to five feet in length, eight to ten inches wide and two inches thick, with the long dimension oriented east-west. These planks were supported by underlying north-south oriented wooden beams which measured nine by nine inches. We were unable to expose the full length of the beams although they extended at least one and a half feet south and seven feet north of the line of the bulkhead.

The top of the exposed planking appeared to overlay the gray clay and silt deposits which marked the original river bottom. Therefore it is likely that the construction predated the deposition of the landfill. It is possible that the deposits of gray clay mark the existence of a marshy area at this location. The wooden planking and underlying beams may represent the remains of a causeway or boardwalk which enabled

the inhabitants of the area to traverse the marsh for purposes of shellfish gathering, fishing etc.

We were only able to expose the bulkhead construction for a few feet west of BT #2. We noted a quantity of both large dressed planks and logs in apparent association with the bulkhead in this area. During the subsequent excavations of the foundation for 7 Hanover Square, we noted that a number of large logs with sawn ends were concentrated in this general area of the site.

SHOVEL TEST 19

In order to determine the extent of the trough uncovered in TC U, we placed ST 19 to excavate the area from TC U westward to the Lot 14/15 boundary wall (Figure 77^A), leaving an 18 inch baulk bulk between TC U and ST 19. Although the north-south wooden planking which underlay the trough extended to the Lot 14/15 boundary wall, the trough itself appeared to end approximately one and a half feet west of the boundary wall. Photographs of ST 19 show the trough-like shape of this feature, strengthening the interpretation that it functioned as a drain. It is possible that the construction of the Lot 14/15 boundary wall removed the trough near the wall, since the excavation of TC S in Lot 15 (see below) suggests that this feature did extend into Lot 15.

TEST CUT T

Examination of the southern portion of BT #2 indicated the presence of early-mid 18th century ceramics and lenses of

gray ashy soil. To examine these deposits we placed TC T at the southern terminus of the backhoe trench. This location was in the "backyard" area between the latest building to stand on Lot 14 and the early 20th century structure which stood on Lot 19. Test Cut T measured seven feet by approximately three and a half feet (Figures 78, 79).

The southern portion of TC T had apparently been disturbed by the construction of the early 20th century building just mentioned. This disturbed area yielded a number of whole bricks which continued the embossed name of the manufacturer. These included "Beggs & Co.," "Brooklyn Fire Brick Works," "Phoenix," and "Malden." De Noyelles (1974) identifies only the latter bricks which were manufactured by the Malden Brick Company and dated to 1905.

In the central portion of TC T the area of disturbance extended further northward than in the eastern portion of the test cut, while the western portion was apparently undisturbed. Approximately three feet from the south wall of TC T in the disturbed central portion, a vertical metal pipe was uncovered extending downward below the maximum depth of excavation of the test cut. The northward extension of the disturbed area may have been associated with the installation of this pipe, thought to have provided drainage.

The southwest corner of TC T was not affected by the early 20th century disturbance and at a depth of 8/10 inches below the test cut datum the remains of what appeared to be

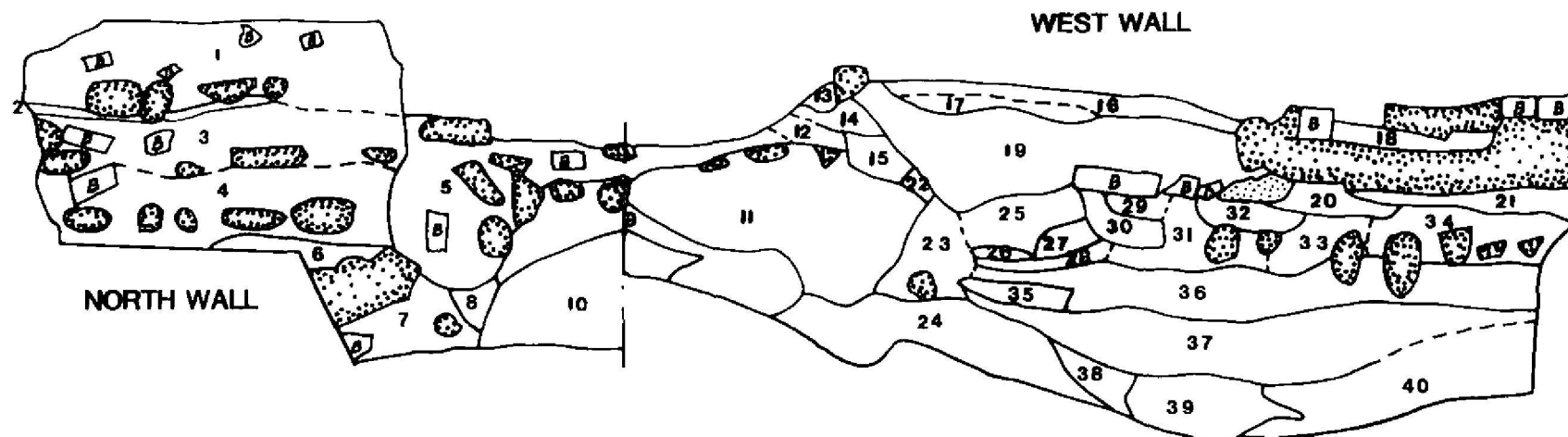


FIG 78-79

TEST CUT T

Figures 78-79. Test Cut T

1. brown gray sandy silt mottled with brick, mortar, charcoal, and yellow silt
2. red sand
3. greenish-yellow sandy silt mottled with brick and charcoal
4. dark gray silt mottled with charcoal
5. intrusive pit
6. brown silty sand mottled with coarse brown sand
7. brown-gray sandy silt mottled with charcoal
8. dark gray silty sand mottled with charcoal and mortar
9. gray ash, sandy silt, charcoal, and shell
10. yellow silt with patches of gray
11. gray silty sand mottled with greenish silt
12. hard-packed red sand mottled with yellow silt
13. coarse black sand
14. coarse red sand
15. dark brown sandy silt
16. gray sandy silt with construction debris
17. greenish-yellow sandy silt
18. black sandy silt with patches of rusty sand and fragments of coal
19. black sandy silt mottled with yellow silt, charcoal, and brick
20. black sandy silt mottled with yellow silt, charcoal, and brick
21. yellow silt mottled with gray silt, brick, and mortar
22. hard-packed red sand mottled with yellow silt
23. yellow silt mottled with gray silt, brick, and mortar
24. light gray sandy silt with charcoal
25. yellow sandy silt mottled with black
26. hard-packed yellow silt
27. light gray sandy silt with charcoal
28. red sand mottled with black and yellow silt
29. grayish-brown sandy silt
30. hard-packed yellow-brown silt with mortar
31. grayish-brown sand
32. grayish-brown sandy silt
33. yellow-gray silt with mortar
34. dark gray silty sand
35. light gray silt with mortar, shell, and rust silt
36. light gray silt with mortar, charcoal, and shell
37. hard-packed gray-brown silt
38. yellow sandy silt
39. light gray silt with mortar, charcoal, and shell
40. greenish-yellow silt with pockets of gray

a cobble floor was uncovered in this area. The soil immediately overlying the cobbles consisted of a black sandy silt mottled with mortar and brick. Unlike the disturbed area, which contained a substantial proportion of 19th century ceramics (11.4% of 131 dated sherds) and bottle glass (121 of 123 pieces of dated bottle glass were assigned to the post-1800 period), the later deposit contained no 19th century ceramics or glass. Of the eight dated sherds from this black sandy silt, four were delftware; one, 17th-century buff earthenware; one, buff slipware; one, white salt-glazed stoneware; one, overglaze painted creamware; and one, 18th-century overglaze painted, famille rose porcelain.

A lens of red sand was excavated immediately beneath the cobble floor. This probably represents the bedding in which the cobble floor had been laid. This deposit yielded one creamware, and four white salt glazed stoneware sherds, one of which was debased scratch blue. This ceramic evidence suggests that the cobble floor was constructed in the latter part of the 18th century. The earliest possible date of construction would be the mid-1760s which is the approximate initial date of manufacture of the creamware and debased scratch blue stoneware. The mean ceramic date for the five sherds is 1771.

Beneath this cobble floor and its red sand bedding a deposit of gray and gray/brown silty sand with some pockets of gray ash and charcoal was excavated to a depth of 17/19

inches. this deposit became mottled with yellow silt near its base. At 17½ inches the remains of a second cobble floor was detected in the extreme southwestern portion of the test cut. Cobbles were also found in the soil between the levels of the two cobble floors.

The deposit between the two floors was excavated in three levels. The entire deposit yielded 16 dated sherds with a mean ceramic date of 1719. One creamware sherd was recovered from the uppermost of the three levels. The other ceramics consisted of one white salt-glazed stoneware, one buff slipware, four delftware, one 17th-century buff earthenware, one Buckley ware (1740-1780), and one agate ware (1740-1810) sherd. It should also be noted that a lens of gray ash with charcoal below the level of the lower cobble floor and adjacent to it yielded three additional agate ware sherds and a pipe bowl fragment with the maker's mark WN, dating either to 1722-39 (William Naylor) or 1730-35 (William Nicholas).

A concrete block in the northwest corner of TC T was removed during the course of our excavations. The underlying soil was similar to that excavated from the southwest corner of the test cut as discussed above. The 31 dated sherds consisted of delftware (19 sherds), buff slipware (five sherds), white salt-glazed stoneware (one sherd), "midlands" type yellowware (three sherds), "bellarmine" type stoneware (one sherd), and brown stoneware (two sherds). The latter two sherds were identified as 19th century brown stoneware bottle

sherds. No creamware sherds were recovered from this deposit. The calculated mean ceramic date is 1716.5. A fragment of an amber glass bottle recovered from the deposit was also coded as 19th century beer/ale bottle glass. The presence of the 19th century artifacts suggest that this deposit may have suffered some contamination from the adjacent early 20th century construction.

The northeast corner of the test cut was largely unaffected by the 20th century disturbance. Most of the soil in this area consisted of greenish yellow-brown sandy silty and light gray silty sand. The ceramics from these deposits are similar to these from the western portions of TC T which were discussed above. Fifty eight dated sherds were recovered. These include 43 delftware, six buff slipware, two 18th century British brown stoneware, six 18th century "midlands" type yellowware, and one creamware sherd. The mean ceramic date is 1707.8, but the ceramic assemblage may have been deposited as late as the third quarter of the 18th century. It should be noted that the deposit also yielded four pieces of mold-made bottle glass dated to the post-1800 period which suggests that some contamination of these deposits by the early 20th century disturbance may have occurred.

The soil beneath the disturbed area in the center of the test cut yielded 44 dated sherds with a similar distribution of ceramic types as the other 18th century contexts discussed

above. Soil below this deposit and beneath the other deposits in the northern portion of TC T was excavated as one unit to a depth of $23\frac{1}{2}/30\frac{1}{2}$ inches. The 69 dated sherds consisted of delftware (54 sherds), buff slipware (10 sherds) and "midlands" type yellowware (four sherds). The ceramics from these deposits suggest an 18th century deposition. However, both deposits contained bottle glass fragments dated to the 19th century, including one pharmaceutical bottle fragment containing the embossed word "Brooklyn," reinforcing the suggestion that this area of the test cut had been contaminated by the early 20th century construction mentioned above.

A small lens of gray-brown sandy silt with gray clay and yellow silt mottling in the northeastern corner of the test cut was the only deposit not containing 18th or 19th century ceramics or glass. The 16 dated sherds consisted of 13 delftware and three buff slipware sherds. This deposit could represent the top of the 17th century landfill deposits, but the absence of later ceramics could also be due to sampling error. Excavation of TC T ended at this point, before the 17th century landfill deposits were encountered.

Summary

Test Cut T sampled an area of the site which had undergone several episodes of disturbance. The southwestern portion of the test cut encountered the remains of what seem to have been two cobble floors. Because only a small portion

of these floors was undisturbed, they could not be accurately dated, but the uppermost of the two was probably constructed during the latter half of the 18th century. Later in this period an intrusive event resulted in the destruction of the floors and the deposition of soil containing 18th century artifacts. The nature of this intrusive event could not be determined from the excavated material. The construction of the early 20th century building on Lot 19 resulted in the disturbance of the 18th century material, and the mixture of this material with overlying 19th century material and artifacts deposited during the construction of the building.

CHAPTER SEVENDocumentary Research -Lot 15

Lot 15 (18'9"/8" X 70'7"/10") falls within the bounds of Evert Duyckinck's 1687 Water Lot Grant, measuring 38'3" X 95' (Liber A p51). This original parcel was subdivided along its north/south axis. By 1697, the year an additional 19'1½" X 46'9" Water Lot was granted at the north of Lot 15, the western 19'1½" X 95' parcel (Lot 15) belonged to the mariner Francis Goederus (or Goodhorn) (Liber A p377). The other half, a parcel not within the project area, belonged to Garret Duyckinck. Goedderus's widow Rebecca remained in Lot 15 until at least 1723-4 (tax assessment records). Josiah Miukin, Rebecca's son-in-law, became the owner of the parcel (then 18'9" X 146') in a deed recorded in 1737 (L32 p123) although a Water Lot Grant (L13 p217) and the tax records place him here as early as 1734.

The parcel had passed back into the Duyckinck family by 1789. Gerardus Duyckinck, a glassmaker, is listed here in the tax records between 1789 and 1795. Stokes cites the following notice in his chronology:

Gerardus Duyckinck, living near the Old Slip Market in New York, continues to carry on the business of his late father, deceased, viz., limning, painting, varnishing, Japanning, gilding, glazing, and silvering of looking glasses, all done in the best manner...
(N.Y. Post Boy 5/19/1746)

Gerardus is also mentioned in a later issue of the same paper. A passage dated December 10, 1755 states that he is selling

imported goods "at his house on the dock next door to the sign of the Prince of Orange, near the Old Slip."

A gunsmith, Thomas Smith, appears in the city directory at the same time as Gerardus Duyckinck (1792-94). Gerardus's widow Ann conveyed the parcel to her son and daughter in 1797 (L52 p157, p300) and they in turn sold it to John Swartwout (City Marshall), Robert Swartwout and Peter Dumont in 1801 (L61 p337). The Swartwouts and Dumont purchased Lots 12 and 13 at the same time (L20 p258; L60 p380) and then sold all three lots by 1807-9 (L74 p407, L84 p249, L106 p446). Tax assessment records list David Dunham's stable here in 1808-9, followed by John Swartwouts shop between 1810 and 1813 although the latter seems to have sold the property in 1807 (L74 p407). By 1815 a new building had replaced Swartwout's "shop" (tax assessment records).

John Johnson and William Halstead (owners of Lots 13 and 14--L105 p426,428; L107 p110) owned the lot between 1818 and 1834 (L115 p149; L125 p339; L188 p266; L267 p543). They appear here in the Tax Records and city directories as "merchants" from 1815 to 1829. Subsequent directories and tax records list a series of "merchants" and "dry goods" stores at this address. The Astor Family owned the lot during the latter half of the 19th century (L1436 p271; L8 p293).

There was apparently at least three building episodes in Lot 15 prior to 1860. It is assumed that David Dunham's 1808 stable was housed in a structure other than that built as the

Duyckinck residence in the 17th century. The stable, which also functioned as Swartwout's "shop" according to the 1813 tax assessment records, was replaced by a more highly assessed building in 1815. This latter building is probably described in the 1860 tax assessment.

Excavation - Lot 15

TEST CUT A

During the testing phase of the project, TC A was located according to our random sampling plan in the northern portion of Lot 12, approximately 15 feet south of the Pearl Street base line and six feet west of the Lot 15/19 boundary wall. Subsequently, stone foundation walls of the late 17th-century house which stood on this lot were uncovered. The south wall of TC A was on a line with a point one foot south of the northern end of the early stone wall which underlay the more recent Lot 15/19 boundary wall. Although TC A was located within the boundaries of the early house walls, no domestic deposits associated with this structure were encountered.

Prior to the excavation of TC A the concrete floor of the most recent building to stand on Lot 15 was removed by the backhoe. Several inches of gravel bedding underlay this floor. The remains of the concrete floor and the remaining bedding were cleared from the surface (Figures 80, 81). Below this was a thin layer of reddish/brown sand (stratum II). Beneath the reddish brown sand a thin layer of black sand

EAST WALL

SOUTH WALL

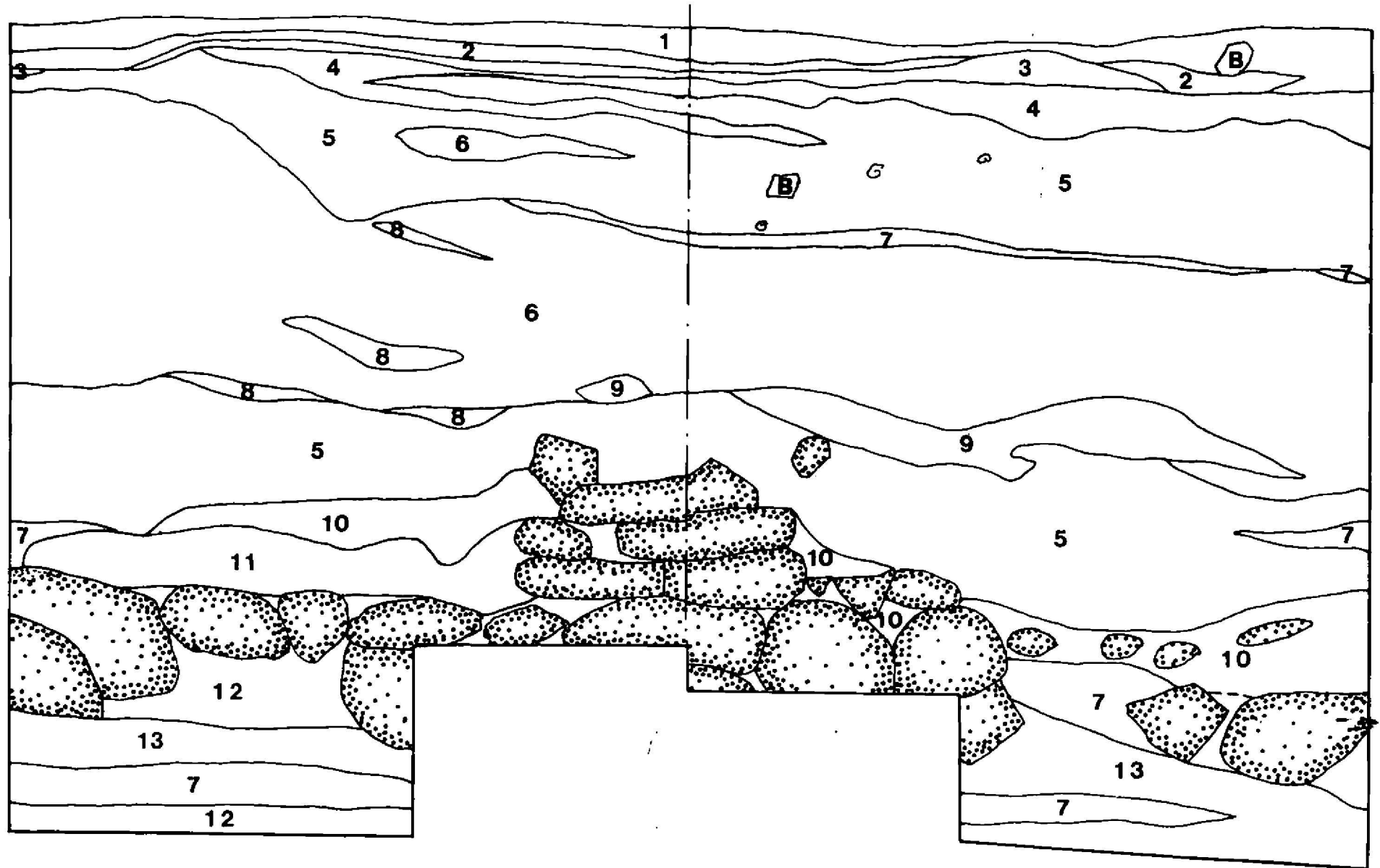


FIG 80-81

TEST CUT A



Figures 80-81. Test Cut A

1. sand with cinder and construction rubble
2. black-brown sand (burned level)
3. red sand with some yellow silt and charcoal
4. hard-packed yellow silt with mortar
5. red sand
6. red sand mottled with yellow silt and shell
7. brown sand mottled with clay
8. red sand
9. orange sand
10. greenish-yellow silty clay mottled with red sand
11. greenish-yellow silty clay
12. gray sand
13. gray sand with water-worn pebbles

(stratum V) appeared over approximately 40% of the square. In an additional 40% of the square the red sand continued downward to a depth of about five and a half inches. In the remaining 20% of the test cut, an irregularly shaped intrusive area (stratum IV) was recognized immediately under the topmost red/brown sand. This disturbance was apparently the result of the activity of a burrowing animal. The soil was excavated and screened separately. At a depth of three and a half to five and a half inches below the surface, a layer of yellow, hard packed silt containing mortar was encountered over most of the square, except for the area where it was cut through by the intrusive burrow. In most of the square, a very thin layer of red sand was interposed between the black sand and the yellow silt.

In summary, the stratigraphic sequence in part of the square was red sand/yellow silt, in other parts, red sand/black sand/yellow silt and in others red sand/black sand/red sand/yellow silt. To complicate matters, in still other parts of the test cut all but the uppermost red sand layer was disturbed by the burrow. Examination of profile drawings and photographs as well as the excavator's notes suggests that the black stratum represents the results of an episode of in situ burning rather than the deposition of burnt organic material. The black sand does not have a larger quantity of organic material than the over- and underlying red sand strata. Examination of photographs of the north wall

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suggest that the burning resulted in the staining of the yellow silt stratum in at least one location. Supporting the suggestion that the burning occurred in situ.

Analysis of ceramics indicates that the red sand and black sand strata (strata V, VI and VII) above the yellow silt layer were deposited during the 18th century. These strata contained 18 dated sherds, yielding a mean ceramic date of 1726.4. Three of these sherds were white salt glazed stoneware and three creamware, with the remaining sherds being delftware and buff slipware. The ceramics suggest deposition during the third quarter of the 18th century. If deposition was accretional, it could have begun after the filling of the land and continued until after the beginning of the manufacture of creamware in the 1760s. A pipe bowl from the burned layer had a "TW" maker's mark. This could date from approximately 1675-1717+ (Thomas Watts) or 1739-c1754+ (Thomas Wadham). The latter date is more consistent with the ceramic evidence.

The stratum of red/brown sand (stratum II) underlying the concrete floor yielded 15 dated sherds with a mean ceramic date of 1755.5. The inclusion of four pearlware sherds, in addition to the later mean ceramic date, suggests deposition of this material after the burning of the underlying material had occurred, and after the introduction of pearlware in the 1780s.

The evidence suggests that probably during the third

quarter of the 18th century a layer of red sand was deposited at the location of TC A. Some of this soil became stained by burning. Subsequent to this, and at some time before the construction of the concrete basement floor, additional red-brown sand was deposited over the burned material. It is tempting to interpret the layer of hard packed yellow silt with mortar (stratum VIII) as a floor of an early building on this lot. The 10 ceramic sherds recovered from this stratum include no clear 18th century types. However, the profiles indicate that a "tongue" of this silt layer extended downward in the southeast corner of the square to a depth of four inches below the main silt layer,. Red sand representing a portion of the landfill deposition, lay between the silt layer and the lower tongue. This stratigraphy suggests that the yellow silt may not represent a purposely laid floor. It is possible that mortar was mixed with the underlying fill stratum during an early episode of construction on this lot.

The material excavated below the yellow silt layer beginning at an average depth of six inches represents an early landfill deposit on the site. This fill consists predominately of a reddish sandy soil with lenses of gray and orange sand (stratum IX) to depths of between 40 and 50 inches below the surface. The red sand fill was fairly uniform in terms of artifact density. However, a depth of approximately 18-20 inches (except in the northeast corner of the test cut where it began at a depth of six to eight inches) the sand

contained a high density of oyster shell (approximately 2007 grams/cu.ft.). The excavators also noted that the soil containing the high shell density was mottled with yellow silt. This soil continued to a depth of 32-38 inches. Below this, red sand similar to that encountered above the shell concentration continued to a depth of 40-42 inches except in the south wall of the test cut where it reached a maximum depth of 52 inches.

At a depth of 42 inches, a pile of rocks was encountered in the northeast corner of the square. The soil adjacent to these rocks was a greenish yellow silt, most of which was mottled with red sand. Deposits of gray clayey soil were also noted between some of the rocks. Rocks were present in the southeast corner of the test cut to a depth of 54 inches. However the mottled silty soil which surrounded the rocks was also present in the south and west portions of the square beginning at 50-54 inches and extending as deep as 64 inches at the west wall.

In the west portion of the square a lens of brown sand mottled with clayey soil was present between the red sand fill and the underlying mottled silty soil. This brown sand was also present in the north portion of the square. Most of this soil was excavated in stratum IXi. The artifacts in this material suggest that the brown sand is a continuation of the fill deposits. The only substantial difference from the rest of stratum IX was the large number of window glass fragments

(640) recovered from stratum IXi. It is interesting to note that Evert Duyckinck, the water lot grantee for Lot 15, is listed in the documentary records as a glass maker.

At a depth of 52 inches, rocks were encountered in the south and east portions of the square. The soil matrix surrounding these rocks consisted of gray sand as contrasted with the silty soil present between the pile of rocks in the northeast corner. While the former did not extend to the northwest corner rock cluster of the square, the gray sand stratum did. The rock and sand stratum sloped downward slightly from east to west. Some of the rocks were removed and the surrounding soil (strata Xa and XIa) screened. Few artifacts were recovered. The patterning of the rocks and the associated stratigraphy did not suggest that they were placed as part of a structure. Subsequent further exploration of this area using the backhoe to expose a wider area also suggested a lack of patterning and that TC A had encountered the western end of a deposit containing many rocks.

Below a depth of 60 inches, only the northwest corner of TC A was excavated. In this portion of the test cut few rocks were present although the yellow silt and gray sand in which rocks were imbedded elsewhere in the test cut continued downward. Excavation of this area continued to a depth of 70/74 inches (strata XIb and XII). Below the gray sand, at a depth of 60/68 inches, a stratum of coarser gray/brown sand containing water-worn pebbles was encountered, with a thin

lens of gray silty sand between this stratum and the overlying gray sand in the north and west part of the excavated area. Another thin lens of green silt was present several inches below the top of the gray/brown pebbly sand.

The soil between 60 and 70 inches was excavated as stratum XIc and XId. This soil contained a lower density of artifacts than the overlying strata. The presence of water worn pebbles in the coarse gray/brown sand indicates that this material was either completely submerged or subject to tidal action prior to the land-filling. In addition, many of the brick fragments and some bone fragments in this deposit were water worn, indicating that they were deposited prior to filling.

Pipe stem analysis also suggests that the artifacts recovered from the gray/brown coarse sand were deposited prior to filling. Of the stems recovered from the landfill deposits (strata IX, X, XIa, XIb and XII), most had #7 or #6 bores, with the former diameter being the most frequent. The mean pipe stem date calculated for the 111 measurable bores recovered from these strata was 1668.2 years. Eleven of the 19 measurable pipe bores (57.9%) recovered from strata XIc and d had #8 bores, which contrasts with the landfill strata having 21.6% of its pipes of this size bore. The mean pipe stem date for strata XIc and d is 1643.9 years. While conclusions based on such a small sample must be made with caution, the data are consistent with the assumption that the

artifacts recovered from strata XIc and d were deposited on the river bottom prior to the land-filling.

It is also interesting to note that the ratio of yellow to red brick in strata XIc and d is approximately 3.4 to 1. In all other excavated levels, substantially more red than yellow brick was recovered (except for stratum XIb which had slightly more yellow. Yellow brick is thought to have been in use during the period of Dutch occupation.

The coarse gray/brown sand excavated below 70 inches (stratum XIII) was nearly sterile, and excavation was not continued further. However, the underlying soil was sampled to a depth of 93 inches using a post-hole digger and the coarse gray/brown sand continued to this depth, at which the water table was encountered.

The data for TC A suggest that artifacts were deposited on the river bottom, which was made up of coarse gray/brown sand at this location. This soil may have been covered by water only at certain times during the tidal cycle. It is likely that the finer gray sand which overlay the coarser sand was also a pre-filling river bottom or tidal deposit. If so, the larger rocks imbedded in this sand would also have been present prior to the filling. Unfortunately, few artifacts were recovered from the gray sand among the rocks in the eastern part of the square. The thin lens of gray sand in the western part of the square was excavated with the overlying yellow green silty soil or the underlying coarse gray/brown

sand, so that it was not possible to determine its artifact content separately.

It is possible that the greenish/yellow silty soil which overlay the gray sand also represents pre-fill river bottom deposits. However, the artifacts recovered from this deposit did not share the water worn appearance or other characteristics of those recovered from the coarse gray/brown sand. This soil probably represents the first deposit of land fill in Lot 15. The rocks in the northeast corner of the test cut which are surrounded by this silty soil could have been present prior to the filling and the silt deposited around the rocks, or as is more likely, these rocks could have been deposited with the silty soil during the filling process.

TEST CUT S

Backhoe Trench #1, placed in the southern half of Lot 15 during the testing phase of the project, uncovered what turned out to be the western foundation wall of the extension to the late 17th century structure which was constructed on the lot.

Examination of the backhoe trench profiles suggested that 18th or early 19th century deposits of archaeological interest might be present south of the rear wall of the extension. Therefore, TC S was excavated adjacent to the east wall of the backhoe trench. The test cut extended three feet east of the east wall of the backhoe trench and six feet south of the rear wall of the extension. It should be noted that the site map shows ST 15 "superimposed" on the location of TC S. Shovel

Test 15 was begun at this location, but after the surface rubble had been cleared away, we decided to place a test cut (TC S) rather than a shovel test at this location.

Excavation of TC S (Figures 82, 83) began after the concrete floor and underlying gravel and cinder bedding had been removed. Additional deposits of rubble in a brownish silty sand soil matrix were encountered beneath the floor and bedding.

On the south end of the excavated area, the remains of a wall, consisting of one course of stones, and wooden planking running in a north-south direction were encountered at a depth of approximately 20 inches below the surface of the test cut. Since the test cut datum was at the top of the overlying rubble, the planking was only about 10 inches below the top of the stone wall in the south portion of the square. It continued to the south beneath this wall. In the north portion of the square the north-south planking was deeper, approximately 27 inches below the surface datum.

The north-south planks were approximately 10-12 inches wide and one inch thick. There was a space of between three quarters and two and a half inches between each of the three individual planks which were uncovered within the boundaries of TC S. There was a gap of several inches between the planking in the north and south portion of the test cut.

Two additional planks, oriented in an east-west direction immediately overlay the north-south planks in the northern

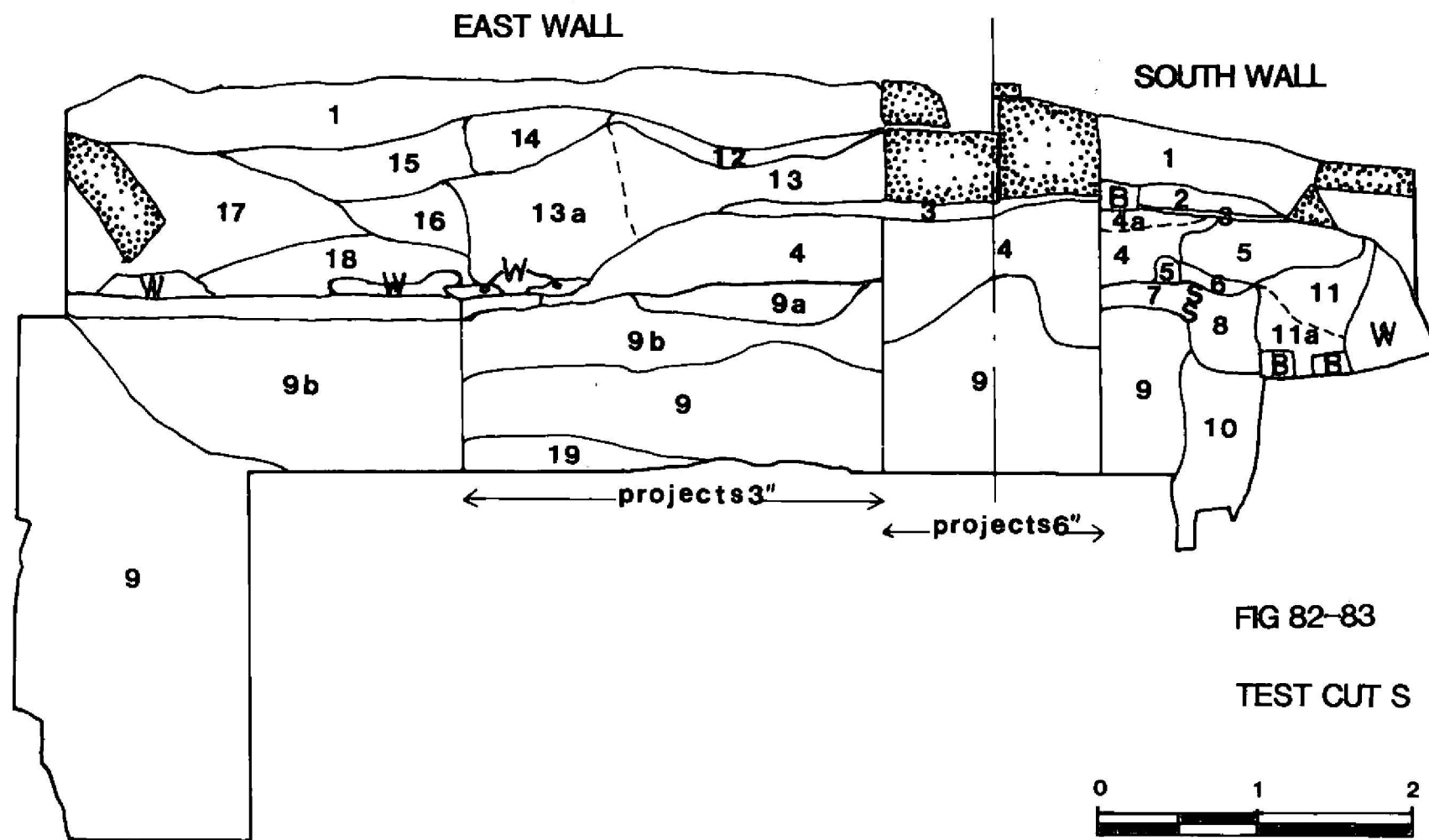


FIG 82-83

TEST CUT S

Figures 82-83. Test Cut S

1. rubble
2. bright yellow-green sandy silt
3. wood planking
4. fine green silt
- 4a. fine green silt mottled with brown silt
5. mottled fine green silt and brown sand
6. red clay
7. fine grayish-brown silt
8. brown silt mottled with green silt and red clay
9. red sand
10. red clay
11. mortar rubble
- 11a. brick rubble
12. yellowish-brown sandy silt with mortar
13. brown sandy silt with mortar
- 13a. gray-brown clayey sandy silt with mortar and brick
14. brown silt
15. reddish-brown sandy silt with rubble
16. light red decayed mortar and brick
17. yellow-brown silt with mortar
18. dark brown silty sand with rubble
19. ashy red sand with shell and charcoal

portion of TC S. The first was located about six inches and the second approximately 16 inches south of the north wall of the test cut. The second plank was supported by a row of small stones to either side. This plank was a foot wide and had a concave "trough-like" shape. Thus, the planking and overlying trough are similar to the features uncovered in TC U (in Lot 14) and W/D (in Lot 13) and ST 19 (Lot 14). The difference in elevation of the trough-like planking in the three test cuts was only slightly more than an inch. The ST 19 measurement increases the range of variation to approximately five inches. However, there are reasons to consider this last measurement less reliable than the others. These trough-like features are aligned almost perfectly from east to west. Measurements indicate that the ST 19 and TC U trough planking was 52 feet and the TC W and TC S troughs were 53 and 53.5 feet, respectively, south of the Pearl Street baseline.

With the exception of the ST 19 elevation, the differences in elevation and distance would appear to be within the limits of error of the mapping procedures used. Thus this trough was probably a single feature which extended across Lots 13, 14 and 15, perhaps providing drainage.

The archaeological deposits associated with this feature, discussed below, and the fact that the Lot 14/15 boundary wall apparently cut through it (see discussion of Lot 14) indicates that it predated the final construction phase on Lot 15. The

archaeological deposits also indicate that the feature was not associated with the 17th century structure.

The profile of BT 1 indicated that a cut sandstone block wall had cut through the western wall of the early house extension approximately 43 feet south of the Pearl Street baseline. A builder's trench for this wall could also be seen in the backhoe trench profiles. This wall clearly post-dated the construction of the early house extension. Unfortunately, because of the limitations of time available for the project, we were unable to sample the builder's trench and more closely date the construction of this wall. However, it seems to be aligned with another cut stone wall encountered in Lot 12 which dates to the late 18th century (see discussion of TC F). If we assume that the two walls were built according to a common building alignment it would indicate that the wall in Lot 15 dates to the same general period. It is likely that two wooden trough-like feature uncovered in TC S was associated with this construction phase. If the sandstone wall represented the rear wall of a structure fronting on Pearl Street, the feature would have been located in the back yard of the house, rather than its basement.

A deposit of light green silty soil underlay the wooden floor in the southern portion of TC S. This deposit ended at approximately the same depth as the wooden floor in the northern portion of the test cut. A thin deposit of the light green silt also was excavated beneath the north planking. The

stratigraphy suggests that the higher, southern wooden floor was built before the wooden floor uncovered in the northern portion of the test cut. A trench was then dug and the northern floor and its overlying trough were installed. There was some stratigraphic evidence that still later, another narrow trench was dug just to the south of the trough planking. This may be represented by a deposit of darker brown silt excavated at this location (strata VIIa and b).

Beneath the planking and associated deposits, a deposit of reddish brown sand was encountered in the northeast corner of the test cut which probably represents the late 17th century landfill. However, the deposits in the remainder of the test cut were associated with a wooden box which was nearly identical with the one excavated in TC W and D although the wooden sides and supporting beams of this feature were more decayed than those of the TC D/W feature.

The remaining sides of the feature began at approximately 35/40 inches below the test cut datum, the supporting side wales (see TC W for details of construction) at 12 inches, and the wooden floor of the box at 48½/50 inches. It should be noted that the elevation of this floor is almost exactly the same as the floor of the box in TC D/W (the measured difference being approximately one inch). As in TC D/W, a deposit of red clay was packed around the box. Some of this clay on the east and north sides of the feature was excavated and screened. Unfortunately, we did not have the time to

excavate a section across the feature which would have enabled us to determine the sequence of events associated with its construction. However, the excavators noted that the sand on the east side of the box immediately bordering the clay, appeared to differ from the sand excavated in the northeast corner of TC S, being slightly more orange. This band of sand may represent a trench dug to install the feature similar to that associated with the feature in TC D.

The east side of the feature was located some 10 inches west of the east wall of TC S and it continued to the west of BT 1. The material within the feature was excavated so that its full north-south extent was exposed. The feature extended 52 inches in this direction, with its north side approximately one and a half feet south of the rear wall of the 17th century house extension. Only the easternmost 42 inches of the feature were excavated. However, backhoe clearing operations in Lot 14, undertaken on the last day of excavation on this portion of the site and discussed in the Lot 14 description, encountered the western edge of the feature. Its full east-west extent was 72 inches. This box is thus slightly larger than that excavated in TC D/W.

As a result of the excavation of the eastern portion of the box in TC S, a stratigraphic profile was created 42 inches west of the east side of the feature. A photograph of this profile shows that a later, brick feature had been installed above the remaining portion of the wooden box. This brick

feature had been previously noted in the west profile of BT 1. It appears to have been oval in shape. Only two or three courses of brick remained of the wall of this feature. Thus, it is doubtful if any deposits related to the use of the feature remained within its boundaries. The feature appeared to have a brick floor of two or three courses which was above the level at which the wooden sides of the box began.

The photographs show that beneath this brick feature, a rubble filled pit had been excavated into the original deposits which filled the wooden box. The base of the pit appears to abut the floor of the box or to end slightly above it. The nature and extent of this pit remains undetermined.

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included?

Two events may have contaminated the original deposits within the wooden box. First, a portion of the box lay within the extent of BT 1. The excavation of the trench and the subsequent passage of personnel and equipment disturbed a portion of the deposits in the northern part of the box area. This disturbed soil was looser than the other deposits and was excavated separately. This disturbance, however, only affected the uppermost five inches or so of the northernmost portion of the deposits within the box.

The second disturbance affected the remainder of the excavated portion of the feature except for the southeastern portion. The disturbance was probably associated with the pit below the brick feature noted above. This disturbance, consisting of deposits of mottled gray/yellow and red sandy

silt, extended to a depth of 40 inches. The soil beneath these deposits was excavated as a single unit because of time constraints.

The southeastern portion of the area within the feature excavated in TC S contained a deposit of gray/brown fine silty sand with charcoal which contained a high density of bone. This deposit was several inches in thickness except in the extreme southeast corner of the box, where it extended approximately 11 inches downward to 47½ inches, almost to the floor of the box.

The excavators of TC S noted that a thin layer of blackish/gray clayey soil overlay the wooden floor of the box. This deposit may have been associated with the use of the feature, or may have been a result of the decay of the wood. No similar deposit was noted at the base of the feature deposits in TC D/W.

A portion of the floorboards in the northeast corner of the feature was sawn and the boards saved for later analysis. This also enabled us to ascertain the details of construction of the floor. A one to two inch deposit of silty gray sand with charcoal and shell immediately underlay the feature. Beneath this was the red sand which apparently represented the main portion of the fill deposits on this lot (see TC A).

The six floorboards of the feature ran east-west and ranged from 8-12 inches in width. Two north-south oriented beams were present beneath the excavated portion of the

feature and the floorboards were nailed to these beams. It is likely that additional north-south beams were present in the unexcavated portion of the feature. The upright boards which formed the sides of the box measured 8-16 inches in width. The wales adjoining the sides of the box had pulled away from these beams so that a space was present between the boards and the wales. However, the rusted remains of nails were noted in the boards behind the wales. These were apparently driven through the boards into the wales to hold the latter against the former. The nails had rusted through, allowing the wales to pull away from the boards. As in TC D/W, the side boards extended downwards approximately three and a half to four inches below the floor boards.

It should be noted that drawings and photographs show a board approximately two feet west of the east side of the box, about midway between the north and south sides standing upright on the floor of the feature. However, this wood was not attached to the feature, and was apparently part of the deposits which filled the box.

Dating of Deposits

The artifacts excavated from the green silt immediately beneath the wooden floor in the northern portion of the square suggest that the floor and the associated trough-like feature were probably installed as late as the last quarter of the 18th century. This would support the hypothesized association of this feature with the structure represented by the cut

sandstone wall as discussed above. This deposit yielded 23 dated sherds with a mean ceramic date of 1716.9. This date is misleading as the ceramics include three white salt glazed sherds, three creamware sherds, and one pearlware sherd, indicating deposition later in the 18th century. Twelve delftware and four 17th-century earthenware sherds were also present suggesting that the later ceramics were mixed with redeposited landfill.

The soil excavated beneath the wooden floor in the southern portion of the square contained only 11 dated sherds, seven of which were 17th-century red and buff earthenwares, and five delftware. Although a small sample, these ceramics do not contradict the stratigraphic evidence that the southern part of the floor pre-dates that in the northern portion of the square. A single perfume-bottle glass fragment recovered from this deposit, dated to the post-1800 period, raises the possibility, however, that the construction of the floor and trough may date to the early 19th century.

The 58 ceramic sherds recovered from above the wooden floor yielded a mean ceramic date of 1744.6. Fifteen of these sherds were creamware and four pearlware. These data suggest deposition in the same general time period as the construction of the floor although perhaps a bit later. While the deposits above the floor did contain one 19th century type ceramic sherd (whiteware), this sherd came from near the top of the deposits, and may have originated in the overlying rubble.

One glass patent medicine bottle fragment dated to after 1857 also originated in the same excavated context near the top of the deposits as the whiteware sherd. Three additional patent medicine bottle fragments were recovered from the deposits above the wooden floor, but these date to a wider range of time (from 1750-1870).

The ceramics excavated from the soil in the area overlying the wooden trough-like feature yielded a later mean ceramic date (1770.8 years) than the material overlying the wooden floor, based on 15 dated sherds. Nine of these sherds were creamware and one pearlware. Only one of these sherds (3.8%) was delftware as opposed to 18 sherds (24.3%) from the rest of the above-floor deposits. These data, although not conclusive, suggest that the trough was filled-in after the deposition of the other above-floor material. While the deposits above the floor appear to contain some re-deposited landfill material, the material in the trough may have accumulated after its period of use. Although this latter deposit contained one pearlware sherd the major difference between this and the other above-floor deposits is the fact that 60% percent of the diagnostic sherds in this deposit consisted of creamware, 18th-century refined earthenwares, and white salt glazed stoneware. Only 30% of the dated sherds in the other above-floor deposits contained these ceramic types, with a much greater proportion of delftware sherds. This suggests the possibility that the "intrusive" trench may have

been filled gradually during the period of use of creamware and pearlware, while the other deposits may represent redeposited fill. This would be in keeping with the stratigraphic interpretation presented elsewhere.

The red sand in the northeast portion of the test cut yielded 33 dated sherds which are compatible with the definition of this deposit as part of the 17th century landfill. The mean ceramic date was calculated at 1683.2, and the Binford date obtained from 25 measurable bores was 1677.8 years. The maker's marks from this deposit (EB, WE) are also consistent with a 17th century deposition. It should be noted that this deposit yielded a high density of architectural artifacts, most of which (230 of 320) were pieces of window glass. The association of window glass with the Duyckinck family, the water lot grantees and 17th and 18th century owners of Lot 15, is noted in the discussion of TC A and Q (Lot 19), where some of the landfill deposits in these test cuts also yielded high densities of window glass. This suggests the possibility that one source of landfill for this water lot was other property owned by the Duyckinck family.

The deposits identified as the clay and fill within the intrusive trench built for the installation of the wooden box yielded mean ceramic dates slightly later than the landfill, 1691.7 (27 dated sherds) and 1697.3 (seven sherds) for the clay and trench deposits respectively. The latter date was skewed by the presence of a single creamware sherd. This

sherd came from the uppermost excavated context identified with the trench and may be intrusive. All of the other sherds from these deposits are either delftware or 17th century-red and buff earthenwares. The pipe stems excavated yielded Binford dates of 1702.3 and 1687.9 respectively, although only nine measurable bores were excavated, eight from the trench.

The deposit of gray/brown fine silty sand in the southeastern portion of the excavated area within the wooden box yielded 147 dated sherds, and a mean ceramic date of 1745.1. Ninety six of these sherds (65.3%) are 18th-century refined stonewares, including 46 Nottingham-type stoneware (1700-1805), 42 plain (1720-1805) and seven molded (1740-1805) white salt-glazed stoneware, and one Elers-type stoneware (1690-1775). While 48 of the sherds were delftware, 27 of these were the later blue and polychrome decorated delftware, with initial dates of manufacture of 1690 and 1675 respectively. Only one sherd of creamware was present in this deposit and this was an early type of creamware, with manufacturing dates of 1740-1770/80. This deposit had one of the highest percentages of oriental export porcelain (19.3% of the total) among those excavated on the 7 Hanover Square site. One of these sherds had an exterior brown/glaze ((1720-1780). The above data, and the absence of other creamware or pearlware sherds, suggest a date of deposition between approximately 1740 and 1770. The Binford pipe stem date for this deposit, based on 20 measurable bores, is 1752, only

slightly later than the mean ceramic date. Sixteen fragments from a glass pocket flask were dated to the 1750-1790 period, which is consistent with the ceramic and pipe dates.

During the period of deposition indicated by the above information, Lot 15 was probably occupied by Gerardus Duyckinck II, a great grandson of Evert Duyckinck, the water lot grantee. The difference between the ceramic assemblage in this deposit and that associated with the clay deposited when the feature was installed suggest that the deposit within the box accumulated after it was no longer used for its original purpose. It is possible that the feature served as a repository of domestic trash after its period of use. The undisturbed deposit contained 486 pieces of bone (112.2 pieces per cubic foot). However the deposit also included 103 architectural artifacts, mostly window glass and nails, yielding an NA/A ratio of 2.5. The deposit also contained high brick and mortar densities. This indicates that the feature may have been filled with a mixture of domestic and architectural debris during structural demolition or repair on Lot 15.

SHOVEL TEST 4

Shovel Test 4 was placed so as to abut the south side of the common wall (wall #1) in Lot 15. This was the rear wall of the earliest structure built on this lot. The shovel test did not indicate the presence of a trench associated with this wall, indicating that it was built first and the landfill

deposited around it. The shovel test indicated that the soil strata sloped downward away from the wall, suggesting that the soil may have been tossed toward the wall during the filling process or dumped from the top of it. These results are consistent with tests in the other lots.

The west wall of the early house extension comprised only one course of stones. This was at the same approximate elevation as the top of the southern (rear) wall of the extension. However, the latter wall, exposed in TC S, consisted of six courses of stone, suggesting that the western wall was constructed after the rear wall. the latter must have been constructed during the land filling process, to hold the fill in place, with the former constructed after landfill had been deposited.

BACKHOE TRENCH #10

This trench was excavated north of wall #1 and abutted the Lot 15/19 boundary wall. It uncovered the remains of an early stone wall which was the east wall of an early structure built on the lot. This wall underlay the later, 19th century, lot boundary wall representing the wall of the last building to stand on Lot 15.

CHAPTER EIGHT

Excavation - Lot 19

Because documentary research had indicated that the basement of the modern building which stood on Lot 19 was deeper than most of the others, this lot was originally excluded from the area being tested. However, during the course of the project the Lot 19 basement floor was removed and the remains of stone walls were observed. One of these ran east-west, on a line with the common east-west wall (wall #1) which had been uncovered in Lots 12-15. There was a gap in this wall extending from the Lot 15/19 boundary wall to a point 14 feet east of the boundary wall, at which point a second stone wall extended northward. It was apparent that the common wall originally extended through this gap. A concrete wall, possibly a portion of a "vault" in the basement of the most recent building to stand on the lot, was uncovered in the area of this gap. The installation of the vault apparently resulted in the removal of the common wall at this location. The rear wall of the early building extension which was uncovered in Lot 15 extended eastward to the Lot 19 side of the Lot 15/19 boundary wall. This wall was cut off by a later disturbance approximately nine feet east of the boundary wall. The east-west stone wall (wall #1) in Lot 19 extended eastward 12 feet from its point of intersection with the north-south wall. At this point it was cut off by later

disturbances. The north-south stone wall extended 15 feet northward from its intersection with the east-west wall. This seemed to represent the full extent of this wall as a small portion (approximately three feet) of what was apparently the front wall of the house intersected by the north-south wall (the west wall of the house) at this point.

This Lot 19 structure apparently represented the house of Martin and Albertus Clock, who obtained the water lot grant for this property in 1686. Lot 15 and the westernmost portion of Lot 19 (between the Lot 15/19 boundary wall and the western wall of the Clock house) were within the lot which was granted to Evert Duyckinck in 1689. The rear wall of the extension to Duyckinck's house was present on both sides of the Lot 15/19 boundary wall. However, the fact that an early wall was present beneath the boundary wall in the front part of the lot (see Lot 15) suggests that two structures were built on this lot with what was probably a common exterior wall separating them.

SHOVEL TESTS 9 AND 10

During the testing phase of the project two shovel tests were placed in Lot 19. Shovel Test 9 was located within the front portion of the Clock house, approximately one and a half feet north of the rear wall of the house. This shovel test revealed an organic appearing stratum which was believed to represent a possible midden deposit.

Shovel Test 10 was placed west of the western wall of the

Clock house, in the north wall of the backhoe trench which had been dug in the area where the common wall (wall #1) was destroyed by the intrusive event mentioned above. This shovel test encountered a layer of wood which we considered to be possibly similar to the wood "flooring" encountered in TC S, U, W and X. In order to further explore the deposits uncovered by ST 9 and 10 and to sample the Lot 19 landfill, we placed two test cuts in Lot 19 on either side of the north-south wall which represents the western wall of the Clock house.

TEST CUT R

Test Cut R (Figure 84) was adjacent to the east side of the western wall of the Clock house and five and a half to nine and a half feet north of the rear wall of the house. Two strata were excavated between the rubble at the surface of the test cut and the gray ashy silt deposit at 6/8 inches below the surface of the test cut which represented the suspected "midden" deposit. The first of these strata was a deposit of gray brown sandy silt. Two pearlware sherds were among the 17 sherds from this deposit, indicating deposition in the late 18th or early 19th century. The underlying stratum was a hard packed red and gray clayey silt. This soil yielded six dated ceramic sherds, five delftware and one Jackfield-type red earthenware. The latter has a manufacturing date range of 1740-1780. However, this stratum also contained a fragment of mold-made bottle glass dated to the post-1800 period. The

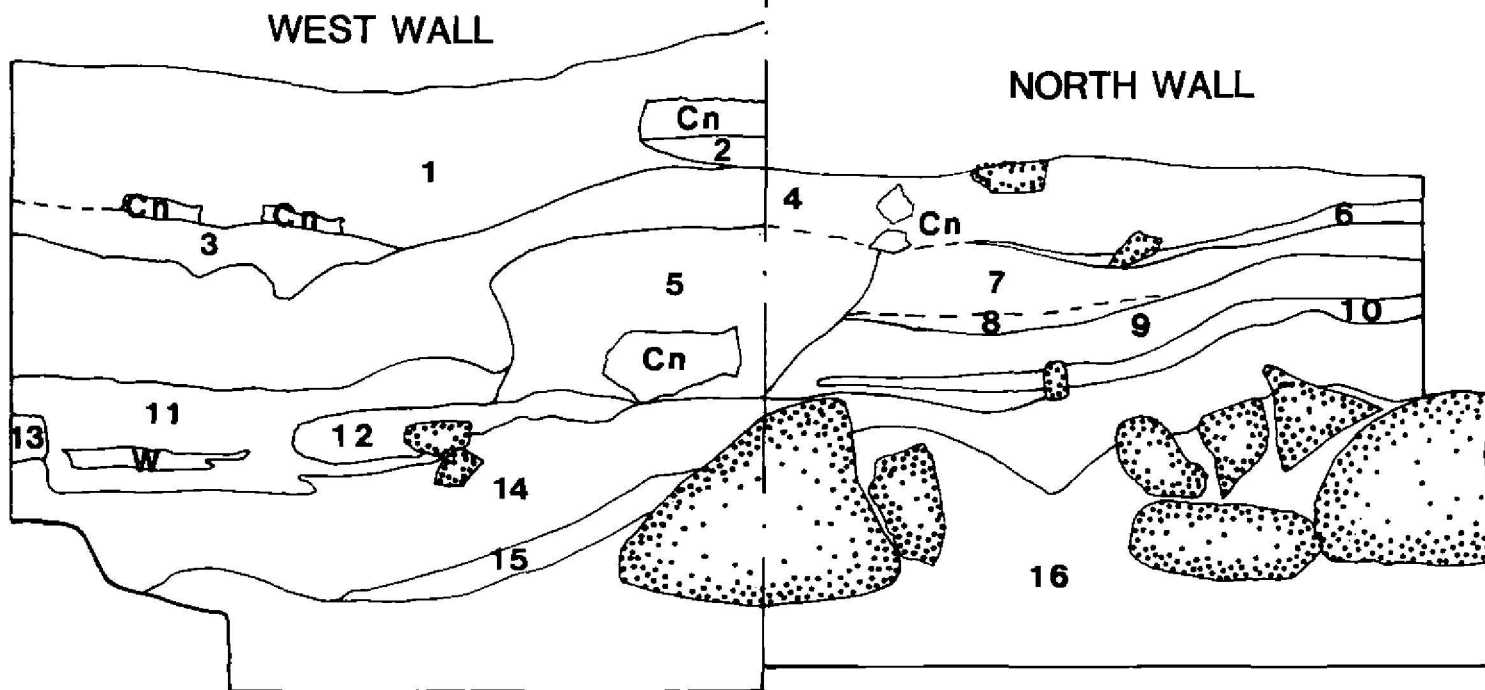


FIG 85-86

TEST CUT Q

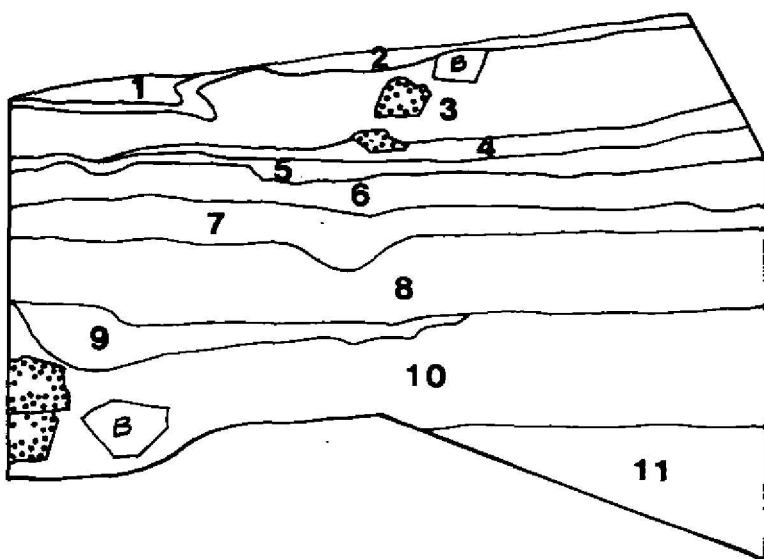


FIG 84

TEST CUT R
SOUTH WALL



Figure 84. Test Cut R

1. red sand and pebbles
2. brown sand
3. red-brown sand with a band of ash
4. brown silt mottled with orange sand and charcoal
5. red clay with pockets of red sand
6. gray sandy silt with shell and ash
7. rust-red sand
8. gray sandy silt with shell and ash and bands of rust-red sand
9. yellow silt mottled with gray
10. gray-brown sand with shell and ash and rust-red sand
11. brown sand with rocks, shell, and brick
12. rust-red sandy silt with rocks, shell, and gray silt

Figures 85-86. Test Cut Q

1. rubble overburden
2. gravel
3. gravel
4. orange-brown sand with pebbly gravel
5. brown silty sand with mortar, shell, and red silt
6. dark brown silty sand with brick, mortar, and shell
7. light brown silty sand with mortar, shell, and brick
8. pinkish red sand
9. gray sandy silt with brick, shell, charcoal, and oxidized iron
10. mottled gray, orange, and tan sand
11. black-brown decayed wood
12. gray-brown silt mottled with dark brown
13. banded red, tan, and gray-green sands
14. brown silty sand with shell and charcoal
15. red-brown sandy silt mottled with gray
16. gray-brown silty sand with iron oxide

nature of these deposits remains uncertain. Since the basement of the most recent building on Lot 19 was deeper than those on the other lots, this most recent building episode removed any earlier basement floors.

The gray ashy silt which represents the possible midden underlay the above mentioned deposit. This silt contained high densities of bone, shell and artifacts, and these densities were higher than those in the underlying landfill deposits. The NA/A ratio of this deposit was only .8, not indicative of a midden deposit. One hundred and two of the 109 architectural artifacts were window glass fragments, and large numbers of the window glass fragments were also recovered from the underlying landfill. Eleven of the window glass fragments in the gray ashy silt were "crown" glass, also a characteristic of the landfill deposits.

The thirty-one dated ceramic sherds recovered from the gray ashy silt consisted of delftware, 17th-century type earthenwares and one sherd of Rhenish gray-bodied stoneware. The mean ceramic date of these sherds was calculated at 1691.7. Twenty-six measurable pipe stems yielded a Binford date of 1675.8. This suggests that if this deposit does represent a primary midden, rather than being deposited with the landfill, it would have been associated with the earliest occupation of the lot by Martin and Albertus Clock.

The deposits excavated beneath the gray ashy silt stratum apparently represented the late 17th century landfill.

Immediately below the gray ashy silt was a deposit of gray and red sands and silts, followed by rust colored sand mottled with gray and tan silt, gray sandy silt with charcoal and, finally, brown/tan sand. The ceramics and smoking pipe fragments recovered from these deposits were consistent with an identification of these deposits as 17th century landfill. The dated ceramics consisted of delftware, 17th century type earthenwares and slipwares. Two 17th century pipe maker's marks (EB and HG) were present on smoking pipe fragments. The bottle glass fragments recovered from the landfill deposits include four dated to 1630-1685 and 26 dated to 1680-1730/40.

In common with TC Q (see below), substantial densities of window glass were noted in the TC R landfill strata, although this unit lacked the concentrated deposit (over 2000 pieces) noted in the former test cut. The window glass was also similar to that recovered from TC Q in that a significant percentage of fragments were edge pieces from sheets of crown glass which were usually trimmed off by the glazier prior to installation. In the discussion of TC Q we noted that the landfill at that location probably originated in a lot owned by the water lot grantee, Edward Duyckinck, opposite the water lot on the north side of Pearl Street. It is possible that the Clocks may have also used some of the soil from the Duyckinck lot as landfill material (the Clocks also had a house adjacent to the Duyckinck house on the north side of Pearl Street). The presence of window glass in the stratum

of gray ashy silt at the top of the landfill deposits suggests that this silt stratum was also a landfill deposit, rather than a primary midden deposited during the occupation of the Clock house on Lot 19.

It should be noted that one of the landfill strata, consisting of gray sandy silt, contained approximately 11,000 grams of coral. The presence of coral in various landfill strata on the site has been noted in the discussion of some of the other lots.

The stone wall, representing the western wall of the Clock house, ended at the top of the brown/tan sand deposit. This soil contained a very high density of 17th century type earthenwares, with 725 sherds being recovered. As discussed elsewhere, this type of brown sandy soil was encountered on other lots in the portion of the site closest to Pearl Street and probably represents soil which was present before landfilling.

It should be noted that the soil beneath the grey ashy deposit in the westernmost portion of TC R, adjacent to the stone wall, was excavated separately down to the top of the brown/tan sand. This soil appeared to the excavators to differ from that in the remainder of the test cut suggesting the possibility that it represented a wall trench for the Clock wall. However, the described soil types in this area are similar to those in the remainder of the square, although occurring at different depths. Furthermore, there was no

indication of a wall trench in either the north or south profiles. It is likely that the observed soil differences represent the deposition of loads of fill or the sloping of strata away from the wall. One of the nine dated sherds from this area was identified as creamware, which is inconsistent with the existence of a wall trench next to the Clock wall. The date for the manufacture of creamware is much too late for the construction of the stone wall which appears to be contemporary with the late 17th century stone walls encountered in the other lots. The most likely explanation is that the creamware sherd was intrusive into this deposit through rodent or soil action or was accidentally incorporated into the excavated material during the field work.

TEST CUT Q

Test Cut Q was adjacent to the west side of the west wall of the Clock house and nine and a half to $13\frac{1}{2}$ feet north of the line of the common wall (#1) which was the rear wall of the early houses fronting on Pearl Street.

The first stratum (Figures 85, 86) excavated in this test cut was orange/brown sand with pebbles, representing the surface debris, including some of the gravel bedding which underlay the concrete basement floor of the most recent building to stand on Lot 19. The only datable artifact recovered from this deposit was a fragment of 19th century mold-made bottle glass.

Beneath the orange/brown sand, an intrusive trench or pit

was encountered in the western portion of the square, sloping downward from north to south and from east to west. This pit can be seen in the northern profile of TC Q beginning approximately nine inches east of the western wall of the test cut.

The soil in the remainder of the test cut consisted of various lenses and strata which probably represent the late 17th century landfill. The ceramics recovered from this strata were mainly the delftware, 17th century earthenwares and stonewares typical of the landfill deposits. The two pipe maker's marks (EB and WH) from the TC Q landfill date to the second and third quarters of the 17th century.

The topmost portion of the landfill deposits consisted of narrow bands and lenses of various soils. Of particular note was a stratum of brown silty sand with burned wood and charcoal excavated from the central part of the square and a deposit of brown and gray silty sand in the southern portion of the test cut. The latter deposit is of interest because of the very high density of window glass recovered, including 178 pieces identifiable as crown glass. Approximately 2300 pieces of window glass were recovered from about .859 cubic feet of soil, a density of 2681 pieces per cubic feet, again reminding us that Evert Duyckinck was a glazier. The lowest fill strata in TC A, in Lot 15, also contained a high density of window glass, although not as great as in this deposit. It is possible that the landfill was taken from another lot

owned by Duyckinck, on which the wastage from his occupational activities had accumulated.

Other landfill lenses in TC Q consisted of bands of red sand and gray sandy silt in the northern part of the square and a deposit of mottled yellow sandy silt adjacent to the stone wall.

The lowest excavated stratum, which began at a depth of 14/16 inches below the surface of the test cut, consisted of bands of varied color sands. The uppermost portion of this deposit included a substantial number of cobbles and larger rocks. The deposit of tan/brown sand in TC R began at approximately the same elevation. While the deposit in TC Q did not contain the high density of ceramics encountered in the former test cut, it is most likely that the TC Q deposit also represents soil which was present prior to the land filling. The artifact and faunal densities of this deposit are substantially lower than in the overlying deposits. In addition, this is the only deposit of those excavated in TC Q which yielded a greater amount of yellow brick (596 grams) than red brick, with a red/yellow brick ratio of .5. Those deposits which appeared to represent the pre-landfilling river bottom in other test cuts also contained a greater amount of yellow brick than red brick.

Test Cut Q was excavated to a depth of approximately 30 inches below the surface. However, the soil between 30 and 54 inches was sampled using a post-hole digger. Strata of

red/brown silt, gray silty sand, gray gravelly sand, and orange sand were detected.

The intrusive pit or trench in the western portion of the test cut contained a concentration of decayed wood. It is possible that ST 10, which was located south of TC Q and also contained a layer of wood, sampled a portion of this intrusive trench. Only one non-diagnostic sherd was recovered from the upper portion (above the decayed wood) of this trench in TC Q. Seven dated sherds were recovered from the reddish brown sand below the wood. In addition to five delftware and one 17th century earthenware sherd, this deposit yielded one creamware sherd suggesting that the intrusion occurred sometime after 1762, the initial date of manufacture for this ceramic type.

CHAPTER NINE

Documentary Research--Lots 28, 29, and 8

Lots 28, 29, and 8 (the latter is not included in the project area) are within the bounds of two water lots granted to the merchant Samuel Bayard, a French Huguenot immigrant and founder of a powerful early New York family (Archdeacon 1976:42). The first water lot, granted in 1690, gave Bayard the right to fill an area 36' wide by 95' long. This area eventually became the site of Lot 8 as well as the northern portions of Lots 28 and 29. The second grant in 1697 gave him the right to an additional 36' X 36'/38' lot. This area corresponds to the remaining area of Lots 28 and 29 (Liber A p181, p205).

The 1703 tax assessment records mention two houses belonging to and possibly occupied by Samuel Bayard. However, these structures probably fronted Pearl Street (Lot 8). Only the rear sections of these houses or associated back houses would fall within Lots 28 and 29. The 1706 tax assessment records clearly list two individuals (Rutger Watson and Widow Es___) on Water Street at the site of Lots 29 and 28. Structures, whether back houses or actual residences, on these lots may date as early as 1699, but the sequence of the assessments on the earlier tax rolls makes it difficult to match names with addresses.

This parcel containing lots 8, 28, and 29 belonged to the

Bayard family as late as 1751 (L34 p274) and throughout this period it housed four separate structures. Stephen Bayard, holder of the 1734 Water Lot Grant opposite this parcel on the south side of Water Street, also owned lots 9*, 27*, 10*, and 26* (Liber B p154). The parcel, including lots 8, 29, 28, belonged to Issac Low and by 1785 it had been confiscated (presumably for Low's loyalty to the British during the revolution) by the Commissioner of Forfeiture for the Southern District ("Appointed in pursuance of...an Act for the Forfeiture and sale of the Estates of persons who have adhered to the Enemies of this State..."). The lots were sold to Issac Moses, an auctioneer (see L46 p528; L143 p164) who also purchased Lot 9* in 1791 and Lot 10* (which had been confiscated for non-payment of debts) in 1792 (L46 p258; L47 p106).

The directories list a series of artisans in Lots 28 and 29 during the late 18th and early 19th centuries. Lot 29 housed a shoemaker in 1790 and again from 1813 to 1833. A coppersmith occupied the lot from 1807 to 1812. Hatters are listed in Lot 28 from 1793 to 1832. The tax assessment records list two structures on Lot 28 between 1806 and 1813. One structure fronting Water Street was occupied by alexander McFarlane, a hatter, and the other, a shed in the rear, housed a cooper, George Conun.

In 1816 Isaac Clason, a merchant, purchased the Lot 8, 29, 28 parcel and in 1822, his heirs subdivided it into three

separate lots which correspond to the present lot lines (L115 p230,p464). Lot 28 remained in the Clason family until 1846 (L485 p23). Lot 29 passed through a series of owners. Thomas Talmadge, a merchant, owned the lot between 1833 and 1863. The structures in both lots were destroyed in the 1835 fire and were rebuilt in 1836.

The 1860 tax assessment records describe two four-story structures on Lots 28 and 29. The building in Lot 28 measured 19'2" x 55', leaving a backyard area of approximately 5'8" across the breadth of the lot. The building in Lot 29 measured 23'4½" x 60', with a backyard area of approximately 5' extending across the breadth of the lot. Both lots have had a minimum of three building episodes prior to 1860. This would include the back houses or the rear sections of residences associated with the original Water Lot Grants. These late 17th/early 18th century structures were replaced in the 18th century with the buildings making the artisans listed in the city directories. Two new buildings were then erected in 1836 to replace those destroyed by the 1835 fire. These 1836 buildings are probably those described in the 1860 tax assessment records.

Excavation--Lot 28

Two test cuts were placed in this lot. TC J was located five feet south of the rear wall of the latest building to have stood on the lot and approximately 51½ feet north of

Water Street. Test Cut M was situated $25\frac{1}{2}$ feet south of TC J, approximately 21 feet north of Water Street. The location of both squares was determined by our random sampling procedure (see Chapter One). Test Cut J was placed so as to sample the landfill deposited subsequent to the granting of the first set of water lots. Test Cut M was one of two squares placed to sample the landfill deposited on the southernmost portion of the block after the second set of water lot grants.

Excavation began at the level of the wooden basement floor of the most recent building to stand on the lot and revealed the remains of two additional wooden floors. Floor #2 was 7-10 inches below the latest floor (#1) and floor #3 was 4-10 inches below floor #2. Each of the three floors was supported on round logs four to six inches in diameter, running in an east-west direction. The logs beneath floors #1 and #2 were supported on fill between the floors, consisting under floor #1 mostly of cinders. The fill between floors #2 and #3 was a silty sand containing a considerable amount of brick and mortar. The charred remains of three small wooden barrels were recovered from floor #3 in TC M.

In the northern part of TC J (Figure 87), immediately below floor #3, we encountered the top of a cut stone wall which projected approximately 32 inches southward into the square. In two locations, roughly 52 inches apart, cut stone blocks were stacked on top of the wall, penetrating through

floors #2 and #3. The fill between floors #1 and #2 covered the top of these stone blocks.

Excavation beneath floor #3 in the western portion of TC J revealed a charcoal deposit beneath the burnt floor. In the eastern portion of the test cut, however, the charcoal of the burnt floor #3 gave way to brown and mottled brown silty sand. This material overlay another cut stone wall, running in a north-south direction, which began at a depth of approximately 31/34 inches. At 28/30 inches a third cut stone wall was encountered in the western part of the test cut running in an east-west direction and continuous with the southern boundary of the test cut. Therefore, the original five by five foot TC J was enlarged in two directions. The square was extended two feet to the west (Figures 88, 89) in order to permit the excavation of the feature which was defined by the cut stone walls mentioned above and a fourth cut stone wall uncovered in the western extension which bounded the feature on the west side. This north-south wall also began at a depth of 28/30 inches.

Since the original objective of this test cut was to sample the landfill deposits, and since this was made difficult by the presence of the feature, TC J was also extended five feet to the east (Figure 90).

With the exception of the deposit in the feature, a dark brown sandy silt with a high concentration of charcoal, the material beneath floor #3 in TC J consisted of brown and

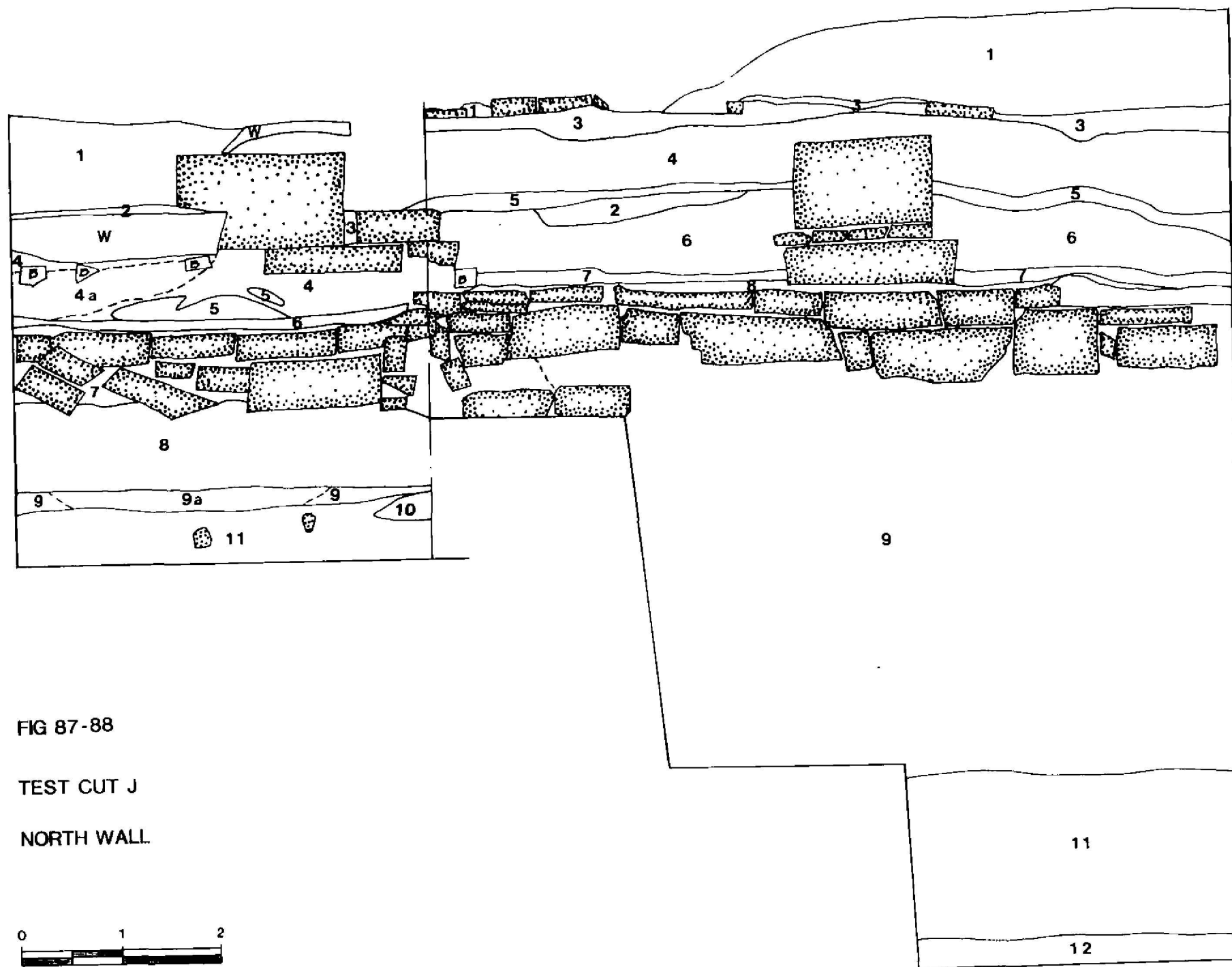


FIG 87-88

TEST CUT J

NORTH WALL

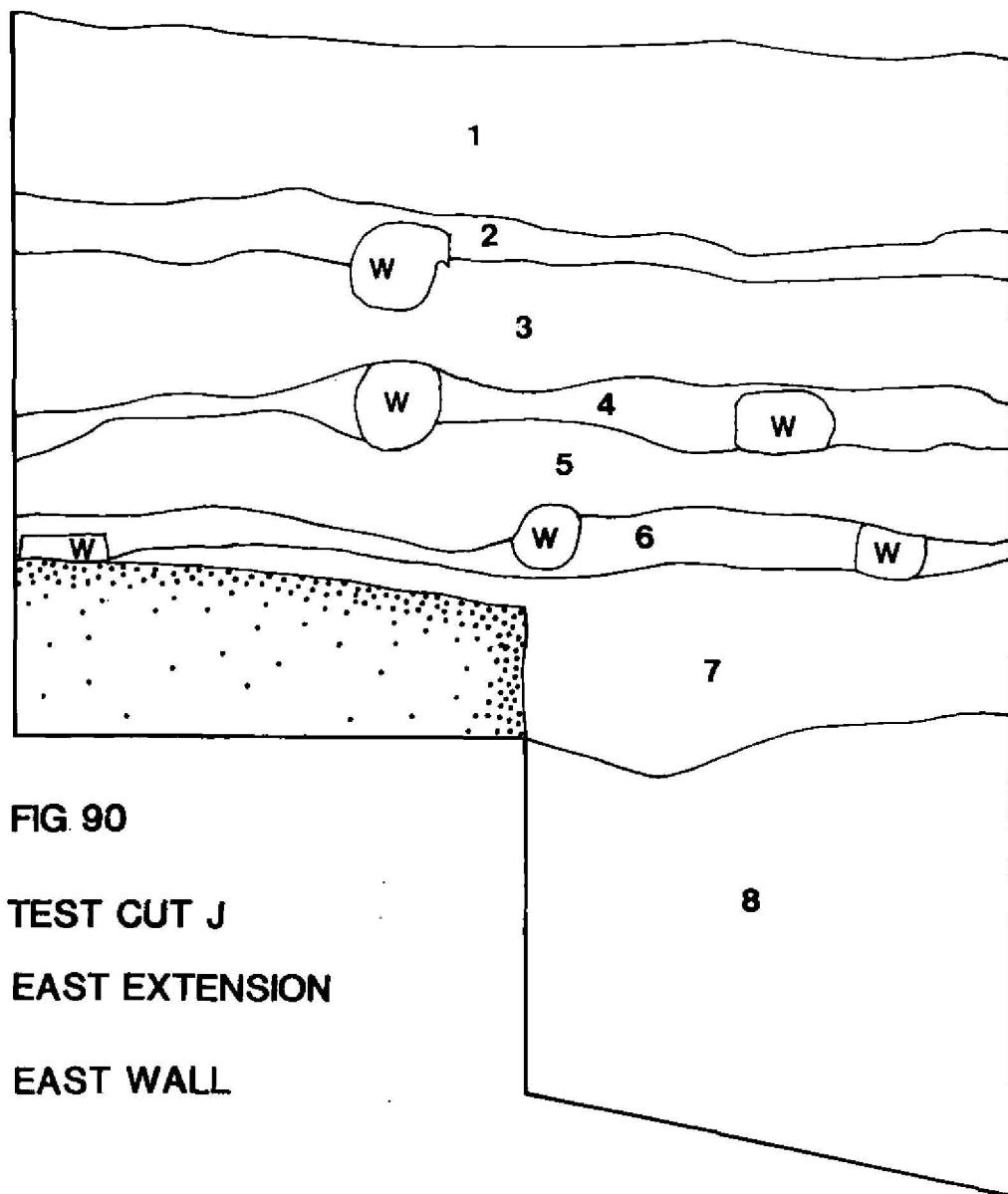


FIG 90

TEST CUT J

EAST EXTENSION

EAST WALL

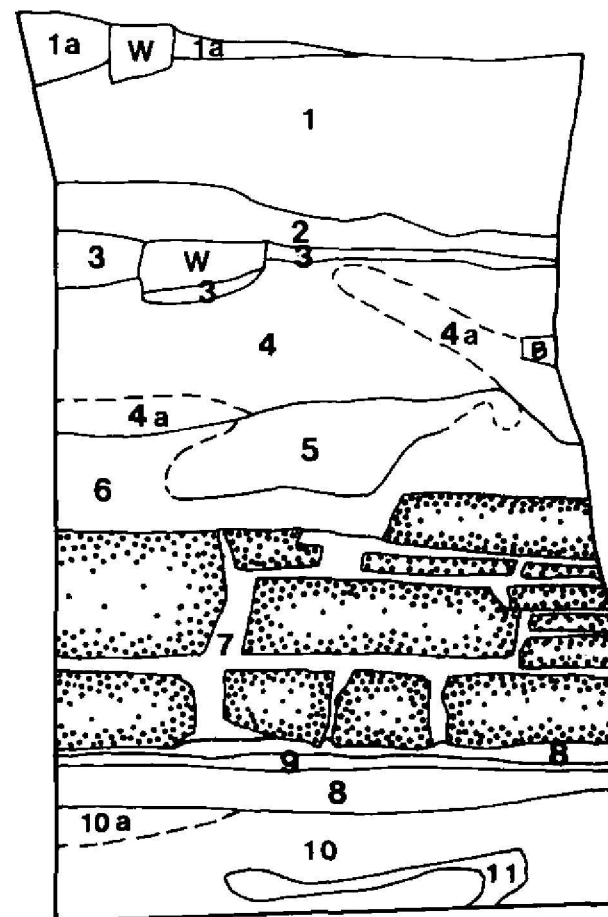


FIG 89

TEST CUT J WEST EXTENSION

WEST WALL



Figure 87. Test Cut J West Extension: North Wall

1. cinder and ash
2. decomposed wood and brown silt
3. sand and brick between cut stones
4. gray ashy sand with charcoal and mortar and brick inclusions
- 4a. yellow ashy sand
5. fine white sand with rust stains
6. dark brown silty sand (burned level)
7. reddish brown silty sand between stones
8. dark brown sandy silt with charcoal and abundant cultural material
9. banded rust and tan sand with some sandstone inclusions
10. gray and rust sand
11. red sand with water rolled pebbles
12. decomposing wood and brown silt

Figure 88. Test Cut J West Extension: West Wall

1. cinder and ash
2. decomposed wood and brown silt
3. gray clayey sand
4. dark gray ashy sand with charcoal, mortar, brick, glass, and stone
5. brown mortary silty sand with brick
6. burned silty sand with ceramic and glass
7. brown silty sand between stones
8. banded rust and tan sand with some sandstone inclusions
9. wood
10. gray and rust sand

Figures 89-90. Test Cut J, East Extension

1. silt with rubble
2. dark brown organic silt
3. cinder and ash
4. dark brown silt
5. light brown and gray sandy silt with brick
6. dark brown and black organic silt
7. brown sandy silt with rocks
8. mottled orange and tan sand

brown/orange mottled silty sand containing rubble, some large rocks, and dense brick debris. Test Cut M also contained a deposit of brown silty sand with a high brick density beneath floor #3. In common with TC J, the top portion of this deposit was described by the excavators as being hard packed. In TC M, the soil at the base of this deposit was described as a yellow or gray mortar sand. This was not the case in TC J. The late 17th century landfill deposits began immediately below the silty sand stratum in both test cuts. The landfill will be discussed further below.

The Test Cut J Feature

The feature in TC J extended four feet east-west. The deposit within the feature extended beneath the stone wall in the north of TC J. This wall was not the northern boundary of the feature, but was built after the feature. The excavation was not extended north of this wall and we were, therefore, unable to determine the northern extent of the feature.

The TC J "north stone wall" and the three exposed walls of the feature were constructed of cut stone, those of the feature being larger than those of the north wall. All walls were only two courses high. The north wall began at approximately the same elevation as the west and south feature walls, but was only about half as high. The east feature wall began at a lower elevation than the west and south feature walls, and below the bottom of the north wall.

The function of the feature remains uncertain, but it seems likely that it was a privy. The material excavated was probably deposited after the period of use of the privy ended, as indicated by the lack of organic material. The feature contained a dense deposit of artifacts (268.5/cu.ft.), mostly domestic in nature, with a high NA/A ratio of 7.6. The most prevalent artifact type was bottle glass fragments, with a large number of bottle bases and necks, and one whole bottle being recovered. A total of 5135 pieces of bottle glass, of various types, were recovered. The 518 pieces of drinking and table glass included fragments of a glass decanter and a cobalt blue glass bowl. One thousand and thirty nine ceramic sherds were recovered. The deposit contained moderate densities of bone but fairly low shell densities. One hundred and eighty five pieces of vegetal material were recovered, consisting mostly of cherry and peach pits with some plum and hickory. The brick and mortar density in the feature deposit was low. The 738 architectural artifacts consisted mainly of window glass (589 pieces) and pantile fragments (133). Only 13 nails were recovered.

In addition to the table and drinking glass, other artifacts in the household category include 123 fragments of glass food storage vessels, and eight fragments of a bone utensil handle. Artifacts in the clothing and personal artifact category include two bone and seven metal buttons, two fragments of a wooden comb, and a marble. Only 15 smoking

pipe fragments were recovered from the deposit, in contrast with the large numbers of such artifacts recovered from earlier domestic deposits (see the description of the Lot 14 excavations) and the 17th century landfill.

The data suggest that the deposit consisted of domestic refuse. The presence of the window glass fragments is probably related to the occupation of the of the lot's residents, as discussed below.

This deposit is unique among those excavated on the 7 Hanover Square site because of the large percentage (30.1% of the recovered sherds) of Oriental Export Porcelain. While precise data on the relative costs of porcelain and earthenware are lacking (Miller 1980), it is generally accepted that imported porcelain was more expensive and implied higher status than earthenwares. The large fraction of this deposit represented by Oriental Export Porcelain suggests that the residents of Lot 28 during the period represented by the feature deposit (or their ancestors) were fairly well-to-do. This suggestion is reinforced by the recovery of a well made cobalt blue glass bowl with a ground pontil from the deposit.

A mean ceramic date of 1781.1 years was calculated based on the 704 datable ceramic sherds recovered from the feature. Further information about the date of deposition was obtained from an analysis of the specific ceramic types present and the cumulative frequency curves. On the one hand, approximately

11% of the dated ceramics had a final date of manufacture before the mean ceramic date. These include Whieldon-type yellow ware (10 sherds), sgraffito-type buff slipware (eight sherds), plain delftware (five sherds), and early creamware (14 sherds). On the other hand, approximately 4.5% of the dated sherds had initial dates of manufacture between 1790 (after the mean ceramic date) and 1800. These include Canton, Nanking, and underglaze decorated porcelain (10 sherds), annular decorated pearlware (two sherds), transfer printed pearlware (18 sherds), and underglaze polychrome decorated pearlware (one sherd). The presence of these 31 sherds suggests that the deposit may have, in fact been created closer to the end of the 18th century than indicated by the mean ceramic date or even during the opening years of the 19th century. Only one sherd, however, had an initial manufacturing date after 1800. Since this sherd was red transfer printed whiteware, not manufactured until after 1830, it is likely that this sherd was intrusive into the feature deposit. The absence of purely 19th century types suggests that deposition ended not long after the turn of the century.

A deposition date during the 1790s or early 1800s accords with the documentary evidence discussed below. The 11% of the deposit no longer manufactured after 1780 could have been present due to curation by the occupants of the lot.

We also examined the possibility that this deposit accumulated gradually over a period of time rather than

representing a single episode of dumping. For each of the four excavated levels of the deposit, we have calculated the mean ceramic date, the percentage of sherds with a final date of manufacture before 1780 and the percentage of sherds with an initial manufacture date between 1790 and 1800. These data are shown in Table One. They suggest the strong possibility that accumulation of the deposit occurred over a period of time, rather than representing a single episode of trash disposal, and also indicate that deposition may have begun before 1790.

Fifty six bottle glass fragments recovered from the feature deposit were dated, 51 of these to the period 1780-1810/30. Three fragments were dated to 1750-1870, and one mold-made fragment to the post 1800 period. One whole bottle, dated to 1740-1790 was recovered from this deposit. These dates are consistent with the ceramic evidence. A glass wine bottle seal with a coat of arms (as yet unidentified) was also recovered.

Of the table glass recovered, two drinking glass fragments were dated to 1760-1770 and several fragments of a glass flacon were dated to 1749-58. Although these dates are earlier than the ceramic bottle glass dates, it is reasonable to expect that these vessels would have been in use for a substantial period of time after their manufacture and purchase. One of the metal buttons recovered is similar to Hume's (1978:90-91) type #9, which he dates to 1726-76.

TABLE ONE

Privy Deposit Ceramic Data - By Level

Stratum	Vb	Vc	Vd	Ve
N (Dated Sherds)	137	131	73	166
Mean Ceramic Date	1790.6	1788.5	1780.5	1761.3
Final Date Before 1780				
N		14	0	22
%		5.2	0.0	12.8
Initial Date 1790-1800				
N	17	5	1	0
%	12.4	3.8	1.3	0.0

Profile drawings show a two to five inch band of tan and rust colored sand between the base of the feature deposit and the underlying landfill. This stratum yielded three sherds of white salt glazed stoneware. Since this ceramic type was not manufactured until 1720, the deposit was probably not part of the landfill, and could be seen as being associated with the construction of the feature. The presence of a number of sandstone fragments in this deposit is consistent with this interpretation. This stratum also yielded a sherd of mottled glaze "midlands" type yellowware manufactured between 1660 and 1750. Although these are scanty data they suggest the possibility that the feature (privy) was constructed during the early-mid 18th century and used until the late 18th-early 19th century. The excavated material from the feature would have been deposited after the period of use and after the privy deposits had been removed.

Lot 28 Construction Sequence

The reconstructable building sequence on Lot 28 begins with the material below floor #3. The relatively high brick and mortar density in this deposit suggests that it may have been deposited after the demolition of a structure. Sixty-two datable sherds were recovered from the material immediately below floor #3. The mean ceramic date calculated for these sherds is 1785.8. However, the presence of nine delft, majolica and Rhenish stoneware sherds, perhaps redeposited from the earlier landfill, makes this date earlier

than would otherwise be the case. The mean ceramic date without these nine sherds is 1800.2. The deposit includes two whiteware sherds. These data indicate that the structure associated with this debris may have been standing on Lot 28 during the same period that the material in the TC J feature was deposited. The rear wall of this structure would have been south of the location of TC J and the feature, probably a privy, was located in the back yard. Subsequently, a larger structure (referred to below as the "second building") was constructed on the lot. This involved the construction of the stone wall uncovered in the north of TC J. Construction of this wall and the larger structure involved at least the partial excavation of the backyard area of the earlier structure. The east wall of the feature was apparently disturbed to a somewhat deeper depth than the west and south walls. If the feature in TC J were a privy it originally must have been much deeper than the two stone courses excavated. During the construction of the "second building," of which floor #3 was the basement floor, debris from the earlier structure was apparently spread over the lot. However, this deposit was not present immediately over the feature. This may be related to the process of demolition of the feature. Perhaps the upper courses of feature walls were removed after the demolition of the rest of the structure. Floor #3 was subsequently built over this debris.

The northern stone wall in TC J was apparently not the

rear wall of the structure associated with floor #3. Its construction, two shallow courses topped with stone blocks, suggests that the wall was built as a base for internal supporting columns within the building. The earliest available maps of the block, dating to 1857 (William Perris), indicate that there was, in fact, a building extension which began at the approximate location of this internal wall.

It is possible that the TC J north stone wall was originally the rear wall of the second building and that a subsequent building episode involved the destruction of the upper portion of the wall followed by construction of the building supports. However, there is no stratigraphic indication of this. Furthermore, wooden floor #3 appears to overlie the wall and to abut the stone blocks on which the supporting columns apparently rested. It is thus likely that the second building was constructed with a main section and a rear extension.

The form of the building was apparently the same when floor #2 was constructed, with the stone base for the supporting columns penetrating through the wooden basement floor. The presence of large quantities of brick and mortar between floors #2 and #3 suggests that some major reconstruction of the building occurred. The 25 ceramic sherds excavated from the material between these two floors yielded a mean ceramic date of 1841.7. Seventeen of the sherds were 19th century types, whiteware and Albany slipped

stoneware. The presence of two sherds of red transfer printed whiteware indicates a probable deposition of this material (and thus a construction of floor #2) no earlier than approximately 1830.

At a later date, the internal supporting columns of the building were apparently removed, and floor #1 was constructed. This suggests that another major reconstruction took place and that the building at this time (Building #3) was a single structure rather than a structure with a rear extension. This reconstruction would have taken place subsequent to the preparation of the 1857 map cited above.

Further inferences about the construction sequence can be drawn from the documentary research. In 1790, Lot 28 was occupied by Anthony Ogilvy, listed as a painter and glazier and by Daniel Steddifor, a hairdresser. It should be recalled that the TC J feature contained 589 pieces of window glass, but few nails and little brick or mortar. If Mr. Ogilvy lived and worked on this lot we would expect to find both the refuse of daily life and refuse related to his occupation: the window glass. Thus, at least part of the refuse excavated from the feature may have been deposited by Ogilvy.

Between 1793 and 1802; Stephen Smith, a hatter, occupied the lot and some of the refuse may have accumulated during his tenure. Between 1803 and 1832 the lot was occupied by Alexander McFarlane, also a hatter. However, between 1806-1813 George Conklin, a cooper, was noted as occupying a shed

in the rear of the building. If this "shed" were in fact the building extension discussed above, the reconstruction of the building (construction of building #2) and the destruction of the feature could have taken place in the first decade of the 19th century. These data suggest that the feature material was deposited c. 1790-1806, which is in accord with the artifactual evidence previously discussed.

In 1835, a fire destroyed the portion of Water Street in which Lot 28 is located. Construction of floor #2 probably occurred after this fire, This also fits the ceramic evidence. Furthermore, floor #3 was definitely burned, while floor #2 and its joists were not. Thus, floor #2 probably is associated with reconstruction of the building after the 1835 fire while floor #1 was built following the removal of the extension and construction of building #3.

The following summarizes the above sequence:

- c. 1790-1805 Building #1 standing; feature deposit accumulates in privy behind structure
- c. 1805 Building #2 constructed with extension; floor #3 built
- c. 1835 Building #2 reconstructed following 1835 fire; floor #2 built
- 1857+ Building #3 and floor #1 constructed

While documentary evidence indicates the presence of earlier structures on this lot, deposits associated with these structures were not encountered during the excavations.

Landfill Deposits

The landfill deposits in both TC J and TC M underlie the

rubble from the first construction episode discussed above. These deposits extended to a depth of approximately 90 inches below the test cut datum and were underlain by the gray river bottom silt. This silt was excavated to approximately 99 inches in TC J and was underlain by the red sandy subsoil. The gray silt could only be excavated to a depth of approximately 83 inches in TC M (Figure 91). At this depth excavation had reached the water table which caused a collapse of the lower portion of the test cut walls.

The landfill in TC J was described by the excavators as a mottled brown, orange and tan sand, with a lens of dark brown and black organic silt at approximately 53-60 inches. The TC M fill was also a sandy fill, but was described as consisting of bands of orange/red, mottled red, dark red and tan, red and gold sand sloping downward from north to south. A lens of green and black mottled silt appeared in the north portion of the test cut, but this occurred some 20 inches higher than the lens of "organic silt" in TC J. The difference between the color of the sand noted in the two test cuts may be due to differences in the perceptions of the excavators. Photographs of TC M suggest that the banding in the fill deposits is not as pronounced as suggested by the profiles, while photographs of TC J show more differences in the color of the sandy fill than suggested by the profiles.

Densities of artifacts and faunal materials recovered from the landfill deposits in TC M were only 1/3 to 1/4 of the

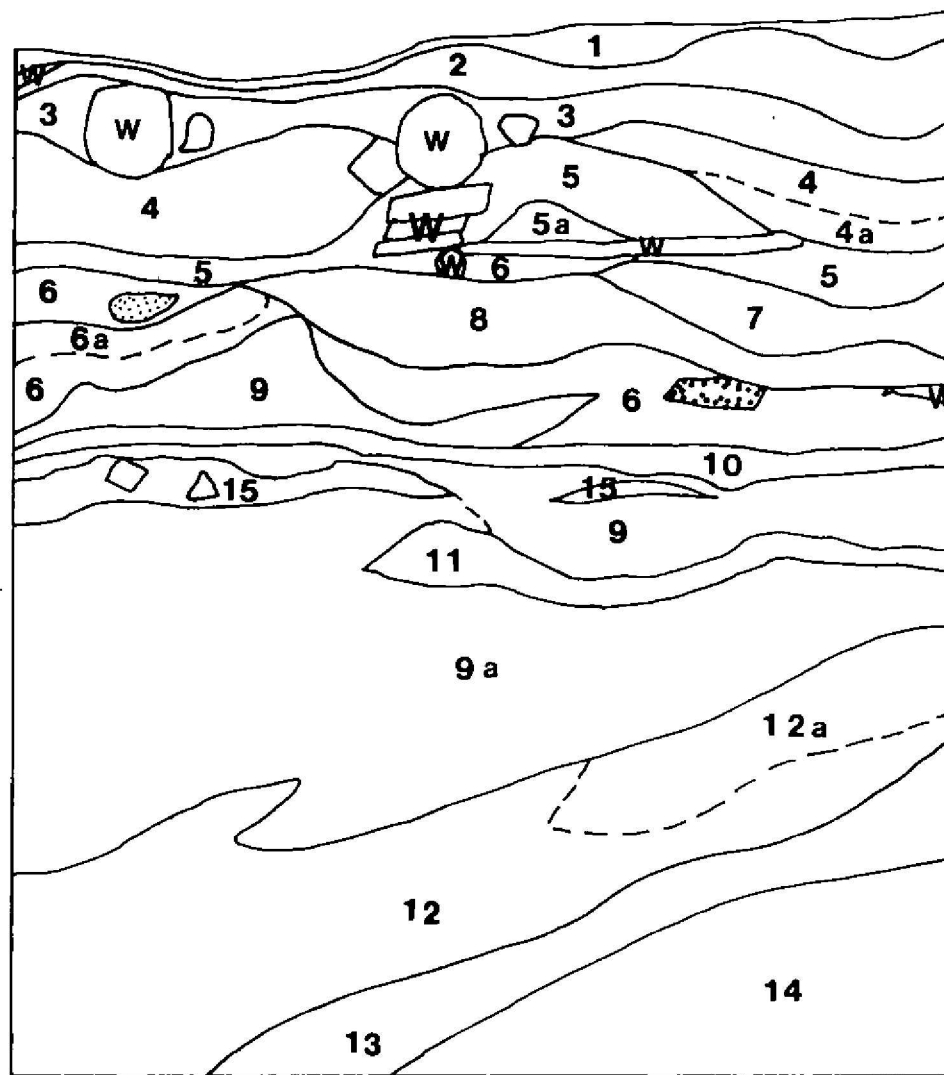


FIG 91

TEST CUT M

WEST WALL



Figure 91. Test Cut M

1. red sand with bricks and rubble
2. black, green, and yellow cinder and ash
3. organic layer (decayed wood)
4. yellow-tan mortar with rubble
- 4a. pockets of gray and brown
5. burned wood and charcoal
- 5a. burned sand
6. brown sand with charcoal
- 6a. brown sand with denser concentrations of charcoal
7. brown coarse sand with brick, mortar, and wood
8. brown sand with yellow mortar
9. red coarse sand mottled with rust
- 9a. red coarse sand
10. thin bands of tan and black sand
11. green and black mottled silt
12. dark red fine sand mottled with black and rust
- 12a. red fine sand mottled with black and rust
13. tan sand bordered by wood
14. dark red fine sand with rust stains

densities in TC J in all categories except for architectural artifacts, mortar and marine shell. However, the landfill deposits from both test cuts have much lower densities of all categories of cultural materials than the landfill samples taken from the test cuts on the Pearl Street side of the site.

The ceramic samples from the TC M and J landfill deposits are too small for mean ceramic date calculations to be significant. However, no ceramic types were present which could differentiate the dates of filling subsequent to the second set of water lot grants from those subsequent to the first set as indicated by the material recovered from the northern portion of the site.

It should be noted that the description of the landfill stratigraphy in these test cuts is in keeping with the stratigraphy of the landfill in the southern portion of the site as indicated by BT 6 (see pp. 335ff).

Excavation--Lot 29

Lots 28 and 29 were considered to represent the same landfilling episode since they were both part of a single water lot grant to Samuel Bayard. As it turned out, our random sampling strategy for the late 17th century landfill did not result in the placement of test cuts in Lot 29.

Backhoe Trench 3 was placed in Lot 29 in order to examine the landfilling stratigraphy, determine whether any landfill retaining structures were present, and detect the existence of any post-landfilling deposits and features. The backhoe

trench was located approximately 10 feet east of the western boundary of the lot in order to avoid any disturbance caused by the construction of the large 20th century building which stands on the lot immediately to the west. The backhoe trench extended approximately 52 feet south from the Lot 8/29 boundary and was approximately 5.5 feet wide. A 5.5 foot wide westward extension to the trench connected its main portion to the wall of the 20th century building mentioned above.

Backhoe Trench 3 indicated that the landfill deposits in this lot consisted of red sand similar to the landfill deposits encountered in TC J and M in Lot 28. No landfill retaining structures, foundation walls or other features were encountered.

7 HANOVER SQUARE--SUMMARY OF LANDFILLING

Backhoe Trench 6 and Extension

Backhoe Trench 6^(Figure 9a) was placed in Lots 9* and 27* during the mitigation phase of the project. The trench was initially located south of TC I and subsequently extended northward, passing through TC I and terminating at the foundation wall of the most recent building to stand on the lot. This wall was located beneath the Pearl Street sidewalk. The trench initially extended 50 feet south of the Pearl Street baseline. During the final phase of the project, which involved the excavation of Lots 26* and 27*, the trench was extended to a point 100 feet south of the baseline. This portion of the trench was excavated with a front end loader. Profiles were drawn of each 10 foot section of the eastern wall of the trench. Due to logistical considerations, the southern portion of the trench was offset several feet to the west of the northern section.

Analysis of the northernmost portion of the trench suggests that the layer of red sand at the base of the stratigraphic profile represents a portion of the pre-filling river bottom deposits. The stratum indicated on the profile as brown/red sand which is present between 0 and 6½ feet south of the Pearl Street baseline is probably also part of the original river bottom material. Thus, the pre-filling land surface sloped downward to the south. This land surface may have been tidally inundated in this area, as discussed below.

At the Pearl Street baseline this pre-filling stratum began at 10.07 feet below the level of the Pearl Street sidewalk as it existed before construction of the new 7 Hanover Square building. This stratum dropped to 12.21 feet below the sidewalk level at $6\frac{1}{2}$ feet south of the baseline, at which point the brown/red sand stratum ended. The underlying red sand stratum sloped downward more gradually south of this point, levelling out at a depth of 14.73 feet below the sidewalk elevation at a distance of 25 feet south of the baseline. It is likely that the material above the red sand represents the 17th century landfill deposits.

In the area approximately 10 feet south of the baseline, the BT 6 profile shows the deposits of red sand and brown sand, both containing cobbles, which were mentioned in the description of TC I. Just south of the location of TC I, the trench profile shows what appears to be a wooden post set upright in the red sand and the underlying grayer sand. As shown in the profile, the top of the post is surrounded by the stratum of brown sand with cobbles rather than being driven through it. This suggests that the latter deposit is, in fact, part of the landfill, and that the post had been driven into the underlying red sand prior to the landfiling. Above this post was a pocket of "humus" which could represent the original top portion of the post that had rotted.

At the location of TC I, the soil immediately above the red sand consisted of the brown sand with cobbles. After a

point approximately 20 feet south of the Pearl Street baseline, the soil above the red sand is described as coarse orange and gray sand with shells. Field notes and photographs indicate that the oyster shells in this deposit are all oriented with the concave side face downward. One interpretation, therefore, is that these shells were deliberately placed in this position.

From 12-27 feet south of the baseline, the sand with cobbles or shell was overlain by a thin stratum of orange and white banded sand. Immediately above this sand where it was present, and above the coarser sand in other areas, a thin dark layer of what appeared to be decayed wood extended from approximately 12-25 feet south of the baseline. If the brown sand with cobbles and the orange and gray sand with shells were natural river bottom deposits, rather than landfill, this wood could be interpreted as planking placed at low tide to facilitate the filling process. In this case, the artifacts noted in the underlying deposits would have had to have been deposited on the river bottom and have worked their way downward through the loose sand. The other possibility is that the planking was laid down during the filling process after some landfill (the brown sand with cobbles and the orange and gray sand with shells) had already been deposited.

From 0-40 feet south of the Pearl Street baseline, there does not appear to have been any river bottom silting, and it is likely that the shoreline environment in this area

consisted of tidally inundated beach. A lens of gray black silt did overlies the "decayed wood" stratum from approximately 11-31 feet south of the baseline, but it is likely that this material is part of the landfill, possibly material dredged from the river bottom at another location and deposited at this site as landfill.

At a distance of 40 feet south of the Pearl Street baseline a thin stratum of gray black silt overlay gray sand at the base of the exposed profile. This material probably represents river bottom silt. If the profile drawings are accurate, the gray sand overlies the coarse orange and gray sand with shell, discussed above, between approximately 30 and 35 feet from the baseline. If the gray silt represents the naturally deposited river bottom silt, therefore, the orange and gray sand with shell, as well as the associated brown sand with cobbles further to the north would have to represent the original river bottom deposits. Unfortunately, the stratigraphy at the extreme northernmost limit of the gray silt stratum is obscured by what appears to have been the remains of a stone wall, perhaps a portion of a foundation wall. The post described below plus the hypothesized upper portion would have extended to the top of the brown sand/cobble stratum.

The gray silt stratum is present at the base of the trench profile from the 40 foot mark to the end of the trench at 100 feet south of the Pearl Street baseline. The presence

of the water table prevented excavation to greater depths. The gray silt stratum began approximately 12.4 feet beneath the Pearl Street sidewalk and 13.4 feet below the datum plane discussed in the following section. The surface of the stratum sloped downward about one foot between the 40 and 55 foot mark and then remained fairly level.

It is interesting to note the variations in the composition of the landfill as indicated in the BT 6 profiles. North of the possible foundation stones (approximately 40 feet south of the Pearl Street baseline) noted above, the major landfill deposit consisted of a brownish green silt. An overlying band of gray silt containing mortar and brick between 15 and 29 feet south of the baseline may have been associated with a construction episode on Lot 9*. South of the disturbed foundation stones, the landfill consisted primarily of deposits of mottled brown or orange/brown sand with downward sloping bands of gray clay and silt in some areas. The downward sloping bands indicate that the land was filled progressively outward, with the fill being consistently deposited from the built-up surface of the land, whereas the fill to the north appears to have been built up vertically in layers.

Comparison with the excavations conducted in the other lots suggests that the stone wall at 40 feet probably represents the remains of a foundation wall of an early structure built on Lot 9*. Like most of the early foundation

walls on the site, this wall would have been constructed prior to the deposition of the landfill, and would have served to support the landfill deposited to the north. The fact that the base of the wall is at about the same level as the gray/brown sand beneath the level of the layer of decayed wood in the northern portion of the lot strengthens the interpretation of this material as a pre-landfill river bottom deposit.

After the land north of the wall was filled-in, the land south of the wall was filled using different sources for the landfill and a different land-filling strategy. The landfill south of the wall could have been dredged from the river bottom, with the bands of silt representing the river bottom silts and the more abundant sand deriving from the river bottom sand underlying the silt.

Pre-Landfilling River Bottom Stratigraphy

The analysis of the stratigraphy of BT 6 and the various test cuts excavated allows us to make some inferences about the pre-landfilling river bottom deposits.

Although the bottom of the East River was apparently covered by a layer of gray silt, this deposit did not extend to the Pearl Street shoreline. The silt deposit as seen in BT 6 apparently ended approximately 40 feet south of the Pearl Street shoreline. This stratum was present in deeply excavated test cuts excavated further from the shoreline (i.e. TC J, M, L, F, D, and U). The most northerly extent of this

stratum may represent the location of the pre-landfilling low water mark. It should be noted, however, that the 17th century water lot grants suggest that the low water mark was located approximately 90 feet south of Pearl Street. The area north of the 90 foot mark in which the silt deposit was present may have been under water during a major portion of the tidal cycle and may not have been subjected to currents strong enough to prevent silting.

The top of the silt stratum was located between 9.8 and 11.5 feet below the site datum plane. This plane passes through a point on the sidewalk on the south side of Water Street at the base of the fire hydrant marked "#20," located in front of the Chase Manhattan Bank building. In TC F,N,J, and D, the excavations penetrated the silt to the underlying sand stratum.

The portion of BT 6 north of the 40 foot mark and all of the test cuts located north of the 35 foot mark which penetrated the landfill deposits (Test Cuts I,H,V,AH,Z,Y, O extension, and O) did not encounter the silt stratum. In this area, sterile sand, usually described as having a reddish color, immediately underlay the landfill. This stratum began between 9.4 and 11.4 feet below the datum plane. However, it was encountered at a slightly higher elevation, 7.3 to 8.3 feet below the datum plane, in the northernmost part of BT 6. It is possible that this portion of the 7 Hanover Square site contained a "beach-like" environment prior to the landfilling

which was under water only during a portion of the tidal cycle. With the possible exception of TC K (35 feet south of the Pearl Street baseline), all of the test cuts north of the rear walls of the late 17th century structural foundations uncovered on the northern portion of the site were in this zone. Test Cut K was not excavated to the depth necessary to reveal the existence of the silt stratum.

In the above discussion of BT 6, we considered whether the deposit of looser sandy soil with rocks and shell which overlay the red sand in the northern portion of the trench was a pre-landfill natural deposit or part of the landfill. In nine of the test cuts north of the point where the river bottom silt deposits began (Test Cuts I, H, V, AH, Z, O extension, A, Q, and R), the excavators noted the presence of a deposit of coarse sand above the red sand river bottom deposit. In most cases this coarse sand was noted as containing concentrations of rocks or shell. In some cases, rather dense deposits of artifacts were also noted. The fact that these deposits were encountered immediately above the sterile red sand in a number of different lots filled by different individuals suggests a "natural" mode of deposition. This is consistent with the inference that the area immediately south of Pearl Street contained a "beach-like" environment, perhaps covered by water only at high tide and subject to wave action. This shoreline area may have been used for the deposition of refuse before the landfilling took place, accounting for the

presence of artifacts in the coarse brown sand. The action of the water could have led to the distribution of the artifacts throughout the deposit. The elevations of these deposits suggest that the pre-landfill "beach" surface was somewhat higher on the western portion of the site, with a drop-off of some three to four feet of the Pearl Street baseline. In BT 6 the elevation of the brown sand stratum north of this drop-off was 5.3-6.3 feet. In the eastern portion of the site, the beach area was more level. The elevation of the brown sand stratum in the area four to five feet south of the Pearl Street baseline was 8.7 feet below the datum plane in TC AH (Lot 14), some two to three feet deeper than in BT 6 (Lot 9*). Thus, at high tide, there would have been a greater depth of water immediately adjoining the shoreline in the eastern portion of the site than in the western portion.

are a number of other ways in which artifacts from landfill may be used for scientific research (for example, they seem well suited to issues related to trade practices, the rate of adoption of innovations, and the development of local technology). We hope that research uses for landfill data such as these will continue to be investigated.

The second type of research for which landfill may be used concerns site formation processes and taphonomic questions, and addresses basic behavioral issues. For example, was the fill deposited by the entire community (since there was no formal or effective garbage disposal at the time), or was it formed mostly by the individuals who had purchased each lot? There is both documentary and archaeological evidence that the latter was the case in at least some instances. The Livingston papers mentioned above (p.123) refer to Livingston's contract with Teunis DeKay to fill his lot, while the Duyckincks' water lot (Lot 15) contained many pieces of broken glass, consonant with their having created their own fill and their occupation as glaziers. At 64 Pearl Street we hypothesized that a shoemaker, Conraet Ten Eyck, had used his water lot for refuse disposal since there were many pieces of leather in the fill, including pattern remnants (Pickman and Rothschild 1981).

Taphonomic information can also be derived from the examination of stratigraphic sequences in a number of deposits or test cuts. We observed "basket-loading" in some profiles, suggesting the same practice used by prehistoric mound-builders. In this report, we have been able to interpret the sequence of

fill, the definition of the river bottom, and the nature of the original shoreline (probably a beach type of environment with some marshy areas, see Test Cut D, Chapter Five). In discussing the density of artifacts as it varied among fill strata, we also distinguished (above) between the deposition of fill strata with little time elapsed between episodes, and other situations in which there had been some interval (Chapter Two, TC I, TC N; Chapter Three, TC H; Chapter Six, TC U). Based on the presence and absence of certain artifacts, we have interpreted the use of dredge soil and re-deposited material as fill, and have been able to differentiate the river-bottom from the overlying fill (Chapter Four, TC F; Chapter Two, TC I). Thus we have been able to suggest likely answers to questions of historical interest, such as where people in the early community got all the material needed to create blocks and blocks of new land, and how the fill was held in place.

The 7 Hanover Square Block project taught us that landfill excavation requires different excavation strategies and interpretive techniques than on-shore excavation. Plans must allow for adequate time to collect and examine the landfill. "Telephone booth" excavations are inappropriate to gather either a large artifact sample or to deal with taphonomic questions. They are also more dangerous to excavate than larger areas. Trenches defining a long profile, or test cuts laid out in a checkerboard are effective, although difficult to keep water-free in deep fill deposits. Other differences between landfill and original land projects appear in artifact analysis. The fact that

Afterword

It is almost ten years since the 7 Hanover Square Block excavation was begun. During this time a number of us have thought about the archaeological importance of landfill. With the wisdom derived from hindsight we would like to discuss landfill as an archaeological resource, with respect to its research potential and to the strategy needed in the excavation of these sites. Beginning with the latter, it is clear that the excavation of landfill is more complex than is that of original land surfaces. Not only are deposits deeper, but the technology of deep excavation, water removal, shoring, and their concomitant requirements create methodological complexities.

In spite of the fact that there is a longer time needed to complete excavations in these situations, we feel strongly that landfill is a valuable archaeological resource. This has been demonstrated in excavations that followed those at Hanover Square, namely at the Telco Block, 175 Water Street, Barclay Bank, the American Express Site, and the Assay Site.

In the excavation of landfill we had two goals: the recovery of a large sample of the fill, and the understanding of the mechanics of making land in the seventeenth century. In order to achieve the latter, we exposed a relatively large excavation area. This may be achieved by opening a number of small units, or it may be done separately, with heavy machinery, once hand excavation in the area is complete. We used both procedures; with

a combination of test cuts and long trenches giving us several long profile views of the site.

We encountered two types of fill-retaining structures close to shore. One only a small section of which was exposed in Lot 14, consisted of boards laid horizontally in a sort of bulkhead, reinforced by small vertically placed logs behind them (pp. 265ff). A second consisted of the many stone foundation walls which, since they were built on the river bottom, served dual purposes of retaining fill and supporting buildings. We also found a large partial structure (and some large unattached logs) on one of our last field days when a machine uncovered a log construction perpendicular to shore in Lot 15. It may have been similar to the cribbing seen later at sites such as the Assay Site, and may have served as a wharf. Since this type of landfill-retaining structure had not yet been seen at other sites, we had not anticipated its existence and unfortunately we lacked the time to explore this structure or to record it.

Many archaeologists are interested in the actual land-making process. In addition, there are two types of research that can be based on landfill. One focuses on the material found in the fill. The second considers how to identify the source of the fill. In the first research type, fill is treated like a large midden, the deposition of which in the case of the Hanover Square Block, can be dated to a ten-year period, from 1687 to 1697. The value of an early, tightly dated assemblage that may not be linked to specific individuals or households is exemplified by two major research projects that use the large sample of fill

recovered during the excavation of the Hanover Square Block. The faunal material from the fill was analyzed as part of a grant funded by the National Science Foundation (BNS 83-04132) examining early New York subsistence and adaptation (Balkwill and Cumbaa 1988; Rothschild 1990). In brief, we can see that seventeenth-century residents of New Amsterdam-New York were eating a very diverse diet in which beef, pork, and fish (sheepshead in particular) dominated. Beef was almost twice as common as other domestic mammals. Among the fish, none were fresh or deep water species; all were from inshore and estuarine environments. Domestic fowl (especially chicken) and wild game were important while deer remains were scarce. Perhaps the single most striking result of this analysis is the diversity of habitats from which food remains were recovered, showing the expenditure of a fair amount of energy in their acquisition, and the important role played by individuals in providing food for their households. The faunal material is also being used as part of a dissertation by Meta F. Janowitz on Dutch foodways in the New World, being completed at the Graduate Center of the City University of New York.

A second important artifact type recovered from the fill is a large sample of Dutch ceramics, particularly from Bergen op Zoom. These are being analyzed by Janowitz for her dissertation, and have provided material for a trace element analysis (Gilbert and Janowitz 1990), as part of our attempt to discern locally produced wares from imported wares in early New Amsterdam/New York (Janowitz, Morgan, and Rothschild 1984). There

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much landfill material is re-deposited means, for example, that we cannot rely on Mean Ceramic Dates or Binford pipe stem dates in the same way we could if the material were recovered from a primary deposit. We should treat fill as a sealed deposit in which the deposition antedates the final year of filling, allowing Terminus Ante Quem dating.

Other New York City sites have produced some important landfill analyses. Paul Huey, Wendy Harris Sapan, and Joan Geismar have all researched the making of land. Huey discussed New York, and Old Slip in particular, with reference to the European antecedents relied upon as models of wharf construction technology (1984). Sapan wrote of the Telco Block in the context of the creation of the landscape by the merchant elite who use the waterfront to generate a profit (1985). Geismar interpreted differences between relatively "dirty" early fill, and later "clean" fill in terms of a growing concern for sanitary living conditions in the city following the Yellow Fever epidemics of the late eighteenth century (1987). These are just a few of the many questions the answers to which will come from the detailed, scientific examination of archaeological landfill, and which will enhance our perspective on life in this and other cities.

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Arnold Pickman

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