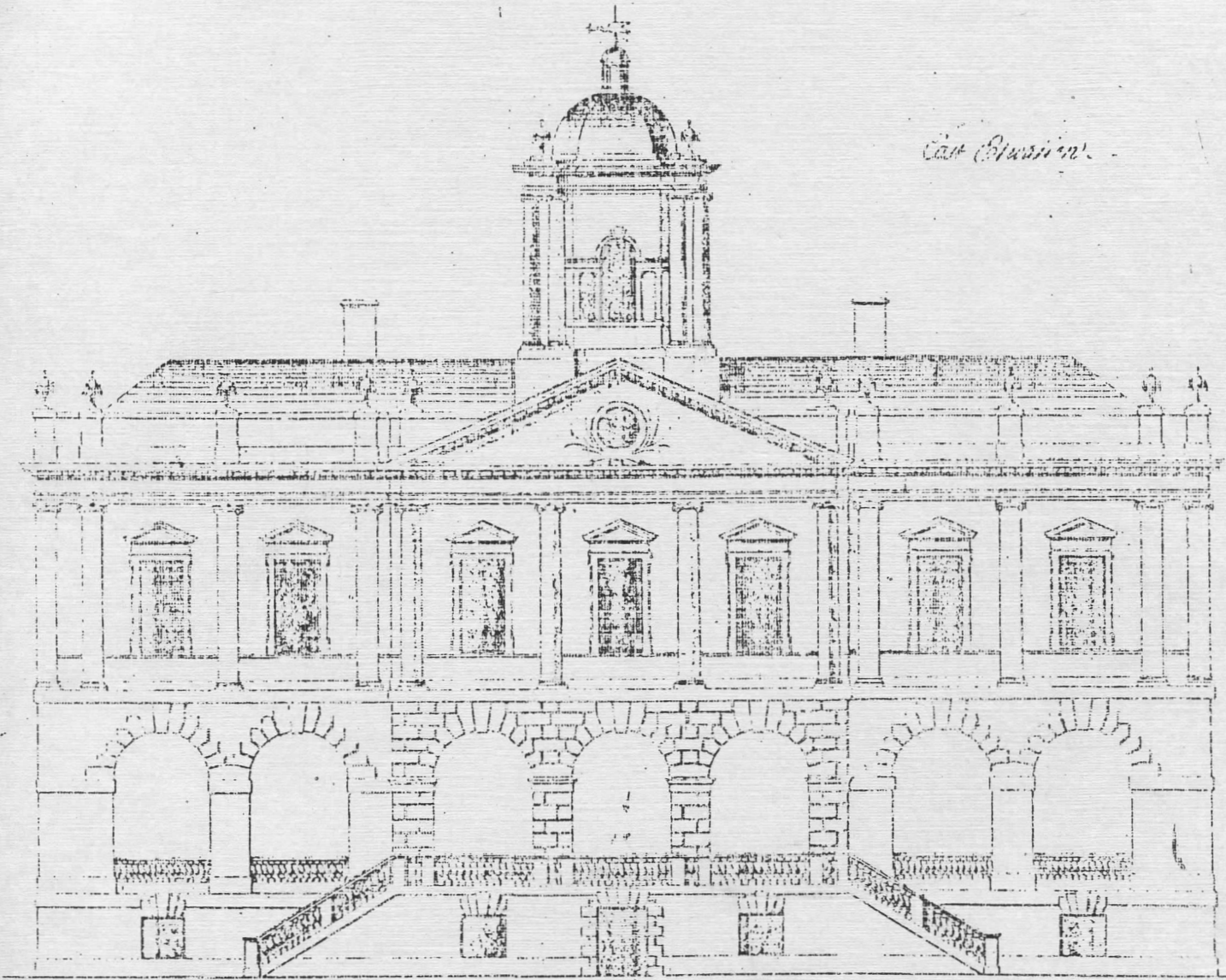


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ARCHAEOLOGICAL RESEARCH AT THE EXCHANGE BUILDING,
CHARLESTON, S.C.: 1979-80

Carl Blumstein



by

Elaine B. Herold, Ph.D.
Research Associate

THE CHARLESTON MUSEUM
360 Meeting Street
Charleston, SC 29403
March 1, 1981

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CHARLESTOWN IN 1780, SHOWING THE EXCHANGE BEFORE ALTERATION
From an Old Print

Figure 1. An old print showing the east side of the Exchange Building in 1780. From the *Dwelling Houses of Charleston* by Alice R. Huger Smith and D. E. Huger Smith, p. 265.

INTRODUCTION

The Old Exchange Building, situated on East Bay Street at the end of Broad Street, has long been regarded as one of the most historic buildings in Charleston. It was completed in 1771, and served as the Exchange and Custom House, and occasionally as the seat of colonial government.

In 1976 plans were made for renovation of the building as part of the Bicentennial activities. Construction started in 1979, and the archaeological monitoring of the project began in December of that year, continuing until May 1980. Some work was carried on intermittently after that until September 1981. As the footing trenches for the towers to be built on the east side of the building and service trenches were excavated, information and artifacts were recovered.

In addition, the collections obtained by John Miller from excavations in the cellar of the Exchange Building in 1965 were cataloged and analyzed. Part of these collections belonged to the Charleston Museum; the rest are on long-term loan to the Museum from the Rebecca Motte Chapter of the Daughters of the American Revolution and the Old Exchange Building Commission. A summary report on this is included in Appendix II.

As a result of the study, we discovered that some years prior to construction of the Exchange, probably as a result of the 1752 hurricane, a substantial amount of naval stores were spilled in front of the Half Moon Battery, preserving wood, leather and textiles there. We have determined the location of the ground level at the time the building was begun and modifications in it as the construction progressed.

During the excavations the brick footings of the original staircases and porch on the east side of the Exchange were located and details of their construction were recorded. These stairs were removed early in the nineteenth century.

All the artifacts recovered from the Exchange are now housed at the Charleston Museum. Included in the collection is an unusual number of wooden, leather and textile fragments which normally are not found in sites in South Carolina. The ceramics from the excavations added to our knowledge of what was utilized by Charlestonians at that time and served as a basis for dating the strata at the site.

The research has not only enabled us to obtain heretofore un-recorded details on the Exchange Building, but also provided us with the first real data on the nature of one aspect of the eighteenth century Charleston waterfront.

The research was funded by the South Carolina Department of Archives and History and the Old Exchange Building Commission.

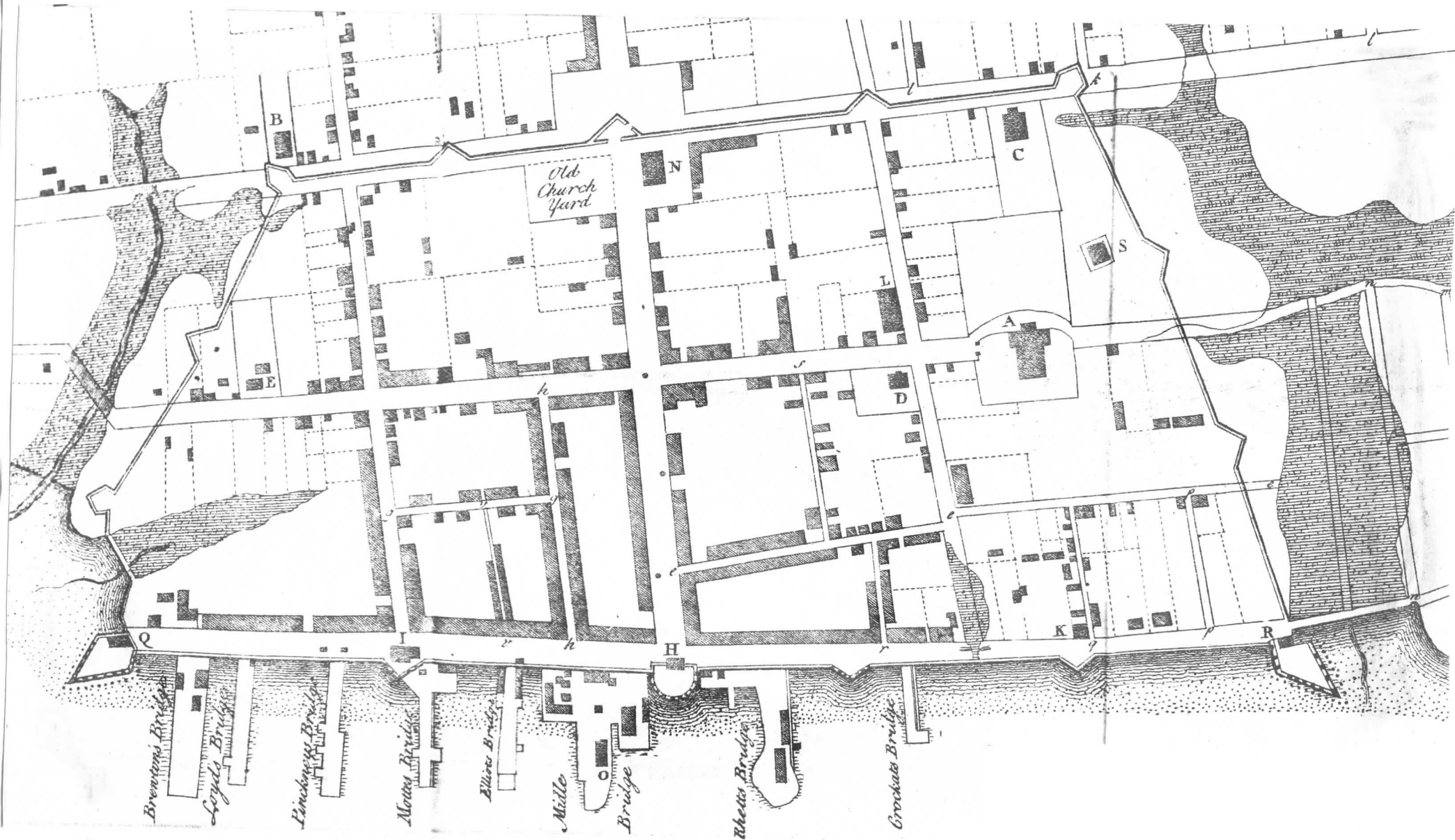


Figure 2. A portion of the 1739 map of Charlestown showing the waterfront area east of East Bay Street. The Council Chamber and Guard House (H) occupy the location at the end of Broad Street inside the Half Moon Battery. From the facsimile of the map reproduced in the 1884 Yearbook of the City of Charleston.



Figure 3. A portion of the 1788 map of Charleston made for the use of the Phoenix Fire-Company of London. The Exchange Building (K) occupies the area at the foot of Broad Street. From the reproduction of an engraving in the Library of Congress.

ACKNOWLEDGEMENTS

The archaeological research at the old Exchange Building was done under the terms of an agreement between the author and the South Carolina Department of Archives and History, and the author wishes to thank Charles E. Lee, Director and State Historic Preservation Officer, Donald Sutherland, archaeologist, and John Laurens of that department for making it possible. This project has been funded with the assistance of a matching grant-in-aid from the U.S. Department of the Interior, Heritage Conservation and Recreation Service, administered by the South Carolina Department of Archives and History, under provisions of the National Historic Preservation Act of 1966. Additional funding was received from the Old Exchange Building Commission. I wish to thank Mr. John Hills, former Director of the Old Exchange Commission and Ms. Shirley McGinnis, Administrator of the Old Exchange Building for their assistance and support of the project.

I am also very appreciative of the assistance received from the Charleston Museum, Donald G. Herold, Director, Allen Liss, Curator of Anthropology, who permitted us to use their laboratory facilities. Artifacts and notes are housed there as part of the collections.

The research at the Exchange Building is the result of the efforts of a number of people who participated in various aspects of the project. The excavations would not have been carried out without the cooperation of Gordon Williams, superintendent of Charleston Constructors, and the members of his crew, particularly Reed Theadore, carpenter, who cooperated fully in the recovery of the information and artifacts from the excavation. Assisting in the excavation from time to time as required were Beverly Leichtmann, Linda Hart, Eric Budds, and Martha A. Zierden.

Several individuals assisted with the analysis of objects recovered from the excavations. Natalie Rothstein, Deputy Keeper of the Department of Textiles and Dress of the Victoria & Albert Museum, London, identified textile fragments from the excavations. Wood samples were identified by Dr. Michael A. Taras of the Department of Forestry, Clemson University. Brad Rauschenberg of the Museum of Early Southern Decorative Arts, Winston-Salem, North Carolina, assisted with the identification of the ceramics. The individuals on whom the burden of the laboratory work fell, and without whom the project never would have reached completion, were Audrey Brown, Doris Dann, Elizabeth Thomas, and Eric Budds, who put in many hours cleaning, cataloging and tabulating the collection at the Museum. Also assisting with various aspects of the cataloging were Penny Sanders, Randa Sanders, Helen Braid, and various other volunteers. Much of the photography of the artifacts was done by Ernie Tunnell and Brian A. Farah. Others on the Museum staff who assisted with the project include Mary Jo Fetzer, Donna Parrish, and J. Kenneth Jones. The manuscript was expertly typed by Anita Moquin. To all of the above who cooperated so enthusiastically, the author is very grateful.

HISTORY OF THE LAND

The land on which the Exchange Building is situated was originally granted to Captain Edmund Bellinger in 1699, by Joseph Blake, proprietor and governor. Bellinger received land which was bordered on the north by the wharf in front of the land of Elizabeth Clapp, and on the south by the wharf of Benjamin Schenckingh, on the west by what was then called Front Street (today East Bay Street), and on the east by the low-water line of the Cooper River (RMCO Book W, pp. 211-213). Bellinger had the privilege of hunting, fishing, and fowling, and was obligated to erect and maintain stairs 8.5 feet wide with bolt rings and posts for common use as a landing place. As early as 1692 masters were permitted to dump ballast at the end of Broad Street, "above the water-mark at half tide, as described by two sedar stakes" (McCord 1840, p. 6).

In 1738, Bellinger sold the property to Ebenezer Simons (RMCO Book W, p. 214) for £800 current money. When Simons died in 1763, he left the land to his son Ebenezer (PC Record of Wills Volume 9, pp. 391-97) from whom a portion of it was purchased for the Exchange in 1767 (RMCO Book H3, p. 512). The remainder of Simons' land, known as Simons Wharf, was sold in 1768 to John Champneys (RMCO Book K3, pp. 227-39).

At the time of the original grant, much of the land east of the street was low. The 1739 map of Charleston (Figure 2) shows no construction directly east of the Half Moon Battery. By 1788, however, buildings extended about 230 feet east of the Exchange and beyond that for another 160 feet or so there were wharves (Figure 3).

Prior to the construction of the Exchange Building the old Council Chamber stood on the property (Way 1921, p. 3). The contract called for tearing it down and clearing the land as well as building the new structure (Bryan 1973, p. 9).

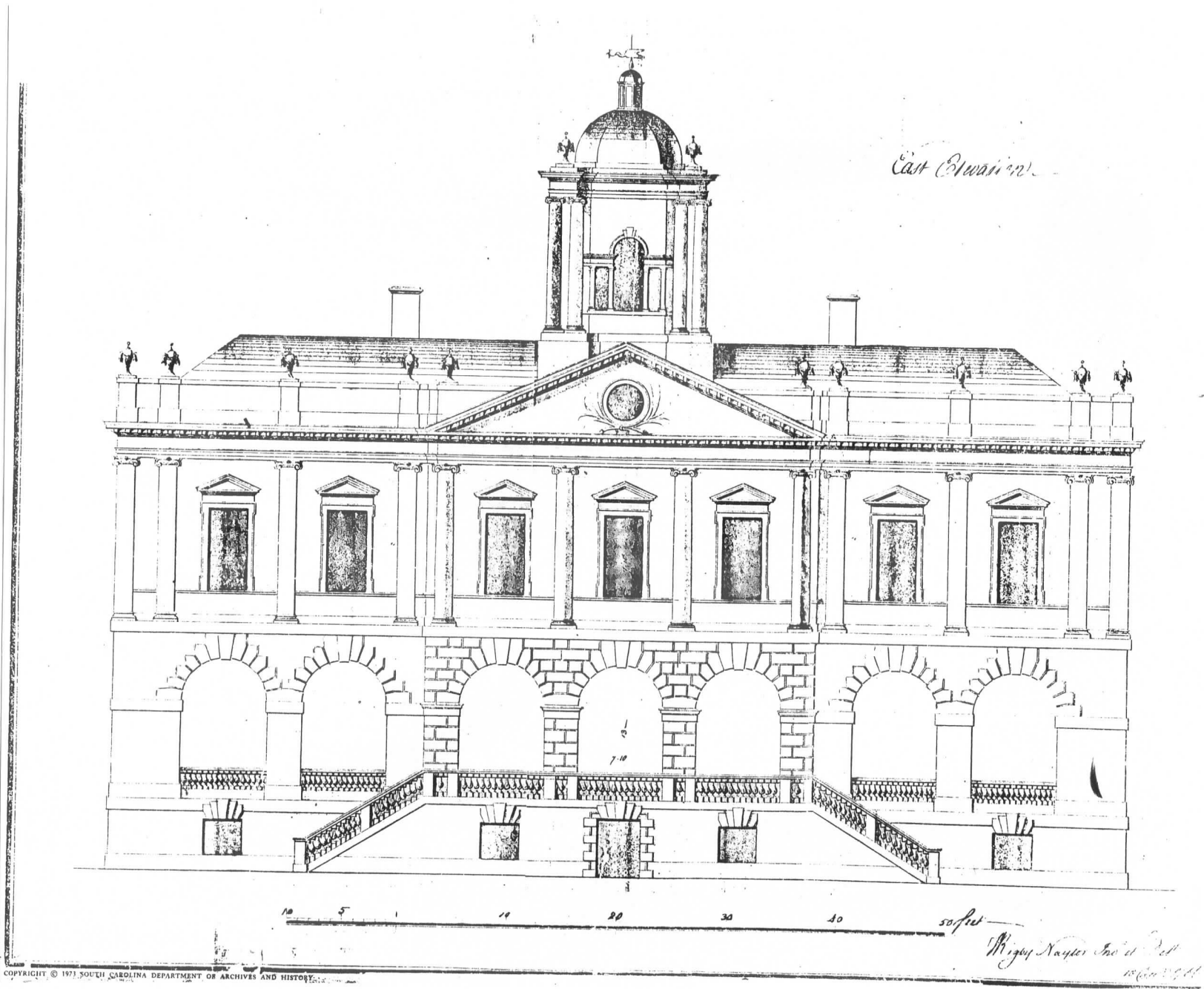


Figure 4. William Rigby Naylor's plan for the east side of the Exchange Building, 1766. From a 1973 reproduction by the South Carolina Department of Archives and History.

HISTORY OF THE BUILDING

The history of the Exchange Building has been discussed in some detail in two papers from the South Carolina Department of Archives and History (Califf 1973; Bryan 1973) as well as the 1898 Yearbook of the City of Charleston and a paper by the Rev. William Way (1921). Briefly summarized, plans for the Exchange Building were approved in March and April, 1767 (Bryan 1973, p. 9-10), apparently based on a plan drawn by William Rigby Naylor, an architect. In December 1767, the contract between John and Peter Horlbeck, masons, and the Exchange Building Commission was signed (1898 Yearbook of the City of Charleston, pp. 370-376) and in the spring of 1768 John Horlbeck left for England to obtain materials for the building (Bryan 1973, p. 12).

The contract specified that the foundation of the building was to be of "brick and mortar, 92 feet from north to south and 65½ feet from east to west" (1898 Yearbook of the City of Charleston, p. 371). This width apparently included the towers which were to be on the west side of the building and project out into what is now East Bay Street, but not the platform on the east side -- if we compare measurements in the contract, the present building and the dimensions of the Naylor plan (Figure 11). Naylor's plan called for a porch on the east side of the building six feet wide, approached by stairs coming up from the north and south sides (Figure 5) and his total depth of the building was 74 feet (Scaled from drawing).

The contract stipulated that Portland stone be used for the steps, handrails, bannisters, and rustic work in the center of the east and west fronts of the building as well as the coping on the parapet. It specified that purple stone be used for flooring the piazza (the first floor above ground). Welsh Carnarvan slate was to cover the roof and the windows were to be glazed with London crown glass (1898 Yearbook of the City of Charleston, p. 371-372). All of these materials as well as brass and ironwork were to be imported from England (Way 1921, p. 4).

It was anticipated that the building would be completed in May 1771 (Bryan 1973, p. 13). Before it was finished, however, there was a fire which damaged the roof and made repairs and some repainting of the cornice necessary (Way 1921, pp. 5-6). The building was completed before the end of 1771, for the Horlbeck brothers received final payment on December 24, 1771 (1898 Yearbook of the City of Charleston, p. 357). At that time there were two towers on the west side of the building which projected out into Broad Street, and a porch on the east facade.

The contract for the building also required that there be 30 feet on the south, east and north sides of the building for a public street (1898 Yearbook of the City of Charleston, p. 363). Thirty feet existed between the main part of the east wall of the Exchange Building and the buildings to the east in December 1979, but 2.5 feet less than that if one measured from the farthest east portion of the building. This distance would be even less if we include the width of the original east stairs and porch, according to the plan. This

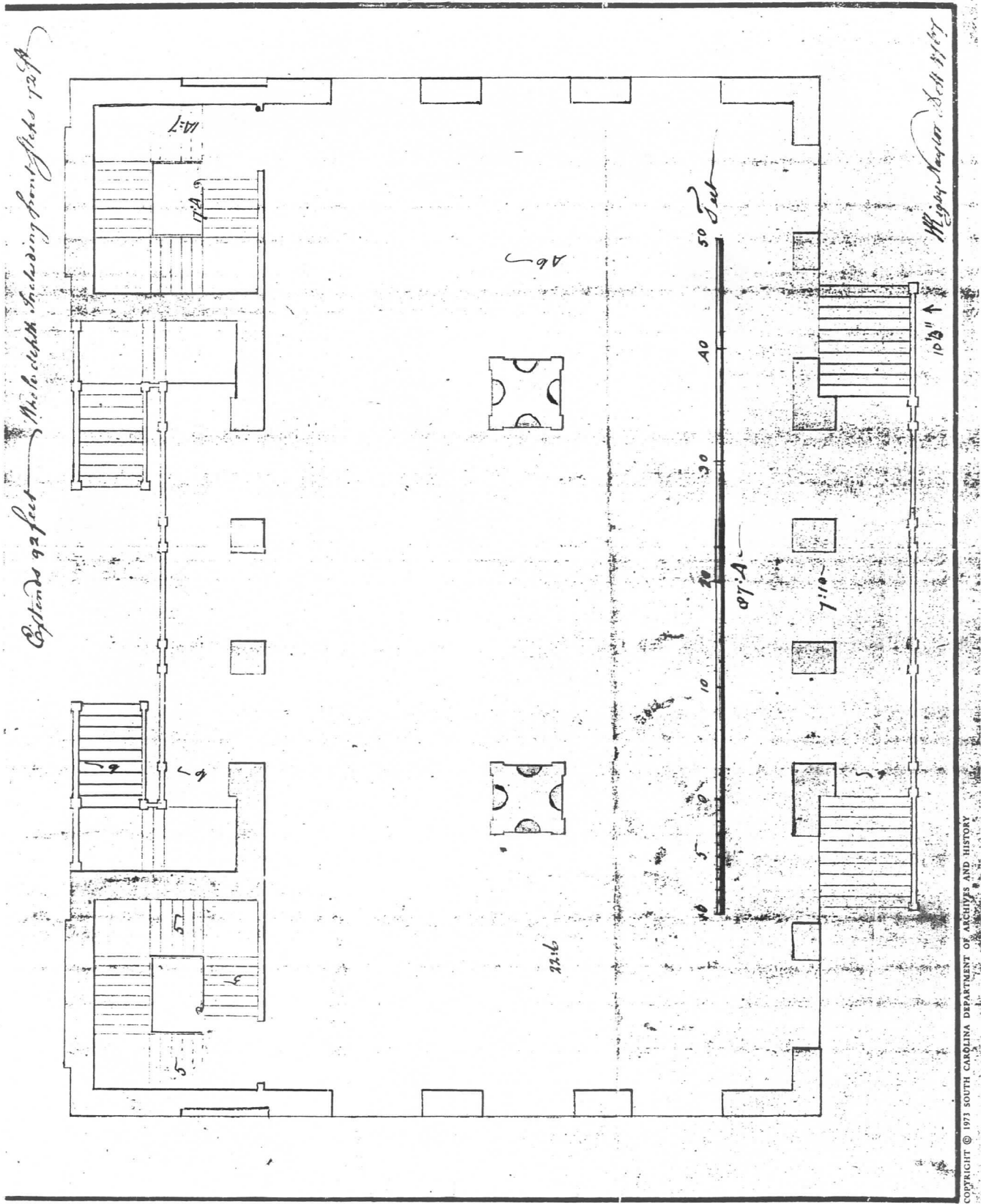


Figure 5. William Rigby Naylor's plan for the first floor of the Exchange Building, 1767. From a 1973 reproduction by the South Carolina Department of Archives and History. Scale transferred from the plan for the second floor.

is assuming that the present building line on the east has remained the same since the late eighteenth century, which several maps suggest (Figures 6, 8, 9, 10). The 1817 plat of the property (Figure 8) indicates that the east porch was twelve feet four inches wide at that time, making the distance between it and the building to the east seventeen feet, eight inches. The street is recorded on the plat as thirty feet wide, so apparently the width of the porch was not considered.

Not too long after the completion of the building, it became necessary to modify it. As the city grew and traffic increased, East Bay Street was widened. Califf (1873, p. 4) reports that although plans were made for the widening of the street in 1787, the towers or stair bays on the west side probably were not removed until some time between 1805 and November 1817, when another plat shows they were gone (Figure 8). A recently discovered advertisement in the *City Gazette and Daily Advertiser* requested bids for the removal of the towers and replacement of the stairs on August 16, 1800. The appearance of the building on a map of Charleston at the South Carolina Historical Society suggests that the towers had been removed by 1802 (Figure 7).

The 1817 plat indicates that the porch on the east side was still in existence, but the north and south staircases approaching it are not shown. Considering the care that the surveyor, John Wilson, took to draw the stairs on the west side and to measure the building, one wonders if it is possible that the stairs had been removed by then and that there no longer was access to the open piazza or arcade on the first floor from the street. The porch was gone by 1837, when another plat of the area was drawn (Figure 9).

Another change in the appearance of the building was the enclosing of the arches of the arcade on the first floor. Bryan (1973, p. 20) believes they were open until at least 1826, and cites an engraving dated 1857 which shows that the openings had been glazed by that time. Perhaps the arcade was enclosed when the building was remodeled in 1843 (Way 1921, p. 8).

The other most visible change in the building concerns the cupola on top. The original one was removed before 1817. Its replacement, designed by Charles Fraser, was put up in 1835 and remained in place until the 1886 earthquake damaged the building, when it, too, was taken down. At this time the parapet and the urns which ornamented it also were removed (Bryan 1973, p. 29). Two of the urns remain today in a garden in Charleston (Figure 12).

When the Exchange Building was built, it was used for meetings as well as for commercial purposes (Way 1921, pp. 9-10), and the cellars below were rented out (1898 Yearbook of the City of Charleston, p. 368). During the Revolution, a number of Charleston patriots were imprisoned there by the British (Way 1921, pp. 11-13). In 1783, the building became the property of the City of Charleston, and after the State House burned in 1788, the House of Representatives met there. On May 4, 1791, a ball was given for President Washington who was visiting Charleston on his tour of the South (Way 1921, p. 15).

In 1818, the building was sold to the Federal Government (RMCO Book W8, p. 431). It housed the Post Office and the Custom House, and at the end of the century housed the Light House Department. In 1917, it became the property of the Rebecca Motte Chapter of the Daughters of the American Revolution (Bryan 1973, pp. 27-32; Way 1921, pp. 9-18).

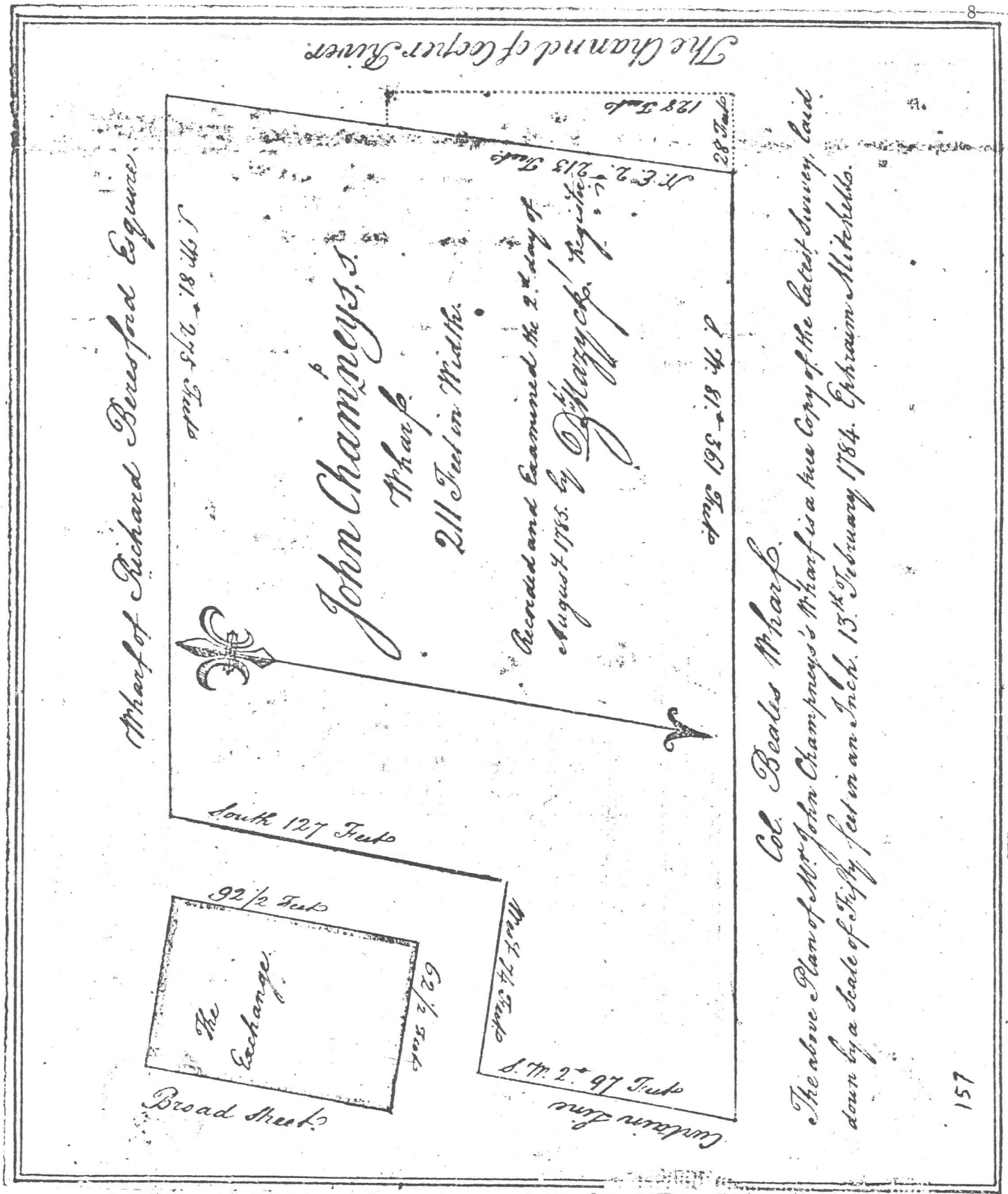


Figure 6. A plat of John Champneys' wharf and the adjacent Exchange Building, drawn by Ephraim Mitchells, Feb. 13, 1784, recorded August 4, 1785. (RMCO Book P5, p. 307).



PLAN OF THE CITY OF CHARLESTON SOUTH

Engraved by G. Bonnor.

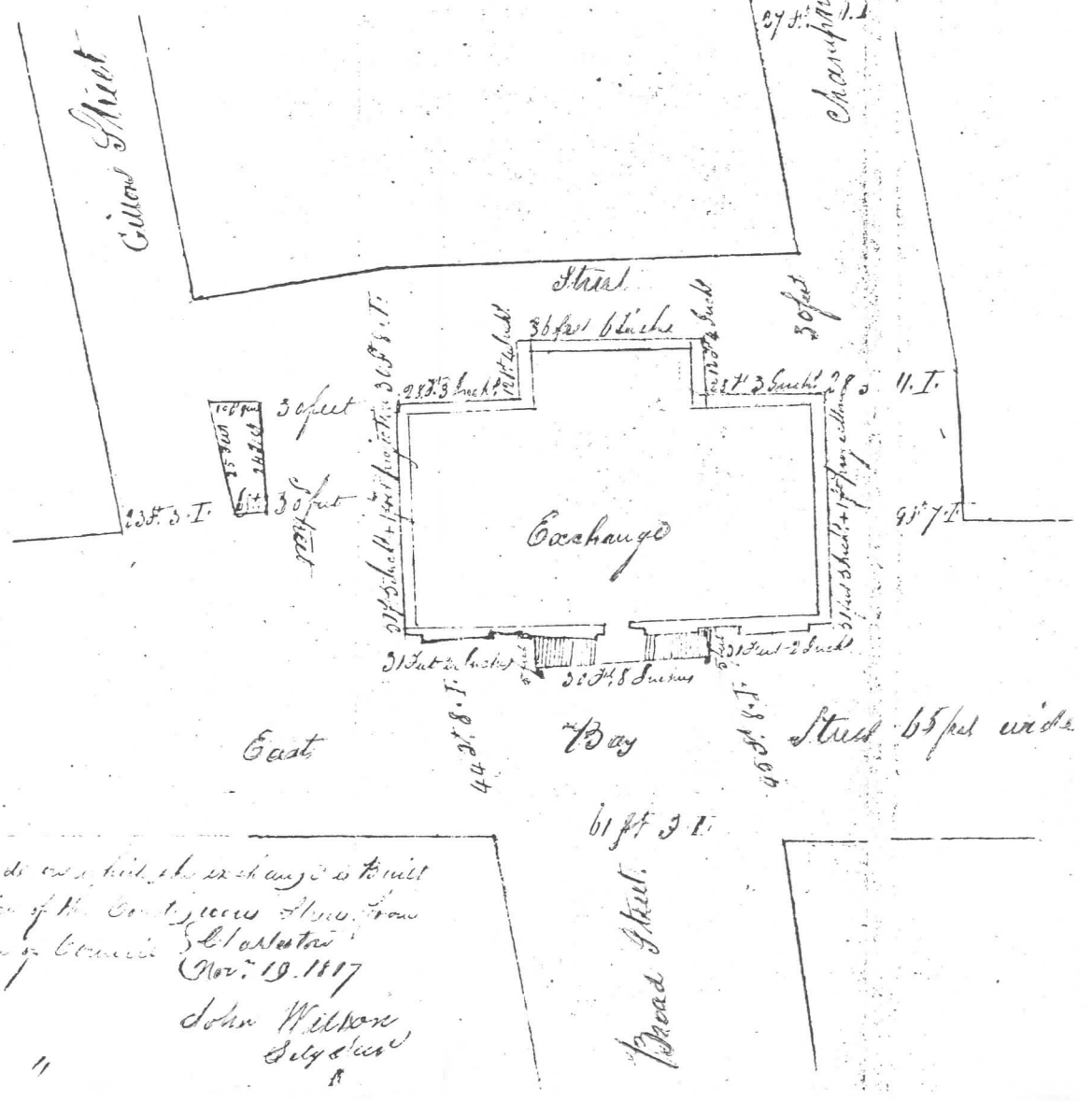
Figure 7. A portion of the 1802 map of Charleston engraved for the patrons of J. J. Negrin's Directorial Register and Almanac showing the Exchange Building at the foot of Broad Street. In this map the towers on the west side appear to have been removed and replaced by stairs. The original of the map is at the South Carolina Historical Society.

Further same conveyance
in Charleston District

I do hereby certify this plat to be duly recorded
in Book W 8's page 231 and Examined this 19th Feb 1818

W 8. 431

W B Tucker. Ryf



A plan of the lands on which the exchange is to build
with the situation of the Court house shown from
a survey by order of Council Charleston
Nov. 19. 1817

John Wilson
Surveyor

Figure 8. A plat of the Exchange Building dated November 19, 1817 by John Wilson and recorded with the deed conveying the building to the Federal Government in 1818. (RMCO Book W8, p. 431).

SOURCE	Length of building	Width of building	Width of west steps	Width of west tower	Width of east steps	Width of east porch	Width of street on east side
Naylor drawing, 1767 (Fig. 5)	92 ft.	51 ft. + 1.5 ft. for east projection		15 ft.*	8.5 ft.*	8.5 ft.*	not given
Specifications in contract (1898 City of Charleston Yearbook)	92 ft.	65½ ft.		no data	no data	no data	30 ft.
Actual building (1979-80)	93 ft.	51.5 ft. + 2.5 ft. for east projection	6 ft.	gone	gone	9.3' to outer edge of support wall + 3'+ width of Feature 2	30 ft.
1784 plat (Fig. 6)	92.5 ft.	62.5 ft.	no data	no data	no data	no data	28 ft.*
1817 plat (Fig. 8)	93 ft.	51.5 ft. + 1 ft. projection in front	5 ft.	gone	not shown	12' 4"	30 ft.
1837 plat (Fig. 9)	92 ft.*	50 ft.*	7.5 ft. *	gone	gone	gone	30 ft.
1902 Sanborn map (Fig. 10)	92.5 ft.*	50 ft. *	no data	gone	gone	gone	30 ft. *

* Measurements scaled from drawings

Figure 11. Comparison of Measurements of the Exchange Building.



Figure 12. A stone urn reported to have come from the top of the Exchange Building, now in the garden of Mrs. Robert N. S. Whitelaw, Charleston.

ARCHAEOLOGICAL RESEARCH

The first archaeological research at the Exchange Building was conducted in 1965 by John Miller who excavated inside of the building between the east wall and the exterior of the sea wall at the Half Moon Battery in an effort to determine if the wall footings were similar to those found at the Granville Bastion by Samuel Lapham (C.H. Bissell, personal communication; Lapham 1925, pp. 221-27). His excavation extended down to the bottom of both walls. Much of Miller's collection is now at the Charleston Museum along with his notes (Exchange File, Charleston Museum). A minimal amount of digging was done some time later to locate the base of the stairs on the east side (C.H. Bissell, personal communication). A summary of the artifacts Miller recovered is presented in Appendix III.

Two other activities produced information on the depth of fill on the east side of the building. When plans were being made for the renovation of the Exchange in 1977, two borings were taken of the soil. One was 22 feet south of the northeast corner of the building and 10.5 feet east of it, the other was 20 feet north of the southeast corner and six feet east of it. Both produced some brick fragments as far down as 14.5 feet. The southern boring also recorded some wood at that depth (Soil Consultants logs of borings, 1977).

In the fall of 1979, when the pilings were put in to support the towers, the line of pilings on the south side of the site encountered a layer of wood at a depth of twelve to sixteen feet below the surface. We do not know what it was, and none of it was saved. However, Gordon Williams (personal communication) who reported it, stated that the drill would not penetrate the wood, and it was necessary to punch through it. He suggested that perhaps it was some type of planking.

On the basis of evidence from these borings it would appear that there is as much as 16 feet of fill in the area east of East Bay Street which contains some record of human occupation of the Charleston waterfront area. The lower part of this, of course, is below the water level today.

The current archaeological research and recovery program at the Exchange Building began on December 7, 1979, when the author met with Dr. Donald Sutherland and Mr. John Laurens of the South Carolina Department of Archives and History at the Exchange Building in Charleston. The contractor (Charleston Constructors) was ready to dig footing trenches for the tower walls and the area for the elevator pit. It was agreed that archaeological monitoring was necessary in order to recover information about the building. The plan was for the contractor to do the excavating with a backhoe and, as time was short and he was anxious to get ahead with construction, I was to monitor his digging and recover what I could.

The backhoe arrived on December 12, and in a short time it became apparent that the trenches and elevator pit could not be dug with mechanical equipment. There was too little space between the Exchange Building and the next building to the east, and the steel pilings were also in the way. The con-

tractor was forced to have the digging done by hand, and once the soil was removed, it had to be loaded by hand into the truck which would haul it away. The project took much longer than had been anticipated, but the result was that more information and a great many more artifacts were recovered. This portion of the excavation was completed by May 1980.

In the following sixteen months several service trenches were excavated by the workmen on the north, east and south sides of the building and some work was done in the cellar. All of this work was monitored as well.

A little archaeological research was conducted inside the building as part of this project. In January 1980, the sand fill placed above the arches, below the flooring on the first floor of the building was tested. I also monitored the removal of a part of the stone flooring along the east wall of the center section of the first floor of the building in October 1980. In September 1981, shallow trenches were excavated in the cellar floor for electrical lines. These excavations were also monitored and at that time the location of the exposed portion of the half moon battery was also recorded. This work is discussed in more detail later on.

METHOD:

Actual hand excavation began in the elevator pit in the southern part of the area east of the building. The initial hole with the backhoe near the center of the elevator pit had revealed several layers of fill in the upper part of the deposit. We were able to hand excavate and/or screen samples from each of the upper levels and thereby obtain small, but controlled samples of artifacts from them. While we proceeded with the controlled samples in the elevator pit area, the workmen continued with the excavation of the footing trenches to the east of the elevator pit in Section I (Figure 13). Upon completion of the southernmost trench and the east footing trench in Section I, profiles were drawn and the stratigraphic layers for the site were defined. No arbitrary grid was established for the site, and time did not permit controlled test squares to be excavated. We did work within the framework of the contractor's footing trenches, however, and horizontal location of artifacts was recorded using that frame of reference. The water table on the building was used as the datum plane and depths measured from it.

Once the elevator pit was excavated, work progressed somewhat more rapidly, depending on the weather and the availability of the crew. In a few instances when I wanted more time to work on archaeological problems -- as in the area of the brick paving, the stairs on the north and south, and the central entrance to the cellar, the contractor permitted me to proceed at my own speed, employing his crew elsewhere on the site. Where additional manpower was needed for special archaeological problems, he cooperated fully, making men available. The success of the project is due in no small measure to the amount of cooperation received from the crew who worked for Charleston Constructors and Gordon Williams, the superintendent.

In some cases, particularly in the lower levels of the site north of the elevator pit, part of the excavation of the trenches was done with air hammer and control of data was not as good as one would have wished. The majority of trenches were profiled, however, providing a good record of soil deposition and construction in the area. Throughout most of the area, trenches were dug

to a depth of 7.5 feet below datum, or approximately 5.5 feet below the surface. In the area of the elevator pit the trenches went to a depth of 9.5 to 10.0 feet below datum or 7.5 to 8.0 feet below the surface.

Most of the actual excavation for the building was done in December 1979, and January to April 1980. There were delays at times when they were getting ready to pour footings, or waiting on brick masons to complete one section before going on to another. The final profiles in the northern part of the area were not completed until late in May 1980.

In August 1980, a trench for a water line was excavated across Gillon Street, and a profile was drawn and a few artifacts were collected from it. Other trenches for drain and electric lines on the north, east, and south sides of the building were excavated in April, May and June 1981, and these excavations were monitored as well. Some artifacts were collected and profiles were drawn.

Part of the cleaning and processing of artifacts from the excavations began at the Museum in February, but most of the cataloging was done in late spring and early summer 1980, and after that as needed. Those wood and textile fragments which required it were specially treated for preservation.

In addition to the recently excavated material, the artifacts excavated by John Miller in 1965, now at the Museum on loan from the Rebecca Motte Chapter of the Daughters of the American Revolution and the Old Exchange Building Commission were also classified and cataloged in the spring and summer of 1981. These collections are summarized and discussed briefly in Appendix II. All of the Exchange Building collection is now housed at the Charleston Museum.

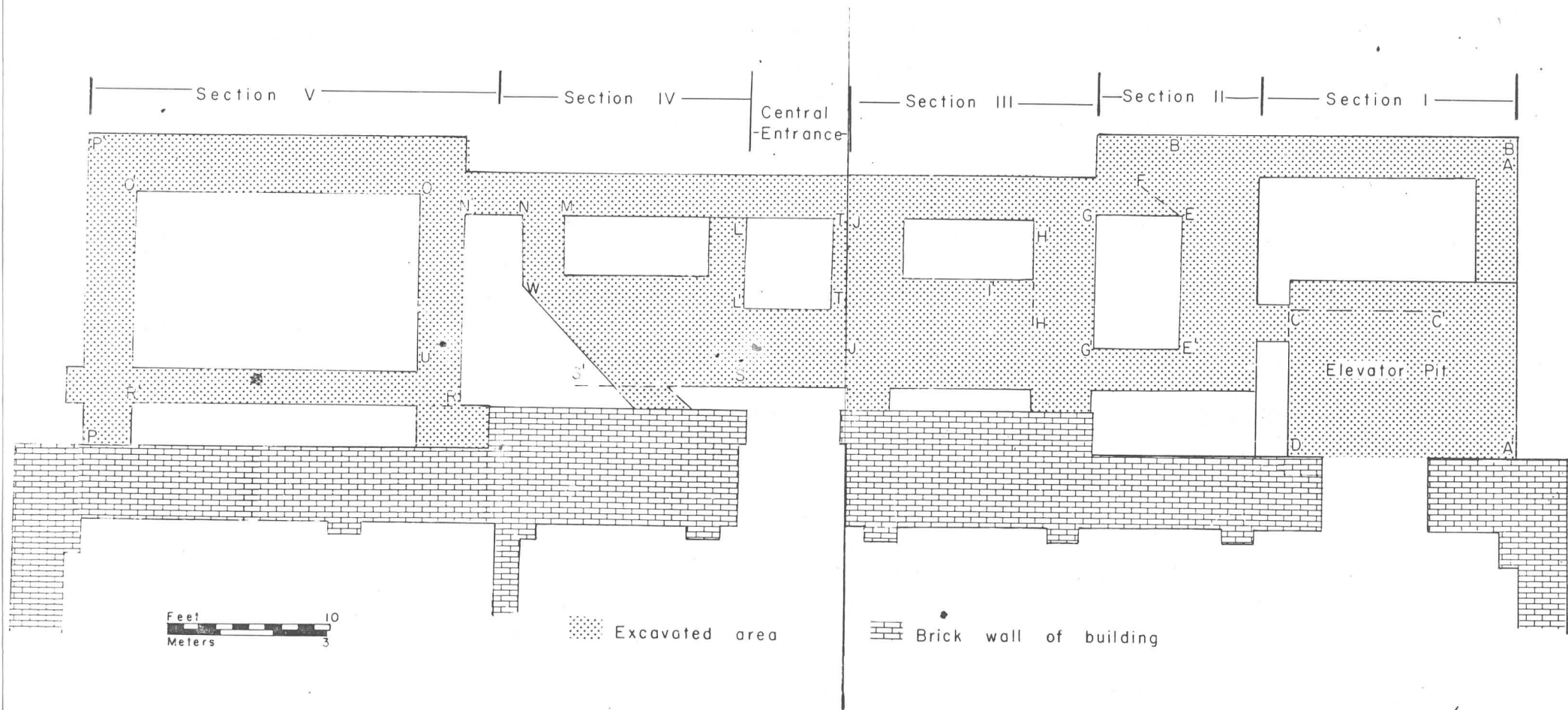


Figure 13. Plan of the east side of the Exchange Building showing the area excavated in 1979 - 1980.. Letters on the plan refer to profiles drawn during the study.

RESULTS OF THE EXCAVATIONS

The archaeological excavations on the east side of the Exchange Building revealed the record of the sequence of events which took place prior to, during and after the construction of the building. Included in this record is information about the construction of the east side of the building. The artifacts found assist with the dating of the sequence of events.

STRATIGRAPHY: The soil profiles (Figures 14-19) of the footing trenches, particularly those from trenches perpendicular to the building, reveal several layers of fill deposited before and after the Exchange Building was constructed. All of the soil was sandy, varying in color and composition partially as a result of the contents. Significant strata at the site were:

a) The lowest layer encountered during the excavation was a very dark grey to black layer, much of which was cemented together with pine pitch. In the layer were wood, grass, cloth, leather and some other artifacts. When first excavated the soil had a strong, pungent "creosote-like" smell. It was difficult to excavate the layer, as much of it had the consistency of hard rubber and only a pick would cut through it. Wood shingles were concentrated in the upper part of the layer in the elevator pit area. There were some small lenses of softer sandy soil and artifacts within it indicating that the penetration of pine pitch was not always uniform nor complete.

Preserved in the layer, particularly at the south end of the Elevator Pit where most of the information on the layer was found, were parts of barrels, wood shingles, wood scraps, wood shavings, and trimmings. The large amount of pine pitch which had been spilled and the number of barrel parts found raised the question as to whether this represented material lost during loading, since it was in the wharf area, or perhaps the result of some disaster.

Examination of Dr. Ramsay's History of South Carolina (1858, p. 180FN) produced an interesting account of the 1752 hurricane:

"The ware houses, scale-houses and sheds upon the wharves, with all the goods in them, were swept away; the solid parts of the wharves much leveled. All the floating materials of the wharves, warehouses and their contents -- naval stores, boards, timber, shingles, staves, canoes, small craft and barrels, were washed up under the curtain line from Lloyd's wharf, now Geyer's, to the place where Cochran's wharf now stands, and from thence to Craven's bastion."

The "naval stores, boards, timber, shingles, staves. . ." is a partial inventory of our lowest layer. A similar deposit was noted about two years ago when a hole was dug for a gas storage tank behind the Exxon Station on East Bay at Elliott Street. At that time it was not possible to examine the exposed soil profile in detail, but the "creosote-like" odor and the presence of at least one cypress log at about the same depth would tend to support the conclusion that similar debris may exist elsewhere along the wharf area.

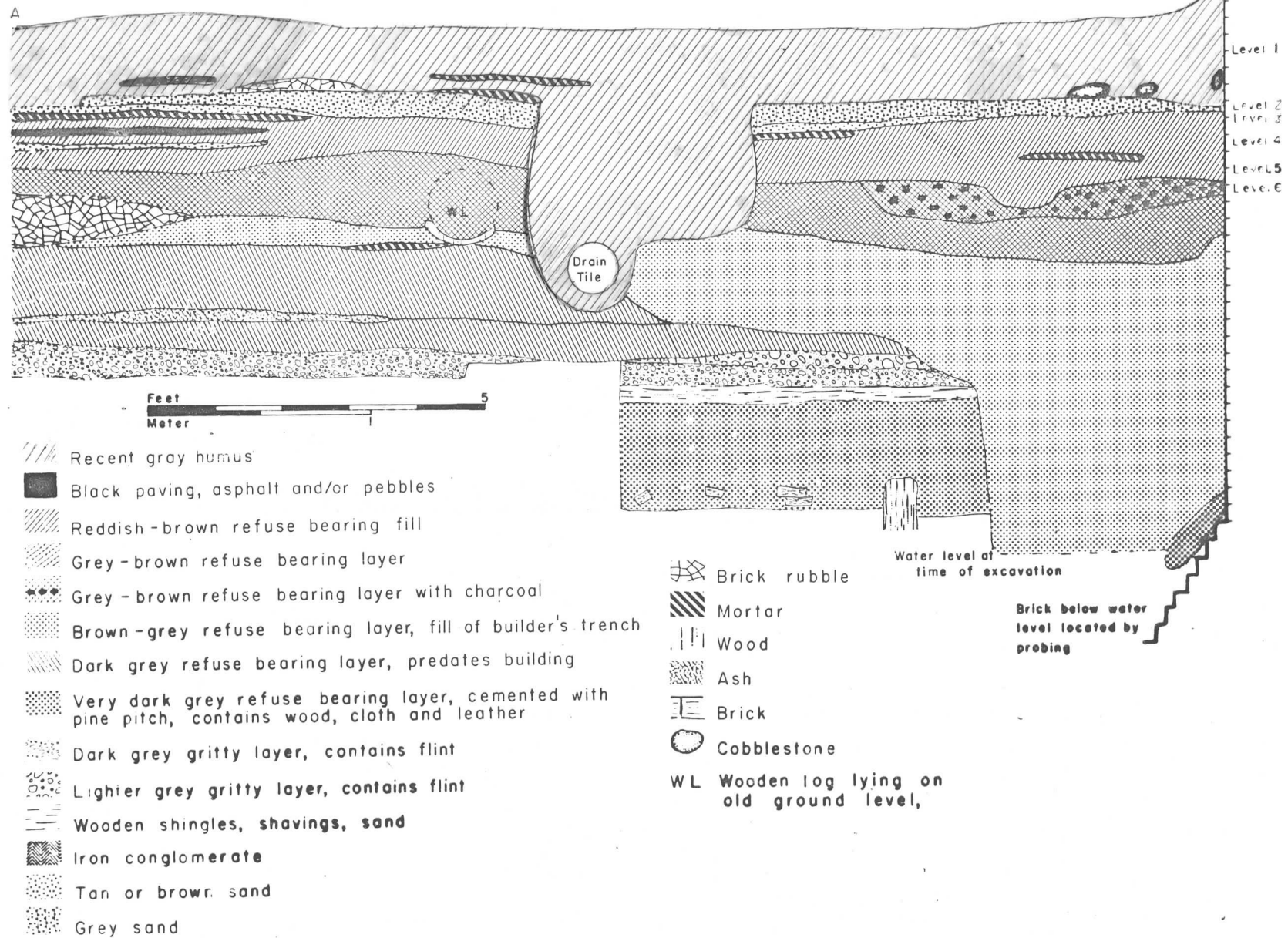


Figure 14. Profile A - A', the south side of Section I and the Elevator Pit on the south side of the site.

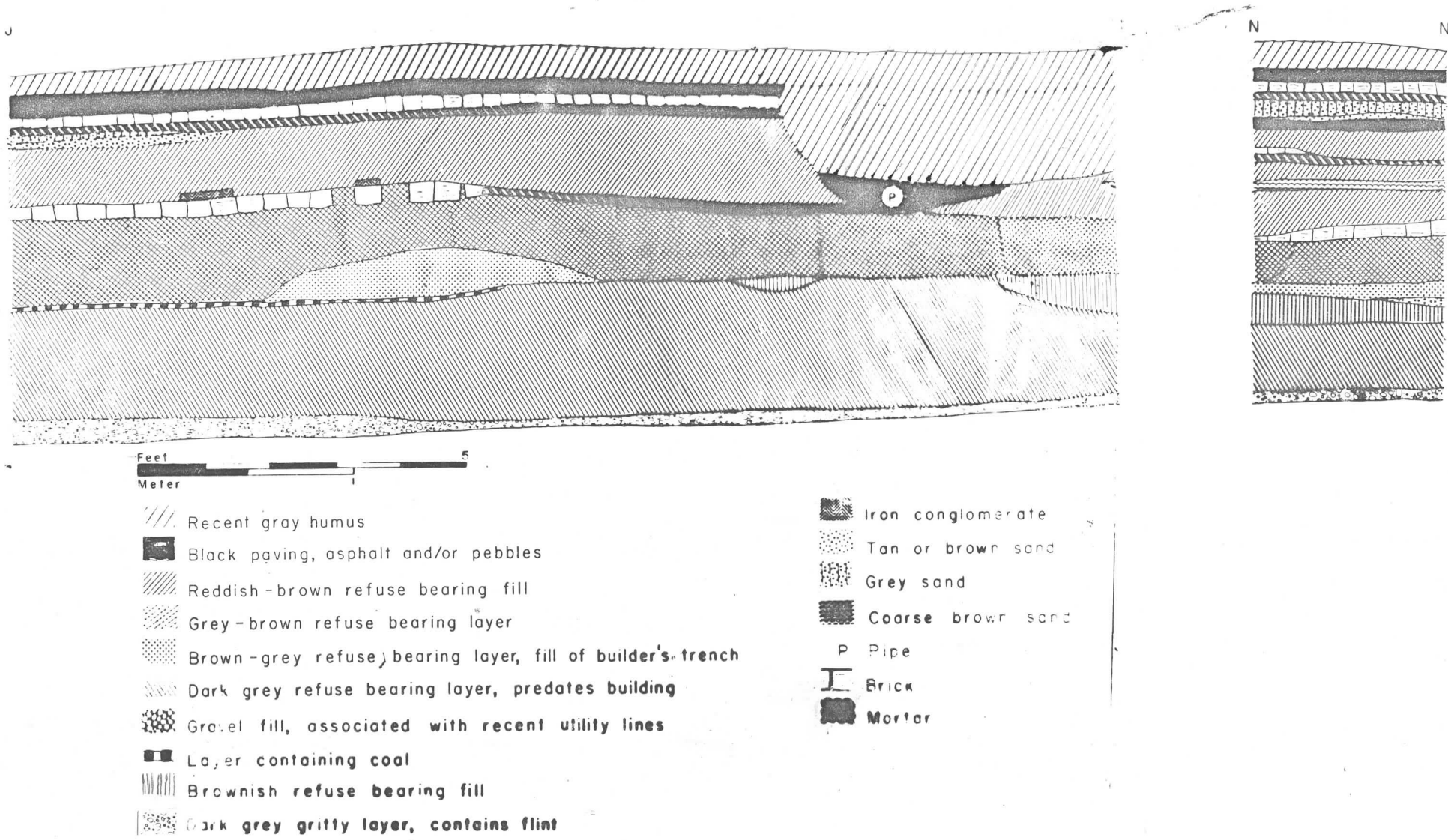


Figure 15. Profile J - M, N - N', the west side of the eastern footing trench in Section IV. The brick paving at the left side is the paving east of the central cellar door.

Profile G - G' South side Section III _____ Datum

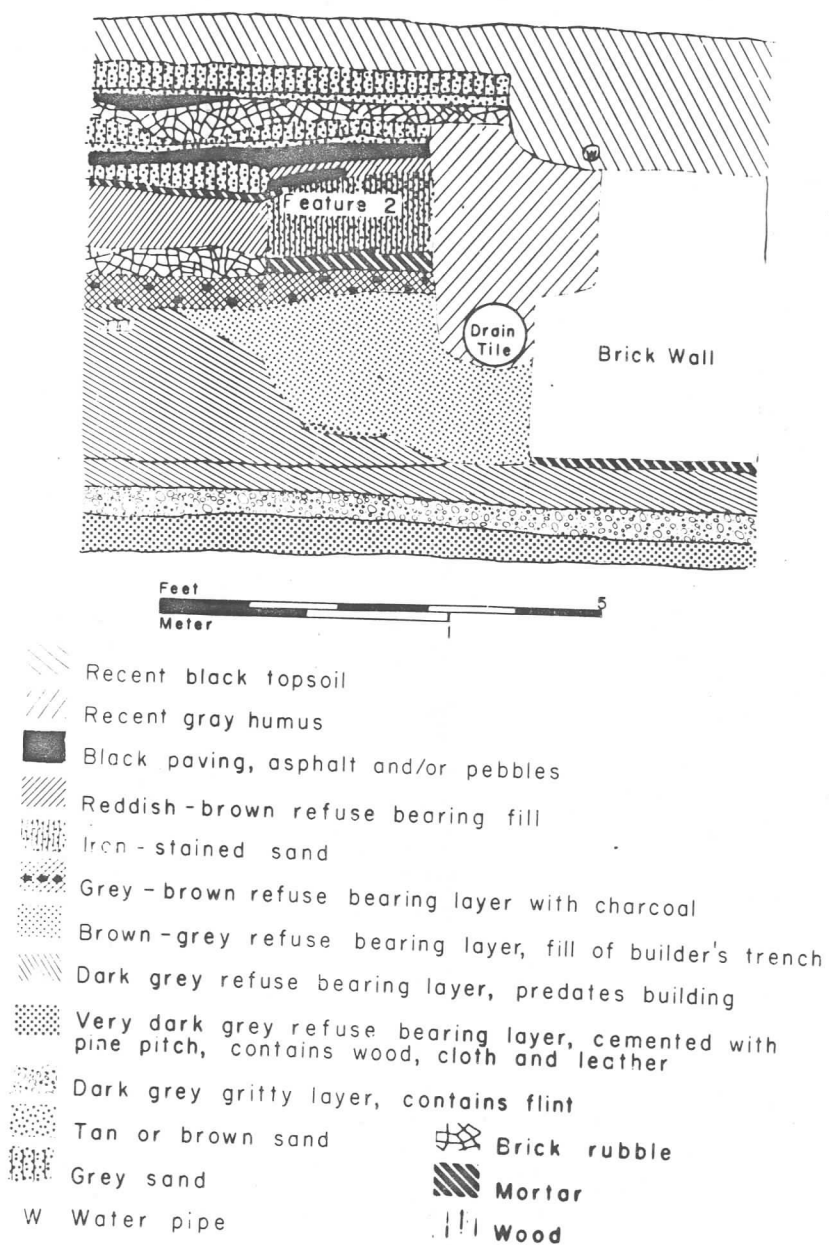


Figure 16. Profile G - G', the south side of Section III, east of the brick wall which supported the porch. Note Feature 2 and the pit for the drain tile which is just east of the wall.

Profile J' - J North side Section III, South of Central Entrance Datum

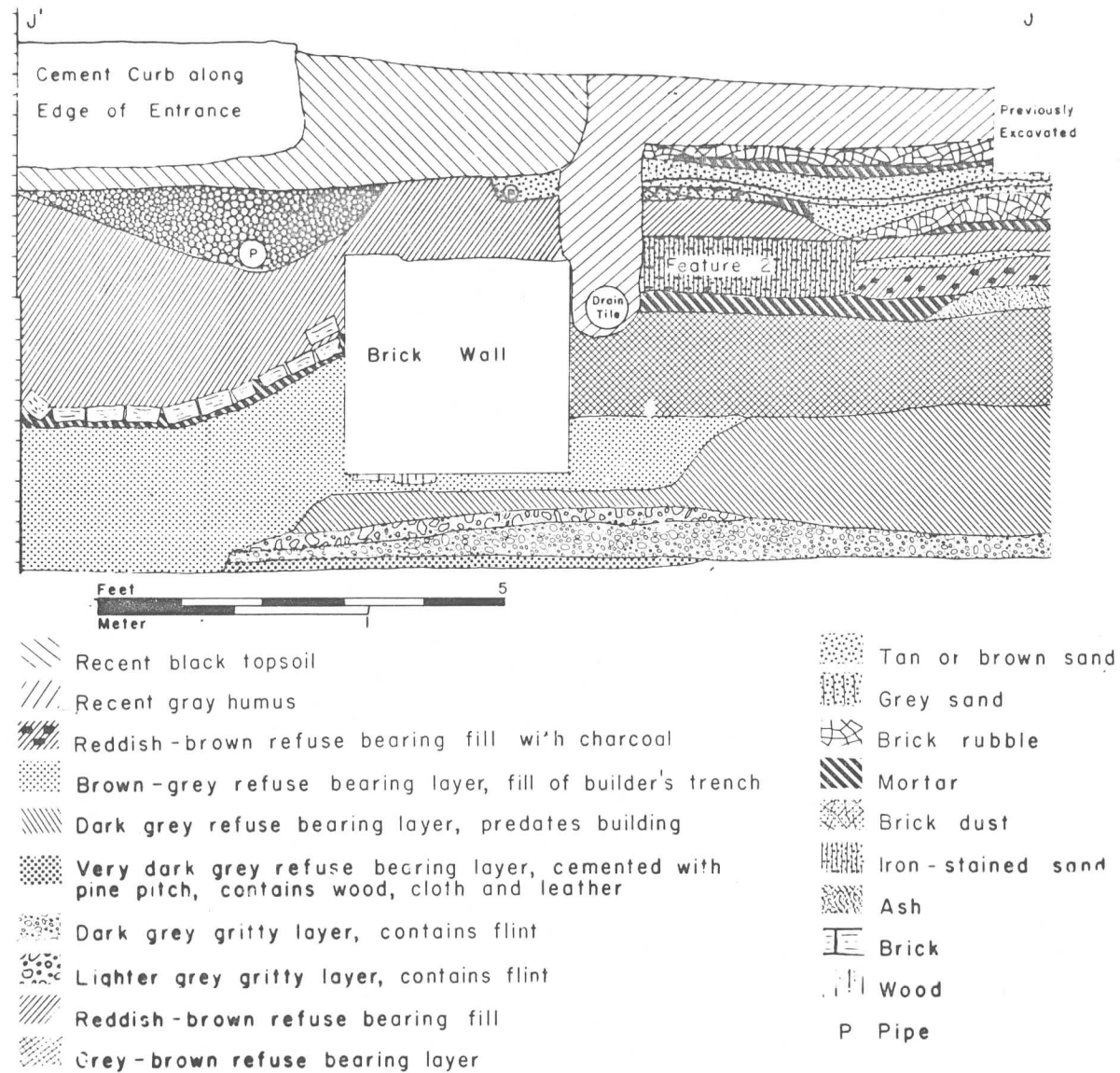
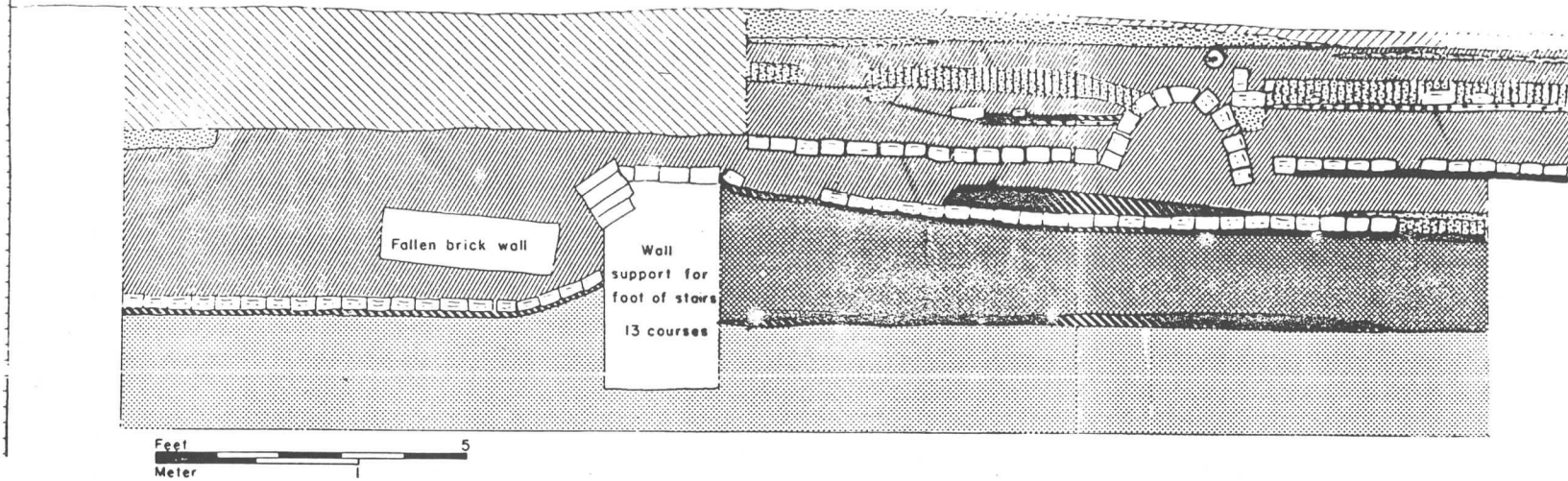


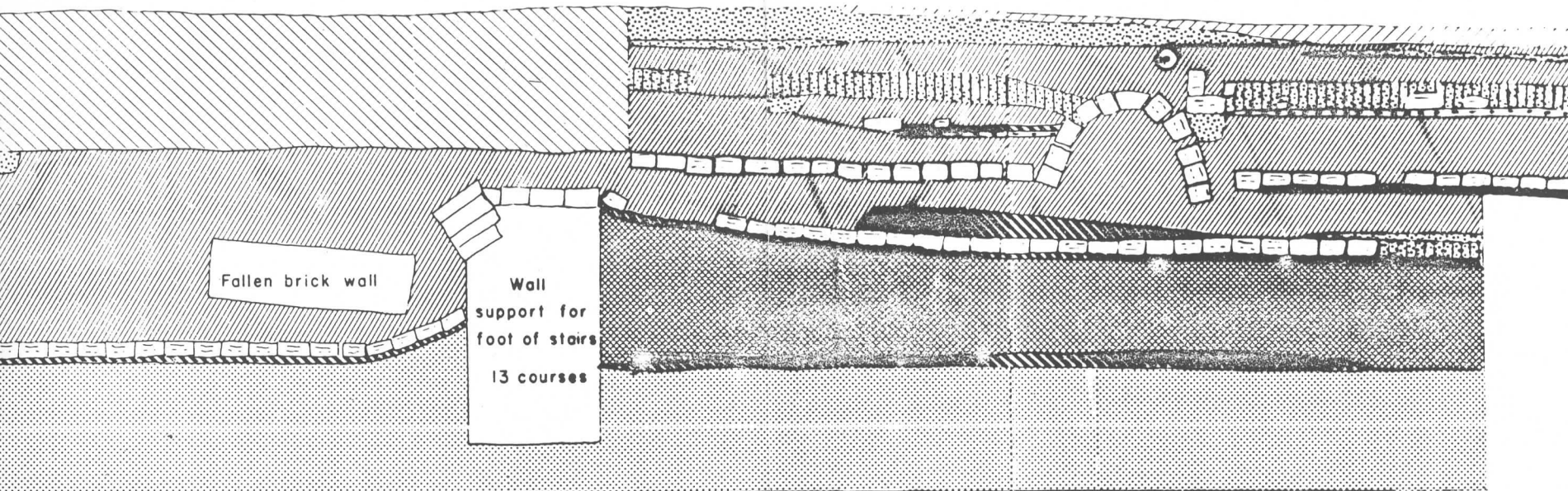
Figure 17. Profile J' - J, on the north side of Section III, just south of the Central Entrance to the Cellar.

Profile R - R' Section V, West side west footing trench, 2 feet from building



- | | | | |
|--|-----------------------------------|--|----------------------------|
| | Recent black topsoil | | Mortar |
| | Recent gray humus | | Brick |
| | Tan or brown sand | | Charcoal |
| | Grey sand | | IF iron drain pipe in wall |
| | Reddish-brown refuse bearing fill | | |
| | Grey-brown refuse bearing layer | | |

Figure 18. Profile R - R', the west side of the west footing trench in Section V, two feet from the building. Profile shows the two layers of paving north of the north stairs and the nineteenth century brick drain.












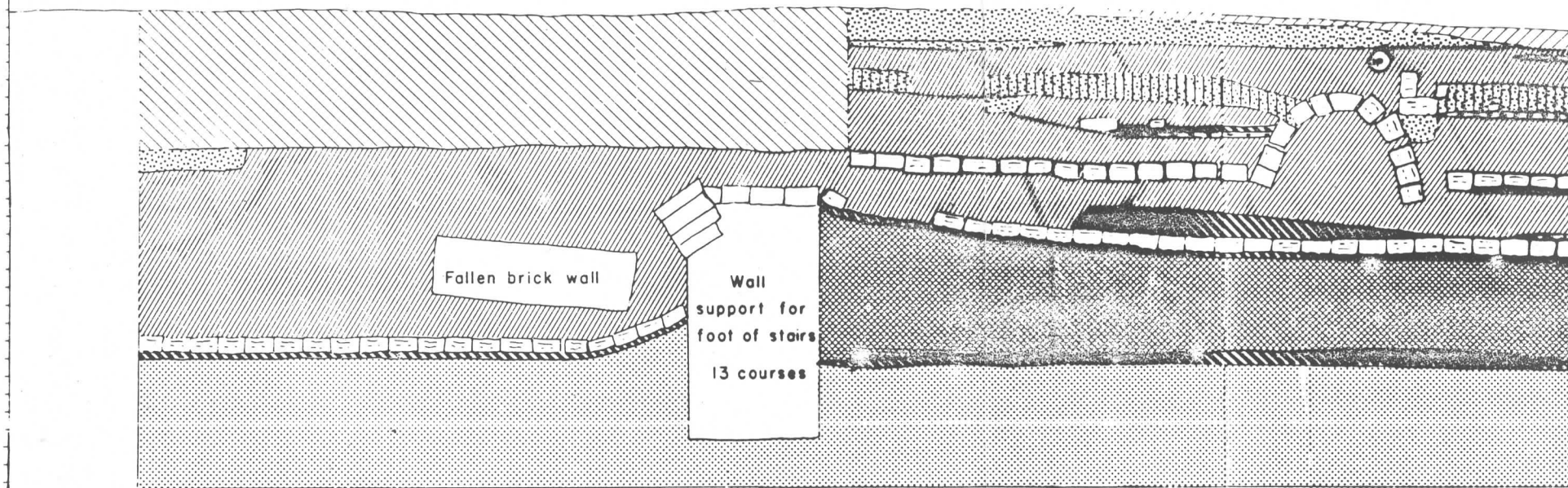
- | | | | |
|---|-----------------------------------|---|----------------------------|
|  | Recent black topsoil |  | Mortar |
|  | Recent gray humus |  | Brick |
|  | Tan or brown sand |  | Charcoal |
|  | Grey sand | | IF iron drain pipe in wall |
|  | Reddish-brown refuse bearing fill | | |
|  | Grey-brown refuse bearing layer | | |

Figure 18. Profile R - R', the west side of the west footing trench in Section V, two feet from the building. Profile shows the two layers of paving north of the north stairs and the nineteenth century brick drain.

Profile R - R' Section V, West side west footing trench, 2 feet from building



Feet 5
Meter 1










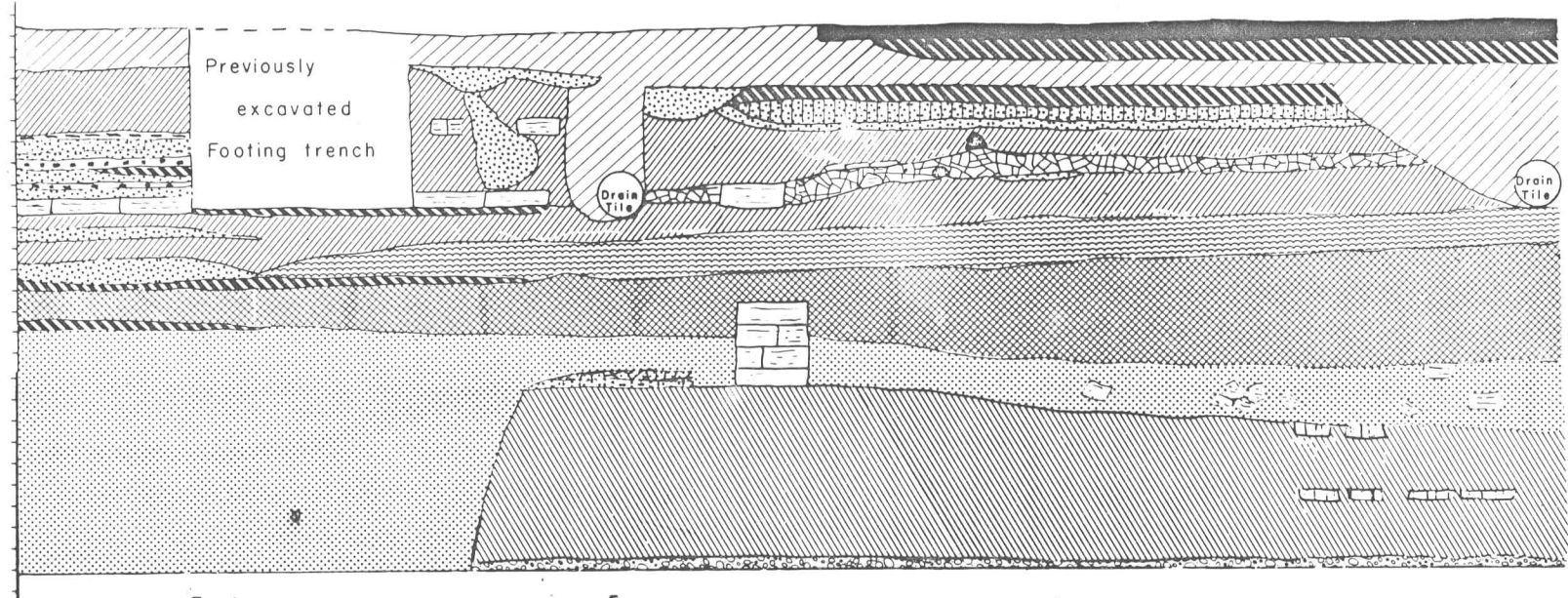
- | | | | |
|---|-----------------------------------|---|----------------------------|
|  | Recent black topsoil |  | Mortar |
|  | Recent gray humus |  | Brick |
|  | Tan or brown sand |  | Charcoal |
|  | Grey sand | | IF iron drain pipe in wall |
|  | Reddish-brown refuse bearing fill | | |
|  | Grey-brown refuse bearing layer | | |

Figure 18. Profile R - R', the west side of the west footing trench in Section V, two feet from the building. Profile shows the two layers of paving north of the north stairs and the nineteenth century brick drain.



- | | |
|---|-------------------|
| Recent gray humus | Coarse brown sand |
| Black paving, asphalt and/or pebbles | Brick dust |
| Reddish-brown refuse bearing fill | Stone |
| Grey-brown refuse bearing layer | Slate |
| Brown-grey refuse bearing layer, fill of builder's trench | Charcoal |
| Dark grey refuse bearing layer, predates building | Brick |
| Dark grey gritty layer, contains flint | Cobblestone |
| Tan or brown sand | |
| Grey sand | |
| Brick rubble | |
| Mortar | |
| Wood | |

Figure 19. Profile P - P' along north side of excavated area, Section V.

In addition to the wood recovered from this layer, there were peach pits, peanut shells, watermelon seeds, some textile fragments, scrap leather and parts of shoes, fragments of feathers and bones and fish scales (Figure 20). Some of these objects were removed during the excavation, but many of the smaller, fragile items were recovered by soaking blocks of earth in turpentine in order to dissolve the pitch and free the items from the residue.

A good sample of potsherds was also included in the level. Types present included delft, Chinese export porcelain, some white salt-glazed sherds, and other types dating in the 1730-1760 range. A mean ceramic date of 1738 was obtained, which is earlier than the hurricane date, but the fill solidified in the pine pitch would be expected to predate that event.

b) On top of the very dark layer, across the site was a coarse, sandy, gritty layer containing a high concentration of flint nodules. This deposit was encountered at about the bottom of most of the footing trenches. Only in the elevator pit was the excavation extended far below it. The gritty layer probably is a beach deposit, or water washed layer, similar to what is seen at low tide today. The flint is dark grey and may be discarded ballast. Ship's masters were permitted to dump ballast at the foot of Broad Street as early as 1692 (McCord 1840, p. 6).

c) On top of the gritty level was a dark grey refuse-bearing level which also predates the building, as it extended up to but not into the builder's trench. This was a fairly compact refuse-bearing stratum which probably represented the surface level at the time the excavation was begun for the builder's trench for the Exchange Building.

The one hand-excavated sample from this level came from below the wall in the south side of Section III. It produced the usual occupation debris -- fragments of bottle and window glass, pipe fragments, flint, slate, iron, etc. Ceramic types present in the sample include Chinese export ware, white salt-glaze, delft, Westerwald-like, and creamware. The mean ceramic date of 1740 from the level seems a little too early in view of the fact that 21% of the ceramic assemblage is creamware with a beginning date of 1762. Most of the other types have a longer life span, covering most of the eighteenth century, and a more reliable date for the level would fall in the 1760's.

d) The next stratum of soil is the brown-grey fill containing some refuse -- mortar, brick, slate, sherds, etc. -- which was deposited to fill the builder's trench for the building after the wall was constructed. There were occasional pieces of wood and leather in this deposit. Part of it undoubtedly came from dirt displaced by the building. Some mortar and rubble may have come from the construction. The mean ceramic date from the level is 1733, which would suggest that the fill came from an earlier deposit.

e) This is a grey-brown refuse-bearing fill deposited after the builder's trench for the building was filled in. This presumably is fill put in to level the area before paving around the building. It also contained some wood, leather and cloth.

In some places the upper part of this level had a quantity of charcoal scattered in it which may represent a deposit dating from the fire which damaged the roof of the Exchange and required the repainting of the cornice. One part of this level was designated Level 6 in the south side of the elevator pit (Figure 14), and a controlled sample was excavated from it.

In Level 6 was the usual debris -- broken glass, bottle fragments, iron nails and a ceramic collection which included delft, Chinese export ware and Westerwald ware, but the predominant pottery type was cream ware. The mean ceramic date for the level is 1772, which is just after the Exchange Building was completed.

f) This stratum of reddish-brown fill is later than the building period of the Exchange. It, too, contains refuse, including pottery, glass, brick, etc. It was deposited over a period of time as layers of mortar, representing successive layers of paving east of the building are noted in it.

In the initial excavations in the southwestern part of the Elevator Pit this stratum was divided into two layers -- designated Levels 4 and 5 (Figure 14). The sample from Level 5, the lower part, is small with a mean ceramic date of 1772. The upper part, Level 4, with a much larger assemblage, had a mean ceramic date of 1776. Cream ware is the most important type here, but pearlware types are present in significant amounts.

The remaining upper part of the fill includes successive layers of paving, some of which consisted of brick and shell mortar, now brick rubble, and occasional levels which contained small pebbles and oil or an early asphalt, and layers of almost sterile sand washed in or deposited as fill. Intruding into this were trenches for water, drainage or other utility lines which were filled with grey sandy soil, or in some cases, loose gravel. Close to the building, recent deposits of sterile black topsoil date from more recent landscaping efforts in the area during the period when the dungeon area was open to the public as a museum.

The only controlled samples obtained from any of these upper levels were recovered from the southwestern corner of the area, in the top of the Elevator Pit. A small sample was obtained from Level 3, a washed sandy area, probably an old surface. Very few sherds were recovered from the thin layer, and all are late eighteenth to early nineteenth century types -- cream ware and decorated pearlware. The mean ceramic date is 1804.

The grey sandy fill layer above, Level 2, produced a larger amount of refuse. Cream ware and pearlware were the predominant pottery types, and the mean ceramic date was 1787. The layer also produced broken glass, nails, slate, and flint refuse.

Level 1, the upper grey humus level, contained a variety of materials as well, but less than that found in Level 2, considering its thickness. The small ceramic sample had a mean date of 1784.

It is very likely that all three of these layers are later than the mean ceramic dates for them. The mixing of earlier ceramics in the layers is inevitable, considering the amount of digging for utilities, gardening, etc., which has taken place in the twentieth century.

FEATURES: Two features were noted and recorded during the excavation in addition to the builder's trench for the building, which was considered part of the stratigraphy.

Feature 1: a post mold located 0.5 feet east of the east supporting wall and 4.0 feet north of the south jog in the building in Section III (Figure 16). It was 0.8 feet across and about 1.4 feet deep, flat-bottomed, ending at the cemented pine pitch layer. It appears to date from the construction period, as it had been removed and filled along with the builder's trench east of the wall.

Feature 2: (Figures 16, 20) was found along the east side of the support wall. It was 0.6-0.8 feet deep, 2.6 feet wide, and cut on the west side by a trench for a drain line dug in recently along the wall. It was designated "iron feature" when first noted in several profiles, because the sandy soil in it had a reddish-tan, iron oxide colored stain. In the sand were a number of badly corroded iron pieces. In the section of the feature south of the central entrance, a black line was also noted along the west side. A sample of the black soil was collected and it was found to be magnetic, resembling the "mill scale" debris one finds in a blacksmith shop area where iron is worked. The bottom of the feature rested on the shell mortar paving, and in the sand were many small water-worn pebbles, the type of debris frequently found in a drip line along a building, and a considerable amount of broken glass as is often found close to a building wall. The feature would appear to be the drip area east of the building below the projecting platform above, containing iron particles and iron stain from the railing on the porch.

BUILDING SEQUENCE AT THE EXCHANGE BUILDING: It is quite clear from the excavations conducted here that the area east of the present Exchange Building has been used as a dump for fill for a long period of time. Whether it was the intent to fill in the bay, originally, or the result of a desire to deposit excess soil and waste somewhere cannot be determined, probably a little of both. However, the 1739 map (Figure 3) suggests that the area immediately east of the Half Moon Battery was somewhat slower to fill up than the land to the north and south of it.

The lowest level encountered in the excavations reported here is that one cemented together with pine pitch. The disarray of barrel fragments, wood shingles, scrap wood, shavings, etc., all tightly held together in the pine pitch matrix suggests that some sort of accidental event was responsible for the condition. It might have been waste spilled while loading naval stores and wood products, but the quantity of pine pitch and the apparent disarray suggested that it might be more than that. The contemporary accounts of the 1752 hurricane in the newspaper (South Carolina Gazette, September 19, 1752) and the report of it in Ramsay (1858, p. 180 FN) coincides so closely with the description of the deposit at the site that it is tempting to suggest that this level represents 1752.

Whether the layer represents goods being loaded from nearby wharves which were spilled by the hurricane or refuse accumulated in town and dumped there afterward during the clean-up activity is open to discussion. It may, in fact, be part of both, with the looser layer of wooden shingles on top representing

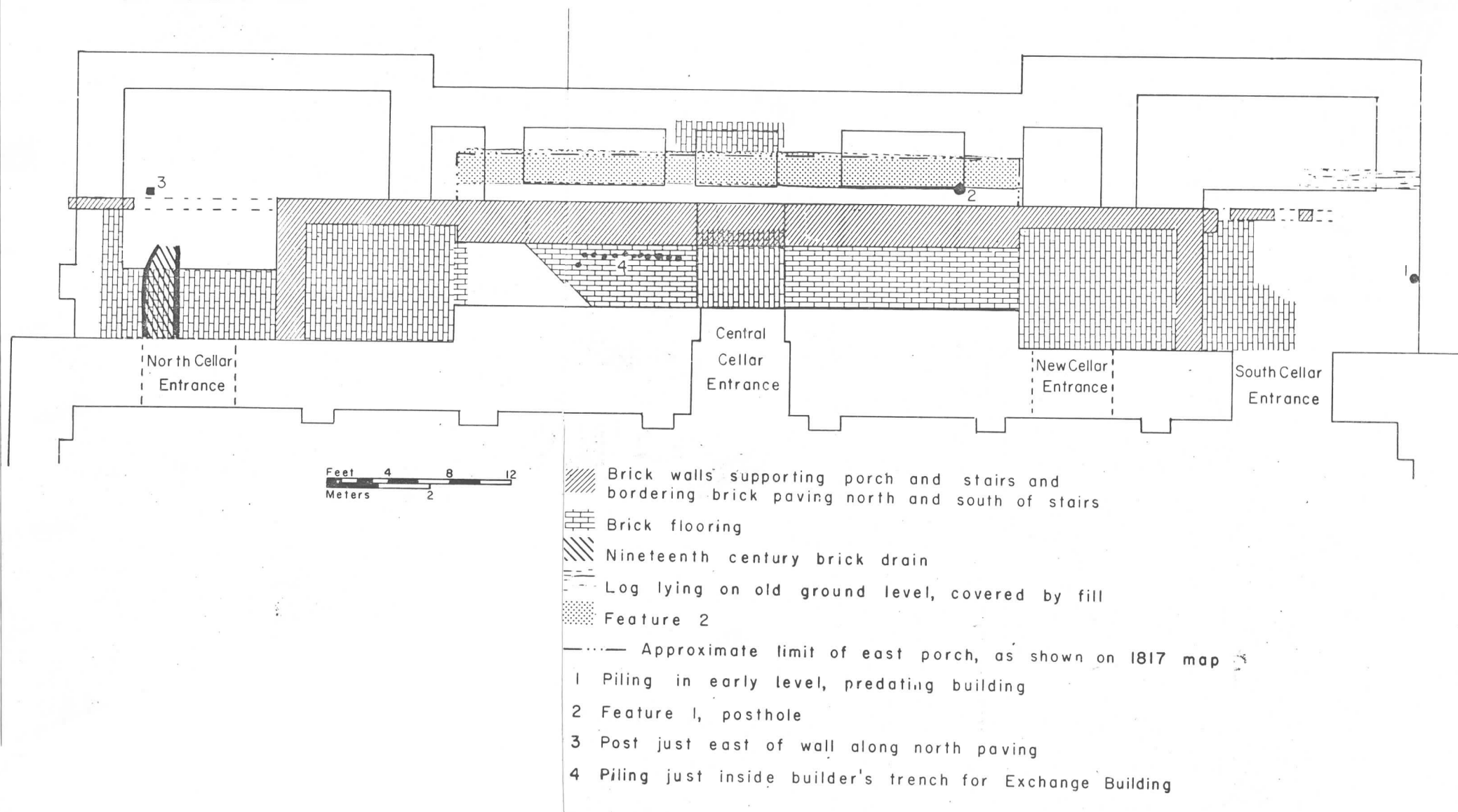


Figure 20. Plan of the excavations on the east side of the Exchange Building showing the location of architectural features and archaeological features uncovered.

wood dumped there during the clean-up that followed. The amount of pine pitch adhering to several staves when excavated, and the fact that some barrel tops had the pegs plugging them still in place, suggests that they had been filled when dumped.

The abundance of barrel hoops, staves, end fragments, wood chips, shavings, etc., along with some scrap wood and wooden shingles raises the possibility that the manufacture of barrels might have taken place in the area. Diderot (1959, p. 458) indicates that the barrel manufacturer did not need a shop, but conducted his trade anywhere that he might find space. There is documentary evidence that some coopering was done on the wharves of Charleston later in the eighteenth century (Walsh 1968, p. 5).

In the pine-pitch layer was what appeared to be matted grass -- quite yellow-green when first excavated although rapidly losing color in the air. This suggests the possibility that there was indeed a beach level at that time.

After the hurricane, more fill was added to the area on the east side of the Exchange Building, raising the ground level 0.5 feet or more. By 1767, the ground level in the area had risen to a point about 4.5 feet below the present land surface. At that time the Old Council Chamber on the Half Moon Battery was torn down and the area excavated for the footings of the new Exchange. Our excavations did not extend to the bottom of the wall, but those of Miller did. When his profiles are correlated with the drawings from the present excavations it would appear that the builder's trench for the Exchange extended to a depth of about 12.3 feet below the present water table (Datum), or 5.5 or so feet below the surface at that time.

A row of twelve pilings was found set just inside the edge of the builder's trench in the east side of the building, north of the central cellar door (Figure 20). The pilings were 0.2 to 0.45 feet in diameter, and the two that were recovered from the excavation were 7.5 feet long. Presumably they were placed there to stabilize the bank during construction, or the remains of an earlier barrier. Miller found evidence of a "coffer dam" in his excavation just east of the Half Moon Battery wall (Exchange File, Charleston Museum; see Appendix II).

According to Miller's drawing (Figure 42), there is a wooden mud sill below the Exchange wall. Our excavations and his both revealed that the wall was stepped out at the bottom (Figure 14). The lower part of the wall all along the building was laid in English bond, the upper part in Flemish. The Flemish bond began at a point 4.5 feet below the water table. A lower water table was present on the wall of the eastern projection of the building, 4.5 feet below the upper water table; brick were laid in Flemish bond above this. The main building wall was smooth all the way down until it stepped out for the footing.

Once the wall of the building was constructed the builder's trench was filled with a sandy brown-grey refuse-bearing layer which contained some rubble. East of the building a wall was built to support the north and south staircases and the porch. Pieces of wooden planking were found under the central part of the wall. The wall was continuous, with English bond pattern on the lower part and Flemish above. The wall extended the entire length of the stairs and porch, but was wider in the center. Along the staircases the wall was 1.6 feet wide, under the platform it was 2.9 feet wide, with the additional width on the west or building side (Figure 20). The walls supporting the bases of the north and

south staircases butted against the building wall, but tied into the east wall under the stairs and porch.

There was a door in the center of the wall even with the central door on the east side of the building providing entrance to the cellar dungeon area. This entry way was floored originally with brick set on edge, as was the floor of the cellar. A second floor level had been laid in the area between the two walls when the first settled (Figure 21).

Between the two walls on either side of the central entrance was a long, narrow room which extended under the staircases. The walls of the room, at least in the area under the platform, had been plastered, for a layer of melted white lime plaster was found just above the floor in the room on the south side. The floors were brick laid flat, rather than on edge as in the entrance to the center door.

Naylor's original plans (Figure 5) called for the staircases to be eight feet wide, plus the width of the railing. Our excavations indicate that the total width of the completed staircase was 9.2 feet. The stairs were to be covered with portland stone. Naylor's drawing of the east side showed the lower level of the building to have a finished exterior with rusticated pattern around the doors and two false windows (Figure 4). Too much of the wall had been removed to determine if there were any windows in that side. No trace of stucco was noted on the east side of the wall wherever it was exposed.

According to Naylor's plan the width of the porch was the same as the stairway, and we assumed that that was the situation. But the 1818 drawing of the building showed that the porch at that time projected out twelve feet, four inches from the main wall of the building which would have been about 9.8 feet beyond the projection on the east side. If this measurement applies to the original porch, that platform extended about three feet beyond the line of the support wall we excavated.

Three possible alternative explanations can be considered for this discrepancy:

- 1) that the original plan was altered and the platform extended beyond the line of stairs
- 2) that the platform was originally the width of the staircase and was extended by some means between the time of construction and 1818 (when the drawing suggests that the stairs were no longer present)
- 3) that the surveyor made an error in measurement in 1818.

Assuming that the third alternative is not valid, we have two alternatives to consider.

Although there is no conclusive proof, we assume that the original floor of the porch was of purbeck stone, as the specifications indicated that the piazza floor should be (1899 Yearbook of the City of Charleston, p. 372), and as the floor inside was. The floor, according to Naylor's plan, was to be continuous and is shown without a sill (Figure 5).

If the platform originally was covered with stone and extended beyond the line of the eastern support wall, there had to be adequate support for it. This would have to have been done by putting in additional piers on the east side, or by arching or cantilevering the support wall out to support the floor.

Although the entire east side of the support wall was not excavated, it was cut through by footing trenches in a number of places (Figures 13, 20) and later removed by workmen, and no remains of brick support piers were found.

Unfortunately so much of the upper part of the support wall was removed when the porch was demolished that not enough was left to indicate whether there was arching or cantilevering on either the east side, which would have supported the outer extension, or on the west or inside, which would have supported the inner part of the platform between the support wall and the building.

An attempt to remove stucco on the building wall to see if there was any evidence of that wall having been built out was not successful, as the stucco was so firmly attached that it could not be removed without damaging the brick and therefore the evidence desired. The section of the wall below the porch is thicker than those sections supporting the staircases and presumably it could have supported arching or cantilevering needed to support the platform. The top of the porch would have been about nine feet above the grade level at that time, allowing the minimum space sufficient for the cantilever or arch to support the projecting platform.

If the porch did not originally extend beyond the line of the stair wall, perhaps it was extended at some time before 1818. It may be that wooden flooring was laid over the stone to extend it the necessary three feet.

Archaeological support for the fact that the porch did extend beyond the wall is found in Feature 2 which ran along the east side of the wall for a distance of 36 feet, coinciding with the length of the porch, and extended about 3.2 feet out from the wall (Figure 20). Feature 2 consisted of a drip line on top of the original paving along the building and a sort of cul de sac area beyond the edge of successive layers of paving into which sand was washed and blown. Included in this sand deposit, which was stained with iron oxide, were pieces of corroded iron and fine particles of black iron or mill scale which may have come from a corroding railing on the end of the porch. The eastern edge of the feature coincided with the extended length of the porch given in the 1818 plat. Seventeen potsherds were recovered from the feature, and they have a mean ceramic date of 1793. That date probably is a little early, as the majority of sherds are creamware and pearlware, both of which are more common in the early years of the nineteenth century. The datable bottle necks also suggest an early nineteenth century date.

There seems to be evidence that the porch on the east side of the Exchange Building did extend beyond the line of the stairs and supporting wall, but whether this was the original construction or a later modification is not resolved.

How long the stairs and platform were retained on the east side of the building has not been definitely determined by historical research. The 1818 drawing does not show the stairs, although the porch is present. By 1837 both were gone (Figure 9).

During the early nineteenth century there were a number of hurricanes and tornadoes which wrought havoc along the Charleston waterfront (1880 Charleston Yearbook, pp. 312-14). Damage to the Exchange Building is specifically mentioned in accounts of the 1804 (Charleston Courier, September 15, 1804) and the 1822 storms (Charleston Courier, September 30, 1822). Perhaps the frequent damage to the waterfront prompted the decision to remove the east porch which

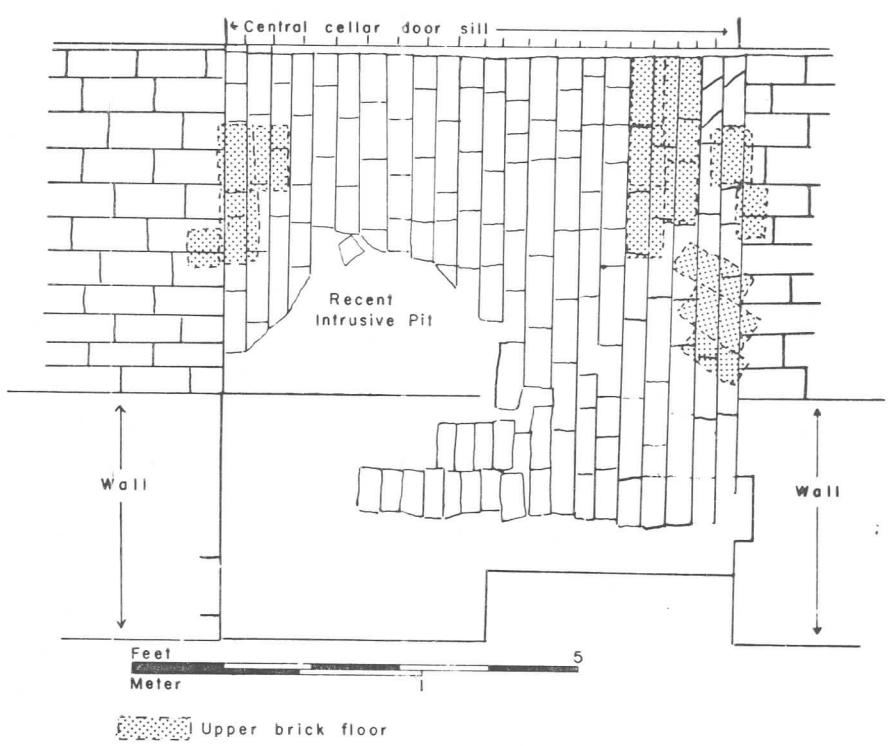


Figure 21. Plan of the paving in front of the central cellar door showing the lower floor and the few brick on the upper floor.

would have been one of the most vulnerable parts of the building, and the area through which water could gain access to the interior of the cellar.

The floors of the rooms under the stairs were covered with refuse-bearing fill containing a large amount of ceramics, broken fragments of window glass, table and bottle glass -- obviously fill brought in for the purpose. The mean ceramic dates for the north and south ends of these rooms were 1802 and 1788, respectively. The date on the fill above the central cellar entrance floor was also 1788. The same types of pottery were found all along, and many looked as though they were parts of the same sets. It would appear, therefore, in the early part of the nineteenth century the platform and stairs were removed. They apparently were knocked down intentionally and most of the brick removed from the site. Fallen wall fragments were found only in Section V, at the north.

At some time after the building was constructed, the doorways for the north and south entrances to the cellar were broken through the wall (Figure 20). Neither of these doors have closure brick along the openings, so it is reasonable to assume that they were not original. Also, the original sills on the side doors were not as low as that of the central door. The door at the south end was shortened at some time in the more recent past, as the ground was filled in in front of it, but it continued to be used until the present project changed it.

The north door was perhaps a bit later than the one at the south, for its opening was not quite as low. It apparently was in use at the time that the second level of brick paving was laid in front of it. The mean ceramic date of the small sample of sherds from between the two pavings was 1771, so presumably the second paving was put in not too long after the building date.

After the north door was sealed off, a brick drain was built against the wall and extended out from the building about six feet (Figure 20). At a later time a modern drain tile was laid in the outer end of it. There was an iron pipe in the wall just above the drain. Gordon Williams, superintendent of the project, suggested that this pipe was connected with the old cistern constructed to collect and channel water from the roof. The drain and the later drain tile probably served the same function -- to carry water away from the building.

Upon completion of the building, the street east of it was paved. Before the contractor leveled the land and laid the paving, the commissioners apparently began to use the structure, for there is a thin dark layer containing coal and some wood in the profile east of the entrance (Figure 15). It extended into the entrance as well. The commissioners originally planned to rent most of the cellar to bring in income for the building, but were to reserve part of the space for "keeping fuel" (1898 Yearbook of the City of Charleston, p. 368) which in those days would have been coal and wood.

The area set aside for the street remained unoccupied, although there were a number of times when part of it was excavated to bring utilities to the buildings in the area. Recorded in the profiles of this area are a minimum of four layers of paving subsequent to the first laid at the time of completion of the building (Figure 19). It was not until the present century that the area was closed to traffic.

Trenches excavated for service lines at the Exchange Building indicated that there was an early brick street on the south side, under the present Exchange Street, on the same level as the earliest layer of paving on the east side of the building. A subsequent brick paving layer was found on both the

south and the north sides of the building, corresponding to the second paving layer on the east side. The few artifacts collected from the service trenches suggest that the second paving was probably early nineteenth century. A third layer of paving consisting of Belgian Blocks was noted on the south side, just below the present street.

Part of the service trench on the east side of the Exchange and the excavation for a fuel tank encountered the brick walls and paved cellar floor of a building which was located due east of the northeast corner of the Exchange Building, and is noted on the 1900 Sanborn map (Figure 10) as the location of the Riverside Box Company. The wall of the building is in line with the west wall of the remaining building and the wall was laid in Liverpool bond, one course of headers and three courses of stretchers -- which is an early nineteenth century style of bonding (McKee 1973, p. 50). Artifacts from this excavation were all early twentieth century objects.

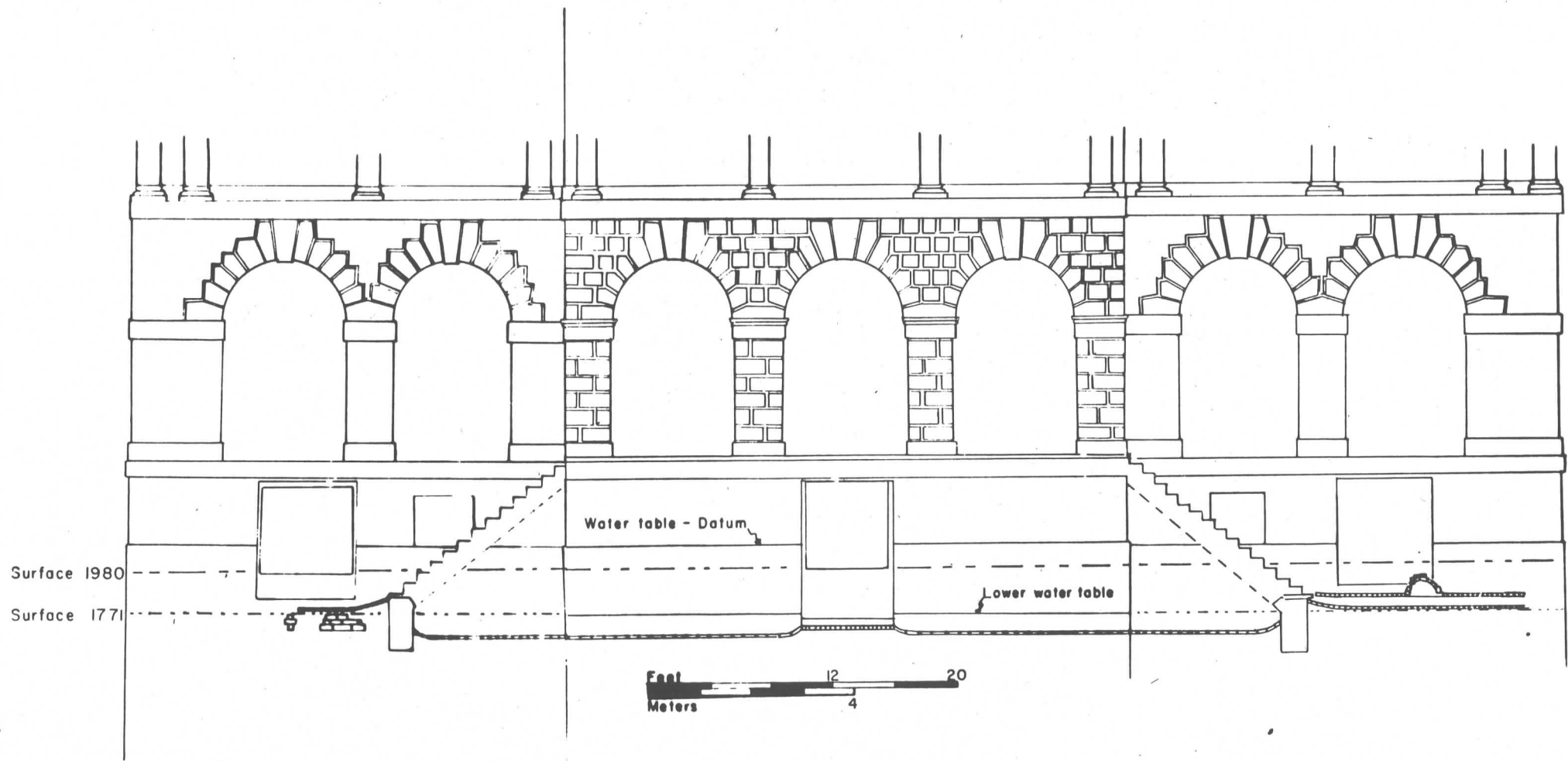


Figure 22. Drawing showing the lower portion of the east side of the Exchange Building with the section through the excavation imposed on it. Section shows walls supporting the end of the north and south stairs and the paved floors north and south of the stairs and under the porch. Hypothetical staircases are also shown.



Figure 23. Photograph looking north on the east side of the Exchange Building, showing the paving in front of the south cellar door in the area of the Elevator Pit.



Figure 24. The original paving in front of the central cellar door on the east side of the Exchange Building.



Figure 25. The north section of the east wall of the Exchange Building showing (left) remains of the plaster once on the wall of the room under the stairs, (center) the part of the wall which supported the foot of the stairs, and (right) the patched section of wall where the north cellar door was located and the paving in front of it.



Figure 26. Photograph of the nineteenth century brick drain along the east wall of the Exchange Building in Section V. Note the iron drain pipe above it which goes into the wall.



Figure 27. Photograph of the remaining part of the wall which supported the northeastern corner of the north stairs on the east side of the Exchange Building. The block in the center is the fallen wall from under the staircase.



Figure 28. Photograph of the row of pilings put just inside the builder's trench to stabilize the bank at the time of construction of the Exchange Building.



Figure 29. Photograph of post which was found at the edge of the paving north of the north stairs.



Figure 30. Photograph of the stratified layers of paving east of the building. The lowest layer shown was put down when the building was completed in 1771.

ARTIFACTS

More than 12,000 artifacts were recovered by the excavation of the area east of the Exchange Building. Included in the collection are the usual potsherds, glass bottle fragments, iron nails, etc., recovered from sites occupied during the eighteenth and nineteenth centuries in Charleston. Most unusual about this collection is the amount of wood, cloth and leather that was preserved at the site, due to the presence of pine pitch which soaked much of the material from the lowest levels.

The artifacts recovered are listed on the charts in Appendix I, and are not described in detail. The potsherds and glass are of particular use in providing minimal dating for the strata. These layers are fill deposits from elsewhere in the city, dumped in the area east of East Bay Street, and cannot be identified with particular households or individuals in Charleston. A few ceramic specimens are unusual and will be given special mention here. Also described in some detail are the more unique, perishable objects.

WOODEN ARTIFACTS:

Most exciting, perhaps, in terms of the story of the city, were the 141 wooden artifacts as well as miscellaneous cut wood fragments recovered primarily from the lowest levels at the site (Figure 31). Never before has such a collection been obtained. Included in it were 41 wooden shingles, well made, about 20 inches long, and varying in width from three to eight inches, tapering in thickness from one end to the other. Samples of two wooden shingles were sent to Dr. Michael A. Taras of the Department of Forestry, Clemson University, for identification. They were of cypress (Taxodium distichum) (Taras personal communication, November 6, 1981).

Even more interesting were the parts of barrels recovered. Fifteen fragments of ends of barrels, 23 barrel staves and 31 fragments of barrel hoops were found. Also recovered were seven wooden pegs used to plug the holes in the tops of the barrels. The barrels themselves were about 27 inches in height and 16 inches in diameter at the top. The staves were wider in the center, tapering slightly toward the ends, with the long edges slightly beveled, and the ends more distinctly beveled to fit the tops. The tops were round, with the inner edges beveled to fit the ends of the staves. Three barrel staves and two tops were identified as made of southern yellow pine (Pinus sp.) by Taras. Wooden pegs, about one foot long and one inch in diameter, were made to plug the holes at the ends and two were recovered in place. One was identified as made of hickory (Carya sp.). The barrel hoops were made of split hickory (Carya sp.) saplings or branches (Taras personal communication, November 6, 1981). In some cases small hand-made, sharply pointed wooden pegs were used to attach hoops to staves, and staves to ends of barrels.

In addition to the barrel parts were pieces of wooden planking. Some had no indication of use, but two were of interest because they had some circular cut marks on them as though they represented the beginning stage in the manu-

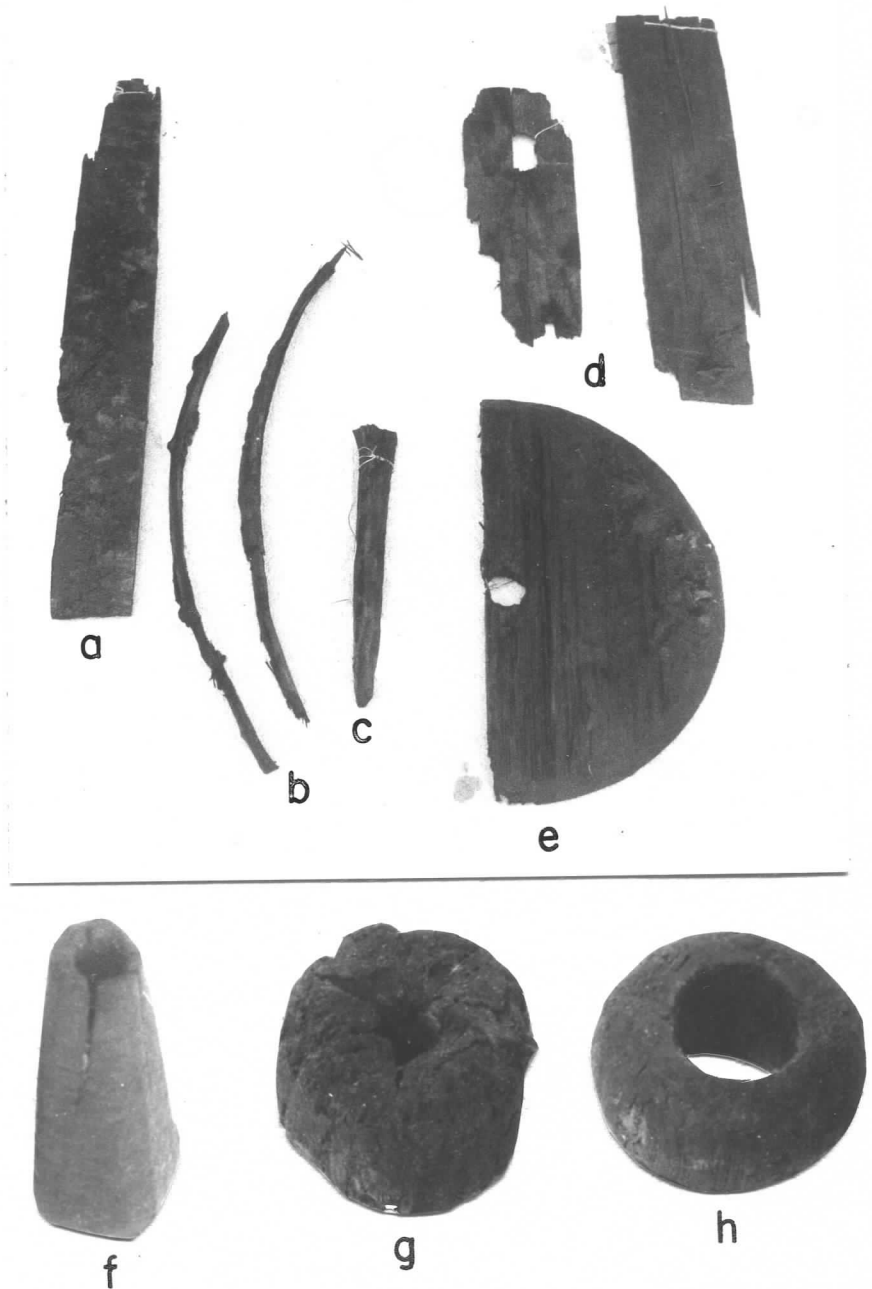


Figure 31. Wooden artifacts from the lowest level of excavation at the Exchange Building.

a) barrel stave b) two fragments of barrel hoops c) wooden peg d) pieces of planks e) portion of barrel top. Length of stave: 65cm or 26 inches. f) wooden handle g) wooden plug h) barrel bead. Diameter of plug: 4.1cm

fracture of barrel tops. Some planking was found under the wall supporting the porch where it had been placed before construction as part of the mud sill. Four specimens were identified as white oak (*Quercus* sp.) (Taras personal communication, November 6, 1981).

Other wooden artifacts of interest include a wooden handle, a hardwood bead which may have been a parrel bead -- part of the rigging of a ship -- a wedge, a wooden plug, small pegs, and shaped pieces of wood which may have been discarded from molding or trimming. There were also wooden shavings, one of which was identified as southern yellow pine (Taras, personal communication, November 6, 1981), a knot of wood and twigs.

Two pilings were recovered from the builder's trench east of the building. These were 7.5 feet long and 0.5 feet in diameter, cut to sharp points at the bottom. A shorter, similar post was found lying on its side along the edge of the builder's trench in the Elevator Pit area, and another, which was not recovered was noted in the south profile of the Elevator Pit (Figure 14). A fifth post, cut flat on the bottom with beveled corners on the upper part and square in section below, was found standing just east of the eastern edge of the paving in Section V, at the north end of the excavation. It was 2.8 feet long and 0.5 feet thick. Perhaps it had been put there to protect the brick paving next to it. All posts were of cedar; three were identified by Taras (Personal communication, November 6, 1981).

Two sections of wooden conduit dating from the early twentieth century were also recovered. The conduit was made by hollowing out two long pieces of southern yellow pine (*Pinus* sp.) (Taras, personal communication, November 6, 1981) and fastening them together with iron staples to make a long tube about three inches square in section. According to the contractor's crew these were used to carry telephone lines.

Basal portions of two other posts were noted near the northeast corner of the Exchange Building when the service trench was excavated along the north side of the building. The posts were of southern yellow pine (*Pinus* sp.) (Taras personal communication, November 6, 1981) and probably were the bases of old telephone poles.

CLOTH:

A total of 33 textile fragments were found in the excavations. The majority were of wool, one cotton, six silk, and one of wool and cotton.

Of the 25 wool specimens, all but four were of plain over-one-under-one weave. Six are examples of tightly woven fabric, with a thread count ranging from 32 by 32 to 48 by 48 threads per square inch. Ten were more loosely woven fabrics with a thread count of 18 by 18 threads per square inch.

Two textile fragments, somewhat resembling modern flannel in appearance, have an over-one-under-one weave and a thread count of 56 by 56 threads per square inch. One had been cut and fitted, as there is evidence of stitching on the edges. The actual weave of the fabric was obscured, except in an area which was worn, because the cloth had been napped on both sides.

Three woolen fabric specimens had been woven with an over-two-under-two diagonal twill weave. The thread count for these examples was 56 by 52 threads per square inch. They probably were imported and may have been used for clothing or furnishings (Rothstein, personal communication, February 2, 1981).

There were also two fragments of woolen fabric which had been knitted. One resembled a heavy glove or a man's stocking. The other was a heavier knit and may have been part of a sweater or coat.

The single example of cotton fabric was a light grey color which originally may have been white. It was made of handspun yarn and was hand woven; it may have been locally produced. The thread count was 50 by 50 per square inch. There are some blue spots on the textile which have been identified as printed with indigo. Rust spots suggest that it may have been used as a lining in a chest (Rothstein, personal communication, February 12, 1981).

Most unusual were five fragments of a very fine, thin silk textile with a thread count of 70 by 70 per square inch. These specimens were reddish-brown in color and had small, irregular light-colored circles scattered across them which were produced by tie-dyeing. These fragments have been identified as part of woman's scarf made in Bengal and exported to England and the colonies. There are several portraits showing English working class women wearing them. They date from the mid-eighteenth century (Rothstein, personal communication, September 23, 1980).

The most complete specimen recovered was a lady's glove (Figure 32), which may be of silk. The fabric is knitted; the glove was elbow length, hemmed at the base and had been worn long enough to have required rather extensive repair of the fingers. When last worn, it had been removed by turning it and peeling it off so that all of it was inside out except the tips of the fingers. It comes from a level dating about 1767.

LEATHER:

A total of 99 leather objects and trimmings were recovered from the excavations, and the majority of them predate the building, most of them coming from the level with the pine pitch. Forty-one of the specimens recovered are parts of shoes, the remainder are scraps and leather trimmings. Most interesting, perhaps, is the complete child's shoe (Figure 33) without a buckle. Both the toe and heel show evidence of hard wear. Other toe and heel fragments of shoes were included in the collection. Toes are pointed, as shoes were made for either foot. Heels were made of layers of leather sewed together. The entire shoe was fastened together by stitching.

CERAMICS:

A total of 3,768 potsherds were recovered from the excavations at the Exchange Building. The vast majority of these were of English origin. The sherds were sorted according to the usually accepted types (Noel Hume 1972, pp. 102-144), and counted by level and feature (Appendix I). Using the method outlined by South (1978, pp. 201-18), mean ceramic dates were calculated for assemblages from well-defined proveniences.

The prebuilding levels produced yellow slipped ware, Chinese export ware, white salt glaze, miscellaneous brown English stoneware and delft sherds. Layers dating after the construction show some of the above types, but creamware and pearlware sherds are much more important in the collections.



Figure 32. The worn glove found in the northeast corner of Section II, in the level predating the building. Length: 30.5cm.



Figure 33. Child's leather shoe which was preserved in the pine pitch in the lowest level of excavation at the Exchange Building.

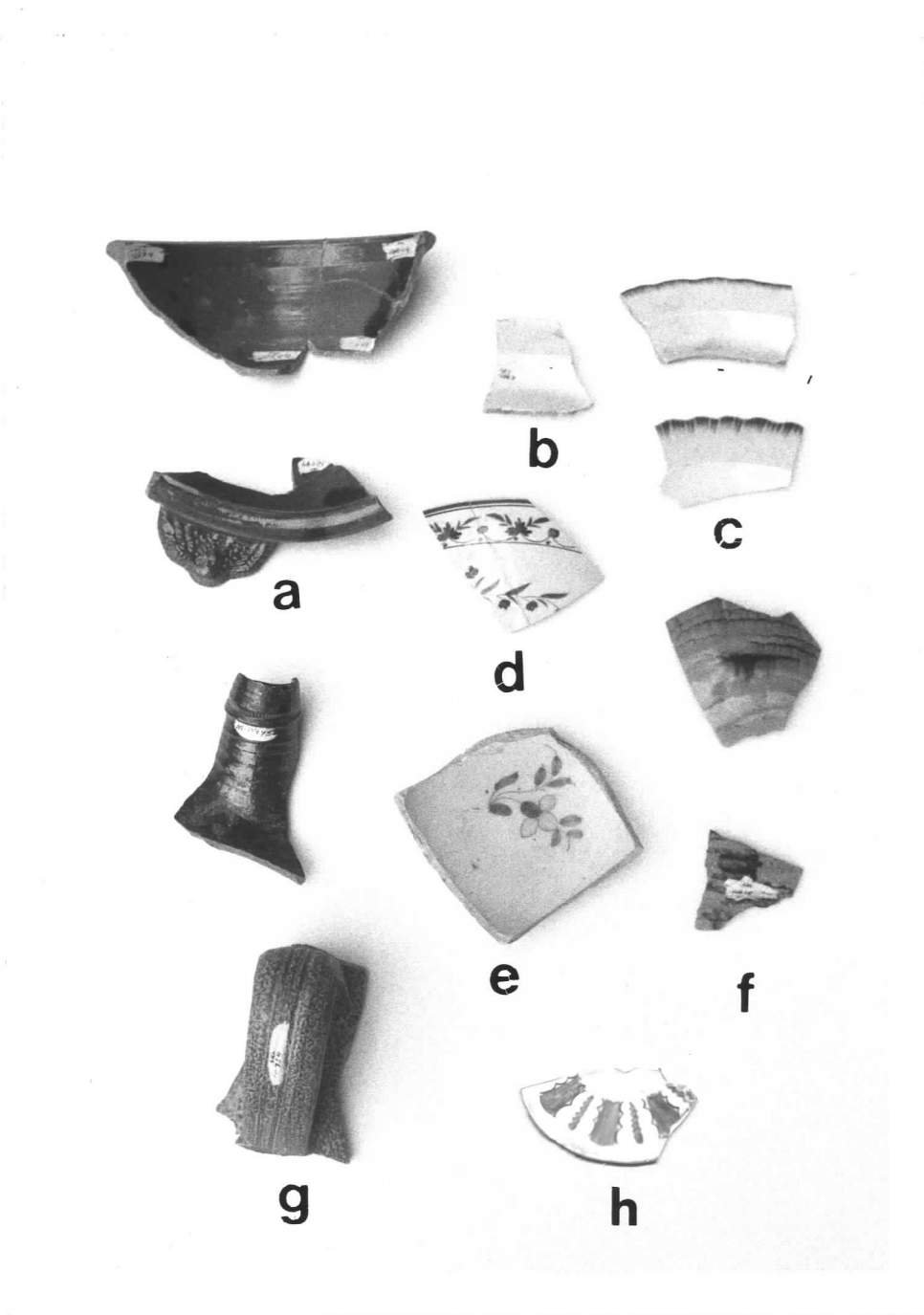


Figure 34. Examples of ceramics recovered from the excavations at the Exchange Building.

a) fragments of a northern European or Dutch porringer
 b) creamware c) shell-edged pearlware sherds, d) hand
 painted pearlware fragment e) delft sherd f) combed
 yellow slipped ware sherds g) fragment of English brown
 stoneware jug h) lid of creamware teapot painted in red,
 purple, and black.

Very few sherds from the early levels are large and none can be considered restorable vessels. Those in the later levels, however, found in the fill above the floors once under the stairs and porch on the east side are larger and some have fit together. A quantity of green feather edge dishes, fragments of blue and white transfer-printed asparagus servers, and creamware dishes of the simpler Royal pattern occurred there (Figure 34). Also in that collection was an unusual porringer-type vessel which has been identified as possibly Dutch or northern European (Rauschenberg, personal communication).

The mean ceramic dates calculated for the various levels are presented in Appendix I and are discussed in the sections dealing with the stratigraphy and archaeology. Most of the dates are somewhat earlier than one would expect from the stratigraphic evidence, but that is not surprising, considering that the pottery comes from earlier levels, dumped in as fill.

GLASS:

A total of 3,972 glass fragments were cataloged from the excavations at the Exchange. The great majority of this is dark green bottle glass. Dark green hand-blown bottles were the popular beverage containers, and most of them found date from the middle to the late eighteenth century. Small amounts of aqua-colored bottle glass and clear bottle glass were recovered as well. The greater concentration of bottle fragments and bottle bottoms and necks was close to the building and in the fill put in after the porch and stairs had been removed from the east side.

Although they are not as subject to change as the ceramics, the glass bottle fragments generally supported the dating of the strata based on ceramics. Bottle necks and bottoms from the levels predating the building are of the style of the first half of the eighteenth century. Those found in the fill above the floors on the east side generally dated 1790 to 1820. All identifiable fragments are blown rather than molded. The only whole bottle recovered was a Smirnoff Vodka bottle from a recent intrusion in the floor in front of the central cellar door.

Some table glass -- stemware and tumbler bases (Figure 35) came from the excavations. An airtwist stem dating perhaps 1750-70 (Noel Hume 1972, p. 190) was found in Level 6. The fill above the stairs and floors under the platform produced some short flaring stems similar to that identified by Noel Hume (1972, Fig. 64) as made by the Amelung Factory in Maryland, as well as a number of bottoms of blown tumblers, some plain, others with vertical ribbing.

The only possible clue to the source of the fill at this time is one bottle seal with the name A. Rose on it. In the 1782 Charleston Directory, Alexander Rose, a merchant, was listed at 37 Tradd Street. In the 1794 directory his address was 2 Church Street. The fill might have come from either location, or elsewhere in the city, for that matter.

A large number of fragments of window glass were also found, particularly in the fill above the central entrance to the cellar. Many fragments were encountered right on top of the brick flooring in that area, close to the building. One piece which may be the bulls-eye from the center of a piece of blown window glass was found in the trench for the drain line just east of the wall supporting the porch.

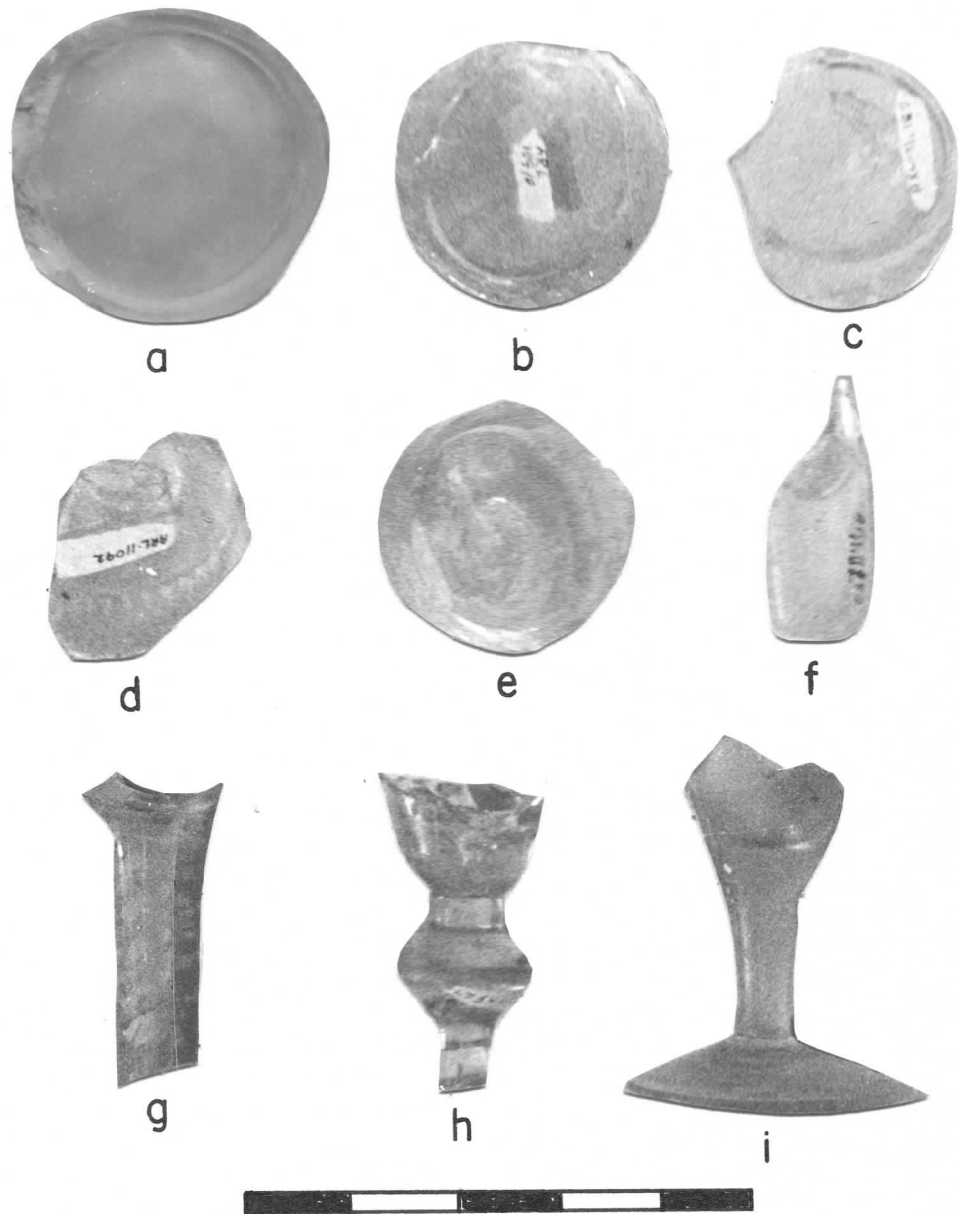


Figure 35. Glassware recovered from the excavations at the Exchange Building.
a-e) tumbler bottoms f) decanter stopper
g-i) wine glass stems. Scale in centimeters.

BUILDING MATERIALS:

Fragments of brick, mortar, plaster and roofing slates were found throughout the site. Most were not recovered nor recorded. Ceramic floor tile were saved when encountered, and have been included in the collections; a sampling of the brick and mortar were also saved. A total of eight yellow "Dutch" brick (Noel Hume 1972, p. 83) were found. Most of them came from the prebuilding level of the site. They appear to be more common in the early part of the eighteenth century in Charleston.

A few brick were saved from the standing walls and paving. These have been measured and recorded and included in the collections. The dimensions are summarized here:

Brick from lower wall of main building: 9 x 4 x 2½ inches	(23 x 10.2 x 6.5 centimeters)
Brick from paving in front of south cellar door: 9-9¼ x 4¼-4½ x 2 3/8- 2 3/4 inches	(23-23.7 x 10.8-11.5 x 6-7 centimeters)
Brick from wall supporting porch: 9 5/8 x 4 x 2 7/8 inches	(24.5 x 10.2 x 7.3 centimeters)
Brick from wall supporting south stairs: 9 x 4 x 2 3/4 inches	(23 x 10.2 x 7 centimeters)
Brick from floor south of central cellar entrance: 9 x 4¼ x 2 7/8 inches	(23.8 x 10.8 x 7.3 centimeters)
Brick from fallen wall, Section V: 9 x 4¼ x 2 7/8 inches	(23 x 10.8 x 7.6 centimeters)
Brick from drain, Section V: 9 x 4¼ x 2 3/4 inches	(23 x 10.8 x 7 centimeters)

Three hundred and forty pieces of slate were recovered from the excavations. A few have holes by which they were fastened by nails to a roof. The color ranges from grey to slightly purplish.

One layer containing a considerable amount of slate was noted in the profile south of the central entrance to the cellar in Section III, along the west side of an unexcavated block. This slate layer, about 3.7 feet below datum, is above the top of Feature 2 and probably correlates with a period when the building was remodeled, or when the roof was damaged by high wind requiring repair.

Two pieces of slate are of special interest. One consists of a piece which evidently was used to keep a record, for both sides are covered with rows of groups of five straight lines, four arranged vertically and one cutting across them at a diagonal (Figure 36) -- the same procedure used in counting today. The other piece was decorated with what appear to be arcs from a pair of dividers and a possible capital "M" scratched in one side. This one was found in the layer predating the building.



Figure 36. A piece of slate used to record a count of something in the past. Length: 15.7cm

Two pieces of portland stone are also included in the collection. One is a curved surface, and was recently chipped from part of the ornamentation on the east side of the building. The other was recovered from the fill of Section III, between the wall of the building and the wall supporting the porch. It consisted of a shaped section of one of the balusters of a railing. It conforms in shape to one of the sections of railing shown on Naylor's drawing (Figure 4, 40), and the specifications for the building stipulated that the railing be made of portland stone (1898 Yearbook of the City of Charleston, p. 371).

FLINT:

One of the most abundant materials found at this site was flint. Quantities of flint nodules, varying in size and color were found in almost all levels of the site, although they were less important in the levels of fill added after the porch was removed than before. Miller's notes also mention the amount of flint (Exchange files, Charleston Museum) and C.H. Bissell suggested that perhaps a flint knapper was at work at the east side of the Half Moon Battery.

The amount recovered from the level cemented with pine pitch, predating the building, is not as large, but the control of excavation and the amount of hand excavation at that level were not great. However, many small nodules were recovered from the samples of solidified soil dissolved in turpentine. The so-called grey-gritty layer, which is probably an old beach line, was almost all flint nodules.

A total of 426 pieces were recovered from Feature 2, the drip-wash area under the projection of the porch. Most of these came from a single pailful of soil washed through the screen to study its contents. A large amount of flint also came from excavations in the builder's trench for the building, and Levels 4, 5, and 6 -- the lowest levels of fill following the completion of the building. These last samples were hand excavated and/or screened so the percentage of flint recovered is probably representative of the amount included in the level.

How or why such a vast quantity of material occurred there has yet to be explained. Many of the flint nodules are intact, but others have been broken, and pieces have been chipped from them. There is little in the way of small chips which would result from knapping. Much of the flint is dark grey or black, the type generally attributed to England. It is generally known that some cobblestones came here as ballast, and a number of cobblestones in Charleston are of flint. There also are requests for tons of gravel from England coming as ballast to be used for gardens and to fill up a wharf in the 1760's (Hamer and Rogers 1974, p. 13; 1976, pp. 350-51). The amount present on this waterfront area may be the result of the dumping of such ballast.

Three gunflints were found -- all of black English flint, and all from later levels at the site (see Appendix I). Two of the gunflints are the prismatic type -- one from Level 4 is probably a pistol type, the other is larger and may be from a musket (Hamilton 1960, Figure 14). The third, from level 6, is the spall type and may be a musket type as well (Hamilton 1960, Figure 13).

PIPES:

A total of 405 white kaolin pipe fragments were recovered from the excavations. They were found in all levels of the site. The major portion of the pipe fragments are plain stems, however there were some bowls and a few stems which deserve special mention (Figure 37).

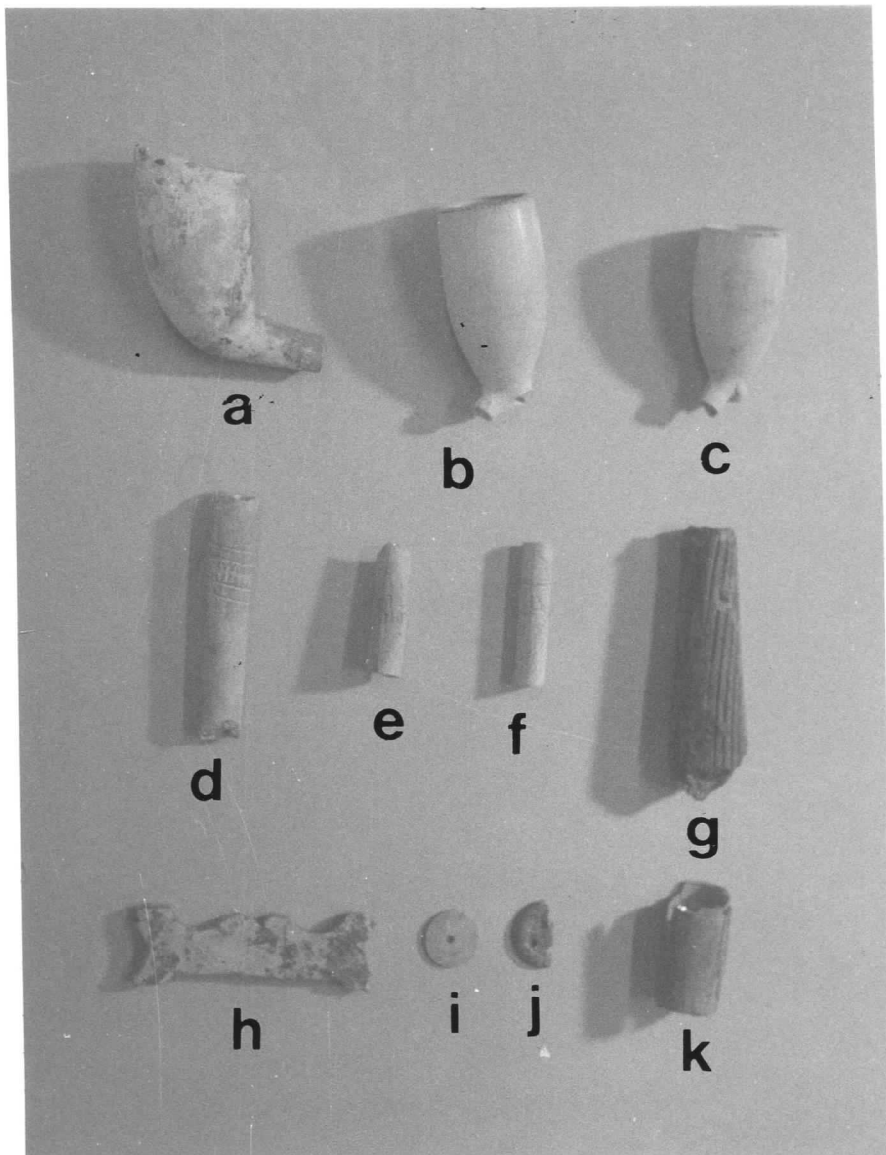


Figure 37. Pipes, bone and ivory objects from the excavations.
 a, English pipe bowl; b,c, Dutch pipe bowls;
 d, Llewellyn Evans pipe stem; e, pipe stem from Chester;
 f, pipe stem marked John Stephens; g, bone knife handle;
 h, bone or ivory object; i, single hole bone button;
 j, four hole bone button; k, short bone tube with threading
 inside.

There were two pipe bowls and one fragment which are probably Dutch. The surfaces of the bowls, which are somewhat egg-shaped, are polished. Each has a rouletted line just below the rim. They have round heels with small raised shields on both sides and "15" , and what looks like "90" on the bottoms of the heels. One comes from Level 6, one from Section III, and the third from the fill above the central entrance.

Four bowls are plain, without heels and lack marks or decoration. They are type 18, dated 1720-1820 by Noel Hume (1972, p. 303). They came from the level predating the building, the fill of the builders' trench and the fill above the central entrance to the cellar. One is from the general footing trench excavations.

Six bowls and fragments are plain, with flat heels resembling Noel Hume's Type 15, dated 1700-1770 (Noel Hume 1972, p. 303). The stamping on the sides of the heels varies, however. Two have plain heels lacking any marking and were found in the fill of the builders' trench. Another had a flower, another a "T" and "K", another a small "O", and another crowns embossed on the sides of the heels. Three of these were found in the levels predating the building and three were in the fill of the builders' trench. Several are like specimens found in the pre-1740 levels at the Heyward-Washington House.

One pipe bowl found in the fill above the floor in the southwestern part of Section V has a more rounded bowl and longer spur. In form it resembles N. 23 (Noel Hume 1972, p. 303), dated 1820-1860. This example has a "W" on one side of the spur and a "G" on the other, and the name "WEBB" stamped on the bowl facing the smoker. A pipe fragment with similar heel was found in the necessary at the Heyward-Washington House, where it would be dated late eighteenth to early nineteenth century.

One other bowl fragment is of interest. It has an impressed design consisting of a "TD" in a circular cartouche with a rope-like outline with a leaf or floral decoration above and below the initials. A similar pipe is illustrated from Mackinac, where it is dated in the 1812 period (Peterson 1963, pp. 6-7). Similar cartouches occur on pipes from the Heyward-Washington House, but they contained different initials. They occur in contexts dating from about 1760-1800.

Three stem fragments are marked. One has rouletted lines bordering a row of diamonds and the letters "LE" stamped on it and according to Walker (1977, pp. 1131-32, 1429), it was made by Llewellyn Evans who worked in Bristol from 1661 to 1686. This is the earliest pipe recovered, and came from the level predating the building. One other is marked with a coat of arms with the name "Chester" on the bottom. Noel Hume identifies stems from Chester as early eighteenth century (Noel Hume 1972, p. 305). The last decorated stem has the name "John Stephens" stamped on it, and was found in the fill of the builders' trench.

In general, the pipe fragments dated by makers' marks and style support dating based on ceramic and glass typology and stratigraphy. The efforts to date the levels on pipe stem diameter produced a series of dates ranging from 1741 for the level predating the building to 1748 for the fill above the central entrance to the cellar.



Figure 38. Metal artifacts from the Exchange Building excavations. a) sickle b) quilting frame clamp c) key d) brass lock e) hinge f) brass ornamental piece with molded leaf design, possibly from a piece of military equipment g) a button. Scale in centimeters applies to a-e, f is 5.5cm wide.

METAL ARTIFACTS:

As a result of the excavations 853 metal objects were found. The great majority of these were of iron. Most of the iron consisted of nails and corroded iron pieces too fragmentary to be identified. Identifiable iron objects included a sickle, a quilting frame clamp from the nineteenth century, an iron handle, a large circle of strap iron probably from a large barrel or bale. Most of the identifiable iron, other than nails, was found in the levels post-dating the Exchange, in the northeastern section of the site. Most of the nails came from the levels in the upper layers of the Elevator Pit, excavated by hand.

There were few artifacts of other metals. They included pieces of lead from post-1772 levels of the site, and a pewter plate rim of the early nineteenth century style. Most interesting of the brass and copper artifacts was a brass ornamental piece with a molded leaf design (Figure 38). It may be from a piece of military equipment -- perhaps a powder box or part of a uniform. Unfortunately its specific provenience at the site is not known. There was a brass chest lock from the general collection and a key from the fill above the floor in Section V. A brass spigot was also recovered. A miniature toy brass cannon was found in the fill in Section V, along the building. Similar cannons were sold at the sales desk in the Dungeon Museum, and this may be an intrusion from that period.

BONE ARTIFACTS:

Four bone artifacts were recovered from the site (Figure 37). One is a knife handle with diagonal lines engraved on it. Another is a small tubular piece of bone with threading on the inside on both ends. It may be part of a fan. Both fit in the late eighteenth to early nineteenth century context.

One object of ivory or bone (Figure 37) is of special interest. It is a flat piece, generally rectangular, but the ends are concave; one long edge is recessed and the other is cut in symmetrical curve. Two metal nails or brads were set in the straight side which must have been used to fasten the piece vertically to something else. The function of the item is not known. It may have been used for ornamentation of a piece of furniture, a box, or perhaps part of a toy.

PERSONAL ORNAMENTS:

Very few objects were recovered from the site which could be considered items of personal ornamentation. The majority are buttons. There are also three beads and one earring.

The earring was made of silver wire, twisted in such a way as to make a scalloped hoop. It was found in the general footing trench, and cannot be assigned to a level. The workmanship suggests a late eighteenth to early nineteenth century style.

The buttons (Figure 37) found at the site were made of bone, shell, porcelain, and metal. One bone button had a single hole in the center and the other, four holes and a raised border around the edge. The former dates from the eighteenth century, the latter in the nineteenth (Noel Hume 1972, pp. 90-91). The one shell bead is thick and has two holes; it was found in Level 4 and 5. The four-hole porcelain bead came from the fill above the brick drain in Section V. Both are nineteenth century.

Five metal buttons were recovered from the excavations. One has a flat face with a raised area in the center; a foot is all that remains on the back. It came from the fill above the floor in Section V. Another is smooth, with a broken shank on the back, and was found above the central cellar entrance. Two are too corroded to classify. The most interesting is a grey metal button with a wooden back -- type 3 (Noel Hume 1972, p. 90). On the face are the embossed letters "USA", with the letters placed one on top of the other. According to Noel Hume, buttons with this insignia date before 1812 (1972, pp. 91-92). It came from a footing trench in Section V.

Three glass beads were found. One is a blue-green double bead which looks like two spheroid beads stuck together. It was found in the fill above the floor in Section V. The second was a tiny white seed bead from Feature 2. Examples of both occur in the period from 1760-1820 (Quimby 1966, p. 89). The third bead, a black egg-shaped bead, was found in the level predating the building. It is a wire-wound bead, and may date from 1670 to 1760 (Quimby 1966, p. 87).

MISCELLANEOUS ENVIRONMENTAL DEBRIS:

Included in the matrix of the pine pitch in the lowest levels of the site were several interesting things relating to the environment of Charleston at that time. Remnants of diet are represented by eleven peach pits, nine watermelon seeds, a fragment of gourd and peanut shells recovered, as well as animal bone and fish scales. Samples of pine pitch also included fragments of large and small bird feathers, small pieces of fiber, wood shavings, and wood chips. The animal bones from this and later levels have not been analyzed as yet, but will provide data on the diet of that time.

We also recovered two samples of pine pitch which included small pieces of a blue substance we believe to be indigo. Indigo was an important export from Charleston in the eighteenth century. The sample presumably date from before 1752.



Figure 39. Small items recovered from the pine pitch in the lowest level of the excavation. Included are small pieces of wood, wood chips and shavings, feathers, fiber, watermelon seeds, shell, slate, glass and small animal bone.

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EXCAVATIONS INSIDE THE BUILDING

TESTING OF FIRST FLOOR FILL:

The first floor of the Exchange Building is supported by the brick arches or arcade of the cellar. When the building was built, the tops of the arches were covered with sand and leveled before the stone flooring was put down. Part of the flooring was still in place at the time the remodeling was begun, and it was agreed that the sand fill should be tested.

Two areas were tested, one near the center of the south room, the other in the northwest corner of the north room. The first square was 12 feet from the south wall and 17.3 feet from the west wall. It was 4.0 feet east to west and 3.25 feet from north to south; the depth varied with the curve of the arch below to a maximum of about 2.2 feet. The second square in the northwest corner was where a hole was to be dug for the electrician. The test was two feet by four feet with a maximum depth of 1.3 feet.

The top thin layer, about 0.25 to 0.3 feet thick, was somewhat consolidated by the mortar from the stone flooring above it. Below this the sand was very dry and loose. The fill was screened, and it contained fragments of brick, mortar, plaster, oyster shells, and occasional flint nodules. In it were scattered particles of charcoal, presumably from the fire which took place prior to the completion of the building.

At the time of the testing a third hole was dug between the first and second windows from the west, on the south side of the south room by the carpenter. Three salt-glaze sherds were recovered from there.

The square in the center of the south room produced the largest collection of artifacts and debris, including a total of 16 sherds. The mean ceramic date on this group is 1736, earlier than the building date of the Exchange. The most recent sherd in the collection, the one creamware sherd, has a beginning date of 1762 (South 1977, p. 212).

A total of 12 pipe fragments were found in the two squares. The date, on the basis of eight stem fragments is 1745 (Noel Hume 1972, p. 299). One smooth brass or copper button of South's type 7, dating 1726-1776 (Noel Hume 1972, pp. 90-91), came from the square in the center of the south room. Other artifacts recovered from inside the building are listed in Appendix I. Much of the brick, plaster and mortar rubble was not saved.

On the basis of our testing, it would seem that the sand was the original fill in the Exchange, and that there were no major intrusions into it or changes in it until the recent renovation began.

MONITORING THE REMOVAL OF THE FLOOR:

The original stone flooring on the first floor of the Old Exchange Building consisted of flat stone slabs which varied in size, but generally were about two feet by two feet. A portion of these blocks were in place in an area on the east side of the central section of the building where old rest room facilities had been located.

In October 1981, the remaining stone flooring was taken up as part of the remodeling activity in the building. This section of flooring was on top of a curved wooden staircase which at one time led to the cellar below. The lower part of the staircase had been removed some years before and only the upper nine steps remained in place. The stone flooring above the stairs had been relaid after the staircase was no longer used. Two planks had been put in under the flooring at that time to support the weight of the stones.

Examination revealed that the staircase was not part of the original construction of the building but a later addition. Part of the brick wall on the side and part of the brick on the cellar ceiling had been broken out to make room for the stairs. The curved edge of the broken brick was finished with cement. The lumber, square cut nails and type of construction suggest that the staircase was an 1820 or later modification of the building.

CELLAR SERVICE TRENCHES:

As one aspect of the final phase of the remodeling of the Exchange Building, shallow trenches were excavated in the floor of the cellar for electrical service. As few bricks as necessary were removed and trenches about one foot wide and approximately 0.4 feet deep were excavated for the conduit. The workmen removed the brick using a jack hammer, being careful to break as few as possible, and we excavated the loose fill from most of the trenches. The fill was shoveled into a wheelbarrow and troweled. It was very dry and loose sandy soil. There was very little in it except for some shell, animal bone and a few creamware and delft potsherds and a pipe bowl. Most of these artifacts were found in an area along the west wall, just south of the west cellar entrance. All fall within the period before 1771, the completion date of the building. The creamware sherds are from an octagonal plate with molded diamond pattern border identified with Melbourne and dated 1770 by Towner (1978, p. 115). Most of the delft sherds appear to come from the same blue and white plate which has a yellow line along the edge.

At the same time we also examined the cellar and mapped the exposed sections of the Half Moon Battery in relation to the building walls. Three sections of the battery, which was part of the original sea wall, are exposed:

1) On the south side of the cellar a section of the wall is exposed including an area where there is a jog in the arc of the wall. In the southwest corner of the building a short section of wall has been built in between the sea wall and the building wall. This section is not part of the sea wall, but was constructed after the building was completed. There has been considerable excavation of fill in this area. Much of it was prior to the use of this area as a museum. Some of it may have been done by John Miller, but the most recent part appears to have been unauthorized and uncontrolled.

2) In the center of the east side, the central portion of the arc of the Half Moon Battery is exposed to the depth of the water level. This was the area excavated to the bottom of the wall by Miller (see Appendix II), and then partially backfilled.

3) On the north side of the cellar a section of the brick floor was removed and the top and outer curve of the wall are exposed.

Examination of the walls of the cellar also reflect some of the modifications which have taken place in the building over the years. The walls at the southwestern and northwestern corners show evidence of the modification and reinforcing required when the towers were removed from the Broad Street side of the building. There is also evidence that the walls below the windows on the north and south sides of the cellar have been modified or patched in the past. Two windows on the south side and one on the north have closure bricks which extend all the way from the top of the present window to the floor while the others appear to have closure brick only as far as the window sill level. Whether this means that some of these openings were once doors or not cannot be determined without further research. The area of the powder magazine also has been modified in relatively recent years, and will require much closer study if the architectural changes in this part of the building are to be recorded in any detail.

SUMMARY AND CONCLUSIONS

As a result of the archaeological research at the Exchange Building we have obtained previously unrecorded information on the construction of the original stairs and porch on the east side of the building, and the building itself. The Exchange Building was built on filled land. When it was begun the ground level was perhaps 4.5 feet below the grade in 1979. Excavation for the building foundation went down about 5.5 feet below that. The foundation, according to Miller, was set on a wooden mud sill. The wall was wider at the bottom, stepping in as it rose to the desired thickness.

The building followed Naylor's plan rather closely. It is about 1.3 feet longer than the specifications called for and about as wide, if the width of the front tower is subtracted. The building is made of hand-made brick, nine inches long, four inches wide, and two and a half inches thick. They are laid about four courses per foot with shell mortar. Walls on the main part of the building were smooth. A lower water table was present 4.5 feet below the upper one on the wall of the eastern projection. The bases of the walls are English bond, the upper sections Flemish bond. No traces of stucco were noted on the walls below the present grade.

The cellar is perhaps a foot deeper than the original plan indicated, as it is 8.5 feet from the crown of the arches to the brick floor on top of the Half Moon Battery, rather than 7.5 feet (1898 Yearbook of the City of Charleston, p. 371). There is a distance of about 4.5 feet today between the top of the cellar arches and the level of Broad Street; the agreement called for 5.5 feet, but it is quite likely that the street level has risen one foot in the past 200 years.

East of the main part of the building was a porch which was reached by stairs from the north and south. The walls supporting the stairs and porch were tied together, but butted against the building wall. Naylor's plan indicates that the stairs, including the railing, should have been about 8.5 feet wide; our excavations reveal that it was actually 9.3 feet wide.

The plan shows the staircases and porch or platform on the top to be of the same width. But here there is a possible difference. The historical evidence suggests that at least at one time, 1817, the porch was wider than the staircase, extending as much as 12.33 feet from the main building wall or about three feet beyond the line of the staircase. The archaeological evidence of a drip line supports this. Perhaps there may have been a later modification of the porch, but there is no archaeological evidence of it; if it were a stone-floored platform, as specified, it would have been difficult to extend it.

The finished grade of the building was circa 4.1 to 4.5 feet below the upper water table of 2.6 to 3.0 feet below the present grade. We know the height of the support for the bottom steps on the north and south, but not the actual tread height, and the stairs were to be of portland stone (1898



Figure 40. A fragment of what may be part of a stone balluster from the railing at the Exchange Building.

Yearbook of the City of Charleston, p. 371).

The railings were also to be of portland stone, and Naylor's drawing shows stone(?) railings not only on the stairs and platform, but also across the arches of the arcade on the first floor. Ravenel (1945, p. 43) suggests the wooden railings in the arches may have been replaced with iron in 1801, and we believe there may have been an iron railing on the porch as well. The amount of iron staining in Feature 2, under the porch projection, suggests that there was an iron railing on the end of the platform. The only evidence of stone railing was part of a stone baluster found in the excavation which looks like those shown on the Naylor plan (Figure 40).

The floor of the entryway into the cellar was paved with brick placed on edge. The specifications called for the brick floor of the cellar to be laid that way as well. The rooms under the stairs were also paved. The bricks in the paving under the platform area were laid with their long axes in a north-south direction. In the area beyond the projection of the building under the stairs, the long axes of the bricks ran east-west (Figure 20). The walls of these rooms under the stairs were plastered; traces of it remain on the building, and more was found in the excavation.

There was some evidence at the end of the south stairs that there may have been a newel post at the end of the railing, as is shown in the Naylor drawing. If there had been evidence of a similar feature on the north stairs, it was destroyed when the drain line was put in.

North and south of the staircases there were paved areas in which the brick also were laid in an east-west direction. The paving on the south side extended out about six feet from the stairs, but there were traces of mortar beyond, suggesting that it once went farther. An area about thirteen feet from the foot of the north stairs was paved, and there is some evidence in the profiles that the end of it was not reached in our excavations. There appears to have been a low curb on the east edge of this walk. Just east of this curb line the wooden post was located.

The area east of the platform from the central entrance north to about the north end of the porch appears to have been paved also. The paving apparently extended little more than five feet east of the wall. At least part of the street along the south side of the building was apparently paved at the same time.

Evidence of an upper layer of paving in the area south of the south stairs is not as good. However, a thin mortar layer was noted in the south profile at a depth of about 1.5 feet below the surface, and there were traces of it farther north in the Elevator Pit. There was also paving along the north and south sides of the building at this time.

The upper, or later, paving and perhaps the opening of the north and south cellar doors date from after the stairs and porch were removed and the area filled in. The date on this cannot be precisely documented, although it apparently took place between 1818 and 1837 (Figures 8, 9). The ceramics found in the fill consist primarily of creamware and pearlware, with so few ironstone (five from the fill above the central entrance to the cellar) that a date in the early nineteenth century is definitely indicated.

Subsequent to these changes in the building, there have been several layers of paving in the area of the street east of the building. These were recorded, but not analyzed in any detail.

The excavations on the first floor of the interior of the building indicate that the sand fill, which contains primarily brick, mortar, and slate refuse from construction, was put in at the time of the building. It also contains some charcoal, which suggests that the floor was put down after the fire in 1771 which caused a delay in the completion of the building. We have also observed that the stairs to the cellar were a nineteenth century modification of the building.

As a bonus, in addition to the information on the construction of the Exchange Building, the excavations have also revealed some information on the nature of the Charleston waterfront before 1767. Prior to the construction of the Exchange, there was an old beach line east of the Half Moon Battery which contained a concentration of small flint nodules, black flint of the type brought over from England as ballast.

Below this beach line, at the bottom of the excavation for the Elevator Pit and some of the footing trenches, was a stratum which contained a large number of barrel hoops, tops and staves, cut pieces of planking, wood shavings, scrap wood, and wooden shingles. This had been preserved, because a substantial amount of pine pitch had been spilled there. In addition to the wood, we recovered examples of cloth, including a lady's glove, pieces of leather and a child's shoe, and such interesting small items as feathers, peach pits, peanut shells, watermelon seeds, and a gourd fragment. The nature of the deposit suggested that it resulted from some sort of accident or disaster on the Charleston waterfront. The artifact inventory so closely parallels the account of the 1752 hurricane that we believe our good fortune may be the result of that disaster. Because of this unique preservation situation, we recovered valuable data on leather and textiles used in Charleston, on the products of the coopers' trade at that time, and a picture of the waterfront in front of the Half Moon Battery.

APPENDIX I

Tabulation of Artifacts Recovered from the 1979-81 Excavations

METAL ARTIFACTS:	Elevator Pit	Level 1	Levels 1 & 2	Level 2	Level 3	Level 4	Levels 4 & 5	Level 5	Level 6	Brick paving in front of South cellar door	Builder's trench	Level predating building (pine pitch level)	Section II -- fill above paving, west side	Section III -- fill above floor, west side	Layer under wall, just predating building	Central entrance -- fill above floor	Section IV -- fill above floor, west side	Section V -- fill above floor, west side	fill above brick drain north of stairs	Layer between floors, north of stairs	Builder's trench	Feature 2	Other
Nails	24			70	11	35	11	79	57	3	6	10	14	1	5	49	1	101	12	27		27	28
Corroded iron pieces	17			2	1	5	10	11	27	3	8	6	10	3	3	52	2	35	8	24	1	22	21
Sickle																							1
Quilting frame clamp																							1
Iron handle																							1
Metal barrel hoop																							1
Staple																							2
Hinges																							2
Knife blade																1					1		
Iron with enamel surface																							
Lead							1											2					
Pewter plate rim																							1
Brass tack																				1			
Brass key																		1					
Iron key																							1

	Elevator Pit	Level 1	Levels 1 & 2	Level 2	Level 3	Level 4	Levels 4 & 5	Level 5	Level 6	Brick paving in front of South cellar door	Builder's trench	Level predating building (pine pitch level)	Section II -- fill above paving, west side	Section III -- fill above floor, west side	Layer under wall, just predating building	Central entrance -- fill above floor	Section IV -- fill above floor, west side	Section V -- fill above floor, west side	fill above brick drain north of stairs	Layer between floors, north of stairs	Builder's trench	Feature 2	Other
Metal Artifacts, cont.											1					1	4					2	
Brass or copper pieces																							1
Brass lock																							1
Spigot																							1
Brass military insignia																							1
Silver earring																							1
GLASS & BONE																							
Window glass	3	1	43	6	24	12	20	87	1	16	1	12	342	16	7	18					4		
Aqua bottle glass	2		13		3	6		3		20	1	5	3	23	1	1					1	2	
Dark green bottle glass	33	50	219	8	95	360	200	56	36	114	102	47	419	496	2	131	3	107					
Misc. color glass	3		10			23		1		18			6										
Colorless glass			13		18	2	7	10	4	28	1		74		3	14	5				5		
Tableware/stems						2	1	1		4	3	3	5	14	5	1	1	17					
Tableware/tumblers			2			3			1	18			7	40	1	1	6						
Decanter																							1
Bottle seal														1									

	Elevator Pit Level 1	Levels 1 & 2	Level 2	Level 3	Level 4	Levels 4 & 5	Level 5	Level 6	Brick paving in front of South cellar door	Builder's trench	Level predating building (pine pitch level)	Section II -- fill above paving, west side	Section III -- fill above floor, west side	Layer under wall, just predating building	Central entrance -- fill above floor	Section IV -- fill above floor, west side	Section V -- fill above floor, west side	fill above brick drain north of stairs	Layer between floors, north of stairs	Builder's trench	Feature 2	Other
Glass & bone, cont.											1											
Glass beads											1									1		
Buttons			1		1		1		1											1		
Bone handle							1															
Tubular bone piece							1															
Carved bone or ivory								1														
* * *																						
Animal bone	1		5		8	20	18	36	1	50	74	3	1	18	25	10	3	5	11			46
Horn																						1
Shell			11		3	3		21		26	12			3		1			3			8
Coral								4														1
Sponge					4																	
Indigo sample											2											1
Fish scales					5					19	35			3								2
Peanut shells											2											
Watermelon seeds											9											

	Elevator Pit Level 1	Levels 1 & 2	Level 2	Level 3	Level 4	Levels 4 & 5	Level 5	Level 6	Brick paving in front of South cellar door	Builder's trench	Level predating building (pine pitch level)	Section II -- fill above paving, west side	Section III -- fill above floor, west side	Layer under wall, just predating building	Central entrance -- fill above floor	Section IV -- fill above floor, west side	Section V -- fill above floor, west side	fill above brick drain north of stairs	Layer between floors, north of stairs	Builder's trench	Feature 2	Other
Peach pits										1	11											
Gourd																						1
Feathers											5											
Flint nodules, etc.	17		43	3	202	81	90	214	6	175	74	5	4	57	20	6	16				426	70
Slate	7	2	14	7	9	23	19	15	1	9	8	27		31	9	52	5				13	1
Limestone						1							1									
Mica schist																						2
Marble																						1
Misc. rock	2		16		19	23				50	3	1		3	1	6	1				60	2
Carbon element from lamp	1																					
Porcelain insulator		1																				
Gun flint					1			1													1	
Marked slate											1										1	
Clay pipes	1	4			13	10	16	61	2	78	84	6	2	22	28	9	9				4	37
Cork							1															1

	Elevator Pit Level 1	Levels 1 & 2	Level 2	Level 3	Level 4	Levels 4 & 5	Level 5	Level 6	Brick paving in front of South cellar door	Builder's trench	Level predating building (pine pitch level)	Section II -- fill above paving, west side	Section III -- fill above floor, west side	fill above floor, just predating building	Central entrance -- fill above floor	Section IV -- fill above floor, west side	Section V -- fill above floor, west side	fill above brick drain north of stairs	Layer between floors, north of stairs	Builder's trench	Feature 2	Other
Roof tile	3		1		1		4		1	1	2	1		1	12		3	1			1	5
Floor tile					2	1		6		4	3				4		2	6				5
Delft tile						4	5											1				3
Dutch brick										5												3
Brick fragments		1	6		1	11		1		3	2	1			1						4	1
Plaster										1				2	2		2	2			1	
Stucco	1						1				1			1								
Mortar			1			5		2		2				1							2	
Coal	1		2			1				1				2	1							2
Clinkers							6															1

EXCHANGE BUILDING		Service Trenches Outside Building		Service Trenches Inside Building			
Plain creamware	1	Amber beer bottle	1	Creamware	3		
Hand painted creamware	1	Clear glass	4	Decorated delft	12		
Whiteware	1	Light blue glass	1	White salt glaze	1		
Plain pearlware	3	Amber glass	1	Dark green bottle glass	2		
Blue & white transfer ware	1	Aqua glass	3	Window glass	2		
Hand painted pearlware	1	Plate glass	2	Iron fragments	1		
Blue shell edge pearlware	2	Brass earthquake rod end	1	Iron spikes	2		
Green glazed earthenware	1	Iron	2	Lead fragments	1		
Brown glazed earthenware	1	Nails	6	Slate	2		
Decorated delft ware	1	Wood fragments	2	Grey flint	1		
Banded pearlware	1	Bone handle	1	Pipe stems	5		
Salt Glaze	3	Mica Schist flooring	1	Pipe bowls	1		
Westerwald	5	Leather shoe frag.	6	Brick	2		
Grey stoneware	1	Leather trimmings	2	Shell mortar	2		
Brown stoneware	1	Pipe stem	1	Animal bone	53		
Dark green bottle glass	9			Oyster shells	8		

Levels predating the building: Elevator Pit	Wool Fabrics					1/1 weave, cotton and wool, 24 x 28 threads per inch	1/1 weave, 50 threads per inch; cotton printed with indigo	Silk Knit Glove	Silk tie-dye fabric 1/1 weave, 70 threads per inch	Leather: Shoes	Leather: Scraps	14	15
	1/1 weave, 32-48 threads per inch	1/1 weave, 10-20 threads per inch	1/1 weave, napped fabric, 56 threads per inch	2/2 diagonal twill weave, 56 x 52 threads per inch	Knit								
Northeast corner Section II	2	8					1	1	5	18	13		
	2	2											
Sections III and/or IV	2	8					1			6	4		
Central Entrance													
Section V		1								4	5		
Other Levels										10	9		

PIPE STEM DATING

	Stem Hole Diameter				Date
	4/64"	5/64"	6/64"	7/64"	
Combined levels predating building	12	79	10	1	1740.55
Fill of builder's trench	19	48	11	1	1743.6
Fill above central entrance to cellar	6	12	2		1748.2
Level VI	3	48	12		1741.32
Fill inside building	3	3	2		1745.33

Formula from Noel Hume (1972, p. 299)

Mean date = 1931.85 - 38.26 x mean hole diameter

Earthenware, cont.	Elevator Pit	Level 1	Levels 1 & 2	Level 2	Level 3	Level 4	Levels 4 & 5	Level 5	Level 6	Brick paving in front of South cellar door	Builder's trench	Level predating building (pine pitch level)	Section II -- fill above paving, west side	Section III -- fill above floor, west side	Layer under wall, just predating building	Central entrance -- fill above floor	Section IV -- fill above floor, west side	Section V -- fill above floor, west side	fill above brick drain north of stairs	Layer between floors, north of stairs	Builder's trench	Feature 2	Other	
Astbury-like											1	2				1							2	
"Jackfield"							1																1	
Plain delft																								64
Decorated delft																								4
French delft																								
Yellow Staffordshire slipped ware	1																							44
PEARLWARE:																								
Plain undecorated	2																							10
Transfer printed	2																							10
Hand-painted																								4
Polychrome																								4
Banded																								2
Blue shell edge	3																							4
Green shell edge	1																							5
IRONSTONE	1																							10

CREAM WARE:	Elevator Pit Level 1	Levels 1 & 2	Level 2	Level 3	Level 4	Levels 4 & 5	Level 5	Level 6	Brick paving in front of South cellar door	Builder's trench	Level predating building (pine pitch level)	Section II - - fill above paving, west side	Section III - - fill above floor, west side	Layer under wall, just predating building	Central entrance - - fill above floor	Section IV - - fill above floor, west side	Section V - - fill above floor, west side	fill above brick drain north of stairs	Layer between floors, north of stairs	Builder's trench	Feature 2	Other
Plain, undecorated	12	11	53	6	122	59	80	116	10		3	114	12	21	219	1	296	7	53	3	5	30
Banded									2			2					48					2
Transfer printed												1					2					
Overglaze																						1
STONEWARE:																						
Miscellaneous English brown	1		7		9	3	15	9	2	7	26	7	1	5	11		23	1	6	1	1	10
Miscellaneous English grey	1		1			5	3	7	1	5	7	2		10	4		18	1		2		14
Westerwald-like	1	1			2	9	6	10		22	19	2		8	5		2	1	1	2		28
Black glazed redware											1	17					6					1
Brown glazed red (Burslem?)						2	2	1		2	1	5	1		1		9					5
Nottingham					1		1	1			2				2							1
White salt glaze	1				2	15	8	4		14	31			12	5		1					15
Bellarmine-like						1				1	1											
Unique yellow in- terior, brown ext.															5							
Unglazed red							3															

Median Date*	Level 1	Level 1 & 2	Level 2	Level 3	Level 4	Level 4 & 5	Level 5	Level 6	Elevator Pit layer predating building	Sec. III, layer predating bldg.	Builder's trench	Sec. II, fill above paving	Central entrance fill above floor	Sec. V, fill above floor, w. side	Sec. V, fill between pavings	Feature 2
Buckley-like 1748											2		23			
Tortoiseshell 1755								2	4		4		4			
Green glaze buff 1767		1						1								
N. Devon gravel temp. 1713						1	1	1	1		3	1				
N. Devon sgraffito 1680									1							
Agate 1758									1		1					
Olive jar 1763													2	2		
Astbury 1738									2		1		1			
"Jackfield" 1760						1										
Plain delft 1720		1	3		4	2	2	9	30	10	55	3	3	9	7	1
Decorated delft 1750		7			15	14	10	15	2	6			1			
Yellow Staffordshire 1733	1		2		12	9	4		57	13	47	10	54	27	17	
Plain Pearlware 1805	2	1	6	2	7	7	2		1	2		38	70	137	8	2
Transfer printed pearlware 1818	2	2	4			1		5	1	1	1	7	23	59		6
Hand painted pearlware 1830								8				13	27	15	2	1
Polychrome pearlware 1830			7	3	2	6						8	20	250		
Banded pearlware 1805			3			3				2			2			
Blue & green shell edge 1805	4	4		1	1	5						19	77	55	1	
Ironstone 1857	1	1	1						1				5			
Plain cream ware 1791	12	11	53	6	122	59	80	116	3			114	219	296	53	5
Banded cream ware 1805												2		48		
Transfer printed cream ware 1790												1		2		
Misc. English brown 1733	1		7		9	3	15	9	26		7	7	11	23	6	1
Westerwald 1738	1	1			2	9	6	10	19		22	2	5	2	1	
Bursalem 1738						2	2	1	1		2	5	1	9		
Nottingham 1755					1		1	1	2				2			

Median Date*	Level 1	Level 1 & 2	Level 2	Level 3	Level 4	Level 4 & 5	Level 5	Level 6	Elevator Pit layer predating building	Sec. III, layer predating bldg.	Builder's trench	Sec. II, fill above paving	Central entrance fill above floor	Sec. V, fill above floor, w. side	Sec. V, fill between pavings	Feature 2
White salt glaze 1763	1				2	15	8	4	31	12	14		5			
Bellarmino-like 1660						1				1		1				
Chinese export ware 1730	3	3	3		13	8	5	16	37	27	30	15	9	8	5	1
Mean Ceramic Date*	1784	1777	1787	1804	1776	1773	1772	1772	1738	1740	1733	1788	1788	1802	1771	1793

* from South, 1977, p. 210-217.

	Square in center of south room	Square in northwest corner of north room	Hole between windows on the south	Median ceramic date*
Ceramics				
Plain creamware	1	-	-	1791
Plain delft	2	-	-	1720
Chinese export ware	1	-	-	1730
Yellow Staff. Slipped ware	4	1	-	1723
Misc. Eng. Brown stoneware	2	-	-	1733
Brown glazed red ware (Bursalem?)	2	-	-	1738
Nottingham	1	1	-	1755
White salt glaze	-	-	3	1763
Brown glazed red earthenware	1	-	-	
Brown glazed buff earthenware	-	1	-	
Tortoise shell	1	-	-	1755
N. Devon Gravel temp.	2	-	-	1713
Colono-Indian	1	-	-	
Animal bone	15	7	-	
Shell	38	31	-	
Pipe fragments	7	5	-	
Flint	9	-	-	
Slate	71	17	-	
Misc. rock	-	13	-	
Ceramic roof tile	1	-	-	
Brick fragments	6	13	-	
Iron nails	-	7	-	
Unident. iron	19	-	-	
Wood fragments	29+	-	-	
Window	6	-	-	
Dark green bottle glass	7	6	1	
Clear glass	1	-	-	
Plaster	10	6	-	
Mortar	4	13	-	
Lead	-	1	-	
Flat brass button	1	-	-	

Mean ceramic date for Square
in center of south room:

$$\frac{27771}{16} = ;736 *$$

Pipe stems from inside
building:

4/64 - 3
5/64 - 3
6/64 - 2

Pipe stem date = 1745.33**

* from South, 1977, pp. 210-217

** from Noel Hume, 1972, p. 299

Artifacts recovered from inside the Exchange Building.

APPENDIX II

MILLER EXCAVATIONS IN THE OLD EXCHANGE BUILDING

In 1965, John Miller conducted excavations in the cellar of the Exchange Building. The work was sponsored in part by C. Harrington Bissell who was responsible for a small museum there known as The Provost, and the Charleston Museum. The major area of excavation lay between the eastern side of the sea wall and the east wall of the building in the center of the east side, although there was some work in the southwest corner as well (Figure 41). Miller's excavation area on the east side was divided in squares and dug by levels. The soil was screened to recover all of the artifacts (Bissell, personal communication). Collections obtained were divided between the Rebecca Motte Chapter of the Daughters of the American Revolution and the Charleston Museum.

Unfortunately Miller did not live to write up his work. His notes are minimal, and there is no overall plat of the excavation to enable us to establish the exact location of his squares. Much of the collection of artifacts had been stored on tables in the upper part of the Exchange Building for several years. The only provenience information came from notes written on the paper sacks and some charts recording artifact counts. Before the remodeling of the building began, the Rebecca Motte Chapter of the Daughters of the American Revolution arranged to turn most of their collection over to the Charleston Museum on long term loan (IL 1977.1). The rest of their material was put in storage. The Museum already owned a share of the collection (Accession No. 1965.85).

In the spring of 1981, the remainder of the D.A.R. collection was removed from storage and added to the loan collection at the Charleston Museum. With the aid of a grant from the Old Exchange Building Commission the entire collection was analyzed and classified. When possible, ceramic vessels were assembled. The collections were cataloged retaining all of the provenience data available.

The contents of the collection are summarized in the charts below. Where the data are available the artifacts are tabulated by provenience. The bulk of the collection, however, is recorded as having no specific provenience. For this summary all of the artifacts excavated by Miller have been combined in the charts, but the Museum and loan collections are separated in the Museum catalog. The following summary of Miller's excavations is based on his notes and information from C. Harrington Bissell, who was present much of the time.

The Miller excavations extended from the fill in low places above the floor to the bottom of the sea wall and the Exchange Building wall. The one profile drawing we have (Figure 42) shows the limit of the builder's trench for the Exchange Building and the remains of a cofferdam constructed in front of the sea wall. The cofferdam (Figure 43) consisted of two rows of vertical posts with planks fifteen to sixteen inches wide and one and three quarters to two inches thick against the posts on the inside or west side of the dam.

Miller indicated the planks on the other side had been removed when the Exchange Building was built. He identified the eastern row of posts as cedar and the western row as hickory, pine and oak.

Miller encountered blue clay at the bottom of the excavation. The levels located on his profile were identified as follows, from the bottom up: (Fig. 42)

- Level 9: blue clay, sand and stumps
- Level 8: the construction level for the city wall
- Level 7: the level containing ballast stones, brick, china and glass
- Level 6: this was separated from level 5 by a layer of wood one inch thick
- Level 5: trash dump present before the Exchange excavation started. Notes mention a layer of sawdust in Square 3A between levels 4 and 5.
- Level 4: level thrown back from the excavation for the Exchange Building, in front of the cofferdam
- Level 3: level containing coal, charcoal, china and bones, etc.
- Level 2: second level of fill hauled in from another area
- Level 1: first level of fill below the brick floor containing brickbats, sand, etc. (Miller notes on file at the Museum)

Miller also noted that the upper part of the sea wall had a rough brick surface while the lower part, below four feet from the top of the wall, was smooth which he explained as having been worn by wave action. There was wooden planking under both the battery and the Exchange Building wall. The planks under the battery were perpendicular to the battery, those under the Exchange Building wall ran parallel to it.

It is difficult to check Miller's interpretation of the stratigraphy. Miller believed that the cofferdam was associated with the building of the Half Moon Battery. However, an analysis of a group of 66 sherds identified as from the fill inside and below the cofferdam in Square 3A suggests that it may be later. Twenty-one of the sherds were plain white salt glaze, 23 were white salt glaze with molded patterns, four were scratch blue, and two were tortoise shell glazed. The earliest dates for these types are 1720, 1740, 1744, and 1740 respectively (South 1977, pp. 210-12) and the mean ceramic date for the entire assemblage is 1755. If this is a representative collection of the cofferdam fill, the date would suggest that the fill of the dam was later than the original construction date of the sea wall.

In 1752, the hurricane apparently caused a great deal of damage to the sea wall and batteries in the city. There are numerous references to the damage and need for repairs in the records of the House of Commons (Lipscomb and Nicholson 1971, pp. 407, 411). McCrady reported that DeBrahm was hired to make the necessary repairs (McCrady 1899, pp. 282-83). Because the fill of the cofferdam has a mid-eighteenth century date, it is possible that this dam was constructed during that period of repair rather than being associated with the original construction of the battery. Therefore all the layers recorded by Miller above the cofferdam would date after 1752. Miller made no mention of the pine pitch layer which we found outside the building, but presumably any portion of that layer close to the battery would have been removed in order to put in the cofferdam for the repair of the wall, and the evidence of the builder's trench for the cofferdam was then removed by the excavation for the builder's trench for the Exchange Building.

Miller's notes indicate that the builder's trench for the building was dug from the top of level 5, although his profile suggests that it was dug from the top of level 3 (Figure 42). It is not possible to check mean ceramic dates on his other levels as we do not know where the squares were located and which artifacts came from the builder's trench portion of the excavation and which did not.

Most of the artifacts recovered from Miller's excavations came from deposits which appear to date between the early eighteenth century and 1771, the completion of the building. There were a few which were later. In places the brick floor had sunk in as the fill below it settled, and the recent fill had accumulated in those low spots. Those deposits were described as fill above the floor. We assume all the ironstone, pearlware, and nineteenth century artifacts came from this upper level.

The yellow Staffordshire slipped ware sherds were most abundant in the levels below the floor. Sherds indicate the vessel forms include bowls, post-set pots and jars. Several good examples of bowls were found (Figure 45).

Another numerically important ceramic type was the white salt glazed ware. Not only did the collections include the familiar dot and diaper and barley patterned plates, but also a King of Prussia pattern plate with an eagle molded on the border (Figure 45) dated 1756 (Mountford 1971, plate 144) and fragments of one or more serving dishes with molded feet with heads on them (Figure 45) dated 1730 (Mountford 1971, plate 64).

There was also a substantial amount of delft ware. Several fragments of polychrome bowls with floral designs in the center (Figure 44) were recovered along with the more common blue and white plates and jars, and plain white chamber pots and other vessels. Unusual was a large portion of a bowl with the phrase "Success to Trade" written on it (Figure 44).

A large amount of Chinese export ware was found in the collection. Most of the sherds were fragments of underglaze blue and white pieces including several large punch bowls (Figure 44). Two unusual forms were present as well -- a tall mug and a smaller mug or cup (Figure 44).

Westerwald pottery was represented in the collection by sherds from the usual chamber pots (Figure 45). There was also a tall restorable mug with an unusual design (Figure 45).

Other ceramic types were present. Fragments of Bellarmine jars with masks (Figure 45) were found along with some examples of British grey and brown stoneware utilitarian vessels. There was a large number of large milk pan fragments of reddish ware with greenish to orange glaze on the inside.

A large quantity of unglazed red ware sherds was also recovered. They were similar in paste and finish to flower pots but the shape was different. Rims were plain, and the vessel form was an elongated cone with a somewhat rounded end with a hole in it. A letter from Noel Hume (personal communication, October 18, 1981) identified them as sugar molds. They were used for refining the coarse sugar imported from the Caribbean. Most of them were found in Square 3B, suggesting that perhaps they were deposited at one time.

The Exchange Building collection includes a relatively small amount of colono ware, considering its size. There was an interesting red filmed appendage of an unusual shape which Dr. Charles Fairbanks (personal communication) identified as Tonalá adorno. This is one of the few pieces of Mexican origin noted in the collections from Charleston to date.

Miller recovered a very large collection of dark green glass bottle fragments which is usual in most eighteenth century refuse collections. A few bottle seals were noted -- one marked KM dated 1744, and another marked F. Bremer dated 1758. There was also a German mineral water bottle seal dated 1720 to 1770 (Noel Hume 1972, pp. 61-62). One unusual bottle was the molded Turlington's Balsam of Life bottle dated ca. 1750 (Noel Hume 1972, Figure 17) (Figure 46).

Other items of interest include a variety of clay pipes, wig curlers, gun flints, shoe buckles, bone knife handles, brushes, carved bone pieces, and a few coins. There were two Rosa Americana pennies dated 1722, produced in Ireland for the American Colonies (Raymond 1941, p. 4; Noel Hume 1972, p. 167).

A final item of note was the human skull recovered from Miller's excavations. His plan indicated there was not only a skull, but fragments of vertebrae, a scapula, and an arm bone as well. Our record also shows a portion of a human jaw from an unknown provenience. It appears that the human bones were found along the sea wall at a depth of about four feet, near the nail he placed in the wall.

The skull was sent to Dr. Ted A. Rathbun, Professor of Anthropology at the University of South Carolina, Columbia, whose report dated April 3, 1981, states that it was from a young adult male, aged twenty to thirty years, "of probable Indian ancestry. At the time of his death . . . he suffered from anemia, gum resorption, and in earlier life had a head wound and three episodes of illness or deficient diet." If our dating of the cofferdam is correct, the skeletal material was placed there after 1755. It is unlikely that it was an intentional burial, but instead may have resulted from drowning or perhaps was a skeleton accidentally included in the fill (Letter from Rathbun to McGinnis, April 3, 1981).

The collection from the Miller excavations provides an interesting inventory of ceramics and other artifacts imported into Charleston before 1771, one that makes us wish we had more accompanying provenience data with it.

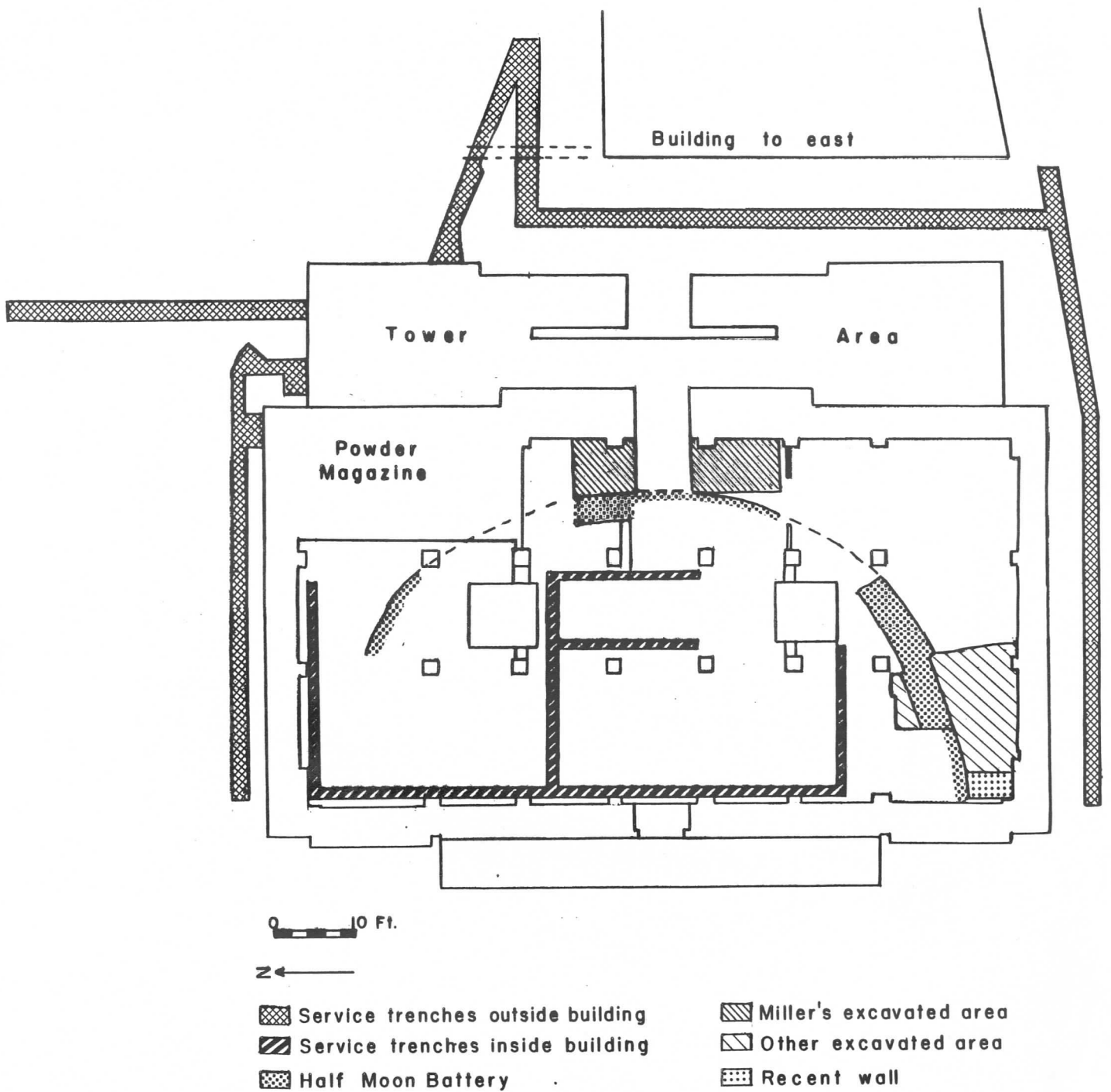


Figure 41. Plan of the Exchange Building showing the location of service trenches inside and outside of the building, the Half Moon Battery, and the area excavated by John Miller.

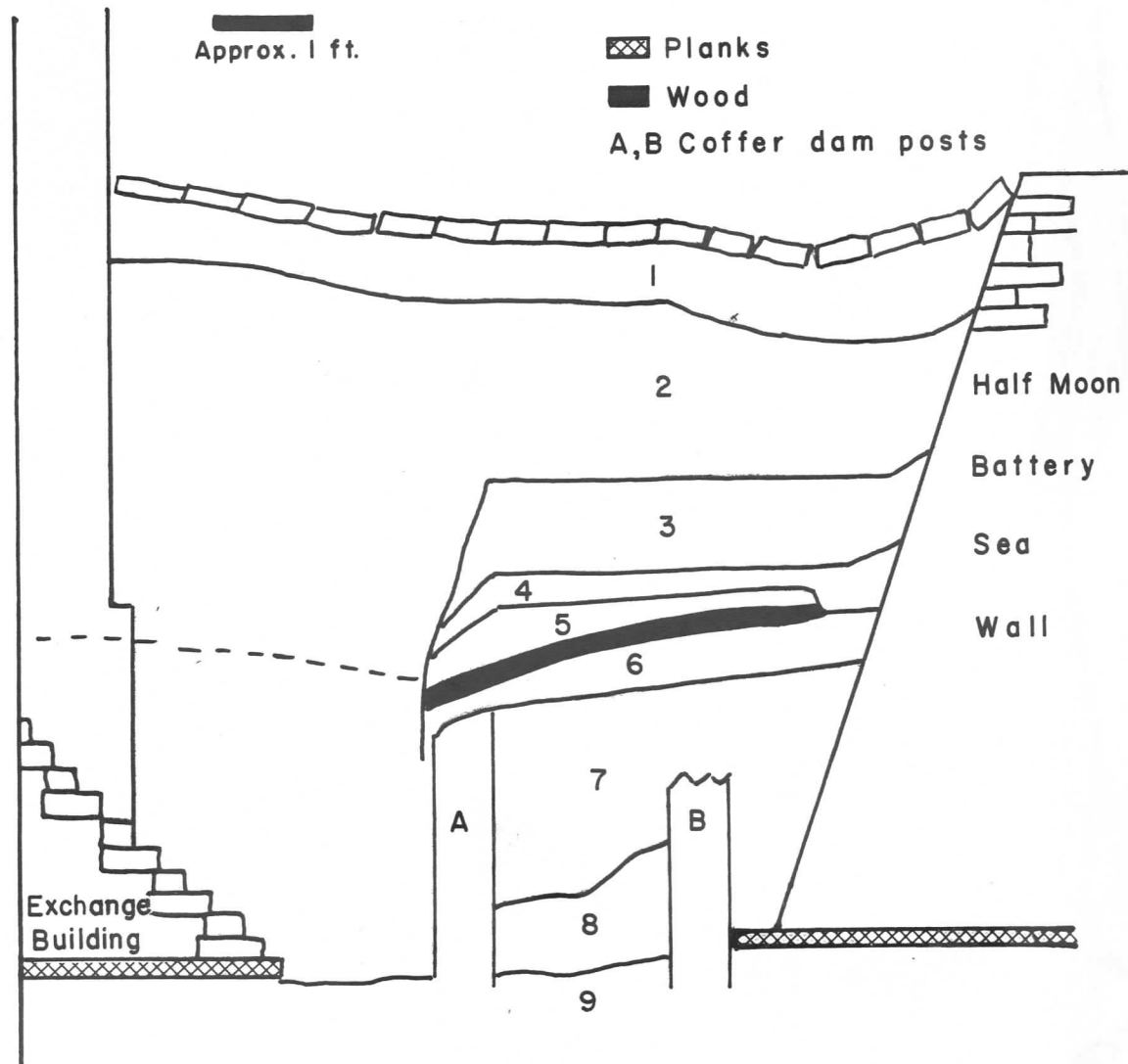


Figure 42. Profile drawn by John Miller of his excavations inside the Exchange Building between the Half Moon Battery and the Exchange Building wall.

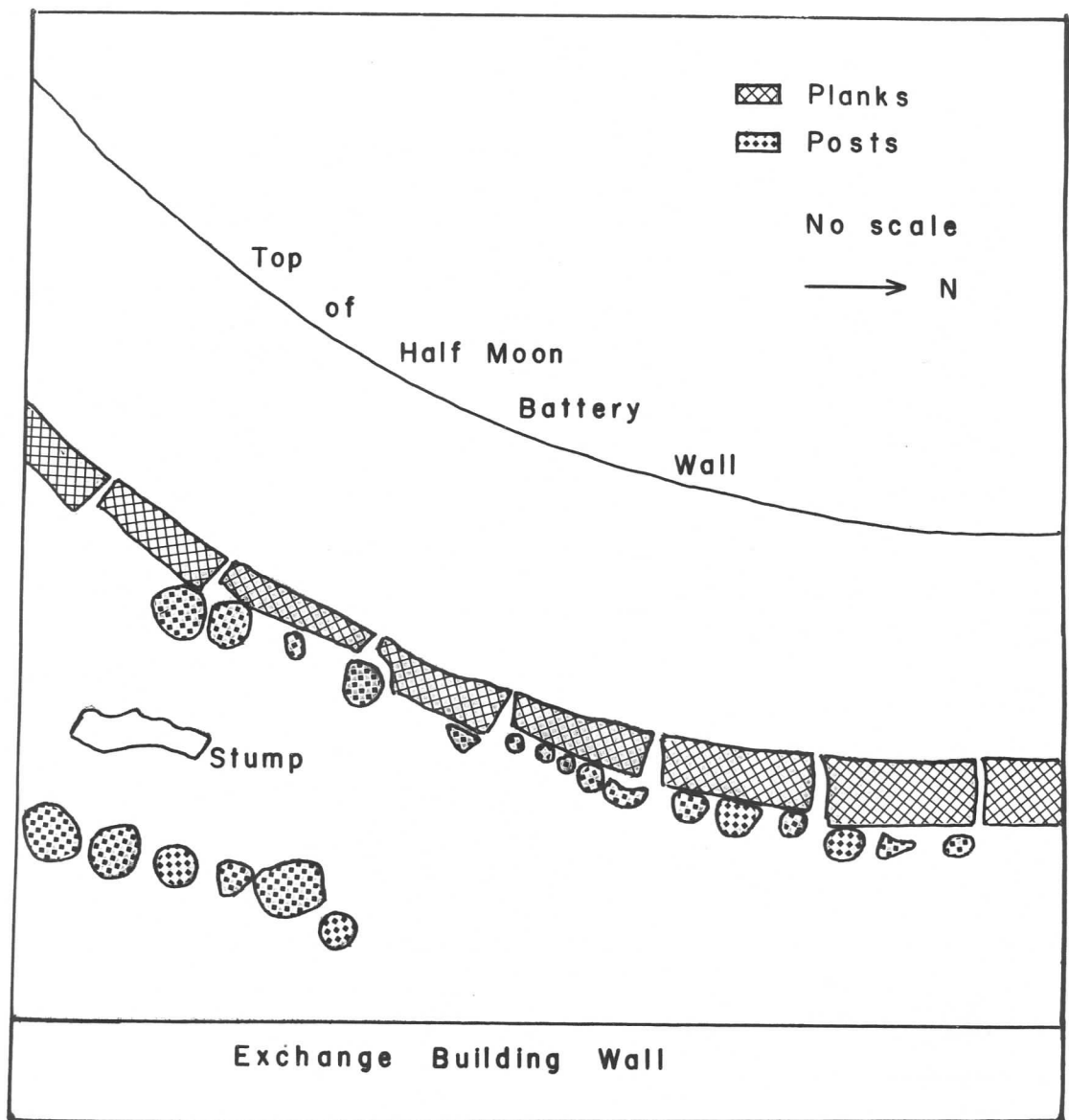


Figure 43. Plan drawn by John Miller of a portion of his excavated area inside the Exchange Building, showing the cofferdam.

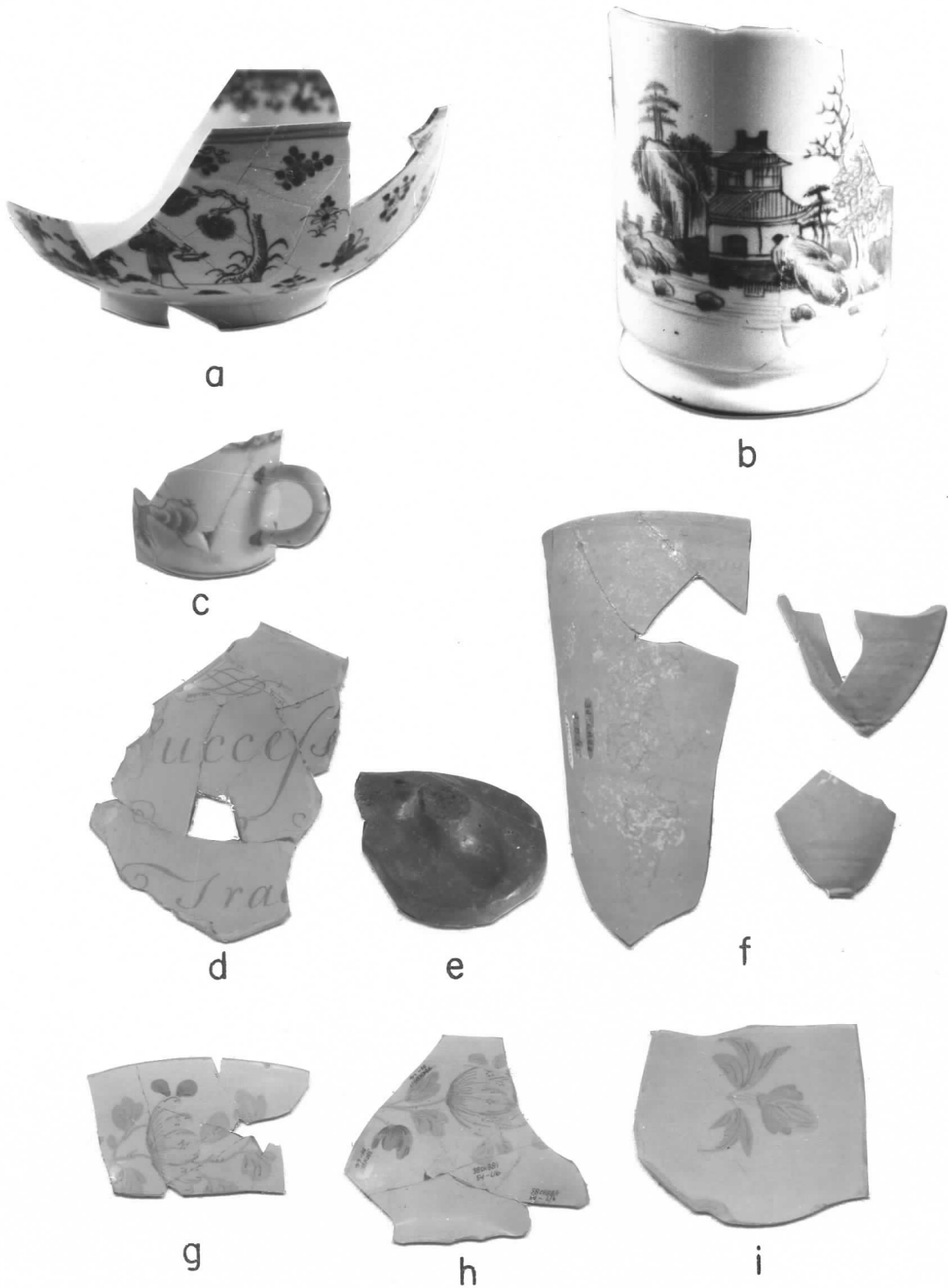


Figure 44. Ceramics from the Miller excavations inside the Exchange Building. a) Chinese exportware bowl b-c) Chinese exportware mugs d) delft bowl fragment with phrase "Success to Trade" in bottom e) "Tonala adorno" f) sugar mold fragments g-i) polychrome delft bowl fragments.



Figure 45. Ceramics from the Miller excavations inside the Exchange Building. a) Bellarmine jar fragments b-c) yellow Staffordshire slipped ware bowls d) Westerwald mug e) Westerwald chamber pot f) white salt glaze vessel foot with face molded in it g-h) King of Prussia white salt glaze plate fragments.

APPENDIX III

TABULATION OF ARTIFACTS EXCAVATED BY JOHN MILLER

1965

SQUARES 1 & 2	Square 1, 0-8"	Square 1, 8-16"	Square 2	Square 2, 0-8"	Square 2, 8-16"	Square 2, 16-24"	Square 2, 40-48"	Square 2, level 6; disturbed	Square 2A	Square 2A, level 2; 6-12"	Square 2A, level 3 12-18"
White porcelain	2	0	0	2	0	0	0	0	0	0	0
Chinese export	0	0	0	0	0	0	11	7	1	0	2
Brown stoneware	8	4	0	4	1	0	0	0	0	0	3
Grey stoneware	15	1	0	9	5	0	0	0	0	0	0
Nottingham	0	0	0	2	1	0	0	1	0	0	0
Bellarmino	0	16	0	0	3	6	0	0	0	0	0
Westerwald	0	8	0	8	9	0	0	2	0	0	0
White salt glaze	0	0	1	0	1	0	0	12	0	0	1
Hand painted salt glaze	0	0	0	0	0	0	8	0	0	0	0
Staffordshire slip	0	52	0	55	28	7	17	14	0	1	3
Yellow & brown slipware	0	0	0	0	0	0	19	0	0	0	0
Yellow slipware	0	0	0	10	0	0	0	0	0	0	0
Glazed earthenware	0	0	1	5	9	0	2	0	0	0	3
Unglazed earthenware	0	0	0	0	6	0	0	1	0	0	0
Colonware	2	3	0	11	9	0	0	0	0	0	1
Tortoiseshell ware	0	0	0	4	0	0	0	0	0	0	0
Astbury	0	0	0	0	0	0	0	0	0	0	1
North Devon gravel tempered ware	0	1	0	0	1	0	0	0	0	0	0

	Square 3A base of 1/2-moon battery	Square 3A below fill in- side cofferdam	Square 3A sand level	Square 3 32-40"	Square 3 16-24"	Square 3 8-16"	Square 3 0-8"	Square 3A-3B below city wall	Square 3A Level 5	Square 3A Level 4	Square 3A Level 3-4 dump	Square 3A Level 3, trash dump	Square 3A Ex. Bldg. footing	Square 3A fill	Square 3A sand level	Square 3A
SQUARE 3 --																
Unglazed earthenware	0	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Olive jar	0	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0
Colonoware	0	2	0	0	5	20	18	2	0	0	0	0	0	0	0	0
Jackfield	0	0	0	0	0	12	0	0	0	0	0	0	0	0	0	0
Tortoiseshell glazed ware	0	2	0	0	0	1	1	0	0	0	1	0	0	0	0	1
Agateware	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Astbury	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0
North Devon gravel tempered ware	0	2	0	0	0	1	2	0	0	0	0	0	0	0	0	0
Plain Delft	1	0	0	0	0	57	0	0	0	0	0	0	0	0	0	0
Blue decorated Delft	0	4	0	0	24	37	49	0	0	0	0	1	0	0	0	0
Polychrome Delft	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0
TOTAL	1	66	0	4	167	348	128	10	0	0	3	2	1	2	0	3

SQUARES 3B & 4, cont.	Square 3B	Square 3B Level 3-4 dump	Square 3B Level 3 fill	Square 3B Ex. Bldg. footing	Square 3B city wall footing	Square 3B Level 4	Square 3B Level 5	Square 4 0-8"	Square 4 8-16"	Square 4 16-24"	Square 4 24-30"
Miscellaneous glazed earthenware	2	0	0	0	0	0	0	35	1	2	1
Unglazed earthenware	0	0	0	0	0	0	0	0	6	0	0
Unglazed redware sugar molds--	1624	0	0	0	0	325	0	0	0	0	0
Colonoware	0	0	0	1	0	0	0	7	14	6	4
Green glazed cream-bodied ware	1	0	0	0	0	0	0	1	0	0	0
Tortoiseshell ware	0	0	0	0	0	0	0	4	0	0	0
Astbury ware	3	0	0	0	0	0	0	0	0	0	0
Agateware	0	0	0	0	0	0	0	0	2	1	2
North Devon gravel tempered ware	0	0	0	0	0	0	0	1	2	2	0
Plain Delft	0	0	0	0	0	0	0	7	26	10	3
Blue decorated Delft	0	0	0	1	2	0	0	38	19	12	6
Polychrome Delft	0	0	0	0	0	0	0	4	11	13	0
Hand painted pearlware	0	0	0	0	0	0	0	0	1	0	0
TOTAL	1659	0	0	2	3	325	0	260	306	223	38

Miller excavations inside Exchange Building

Sherd count, specific provenience unknown:

White porcelain	36
Chinese exportware	775
Brown stoneware	281
Grey stoneware	18
Nottingham	51
Bellarmine	3
Westerwald	83
White salt glaze	1448
Scratch blue salt glaze	26
Hand painted salt glaze	2
Ironstone	17
Black basaltes	1
Engine turned stoneware	6
Ehlers stoneware	1
Staffordshire slipware	1344
Brown slipped ware	12
Yellow slipped ware	4
Metropolitan ware	19
Glazed red earthenware	92
Glazed cream pan	733
Miscellaneous glazed earthenware	55
Miscellaneous unglazed earthenware	685
Spanish olive jar	2
Colonware	133
Jackfield	37
Green glazed cream-bodied ware	24
Wheildon ware	3
Tortoiseshell glaze	31
Rockingham	1
Agateware	1
Astbury	35
Buckleyware	3
North Devon gravel tempered	34
French Delft	2
Plain Delft	196
Blue decorated Delft	858
Polychrome Delft	55
Majolica(?)	1
Banded ware	13
Plain creamware	174
Plain pearlware	30
Hand painted pearlware	16
Polychrome pearlware	1
Transfer printed pearlware	16
Shell edge pearlware	29
Indian sherd	1
TOTAL	<u>7388</u>

Inside Exchange Building, fill above floor:

Chinese exportware	15
Brown stoneware	2
White salt glaze	1
Ironstone	1
Ehlers stoneware	7
Miscellaneous glazed earthenware	2
Plain Delft	2
Blue decorated Delft	1
Polychrome Delft	1
Plain creamware	2
Hand painted pearlware	2
TOTAL	<u>36</u>

Fill, southeast corner:

Staffordshire slipware	6
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Fire well on East Bay Street:

Blue decorated Delft	3
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	Square 1 level 0-8"	Square 1 level 8-16"
Dark Green bottle glass	6	70
Clear bottle glass		1
Window glass	3	
Stemware	1	3
Tumblers		9
Pipe Bowls	5	9
Pipe Stems	33	90
Delft tile	1	
Roof tile		1
Bone tooth brush handle		1
Brass Button	1	
Brass tube		1
Miscellaneous brass objects	1	8

	Square 2	Square 2 level 0-8"	Square 2 level 8-16"	Square 2 level 16-24"	Square 2 level 40-48"	Square 2 level 6 disturbed	Square 2A	Square 2A level 2 6-12"	Square 2A level 3 12-18"
Dark Green bottle glass	4	38	16			108		21	24
Clear bottle glass						1			
Window glass		1	7		1	1		3	10
Stemware		3	3			1			
Tumblers		1	1						
Clear table glass									5
Pipe bowls		18	6	1		4			4
Pipe stems		74	42			22			29
Delft tile			4						
Roof tile	3		6			1			
Animal bones									35
Bone disc									1
Bone handle									1
Pig tooth		1							

	Square 4 0-8"	Square 4 8-16"	Square 4 16-24"	Square 4 24-30"											
Dark green bottle glass	6	29	31	34											
Clear bottle glass	9	12	11	4											
Light green bottle glass	12		13												
Aqua bottle glass				13											
Stemware	2	3													
Tumblers	1	2													
Clear glass tableware	2														
Window glass		22													
Bottle seal			1												
Pipe bowls	14	12	72	1											
Pipe stems	112	69	11	8											
Delft tile	1														
Roof tile	1														

	Specific proven- Vence unknown	Inside Bldg. fill above Floor	Fill, SE corner	Fire well on E. Bay St.		Specific proven- Vence unknown	Inside Bldg. fill above Floor		Specific proven- Vence unknown	Inside Bldg. fill above Floor		Specific proven- Vence unknown	Inside Bldg. fill above Floor	
Dark green bottle glass	1883	52	NO MISCELLANEOUS ARTIFACTS	NO MISCELLANEOUS ARTIFACTS	Floor tile	35	35	Floor tile	35	35	Misc. metal objects	13	13	
Clear bottle glass	140	13			Fish & animal bone	173	173	Fish & animal bone	173	173	Minie balls	4	4	
Lt. green bottle glass	34				Animal teeth	2	2	Animal teeth	2	2	Musket ball		1	
Aqua bottle glass	73				Human jaw bone	1	1	Human jaw bone	1	1	Cannon balls	5	5	
Blue glass	2				Bone button	9	9	Bone button	9	9	Sheet lead	2	2	
Amber glass	2				Bone handle	4	4	Bone handle	4	4	Dutch brick frag.	2	2	
Bottle seals	5				Bone collar button	1	1	Bone collar button	1	1	Worked slate circles	8	8	
Window glass	287	4			Shell	6	6	Shell	6	6	Slate fragments	19	19	
Opaque glass		1			Shell buttons	2	2	Shell buttons	2	2	Slate pencil	1	1	
Stemware	36	1			Brass buttons	2	2	Brass buttons	2	2	Mortar	5	5	
Tumblers	4				Brass buckle	2	2	Brass buckle	2	2	Plaster fragments	4	4	
Clear glass tableware	2				Brass thimble	1	1	Brass thimble	1	1	Coal	30	30	
Pipe bowls	916				Brass fork	1	1	Brass fork	1	1	Flint nodules	81	81	
Pipe stems	853	7			Misc. brass objects	14	14	Misc. brass objects	14	14	Gun flint	3	3	
Delft tile	15				Iron	97	97	Iron	97	97	Straight pins	2	2	
Roof tile	34				Iron nails	38	38	Iron nails	38	38	Wood buttons	3	3	

	Specific proven- lence unknown	Inside Bldg. fill above Floor
Ceramic buttons	12	1
Glass buttons	4	
Coins	6	
Wig curlers	6	1
Lead seal frag.	2	
mother-of-pearl cuff link	1	
Wood fan holder	1	
Leather frag.	2	
Cork fragment	5	
Marbles	2	
Stirrup	1	
Nut shell	1	
Fruit pit	1	

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1880

1884

1898

City Gazette and Daily Advertiser

August 16, 1800

PC

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RMCO

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