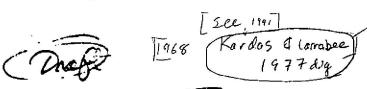
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1978 Historic Sites Research (Susan Kardas & Edward M. Larrabee)

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1978 18th Century Landfill in Manhattan, an Archaeological Analysis of Tests in the Schermerhorn Row Block [1977].



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# DESCRIPTION OF EXCAVATION REFINDINGS IST TEST, AT NO. 4 FULTON-ST. 200 TEST, AT NO. 198 FIDNT ST. SG 300 TEST, AT NO. 165 DHW ST. 4TH TEST, AT NO. 18 FULTON ST. 94 STH TEST, AT NO. 171 JOHN ST. 6TH TEST, AT NO. 189 FRONT ST. 106 7TH TEST, AT NO. 2 FULTON ST.

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#### I. Introduction

A. Purpose of Project and Definition of Terms

This report describes the collection of archageological material from seven test pits dug at "Schermerhorn Row"Block" in lower Manhattan suring the summer of 1977, and provides an inventory and preliminary discussion of the artifacts recovered. The purpose, as stated in Contract Di25125 dated 2 June 1977, was to provide "Archaeological Supervision and reporting of test excavations," with actual digging to be performed largely by a Foundation-Contractor to standards of recovery of cultural data mutually acceptable to the archaeologists who ate the authors of this report and to the New York State Office of Parks and Recreation.

Throughout this report, the term 'study area' is used to refer to that part of the East River waterfront of Manhattan between and including Burling Slip (now John Street) and Beekman Slip (now Fulton Street). In 1700 the waterfront was about three blocks west of its present location, and it moved progressively eastward from Pearl Street to the present South Street Seaport entrance.

We have used the more restricted term 'site' (or 'site block') to describe the city block bounded by Fulton Street (on the north) West Front Street (on the \$p\delta \delta \delta) John Street (or the South) and South Street and the East River elevated highway (on the East). Seven test pits were excavated within the site block. Throughout the report they are identified by number (given in the sequence of digging), and by the street address of the building in which they were placed.

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The locations of these tests were determined by Restoration Architects and Foundation Engineers using criteria for yielding maximum information on foundation structure and fill material. Size was set at 6 feet square, but was modified by individual conditions. Maximum depth was also determined by those specialists in consultation with Soils Engineers, upon inspection of each pit. Depths at which sheathing was necessary were largely decided by the condition of the loose fill and the flow of water, as determined by the working experience of the construction crew.

This left the archaeological staff with only limited control over the digging, in locations chosen for reasons not related to archaeological sampling for cultural data. The archaeologists could determine the speed of excavation, could stop it for removal of sensitive material or recording of features, and could perform the excavation themselves; but could not choose to extend and of the pits or determine the depth to which any tests would be dug. Consequently, this work (and its results) should be considered as controlled salvage of archaeological resources from a series of foundation condition tests rather than as an excavation project planned for archaeological research objectives.

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#### B. Methods Employed

Fieldwork for this project was performed in sixteen days during the summer of 1977.\* In all a total of 47 person-days of archaeologists' time and nearly 57 person-days of Assistants' time were spent during the three summar months. This included a small amount of artifact study, as well as actual overseeing of excavation and recovery and field washing of artifacts. The major part of field cataloging and preliminary analysis of artifacts, as well as compilation of excavation data and report peep-aration, was accomplished during the following autumn.

At all times during the field excavation there were two Archaeologists present at the site, and from two to five assistants, depending on the requirements of the project. Normal prodedure, established during the more or less simultaneous excavations of Tests 1 and 2 in June, was for one Assistant to observe any construction activities other than pumping, and for between one and three members of the archaeological staff to be present and re-

<sup>\*</sup> Fieldwork was conducted on June 15, 16, 20, 21,22,23, 24, and 27; July 12,13, 15, 16; and August 8,9,10 and 11, 1977. During June, Tests 1 through 3 at 4 Bulton Street, 193 Front Street and 165 John Street were excavated. The shorter period in July covered digging of the two smallest Tests, 4 & 5 at 18 Fulton Street, and 171 John Street; and, the 6th Test at 189 Ftont Street. In August work was conducted at 2 Fulton Street.

covering artifacts whenever excavation was in progress. The construction crew, from the firm of Spenser, White and Pretice, Inc. placed each shovelfull of material on a cement floor or plywood sheet, where the Archaeological staff sorted through it. As the test pits became deeper, the laborers filled buckets which were then hauled up and spread out as before.

At regular intervals (usually with every foot of increased depth, but more frequent if unusual features or deposits were present) the Archaeologists would inspect and record the sides and bottom of the test pit, and determine whether a new Level designation was needed. This process was complicated at depths of more than three or four feet by the necessity of sheathing the sides with neavy planking, braced all around, for safety in the very soft, wet, rubble filled earth. Normally the sheathing was horizontal, but in some cases it was driven vertically as work went deeper. Recording of stratigraphy was then performed piece-meal after the pit had been deepened another foot, but before the sheathing was lowered that distance/

At vaicious times deposits were considered so sensitive that they were removed by the Archaeoogists and their Assistants. However, this was necessary in only a few cases. Visibility for recovery was usually much better in the material spread out for

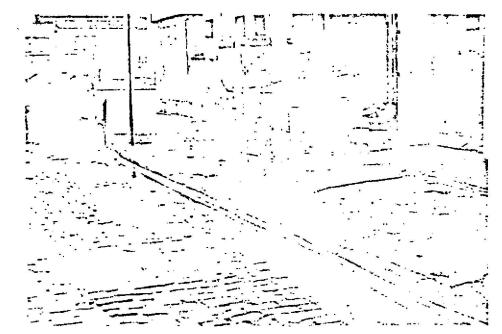
sorting than in the poorly drained lit and water filled bottom of each pit. Total soil samples were taken at several times, to see if significant numbers of small finds were being lost.

All pits that were dug more than 3 feet deep required continuous pumping, and the deepest tests (Tests 1, 2 and 7) often needed two pumps. The pits filled with water overnight and on week-ends, so that extensive pumping was needed at the start-up of work, and in case was there dry soil. At the bottoms of some tests rapid flow of water provided a constant washing action in sandy soil.

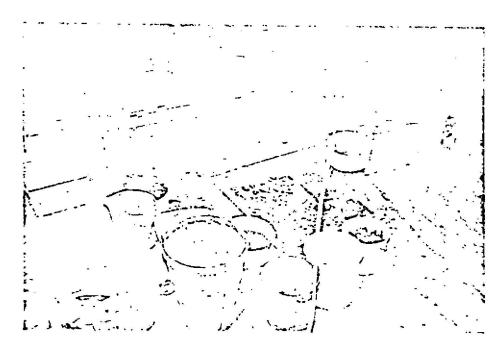
Throughout the entire project, the members of the construction crew were extremely cooperative, and several times devised ways to make it easier for the Archaeological Staff to record excavation and recover cultural material. Help was also provided by the firms of Spiegel and Zamecnick Inc. (Foundation Engineers), Pokorny & Pertz (the Historical Architects, who alos provided office support during the summer and autumn, URS Madigan Preager (Soils Engineers), and by the on-site staff of the New York State Office of Parks and Recreation, who arranged for secure work-space at 12 Fulton Street during the summer, and in their own offices during the summer, and in their own offices during the summer, and in their offices during the autumn. Special consultation was also provided by Paul Huey, State Historic Archaeolofist and his staff.

Material collected from the Test Pits under excavation was placed in plastic tubs or buckets, and when these were filled, or a Level completed, the objects were hand washed in sieves under a fine spray of water, or in buckets of water, as appropriate, and air dried on screens. Materials such as wood and leather which had preserved well in the wet soil but might deteriorate during drying were kept moist in plastic bags. Most of the wood was gradually dried, while the leather was treated in several ways, in experiments to find the most satisfactory field technique under the circumstances.

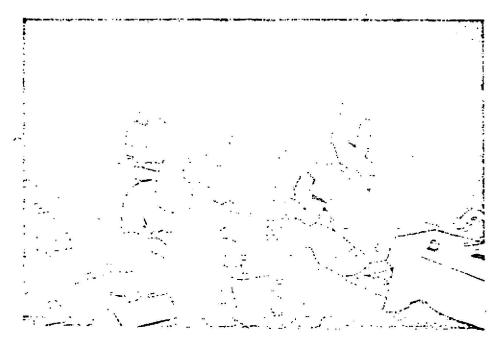
After drying, all material was numbered with the Lot in which it was found. These numbers were stamped or written on the artifacts themselves, except in the cases of some leather and wood in plastic bags, and some large (5 lb. or greater) deposits of non-diagnostic waster and pantile sherds from 4 Fulton Street. During subsequent compilation and analysis, a;; material from the same lot was combined. Later, all material from each testwas combined and then sorted into different types of artifact.



After a container had been filled with mud-covered artifacts from a single level, it was placed in a large collander and the mud was cleaned off with a pressure nozzle and scrub brushes (Sch 4, x 15, looking NE).



Finer material was washed in a bucket of water. The washed artifacts were then placed on drying screens in an unused store at 12 Fulton St. which was made available as an archaeological workshop (Sch 6, x 20, lcoking NW).



Lot numbers were written or stamped on the cleaned artifacts before they were boxed preparatory to making a field tatalog. The archaeologist assistants were able to work on numbering when the excavation temporarily stopped for placement of shoring, pumping of water or other delays (Sch 6, x 18, looking SW).



After washing some preliminary identification of material was made. Here one of the archaeologists is comparing excavated Turban shells from the West Indies with modern examples and comparative illustrations (Sch 7. x 20, looking NE).

#### C. Background Information

#### Historical Evidence

The interpretation of excavation findings in this project has been largely restricted to archaeological analysis. A detailed search of historical documents pertaining to Schermerhorn Row had already been made (Waite & Huey 1972, Waite 1974, Rath 1975). We have relied on these reports for historical data as well as other published works which yielded general information about New York and the processes which might be reflected in the archaeological record. Reference is made to these where they provide some insight into events of which we may see the results.

Of particular interest is information concerning the process of making land fill, suggestions as to the sources for material, and general information about the expansion of Manhattan by the process of "making land" and rearranging topography.

This last process can be illustrated by some historical and reconstructed maps. New Amsterdam in the mid-17th Century occupied only the tip of Manhattan below Wall Street, and land expansion was limited to a few wharfs and a sea wall on the East River along the line that is now loweer Pearl Street. (See Mac Coun 1909 and Kouwenhoven 1953: 41). By the time bed detailed Ratzer map was made in 1767, extensions of the city had spread north as far as the "Collect Pond" (marked "Fresh Water" on the map), and the East River waterfront had been expanded from the irregular original shoreline (marked on the 1767 map by Dock Street, Hanover and Queen (Pearl) Street to Water Street, and in several places beyond bhat to "Burnets Key" (later Front Street). Two decades later the city grid pattern

had expanded north past the "Fresh Water Pond", and along the East River (see 1789 map). Front Street existed as far north as Burling Slip, with piers and fill extending beyond it. The 1797 map (Rosebrock 1975: 9) shows Front Street existing intermittently north of Burling Slip.

In the middle years of the 19th Century the process was graphically summarized by the topographer and surveyor Egbert L. Viele (1865, 1374). His "made land" symbol surrounds the lower tip of Manhattan for two to four blocks in all directions. A 20th Century summation is shown in very schematic and simplified form by Baiter (1974: x, 4), which indicates further expansion between the mid-19th and late 20th Century. Clearly, this process has been an integral part of the character of New York for more than three centuries, and the land fill archaeologically sampled at Schermerhorn Row in the summer of 1977 is not only part of the fabric of this city, but is symbolic of the expansion of "real estate" and of urban "improvement" upon natural topography which its at the heart of Euro-American culture.

Very little detailed information is available concerning the actual filling. From time to time, as the city expanded, various streets were "graded and paved" (probably gravelled), as was Fulton Street (then called Partition Street) in 1761 (Booth 1867: 394-395). Fill material from such grading may have been available, but in general, nearby sources were probably used as much as possible. For example, the "Collect" or "Fresh Water Pond" was surrounded by rocky hills some forty feet high. Between 1803

and 1811 these hills were leveled in order to fill the pond (Kouwenhoven 1953: 95; Booth 1867: 576-80).

Henry Wansey, an English visitor and social observer, described the large groups of pattiotic citizens who, organized by trades, provided volunteer labor for the construction of Fort Jay on Bovernors Island in 1794 (Jeremy 1970: 81). It is unlikely that vounteers were involved in land-filling, but the work "with spade, pick axe, and wheel barrow ... amidst the most cheerful society imaginable" so enthusiastically described to Wausey by two newly naturalized Americans (Ibid: 82) probably gives a fair idea of the large numbers of people and "gang labor" techniques of such work.

That large numbers of laborers were available when Codwise and Schermerhorn were filling their land is undoubted. The population of New York City in 1810 was 96,373, and the effects of the Neapoleonic Wars and competing Anglo-French blockades and embarges had been felt in this maritime trading center. Unemployment ed seamen were housed at the U.S. Navy Yard in 1808, and unemployed cartmen were used on public works, possibly including some of the bulk-head and pier construction in the Burling and Beekman Slip area which had to be performed before the private owners of "water rights" could fill their land (Stokes 1939: 76).

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(and apparently related) descriptions of how land-fill was placed.

For example, Rosebrock (1974: 8), describes an owner of a "water lot" as building it up with landfill, constructing wooden 'cribs' into which he would dump enough carthoads of refuse to fill it up to street level. A display in the 16 Fulton Street Museum illustrates the type of refuse the finds in this fill: old porcelain, pottery, glassware -broken cast-off things." and Shumway (1975: 18) speaks of enterpreneurs who "purchased these ppeces of liquid real estate and filled them at their own expense with earth and trash (whose buckles and bricks and chima and bits of ships are treasures today)."

The fill sometimes contained so much organic material that even by the standards of ca. 1800 New York it was considered unheathful. The Common Council in 1796 passed four ordinances for filling up sunken lots along a newly filled part of South Street (by the "Whitehall", south of the Schermerhirn Row location) because it was believed that "filth" in the landfill had caused much illness (McKay 1969: 19). This special action suggests that most land-making was considered to be "clean fill" operations in its time.

It is reported that a delay of from six to eighteen months was allowed between land-making and building construction, to allow for natural settlement and "partial consolidation", but this is a modern description (Hed 1977: 2). It is however, supported by the 1813 report on filling and paging of Beekman Slip,

Our general information shows progressive expansion of Manhattan real estate by land-making, which indicates that the process had been commonly practiced in New York for over a century when the site block was filled. A well developed technology can be presumed to have existed, which was applied by owners of water lots to create land. Material for filling was taken from nearby sources, when available (as ub filling the Collect Pond), but we have no information on where the material for the site block may have been obtained. It is believed that wooden frameworks were used to retain the fill, and that it was commonly permitted to settle for at least half a year, and probably more, before it was built on or paved over.

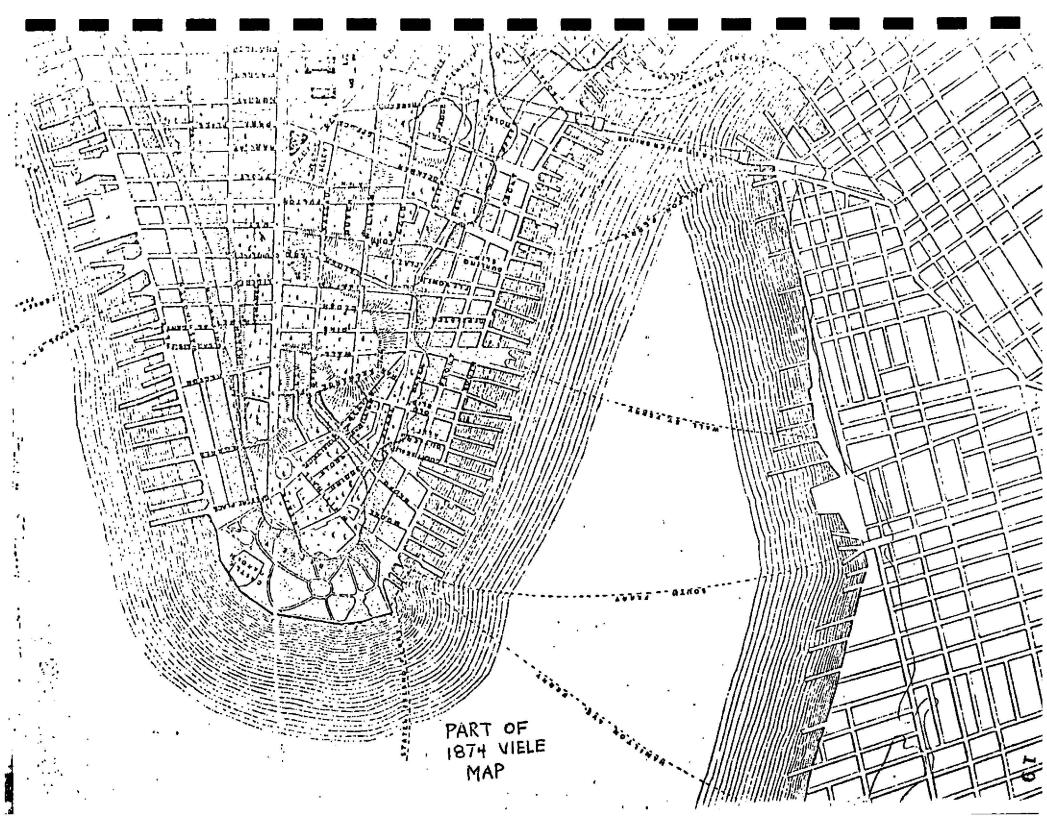
There is a large gap in our knowledge concerning the economics as well as the mechanics of making land. There is a need for intensive research into documentary sources which may indicate th the costs, and how they were paid. It would be useful to know if one general contractor oversaw an entire operation, or if many small haulers brought material from numerous sources.





The Taylor-Roberts Plan of New York (detail), 1797. (The New York Public Library.)

FROM ROSEBROCK 1975 9



1650

**1776** 

1850

**I** 1973

**1980** 

LANDFILL

Diagram showing progressive land fill of the Manhattan waterfront. (Baiter 1975: 4)



The East River shoreline near our study area was shifted slightly eastward of Pearl Street (formerly Oueen Street) at the end of the 17th Century (Waite & Huey 1972: IV, 1). Gerardus Beekman petitioned the Common Council of New York in 1703 to build a public slip which would extend as far inland as what is now Pearl Street. Permission was not granted until 1722, by which time the shoreline bad been extended to what is now Water Stree, t, and the slip (an indentation in the shoreline with docking or berthing facilities along its sides) was to extend from that artificial shoreline inland to Queen (Pearl ) Street.

Waite & Huey (1972: IV, 2-4) show that as land fill was pushed further eastward, extending the land area of Manhattan at the expence of the East River, Beekman Slip (which was under the present Fulton Street) became progressively obsolete, and tended to be "filled with sand" by river action by 1767 (Ibid: 2, citing Stokes 1915 -28 IV 777). Both Beekman and Burling Slips (the indentation next south of Beeekman Slipm under the present John Street) were filled in by 1967 as far as Water Street, and fill extended between them toward what is now Front Street. (See Ratzer map). A "Block" described as "Six feet at the Bottom & five feet at the Top. Timber Iron, filling up with Stone compleat ..." was put "across Beekman's Slip" in 1784, probably at Water Street. and in 1785 it was proposed that both Beekmans and Burling Slips should be filled up to what is now the line of Front Street. This work continued into 1788, at which time

Front Street was extended across the inner of west end of Burling Slip, which has been "rendered useless by the filth and mud which lies under it ..." (N.Y. City Minutes of the Common Council 1: 380 in Waite 1974: n. 30).

The two indentations continued to exist, moving eastward as the shoreline did, and in 1790 the Common Council ordered that Beekman Slip should be kept open for coastal shipping. This concern implies that some filling had occurred or was expected east of Front Street (and directly into our study area) as early as 1790, and the 1797 Taylor 0 Roberts Plan of New York (Rosebrock 1974: 9) shows the western end of the present site block already filled in (about one fourth of the total area later filled in at the site).

Front Street was paved between Burling Slip and Peck Slip (two blocks north of Beekman Slip, which is now Fulton Street) in 1798, so Beekman Slip must have been completely filled to a point east of that (N.Y. City Minutes of the Common Council 2: 433 in Waite 1974: n. 34), which is what is shown on the 1797 map. By 1800, and probably some time in the 1790's, some buildings appeared on land which was later part of the site block, but it is not clear whether these were later replaced or incorporated in the early 19th Céntury structure, whith which we are directly concerned (N.Y. City Minutes of the Common Council 3: 329 in Waite 1974: Fig 1 & n. 35).

In 1803 owners of property on land adjacent to what is now.

Schererhorn Row Block started to petition for "water rights" or

"a grant of the soil underwater on the East ( now North) side of

Burling Slip /now John St./" (N.Y. City Minutes of the Common Council 3: 270, 271, in Waite 1974: n. 36). A dsipute as to ownership of these rights was settled with, among other items, payment of \$ 75 to John Riker for a blacksmith shop which was apparently located where there is now sidewalkon the south (Burling Slip or John St.) side of the Schermerhorn Row Block, probably near Front St. (N.Y. City Minutes of the Common Council 3: 713, in Waite 1974: n. 45).

Grants of water rights were completed in 1803 and 1804, but it appears there may already have been some fill, and even some improvements or structures, at the west end of the site block. A map, dated 1806, shows these properties, and the legal boundaries of the two slips at this yime, with Burling Slip open almost as far west as Front St., but Beekman Slip extending only half as far westward. It was now (July, 1806) proposed by George Codwise. owner of the southern part of the site block (that part fronting on Burling Slip, now John St.) that the city place a bulkhead across Beekman Slip (at about South St.) because "he cannot fill up his ground until Mr. Schermerhorn fills his which Mr. Schermerhorn will not do until the bulkhead is sunk as it will be washed into the river..." ( N.Y. City Minutes of the Common Council 4: 250, 251, in Waite 1974: n. 49). Thus there had not yet been substantial land-fill, at least at the east (South St.) end of the site block, in mid-1806, and land-fill was subject to washing out unless retained by a bulkhead, probably like the "Block" of "Timber Iron, filling up with Stone Compleat..." described for 1784.

search of city documents indicates that Beekman Slip ( now Fulton St.) had been filled by 22 June 1807 (N.Y. City Minutes of the Common Council 4: 465, in Waite 1974: n. 50). wich created need for & replacement wharfage. In its place the city resolved by ordinance of that date to build "a good and substantial Pier composed of four Blocks and four 3 ridges, each forty feet wide at top and bottom, making a distance of two hundred and fifty feet..." (N.Y. City Minutes of the Common Council 4: 471, 472 in Waite 1974: n.55). This was to project out into the East River from South St., and to be set 30 ft. north (then referred to as "easterly" because the orientation of Streets here, which is about 450 off true north, allows choice of directional terms) of Burling Slip. It will be seen that the eight components add to 320 ft., so that if the pier was to be only 250 ft. long, the "blocks" must have been set only 30 ft. apart, with each "bridge" overlapping a "block" by 5 ft. at each end. The four 40 ft. blocks (160 ft.) and the three 30 ft. gaps between them (90 ft.) would thus total 250 ft. The Pier, which must have projected across the present parking area under the Elevated East Side Highway and part way into what is now Pier 16, was supposed to be finished by August 1807, and was certainly built by 1810 or 1811, to judge from the bills presented to the City in those years ( N.Y. City Minutes of the Common Council 6: 754, 782, 783 in Waite 1974: n. 56). If the pier was built, the land leading up to it, including a strip across South Street must have been filled.

During the period from 1807 to 1810 final adjustments were made on the Codwise and Schermerhorn properties (Facing on what are now John Street and Fulton Street respectively, N.Y. City Minutes of the Common Council 4: 618; 5: 573, 606, 643; 6: 105, 142 in Waite 1974: ns. 57 -64.

In August 1809, Codwise's "ground" on the "East side of Burling Slip" (how the north side of John Street) was described as "still vacant" amd as "lately filled up by him" (N.Y. City Minutes of the Common Council 5: 637, 638, in Waite 1974: n. 65). By April 1810, Codwise had laid the foundation of a store at the corner of Burling Slip and South Street (now the location of a filling station), and at least the walls of Schermerhorm's building at what is now numbered 2 Fulton St. were standing when a city committee investigated a discrepancy of 8 inches between the eastern lines to which Codwise and Schermerhorn were building (N.Y. City Minutes of the Common Council 6: 153,168, 169 in Waite 1974: ns. 67,68).

At the time of building construction, Beekman Slip still existed as an indentation in the line of South St. at what is now Fulton St., and Burling Slip extended westward probably as far as Front St. In 1813 it was decided that a new steam ferry to Brooklyn should dock at the location of Beekman Slip (later the foot of Fulton St.) rahter than at Burling Slip. A description of the condition of fill at South St. and Beekman slip (the street intersection immediately northeast of No. 2 Fulton St.) is instructive here. What is now called Fulton St. had been, in 1813, filled and paved to South St., and

although the ground so filled in remained for more than a year after the filling in was compleated, soft and unfit to receive pavement it has now become perfectly solid, the Wharves & piers well constructed, & the Slip is in all respects well adapted for the immediate establishment of the Ferry...

(N.Y. City Minutes of the Common Council 7: 648, 649

THE THE STANDARD OF THE TO LEAVE THE SECOND ACCOUNTS OF THE SECOND SECON

- 1703 Seekman petitions to build slip reaching to Queen (now Pearl St.)
- 1722 Permission for slip granted. Shorline at Water St.
- 1767 Beekman Slip partly sand filled. Beekman & Burling Slips filled to Water St. Shoreline partway to Front St.
- 1784 "Block" placed across Beekman's Slip.
- 1785 Beekman's and Burling Slips to be filled to Front St.
- 1788 Front St. extended across west end of Burling Slip
  - 1790 Beekman Slip to be kept open (implying some fill in site block)
  - 1797 Western end of site block filled
  - 1798 Front St. paved between Burling Slip & Peck Slip
  - 1800 (or earlier) some Buildings at west end of site block
  - 1803 Request for grant of water Rights (& Riker's blacksmithy moved)
  - 1935 Mag chows Beekman Slip filled half-way from Front St. to South St. As yet, no bulkhead at east end of Site block or Beekman Slip, so no filling at east end
  - 1807 Beekman Slip filled to South St., wharf or pier to be built
  - 1810 (for earlier) wharf or pier finished
  - 1809 August, Codwise's ground "lately filled" but "vacant" of Bldgs.
  - 1810 April, Codwise laying foundation at Burling Slip & South St. Schermerhorn's No. 2 Fulton St. already existed( at least walls)
  - 1813 Beekman Slip filled across South St. for more than a year
  - 1835 Burling Slip filled.

From this, several important facts are clear. process along this part of the East River started about 170: and moved the shoreline eastward from Queen (now Pearl) St. Water St. (by about 1722), part of the way to Front St. (by past Front St. (by 1790), and to South St. at the east end of the site block (by 1809). Except for scattered material on tr harbor bottom, or soil washing out toward the river from as-y $\epsilon$ unconsolidated land-making deposits west of this, no fill is likely to have been placed on the site block until the very lat 1780's or early 1790's, and then only at the extreme western en: constituting no more than one third to one fourth of the total length of the block. By 1797, at the latest, there definitively was some fill at this west end, but more may have been added here in the next decade to raise the level. Soil had not yet been placed at the est end by 1806, and in 1809 that end was described as "lately filled," but with no buildings. In 1810 there were already some structure (e.g. No. 2 Fulton St.), and others were being built.

As far as limiting dates for the site block, this means that the extreme west end (facing Front St.) may have received material as early as the 1780's, certainly had some fill by end definitively was not filled as late as 1809. The east by 1809, probably in 1808 or 1809. Buildings were under construction in 1810. We cannot easily draw a line between the

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earlier filled west and later filled east end, but it must be closer to the west end - that is, most of the site block was filled in 1808 or 1809.

The 2nd and 6th Test Pits (193 and 189 Front Street) are definitely at the earlier filled west end, although the 2nd Test (193 Front Street) is located at the back of the building and consequently is far enough east of Front Street so that it may have been at the margin of the earlier fill. The 4th Test (18 Fulton St.) is probably at this margin also, but was so shallow and in a disturbed deposit, so that it does not relate to the early material. Tests 1 and 7 (at No. 4 and No. 2 Fulton St.) are definitely in the eastern end, filled in 1808 or 1809, and so probably is the 5th Test, (at 171 John St.), although it also was very shallow and of little significance in terms of cultural deposits. This leaves the 3rd Test (at 165 John Street) in an ambiguous transition zone which may have been subject to fill as early as the late 1780's, or as late as 1808-09, a twenty year time span.

The dates of the buildings themselves are largely derived from assessment and tax records. One of the documentary studies, citing two Landmarks Preservation Commission reports and a State History Office report (Waite and Huey 1972: IV, introduction to ... <u>Survey of the Buildings)</u> (concludes that Nos. 91 through 93 South Street (which last is also No. 2 Fulton Street) and Nos. 4 through 12 Fulton Street were all build in 1811 (see also Waite & Huey, under the particular building). This is somewhat at variance with Common Council records of 1810 which measured afrom a corner of Schermerhorn's

store at 93 South Street (& 2 Fulton Street), but it is possible that the difference is only because the structures were not completed or occupied or taxed until 1811.

The date of 1810 or 1811 holds for Nos. 2 and 4 Fulton Street. Waite and Huey (1972) state that No. 18 Fulton Street was built in 1812, and that portions of 193 Front Street may date from before 1993, when a double store building occupied the present Nos. 191 and 193 Front Street locations. A merchant mamed Westfall was named as lessee in 1793, '94, and '95. Later the property was sold to Minturn and Champlin, who occupied it "intermittently! from 1804 to 1816. Without knowing what the gaps are, it is not possible to comment on this, but two interpretations are possible. The first suggests an early ( ca. 1793) structure which is continuously occupied through the "fillinf anf construction period" (ca. 1808 -1812) of the eastern three fourths of the block, probably with alterations or additions. A second interpretation is that an early building was replaced during the 1808 - '12 construction period, and that the "intermittant" nature of Minturn and Champlin's occupancy masks a period during which a new structure was built.

The other buildings in which tests were made seem to be later.

No. 189 Front/Street was built in 1835 - '36, but this is on the site of an earlier structure. This is where fill existed from the 1790's but no record of an early structure here is presented in Waite and Huey (1972). The present building at 165 John Street is also dated to 1836 - '36, but tax records show a building here as early as 1811.

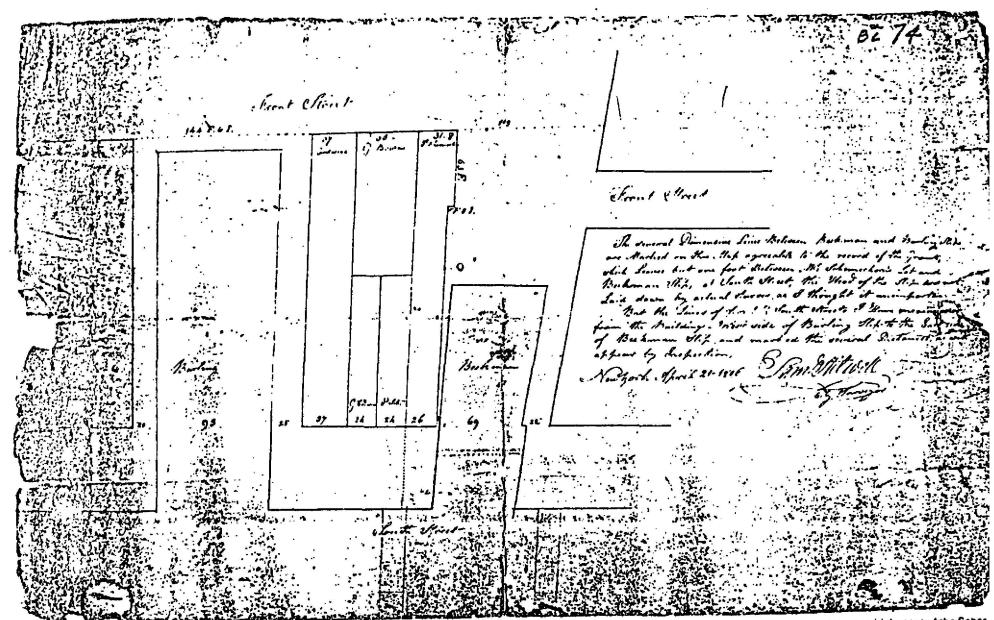
No. 171 John Street is part of a structure built in 1894-'50 for A.A. Low, which replaced buildings erected in 1811 by Codwise.

Summary of building date information

Street Address	Test No.	Date of Construction of Standing Structure*	Comments
2 Fulton	7	by 1811	walls by 1810? **
4 Fulton	1	by 1811	walls by 1810? **
18 Fulton	4	by 1812	· · · · · · · · · · · · · · · · · · ·
193 Front	2	possibly 1793?	extensive remodeling or replacement possibl
189 Front	6	1835-136	areamof old fill **
165 John	<sup>'</sup> 3	1835-'36	earlier building 1811
171 John	5	1849-'50	earlier building 1811

<sup>\*</sup> Waite and Huey 1972

<sup>\*\*</sup> Waite 1974



FREM RATH 1975:4

Map of the water grants on which most of the Schermerhorn Row block was to stand. Map by Saml. Stilwelf, City Surveyor, April 21, 1806. Collection of N.Y.S. Division for Historic Preservation.

#### 2. Archaeology in the Vicinity

Considering the fact that lower Manhattan is an area of great historical and cultural interest, and one in which there has been continuous building activity for three and a half centuries, there has been little professional archaeology, and most of that strictly limited to salvaging artifacts from construction projects.

In 1916, the prow of the Dutch Ship <u>Tijer</u>, which burned and sank in the late winter of 1613 /1614 was found during excavation of an Interborough Rapid Transit subway tunnel. This was in the area where the World Trade Center now stands, on the west side of lower Manhattan, and an effort was made to find more of the ship during deep excavation for the World Trade Center towers. However, other remains of the ship were not found (Solecki 1974).

Paul Huey of the New York State Office of Parks and Recreation, Division for Historic Preservation, conducted a short salvage operation in September, 1959, at Old Slip, which was under excavation by the Uris Construction Co. (Huey 1969b). He recorded stratigraphy and photographed artifacts in the private possession of construction workers, as well as collecting some cultural material. Huey describes the stratas consisting of

the light sand of the original river bottom, below a heavy dark deposit of colonial fill. This fill had been dumped on the river bed around large wharves built of log cribbing... (Huey 1969a):2).

Tentatively, Huey dated "three distint levels" to periods 1656
16751740; and 1740 - '54 (1969b; 2). In this area, the deposit of fill retained by the log cribbing was at least twenty feet

thick. Salwen describes over thirty feet of stratified deposit in some parts of lower Manhattan (1973).

Organic material such as shoe leather was revovered by Huey, and intact glass bottles of types popular from about 1675 to 1780 were recorded from collections of construction workers. Material from this same construction project was also collected by a Dr. T. Kazimiroff, a dentist in the Bronx (anon. 1960, Kazimiroff n.d.). Similiar treasure collecting has been carried on at the Bowling Green by a William Asadorian of Queers (N.Y. Times 17 March 1977).

A more professional search was conducted for the 1641 structure which was used from 1653 to 1699 as the "Stadthuis" or City Hall for New Amsterdam / New York (Shelley 1971 in Schuyler 1977: 2). This uncovered some structural evidence (well and stairway sections and ceramic sherds, fragments of tobacco pipes, and pan tiles). The excavators tentatively identified some of this evidence as coming from the 1641 -1699 structure, and some from subsequent (1701) Anglo-American buildings on the same site.

Several authors have commented on the archaeological potential of New York in general and of this general part of Manhattan in particular, but the foregoing appears to list all the actual field work conducted. Thus it seems that the 1977 excavations at the Schermerhorn Row Block, even though they were made under limitations of a project designed for other purposes, are the first attempt at anything other than "resoure archaeology" in this area of extremely rich cultural resources.

### II DESCRIPTION OF EXCAVATION AND FINDINGS TEST 1, 4 FULTON STREET

Test 1 was dug in the northeast corner of the building, to a depth of 9 feet, starting from ground floor level with removal of a cement floor at 6.31 feet elevation Mean Sea Level. Excavation bottom was thus over 2½ feet below M.S.L. The north wall was the street front of the building, facing on Fulton Street, which was the filled - in space of Beekman Slip at the time Schermerhorn constructed this building in 1810 or 1811. The east wall separated No. 4 Fulton Street from No. 2 Fulton Street, which is the building at the corner of Fulton and South Streets.

Because this was the first test excavated, the artifact lot numbers here are identical with the arbitrarily designated Level numbers. As explained in the section on Method, recording of stratigraphy was necessarily made piece-meal, with the result that the exact configuration of the strata was not visible at any one time, and could only be reconstructed after excavation was completed. For this reason, layer numbers and strata are not identical. A profile drawing of each test pit is included in this section, showing actual strata, followed by the same drawing with Level and Lot numbers superimposed, and a third version in which a tentative interpretation is made of the stratigraphic sequence.

Level 1 (Lot 1) consisted of a thick deposit of yellow-brown sandy material with a band of light grey sand running through it. An intrusive pit had been dug in the northwest corner of this square through Level 1 into the brown stratum beneath it. This surrounded a rusted pipe and disturbed most of this sorner of the square. Another deeper intrusion was along the east side of the test and was designated as Level 2 (Lot 2). It does not show in the profile drawing. Artifacts from these strata and the underlying brown stratum lumped in Lot 1 consisted of the following ceramic types:

Porcelain	Type	39	ca.	1660	-	1800			2
Delft	Type	49	ca.	1700	-	1802	•	•	1
Creamware	Type	22	ca.	1762	-	1820		•	6
Pearlware	Type	17,19	9	1780	_	1820			3
Pearlware	Type	13		1790	-	1820			1
Pearlware	Type	11		1795	_	1840			1

Additional datable material was an 1880-1900 type bottle neck, and a 19th Century pharmaceutical bottle sherd. The 19th Century material is assumed to have been associated with the intrusive pipe installation. The rest of the material all dates from the late 18th Century.

Levels 3 and 4 (Lots 3 and 4) consist of brown and dark brown strata overlying a distinct black stratum (Level 5).

Lot 3 contained modern (third quarter of the 20th Century) trash (e.g. no-deposit, no return soda bottles and strofoam cups) which were in the bottom of the intrusive pit. Here several inches of the dark brown stratum that should have been part of Level 4 were excavated with the brown stratum above (Level 3). The part of the "brown" stratum immediately below the Yellow brown sand which was not disturbed contained a similiar assortment of late 18th Century ceramic types:

Delft	Type	49	ca.	1700	-	1802	2
Creamware	Type	22		1761	-	1802	4
Pearlware	Type	20		1780	-	1830	1
Pearlware	Туре	17, 19		1780	_	1820	3
Pearlware	Type	12		1795	-	1815	3

Beginning in the dark brown stratum starting about 4 ft.

below the cement floor (the lower part of Level 3), we uncovered large quantities of bisque fired redware which must represent rejected waster materials from a ceramic manufacturer. Many of these with are burnt and marred fragments of broken vessels and glaze. Intermixed with these broken ceramic vessel sherds were some broken pan tile sherds, other redware tile, and a few stoneware waster sherds. No material carried any maker's mark, nor were any of the vessels reconstructable. The total weight of waster sherds between 45 inches and 60 inches (Levels 3 and 4 combined) was 11 lbs.

As distinct from the higher strata, Level 4 (54 in. to 60 in.) which was the bottom half of the dark brown stratum, contained only 7 ceramic sherds (5 of which were Creamware Type 22,1762-1820). The remainer of thecultural material was the ceramic waster deposit referred to above. Also diagnostic of this level was a dark green bottle neck which appears to be of the type Noel-Hume illustrates as 1765 (1974: 195). Many (130) bottle body sherds were also recovered but were not diagnostic.

Level 5 (60 in. to 72 in.) consisted of a black stratum.

about 12 inches thick, parcked with ceramic waster material. A

total weight of the sample was 193 lbs. Ceramics which were clearly

not part of this waster deposit consisted of the following types:

Stoneware		,	5
Redware			1
Porcelain Type	39 ca.	1660 - 1800	1
White Salt Glaze	43	1740 - 1775	1
Creamware Type	22	1762 - 1820	8
Pealware Type	13	1790 - 1820	ì
Pearlware Type	12	1795 - 1820	5

Level 6 (72 in. -96 in.) contained bands of brown and black silty dirt sloping down from south to north. It also contained ceramic waster sherds: 72½ lbs of them. Ceramic types consisted of:

Creamware	Type 22	1762-1820	4
Pearlware	Type 17	1780-1820	1

Pearlware	Type 12	1795-1815	1
Porcelain	Type 7	1790-1825	3

The south half of Level 6 consisted of brown sand which graded into a reddish sand making up our Level 7 (8 - 9 feet). Only a small quantity of artifacts were present, and they conform to the same datable range as the overlying strata.

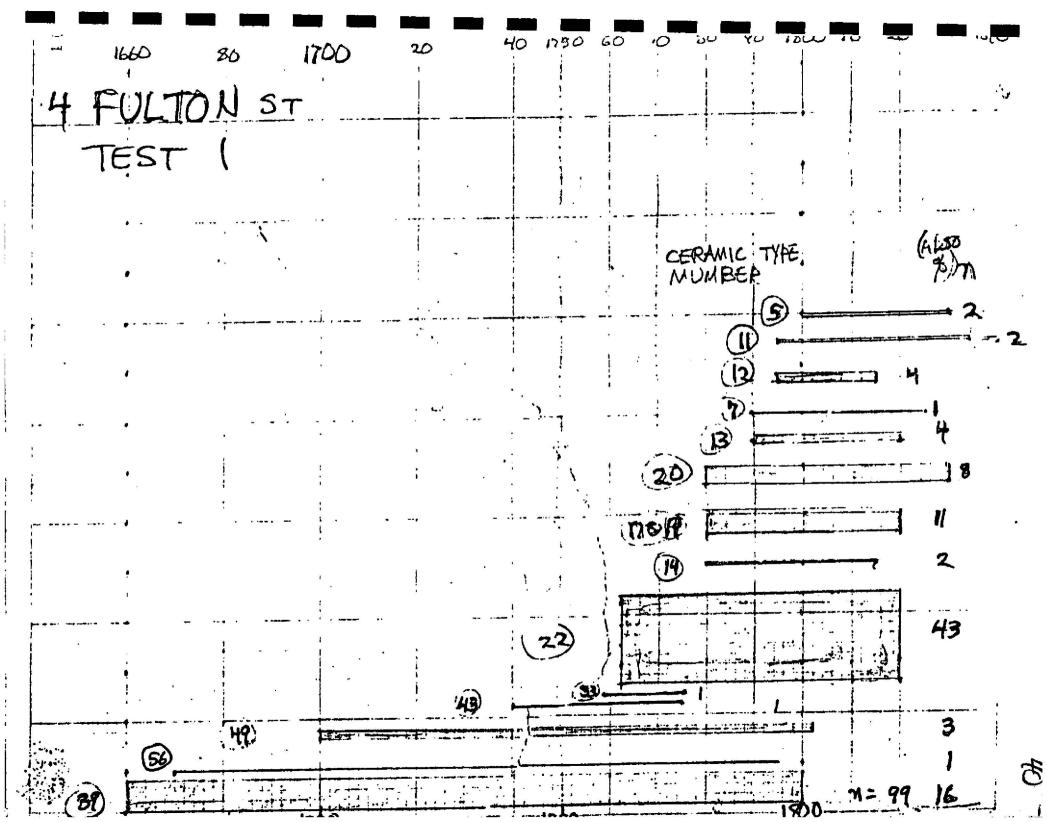
Redware			6
Stoneware			3
Yelloware	Type 56	1670 - 1795	1
Creamware	Type 22	1762 - 1820	2
Creamware	Type 33	1759 - 1775	1
Pearlware.	Type 17	1780 - 1820	1
Porcelain	Type 7	1790 - 1825	1

Also present were 66 waster sherds, probably mixed from the sloping brown and black strata.

Tentatively, we interpret the brown sand part of Level 6 and all of Level 7 below it as land-fill material which pre-dated the wall construction, and the alternating bands of black and brown soil in Level 6 and the strata in Levels 5, 4, and the bottom of 3 as back-fill against the foundation wall soon after construction.

This interpretation is derived from the visual appearance of the strata, with the sloping top of the brown sand in Level 6 probably showing excavation of a broad wall-trench, and with the alternating black, brown, and dark brown strata above it abutting the lower half of the foundation wall directly, as immediate back-fill should. It is in conformance with the date spans of the ceramics, which indicate a late 18th century and early 19th century period for the debris represented in the fill.

At present, we are unable to use the large mass of waster ceramics (nearly 300 pounds total) for diagnosis, but analysis of the datable ceramics from Test 1, taken as a whole, indicates that the probable time period represented by this material is the last decade of the 18th and first decade of the 19th century, which indicates that the material gathered for fill was receiving "contemporary" debris before it was placed as land-fill (probably 1809), or back-filled against the wall (1810-'11). To put it another way, the datable ceramics suggest that this material did not come from "old midden" sources, and the amount of cultural material is probably representative of what was typical "surface scatter" at the time of land-making and wall construction.



### STRATIGRAPI IC SECTION TEST 1

4 FULION STREET THEMING PLOOP AS STREET CHARL CHELEV. I. Stift, Mby-RUBBLE MINED IN SOIL LEVEL 1 0-45 in. SILL STONE I FT. MINCHE MICHEL 2 FT. STONE LOT (1 INTRUSIVE PIT いんりょう STEP CUT CMAE 3 FT. FOUN--DATION 4 FT. (3)45-54 in 54-60 STEP OUT in. (5)60-72 in. 7 FT. \_6 72-96 in. (6)

96-108 in.

NEW YORK STATE MARITIME MUSEUM

SCHERMERHORN ROW BLOCK

NEW YORK CITY, NEW YORK

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77. S

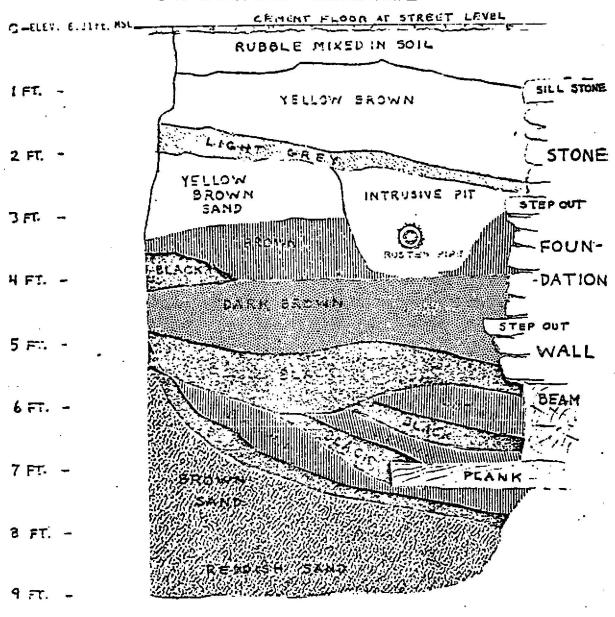
NEW YORK STATE OFFICE OF PARKS & RECREATION DIVISION FOR HISTORIC PRESERVATION

Historic Sites Research nov. 1977 S.Kardas & E.Larrabee

NOTE: LEVIL 2 (LOT 2) IS AN INTRUSION FROM 14 TO 20 to. ALONG THE EAST WALL WHICH DOES NOT SHOW IN THIS VIEW.

4 FULTON STREET

LOOKING W



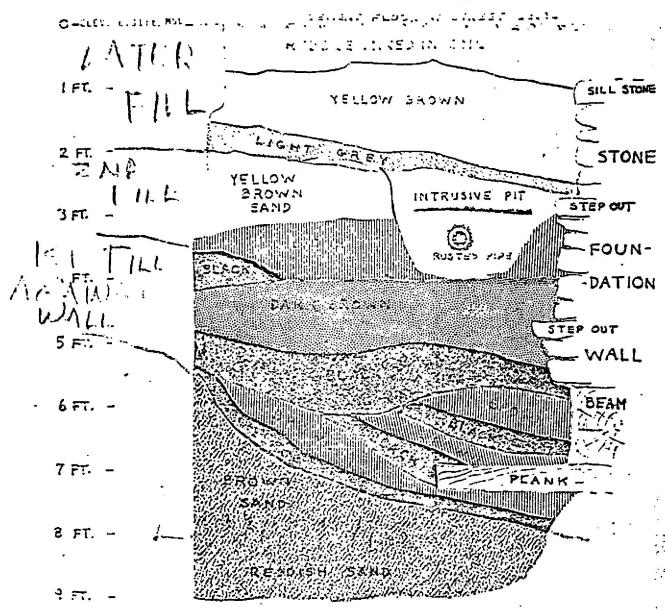
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#### 4 FULTON STREET

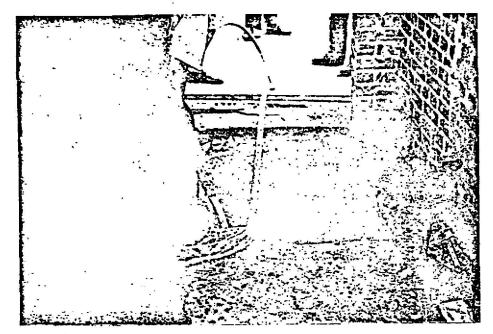
LOOKING W



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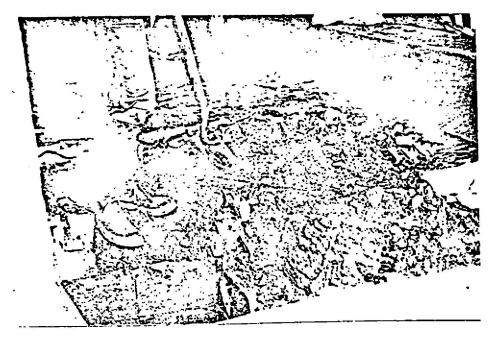
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Excavation started in 4 Fulton Street, at the northwest corner adjacent to the sidewalk, This view, from insider the building, shows the plumbing pipes frm Sweets Restaurant and the pit lined with cement blocks made for access to the trap in these pipes (Sch 1, x 3, looking N).



Another view at the start of excavation. The cement floor, slab has been broken exposing earth fill surrounding the recent pit. The hose was used for pumping water out of this pit. Daylight was let in by removing plywood panals on the street front (Sch. 1, x 4, looking S)



After the cement floor had been removed, the earth fill was removed to a pile further inside the ground floor room at 4 Fulton Street. Here the rubble and debris in this first layer of earth fill can be clearly seen (Sch 1 x 8, looking SW).



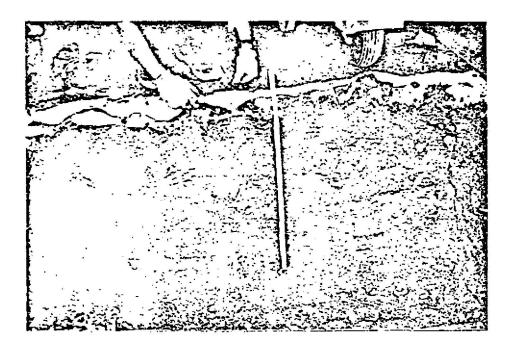
The archaeologists regularly checked the nature of the fill by trowelling, to determine if a new layer of different material had been reached (Sch 1, x 12, looking SE).



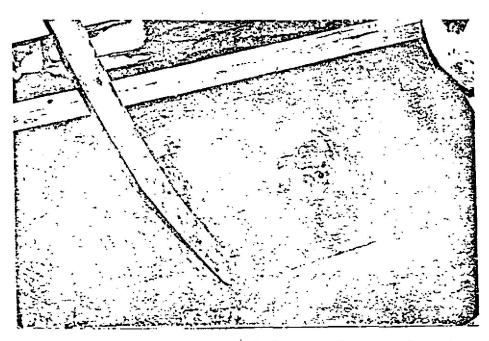
The labor crew from Spencer, White & Prentice Inc. then shovelled the material from the new layer onto the cement floor, where the archaeological assistants worked through each shovel-full to recover artifacts. All material excavated was coated wiith wet muck, and could not be screened (Sch 3, x 4, looking SE).



At a lower level, the labor crew removed the concrete blocks surrounding the recent pit by breaking them. This and similar necessary steps in excavation complicated the attempt to maintain stratigraphic control of the artifacts that were recovered (Sch 2, x 9a, looking N).



Here a profile of the south wall of the first test (4 Fulton Street) is exposed and recorded photographically before wood sheathing covered it. The ruler is 30 inches long. Stratigraphy was also drawn at each similiar stage and the overall profile of the complete test was constructed by putting together the separate drawings, made of 2 ft to 3 ft sections before they were covered (Sch 2, x 11a, looking S).



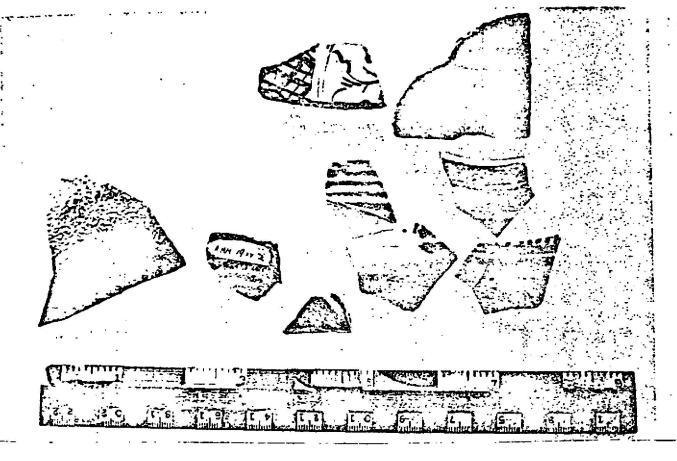
Thick planks used as "spread footers" were found under the sill beam below the stone foundation wall in 4 Fulton Street. This type of construction was also found in most of the other tests. The planks ran at right angles to the wall being supported. Those shown here are under the north wall. A 15" sill beam rests on them. (Sch 4, x 6 looking N).



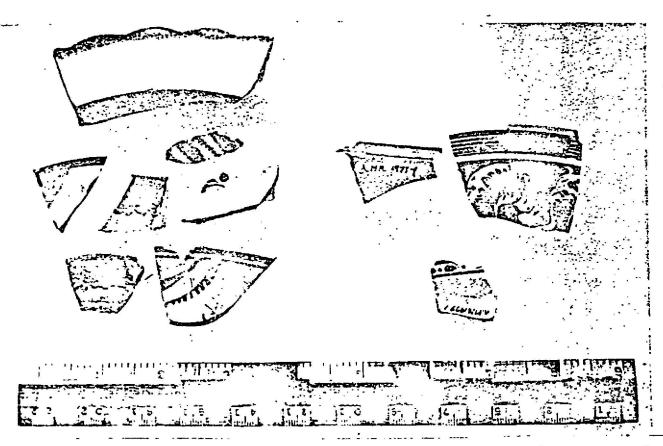
In the strata immediately above the spread footer planks were a large mumber of unglazed and partially glazed red-paste earthenware "wasters". This deposit may have been placed here, inside the foundation to help absorb moisture. Here one of the labor crew is shovelling out the lowest part of the ceramic waster deposit. The plumbing trap from Sweets Restaurant had been repaired again when this picture was taken. (Sch 5, x 13a, looking NE)



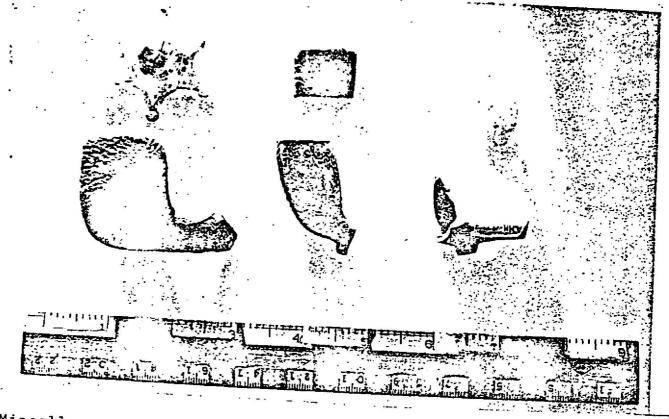
There were so many ceramic fragments (several hundred lbs.) in these deep layers at 4 Fulton that as many as three archaeological assistants had to work at this one pit, in order to recover artifacts as fast as the labor crew could shovel (Sch 5, x 17a, looking SE).



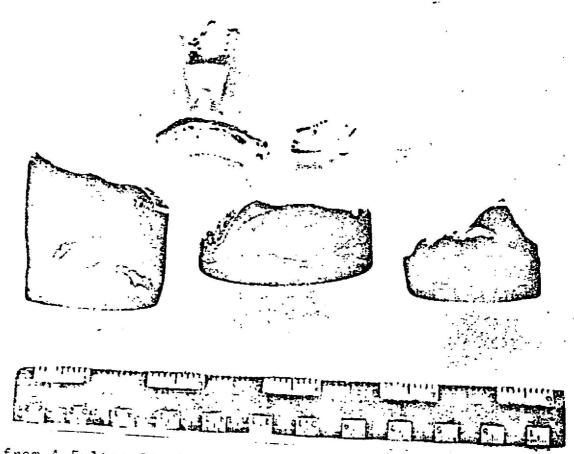
Ceramics from 4 Fulton St. Delft Tile (Upper R.), Stoneware (Lower L.), Porcelain (Lower R.) (Sch 16 x 10)



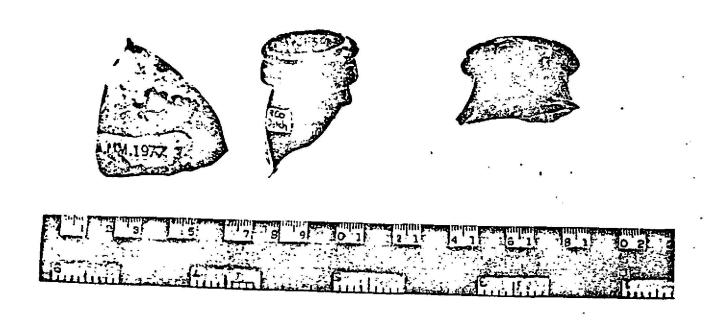
Ceramics from 4 Fulton St. Creamware and Pearlware (Sch 16 x 9)



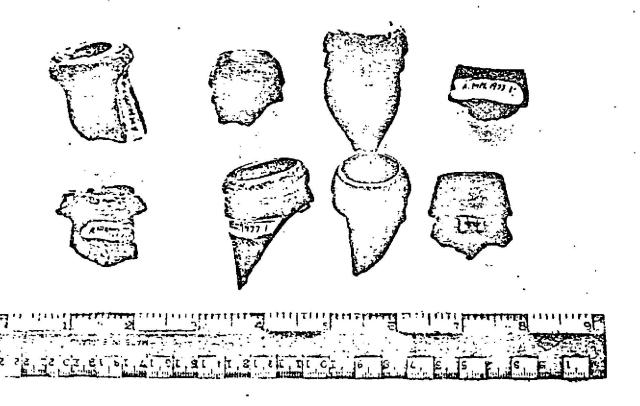
Miscellaneous Artifacts from 4 Fulton St. Left to Right, Upper Row, Plastic Toy Sheriff,s Star, English Gun Flint, Glass Vial, Lower, Briar Pipe Bowl, Ornamented Kaolin Pipe Bowl, Kaolin Bowl & Stem frag. (Sch 16 x 8)

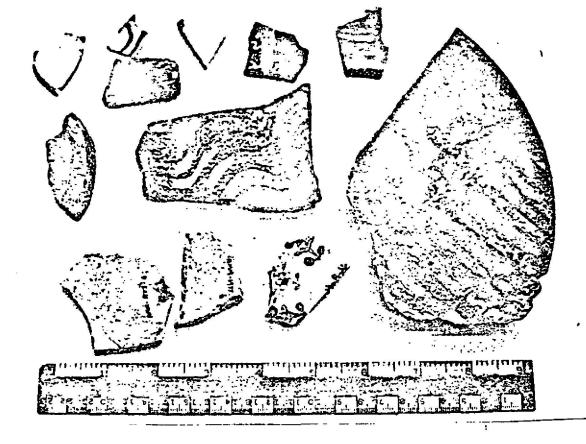


Glass from 4 Fulton St. Dark Green Bottle Bases & Wine Glass Stem (Sch 16 x 12)

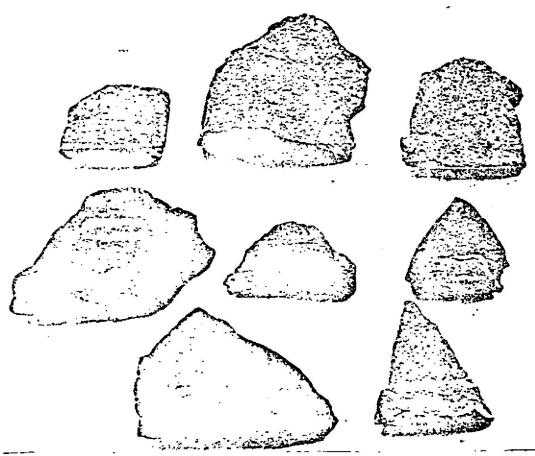


Dark Green Glass Bottle Tops from 4 Fulton St. (Sch 16 x 5 top, x 11 bottom

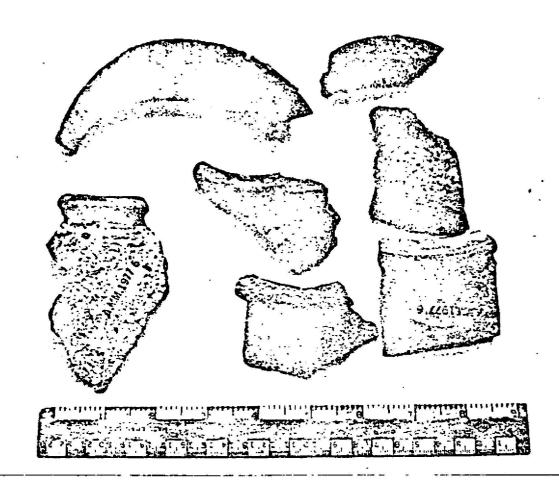




Miscellaneous Ceramic Sherds found in Waster Layers of 4 Fulton St. (Levels 3 - 6, Most are burnt or flawed) (Sch 17 x 7.)

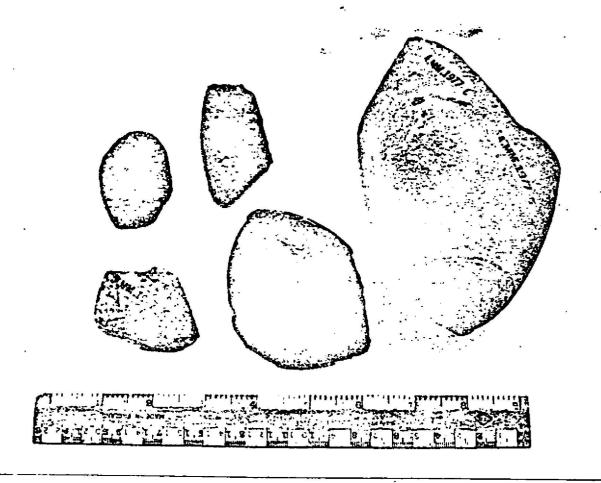


Waster Layers (levels 3-6) 4 Fulton St., Pan Tile fragments with Lugs (Sch 17 x 12)

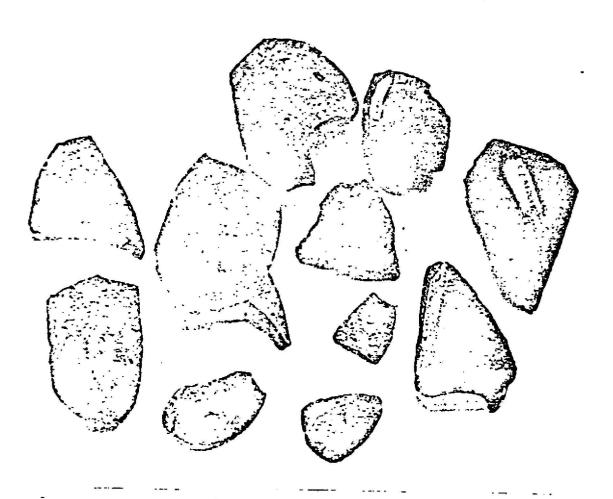


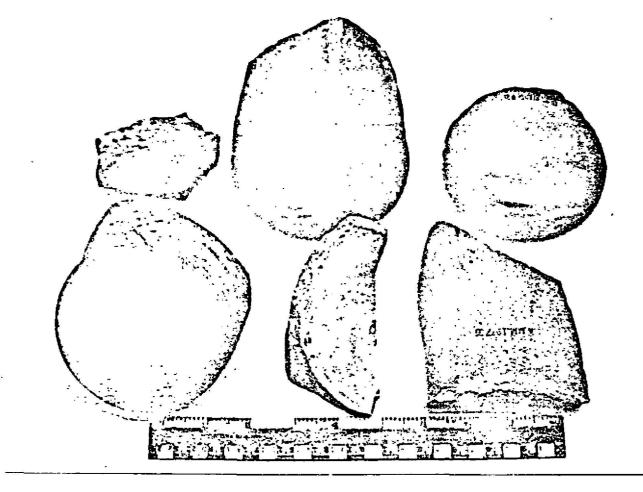
Waster Layers (Levels 3 - 6) 4 Fulton St. Typical Vessel Rim Sherds (Sch 17 x 6 top, x 9 bottom)



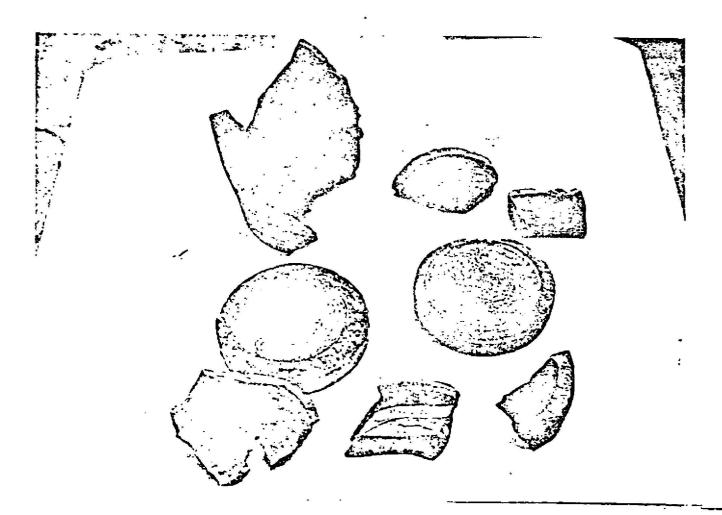


Ceramic Waster Layers (Levels 3 - 6) 4 Fulton St. Cylindroconoidal Vessels with open, pointed bases (Sch 17 x 5 top, x 10 bottom)





Ceramic Waster Layers from 4 Fulton St. (Levels 3 - 6) Vessels with flat bases (Sch 17 x 4 top, x 11 bottom)



#### Test 2, at No. 193 Front Street

The second test was placed at the extreme back (northeast) corner of the cellar. A cement floor existed here at an elevation of 0.82 ft. Mean Sea Level, and the pit was dug 7½ ft. deep, so the bottom was about 7 ft. below M.S.L. Hand auger tests were made to a depth of 9 ft. from the cement floor. This was the deepest of any of the tests, and the one with the most water flow at the bottom.

Again, as at No. 4 Fulton St., the north and east faces of the test were along the lines of the north and east walls of the building. However, the difference between Test 1 and this one was that Test 2 was dug almost 6 ft. below the bottoms of the walls. Along the north side of the test this revealed a rubble core or wall-base extending at least 5 ft. below the spread-footer planks. We assume this was placed in preparation for the wall itself, but it is possible that it remains from an earlier structure on the same alignment.

Below the cement floor were three layers of bricks, laid in alternating directions (i.e., top and bottom layer stretchers north-south, middle layer stretchers east-west) in a cement mortar, presumably to provide water-proofing in this deep basement. The brick and cement-mortar structure was carried part-way up the cellar wall, producing a sloping or "battered" mass which hid the bottom of the wall.

Strata at No. 193 Front St. below the bricks consisted of five levels horizontally deposited and capped by the brick and cement floor, to the excavation depth of about  $7\frac{1}{2}$  ft, with an auger test to about 9 ft., where stones were encountered.

The matrix of the fill consisted of two distinct material reddish fibre and sand strata below 4 ft. which contain no
ceramics, and the brownish dirt and rock layers above it which
contained mid-18th century objects similar to the material
in 189 Front Street. The only pearlware sherd with a known
provenience came from Level 1. The other two pearlware specimens were picked up from the back-dirt during its removal by
the construction crew.

This suggests that two distinct filling operations are represented in this second test: an early one against the base of the lower rubble stones of uniform material, and a subsequent one between 1 and 4 ft. from the present surface. Level 1 may represent a yet later filling related to the laying of the brick floor.

Level 1 (Lot 41) consisted of the first 12 in. beneath the brick floor. This contained almost no artifacts. Six ceramic snerds of lead-glazed redware, creamware, and pearlware, and one piece of window glass and a bottle sherd were all that was recovered.

A distinct black pocket of material abutted the south side of the west wall at the bottom of Level 3, and was called Level 3 A (Lot 14). It contained a large portion of the artifactual material from this test. This material was trowelled out by

hand by the archaeologists. It contained 16 sherds of creamware, 1 sherd of white salt-glazed stoneware, 4 sherds of grey stone-ware, and 4 sherds of Chinese porcelain with both underglaze: blue and gilt overglaze. It also contained the only marked tobacco pipe stem found during the test excavations, from . W. Morgan of Liverpool, probably a 19th century firm.

Levels 2 and 3 combined consisted of grey-brown sand with a band of large rocks near the top, and a pocket of plaster and brown sand above them. Ceramics were:

 Creamware
 Type
 22
 1762-1820
 18

 Ston\*ware
 1

an overglaze enamelled dish (cross-mended), decorated in red, gold and black flowers and a dragon motif.

Level 4 (Lot 28) extende from 4 ft. to 5 ft. below the surface datum, and included the bottom of the grey brown silty sand and the top of the reddish fibre strata. In it (probably from the silty sand) were the following ceramics:

Stoneware	-	•	1 -
Redware			1
Porcelain	Type 39	1660-1800	2
Creamware .	the second second	1762-1820	3
Also found were	two tobacco	pipe stems with	1/64 in. and 5/64
in. diameters.			e.

Below this was level 5 (Lot 42), (5 ft. to 8 ft. +) which contained no ceramics but yielded one complete early style

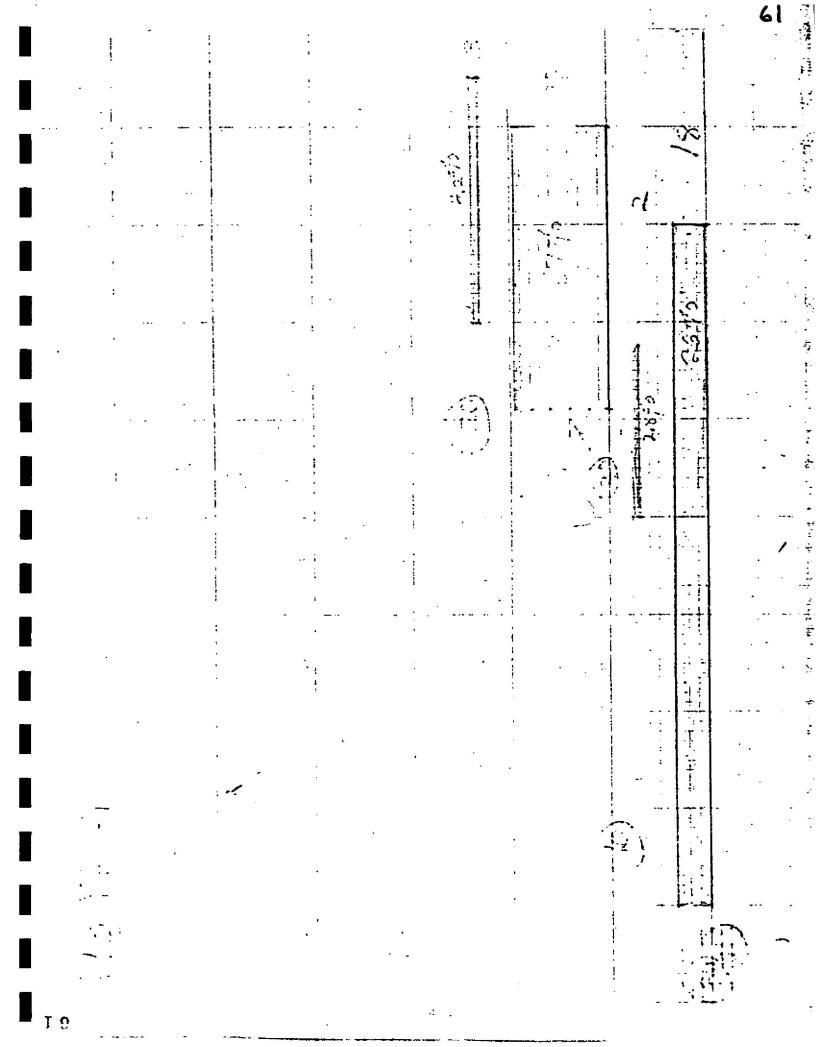
shoe, an elk mandible, and a piece of oakum. The matrix in Level 5 was the alternating strata of reddish fibre and chips and grey sand.

Interpretation of these strata is not as obvious as at the 1st test, partly because of the deep rubble "wall base" underneath the spread-footer planks (which may be a foundation for the wall, or may be earlier and not directly related. The preferred explanation is that already given, with the lowest strata (the alternating reddish fibre and grey and) being earliest fill against the wall base, followed by the brownish dirt and rock (including the black pocket of artifacts) tagainst the same base, and possibly a third fill directly related to the "waterproof" brick and cement mortar floor.

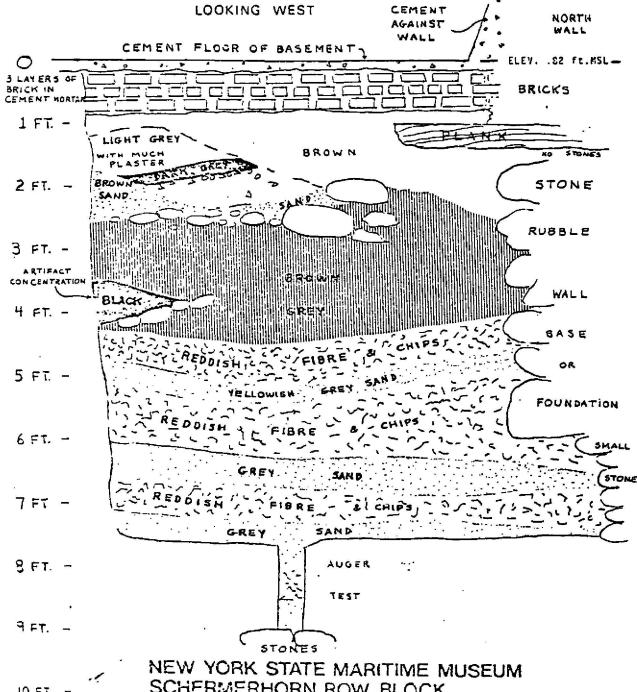
If the loose rubble "wall base" existed before the wall was built, then everything up to Layer 1 may be fill from "Land Making" (the rubble stones then being a bulk-head or divider in the filling process), and the upper, brown dirt layer 1 represents excavation of a shallow wall trench, and back filling against the spreasmost r planks. In this case, the underlying rubble core was fortuitously located, and the north wall of No. 192 Front St. built on top of it.

An overall impression of the datable ceramics suggests an earlier period than at No. 4 Fulton Street, especially if the

three pearlware sherds (one from Layer 1 and two from back-dirt moving) are omitted from the fill below 1 ft. depth. In that case the artifacts seem to be mid- to late-18th century, which is like the situation described below for No. 189 Front Street. The very few objects found in the problematic lower strata are suggestive of a relatively early (17th century?) period, when shoe styles were narrower and elk meat was consumed, but the evidence is very scanty. It is possible that some part of the historic harbor-bottom may have been reached, although the level indicated by the borings (see Schematic Profile of Schermerhorn Row) is at least 5 ft. lower for the top of "Black Organic Silt." Another possibility is that early material was included in this fill.



# STRATIGRAPHIC SECTION TEST 2 193 FRONT STREET



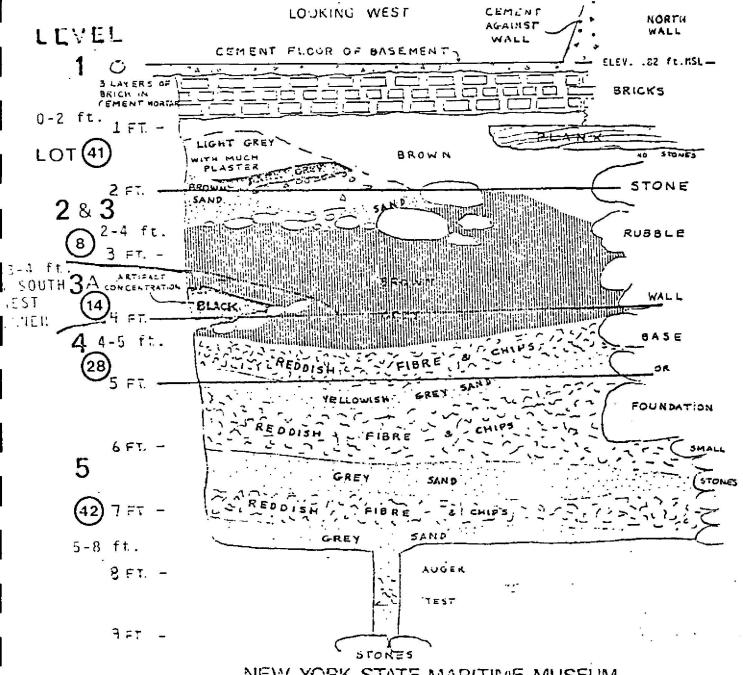
SCHERMERHORN ROW BLOCK 10 FT. -NEW YORK CITY, NEW YORK

> NEW YORK STATE OFFICE OF PARKS & RECREATION DIVISION FOR HISTORIC PRESERVATION

Historic Sites Research nov. 1977 S.Kardas & E.Larrabee

## STRATIGRAPH C SECTION TEST 2

193 FRONT STREET



NEW YORK STATE MARITIME MUSEUM SCHERMERHORN ROW BLOCK NEW YORK CITY, NEW YORK

NEW YORK STATE OFFICE OF PARKS & RECREATION DIVISION FOR HISTORIC PRESERVATION

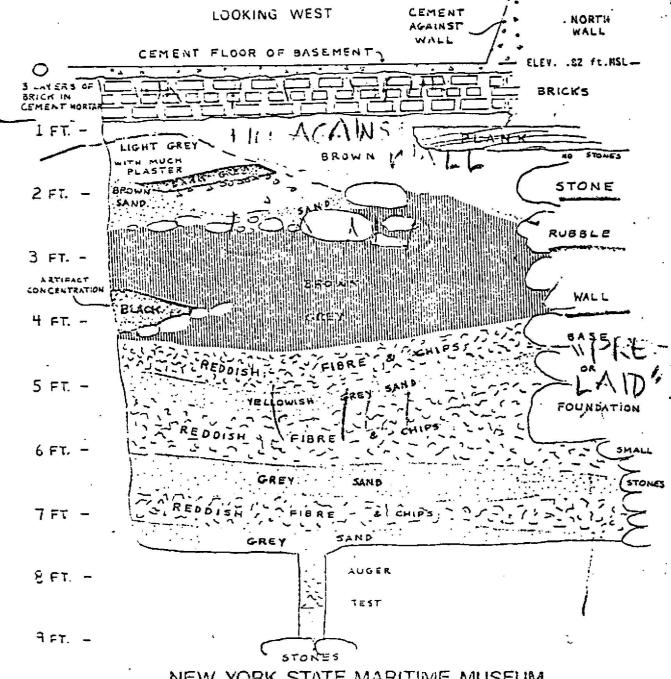
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NOTE: LOT 16 IS FROM BACKFILL

10 FT. -

# STRATIGRAPHIC SECTION TEST 2

# 193 FRONT STREET



NEW YORK STATE MARITIME MUSEUM SCHERMERHORN ROW BLOCK NEW YORK CITY, NEW YORK

NEW YORK STATE OFFICE OF PARKS & RECREATION DIVISION FOR HISTORIC PRESERVATION

Historic Sites Research S.Kardas & E.Larrabee

10 FT.

nov. 1977



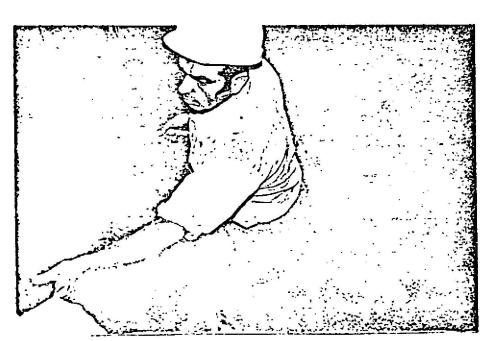
After the flooded basement of 193 Front St. had been pumped out, and cleaned of debris, the cement floor was broken at the east end by pneumatic hammer. Under the cement were three alternating layers of brick in mortar. About 3 inches below this, planks projected from underneath the north wall. Later the ends of the planks were sawed off so that sheathing could be placed against the side wall of the pit. Pumping continued throughout the excavation (Sch 2, x5a, looking NW)



Here the underside of the "spreadfooter" planks is pictured, when the 2nd test had progressed to a lower level. Above the planks are the three layers of brick and above that cement which was placed against the wall. The planks that could be measured were 22 inches wide, between 4 and 5 inches thick, smooth on top and somewhat irregular on the bottom. Rubble filled soil is immediately beneath them (Sch 7, x 5, looking N and up).

A complex stratrigraphy was revealed at the west wall of the 2nd test before sheathing was put against it. The ruler extends 27" down from the surface of the cement floor. The three layers of brick are clearly visible, as is a light grey ashy lense coming from the left (Sch 2, x 6a, looking W)

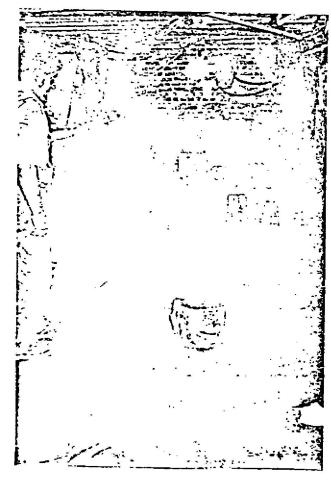




As excavation at 193 Front St. extended deeper than 6 ft. below the cellar floor, it was more than 5 ft. below mean sea level. Here a member of the Spencer, White & Prentice, Inc. labor crew is adjusting one of two pump suction units needed to keep the pit from flooding. Sheathing is visible at the rear and to the right (Sch 4, x 14, looking E)



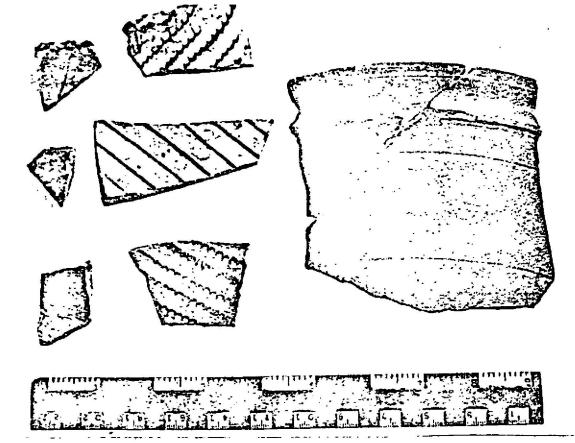
No vertical sheathing was placed on the north side of the test so that the section under the stone wall was left exposed. Here large stones of a loose boulder-rubble fill under the wall are visible (Sch 6, x 14, looking NE).



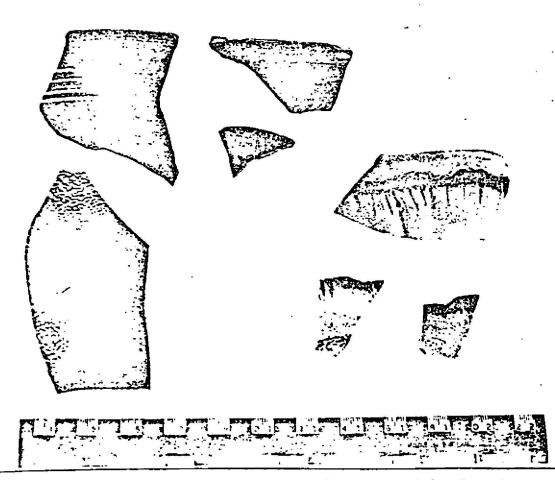
This second test occupied the entire narrow width at the back of 193 Front St. basement. Vertical sheathing was driven progressively lower as the Test pit went deeper. The laborer here is standing next to the pile of back dirt and stones which had been shovelled out, or brought up in a bucket when the pit was too deep for shovelling (Sch 6, x 13 looking E).



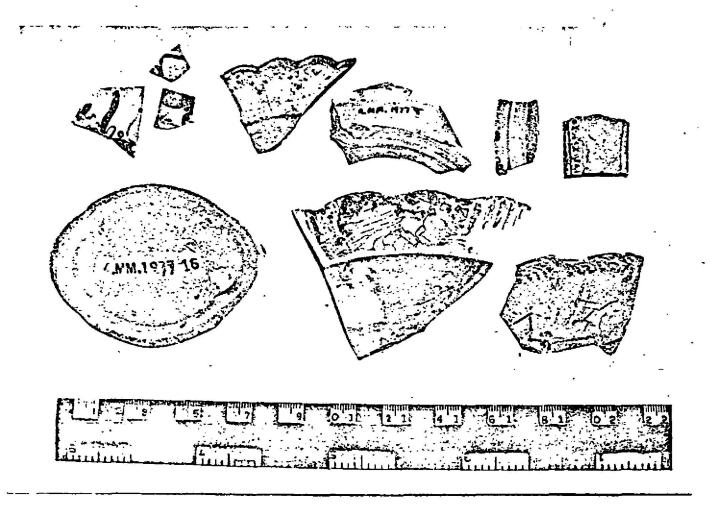
Excavation here was deeper than in any other tests, reaching nearly 8 ft. below the basement floor, or about 7 ft. below Mean Sea Level. In the lower part were alternating strata of grey sand and wood chips and fiber, with relatively fewer artifacts than in the rubble filled earth above it (Sch 7, x7, looking E).



Ceramics from 193 Front St. Slipped earthenwares, and red Flowerpot fragment (right). (Sch 15 x 18)



Ceramics from 193 Front St. Stoneware (top & left), Pearlware (right) (Sch 16 x 2)

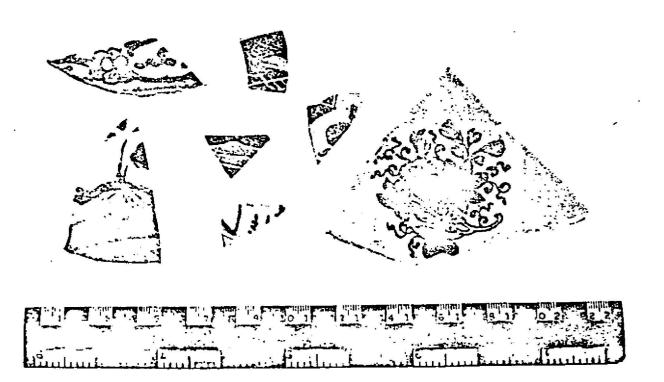


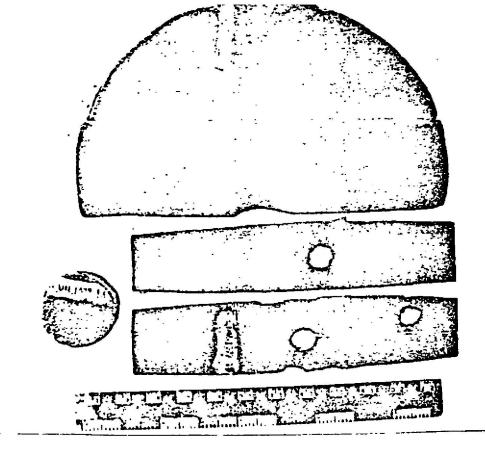
Ceramics from 193 Front St. Creamware, handpainted and molded (Sch 16  $\times$  6)



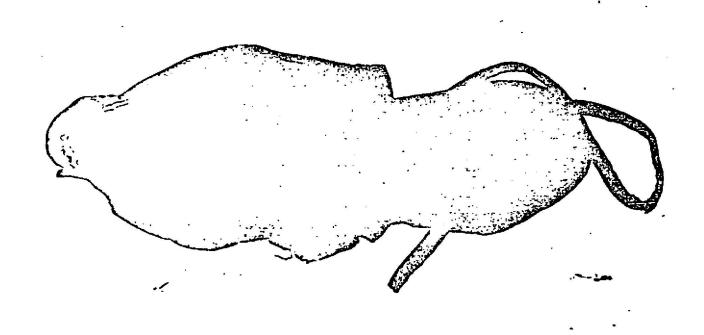


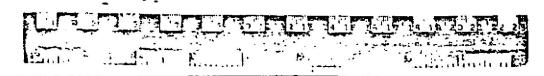
Ceramics from 193 Front St. Porcelain. (Sch 16 x 3 top, x 4 bottom)



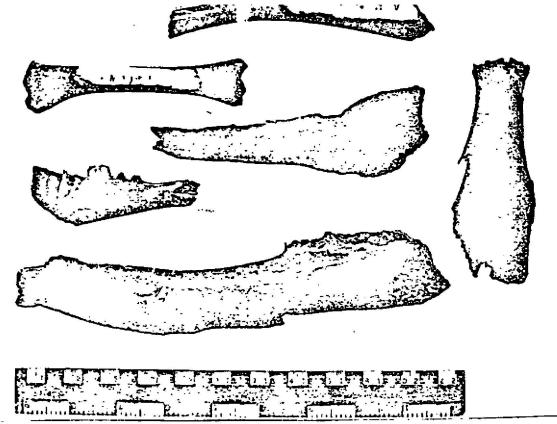


Wooden Cask parts from 193 Front St. (Sch 16 x 7)

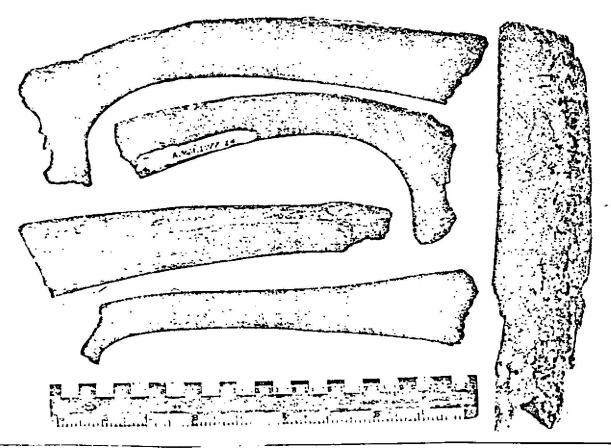




Leather shoe from 193 Front St. (Sch 15 x 31)



Faunal Remains from 193 Front St. Elk Jaw (lower L.), Deer and two Sheep Jaws (top and center), Sheep metatarsus (upper L.) (Sch 15 x 30)



Faunal Remains from 193 Front St. Large Rib Bones (Bos sp. ?) Note cut ends. (Sch 15 x 29)

## Test 3 at 165 John Street

Test 3 mas a shallow excavation extending 64 inches at . its deepest point below the cement floor of the basement of 155 John Street. The east wall of the building was the focal point of the excavation. About 5 feet below the cement surface (which was at an elevation of 2.84 ft. above Mean Sea Level) the spread-footer plank of the wall was exposed and excavation stopped. Adjacent to the east wall, three distinct strata could be distinguished. The first strata (Levels 1 and 2)in the main pit, and Level 1 in the west extension) consisted of brown loam filled with ash, an ash lens and rubble and shells, about 18" to 30" thick and roughly sloping down toward the wall.

Ceramics from Levels 1 and 2 included the following:

Redware	32
Stoneware .	4
White Salt Glaze Stoneware, Type 16 & 43	2 (1740-'75)
Jackfield Type Type 29	1 (1740-11780)
Creamware Type 22	49 (1762-1820)
Tues 10	7 ( 1780-1830)
Pearlware Type 19 Type 13	1 ( 1790-1820)
T 7	2 ( 1790-1825)
Porcelain Type 7	_ ,

Near the surface were two late 19th Century bottles: one bottle neck ca. 1880-1900, and a Stillwell & Company ink bottle ca. 1860-1900 (Swindell 1975). The rubble was largely roof slate fragments, red brick, and mortar.

The second visible stratum consisted of a uniform dark grey soil with a few lwnses of the higher strata. Occupying most of this layer were large bribbing logs. The soil around the logs was densely packed with broken ceramics. It was excavated as Levels 3,4,and 5, plus Level 2 of the Mest extension (Lots 11, 12 & 22, 13 and 19), and extended from a surface depth of about 13" to an unknown depth in the West extension. Against the wall it was from about 30 " to 60" deep, and stoped at the level of the spread footer planks. Diagnostic ceramics from this stratum were as follows:

Delft	Type	49	ca.	1700-1802	25
Yelloware	Type	56		1670-1795	27
Jackfield	Type	29		1740-1780	2 ,
Castleford					3
Creamware	Туре	22		1762-1820	91
Wheildon	Type	33		1759-1820	1
Pearlware	Type	17		1780-1820	7
	Туре	19, 20		1780-1830	21
	Iype	11		1795-1840	2
	Type	12		1795-1815	9
~	Type	13		1790-1820	3
Porce;ain	Type	39		1650-1800	43
	Type	7		1790-1825	3
White Salt Glaze Stoneware	Type	16, 43	•	1740-1775	6

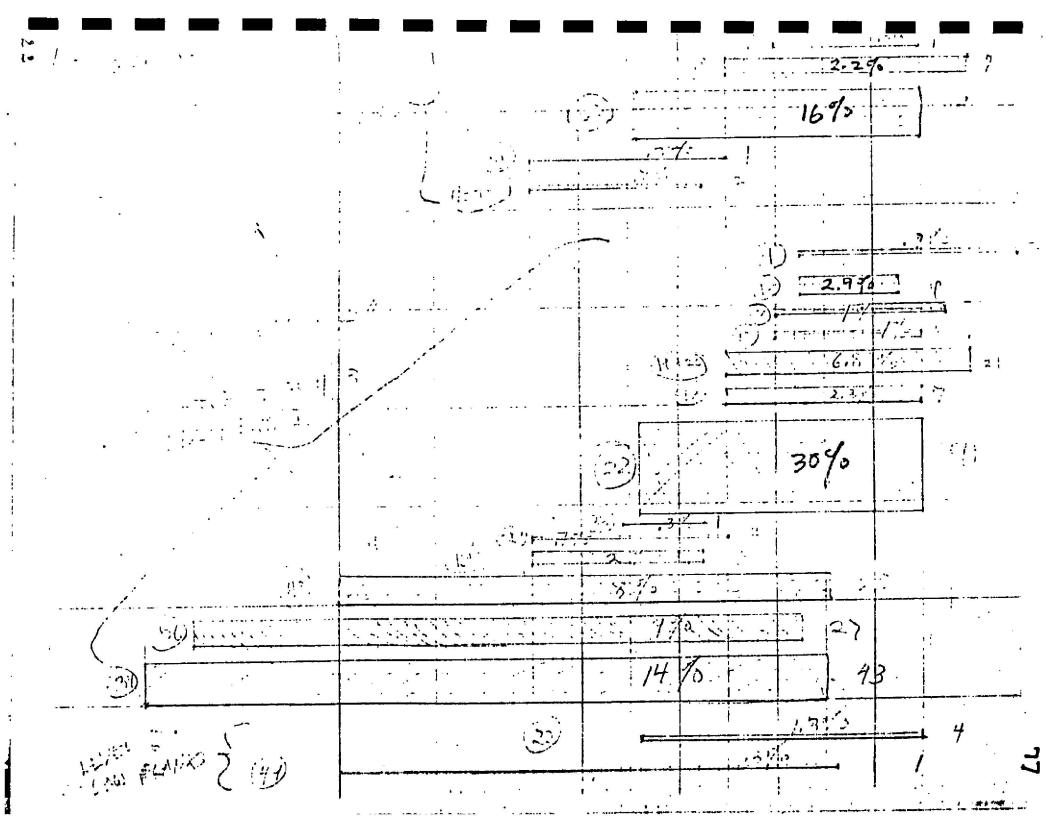
Other datable material from this dark stratum included a metal button 1726-1775 (South Type 7), and three pipebowls: Type 21 (Atkinson & Oswald) ca. 1680-1710, an RT pipe ca. 1590-1740; and Type 25 (Atkninson & Oswald) ca, 1740-1800. Fragments of a square "gin" bottle of 17th Century style was also found.

Below the spread-footer plank abd the cribbing logs (starting at about 60 inches below the surface) was a block muck, only about a square foot of this stratum was excavated as Level 6, Lot 20. It contained:

Delft	Type 49	ca, 1700-1802	1
Creamware	Type 22 v	1762-1820	4
Stoneware		·-	1

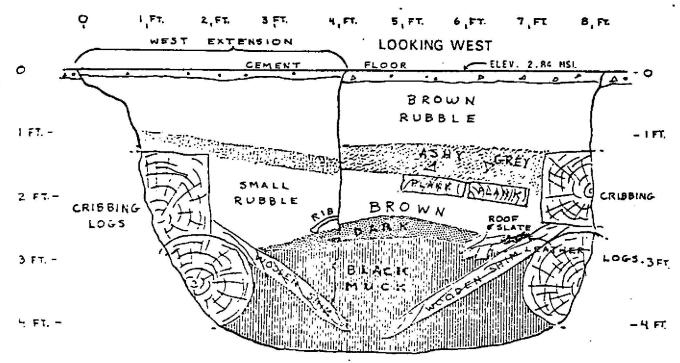
There was also a copper bead, and two pipe stems (both 6/64ths)

The fill at 165 John Street test contained the highest percentage of artifactual material of any of the tests excavat4ed and presented a situation in which enough different material was present so that we could attempt to date the different strata.



### 165 JOHN STREET

NEW YORK STATE MARITIME MUSEUM LOOKING SOUTH SCHERMERHORN ROW BLOCK BRICK NEW YORK CITY, NEW YORK (EAST BLDG.) IFT. 2 FT - ELEV. 2.84 HSL FLOOR OF BASEMENT ASHY SHELLS RUBBLE RUBBLE WITH SMALL RURE **(F)** 177 STONE 2 FT. -OUTLINE OFFE +3FT CRIBBING LOGS (SBSCURES STRATIGRAPHY · 4 FC BEHIND) -.5 FT.



NEW YORK STATE OFFICE OF PARKS & RECREATION
DIVISION FOR HISTORIC PRESERVATION

-5 FT

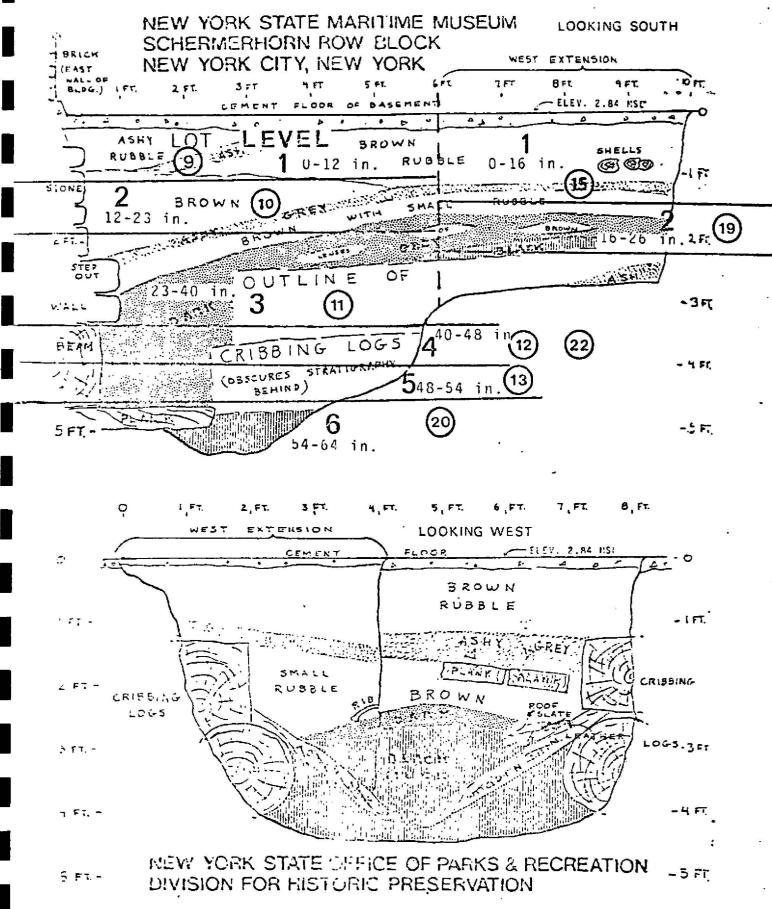
Historic Sites Research no S.Kardas & E.Larrabee

5 FT. -

nov. 1977

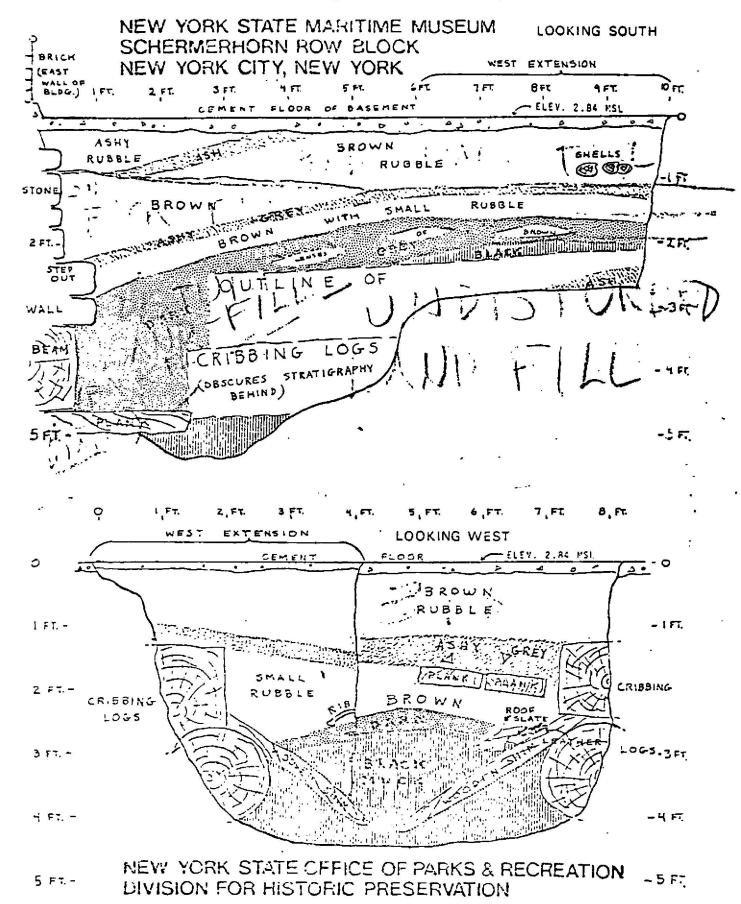
DITENTION FUNDA CONTRACT THOSE OF

### 165 JOIN STREET



Historic Sites Research nov. 1977 S.Kardas & E.Larrabee

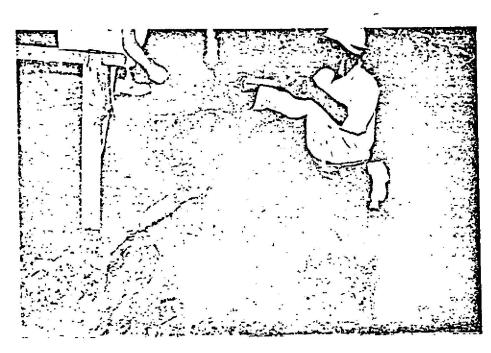
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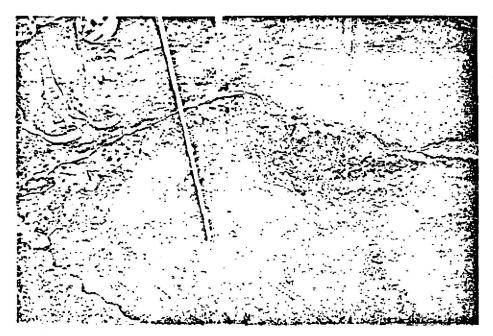
Historic Sites Research nov. 1977 S.Kardas & E.Larrabee



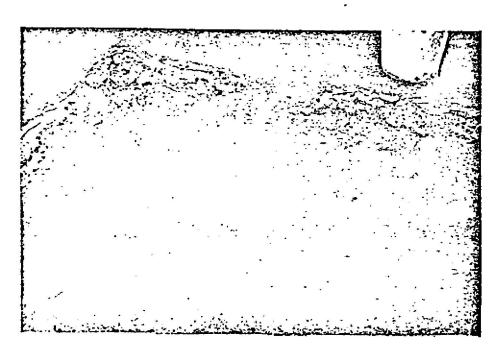
Excavation in 165 John Street (the 3rd Test) revealed large cribbing logs running east-west. This picture shows the SW extension of the test, with two large logs extending from it, along the south wall of the test. (Sch 6,  $\times$  4, looking SW).



Two more cribbing logs lay along the north wall of the 3rd Test, behind the laborer shovelling out fill, where it is being examined for artifacts by the Archaeological Assistants. (Sch. 6, x 5, looking NE).



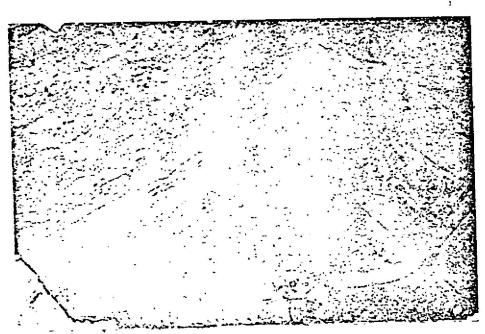
Cribbing logs were also exposed in the center of Test 3, between those along the north and south walls. The view here shows cribbing in the SW extension (Sch 6,  $\times$  17, looking NW).



Ends of cribbing logs at the north wall showed sawed ends (Sch 7,  $\times$  2, looking NW).



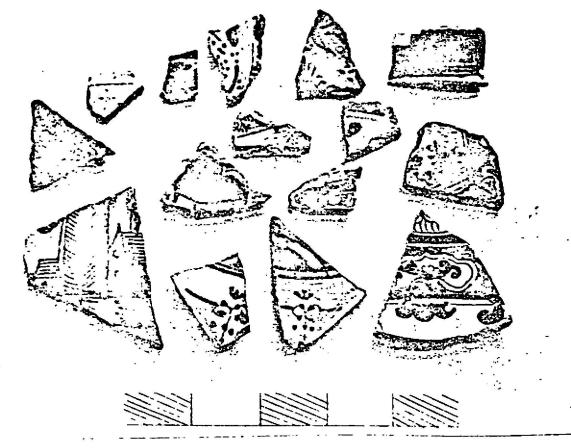
Soft wet fill in Test 3 collapsed at the projecting corner of the SW extension. This picture shows the ashy, rubble filled soil, and an arched lense of darker fill, below which is a large bos rib bone. (Sch 6, x 8, looking W).



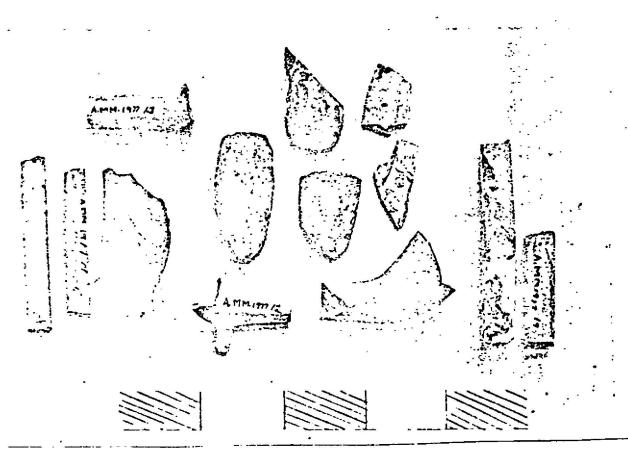
The east brick wall of the building in 165 John St. was built like the walls found in 4 Fulton Street, with a stone foundation resting on a longitudinal beam about 15 inches square, below which 4 inch thick spread-footer planks projected at right angles to the wall and beam. The planks extend to the end of the large cribbing logs along the south wall of Test 3 (Sch 7, x 18 looking SE).



In the corner of the SW extension of Test 3 another arching stratum of darker soil above decomposing wood shims abutted the lower of the two large cribbing logs, separating lighter, ash-filled deposits (Sch 7, x 9, looking SW).



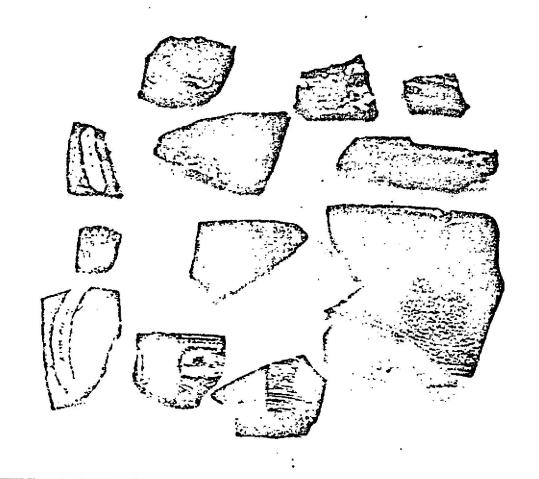
Ceramics from 165 John St. Delft tile and vessel sherds (Sch 14 x 32)



Kaolin Tobbaco Pipe Bowl and Stem fragments, 165 John St. (Sch 14 x 38)

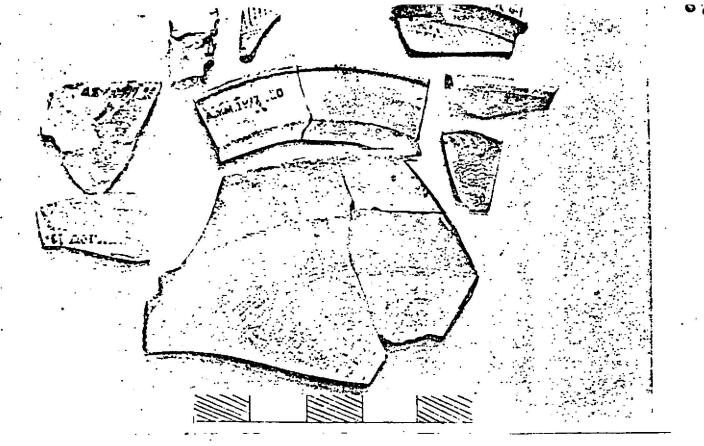


Ceramics from 165 John St. Yellow and Slipped Earthenware Sherds (Sch 14  $\times$  37)

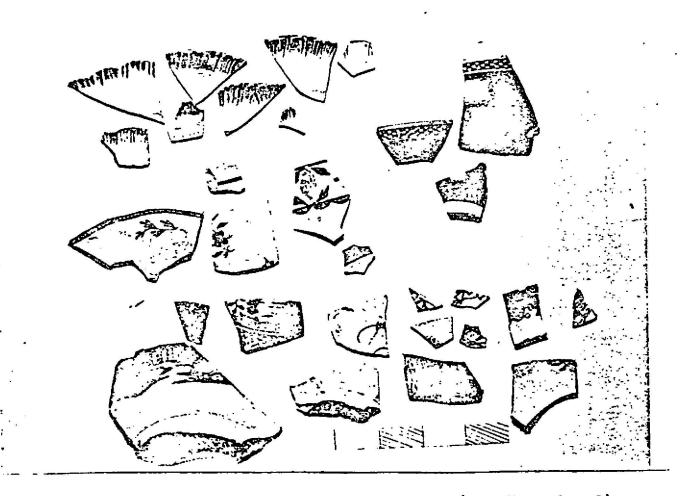


Ceramics from 165 John St. Redwares. (Sch 13 x 33)

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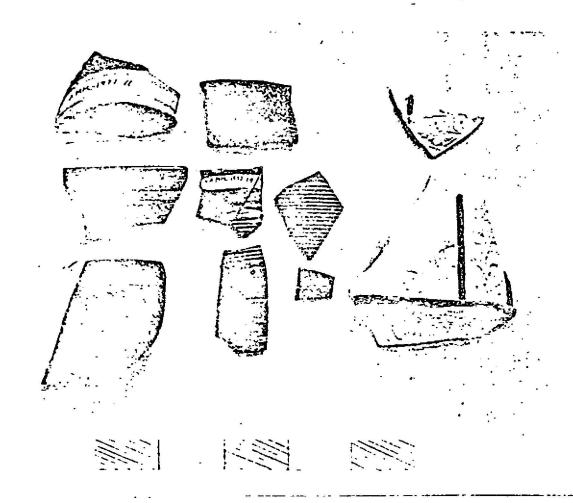
Ceramics from 165 John St. Creamware Sherds. (Sch 14 x 36)



Ceramics from 165 John St: Pearlware Sherds. (Lam-Hope 4 x 2)



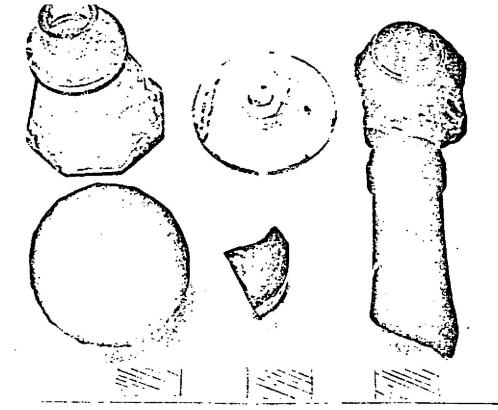
Ceramics from 165 John St. Stoneware. (Sch 14 x 34 top, x 35 bottom)



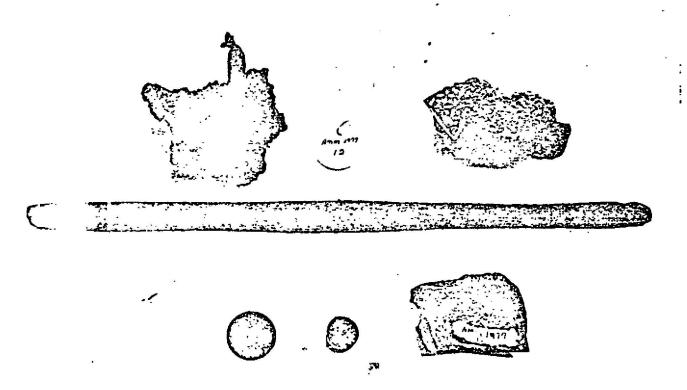


Ceramics from 165 John St. Chinese Porcelain (Lam-Hope 4 x 4 top, x 5 bottom)



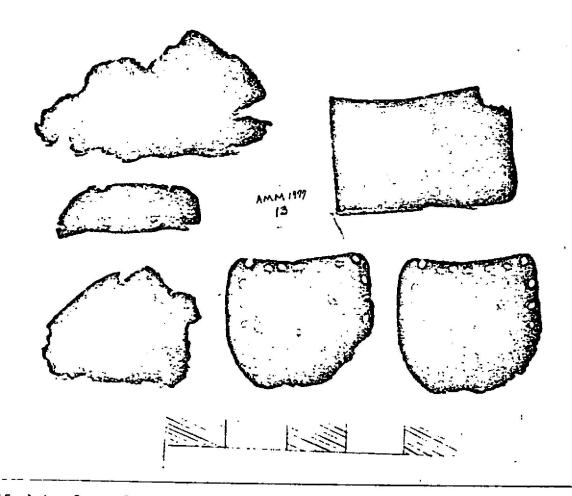


Glas: rom 165 John St. Ink Bottle (upper L.) reads Stillwell & Come / (latter half of 19th C.) Dark Green Bottle Base (lower L.) is a ragonal. (Sch 15 x 22)

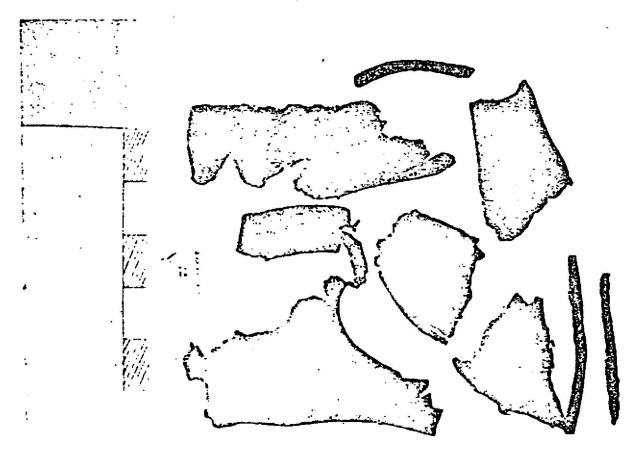


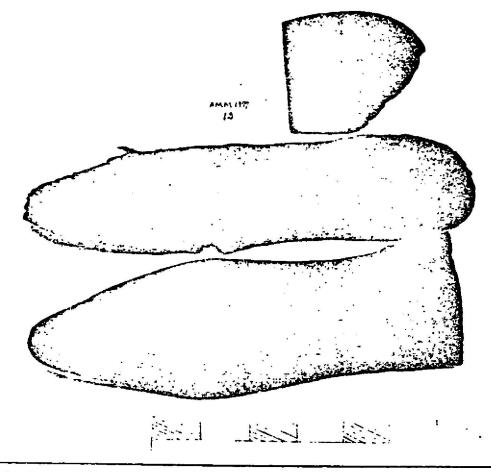
neous Objects from 165 John St. (Top) Lumps of Conglomerate. e) Wooden Chair Pung. (Bottom) Button (1726-1776 type), Misco Cor

and Coconut Shell fragment. (Sch 15 x 23)

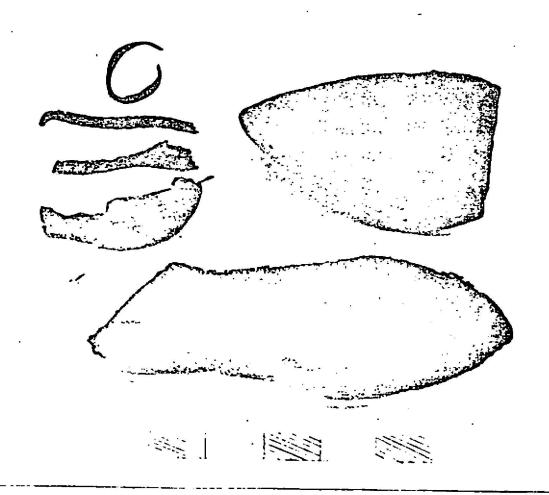


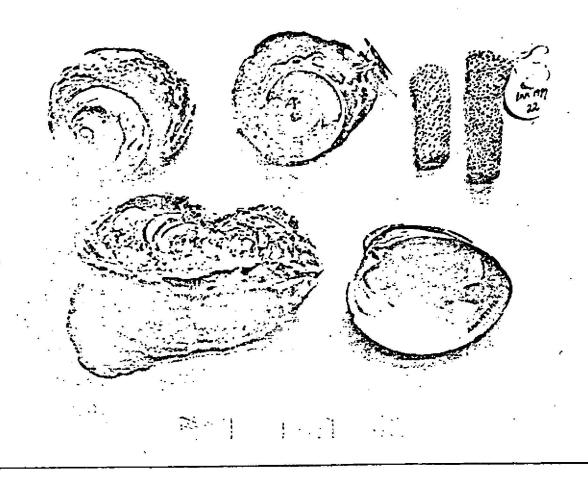
165 John St. Shoe Leather. (Sch 15 x 24 top, x 25 bottom)





165 John St. Shoe Leather. (Sch 15 x 26 top, x 27 bottom)





Shell from 165 John St. (Left to Right, top) two Turbine shells, (Turbo sp.), two fragments of Staghorn Coral (Madrepora cervicornis), all from Caribbean waters. (bottom) joined Oyster bivalve (Crassostrea virginica ?), and Clam (Venus mercenaria ?), both local. (Sch 15 x 21)

Test 4, at No. 18 Fulton St.

This small test was one of two in which structural information was produced with relatively little removal of significant artifact bearing soil, so consequently there are few finds, and minimal stratigraphy. Test 4 was placed next to a supporting column in Mo. 18 Fulton St. The first foot (Level 1, Lot 38) was excavated without archaeological supervision, from a ground floor cement slab at an elevation of 5.39 ft. Mean Sea Level. Some finds were saved by the construction crew, and some taken from back dirt. These included a non-diagnostic piece of red earthenware with dark glaze on the interior, a piece of plain creamware (latter third of the 18th century) and a 19th century sherd of ironstone. Also of 19th century origin was a clear glass salt shaker marked "PATENTED MATHAN & HIGHT." All this was in a dark soil matrix.

Under that, from 1 ft. to  $3\frac{1}{2}$  ft. depth, was light brown soil filled with coment, mortar, and fine rubble fragments, which graded to whitish near the bottom (Level 2, Lot 20 A). This contained only four ceramic sherds and two pieces of window glass. Two of the sherds were generalized creamware (Type 22, date range 1762-1820), and two were blue and white handpainted pearlware (Type 17, date range 1780-1820). On this very scanty. Pride evidence we can postulate a late 18thearly 19th century date for this lower, rubbly, fill.

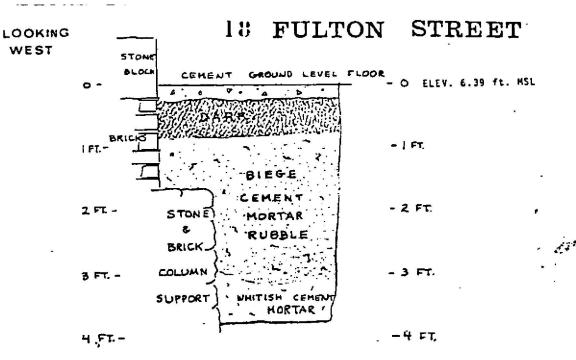
Test 5, at No. 171 John Street.

A test was made approximately in the center of the open basement space at No. 171 John St., along a line where there was once a wall between two of the ca. 1811 structures which preceded the 1849-'50 building that is there now. The wooden floor here is at 5.32 ft. Mean Sea Level. Under it was an open space, which was designated Level 1, but no artifacts were recovered from the thin layer of rubble at the bottom. From 2 ft. to nearly 3 ft. was a brick floor, probably placed as water-proofing. Like the floor in No. 193 Front St. it was three bricks thick, but it differed from that in how the bricks were laid. The upper and middle courses were on edge, and the lower course laid flat. In all three courses the stretchers ran north-south, and were laid in a brownish cement or cement mortar. This brick flooring was called Level 2.

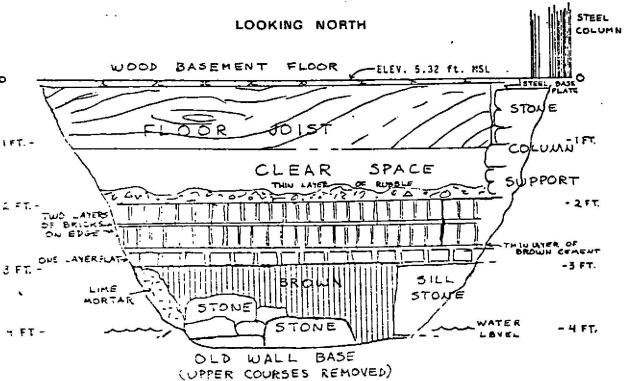
Under the bricks was a medium brown soil which was also included in the designation Level 2 (Lot 13). The diagnostic ceramics from this Lot were the following type:

Redware	Type						·:: 3
Stoneware							2
Yelloware	Type	56	ca.	1670	-	1795	1
White Salt- glazed Stone		16		1740	-	1765	1
Creamware	Type	22		1762	-	1820	12
Pearlware	Type	20		1780	-	1830	.1
" Polychrome	Type	12		1795	-	1815	1
Ironstone	Type	3		1813	_	1900	3

Also present were four tobacco pipe stems, one with 4/64th in. bore and three with 5/64th in., and two liquor bottle portions that were of styles dating to the very late 18th, century. The overall impression this gives is that of debris from the period typical of the eastern end of the site block (as defined at Tests 1 and 7, ca. 1790 - 1810), disturbed in the 19th century when ironstone was common. This interpretation is in conformance with the 1849-'50 date for the present building. When the top of the 1811 stone wall was exposed, excavation was stopped. Consequently, none of the lower strata which were examined in the five major tests were penetrated here.



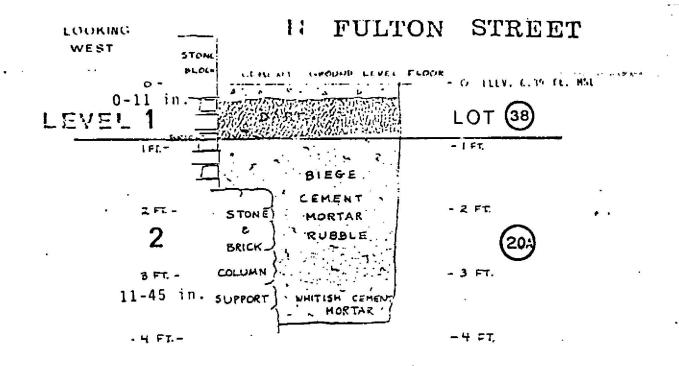
# STRATIGRAPHIC SECTION TEST 5 171 JOHN STREET



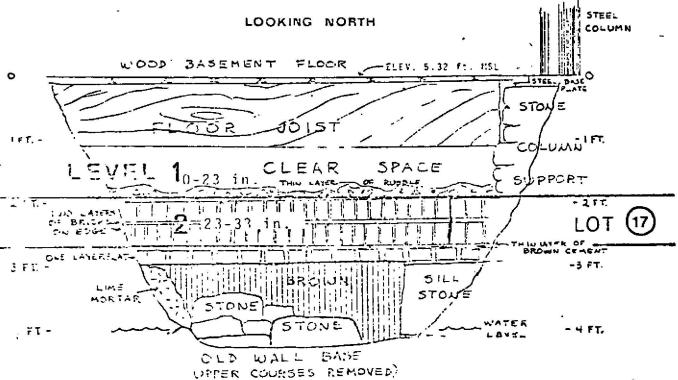
NEW YORK STATE MARITIME MUSEUM SCHERMERHORN ROW BLOCK NEW YORK CITY, NEW YORK

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# STRATIGRAPHIC SECTION TEST 5 171 JOHN STREET



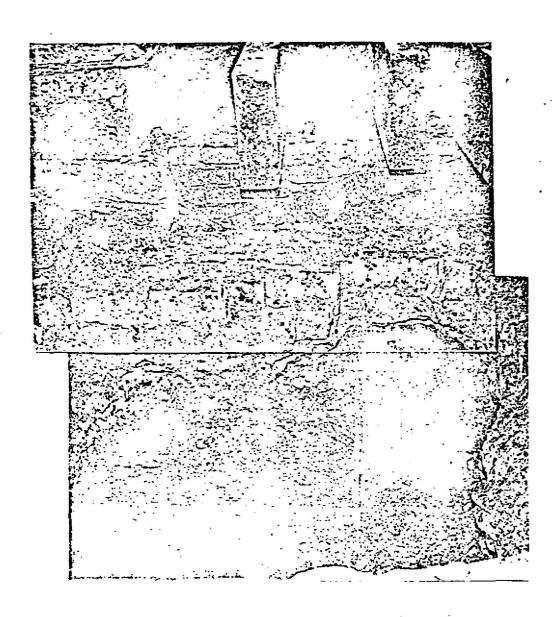
NEW YORK STATE MARITIME MUSEUM SCHERMERHORN ROW BLOCK NEW YORK CITY, NEW YORK

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Artifacts from 18 Fulton: Creamware, glass salt shaker, oyster shell and thick redware sherd. (Sch 15 x 28).



This composite view shows the large granite block, on which the column at the upper left corner rested. It was necessary to break through a floor of three thicknesses of brick (immediately above the granite block) to expose the lower fill. The top of the circa 1811 wall is visible at the bottom of the picture (Sch 8, x 9a & 10a, looking E)

#### Test 5 at 189 Front Street

This excave was placed along the south wall of the building, about aid-way back (east) of Front Street, toward the rear of the structure. It was in a cellar like that at. 193 Front Street, but with a higher floor elevation, and much shallowere than Test 2. The floor datum was at 2.80 feet Mean Sea Level; and, excavation stopped about 4 feet below that (between 1 ft. and 2 ft. below sea level) Stones were found with a probe about below the bottom of the excavation.

Underneath multiple wooden floors, No. 189 Front contained four stratigraphic levels dug to about 48 inches.

Level 1 (Lot 18) 0-12 inches, consisted of a medium brown soil. Ceramics included machine-turned flower pot, one blue and white delft sherd, a piece of creamware and a piece of grey salt glaze stoneware. This stratum continued into Level 2 for severla inches, the majority of that level being a dark brown soil.

Ceramics from Level 2 (12 inches to 24 inches, Lot 21) consisted of lead glazed slipwares and creamware, with a few pieces of stoneware and porcelain. Also present was a fragment of yellow brick.

Level 3 (Lot 24, 24 inches to 35 inches) consisted of a dark grey soil under Level 2 and above the spread-footer planks. This contained redwares, slipwares and creamware. Also present at near the bottom of this level the spread-footer was a large grey cannon flint.

Level 4 (Lot 25, 36 inches to 48 inches) was a gravellly soil with much brick rubble and mollusk shells. It contained the same mix of creamware, white salt glaze and slipware as the higher strata. This stratum was not excavated to its full depth because the testing stopped when the spread-footer was exposed.

The artifact yield from Test 6 at 189 Front Street was small in comparison to the tests on John Street and Fulton Street, but the material consistantly suggests a somewhat earlier date for the fill material. Ceramic types included:

Porcelain	Type	39	1660-1800	4
Yelloware	Type	56	1670-1795	6
Delft	Type	49	1700 -1802	1
White Salt Glaze Stoneware	Type	43	1740-1775	10
Creamware	Type	22	1762-1820	21

Significantly, no Pearlware sherds were found with this material. According to Hume, Pearlware was being developed during the third quarter of the 18th Century and reached its peak of popularity in the early 19th Century (1970: 128-131). It is common at Williamsburg on the period 1790-1815 (Hume 1969: 24). This suggests that this deposit consists of material predating the 1790's, and probably represents the mid 18th Century. The only possible contradiction of this interpretation are two bottle necks which we tentatively typed as late 13th Century. Bottle typologies are not as reliable as ceramic ones at present, and we think the bottles are probably of the age of the ceramics.

The stratigraphy here seems to indicate that soil below about 3 feet (i.e. Level 4, the rubble filled stratum) is land fill that was not disturbed when the south wall of No. 189 Front Street was built. Above that line cribbing was visible, but only in the west side of Test No. 6, while the stratigraphy was readable only on the opposite east wall. We interpret the lower dark grey soil (essentially Level 3, from 2 ft. to 3 ft.) as land fill material around the cribbing which was pushed back and then immediately replaced when the spread-footer planks were placed and the lower wall foundations built.

Above that is a dark brown soil (mostly within Level 2) which was probably land-fill material that was thoroughly disturbed and re-deposited during and after wall construction. The medium brown top stratum then is a second fill, put on top of the dark brown stratum after the wall was finished and before any wooden floor was laid down. The consistently early (mid-15th century) artifacts form a unit, and are agreeable with this interpretation, but only if the land-fill, and stone wall, pre-date 1800.

TEST 6 189 FROMT

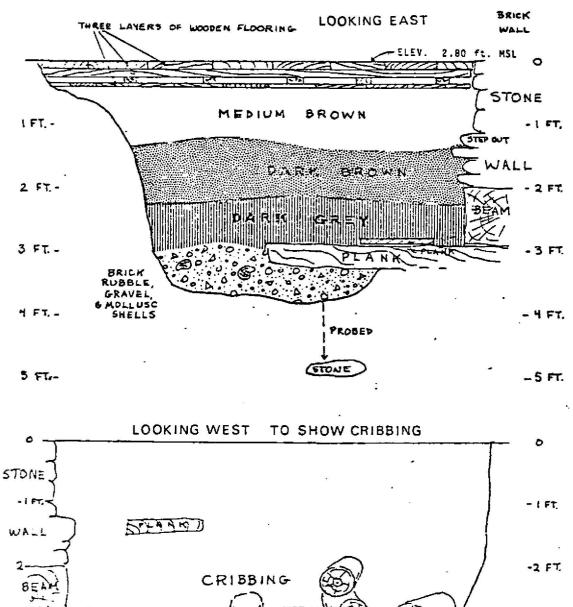
TEST 6 189 FRONT

-50%

# 189 FRONT STREET

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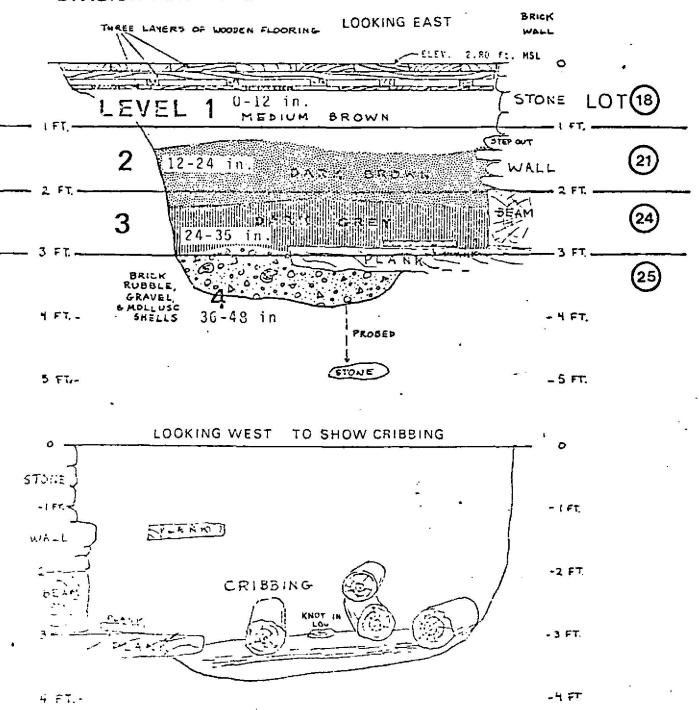
4 FT. -

nov. 1977

### 189 FROLT STREET

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NOTE: LEVELS 3 AND 4 IN THE EAST EXTERSION (SAME DEPTHS AS ABOVE) ARE LOTS 26 AND 27.

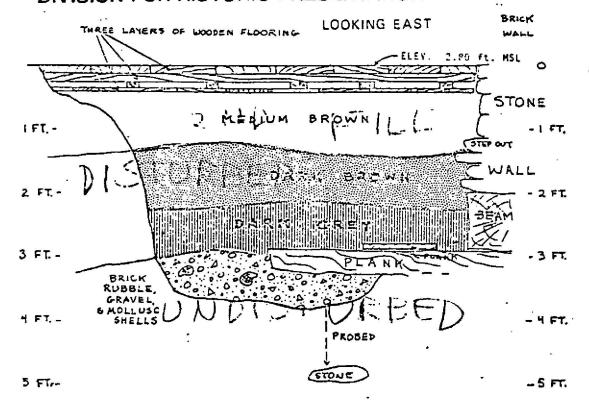
### 189 FRC NT STREET

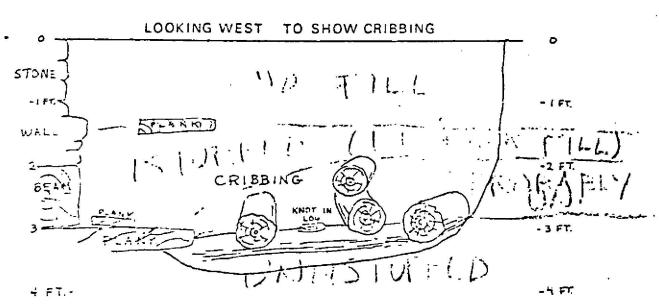
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108

WITCH.

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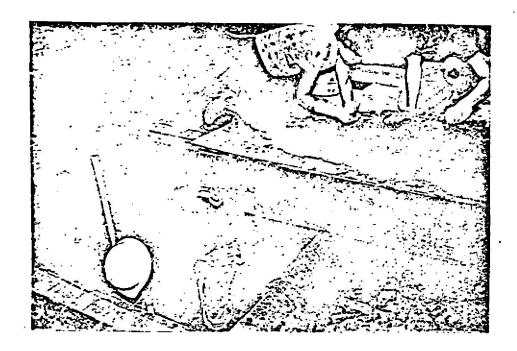
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Test 6 in 189 Front Street was started by digging between the support beams of a wooden basement floor (Sch 8, x 12a, looking SE)



This revealed three superimposed wooden floors, visible here along the east wall of Test 6, where the Archaeological Assistant is sorting through excavated muck (Sch 9, x 5, looking NE)



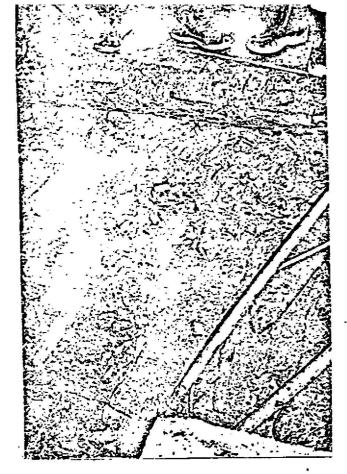
Test 5 in 171 John Street was dug in the center of the present basement, to expose a column support base and buried foundation wall of the 1811 period. The laborer is working between floor-boards and spreading the soil on a plywood sheet for sorting (Sch 8 x 4 looking N)



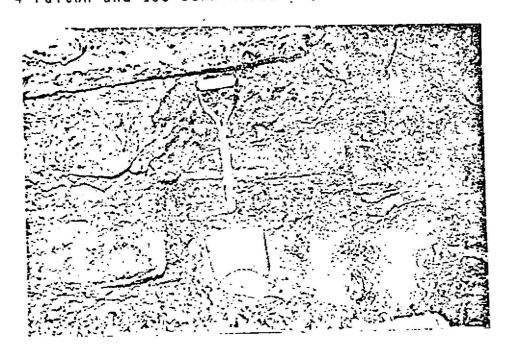
Large cribbing logs were found in Test 6 under the wooden floors. The tape shows a depth of 2 ft. from floor boards to a stratum of brick-bats and rubble underneath the cribbing log (Sch 8, x 16a, looking E)



Typical pit fill of rubble and wooden planks above the footers (Sch 8,  $\times$  14a, looking SE)



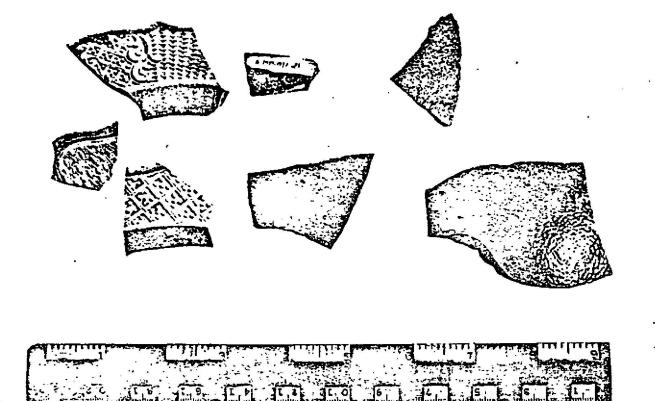
Cribbing in Test 6 ran east -west, with some north south members below it. To the lower left are seen soread-footer planks below the stone wall, as in 4 Fulton and 165 John Streets (Sch 9, x 13, looking W)



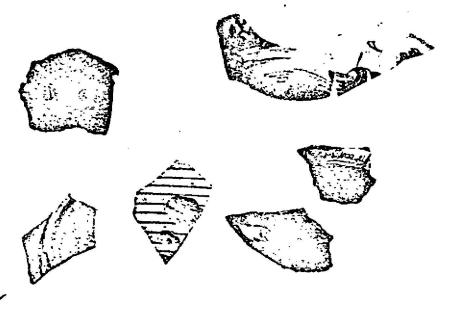
Here the uneven lengths of the spread-footer planks under the south wall of the building at 189 Front St. are clearly visible (Sch 9, x 14, looking S)



When excavation was finished in Test 6, a steel rod was driven down 4 ft. through sandy fill before encountering a large rock. At another location in the same pit, rock was probed at 2 ft. below the spread-footer planks. (Sch 9, x9, looking SE).

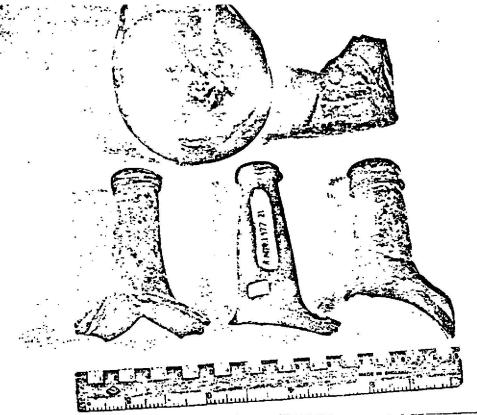


Ceramics from 189 Front: molded white stoneware (left) and grey salt glaze stoneware (right) (Sch 15 x 19).

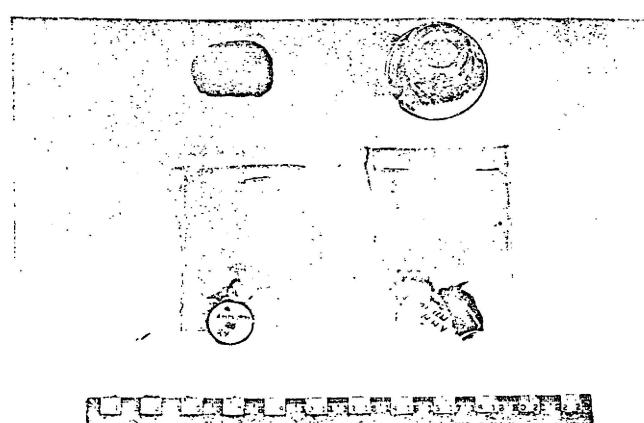




Green glazed earthenware (upper left), Chinese porcelain bowl, (upper right), creamware and redware (Sch. 15 x 20)



Bottle glass bases and lips from 189 Front, (Sch 15 x 16).



189 Front Misc. artifacts: Cannon flint, dictaphone ear piece (upper row); fish lense and bottle cork (lower row) (Sch 15 x 17).

Test 7, at No. 2 Fulton St.

Work on this test was started in July, 1977, but stopped after one day of digging because a broken sewer pipe had to be repaired. After this had been accomplished, excavation continued in August to a depth of nearly 8 ft. The surface elevation here (a dirt floor at about sidewalk level) was 4.52 ft. Mean Sea Level, so the bottom was more than 3 ft. below M.S.L., and two hand auger tests extended nearly 2 ft. deeper.

The pit was dug along the south wall of the building, which is also the wall separating it from No. 92 South Street. This is probably a wall which was already in existence by April, 1810, when the City Council Committee found that Schermerhorn's buildings projected about 8 inches further east (toward the river) than the line about to be used by Codwise (see preceding historical discussion).

The wall exposed was similar in construction to others seen during the 1977 testing. It was widest at the bottom, and at about 1½ ft. distances up, the wall was set in by 3 or 4 in., so that the brick wall on top was narrower than the base wall. A large beam, about 14 in. square, was under the roughly course stone wall base, and rested in turn on spread-footer planks about 4 in. thick. In this test horizontal borings were made through the beam, confirming its thickness, and indicating that another similar beam existed south of it, possibly with loose rubble between them.

The east face of Test 7 was formed by a previously unknown brick wall which divided the basement space, running northsouth, abutting the stone foundation wall at a right angle, and with a shallow stone foundation which rested on the spreadfooter planks of the main wall. It clearly post-dated the main wall, and evidently retained fill-dirt which we dug through, to keep the eatern part of the cellar space (leading up to South St.) open. In recent years, according to the owner of Sweets restaurant, the basement at No. 2 Fulton St. was filled with "clean sand" (perosnal communication from J. Pokorny). It is clear that the fill we sectioned is neither recent, nor "clean sand," so we believe the space once open on the east side of that brick wall is what was recently filled.

One other feature of Test 7 which made it distinctive was a well preserved timber cribbing found in the lowest part of the pit along the north side. Cribbing was also found in the 3rd and 5th tests, but here at No. 2 Fulton St. it was in better condition, because the timbers had not shifted. This cribbing included large (ca. 8-10 in. daimeter) logs running east-west, smaller ones running north-south, and at least one piling or vertical log which may have served to hold the cribbing in position. A very dark grey silt surrounded this cribbing, and we believe that this is landfill, undisturbed by later building construction.

Level 1 (Lot 30) from 0 to 28 in., included the two upper strata of earth in this test. They contained the following diagnostic ceramics:

Redware			2 .
Porcelain	Туре 39	1560- 1800	1 ;
Yelloware	Type 56	1670-1795	1
Delft	Type 49	1700-1802	1
Creamware	Type 22	1762-1820	10
Pearlware	Type 20	1780-1830	1
	Type 17	1780-1820	1 -
Ironstone	Type 3	1813-1900	, <b>1</b> -

This level included surface debris, so the 19th Century ironstone is not surprising.

Level 2 (Lot 31) was from 28 to 50 inches deep, but only in the center, as shown in the profile drawing. This was a result of the stage of excavation at the end of one day, with the squaring out of the corners occurring the next day when sheathing was placed. This level included all of a dark brown lense, but also part of a reddish deposit under it. Ceramics were.

Redware		-	2
Stoneware	*		2
Yelloware Type	32	1670-1795	1,
Delft - Type	e 49 ·	1700-1802	2
White Salt Glaze Stoneware Ty	pe 43	1740-1775	2
Creamware Typ	e 22	1762-1820	18
Pearlware Typ	e 19, 20	1780-1830	2
Тур	e 17	1730-1820	1
Ironstone Typ	e 3	1813-1900	3

Again, a few sherds of ironstone were found, perhaps a contamination from the upper level. Other than that, the material seems to date from the latter 18th Century, and this may represent the age of the material in the dark brown lense.

Level 3 (Lot 32) was from 36 inches to 50 inches deep. It included the remainder of the reddish deposit, with the following ceramic types:

Redware		·		2
Porcelain	Type 39	1650-1800		2
Jackfield	Type 29	1740-1780		2
Creamware	Type 22	1762-1820	*	11
Porcelain	Type 7	1790-1825.	٠,	1
Pearlware	Type 17, 20	1780-1830	a - 1	2
	Type 12	1795-1812		1

This also suggests a date for the end of the 18th Century, as does all the remaining levels, summarized below.

Level 4 (Lot 33) was a narrow band from 48 " to 58" consisting of a dark grey and tan stratum.

Redware			2
Creamware	Type 22	1762-1820	- 14
Pearlware	Type 19,20	1780-1830	2

Level 5 (Lot 29) extended from 54" to 60" in a light brown fill. Level 5 (Lot 34) extended from 60" to 68" in the same light brown stratum. The combined diagnostic ceramics were:

Redware						4
Stoneware						, 3
	Type	56 .	1670	-	1795	1
White Salt- glazed Stonev	are	43	1740	-	1795	4
Creamware	Type	22	1762	-	1820	25
Pearlware	Type	11	1795	-	1840	1
11	Type	17	1780	-	1820	1
u .	Type	19	1780	-	1830	2

Two hand-forged pieces of Admiralty Brass were found in this stratum. On the basis of the ceramic dates, this must post date 1795, with some mid-18th Century material present.

Levels 8 (75 to 90 inches) and Level 10 (90 to 110 inches) consisted of a dark brown gritty sand below and proximal to the spread footer planks. This stratum was disturbed during the construction of the wall. Diagnostic ceramics were:

Stoneware			8
Porcelain	ja .	•	2
Creamware	Type 22	1762-1820	14
Pearlware	Type 12	1795-1815	11
×	Type 17	1780-1820	1

The bulk of the ceramic material falls into the range 1795-1815. This layer of fill could not predate 1795 because of the presence of Pearlware sherds which were not introduced until that date.

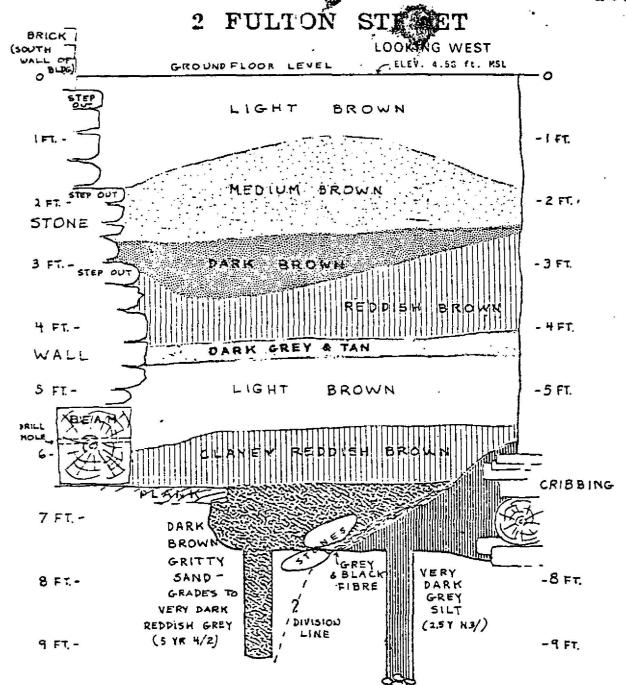
Level 7a (72" to 94") was dug in undisturbed fill around the log cribbing and in the augor boring nearest the cribbing. It contained two sherds: 1 piece of Yelloware, and 1 piece of redware.

Overall, the artifactual material from Test 7 at No. 2
Fulton Street can not be interpreted as representing a) accumulated midden or b) domestic or industrial material relating to a particular site. The fill material found here consists of several soil matrices distinctly stratified. The average depth of each matrix was roughly 3 to 12 inches. Each stratum contained artifactual material which could not have been deposited prior to 1790-1795, indicating that each stratum had been surface material at the time it was brought in to be used as fill.

The only stratum where post 1810 material was definitively found was on the surface of level 1 (0-28") in light brown soil at the ground floor level. This material consisted of 4 sherds of ironstone. This is the only material recovered except got yhe two 19th century bottles at the surface of 165 John Street that can be interpreted as relating to the structures of Schermerhorn Row. The ironstone here is probably late 19th or even 20th Century restaurant ware.

We interpret the dark grey silt around the cribbing undisturbed land fill which was dug away for the wall, leaving a wall trench filled by the material in Levels 8 and 10. The steep angle at which it dips suggests that there may be a core support under the spread footer planks - perhaps a rubble mass like that under the wall in Test 2, at 193 Front Street. All the strata above that are intentional back fill against the main wall, and also against the brick partition wall. The dating of the artifacts suggests that the brick wall was built soon after the 1810 main wall.

7.2.5 

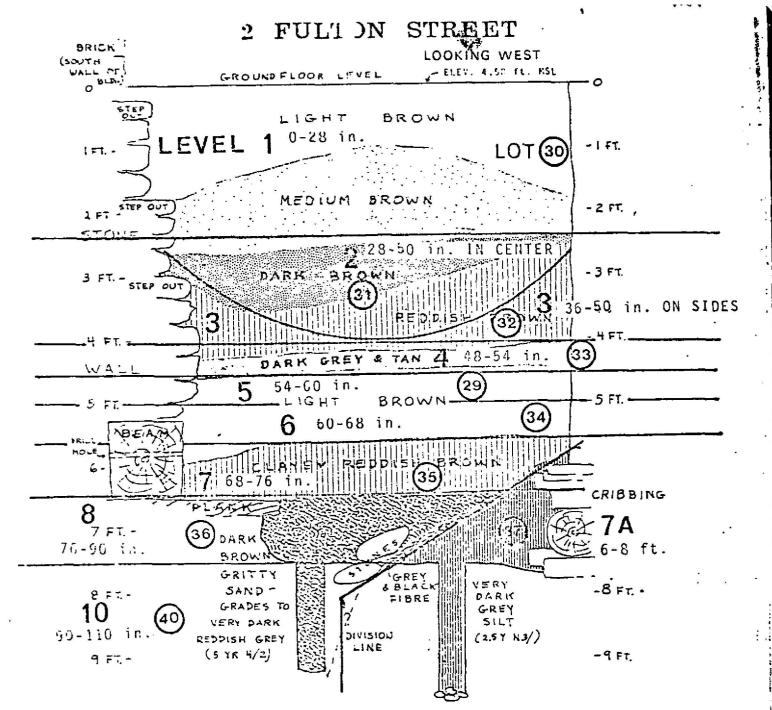


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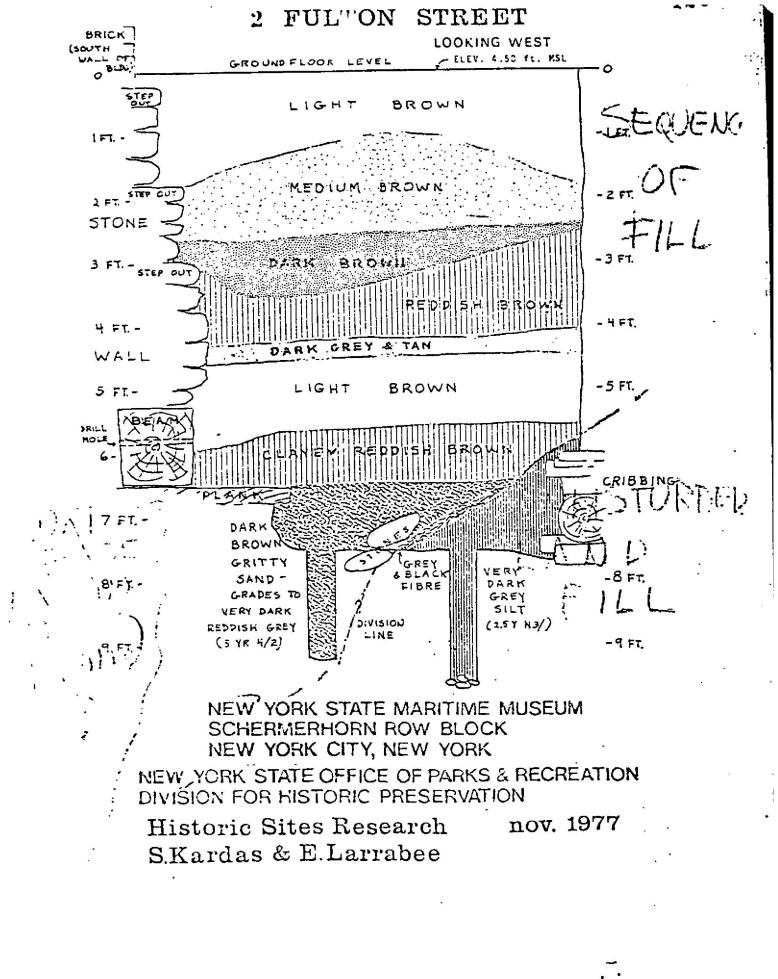


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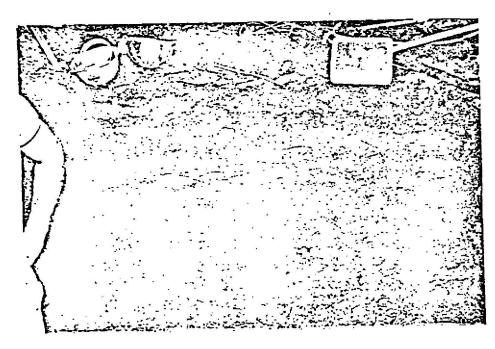
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> HOTE: LEVEL 9 (LOT 30) IS FROM POTTOM CLEARING, AND PRO-HABLY IS THE SAME AS LEVEL U (LOT 36).

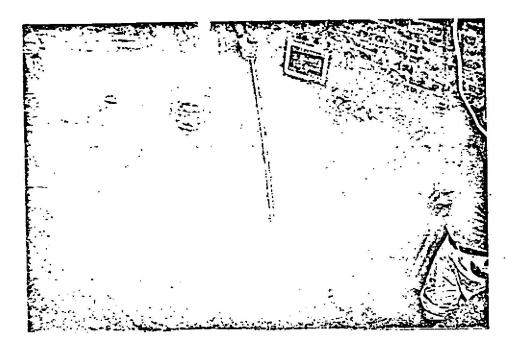




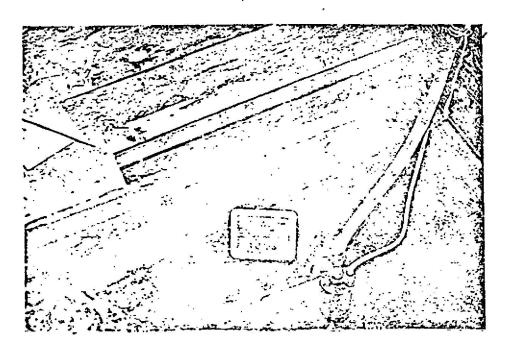
Excavation in the 7th Test, at 2 Fulton Street was started in July, 1977, but had to be delayed for a month because of a sewer leak. Here a laborer is starting the first time, along the south wall of the building. (Sch 5, x 20a, looking S).



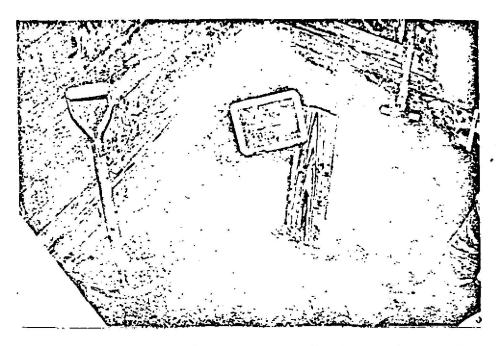
When work resumed in August 1977, a thick deposit of fill was revealed against the south wall of the building (visible at lower left). (Sch 11, x 33, looking W)



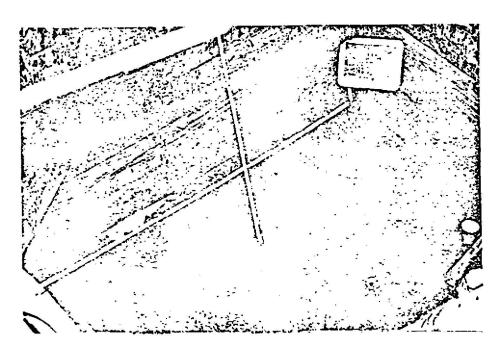
A brick partition or basement wall was discovered in Test 7, extending north from the south wall stone foundation. Here about 3 ft. of this brick wall (which became the east wall of Test 7) is showing. (Sch 11, x 36, looking SE).



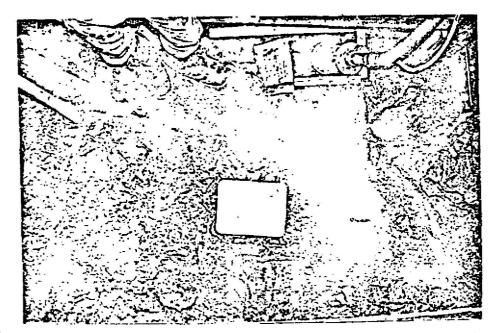
The south foundation wall at 2 Fulton Street showed the now familiar pattern of a longintudinal beam resting on spread-footer planks. The planks are slightly canted and not at a true 90 angle with the wall. Modern 2x4"s are shoring (Sch 12 x 32, looking SW).



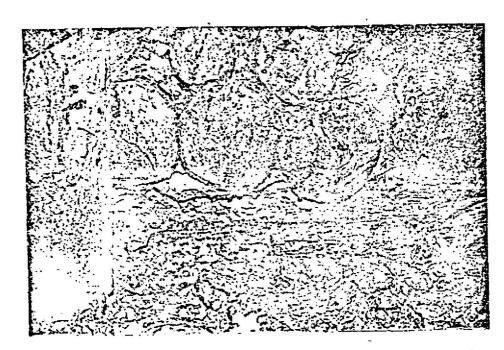
A vertical piling (in center of picture) was found near the northeast corner of Test 7. This proved to be along the edge of a log cribbing feature (Sch 13,  $\times$  2, looking NE).



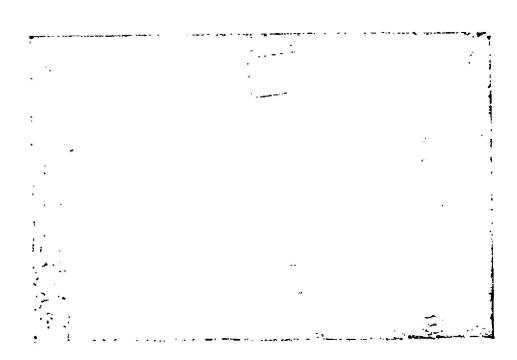
As more fully exposed, the cribbing consisted of two rows of logs running N-S resting on large logs running E-W, with more N-S logs below that. Here the south ends of the upper logs are exposed behind the vertical piling (Sch 13,  $\times$  10, looking NE)



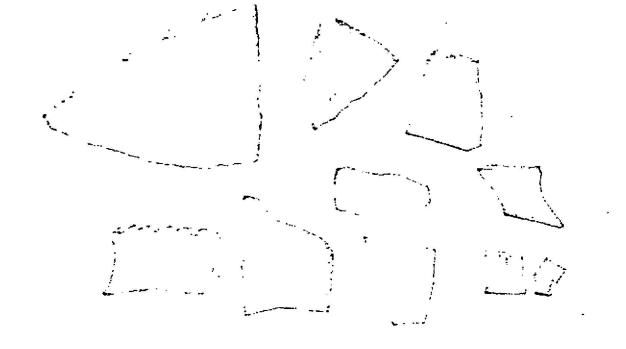
Viewed from above, the vertical piling and the largest of the horizontal cribbing logs can be seen at the bottom of this photograph (against the N wall of Test 7) (Sch 13, x 11, looking S & down).



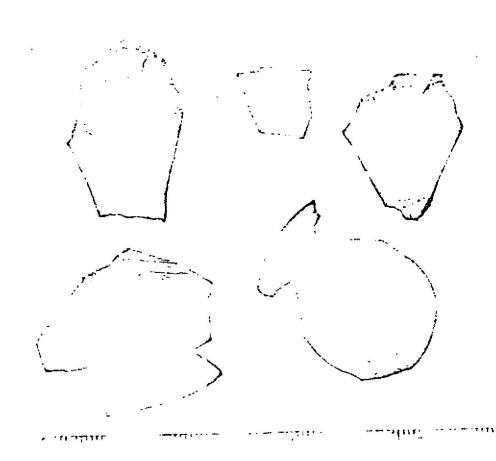
A detail of the ends of the upper two layers of cribbing logs behind the vertical piling. Below them an E-W log is visible (Sch 13,  $\times$  14, looking N).



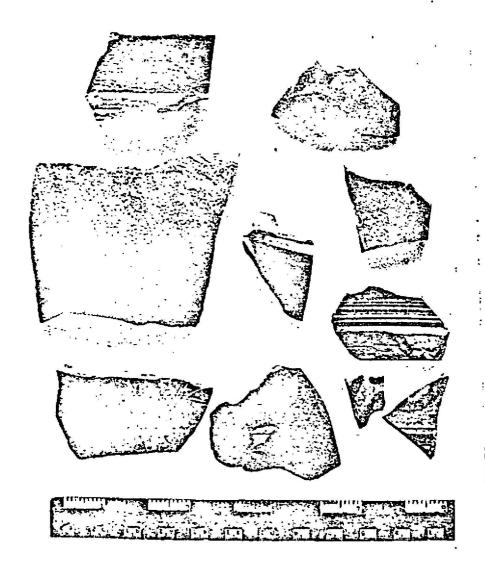
At a depth of nearly 8 ft. below the ground level in 2 Fulton Street, this view shows the spreadfooters (at top of picture, with letter board resting on them), the north - south brick wall on the east side of the Test Pit . and the vertical piling and cribbing at the north side of the pit (Sch 13, x 22, looking S & down).



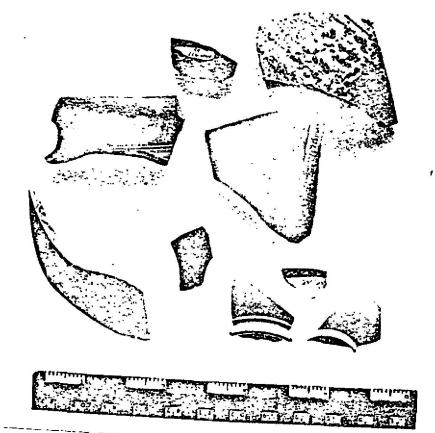
Tararia, from 2 Julton St. Various Lead Glazed Slipwares (Sch 16 x 16)



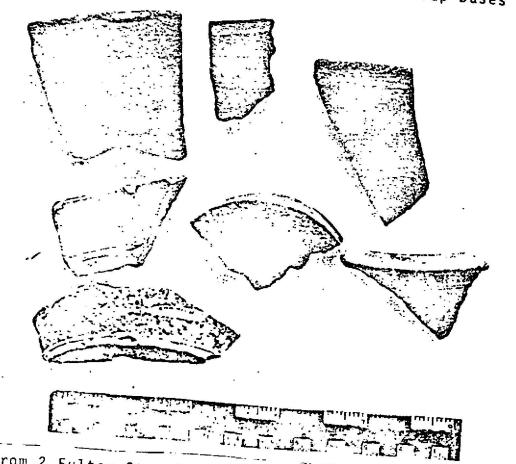
foremins from 2 Sulton St. Litined Fedwares, including "Engine Turned" pc.(lower L.) & Jackfield-type Teapot base (lower R.) (Sch 16 x 15)



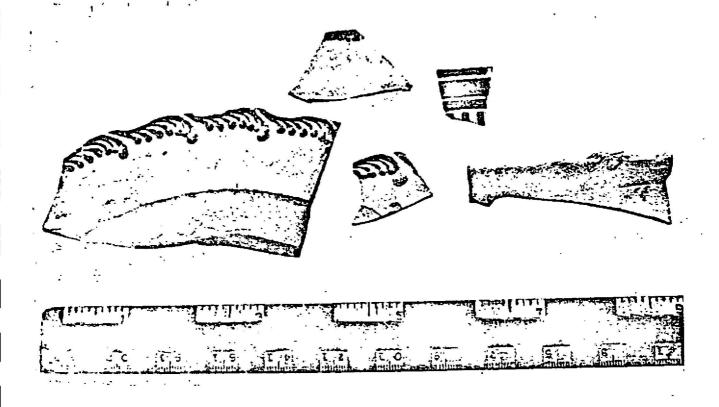
Ceramics from 2 Fulton St. Grey salt-glazed Stoneware with cobalt blue decoration. Note Incised design (Lower Left) (Sch 16 x 13)



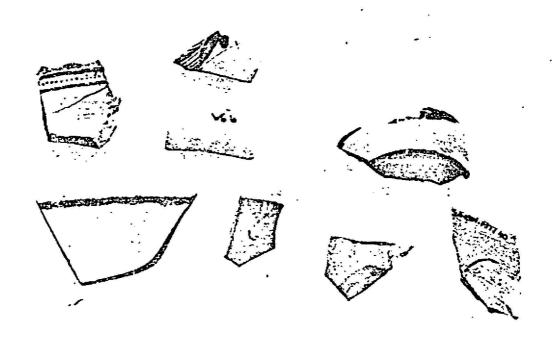
Ceramics from 2 Fulton St. Stoneware types: Grey salt-glazed wares, lead glazed bottle fragment and white salt-glazed cup bases (Sch 16 x

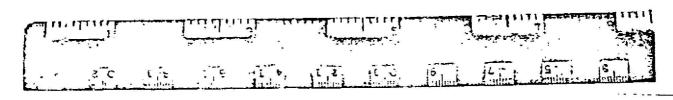


Ceramics from 2 Fulton St. Stoneware vessel bases & lips. (Sch 16 x 202)

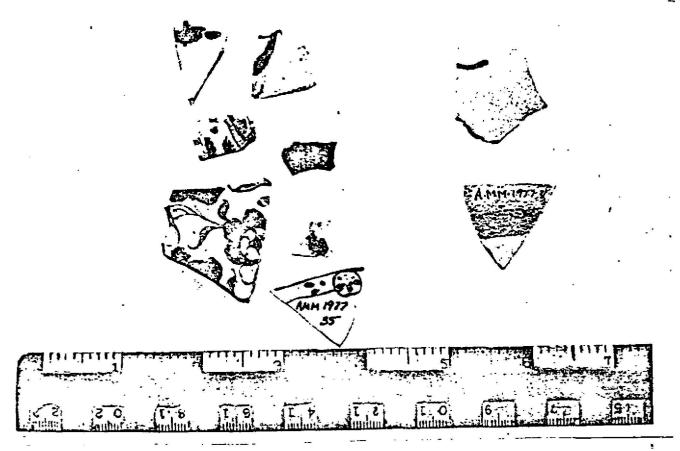


Ceramics from 2 Fulton St. Creamware sherds: Feather-edged, Annular (Upper R.), and Turned Rim vessel (Sch 16 x 19)

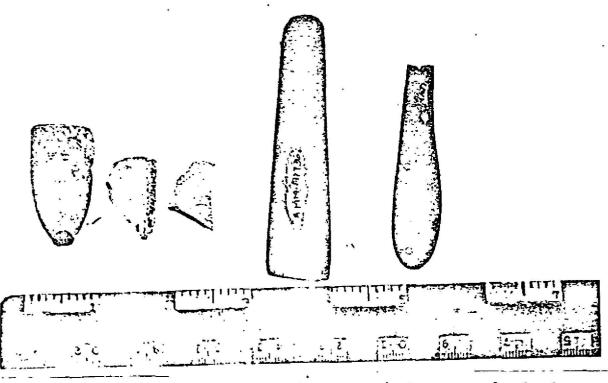




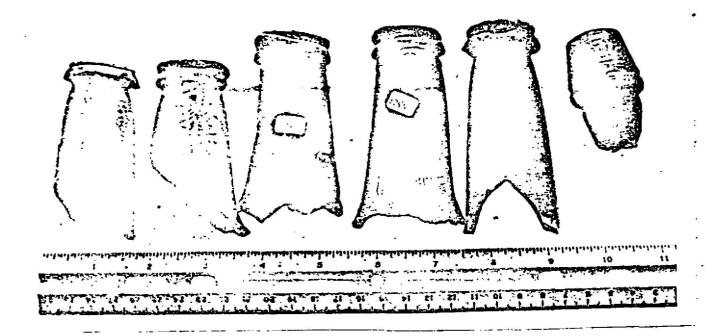
Ceramics from 2 Fulton St. Decorated Pearlware sherds (Sch 16 x 18)



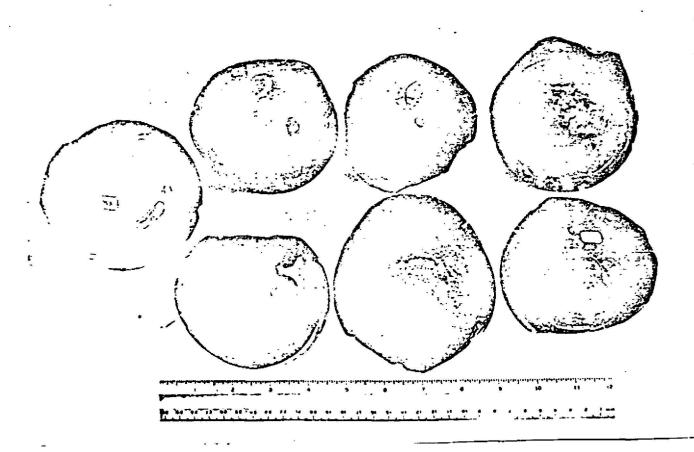
Ceramics from 2 Fulton St. Chinese Porcelain sherds: Blue and White Underglaze (Upper L.), Overglaze Red and Gold (Lower L) Delft Sherds on Right. (Sch 16 x 17)



Tobacco Pipes from 2 Fulton St. (L. to R.) From Levels 6, 1, and 7 (with TD mark). Bone utensil handle in center (Level 8) and wooden (?) handle on L. (Sch 16 x 20)



Dark Green Bottle Glass from 2 Fulton St. Necks and Lips of mid- to late- 18th Century styles (Sch 17 x 2)



Bottle Bases and Kick-ups, of styles from 1750's to 1780's (Sch 17  $\times$  3)

## A. Discussion of Stratigraphy and Fill

The process of land-making involved filling large wooden crib-works with soil. The full depth of this fill at the site block was not exposed in any of the seven test pits, but if the "bottom of fill" shown in the borings is connected, we were at least 5 ft. above bottom in our deepest pit (Test 2, at No. 193 Front St.), and even further above it in the others. This indicates at least 15 ft. of fill in the Schermerhorn Row Block, which is of the same order of magnitude as the ca. 20 ft. depth recorded by Huey at Old Slip.

Most of the material we excavated was deposited against the stone foundation walls after they were built, because excavation stopped at the spread-footer planks in all cases except Test 2. Probably less than one fifth of all the soil excavated in 1977 (and most of that in Test 2) was placed for land fill before wall construction, and the remaining four fifths was placed inside the foundation walls of the buildings after they had been built at least to the level where brick work starts.

There may be a difference reflected in the divergent functions of fill placed before and after wall construction. "Land-Making" involved covering an extensive area (at least as large as several buildings combined, and possibly as much as the entire block at once) to a considerable depth (starting at between -10 ft. and -5 ft., and raising at least above ca. 1810 Mean Sea Level, and

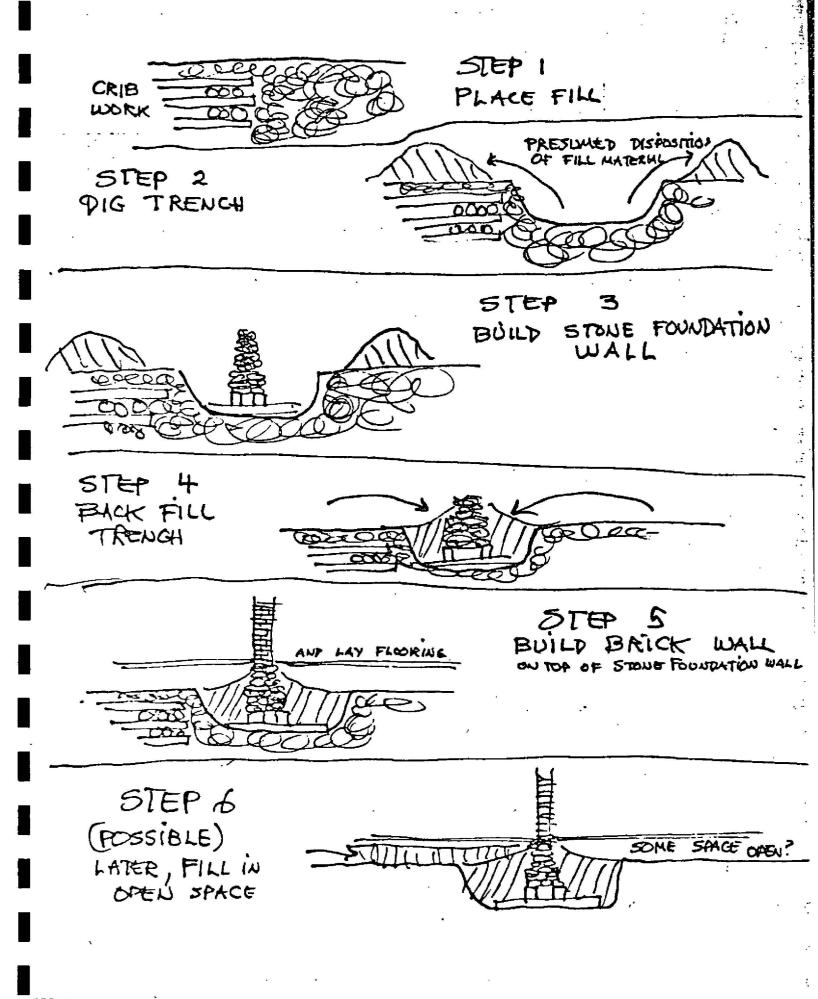
probably to about + 5 ft.). We know that crib work of large logs was used. Covering foundation walls or filling space below floor level, on the other hand, might involve placing only 1 or 2 ft. of dirt in only part of a building's cellar space. The volumes involved are of completely different magnitudes. Moreover, filling space inside existing structure must be done under many constraints and restrictions not present during a large "land-making" process.

We do not know on any historical basis where fill material was obtained for either kind of activity, and consequently can only guess as to whether there would be a tendency for different sources to be used. Logically, it would be less likely that organic debris would be used in the cellar of an inhabited building.

Two sequences for filling are possible here. One of these would require "land-making" to a relatively low surface elevation (say 3 or 4 ft. below present MSL), followed by construction of foundation walls, starting with spread-footer planks, on top of the fill. After the foundation walls reached an appropriate height above the spread footer bean, brick walls were started. Additional material was then placed against thelower stone foundation wall, possibly completely filling the open space. The other sequence would mean land-making to a slightly higher elevation, and then digging of trenches in this for the foundation walls, after which the process would be like that in the first sequence. In either the first or second case, at some later date any hollow space under the first floor would be filled.

If a trench were dug for the lower part of the foundation wall, we would expect to see a "footer trench" profile in the stratigraphy, with possible similiar material that was removed redeposited during back-fill. However, since all the earth was land-fill, no clear distinction might be visible, especially under the conditions of this excavation. The presence of heavy log cribbing would be an indicat or that this was "land-making" fill because there would be no purpose for using this technique inside a cellar. In the following table, we show presnece and absence of cribbing, wall trenches and other indicators and in the sketch, the probable sequence of comstruction.

Test BNo.	Land M	laking	Wall Trench	. Back-fi	lling
	Cribbing	Other evidence			Space Filling
1 (No.4 Fulton)	no	? sand	yes	Levels 5, 6 & & ( waters)	Levels 1 & .2, maybe 3 & 4.
2 ( No. 193 Front)	no B	Chips & Fibre	?	Levels 2, 3 & 4	Maybe Level 1
3 ( No. 165 John)		B lack Muck around cribb		Levels 3, 4, & 5 (dark strata	maybe 2.
4 ( No. 18 Fulton)	x	x	x	X	Levels 1 and 2.
5 (No. 171 John)	x	<b>x</b>	<b>x</b>	Top of wall	removed
6 ( No. 189 Front)		B rick rubble & mollusc sh under cribbin	ells	Levels 2 å 3	Maybe Level 1
7 (No. 2 FULTON)		Dark grey si around cribb and piling		Probably Levels 5 & 6, certainly Levels 7, 8, & 10	through 4



From this table, we can determine that in the five tests which were dug deep enough to resolve the question (omitting Tests 4 & 5) a wall trench seems to have been dug in Tests 1, 3 and 7, and probably in 6. This leaves only Test 2 in doubt. Therefore, the preferred sequence seems to have been one of cutting into a surface of land fill for wall building purposes. It is not clear whether buried cribbing was avoided, deliberately cut (this may have happened in Tests 3 and 6), or placed with later wall construction in mind (unlikely).

One other conclusion cam be drawn from the stratigraphy alone, and that is that soil material used for land-making, back-fill against newly constructed walls, and for later cellar space filling was extremely varied, but did not inclide massive deposits of stone in the areas that we tested. Large stones were found throughout, but they were isolated. Differing organic content, and differing degrees of sandiness and siltiness were present. All the soils were in this range, and were technically lumped under the Unified Soil Classification System definition "Silty Sand (SM)" by the URS/ Madigen Praeger Soils Analysis (Hed 1977:5). This classification is too gross for archaeological interpretation, particularly since it ignores all cultural and organic materials in the soil.

There was no evidence of any uniform strata occurring in more than one test. Perhaps the closest similarity was in the dark mucky matrix surrounding the cribbing in Tests 3. 6. & 7.

The stratigraphy thus seems to suggest that a fairly standardized technique was used for land-making, for backfilling against walls and filling cellar space, but that the soil material involved and the specifics of its deposition — differed from one part of the block to another.

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#### B. Discussion of Artifacts

1. Overall Patterns and Dating

South has recently argued that on 18th Century sites there is a high correlation between the dates of ceramic manufacture and the period of site occupation (1977: 201). Basically, his use of ceramic manufacture date as an analytical tool is based on the following logic

Ceramic types manufactured in a short duration are excellent temporal markers for determining the approximate brackets for the accumulation of the sample, allowing an interpretation to be made regarding the occupation period of the historic site. Such short-period types can be used effectively on a presence and absence basis as cluse to sample accumulation. An important consideration here is that a ceramic type specimen cannot appear on a site prior to the beginning manufacture date for the type, thus creating a temporal relationship between the manufacture date and the occupation of the site by those who used and broke the ceramic objects. (South 1977:206).

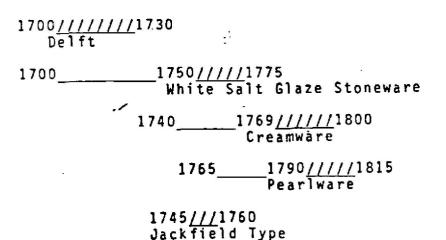
A further South postulate is that the 18th Century breakage of material began shortly after introduction of each type and it would be discarded along with a few 'heirlooms' (i.e. earlier ceramic types). The majority of material broken however, would consist of the "modern" material (op. cit. 206). If this is true, than it follows that the frequency of contemporary ceramic types brackets the occupation (deposition) of the material.

With certain restrictions this reasoning, and South's date ranges \* -/can be utilized in interpreting origins of the material used as land fill.

B ased largely on Noel-Hume's work.

A second problem arises if one has locally manufactured ceramic material which looks like its European counter-part. This is particularly true of redwares and stonewares which at this site are present as only small fragments, not complete vessels. The manufacture span of local wares is probably much longer than South's figures for European made wares, and hence can skew the median toward an earlier date than is warrented. To compensate for this problem, we have excluded grey stoneware and retwares from our frequency charts since we believe a good part of this sample was locally made.

Another approach which is useful in relating the contents of these tests to each other is to compare relative frequencies of material of known popularity with each other. Using Williams-burg as a model, Noel-Hume has suggested the following trends in ceramic popularity. (N.B. this is <u>not</u> manufacture date, but frequency of appearance at Williamsburg).



With these techniques and their limitations in mind, the relative dating profiles of diagnostic ceramics for the five significant tests have been plotted together. Several things are apparent in looking at this.

- a. The mass of datable material from 165 John St comprises about half of the total of 508 pieces, while the other four tests have much smaller samples which are in the same order of magnitude with each other. Put another way, this means that the 263 diagnostic sherds from Test 3 at No. 165 John St. more than equals the other fout tests put together. This same general ratio holds for some other objects. For example, of 90 tobacco pipe stems with measureable bore, 56 came from Test 3. The only mass of artifactual material that compares with the large deposit in No. 165 John St. is the massive and uniformly unmarked deposit of waster sherds near the bottom of Test 1, and that obviously represented a single collection of commercial manufacturing by-product used for fill.
- b. Three definite dating patterns are shown. Tests 1 and 7, next to each other at No. 4 and No. 2 Fulton St., each have almost exactly 38 % pearlware, and about 60% and 50% creamware respectively. This suggests a date in the 1790-1810 period for the collection of ceramics. In contrast to this, Tests 2 and 6, again next to each other (No. 193 and 189 Front St.) and at the opposite end of the block from Tests 1 and 7, have only 6% and no pearlware, and for them Creamware is 90% and 66% respectively.

170		1745-60	1750 SALT	ne my b	PILL	1800	1790-1815
100%     151 TEST	1700-30		1750-	5	59,74%		(44)
No.41 FULTON						37-16/	7=77
0	13.%		1.3 %			HIVIIII	
5:20-							
100/0				17	90.38 70		Enlist
10.193- TU:UT -							M=52
0			3.8%			5.7670	
	· · · · · · · · · · · · · · · · · · ·					-	
-10090 = 3807			··· - · · - · · · · · · -	·   -   -	69.2%		4-5/3
No. 165			-			18.25	7 (3/3)
	6.496.		5.324				
	<u> </u>		1770	1 1	1 1 1 1.		
					1 - 1 - 1		
105%					65.629	8	A-23
100 189 100 189			31.257		65.629	8	1=32
6TH	3.1%		31.257		65.62		1=32 (earliest)
100 189 100 189	3.1%		31.257		65.62	8	A=32  Carlied
10096	3.1%		31.257				4:32  Carling  M=84
100 189 1 KONT	3.1%				48.870	372,01	earliest Marie M = 84
10080 TECHT 10080	23%		31.257			32.0	earliest Marie M = 84
JOSTON Z FURNS	3.1% 2.3% 700 -1725						earliest Marie M = 84

In the case of Test 6, where it is 56%, the bulk of the other datable ceramics are the earlier White Salt Glazed Stoneware (31%). Since the three pearlware sherds from Test 2 are in Layer 1 or back-dart, and probably not from the lower 7 ft. of fill, they should not be considered a determinant of dating. Thus the fill in Tests 2 and 6 both appears to date from before 1790 (when pearlware became common), and probably from the period 1770 to 1730.

The third pattern is that found in Test 3 at No. 165 John Street. Not only is there a much greater sample, but there are diagnostic ceramics not present elsewhere, for example 7% is Jackfield (also found at Test 7 in minimal quantity), and over 6% is Delft (3% or less in Tests 1, 6 and 7). Pearlware is 19% of the large sample at No. 165 John St., which is too much to be explained away, but only half the relative frequency of this material in Tests 1 and 7. On these grounds, we believe that the fill in Test 3 contains material which can be assigned a date between that of the two tests with early material (on Front St.) and the two tests with more recent artifatcs (on Fulton St.). Significantly, Test 3 is between the western (early and eastern (late) material.

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This means that we can date the fill along Front St. as probably occurring before 1790, or at least as coming from sources which received no scattered debris after pearlware became common. Similarly, we can date the fill on Fulton St. as very early 19th century. This suggests that the large

mass of artifates at Test 3 (no. 165 John St.) were deposited during a transitional period, perhaps from about 1780 to 1800.

Historical evidence already presented shows that parts of Front St. existed by the mid-1780's, and that some part of the western end of the site-block was filled by 1797. Beekman Slip was filled to South St. by 1807 or 1808, "Codwise's ground" was filled by 1809, and buildings were under construction near the east end by 1810. Clearly the archaeological evidence here confirms this picture, and refines it significantly. This physical evidence, independently of documentary references to the site-block. shows that the west end of the block received land-fill with material culture datable to before 1790, and therefore probably the soil was placed very soon after that. A short distcance further east and south there was very different fill, with many more artifacts, at No. 165 John St. is definitely later, but not much later, and probably was in place by about 1800. The material at the east end of the block contains material dating from between 1790 and 1310, and the "ceramic profile" clearly makes it later than Test 3, and much later than Tests 2 and 6.

c. The artifacts from Schermerhorn Row Block are overwhelmingly domestic debris, with the one obvious commercial deposit of bisque-fired earthenware wasters at No. 2 Fulton

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Street, and possibly commercial leather scrap. Military and hunting activities are scarcely represented (only two flints were found, and no cannon balls, lead shot, military buttons or leather equipment). Similarly, demonstrably naval or marine material is rarely present. Two small pieces of Admiralty Brss came from Test 7, and some oakum from Test 3, but no rope, wooden eyes, or any of the multitude of ship-related objects one might expect on the water front. It appears that New York expended by pushing its internal debris outward, rather than by picking up (i.e. dredging) its waterfront to make land.

Another interesting lack is that of building demolition rubble. The bottom level of Test 6 contained some mortar and brick. We believe this general lack is because brick was scarce, and the <u>new</u> building material around 1810. During the period of filling and construction, most new structures were built of brick, replacing earlier wood. On may 9th, 1810, the New York Columbian wrote that

at no time within our recollection have we seen so many improvements in streets and buildings progressing. Almost every street in the city is lumbered with rubbish of old and wooden buildings pulled down to make room for more valuable and permanent edifieces of brick (quoted in Luke 1953: 393).

During this same period, however, there was a shortage of bricks. For example, in 1800 some one hundred brick buildings were going up, but on some of these construction was "at a stand owing to the scarcity of brick" (quoted in Rosebrock 1975, 20). A few years earlier, brick making was

reportedly a brisk trade (going for 50 shillings per thousand in 1794), but the best brick for facing came from Philadel-phia (Jeremy 1970: 89). Very little brick was imported from Europe as ballast, due to import duties, and the preference for Philadelphia and Baltimore brick lasted into the 1830's (Rosebrock 1975: 22), after which towns up the Hudson, such as Haverstraw, began to provide a substantial supply (DeNoyelles 1974).

Roof slate was present in most tests, as was a small quantity of pantile, but in general "architectural" objects were infrequent. Only a half dozen nails were found, for example. This may represent poor preservation of iron in the continuously wet, salty soil conditions, and a lower rate of recovery for small lumps of rust than for white ceramic sherds, large pieces of flexible leather, etc., in sorting through dark muck under poor light. However, nails and other "fasteners" were not found in the carefully screened control samples. We interpret this to indicate that the fill we sampled contained relatively little demolition debris (from older buildings) or construction debris (from the 1810-'12 period at the site block). The latter suggests that most of the deposits against walls or to fill basement space were put down, and possibly covered, before the buildings had progressed very far.

A possible exception to this is at Test 3, which was different in so many ways. Here there was a definite inclusion of some older (late 17th- early 18th century)

ceramics, including more delft, and delft tile. The tobacco pipe stems here (see below) are also earlier. Some of the material culture in the landfill at Test 3 (No. 165 John St.) may be from demolition of old Anglo-Dutch New York from the period nearly a century before the Schermerhorn Row, Blook was created

A few other comments on the artifacts in general may be made. Clothing (except shoes) is very poorly represented. There are no hooks or pins, even from the seive samples, and very few buttons. Liquor bottle fragments were found in most strata, but it is more difficult tod date bottle styles than ceramics, even when intact bottles are present. We found a number of intact lip-neck-shoulder fragments, and' sone bases or "kick-ups", but in no case were both attached. From the very general evidence available, the bottle types seem to be of mid - to late 18th Century date, which is in conformance with ceramics, or slightly garlier.

- Specific Types of Artifacts:
- a. Tobacco Pipe Stems

The total sample from all seven test bits was only 90 stem fragments for which the bore diameter could be measured. This is not a large sample for dating, and is further skewed by the fact that over half (56) of these are from Test 3 at 165 John St. However, it was thought that use of the Binford ormula for dating might be suggestive (Maxwell & Binford

1961: 107-09). These are considered crude calculations, but the value of X (for the formula Y = 1931.85 - 38.26X, where Y is the date sought), derived from the table which follows, yields the following dates. For the total sample, ca. 1712, for Test 3 alone, ca. 1695, and for a combination of all tests except Test 3, ca. 1741. The latter date is conformable with those arrived at by other means, but a bit early. The date of 1712 is obviously heavily weighted by the ca. 1695 date for the sixty percent of the total sample which is from Test 3. We interpret the ca. 1695 date as reflecting some "old New York" debris, already mentioned, in the deposit at Test 3.

Summary of Tobacco Pipe Stem Bore Diameters (in inches) Test No. Total Unknown 4/64 5/64 6/64 7/64 8/64 (1) none Total for all tests (1) Total with Test 3 at No. 165 John St. omitted

#### b. Leather

Throught the site block we found numerous pieces of cut leather, and some shoes or shoe parts. No detailed analysis has been made, but in general it did not seem that we were recovering worn-out foot gear. Many of the scraps were obviously trimmings which had never been stitches, and the heels and soles were not worn through. We believe that this leather is a by-product of tanning and shoe manufacture. Since the 1730's a tanners' and ahoemakers' industry had been established near the Collect Pond, only a few blocks northwest Schermerhorn Row (Shumway 1975: 23). Before that, in the early 18th century, an area about three blocks southwest of the site block had been called "The Shoemaker's Land" (approximately bounded by Maiden Lane, Ann St., Broadway, and a line between William and Gold Streets). This had swamp and marsh, which was favored for tanning pits (Valentine 1853 : 277-'79). Between 1696 and 1720 this land was subdivided for sale, and a "tan pit" is shown at the corner of William St. and Maiden Lane (only a block south of John St.) at that time. With this real estate pressure, the shoemakers moved further north, some to the Collect Pond, and some to "Beekman's Swamp", which was northwest of the site block.

For nearly a century before land-filling at the Schermerhorn Row Block there were shoe makers within a few blocks southwest and northwest. It seems probable that the leather scraps represent debris from such manufacture, possibly preserved in wet soil for some time prior-to use in land fill.

#### c. Fauna and Flora

Faunal material from these tests was collected in its enthrity except for common oyster and hard clam shells. which were taken only in representative proportion from each test. Bone fragments which had no distal or proximal ends were not identified as to species, and are shown on the chart as "unidentified mammalian." The smallness and variedness of the sample present suggests to us that the faunal material represents fodd debris, not commercial 'waste' from a knacker's trade establishment. A large proportion of the sample consisted of cut bone, indicating that it had been butchered. The most common specied present in tests analyzed by cermic material to be later than 1790 were sheep and cow in about equal proportions. Henry Wansey's journal of the mid-1790's provides a list of produce available at the Fly Market (a few blocks south of the Schermerhorn Row Block location). Present among land animal species were: "turkey," "ribs of beef," "good beef," "ducks." and "lamb" (Jeremy 1970: 138). Notably Ovis (sheep), Bos (cattle), and Avis (bird) represent 87% of our total identified sample of material. ..

The tests with earlier dated material (Test 2 at No. 193 Front St. and Test 6 at No. 189 Front St.) had no cow, and Test 2 had deer and elk. This suggests a shift in diet from wild species in ca. 1780 land-fill to largely domesticated species in ca. 1810 fill, about one generation

later. Faunal material from Tests 3 and 7 is almost identical in species and proportion, and suggests a similar origin for this fill. Tests 3 and 7 also share a preponderance of seed, leaf and bark material from the seived soil samples, suggesting summer or fall deposition (see the Appendix on Screened Soil Samples). The following table shows distribution of identifiable bones.

Faunal Distribution

Species	Tests							Total ·
	-	1 7	2 3	4	5	6	7	
Ovis	į	4 !	5 5 <sup>.</sup>				6	20
Bos	R	1	9		5		9	24
Cervus		2	2				1	3
Wapati		3	l					1
Sus			2				1	<b>3</b>
Canis fam.	. 1							· 1
Avis			<sub>it</sub> 5				5	10
Unident. mam.	11	13	33			6	19	82
oyster <sup>1</sup>	47	30	125				88	290
oyster <sup>2</sup>	6						•	6
cat's paw <sup>3</sup>	1							1
clam <sup>4</sup>	24	52	40				41	157
surf clam <sup>5</sup>		2	<sup>!</sup> ! 1					3
magpie shells			3					3

<sup>1.</sup> Crassostrea virgenica 2. oyster, Species unknown 3. Family Plicatudidae 4. Mercenaria mercenaria

<sup>5.</sup> Spisula solidissima6. Cittarium pica

#### C. Interpretive Synthesis

The Schermerhorn Row Block fill considered as a whole, is a construct of early 19th Century American Culture in New York City. There are many such "made-land" constructs or units of land fill in this metropolis produced over more than three centuries, and still being created . Land fill units such as this are completely functional, additive constructs, and those along the waterfront have been built under stringent environmental constraints. They have legally defined boundaries, and must meet obvious practical conditions. Although they are shaped masses of earth, they have little in common with other cultural objects of archaeological interest, such as temple mound bases, or military earthworks. In effect, they are legally created "spaces" to be filled to standards which permit their use as real estate for buildings. It is clear that the artifacts within the fillare not directly related to the rectangular block of fill itself. However, from what was, and was not, included in the fill, we can draw some inferences regarding the cultural process.

Schermerhorn Row land fill can be studied archaeologically, and the tests can be considered to constitute the sampling of a <u>site</u> because they represent "a spatial concentration of material evidence of human activity" (Deetz 1967: 11). The "site" in question constitutes Manhattan's land fill, a particular activity of our industrial society which began here during the 17th Century.

Unlike habitation sites, we cannot treat this material as having components \* except in the sense that this is a one component site established near the end of the 18th Century. The cultural material present is probably derived from several different components of several different sites. Had this site been built up of differing components, deposited at different times, we would have found a stratigraphy consisting of layered debris with internally consistant dates of artifacts. Ideally the oldest at the bottom, although in the case of transported land fill this would not necessarily be the case.

Seriation\*\* of the damples from each test may give some indication of the most popular ceramic types present in different sections of the site. This may indicate different relative ages

<sup>\*</sup> the distinguishable evidence of a discrete occupation or use of that site by a group of people (Deetz 1967: 12)

<sup>\*\*</sup>Seriation is a relative dating technique involving arranging assemblages in such a way that the frequencies of various types of artifacts in them form "battleship-shaped" curves through time. (Deetz 1967: 27)

for the sources if not the depositional sequences of the filling operation. Further excavation in the space between our tests would clarify this interpretation.

We have chosen to analyze each test pit as a separate unit because of the noticeable differences in stratigraphy, soils, and artifact distributions within each of them. The tests cannot be considered to constitute separate components, but they demonstrate that fill in differ ent parts of this site from each other. This suggests that the filling procedure utilized consisted of small heterogeneous quantities of material from diverse sources. Common to all tests was a pre -ponderance of artifactual material dating from about 1760 to 1800. This suggests that the bulk of the fill material was deposited at about the same time, and that sources of fill were "contemporary" garbage dumps rather than long abandoned sites or virgin soil. One clearly identified commercial source of some of this material was a ceramic waster dump. Another commercial source was scrap leather from a shoe-maker. Because of the relatively small pieces of domestic ceramic material and its variation, the ceramics do not appear to have been discarded merchan dise broken in shipment or the result of any commercial activities of nearby businesses.

The quantification of this material provides comparative data for other fill deposits in the New York City area. The : patterning can be assumed to be quite distinct from that which would be found with small scale filling such as to make a house

site, or in cases where the source of the fill is known to be from specific historic dumps. The particular geographical location of Manhattan, and its historical relationship to foreign trade make it possible that land fill here could be derived from foreign as well as domestic sources, For example, ship ballast from Europe may have been purchased cheaply and unloaded conveniently near South Street. The presence of Turban shells, coconut shell and other scattered examples of exotic material may represent such a source.

Preliminary archaeological analysis of the land fill material at the Schermerhorn Row Block has demonstrated that the west end was filled about a generation earlier (ca. 1780) than the east end (ca. 1810), and suggests that dietary changes had occurred in New York during that time. It has shown that some commercial debris was used, and some domestic refuse, but that neither the site-block nor the sources from which fill was obtained were used intensively as garbage dumps. Material used was probably considered "clean fill" in 1810, but some material from almost a century earlier in New York may be included in Test 3 at No. 165 John St.

perhaps the most interesting aspect of the 1977 excavations is that they have provided a chance to recover material culture and record stratigraphy in lower Manhattan land-fill under archaeologically controlled conditions for the first time. Even though the tests were placed and dug for reasons of structural analysis, the information obtained is the beginning of scientific data collection concerning the cultural process which has virtually doubled the size of lower Manhattan in three centuries.

Huey was able to recover some intact objects, and to make a gross record of the strata, at Old Slip in 1969, but was denied the opportunity to conduct a controlled excavation. Even so, he was able to show a thick deposit of dark, organic soil, filled with artifacts and retained with log cribbing. The record he was able to make then, now takes on more significance, because it shows that Old Slip which he observed and the Burling Slip — Beekman Slip area we excavated at the site block have similiar strati-

graphic units. His pictures of whole masses of cribbing help to make more intelligible the few ends of timbers we saw or felt in mud at the bottom of dark, flooded, test pits. And the controlled collection of material culture debris cataloged from the 1977 excavations gives some idea of the information that has been lost when major projects such as the Uris Building or the World Trade Center have destroyed entire blocks of Manhattan land fill.

The created real estate represented by the many units of "made-land" around lower Manhattan are enormously valuable cultural resources, containing the artifacts, organic material, and structural debris which reflect the creation and growth of the city, and the historic changes in the culture of people living here. When carefully excavated with scientific control, and analyzed by archaeological techniques, this material can be interpreted so as to greatly enlarge our understanding of life in New York City in the past, and of why and how such processes as the creation of the Schermerhorn Row Block occurred.

APPENDICES
STRATIGRAPHIC DRAWINGS WITH LEVEL & LOT
CONCORDANCE OF LOTS
TABULATIONS OF ARTIFACTS FROM TESTS
FIELD SPECIMEN INVENTORY RECORD

WASTER DEPOSIT DESCRIPTION

SCREENED SOIL SAMPLES

DATA ON TIDE LEVELS FROM NOAA

LOCATION MAP

BIBLIOGRAPHY

The following drawings reproduce the Startigraphic Sections already illustrated, but with the LEVEL and LOT designations superimposed. In each case the LEVEL number is given in large type, followed by the depth in inches or feet. Surface elevation is given for the O line of each test pit in relation to Mean Sea Level, as determined by Spiegel & Zamecnik, Inc.

Typically, the LEVEL number run from 1 through 5, from top to bottom, and are started anew for each Test Pit. The LOT is indicated by a smaller numeral in a circle. These are consecutive for the entire 1977 project, starting at and running to 42. In Test No. 1, at 4 Fulton St., LEVEL and LOT numbers are the same, but in subsequent Tests the sequence is not exact, although there was an effort to use a particular set of LOT numbers for the important Tests. LEVELS were determined largely by the exigencies of excavation, pumping, and sheathing. LOTS were assigned during washing and numbering of artifacts.

## STRATIGRAPHIC SECTION TEST 1

4 FULION STREET LOOKING W CEMENT FLOOR AT STREET LEVEL C-ELEV. 6.31ft. HSL RUBBLE MIXED IN SOIL LEVEL 1 0-45 in. SILL STONE IFT. -YELLOW BROWN STONE 2 FT. -**AEFFOM** LOT INTRUSIVE PIT SHOWN STEP OUT CMAE 3 FT. FOUN-4 FT. -3 -DATION 3 45-54 in 54-60 STEP OUT in. 5 F WALL (5) 60-72 in. 6 FT. 7 FT -72-96 in. 6 8 FT. A 2-5015 H///S&HA 9 FT. -

96-108 in.

NEW YORK STATE MARITIME MUSEUM

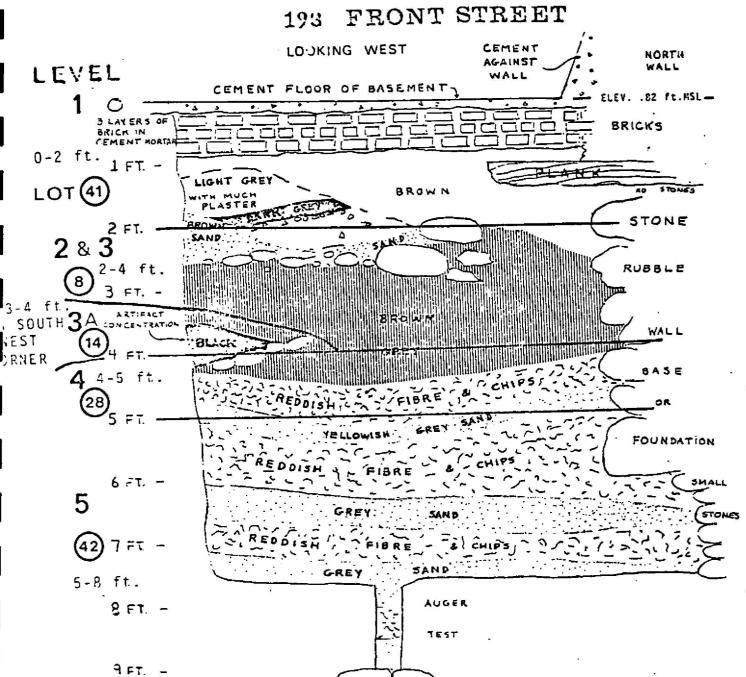
SCHERMERHORN ROW BLOCK
NEW YORK CITY, NEW YORK

NEW YORK STATE OFFICE OF PARKS & RECREATION DIVISION FOR HISTORIC PRESERVATION

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NOTE: LEVEL 2 (LOT 2) IS AN INTRUSION FROM 14 TO 20 in. ALONG THE EAST WALL WHICH DOES NOT SHOW IN THIS VIEW.

## STRATIGRAPHIC SECTION TEST 2



NEW YORK STATE MARITIME MUSEUM SCHERMERHORN ROW BLOCK NEW YORK CITY, NEW YORK

NEW YORK STATE OFFICE OF PARKS & RECREATION DIVISION FOR HISTORIC PRESERVATION

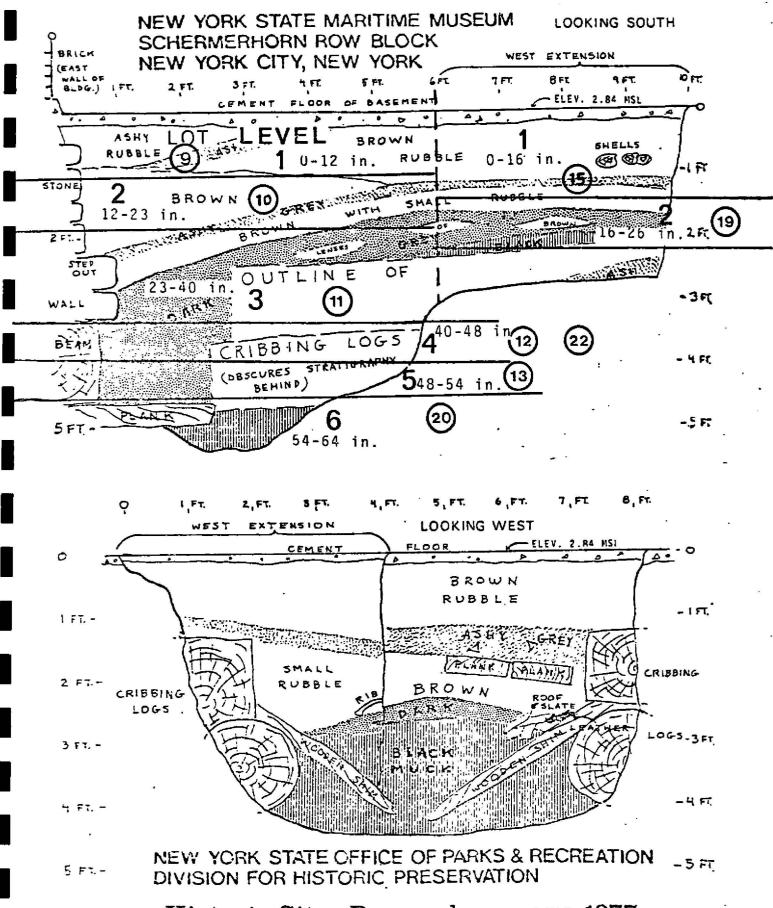
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NOTE: LOT 16 IS FROM BACKFILL

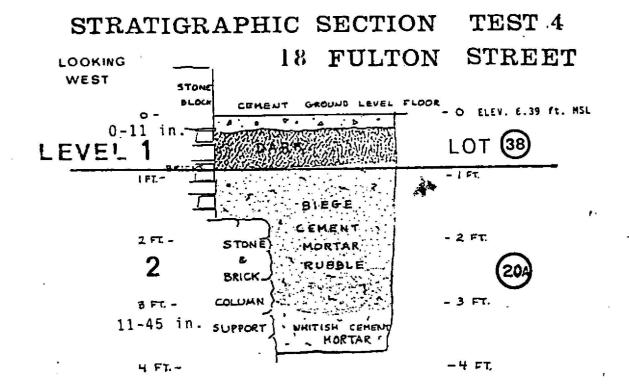
10 FT. -

## STRATIGRAPHIC SECTION TEST 3

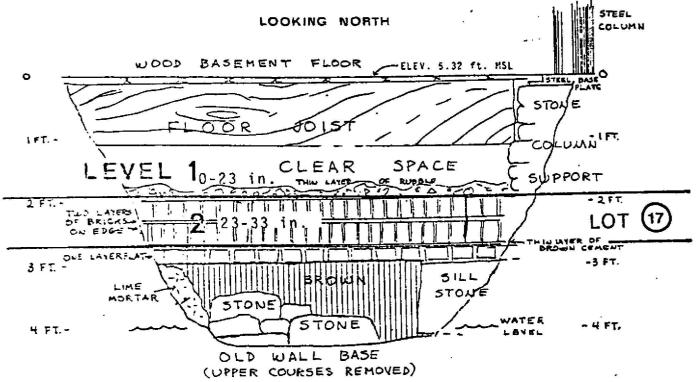
### 165 JOHN STREET



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# STRATIGRAPHIC SECTION TEST 5 171 JOHN STREET



NEW YORK STATE MARITIME MUSEUM SCHERMERHORN ROW BLOCK NEW YORK CITY, NEW YORK

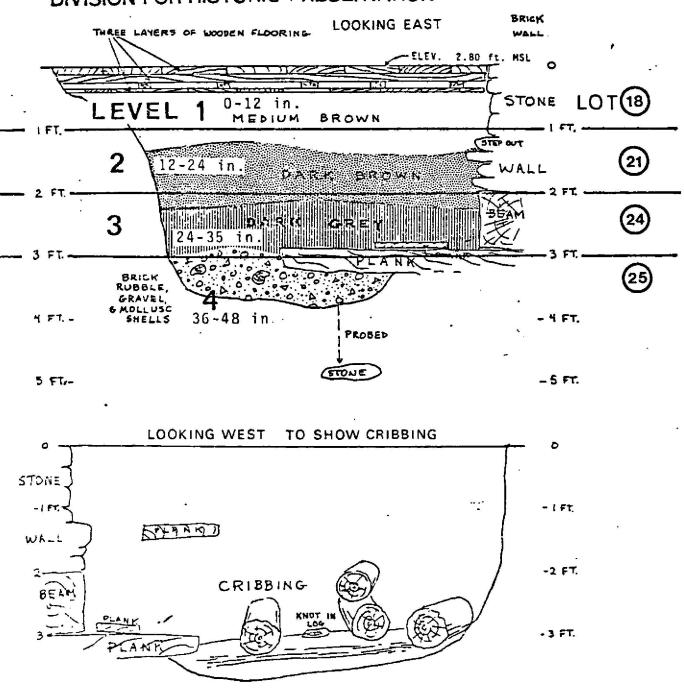
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## STRATIGRAPHIC SECTION TEST 6 189 FRONT STREET

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4 FT. -

NOTE: LEVELS 3 AND 4 IN THE EAST EX-TERSION (SAME DEPTHS AS ABOVE) -ARE LOTS 26 AND 27.

-4 FT

#### DIKATIGRAPHIC SECTION TEST 7 FULTON STREET BRICK ! (SOUTH LOOKING WEST WALL GROUND FLOOR LEVEL - ELEV. 4.50 ft. MSL LIGHT BROWN 0-28 in. LEVEL - I FT. LOT (30) MEDIUM BROWN - 2 FT. 28-50 in. IN CENTER T 3 FT. - STEP OU DARK BROWH - 3 FT. 36-50 in. ON SIDES 48-54 in. DARK GREY WAL 54-60 in. (29)5 FT. LIGHT BROWN 5 FT. . 34 60-68 in. CRIBBING 7 FT. -76-90 in. 6-8 ft. GRITTY & BLACK SAND -8 FT. --8 Ft. • FIBRE DARK

NEW YORK STATE MARITIME MUSEUM SCHERMERHORN ROW BLOCK NEW YORK CITY, NEW YORK

DIVISION

LINE

GRADES TO

VERY DARK

REDDISH GREY

(5 YR 4/2)

90-110 in.

9 FT. -

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NOTE: LEVEL 9 (LOT 39) IS FROM BOTTOM CLEARING, AND PROBABLY IS THE SAME AS LEVEL 8 (LOT 36).

GREY

SILT

(2.5 Y N3/)

-9 FT.

## CONCORDANCE OF LOTS, TEST PITS, AND LEVELS

	CONCORDANCE OF LOTS	. (23) (1) (3) (11)
TEST P	IT Street Address	LOTS
No. 1	4 Fulton Street	1, 2, 3, 4, 5, 6, 7
2	193 Front Street	8, 14, 16, 28, 41, 42
3	165 John Street	9, 10, 11, 12, 13, 15, 19, 20, 22
4	18 Fulton Street	20a, 38
5	171 John Street	17 .
6	189 Front Street	18, 21, 24, 25, 26, 27
7	2 Fulton Street	29, 30, 31, 32, 33, 34, 35, 36
	Α.	. 37, 39, 40
Lot No	o. Test No. Address	Level Depth Comments
1	1 4 Fulton St.	1 0-45 in.
2	1 4 Fulton St.	2 14-28 in., intrusive pit in Southeast corner
3	1 4 Fulton St.	3 45-54 in.
4	1 4 Fulton St.	4 54-60 in.
5	1 4 Fulton St.	5 60-72 in.
6	1 4 Fulton St.	6 72-96 in.
. 7	1 4 Fulton St.	7 96-108 in.
8	2 193 Front St	. 2 & 3 24-48 in.
9	√3 165 John St.	1 0-12 in.
10	3 165 John St.	2 12-23 in.

3 23-40 in.

4 40-48 in.

5 48-54 in.

165 John St.

165 John St.

165 John St.

11

13

12(822) 3

3

```
(Concoddance, Cont.)
Lot. No. Test
                                 Level
                                         Depth
                                                      Comments
                  Address
         2
              193 Front St.
                                 3 A
                                       36-48 in in Southwest corner
14
                                                  (artifact concentration
                                        0-16 in. slump of SW wall
         3
              165 John St.
15
                                       Backfill
16
         2
              193 Front St.
                                 2
                                       23-33 In.
17
         5
               171 John St.
18
               189 Front St.
                                  1
                                       0-12 in.
                                                   Between Beams
         6
19
         3
               165 John St.
                                 2 .
                                       16-26 in., in Southwest Extension
                                                   Below footer planks
                                  6
                                       54-64 in.
20
         3
               165 John St.
20 A
               18 Fulton St.
                                  2
                                       11-45 in.
         6
               189 Front St.
                                  2
                                       12-24 in.
21
22
     (catalogued with Lot 12)
23
     (not assigned)
                                       24-36 in. "bottom of 3, Main Pit"
               189 Front St.
24
         6
                                  3
         6
               189 Front St.
                                  4
                                       36-48 in. "bottom of 4, Main Pit"
 25
                                       24-36 in., East Extension
26
               189 Front St.
         6
                                  3
 27
                                       36-48 in., East Extension
         6
               189 Front St.
                                  4
                                       4 ft.-5 ft.
 28
         2
               193 Front St.
                                  4
                                                    (Dark grey & tan laye:
                                       54-60 in.
 29
          7
               2 Fulton St.
                                  5
                                         0-28 in.
 30
          7
               2 Fulton St.
                                  1
                                        28-50 in.
                                                    in center
 31
          7
               2 Fulton St.
                                  2
. 32
          7
               2 Fulton St.
                                        30-50 in.
                                                    on sides
          7
               2 Fulton St.
                                        48-54 in.
 33
                                                    (Light Brown layer)
                                        60-68 in.
 34
               2 Fulton St.
                                  6
                                        68-76 in. (Red-brown clayish)
          7
               2 Fulton St.
                                  7
 35
                2 Fulton St.
                                  8
                                        76-90 in. (Sand )
 36
          7
                                        6-8 ft.(dark grey silt around
                2 Fulton St.
                                  7 A
 37
          7
                                                 cribbing feature)
```

1

38

4

18 Fulton St.

0-11 in. Material salvaged

by construction crew

## (Concordance, Cont.)

Lot.	No.	Test Address	Leve	l Depth	Comments
39	. 7	2 Fulton St.	9	76-90 in.	(bottom clearing, may be same as Level 8, Lot 36)
40	7	2 Fulton St	10	90-110 in	. Auger boring
41	2	193 Front St.	1	0-2 ft.	
42	2	193 Front St.	5.	5-8 ft. (	"below 8 ft.")

#### ARTIFACT TABULATION FOR \$ 4 FULTON STREET

```
DELFT
     1 blue & white handpainted tile, purple border
     1 blue & white painted plate frag Lot 1
     1 undecorated body sherd Lot 2
WHITE SALT GLAZE STONEWARE
     I pc white salt glaze body sherd Lot 4 .
YELLOWARE
     1 pc undecorated Jelloware body sherds Lot 7
CREAMWARE
     34 undecorated creamware body sherds Lot 1
                                                     20
                                             No.
        6 undecorated plate rim frags
                                       Lot 1
        1 everted lip chamber pot rim sherd Lot 1
        2 handpainted polychrome sherds Lot 1 and 2
        2 annular decorated sherds Lots 1 and 2
        1 Whieldon - wedgewood green glazed sherd Lot 7
PEARLWARE
     4 annular decorated sherds Lot 1:2
                                           Lot 2: 2
     4 handpainted polychrome sherds Lot 4
     2 green shell edged rim frags Lot 1, 2
      9 handpainted blue and white sherds Lot 1:6 Lot 2: 3
      2 blue and white transfer print decorated Lot 1, 2
      8 undecorated sherds Lot 1: 5 Lot 2: 2 Lot 3:1
 UNIDENTIFABLE WHITE EARTHENWARE SHERDS
      3 body sherds of creamware or pearlware
 REDWARE
      4 clear lead glazed redware sherds Lot 1:1 Lot 2:3
 PORCELAIN
      I jar rim sherd, blue and white underglaxe Lot 2
      12 body sherds, blue and white underglaze
                                                 Lot 1
      3 thin undecorated body sherds Lot 1:1, Lot 2:2
      2 thick undecorated body sherds Lot 2
      1 red and gold overglaze decorated sherd Lot 1
```

STONEWARE

1

```
2 grey salt glaze Lot2. 7
    1 grey salt glaze, cobalt decoration Lot 2
    2 grey salt glaze, slipped interior Lot 4, 7
    35damaged or waster sherds Lot: 1, 2, 7
TOBACCO PIPE
    1 undecorated kaolin pipe bowl frag. Lot 2
    1 complete bowl, folated decoration Lot 2
     1 briar pipe bowl Lot 3
     10 kaolin pipe stem fragments Lot 2 3 4
      9/64" 5/64" 7/64" bore dia.
1 8 1
GLASS
     2 wine glass stem and foot sherds Lot 3
     4 tumbler rim sherds Lot 1:2 Lot 2:2
                             Lot 1
     11 window glass sherds
     8 dark green bottle glass lips
     41 dark green bottle base and kick-up parts
        <u>Lot 1 2</u>
            10 10 4 16
     7 dark green bottle neck fragments
                                         Lot 1
     173 dark green bottle body sherds
     2 amber bottle base and kick-up sherds Lot 1. 2
     2 amber bottle body sherds Lot 1
     10 clear glass vial Lot 2
                                        Lot 1
     21 clear bottle glass body sherds
     ic blue-green bottle glass body sherds Lot 1
MISCELLANEOUS
      1 gun flint Lot 1
      1 bottle corkLot 4
      1 pink plastic sheriff's star Lot 1
```

2 plastic buttons Lot 1

1 black hard rubber comb Lot 2

FAUNAL

SHELL: 47 oyster shells Lot 1 2 7 6 18 23

6 18 23

6 oyster shells, species unknown Lot 4 1 Cat's Paw (Plicatula gibbosa) Lot 2

24 24 hard shelled clams Lot 1 2 3 4 7 5 5 2 1 11

MAMMALAIN BONE

Ovis: 2 mandibles

2 metatarsus Lot 2

bos: scapula lot 7

canis familiaris : mandible

species unidentified: Il fragments Lot  $\frac{1}{3}$   $\frac{2}{3}$   $\frac{4}{3}$   $\frac{7}{3}$ 

2 ribs Lot 4, 7
4 cut bones Lot 1:3, Lot 3:1

## =193 FRONT STREET SQUARE TABULATION

#### CERAMICS

REDWARE

CLEAR LEAD GLAZE: 4 (Lots 14, 14, 28, 41)

CREAMWARE

MOLDED: % Lots 16,16,16,16, 8)

FEATHERDEDE: 1 Lot 8

HANDPAINTED: 3 (Lot 14)

PLAIN WHITE: #\* 38 Lot 8 14 16 28 41

PEARLWARE: 3 Lot 16, 41,41

STONEWARE

WHITE SALT GLAZE: 2 Lots 14, 16

GREY SALT GLAZE: 7 Lot 8 14 16 28 1 4 1 1

PORCELAIN

BLUE & WHITE UNDERGLAZE: 6 Lot 14 16 28

BLUE & WHITE UNDERGLAZE, PAINTED OVERGLAZE: #3 Lot14, 14, 16

OVERGLAZE DECORATED: 7 Lot 8 14 16 No. 5 1 1

PLAIN WHITE BODY SHERDS: 2 Lot 14

### TOBACCO PIPES

KAOLIN PIPE BOWL FRAGMENTS: 1 Lot 14

STEM FRAGMENTS: \*8 Lot 8 14 28 1 5 2

one marked W. Morgan of Liverpool

LEATHER

SHOE: 1. intact (soles, yamp & heel strap)

HEEL PARTS: 3

#### STRUCTURAL

BRICK: YELLOW: 1 Lot 16, 14

RED: 2 frag, Lot 28

PANTILE: lot 14

PLASTER: 7 frags Lot 8 14

SLATE: 18 Lot 8 14 28 No. 7 9 2

#### MOGD

BARREL BUNG Lot 14

KEG STAVES: 2 Lot 14

. KEG END: 2 Lot 14

WOOD FRAGMENTS: 14

Lot 8 14 28 9 11 1

#### FAUNAL

SHELL OYSTER SHELL

Lot 8 14 16 28 5 17 3 5

HARD SHELL CLAM

Lot 8 14 16 28 \$ 18 3 28

SURF CLAM SHELL: 2 Lot 14 STAGHORN CORAL: 1 Lot 8

MAMMALAN BONES:

OVIS: mandible, immature Lot 14 metatarus, 2 Lots 8, 14 scapula, Lot 8 tibia, Lot 14

CERVUS

MAndible; 2 Lot 14

WAPITI:

mandible Lot 82

UNIDENTIFIED:

rib: 6, 1 sawed, large mammal (: Lots 14116

humerus: 1 Lot 42

broken fragments; 6 (Lot 8  $\pm \frac{14}{2}$ 

" ADM F

GLASS DARK GREEN BOTTLE GLASS

flat sided bottom lot 16

shoulder frags: 2 Lots 16, 41

heavy kick up frag Lot 14

lips Lots 8, 14

```
165 John Street Artifact Tabulation
```

DELFT

Tiles: 13 (lot 12: 4; lot 19: 5; lot 22: 4)

Dishes: 17  $(\frac{10t \ 11}{4} \ \frac{12}{7} \ \frac{19}{3} \ \frac{22}{2})$ 

REDWARES

JACKFIELD TYPE: 2 Lots 15 and 19

LEAD GLAZED REDWARE: 13

Lots: 10 11 12 15 19 1 3 2 4 3

LEAD GLAZED REDWARE, MACHINE TURNED: 2 (Lot 12)

FLOWER POT BOTTOM: 1 Lot 22

MANGANESE GLAZED REDWARE: 13

Lots 11 15 19 22 1 1 5 2

CREAMWARE

PLAIN WHITE BODY SHERDS: 125

lots: 10

11

12 15·

20 and 22

PLAIN VESSEL BOTTOMS: 14

lots: 9 11 12 15 19 22 1 2 3 1 5 1

PLAIN RIM SHERDS

1<u>ots: 10 11 12 15 19 22 2 2 5 5 7 </u>

ROLLED CHAMBER POT RIM: 1 LOT 19 .

PLAIN CUP RIM SHERD: 1 (lot 9)

Plate Rims (9 <u>lots: 10 12 15 20</u> 5 1 1 1 1 1 PLAIN MUG HANDLE SHERDS: 4 <u>lot 19 22</u>

PLAIN LID SHERDS: 2 (Lot 12)
MOLDED BODY SHERDS: 2 (lots 12, 15)

HANDPAINTED BLUE AND WHITE : 2 (1ot

WHIELDON-WEDGEWOOD WARE: 1 (Lot 12)

CLOUDED WARE: 1 (Lot 11)

165 John St. Artifact Tabulation, Cont.

(CREAMWARE, Cont.)

Feather Edge (molded) plate rim sherd: 1 (Lot 22)

"Royal Pattern" (Hume 1970: 116) Plate Rim Sherds: 6

Lot; 11 15 19 22

PEARLWARE

UNDECORATED WHITE: 16 Lot 10 11 12 15 19  $\frac{1}{3}$  5 4 3 1

CUP HANDLE FRAG.: ! (Lot 11)

BLUE TRANSFER PRINT, ORIENTAL MOTIF: 4 Lots 12, 12, & 19 same design, Lot 11 different)

HANDPAINTED ORIENTAL MOTIF: 4 (Lots 12,12, 19,19 all diff.)

ANNULAR BECORATED CHECKERED RIM: 3 (Lots 12, 12, 15 same piece)

HANDPAINTED BLUE FLORAL MOTIEF : 4 (all Lot 12)

HANDPAINTED POLYCHROME PLATE & VESSEL SHERDS 7

ots 11 12 19 22

2 2 1

HANDPAINTED VIOLET PATTERN: 1 (Lot 12)

SHELL EDGED BLUE: 5 Lots 10 11 19 22

STONEWARE

ENGINE TURNED BROWN STONEWARE Lots 11 12 15 19 5 1 1 8

SCRATCH BLUE: 4 Lots 11, 11, 12, 19)

CASTLEFORD: 3 Lots 11, 19, 12 probably same piece

BUFF-GREY POROUS STONEWARE: 10

Lots 10 11 12 15 19

165 John St. Artifact Tabulation, Cont.

(STONEWARE, Cont.)

**GREY STONEWARE** 

COBALTBLUE DECORATED, INCISED DESIGN: 1 (Lot 12)

COBALT BLUE DECORATED, ENGINE TURNED RIM DECORATION:
1 (Lot 15)

PLAIN: 17 LOT 10 11 12 15 19 20 1 8 1 1 2 1

WHITE SALT GLAZED STONEWARE, PLAIN: 13

LOT: 10 11 12 15 19 ?

WHITE SLAT GLAZED STONEWARE, BARLEY PATTERNED PLATE RIM: 1 (1ot 11)

PORCELAIN

UNDERGLAZE BLUE CHINESE: 20 Lot: 11 12 19 4 10 6

OVERGLAZED ENAMELLED CHINESE: 15 Lot: 10 11 12 15 19 1 2 10 1 1

PLAIN WHITE: 12 Lot: 10 11 12 15 19 ?

HEAVY VESSEL LUG, PLAIN WHITE: 1 (lot 11)

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165 John Street Tabulation cont.
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**GLASS** 

Dark green neck and lip, champagne type bottle Lot 9

SQUARE BOTTLE SHOULDER AND LIP (mid 17th Cent.)

DARK GREEN BOTTLE KICK UP FRAGMENT Lot 12

FLUTED GLASS BOTTLE BASE: 2 (1 complete) Lots 2, 12

Erk DARK GREEN OCTAGONAL BOTTLE BASE Lot 3:

CLEAR WINE GLASS FOOT, PLAIN, MOLDED Lot 19

LIGHT GREEN BLUE INK BOTTLE Lot 9

ETCHED GLASS LIP FRAGMENT Lot 12

CREEN GLASS BOTTLE BODY SHERDS: B 30

WINDOW GLASS SHERDS. THIN: 21 Lots no.

Window GLASS SHERDS, THICK: 12 Letsno.

SAFETY GLASS FRAGMENT: ! Lot

### STRUCTURAL

PANTILE FRAGMENTS: \$ 3 Lots 9,9, 11

PLASTER FRAGMENTS: 2 Lots19, 11

YELLOW BRICK FRAGMENTS: 3 Lots 12, 12, 22

RED BRICK Lots 11 12 13 15 19 20 total: 25 No. 76 2 1 2 2 14

#### LEATHER

HARNESS STRAP 14" x 2" Lot 12

POINTED TOE SHOE BOTTOM 11" long, 3" wide in three pieces (sole, heel and insole) Lot 13

HEEL FRAGMENTS lot 13

LEATHER SCRAPS: 15 Lot 10 13

ELY II

POINTED SHOE TOE SOLE FRAGS: 5 (lots 10, 11, 13, 13, 13)

### MISCELLANEOUS

. METAL

RUSTED NAILS: 4 Lots 19, 19, 22, 22

RUSTED OBJECTS: 2 Lots 10, 22

COPPER BEAD lot 20

BUTTON AND EYE. Tot 12.

#### OTHER

WOODEN CHAIR RUNG lot 11

COCONUT SHELL FRAGMENT Lot 12

REED SECTION, (bottle stopper?) lot 9

#### FAUNAL.

SHELL

OYSTER SHELL: 102? 125 Lots 10 13 12&22 15 19 20 No. 12 8 20 14 57 14

HARD SHELL CLAM: 40 Lots 10 13 12&22 15 19 20 1 2 13 6 14 4

SURF CLAM Lot 19

TURBAN SHELLS: 3 Lots 12 & 22

STAGHORN CORAL: 2 Lots 12 & 22

Mammaleian

SUS 2 boar tusks (male) Lots 12, 17

OVIS ulnas, 2 Lot 11

humerus, 2 Lot 12, 19

. vertebra Lot 12 \* deer or sheep size

#### BOS

**METACARPUS** 

femur, sawed Lot 22

calcaneus. Lot 19

BOS cont.

phalange Lot 19

scapula: 2 Lots 12 & 22 (probably bos)

ribs: 5 Lots 10, 11, 12, 12 3 cut

pelvis frag. Lot 12 (bos or equus)

### SPECIES UNIDENTIFIED

- 1 maxilla frag. Lot 19
- 1 tibia Lot 12
- 2 sacrum frags. which mend Lot
- 4 medium sixze ribs (deer/sheep range) 3 cut
- 2 small ribs Lot 19 ?
- 33 unidentifable fragments (distal and proximal ends or diagnostic characteristics missing)

AVIS

5 fragments Lots 12, 12, 13, 19 ?

```
artifact tabulation for 189 Front Street
     1 pc handpainted blue and white floral design Lot 18
    .WHITE SALT GLAZE STONEWARE
     2 Dot-diaper-basket pattern rim sherds (Lot 26)
     1 Barley pattern rim sherd (Lot 26)
     7 body sherds ( Lots 18, 21, 21, 25, 26,26,26)
     YELLOWARE:
     2 Pie-crust edged trailed yellow shipware, inerior glazed
       (Lots 21, 31) \ · ·
     3 Trailed yellow slipware, interior dec. (Lots 21, 21, 24 (
     1 Green lead glazed white paste & pware (Lot 21) (
     CREAMWARE:
     ! undecorated lid fragment (Lot 24)
     2 undecorated vessel bottom sherds (Lots 21, 25 (
     2 ribbed body sherds (lot 21)
                                           18
     16 undecorated body sherds <u>Lot 16</u>
     PEARLWARE:
       NONE[12 unidentifed white paste earthenware sherds)
     REDWARE:
     2 flower pot sherds (Lot 18)
     2 clear lead glazed redware sherds (Lots 21, 24)
     1 exterior brown glazed, interior green glazed sherd (Lot 21)
     3 sherds brown glazed redware (Lot 21)
     1 exterior brown glazed, interior unglazed redware (Lot 24)
     PORCELAIN
     4 blue & white underglaze tea cup sherds (Lot 21, 26,26,26)
     STONEWARE
     STONEWARE
     @ grey/buff paste salt glazed stoneware (Lots 18, 21) \
     2 grey stoneware with brown exterior salt glaze (Lot 21)
       1 light brown stoneware, Albany slip(lot 27)
      TOBACCO PIPES:
      5 kaolin pipe stem frags ( 1 4/64; 4 5/64 dia.)
     B OTTLE GLASS
      2 dark green bottle bases with kicp-up ( Lots 18 and 26)
      3 bottle necks with lips
           Lot 18 - Hume 1974: 195
                                     1800 Dutch
```

Lot 21 - Hume 1974: 68

Lot 26 - Hume 1970: 68

1798 English

mid 18th Cent. (1767?).

189 Front Street cont.

26 9 dark green bottle body sherds Lot 18 21

STRUCTURAL

2 Yellow Brick frags Lot 21 20 Red brick frags Lot 18: 2 Lot 21: 18 1 Red brick complete, Lot 26 1 pc fire brick, Lot 24

WASTER SHERDS

10 pc fired bisque ware, red paste Lot 21: 6 Lot 24: 4

SLATE

8 pc, Lot 18: 3

FAUNAL

Mammalian bone: bos

sawed long bone Lot 24 scapula, proximal end, sawed distal end Lot 27 acetabulum& llium Lot 24 rib Lot 27 humerus Lot 27

broken bertebra Lot 21 species unknown: 4 broken long bones Lot 21:2

24

1 rib Lot 24

### ARTIFACT TABULATION FOR 2 FULTON

```
DELFT:
1706-1953
                1 pc plain (31)
                1 pc handpainted blue design (31)
                WHITE SALT GLAZE STONEWARE
               2 pc cup base (36, 36) \frac{1}{2} 2 pc white with green & gold band (31,31, cross mend)
                2 pc plain white body sher'ds
                YELLOWARE
              5 % pc piecrust edged redslipped trailed decoration (32) 1 rim sherd, dot decorated (35) 2931,32137
                1 undecorated yelloware handle sherd (35)
                  undecorated yelloware body sherd (30)
Yellow stiffed extensor, "bambos" decisin (35)
                CREAMWARE
                18 undecorated creamare body sherds
                   lots: 30
                              31
                                    32
                                          33
               1 rolled rim sherd from a chamberpot (36)
               2 feather edged plate rim sherds (33, 34)
               6 scalloped edged "royal pattern" rim sherds (29,31,32,33,35,3
               10 undecorated rim sherds (30, 30, 29,31,31,35,35,36)
              - 1 brown cloudedware body sherd
               1 polychrome handpainted rim sherd (36)
               2 black glazed exterior body sherds (33, ?)
                PEARLWARE
               10 undecorated pearlware body sherds
                   (29, 30, 31, 33, 34,35, 36, 36, ?)
               1 blue shell edged rim sherd (33)
             2 green shell edged rim sherds (31, 34)
        6 handpainted blue and white sherds (30, 31, 32, 34, 36, 39)
       ... -1 transfer print blue and white pearlware sherd (29)
         -1 blue and brown annular decorated rim sherd (35)
               7 handpainted polychrome sherds floral design (32, 36,36,36,
                  39, 40, 40)
         ': 2 pearlware rim sherds with green/ brown band (40, 40)
      2 handpainted polychrome sherds with orange rim & dots
                  around the rim (40, 40).
               UNIDENTIFABLE WHITE EARTHENWARE SHERDS
               13 body sherds of creamware or pearlware
                   (29, 32,34,34,34,34,34, 35,35,35,35,36,36)
```

```
3 Jackfield Type teapot sherds including base (34. 35.35
  cross mended)
3 clear lead glazed enrineturned body sherds (29, 34, 35 cross
  mended)
6 clear lead glazed interior/exterior sherds (29, 31, 34, 34, 34,
  35)
2 light brown interior glazed sherds (30, 35)
2 brown glazed interior/exterior body sherds( 33, 35)
5 dark brown interior glazed sherds (29, 32, 32, 35,35).
3 dark brown interior/exterior glazed sherds ( , 31,35,35,
   (1 dairy bowl base)
1 white slipped inerior decorated dark exterior glazed sherd (29).
PORCELAIN
2 plain sherds (32, 35)
-3 underglaze blue (30, 32, 36)
1 underglaze blue with overglaze red/gold flowers (35)
4 overglaze red rim decorated (32, 33, 33 35, 34)
1 blackish (green? overglaze floral design body sherd (36)
STONEWARE
 1 brown salt glaze
4 grey with brown glazed exterior (31,31, 36 ?)
 1 grey with interior/exterior slip (29).
2 grey salt glaze interior/exterior (33. 35)
 3 grey salt glaze slipped interior (35, 36,36)
 1 grey jug handle base, interior drk brown slip (Albany) (29)
 2 grey salt glaze, incised & cobalt decorated, interior slipped
   (31, 33)
 2 grey salt glaze, cobalt dec. body sherds (31, 32)
 1 grey salt glaze cobalt dec. thick rim sherd (35)
 1 grey saltglaze dairy vessel fra. exterior/interior cobalt
   decorated (35)
 6 grey/pink porous salt glazed sherds (34, 35,35,36,36) 36 "
 1 pc balk basalt ware (35)
 1 stoneware bottle body sherd, lead glazed (34)
 IRONSTONE
 3 butter chips
 1 body sherd, marked "...EAD, MOORE & CO.
```

the transmitter of the same

REDWARE

```
FIRED WASTER SHERDS
```

Flower Pot: 6 pc. rims (29, 29, 32, 34, 34, 35) 9 pc. body sherds (29,29,29,29,30, 34,34, 35)

Unidentifiable Redware Body Sherds (tiles or vessels?) 19 pc. (29,29,29,29,29,29,29,29,29,29,33,33,34,34,35,35)

Interior Glazed Tile 1 pc. (35)

Pan Tile 5 pc. (29,29, ?, 35,35)

Miscellaneous Bisque Vessel Pieces
7 pc. 1 base, burnt redware (34)
2 earthenware dairy/kitchen vessels (Carr in Quimby
1972: 106) (32, 32)
1 earthenware chamber pot lip sherd (31)
2 body sherds (33,33)
1 Stoneware Waster sherd

.:¥

#### GLASS

Dark Green Bottle Glass

29 Round Bottle Bottoms and Kick-up sherds (29,29,29,29,29, 29, 29, 31, 32, 33,33,33, 34,34,34,34,34,34, 34, 35,35,35,35,35,35,35, 36)

1 pc. Squared Corner Bottle Bottom

9 pc. lips & necks (29,29,29,29, 33,33, 34, 35,35)

84 pc. body sherds (lots by depth order) Lot No. 30 31 32 33 29 34 35 36 37 No. pcs. 1 5 4 9 29 16 12 7 1

Milk Glass

10 pc. (30,30,30, 31,31,31,31, 32, 33, 37)

2 pc. clear glass sherds, white frosted interior

Blue/green bottle glass

1 pc. embossed "DAFFY'S ELIXIR" (34)

3 pc. body sherds (31,31, 34)

```
Clear Glass
```

2 pc. Tumbler Frags. (34, 35)

1 pc. plain wine glass foot (34)

(where measured)

1/16 in. 3 22 1/8 in. 2 3/16 in. 1

Bottle Top Styles

- 1755 1765 (29,29,29, 34, 35) English 5
- 1760 1775 (33) Dutch
- 1850 -1900 1

### Kaolin Tobacco Pipes

. Bowls

6 pc. plain bowls frags. (30, 34, 35, 39,39,39)

1 pc. bowl frag. with part of TD mark (35)

Stems

### MISCELLANEOUS

- 1 bottle cork (29)
- 1 lead frag. (29)
- 2 pc. Admiralty Brass (29, 34) -
- 1 cut & drilled wooden (?) instrument handle (34)
- 1 bone/ivory utensil handle (36)

### FAUNAL

Shells and Shell Frags.

Lot (depth order) No.

Clam (hard shelled) No.

```
Bone:
```

- 5 vertebral frags. (4 large mammal, probably <u>Bos</u>, I medium) (29, 31,34, 35,36)
- 4 humerus (1 <u>Bos</u>, cut, 2 <u>ovis</u>) (29, 32 34,35) (1 bird)
- 4 longbone unidentified, cut (29, 32,35,35)
- 40 unidentificable Mammal Bone frags.

  Lots (depth order) 30 31 32 33 29 34 35 36

  3 16 2 2 6 4 3 6
- 1 pc. bird bone (unidentifiable)
- 1 femur (Bos) (distal end) (31)
- 1 calcaneus (Bos) (distal end)(31)
- 1 Tooth (maxillary molar, Bos) 31
- 12 ribs (1 large mammal, 7 med. mammal, 1 small mammal or bird)

  Lots 32 33 29 34 35 36

  No. 3 1 1 4 3
  - 6 tibia (1 Cervus, 1 Sus) (-33, 34,34, 35, 36,36)
  - 3 radius (bird) (32, 34, 35)
  - 1 metacarpus (Ovis or Cervus) (33)
  - 1 mandible (Sp. unknown) (33)
  - 2 metatarsus (Cervus or Ovis) (34, 35)
  - 1 phalange (Bos) (34)
  - 1 pelvis (<u>Ovis</u>) (35)
  - 1 scapula (Sp. unknown) (36)

LEATHER (by Lots, in depth order)

Lot 32 2 pc. scrap (thick, triangular)

- Lot 29 1 sole complete, 10½ in. long, 2 7/8 in. wide 0 ball, 4 thicknesses (3 inner sole & 1 outer sole) (Machine stitched?), heel is 1 thick piece, 2½ in. wide, 2 7/8 in. long
  - 1 large heel (2 piece), 2 7/8 in. wide, 3½ in. long.
  - 1 large sole frag., 34 in. wide 0 ball (may go w/ heel)
  - 1 smalled sole frag., (machine stictched ?)
  - 1 heel frag., & 4 bags of leather scrap

- Lot 34 1 sole, round toe (cut off at heel, so full length not available, but 9 in. long to cut, at instep)

  3½ in. wide @ ball, 2 thicknesses, heavy leather, machine stitched(?)
  - 1 sole pointed toe (sharp), 11½ in. long, 3½ in. wide @ ball, heel is 3½ in. long, 3 in. wide, may be machine stitched
  - 1 heel, 3 thicknesses, 2 3/4 in. wide, 3 ½ in. long pegged
  - 1 heel, 2 3/4 in. wide, 3 1/8 in. long
  - 2 pc. of upper
  - 1 bag of scraps and trimmings
- Lot 35 2 pc. upper
  - 1 bag scrap & trimming (dry packed)
  - 1 bag scrap (wet packed)
- Lot 36 2 scraps
- \* Note: in Lot 31, in addition to clear window glass tabulated, there were 2 pc. frosted 1/16 in., 2 pc. blue-green with parallel lines, 1/16 & 1/8 in., and 1 pc. with round edges. These would bring total for Lot 31 to 48 pc.

Site ARCHA-OLOGY-MARITIME MUSEUM

scher withorn Row Block

Test Pit Number. (1), 4 Fulton Street

Level: 1, 0=45"

Date. 1977

Lot Number: 1

Page 1 of 2

Number

Item

### Ceramics

Delft:

(De Jonge, p. 88)

- 1 pc. delft tile, blue & white interior, manganese purple edge
- 1 pc. delft plate, blue and white

### Creamware:

- 5 pc. undecorated creamware
- 1 pc polychrome creamware, brown band near rim, orange flower, green leaf design

### Pearlware:

- 1 pc. blue and white transfer print pearlware, gilt rim
- 1 pc. hand painted blue and white pearlware bowl
- 1 pc blue and white handpainted pearlware, feather and squiggle design
- 1 pc green edged pearlware
- 1 pc annular pearlware, brown band

### Porcelain:

- 2 pc handpainted blue and white underglaze porcelain

### Redware:

- 2 pc. dark brown glazed redware
- 8 pc. waster
- 1 pc. pantile
- 10 pc. brick (red)

### FIELD SPECIMEN : . . VIRY RECORD

Site ARL-\*\*EULOGY-MARITIME MUSE.\*\* Test Pit Number (1) 4 Fulton Street Schemierhorn Row Block Leve1: 1, 0=45" 1977 Lot Number: 1 Date Page 2 of 2 Number I tem Glass: - 5 pc. clear bottle glass - 1 pc. clear bottle base with pontil scar 1 pc clear bottle base, embossed "new"
4 pc clear drinking glass - 1 pc clear wine glass - 2 pc. amber glass - 2 pc blue bottle glass - 1 pc. blue bottle neck (c. 1880-1900, Carallo) straight lip - 1 pc. dark green bottle glass - 1 pc. dark green bottle bottom - 1 pc. window glass Plastic: 1 pink plastic sheriff's star - 2 buttons, 2 hole, plastic, 1 green, white Lithic: - 1 large roof state holes - 2 smaller pieces, roof slate - 2 piece marble, 1 in cement Metal: 1 pc. iron pipe 1 nail Fauna:

> 2 pc. clam shell 4 pc. oyster shell

Site: ARCHAEOLOGY-MARITIME MUSEUM

Schermerhorn Row Block

Test Pit Number: (1) 4 Fulton St.

(14-28 inches, in-

trusive pit)
Lot Number: 2

Date: 1977 Page 1 of 2

Number	Item
	CERAMIC
	1 pc. Delft dish, undecorated
	2 pc. clear lead-glazed redware 1 pc. thick manganese glazed redware
	21 pc. undecorated creamware 2 pc. creamware plate edge, scalloped 1 creamware rim sherd, thin red band below rim 2 pc. annular creamware, molded black band below rim, orange brown background, fingerpainted (?) white, blue-grey, and black decoration
	2 pc. undecorated pearlware 4 pc. hand-painted polychrome pearlware, orange & blue flowers, green leaves, brown stem
	3 pc. hand-painted blue and white pearlware 1 pc. hand-painted pearlware, brown-green band below rim 1 pc. green shell-edged pearlware 1 pc. blue transfer-printed pearlware
	1 pc. unglazed grey stoneware 1 pc. grey stoneware, exterior brown glazed, interior slipped
	1 pc. grey salt-glazed stoneware 1 pc. grey salt-glazed stoneware, blue brushed decorated 1 pc. lead-glazed stoneware bottle
	6 pc. blue underglaze oriental porcelain 1 pc. plain white porcelain 2 pc. very thick white porcelain, burned Y porcelain jar rim sherd, underglaze blue decoration, surface damaged
	CERAMIC WASTERS
•	3 unglazed redware vessel rim sherds 1 interior glazed redware vessel rim sherd 19 interior glazed redware vessel body sherds 21 unglazed redware body sherds 7 thick unglazed redware sherds (probably pan tile)

Test Pit Number: (1) 4 Fulton St. Site: ARCHAEOLOGY-MARITIME MUSEUM Schermerhorn Row Block Level: 2 (14-28 inches, intrusive pit) Lot Number: Date: 1977 Number Item TOBACCO PIPES: 1 pc. undecorated clay pipe bowl 1 clay pipe bowl, foliated decoration (Jelks 1973: Pl. 78 f). 4 pc. clay pipe stem 1 @ 4/64, 3 @ 5/64 GLASS: 57 dark green bottle body sherds 1 dark green bottle lip, probably ca. 1780 (Hume 1964: 195). 4 blue-green bottle body sherds 1 blue-green bottle body sherd, red letters .. KE painted on ("Coke" bottle) 18 clear glass bottle body sherds 2 clear glass tumbler rims 1 pc. modern bright green traffic signal glass 1 brown glass bottle base 1 vial, clear glass, lip, neck & shoulder 6 pc. window glass FAUNAL Shell: 18 pc. oyster shell 5 pc. clam shell 1 cats paw shell (Plicatula gibbosa) ./ 1 metatarsus (Ovis) Bone: 3 bone fragments, unidentifiable STRUCTURAL 4 pc. marble 14 red brick fragments 13 pc. roof slate 2 pc. mortar

2 nails, rusted

# FIELD SPECIMEN 'N NORY RECORD

Site. ARC-AEOLOGY-MARITIME MUSE'M Test Pit Number 1 (4 fulton) 3. hermerhorn Row Block Level:3 & 4 (45" to 60") Date. 1977 Lot Number: 3 (1sr set) Page 1 of 3 Number CERAMICS 2 pc Delt, white tin enamel glaze, undecorated 1 pc clear lead glaze redware 4 pc creamware, undecorated I pearlware plate base sherd, undecorated impresses mark on base: 1 pc pearlware, molded ribbed body 1 pc pearlware, green shell edged 1 pc pearlware, blue underglaze, Chinese style I pc pearlware polychrome handpainted floral, blue, green brown & yellow 1 pc pearlware, blue, yellow & brown underglaze 1 pc pearlware, brown splotch of glaze 1 pc undecorated, stained pearlware or creamware 2 pc grey salt glaze with faded blue decoration, prob. American made 1 pc grey salt glazed rim, cobalt blue decoration around handle attachment 1 pc undeorated white Chinese porcelain cup 1 pc undecorated white Chinese porcelain foot frag. 1 pc handpainted blue and brown underglaze porcelain sherd TOBACCO PIPES 2 kaolin pipe stem frags, 5/64" dia. of bore GLASS 5 pc modern soda bottle (8 fl. oz. no deposit no return) 1 pc curved clear glass possibly from jelly jar 1 clear curved bottle glass sherd 1 clear faceted drinking glass base 1 pale green modern bottle glass sherd 9 pc window glass 2 pc medium green molded bottle frags. 6 pc dark green bottle neck fragments 50 pc dark green bottle glass body fragments 21 pc dark green bottle base fragments.

Site:

ARCHAEOLOGY-MARITIME MUSEUM

Schemierhorn Row Block

Test Pit Number: 1 (4 Fulton) Level: 3 & 4 (45" to 60")

Date:

1977

Lot Number: 3

Page 2 of 3

	· · · · · · · · · · · · · · · · · · ·
Number	Item
	PLASTIC 1 styrofoam cup
; 	LITHIC  1 large flint nodule with concrete adhering to it 2 large flakes from above 1 broken piece of marble 1 bag rock sample from level
	METAL  2 white painted tin lid fragments  1 iron nail, 4" long with concrete adhering  1 iron nail embedded in concretion, 4½" long
	WOOD 4 charred wood fragments 3 scraps of drift wood 1 wooden strip 1 coal fragment
	FAUNAL Shell: 9 hard shell clam fragments 26 oyster shell fragments Bone: 1 cut mammalian bone 1 long bone frag 1 mammalian pelvis, small dog size
	STRUCTURAL 13 roof slate fragments 9 red brick fragments 7 pieces mortar 1 piece cement

Site: ARCHAEOLOGY-MARITIME MUSEUM

Schermerhorn Row Block

Test Pit Number: 1 (4 Fulton)

Level: 3 & 4 (45" to 60")

Date: 1977. Page 3 of 3

Lot Number: 3

dark brown stratum, including some intrusion

Number	Item	
WASTER CATALOG FOR LOT	3	
	number	weight
RED PASTE RIM SHERDS	. 4 -	-1 1b
RED PASTE BASE SHERDS .(flat)	5	1 1b
RED PASTE BODY SHERDS (soft, flower p	ot) 26 .	1 1b
RED PASTE BODY SHERDS (hard paste)	31	2 1b
RED PASTE BODY SHERDS, INTERIOR GLAZE	D 22	1½ 1b
PAN TILE EDGES	3	7
PAN TILE BODY SHERDS	22	3½ 1.b
STONEWARE, GLAZED	4	*.
OTHER TILE	11	1½ 1b
•		•

total weight: ca. 11 lbs

### FIELD SPECIMEN IN TO PECORE

ARC = JLOGY-MARITIME MUSEUM Sche Jernord Row Block

Test Pit Number- (1), 4 Fulton Street

Level: Three

Date '97'

Lot Number: Three (2nd set)

Page 1 of 2

Number

Item

### <u>Ceramics:</u>

### Creamware:

- 2 pc. undecorated creamware

### Pearlware:

- 1 pc. undecorated pearlware

### Stoneware:

1 pc. brown stoneware, outer surface glazed.
 Glaze body corroded.

### Redware:

- 1 pc. dark brown interior glazed redware
- 1 pc. interior glazed redware, glaze bodly corroded
- 5 pc. unglazed redware (pantile fragments or pottery wasters?)

# Tobacco Pipes

- 1 briar pipe bowl
- 1 pc. clay pipe stem, bore diam 5/64

# Glass: (Hume, 1970, p. 189).

- 1 pc. clear wineglass, folded foot, (mid-eighteenth century second 1/4 18th century-19th century) drawn stem, fluted, trumpet-shaped bowl.
- 1 pc. clear folded wine glass foot
- 2 pc. clear bottle glass
- 1 pc. blue bottle glass

5:te: ARCHAEOLOGY-MARITIME MUSEUM

Schemierhorn Row Block

Test Pit Number: (1) 4 Fulton Street

Level: Three

Date: 1977

Lot Number: Three

Page 2 of 2

Number		•	Item	
	Glass (	Cont.)		
	-	12 pc. dark gre	en bottle glas:	s (body shards
	-	4 piece window	glass	
	. ₹ - <b>∤</b>	1/16"	2/16"	Thickness
	ţ	1	3.	
	Fauna:			
	She	11ş:		-
	1	- 2 piece clam	shell	• • •
	Bon	8		*
		- 1 mandibular	hinge, sheep one, unidentif	iable
•	Lithic:	-		mg <sup>n</sup>
		1 piece marble	•	e
	_	1 piece red san 1 piece limesto	dstone ne	
	1	•	,	
	Metal;	,		
	-	1 piece ruster	iron, 1/4" thi	ck
		l piece kiln sa	qqer	

Site: ARCHAEOLOGY-MARITIME MUSEUM

Schemmerhorn Row Block

Test Pit Number: (1) 4 Fulton St. Level: 4 (54 " to 60")

Date: 1977

Lot Number: 4

Number	!tem
	CERAMICS 5 pcs. undecorated creamware
1 <b>-</b>	1 pc. grey salt glazed stoneware, cobalt blue decorati
	1 pc. underglaze blue porcelain
	TOBACCO PIPES 2 pipe stem frags. bore dia. 5/64"
	GLASS 130 dark green bottle body sherds 1 dark green bottle neck, ca. 1765 (Hume 1974: 195) 1 dark green bottle neck, no appended collar, possibly machine made. 1 pc. safety glass
•	MASTERS  1 pc. glazed interior, rim sherd 1 pc. flower pot rim 50 unglazed redware body sherds 2 interior glazed body sherds 3 redware body sherds, glazed both sides 4 burned redware body sherds 4 unglazed thick body sherds 2 interior glazed thick basal sherds
	FAUNAL Shell: 6 oyster (species not identified, possibly Tree oysters or Cat's Paw)  1 hard shell clam Bone: 1 rib fragment 3 small bone fragments
	STRUCTURAL  1 pc. silt stone 1 pc slate 1 circular sandstone - possibly a plug 2 flint nodules 1 red brick fragment
	OTHER 1 bottle cork

ARCHAEOLOGY-MARITIME MUSEUM Site:

Schermerhorn Row Block

Test Pit Number: 1 4 Fulton St

Level: 5 (60" to 72")

Date: 1977

Lot Number: 5

Page 1 of 3

Number	Item
	CERAMICS 8 pc. undecorated creamware
•	1 pc. handpainted blue & white pearlware 1 pc. blue & white annular decorated pearlware 5 pc. handpainted polychrome pearlware (orange & blue floral decoration) 1 pc. undecorated pearlware
	3 pc. badly stained white paste earthenware
	1 pc very porous unglazed stoneware 3 pc. grey stoneware, exterior brown saltglaze, interior slipped.
	<pre>1 pc grey saltglaze stoneware, interior slipped 1 pc white saltglaze stoneware, "bead and reel" pattern</pre>
12	1 pc brown glazed redware 1 pc red slipped, dot decorated "Yelloware" 1 pc lead glazed Yelloware rim sherd
	1 pc. underglaze blue handpainted porcelain 7 pc thick burned porcelain
•	GLASS 25 dark green bottle glass body sherds 4 pc window glass
	METAL 1 nail 2 lead scraps
	FAUNAL Shell: 4 pc. hard shell clam
	17 pc. oyster shell 1
	<ul> <li>1 metacarpus species unknown</li> <li>1 metatarsus, Ovis</li> <li>5 mammalian bone frags.</li> </ul>

site ARCHAEOLOGY-MARITIME MUSEUM

Schermerhorn Row Block

Test Pit Number: 1 (4 Fulton St)

Level: 5 (60" to 72")

Date: 1977

Lot Number: 5

Page 2 of 3

raç	Je 2 of 3	,			
Number		Item			
	1 fish scale OTHER	· · · · · · · · · · · · · · · · · · ·			•
	1 scrap leather 1 wad oakum 1 pc roof slate			. •	
			-		
	•	•	-		

ARC FILLOGY-MARITIME MUSEUM Site

ichemerhorn Row Block

Date: 1977 Page 3 of 3

Number

Test Pit Number:1 (4 Fulton)

Leve<sup>1</sup>:5 (dark brown & black banded area) 60" to 72" Lot Number: 5

### WASTER MATERIAL FROM LOT 5

Item	
number	weight
RED PASTE RIM SHERDS	9 1bs
RED PASTE BASE SHERDS conical flat	2½ lbs 7½ lbs
RED PASTE BODY SHERDS, GLAZED (goes with flat bottoms)	33 1bs
RED PASTE BODY SHERDS, HARD FIRED	45 lbs
RED PASTE BODY SHERDS, SOFT "flower pot"	
PAN TILE, BODY SHERDS	43 1bs
PAN TILE EDGES	17 1bs
PAN TILE LUGS	5 1bs
OTHER TILE& STONEWARE	13 1bs
BURNT WASTERS	16 lbs
•	

total weight: 193 lbs

Site: ARC REDLOGY-MARITIME MUSELM

Schermernern Row Block

Test Pit Number: 1 (4 Fulton)

Level: 6 72-96"

Date: 1977

Lot Number: 6

Page 1 of 3

Number

Item

#### CERAMIC

2 pc clear lead glazed redware

1 redware base, traces of dark brown lead glaze

1 redware, clear lead glaze, white slip painted in wavy lines

1 pc redware, very eroded combed slipware in reverse, possibly made by waster maker. White slip trailed, shallow pie or tart plate, edge notched, probably by a coggle wheel.

2 pc plain creamware

1 pc badly stained cream or pearlware

1 pc plain pearlware

1 pc pearlware, handpainted blue underglaze

1 pc pearlware handpainted blue, brown & green underglaze

1 pc buff earthenware, traces of brown slip

1 softpaste porcelain, brownish glaze with blue gathers as in pearlware. Gilt band around interior rim

2 pc Chinese export porcelain, undecorated

1 pc Chinese trade porcelain, blue underglaze, red & gold overglaze floral design. Bowl or plate base sherd.

#### GLASS

1 pc clear glass

4 dark green bottle glass body sherds

2 dark green bottle glass sherds of base with kick-up

2 pc window glass

### LITHIE/

1 bag sample stone matrix material

### METAL

l iron spike 6" long w/out head, embedded in conglomerant l iron spike 4½" long

#### MOOD

1 bag driftwood sample

STORY - THE - MEDGY-MARITIME MUSEUM

Common Row Block

Test Pit Number 1 (4 Fulton)

Level: 6 (72-96 ")

Date 14/

Lot Number: 6

Page 2 of 3

Number

Item

FAUNAL

Shell: 17 oyster shells 1 hard shell clam

Bone: 1 cut mammalian vertebra

3 broken and fragmentary mammalian bones

1 tibia, Ovis (broken)

LEATHER

1 shoe sole

STRUCTURAL

51 brick fragments, several glazed

1 bag of slate

1 bag of mortar fragments

# FIELD SPECIMEN

Site: ARC-A-OLOGY-MARITIME MUSEUM

Date:

1977

Page 3 of 3

Schemmerhorn Row Block

Test Pit Number: 1 (4 Fulton)

Level: 6 (alternating black, & brown sand) 72"-96"
Lot Number: 6

WASTER MATERIAL LOT 6

Number	ltem	
	RED PASTE RIM SHERDS 23	weight 3 lbs
	RED PASTE BASE SHERDS conical 5 flat 35	à 1bs
-	RED PASTE BODY SHERDS	.18⅓ 1bs
	RED PASTE BODY SHERDS, GLAZED (go with the flat bottoms)	17 Tbs
, <b>!</b>	PAN TILE EDGES	10 7bs
	PAN TILE BODY SHERDS	<b>16</b> lbs
	UNGLAZED STONEWARE 11	
	OTHER TILE 15	
	13	

total weight: 72½ lbs

#### FIELD SPECIMEN . RY RECORD

ARC-A-OLOGY-MARITIME MUSEUM Site:

Schemmerhorn Row Block

Test Pit Number: 1 (4 Fulton)

Level:6 (alternating black, & brown sand) 72"-96"
Lot Number:

Date: 1977 Page 3 of 3

# WASTER MATERIAL LOT 6

<u>.</u>			•
Number	Item		<del></del>
}	RED PASTE RIM SHERDS	umber 23	weight . 3 lbs
, n e e e e e e e e e e e e e e e e e e	RED PASTE BASE SHERDS conical flat	5 35	. 8 1bs
	RED PASTE BODY SHERDS		18½ 1bs
	RED PASTE BODY SHERDS, GLAZED (go with the flat bottoms)		17 lbs
1	PAN TILE EDGES .		10 lbs
;	PAN TILE BODY SHERDS	•	16 lbs
:	UNGLAZED STONEWARE	11	
	OTHER TILE	15	

total weight: 72½ 1bs

### Fit : PECINEN RELORU

ARCHAEOLOGY-MARITIME MUSEUM Site:

Schermerhorn Row Block

Test Pit Number: 1 (4 Fulton St.)

Level. 7, 96" + 108 in.

Date: 1977

Page 1 of 3

Lot Number:

Number

1tem

## CERAMICS

### Creamware

2 pc. undecorated creamware

1 pc. green glazed creamware (Wheeldon Wedgewoodware).

### Pearlware

1 pc. blue and white hand-painted pearlware

3 pc. unidentifiable white paste earthenware (badly stained)

### Stoneware

1 pc. interior slipped, exterior unglazed gray stoneware

1 pc. green slipped grey stoneware traces of grey salt glaze

1 pc. green salt glazed stoneware

## Yellow ware

1 pc. undecorated yellow ware

# Porcelain

1 Chinese overglaze porcelain bowl base

# Redware

2 pc. clear glazed redware, glazed both sides

1 pc. waster redware vessel rim, unglazed

3 pc. redware vessel rim interior glazed, two have following dimensions: 3" interior diameter, 4" exterior diameter; ኔ" thickness.

22 pc. redware waster body sherds, interior glazed

35 pc. unglazed redware waster body sherds (thin)

Site: ARCHAEOLOGY-MARITIME MUSEUM

Schermernorn Row Block .

Test Pit Number: 1 (4 Fulton St.)

Level: 7,96" → 108 in.

Date: 19/7

Lot Number: 7

Page 2 of 3

Number

(Cont.)

# Ceramics Control

7 pc. unglazed redware waster fragments
2 pc. unglazed yelloware waster fragments

1tem

# Tobacco Pipes

3 pc. clay pipe stem bore diameter 5/64"

7/64"

2

1 `

# Lithic

12 pcs slate 1 pc schist w/ conglomerate attached 10 pcs. shale 3 pcs siltstone

3 pcs siltstone 11 pcs sandstone

1 pc light shale 1 pc. limestone

# Wood

54 pcs. wood 13 pcs. bark

# Faunal Bone

1 scapular (bos)
1 mandible (canis familiaris)
1 rib frament (lg. mammal)
3 unidentifiable bone fragments

## Shell

23 Oyster 11 hardshell clam

# FIELD SPECIMEN INTO BE RECORD

Site: ARCHAEOLOGY-MARITIME MUSEUM

Schermerhorn Row Block

Test Pit Number: 1 (4 Fulton St.)

Level: 7,96" + 108 in.

Date: 1977 Lot Number:7

Page 3 of 3

Number

(Cont.)

Leather

3 pc. inner shoe sole

tem

Structural.

4 pcs. mortar/plaster

18 pcs. red brick

6 pcs. pantile

Other

1 pc. slag

ARCH TOLOGY-MARITIME MUSEUM Schermerhorn Row Block ite

Test Pit Number: 2 ( 193 Front) Level: 2 & 3 (24" to 48"

1977 Date:

Lot Number: 8

Number	· Item
	CERAMICS  1 pc feather edge creamware plate rim 1 pc shell edge creamware plate rim (white) 1 pc plain creamware plate rim 1 pc plain creamware mug base 14 pc plain creamware body sherds
	1 pc grey saltglazed stoneware, interior slipped, exterior cobalt decorated
·	6 pc porcelain (cross mend) overglaze dish, decorated in red, gold and black flowers and dragon motief
	GLASS  1 pc dark green bottle neck, string rim badly applied at the top, wide mouth, short neck
	FAUNAL Shell: 5 pc oyster shell 3 pc hard shell clam 1 pc coral
	Bone: 1 metatarsus, Ovis 1 scapula, Ovis 2 pc mammal bone, unidentifiable
	WOOD 2 pc drift wood
	STRUCTURAL 3 pc plaster and mortar 1 pc concrete 7 pc roof slate 1 pc grey sandstone
	TOBACCO PIPES  1 pc kaolin pipe stem

# FIELD SECTMEN THE SET ON Y RECORD

Site: ARCHAEOLOGY-MAPITIME MUSEUM

Schermerhorn Row Block

Test Pit Number: 165 John St.

Level: 1 (0 - 12 in.)

Date:

1977

October 25

Lot Number: 9

Number	Item
•	CERAMIC
	3 pcs. white glazed cream 2 pc. white glazed hand painted? 2 pc. red tile, pan tile
	GLASS
	1 bottle neck, green, neck and lip intact Cavallo (ca) 1880-1900
	l ink bottle, Stillwell & Company, green with patina mid-19th century, ca) 1860, reference: Smith (Swindell, 1976)
	WOOD 7 pc. plate glass (?)window pane
	1 cork, or bottle stopper
	FUNAL
	1 oyster shell

Site:

ARCHAEOLOGY-MARITIME MUSEUM

Schermerhorn Row Block

Test Pit Number: 3

Level: 2

165 John Street

Date: 1977

Lot Number: 10

(12-23 in.)

Number		tem .
	CERAMIC:	
	1 pc. grey salt go	e pearlware -edged pearlware l-edged pearlware own slipen red body, clear lead glaze alzed stone ware lazed stoneware
	** stoneware	exterior, brown slip interior (Albany slip)
	GLASS:  2 pc. patinated 2 pc. window gl	
	TOBACCO PIPES:	•
		nts, 1 with raised design nts, bore diameter 6/64 in.
	FAUNAL: Shell:	1 pc. coral 2 clam shell fragments (largest shell 6" long) 12 oyster shells and fragments
	Bone:	4 pcs. cut beef bone
	LEATHER:	
	6 pcs. leather 1 sole 1 pc. upper 4 scraps	
	METAL: 1 rusted iron bar	
	*1 pc. white earthenware (table *1 pc. redware clear, lead	

Site: ARCHALOLOGA MARI INF MUSEUM

Scheniernorn Yow Block

Teir Pit Vambers 5

Level: 3, 165 John Street 23" - 40"

Lot Number:

11

Page 1 of

1977

Number

Date:

#### **CERAMICS**

### Creamware:

24 pc. undecorated creamware 1 pc. clouded ware (Wieldon) brown

### Pearlware

6 pc. undecorated pearlware

1 pc. handpainted polychrome underglazed pearlware

1 pc. blue transfer print pearlware

1 pc. hand painted pearlware, red decoration

2 pc. blue shell-edged pearlware

1 pc. green shell edged pearlware

### Unidentiable Earthenware

1 pc. white paste earthenware (creamware or pearlware)

2 pc. painted, burnt pearlware or delft

### Delft

1 delft tile, damaged

1 pc. delft, traces of paint

#### Redware

1 pc. manganese glazed redware

3 pc. brown-glazed (lead) redware

#### Slipware

1 pie crust edged buff paste combed ware red and white stripped

I white paste red slipped combed ware

1 mottled brown glaze on buff paste

6 yellow on white slip (prob ably part of combware)

1 coarse yellow-ware

S'te: ARCHAEOLOGY-MARCH ME MICHOLY

Schemmerhorn sen bicc.

Tent Pit Tuncer 3

ਪਰਾਵੀ 3, 165 John Street 23"-40"

Date:

Number

1977

Lot Number 11

Page 2 of 3

### Stoneware

I barley coarse yellow-ware pattern white salt glazed plate edge.

7 grey salt glazed stoneware, undecorated

1 white salt glazed mug rim with engine turning

1 white salt glaze molded with gilt over glaze tea pot fragment (Castleford)

1 brown salt glaze

1 buff/grey, brushed-on-blue decorative, incised pattern

4 British brown stoneware, engine turned

2 pale brown stoneware, engine turned

2 brown salt glazed two-tone

1 white salt glaze exterior/brown interior

# Porcelain

1 porcelain mug

3 plain white

4 underglazed hand-painted blue 2 rims, 2 plate bases

2 overglazed enameled red and gold (peony)

# Tobacco Pipes

4 pipe stems with broken bowls

20 pipe stems, broken bore diameter

5/64" 6/64" 7/64" 8/64" 11 6 2

# Glass

1 bottle base, octagonal, off-center pontil mark

1 pc. bottle base with kick-up, dark green, early 18th century

3 pc. dark green bottle glass

4 pc. window pane glass

Site: ARCHAEOLOGY-MARTT (ME MUST &

Schermennurn Row Plack

Test Pit Number: 3

Level 3, 165 John Street, 23" - 40"

Date: 1977

Lot Number 11

Page 3 Of 3

Number

Lithic

1 pc. red sandstone

Wood

2 bags wood + 17 pieces wood 1 chair rung

Fauna 1

<u>Shell:</u>

19 oyster shells 5 pieces clam shell

Bone:

2 vertebral spines (species unknown, large mammal)

1 humerus, distal end (ovis)

5 ribs (2 large mammal, 3 medmammal, species unknown)

3 calcaneua (1 <u>ovis</u> or <u>sus</u>, 2 <u>bos</u>)

3 metacarpus (2 bos, 1 ovis)
3 phalanges (1 bos, 1 ovis, 1 cervus)

3 bird bone fragments

24 unidentifiable bone fragments

1 incisor (bos).

Leather

1 pc. outer shoe sole, toe end

2 pc. shoe leather

Structural

3 pc. pantile

8 pc. red brick 1 whole red brick

7 pc. slate

Other: 1 slate pencil

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ARCHALOL HEY-MAR TIME MULTER
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Pit Samber 3 Level 4, 40 - 48"

Date. 1977

Lot week 12,22 165 John ST.

Page 1 of 3

Number

#### CERAMICS:

5 sherds with a handpainted delft

8 delft tile sherds

1 rim sherd redware

3 redware "engine turned"

1 sherd redware with buff slip, lead glazed green interior

2 sherds "yellow ware" (1 combed, 1 marbled)

1 sherd "pie-crust edged" red earthenware (buff slipped interior-glazed, marbleized design)

1 green glazed ware, made by Whieldon, wedgeware creamware. (Hume 1969, footnote 19-20, 1959 - 1770)

3 pcs. green shell-edged pearlware

15 sherds with porcelain (oriental china)

1 sherd b/w handpainted pearlware, oriental motif-

2 sherds (bowl) 1 H.P., oriental motif pearlware T.P.

1 pearlware bowl fragment, ribbed body, clear white

4 pearlware b/w botannical design h.p.

1 pearlware polychromes lip sherd (yellow-green..brown)

1 pearlware lip sherd, band near rim

2 pearlware blue and checker band

1 polychrome pearlward'violet" design

10 MP painted chinese porcelain importware

1 bowl base and side reconstructed)

4 plain white pearlware sherd

1 white stoneware teapot sherd (Castleford, 1810)

#### TOBACCO PIPES:

18 fragments (3 bowls, 15 stems)

1 bore diameter 4/64 in.

8 bore diameter 5/65 in.

5 bore diameter 6/64 in.

4 bore diameter 7/64 in.

1 pipe bowl, 1680-1710, Type 21(Atkinson & Oswald, p. 11) See also Cotter 1958 Plate 92 Mark on Bowl "T"

ARCHAEOLOGY-MARITIME MUSEUM Site:

Schermerhorn Row Block

Test Pit Number: 3

Level: 4, 40" - 48"

Date: 1977 Lot Number: 12,22 165 John St.

Page 3 of 3

Number	Item
	WOOD:
	2 bags wood fragments
	BRICK:  3 yellow clay bricks 3 red brick fragments
	9 roof slate fragments
	1 mortar fragment
	2 nails
	LEATHER:
	1 pc. leather approximate 14" long, 2½" wide holes along one side MISCELLANEOUS
	1 pc. coconut shell
,	

Site: ARCHAEOLOGY-MARITIME MUSEUM

Schermerhorn Row Block

Test Pit Number: 3

Level: 4, 40" - 48"

Date: 1977

Lot Number: 12,22 165 John St.

Page 2 of 3

	Page 2 of 3			
Number	Item			
	1 pipe bowl, RT on bowl, no spur 1690-1740? Made by Robert Tippett? English (Hanson, Fig 3, p. 94)			
	1 pipe bowl, long spur Atkinson & Oswald Type 26 1740-1800			
	GLASS:			
	1 bottle neck, lip shoulder of 17th century square bottle (Hume p. 69 (Fig. 14) p.62) patin			
	1 pc. etched glass 17 pc. heavily patinæed green bottle glass 1 completed blackened bottle bottom very heavy, ribbed, moded, but with rough pontil mark 16 pc. window glass			
	METAL: button, metal South Type 7, 1726-1776			
,. ·•	FAUNAL:			
	Shell  2 pc. coral (Staghorn-Madrepora cervicornis-Caribbean)  11 pc. clam shell and fragments  26 pc. oyster shell and fragments (lgest, 5½")  3 turbineshells			
	Bone  2 young sheep bones, I tibia, I humerus 1 boar tusk 3 bird bones 8 unidentified bone fragments 17 beef bones 4 ribs, 8 long bones, I anominid, 2 flat bones			

5 te:

ARCHAEOLOGY-MAK TIME MOSE, +

Schemmerhorn Row Block

Te . Pit Number: 3

Level 5 (48" - 54")

Date:

1977

Let vamber 13, 165 John Street

Page 1 of 1

Page	1 OT 1	
Number		It-m
	CERAMIC:	
	, and discovered to	1 pc. pearlware, plain white 2 pc. creamware, undecorated 1 pc. stamped buff-grey salt glazed stone ware, blue decorated
	FAUNAL:	Shells: 2 Mercenaria mercenaria Linne (Hard shall or Quahog)
	5 1 2	6 Crassostrea virginica (1 triple shell) oysters common)
•	1	Bone:
	i	1 spinal vert. frag. 2 long bone frags
	LEATHER:	1 shoe sole: oval stitch holes with indentations in the leather between holes indicating tightly pulled thread.
	WOOD:	1 Bag wood fragments
	SLATE:	2 pieces
	BRICK:	1 fragment
	ROCK:	1 sandstone rock, red.

1 sandstone rock, red.

Site: ARCHAEOLOGY-MARITIME MUSEUM

Schermerhorn Row Block

Test Pit Number: 2/193 Front Street

Level: (3a)

36" -48" in SW corner Artifact Concentration

Lot Number:

(14)

Date: 1977

Page 1 of 3

Number

Item

### Ceramics:

#### Creamware:

- 2.pc. hand painted creamware, orange & red gilt design
- 3 pc undecorated creamware plate rim
- 1 pc. undecorated creamware vessel bottom
- 9 pc. undecorated creamware body sherds
- 1 pc. unidentifi able white paste earthenware, badly chipped and stained

### Stoneware:

- 1 pc. engine-tumed grey salt glazed stoneware, cobalt blue decoration, interior slipped (rim sherd)
- 1 pc. grey stoneware, interior and exterior saltglazed cobalt blue decoration
- 1 pc. pink buff, stoneware, grey salt glazed exterior
- 1 pc. light grey stoneware, imperfectly salt glazed exterior
- 1 pc. white salt galzed plate rim, barley pattern

#### Porcelain:

- 1 pc. thick porcelain plate rim, blue underglaze, gilt overglaze, crude flower & vine decoration (late Chinese export)
- 1 pc. thick porcelain bowl, blue underglaze, gilt overglaze crude vine and leaf design (late Chinese export)
- 1 pc. porcelain teacup base, badly damaged, traces of blue underglaze
- I pc porcelain, gilt overglaze decoration
- 1 pc. undecorated porcelain
- 3 pc. blue and white underglazed porcelain

#### Redware:

 1 pc. yellow & green slipped redware, clear lead glaze on interior

Site:

ARCHAEOLOGY-MARITIME MUSEUM

Schermerhorn Row Block

TOTAL MENTON IN NOW BIOCK

Lithics:

- 9 pc. roof slate - 1 pc. grey siltstone

Date: 1977

Page 2 of 3

Test Pit Number: 2/193 Front Street

Level: (3a) 36"-48" in SW corner

Artifact Concentration

Lot Number:

(14)

Number	Item
	Ceramics (Continued)  Buff Paste:  - 1 pc. buff paste earthenware, heavy brown lead glaze (clouded or tortoise-shell ware)
	Tobacco Pipes:  - 1 pc. plain pipe bowl - 4 pc. pipe stem 5/64 in. 6/64 in. 7/64 in.  - 1 pc. pipe stem stamped "W. MORGAN LIVERPOOL" 5/64" bore diameter
i	Glass:  - 1 pc. dark green bottle glass (body sherd) - 1 dark green bottle lip and part at neck ca. 1800 Dutch (Hume 1974: 195)
	Wood:  - 1 barrel bung - 2 pc. wooden keg end ca. 9 1/2" diamter - 2 keg staves ca. 8½" long, 1 3/4" wide in briddle, 1½" long at ends -11 wood fragments
	Building Materials:  - 3 pc. stuccoed mortar - 1 pc. pantile - 1 pc. yellow brick - 1 pc. plaster

ARCHAEOLOGY-MARITIME MUSEUM Site

Schermerhorn Row Block

Test Pit Number: 2/193 Front Street

Level: (3a) 36" - 48" in SW Corner Artifact Concentration

Lot Number: (14)

Date: 1977

Page 3 of 3

Number	Item
	Faunal: Shell:
	-17 pc. oyster shells -17 pc. clam shell - 2 pc. surf clam - 1 oyster species unknown
	* (bone)
	Leather: - 2 pc. leather forming 1 shoe heel - 1 leather scrap
·	Bone:  3 pc. mandible (1 immature <u>Ovis</u> , 2 <u>Cervus)</u> 4 pc. longbone, unidentifiable 2 pc. rib (probably <u>Bos</u> ) 1 pc. metatarsus, <u>Ovis</u> 1 pc. tibia, <u>Ovis</u>
	<b>f</b>

Site: ARCHAEOLOGY-MARITIME MUSEUM

Schemmerhorn Row Block

(3) 165 John St Test Pit Number: Leve!: 1 (0-16 inches, West Exten-ion (wall slump SE Wall).

1977 Date: Lot Number: 15

Page 1 of 1

RAMIC  1 pc. Jackfield Type ware 32 pc. interior lead glazed redware 1 pc. manganese glazed redware  1 pc. plain white creamware with raised design 21 pc. plain white creamware  1 pc. blue shell edged pearlware
1 pc. blue shell edged pearlware
1 pc. blue shell edged pearlware
1 pc. green shell edged pearlware 3 pc. plain white pearlware 1 pc. blue glazed pearlware, annular design
<pre>1 pc. moulded white saltglazed stoneware 1 pc. grey saltglazed stoneware 1 pc. grey saltglazed stone ware, cobalt decoration</pre>
1 pc. plain white porcelain plate bottom 1 pc porcelain overglaze gilt decoration jar top
ASS ! pc. green bottle glass 2 pc. window glass
BACCO PIPES 2 pipe stem frags, 1 bore dia. 5/64, 1 bore dia. 7/64
Shell: 5 pc. clam shell 15 pc. oyster shell
Bone: 1 bone fragment, unidentifiable  RUCTURAL 2 red brick fragments 26 pc. roof slate

# THE STEET WITH THE STATE OF STREET

Site: ARCHAEOLOGY-MARITIME HISLEM

schemmerhorn Row Block

Jest Pit Number 2

Level .

193 Front Street (Backfill)

Lot Number

16

Page 1 of 2

197?

Number

Date:

:tem

#### CERAMICS

# Pearlware:

Tureen lid molded shell edge design Green shell edge plate fragment

#### Creamware

Vessel base, tureen or sauce-boat?
Tureen lid fragment
4 plate fragments
(1 "Spearhead" pattern)

### Stoneware

1 white salt glaze sherd
1 grey stoneware crock basal sherd (tan washed interior)

#### Porcelain

1 underglaze blue (Chinese)

2 overglaze enameled (1 on underglaze blue) (Chinese)

1 transfer Print, blue floral (European)

Porcelain Industrial Eclectrical socket

#### GLASS

Light green thin bottle shoulder
Thick big green flat slab (side or base of bottle)

#### FAUNAL

#### Shell:

3 oyster shells

3 hard shell clam fragments

1 cut rib bone

# SPECIVEN NEW OF RECORD

Site: ARCHAEGLOGY-MAPITIME MUSEUM Schermerhorn Row Block

Test Pit Number: 2

Level:

193 Front St. (Backfill)

Date: 1977

Lot Number:

16

Page 2 of 2

Number

:tem

STRUCTURAL

**Brick** 

Yellow brick (broken) 3½ X 1½X 4+ (broken)

5" t- .. Pit Nation 5 sche" er Level:2, 171 John Street (23"-33") Date 1977 L The same 17 Page 1 of 2 Number CERAMIC: Redware 1 pc. red paste, yellow ship slipware 1 pc. Jackfield - type vessel bottom, interior only glazed 2 pc. unglazed redware 1 pc. buff paste, red slipped slipware, surface gone Creamware 8 pc. undecorated creamware body sherds 1 pc. undecorated creamware plate bottom 2 pc. undecorated creamware rim sherds 1 pc. undecorated creamware chamberpot rim-everted lip Pearlware 1 pc. undecorated pearlware I pc. polychrome pearlware, yellow brown line, ground rim, red/blue flower decoration Stoneware 3 pc. white paste earthenware, badly stained

#### TOBACCO PIPES:

1 plain bowl fragment
4 stem fragments, 1 with mouthpiece

1 pc. grey salt glazed stoneware 1 pc. brown salt glazed stoneware 1 pc. white saltglazed stoneware

Bore Diameter 4/64 in. 5/64 in.

#### GLASS:

1 bottle bottom and kick up, late 18th century

Test Pro Number . 5

Lot Number: 17

Lete: 2, 171 John Street (23" - 33")

Site: ARCHAEOLOGY-MAHITTME MUSE IM Schermernorn R. I oca Date: 1977 Page 2 of 2 Number GLASS (cont.) 1 bottleneck & lip, ca. 1800 Dutch 6 bottle body sherds, dark glass 1 partial bottle bottom 1 pc. window glass 1 pc. clear bottle glass 1 pc. pharmaceutical bottle FAUNAL <u>Shell:</u>

4 pc. clamshell 8 pc. oyster shell

### Bone

1 pc. deer mandible 4 bone fragments, broken 1 pc. cut leg animal longbone

#### LEATHER:

3 scraps

#### LITHIC:

Rock Sample 2 pc. red sandstone 1 pc. black flint 1 pc. red & black flint 2 pc. grey siltstone

#### STRUCTURAL:

Pantile 8 pc. pantile 8 red brick fragments Brick Slate 4 pieces roofing slate Site ARCHALOLOG : Two wiles
Schemmerich - w Block

Date: 1977
Page I

level 1 (0-12")

Lot Virger 18, 189 Front Street

			•
Number	- telu		
j - j	CERAMIC:	· · · · · · · · · · · · · · · · · · ·	
, <del>,</del>	Earthenware:		
	Large red paste Slower pot Rim sherd, machine ground	1	
1	Blue and White Delft Sherd	1	
į.	Стеапмаге	1	
9	Stoneware	· .	
	White /Grey Salt Glazed	1	
	GLASS:	•	•
	Bottles  1 lip and neck 1 kick-up 3 5/8" diameter 2 body fragments Window, 3/16" thick	4 2	
•	FAUNAL:		
	Oyster Shell Mammal cut bone fragment	6 1	
<u> </u>	LITHIC:		r
	Roof Slate Red Brick Flint Nodule Schist Rock	4 2 1 1	• {

Site: ARCHAEOLOGY-MAH TIME MUSELY Test Pit Number: 3 , 165 John Street Schermenhorn Paw 51ock Level: 2, SW Extension (16" - 23") Date: 1977 Lot Number: 19 Page 1 of 4 . Number CERAMICS: Red Earthenware Clear Lead Glazed Brown lead glazed traces of glaze Brown Lead Glazed, incised pattern, probably American 5 (Also found at Jamestown. Cotter dates as 1700-1800, Cotter 1958: p.185). Opaque Brown Lead Glazed Black Lead-Managanese Glaze - Jackfield type Black Glazed Damaged 10 Buff Earthenware Clear Lead Glazed, Yellow Clear Lead Glaze, Brown Slip Combed Slipware Buff Body, no glaze Tin Enameled Glaze, Undecorated Tin Enameled Glaze, Plate Fragment, Blue Under-2 Tin Enameled Glaze, Blue underglaze tile - fragment (Hume p. 240) Buff Body Clear Int., Brown Ext. Creamware Creamware, undecorated 64 Creamware chamber pot, rim rolled, Hume p. 148 <u>Pearlware</u> Pearlware, undecorated Pearlware, blue shell edged Pearlware, green

# MOREON IN WAYNERS

Site: ARCHAEOLOGY- OUR!TIME MUSEUM

Schermerhorn Row Block

Test of Nambers

Leve 2, SW Extension

Date: 1977

Lot Number: 19, 165 John Street

Page 2 of 4

Number	:Tem	
1		
<b>\</b>	Pearlware	
	Hand painted blue pearlware, underglaze Handpainted brown and green underglaze Hand painted blue pearlware, chinese 'willow'	3 2 1
	Stoneware	
	Slightly porous tan salt glaze.'local' Grey Salt Glaze Grey salt glaze blue brushed design @	1 2
	possibly Morgan local White salt-glazed stoneware	1 2
i !	Moulded white salt glaze, possible trace of gilt Scratch Blue	1
;	White salt dipped brown rim mug Pale Brown glaze rim incised fragment British Brown incised decorated slight	3
i 1	flared rim British brown salt glaze	1
i	Porcelain	
	Chinese procelain undecorated Chinese, underglaze blue, 4 cup, 1 plate Chinese, underglaze orange	4 6

#### GLASS:

2 dark bottle glass fragments
1 wine glass base (modern?)
2 pc. window glass

# TIEM SEEC AND WILLIAM BURGET

STEEL ARCHATOLOGY-MARITIME MUSEUM

Schermerhorn Row Block

Test Pit Number:

Leve1: 2, SW Extension

Date: 1977

Lot Number: 19, 165 John Street

Page 3 of 4

Number

\*em

Tobacco Pipes

Pipe Stems - 13 Stems

Distribution of Size:

3/64 4/64 5/64 6/64 7/64

1 1 5 5 1

Pipe Bowl Fragments - 2 fragments

<u>Lithic</u>

2 pcs. Sandstone

<u>Metal</u>

2 nails: 1 square cut, 1 undentifiable

Wood

2 Bogs

Fauna 1

Shell: 49 Oyster Shells

13 Clam Shells

Bone :

Cow/ 1 calcaneum

1 phalange

6 unidentified fragments

Unknown

Species: 1 humerus fragment of young animal

8 fragments of bone

Leather

18 pcs. shoe leather
3 soles, 1 pc. top shoe (lace front)
2 heels

# THE PRESTMENT OF SURVESTIONS

Site AHCHAEOLOGY-MARITIME MUSEUM

Schermerhorn Row Block

Test sit Number

Leve' 2, SW Extension

Lat Number. 19, 165 John Street

1977 Date:

Page 4 of 4

Number

Structural

2 brick pieces 1 piece slate

## FIELD SPECIMEN I ... ANTORY RECORD

Site: ARCHAEOLOGY-MARITIME MUSEUM

Schemmernorn Row Block

Test Pit Number: (3) 165 John St.

Leve': 6 (Below Planks)

Date: 1977

Lot Number: 20

page 1 of 1

Number	. Item
	CERAMICS
	<pre>1 pc. handpainted blue delft 4 pc. plain white creamware 1 pc. grey saltglazed stoneware</pre>
·	TOBACCO PIPES 2 pipe stem frags., bore dia. 6/64
	GLASS 3 pc. dark green bottle glass 1 pc. clear bottle glass 1 pc. window glass
	FAUNAL Bone: 3 long bone frags, species not identifiable
	METAL 1 copper bead, decomposing, ca. 3/8 " diameter
	STRUCTURAL  6 pieces roof slate 1 bag wood fragments 14 pc. red brick 4 pieces schisty rock ( approx. 9" long)
	, 4 pieces senisty fock ( approx. 5 .ong)

Site:

ARCHAEOLOGY-MARITIME MUSEUM

Schermerhorn Row Block

Test Pit Number: (4) 18 Fulton

Level: 2 (11 - 45 inches)

Date: 1977

Page 1 of 1

Lot Number: 20A

Number

Item

2 pcs. plain white creamware

2 pc. blue and white handpainted pearlware

GLASS

2 pc. window glass dia. 2/16 and 4/16"

# FILLS SPECIMEN AND NORY RECORD

Site:

ARCHAEOLOGY-MARTTIME MUSEUM

Schermerhorn Row Block

Test Pit Number: 6

Leve: 2, 12-24 inches (189 Front)

Date:

1977

Page 1 of 2

Lot Number: 21

Number	Item	· · · · · · · · · · · · · · · · · · ·
	CERAMIC:	
	<u>Earthenware</u>	
	Lead glazed shipware combed yellow 2	
	Green lead glaze, buff paste 1	•
	3 Red paste, dark manganese glaze exterior and interior	
	1 Green lead glazed interior 4	
	Hard red-paste body sherd clear lead glaze -1	
	Misc. soft white pasts clear glaze machine grooved body sherds 13	
	<u>Stoneware</u>	
	1 grey thick stoneware body sherd grey thin-walled body sherd, b wn spotting	1
	1 thick grey body sherd w/brown glaze	
	2 white salt glazed stoneware sherds (plate fragments)	*)
	- Porcelain	
	I underglaze blue cup fragment	
	- <u>Ceramic Wasters</u>	

5 Fragments

ARCHAEOLOGY-MARITIME MUSRum Schermerhorn Row Block

Test Pit Number 6

Level 2,12-24 inches (189 Front)

Date:

1977

Lot Number: 21

Page 2 of 2

Number	l ten		<u> </u>
	Tobacco Pipes		
	Pipe Stems 4/64 5/64	3.	
■:	1 2		·
	<u>Glass</u>	•	
Se man	Window Pane Glass 3/16" thick	3	
	Green Bottle Glass 1 neck and lip, hand I 3 body fragments	olown	
		•	
	<u>Lithic</u>	•	
	Slate fragment	5	
	<u>Wood</u> (Water washed like drift wood)	15 pcs.	
	Lime	4 pcs.	(½ 1b)
	Fauna1		
	Oyster Shells 4-6" Aver.	11½ 1b.	
	<pre>./ Bone: 1 bird/rabbit</pre>	3	
	Leather	•	
	Shoe Leather Fragment, Center of Sole	1	
	Structural Yellow Brick Red Brick Unmeasurable Fragments	2 pcs. 18	

Site:

ARCHAEOLOGY-MARITIME MUSEUM Scherwerhorn Row Block

Test Pit Number: 6

Level 2,12-24 inches (189 Front)

Date:

1977

Lot Number: 21

Page 2 of 2

Page 2 of 2							•
Number	<del></del>		[tem				355
\$	Tobacco	Pipes		<del></del>			
		Pipe Stems	4/64		5/64	3	
*Trues			1	•	2		
!	<u>Glass</u>	• .		•			
		Window Pane Glas	s	3/16" th	nick	3	•
		Green Bottle Gla	SS	1 neck a 3 body f	and lip, hand Fragments	blown	ė
	Lithic			•			•
		Slate		fragme	ent	5	
•	Wood (W	ater washed like	drift	wood)		15 pcs.	
		Lime				4 pcs. (½ 1b	)
	Fauna1	• ,		¥		•	
		Oyster Shells		4-6" /	Aver.	11½ lb.	
	./	Bone: 1 bird/r 1 mammal 1 calcined	vert	ebrae	rag.	3	
	Leather	9					
1		Shoe Leather Fra	gment	, Center	of Sole	1	
	Structu	ral Yellow Brick Red Brick		اچ' thick measurab	le Fragments	2 pcs. 18	

Site:

ARCHAEOLOGY-MARITIME MUSEUM Schennerhorn Row Block

Date:

1977

Test Pit Number: 6 (189 Front)

Level:bottom of level 3 (24" to 36")
Lot Number:24

Number	Item
·	
	ÇERAMICS
	1 pc combed Yellowware
	1 pc clear lead glazed redware
	1 pc brown glazed redware
	4 pc unglazed redware 3 pc undecorated creamware
	, o po anacao, aoca o cammara
	LITHIC
	1 grey cannon flint 1½" by 1 1/8 "
	FAUNA
	fish eye lens (probably cod)
	5 bone fragments
	STRUCTURAL
	1 red brick fragment

# FIELD SPECIMEN THENTHRY RECORD

ARCHAEOLOGY-MARITIME MUSEUM Site:

Schermerhorn Row Block

Test Pit Number: 6 (189 Front) Level: level 3, east extension (24" to 36")

Date: 197.7 Lot Number: 26

Number	Item
C	ERAMICS  1 pc clear lead glazed slipped redware 5 pc plain Creamware body sherds 1 pc grey stoneware 3 pc plain white saltglaze stoneware body sherds 2 pc molded white saltglaze rim sherds, dot, diaper and basket pattern 1 pc molded white saltglaze rim sherd barley pattern 3 pc Chinese underglaze blue porcelain
G	DBACCO PIPES  I kaolin pipe stem frag. bore dia. 5/64  LASS  I dictaphone earpiece, clear glass I dark green lip and neck bottle frag. 2 dark green bottle glass body sherds I broken dark green bottle kick-up 3 pc window glass 3/16 inches thick
. 1,	Shell: 8 oyster shells ave. size 6-7 " Bone: 1 unidentifiable bone frag.
s	TRUCTURAL 1 whole red brick 1 pc wall plaster
1	OTHER 7 pcs shoe leather 1 cork (for a bottle)

Site.

ARCHAEOLOGY-MARITIME MUSEUM

Schermerhorn Row Block

Date:

1977

Test Pit Number: 6 (189 Front)

Level: level 4 east extension (36" to 48" Lot Number: 27

Number			, 1	Item	
,		•	<u> •                                    </u>	• • • •	<u> </u>
	TOBACCO PIPES 1 pipe stem	frag	bore	diameter	5/64
	FAUNA				

Shell: 2 oyster shells
Bone: 1 cut beef scapula
1 pc beef pelvis
1 pc beef rib

Si te:

ARCHAEOLOGY-MARITIME MUSEUM

2 pc roof slate

schemmerhorn Row Block

Test Pit Number: 2 (193 Front)

Level 4 (48" to 60")

Date:

1977

Lot Number: 28

Number Item CERAMICS 1 clear lead glazed redware vessel base 3 pc undecorated Creamware 1 pc grey saltglazed stoneware 2 pc blue underglazed porcelain TOBACCO PIPES 2 kaolin pipe stem fragments; bore dia. 4/64 FAUNAL Shell: 7 pc oyster shell 5 pc clam shell WOOD 1 pc drift wood STRUCTURAL 2 pc red brick

Site: ARCHAEOLOGY-MARITINE MUSEUM

Schermerhorn Row Block

Test Pit Number: 7 (2 Fulton St.)

Level: 5 (54 -60 in.)

Date: 1977

Lot Number: 29

Page 1 of 3

ior partiall  1 pc. clear glazed  9 pc. unglazed red  1 pc. redware, pie  trace of cop  1 pc. redware, eng  • 1 pc. redware, wit	ine-turned, lead glazed	ed.
Pan Tile or  1 pc. creamware, s 1 pc. molded plate 8 pc. plain white  1 pc. undetermined 1 pc. pearlware, b 1 pc. plain white  1 pc. white salt g	white paste earthenware lue transfer print pearlware	2
Albany Slip	rey salt grazed exterior, interior? (possible broken handle of jug) rey, with brown slip exterior, salt	•

2 bottle bottom and kick-ups, dark green
2 bottle necks % lips, slightly out-turned lip, squared
 string rim, straight neck, dark green
 (1 is ca. 1755, % 1 is ca. 1755-1783, Hume
 1970, 1971: 195).

I bottle neck, lip broken off, slightly bulbous, dark green

3 broken basal sherds, dark green

1 broken bottle kick-up, dark green

9 body sherds, dark green

16 body sherds, dark green

I bottle neck & tip, heavily patinated (ca. 1780-1800)

Site: ARCHAEOLOGY-MARITIME MUSEUM

Schermerhorn Row Block

Test Pit Number: 7 (2 Fulton St.)

Level: 5 (54-60 in.)

Date: 1977

Lot Number: 29 (Cont.)

Page 2 of 3

Number	Item
	(GLASS Cont.)
·· :	2 bottle bases, dark green, heavy patination, 3 7/8 in. and 4 in. diameter, with kick-ups. 1 pc. dark green bottle glass 1 pc. bottle glass, haevily patinated 2 complete bottle bottoms, haevily patinated
	11 pc. window pane 2 pc. window pane 1/8 in. thick
	LITHIC
	5 pc. shisty rock 1 pc. sandstone METAL
	1 frag. LEAD, (bar 2 cm. x 2½ cm.)
	1 pc. ADMIRALTY BRASS (shaped like fibula or brooch pin)
	8 frags. unidentified wood FAUNAL
·	SHELL: 17 pcs. oyster 5 pcs. clam BONE: 1 vertebrae spine (large mammal, probably <u>Bos</u> ) 1 humerus ( <u>Bos</u> sp.), cut 1 long bone ( <u>Bos</u> sp.), cut 6 unidentifiable bone frags.
ي	LEATHER
	6 bags of shoe leather fragments 2 pcs. shoe heel 16 larger leather scraps, & misc. small scraps.

ARCHAEOLOGY-MARITIME MUSEUM Site:

Schermerhorn Row Block

Test Pit Number: 7 (2 Fulton St.)

Level: 5 (54-60 in.)

Lot Number: 29 (Cont.) 1977 Date:

Page 3 of 3

Number	Item	
	STRUCTURAL MATERIAL	_

30 pcs. SLATE

6 pcs. mortar

1 conglomerate mass (brick, cement, wood, shell, red-paste earthenware or waster sherds) (bagged with wood)

MISCELLANEOUS

1 pc CORK

Site ARC-AEDLOGY-MARITIME MUSEUM

Schermerhorn Row Block

Test Pit Number: 7(2 Fulton)

Level: 1 (1 to 28 inches)

Date 1977 Lot Number: 30

Number Item CERAMICS 2 pc redware, interior clear lead glazed 1 pc yellow slipped, clear lead glazed buff paste earthenwar I pc. blue glazed undecorated delft tile 8 pc plain creamware 1 pc plain creamware vessel bottom sherd 1 pc plain creamware vessel rim sherd I pc handpainted blue and white pearlware 1 pc plain pearlware I pc water washed blue and white porcelain 1 pc porcelain tile in cement I small white butter chip (ironstone or porcelain) TOBACCO PIPES 1 pc plain white pipe bowl fragment GLASS 4 pc milk glass (lighting fixture?) 1 pc green bottle body sherd 5 pc window glass ( 3 pc 1/16", 1 pc 2/16, 1 pc 3/16" thick) FAUNAL Shell: 2 oyster shells Bone: 2 unidentifiabe cut bone frags. 1 bird tibia (chicken)

1 rib of medium sized mammal

#### STRUCTURAL

1 red brick fragment 1 pc roof slate

Site. ARCHAEOLOGY-MARITIME MUSEUM

Schemmerhorn Row Block

Test Pit Number: 7 (2 Fulton)

Level: 2 (28 to 50" in center)

1977

Number	Item
C C	ERAMICS  1 pc redware, clear lead glaze on both sides 1 pc redware, rim sherd, dark brown glaze both sides 1 pc yellow-slipped redware, piecrust edge
· · · · · · · · · · · · · · · · · · ·	1 pc undecorated delft rim sherd 1 pc blue decorated delft sherd, glaze on exterior only
	<pre>13 pc plain creamware body sherds 1 plain creamware vessel base 1 pc "royal pattern" plate rimsherd creamware 2 pc creamware, plain rim sherds</pre>
	<pre>1 pc plain pearlware 1 pc green shell edged pearlware 1 pc blue and white hand painted pearlware</pre>
į.	<pre>1 pc grey saltglazed stoneware, incised and cobalt decor 1 pc grey saltglazed stoneware, blue dec. interior slips 1 pc grey stoneware with brown salt glaze 1 pc light grey stoneware, mottled brown-grey glazed surincosed line 1 pc white salt glazed stoneware rim sherd, green band around rim. gilt decoration on top of green. 1 unglazed porous stoneware rim sherd</pre>
	1 pc ironstone vessel, mark readsEAD. MOORE & CO. 1 plain white butter chip, ironstone 2 pc. white butter chip with green bands ironstone

2 pc. 3/16" thickness)

2 pc blue green window glass with parage 2/16 th inches thickness) 2/16 th inches thickness)

2 pc frosted window glass 1/16th" thickness

1 pc curved clear glass interior white frosted (light bulb 4 pc milk glass

1 dark green bottle base with kick up, 3½" dia. pointed kick up.

ARCHAEOLOGY-MARITIME MUSEUM Site:

Schermerhorn Row Block

Test Pit Number: 7 (2 Fulton)

Level:

Date: 1977

Lot Number:

31 cont.

Page 2 of 2

Number	Item	
	5 pc dark green bottle glass body sherds 2 blue-green bottle glass body sherds 1 pc window glass with round edges	
	WOOD 10 pieces drift wood	
	FAUNAL Shell: 11 oyster shell frags. 5 pc hard shell clam	
	Bone: 1 bovine upper jaw molar (M. max) 1 bos calcaneus, distal end 1 bos femur, distal end	
	1 bos vertebra 16 bone fragments too small to be typed, prob. bo STRUCTURAL	O S
	11 pc roof slate 1 nail, wood attached	•

Site:

ARCHAEOLOGY-MARITIME MUSEUM

Schermerhorn Row Block

Date:

1977

Test Pit Number: 7 (2 Fulton)

Level: 3 (same as level 2 but Lot Number: on the sides 30-50"

32

Number	Item
Number	CERAMICS  1 pc lead glazed slipped redware 1 pc piecrust edged red slipware 1 pc lead glazed redware 2 pc "Jackfield type" redware 1 pc flower pot rim sherd 1 pc softpaste buff earthenware, unglazed vessel bottom 9 plain creamware sherds, 2 plate rim sherds 1 pc. hand painted blue pearlware 1 pc polychrome handpainted pearlware cup base frag. 1 pc. plain pearlware 3 pc Chinese porcelain ( 2 basal pieces, 1 rim sherd with bluefloral design  GLASS 5 pc dark green bottle glass, 1 kick up section ca. 1783 1 pc etched wing glass frag 35 pc window glass  FAUNAL Shell: 4 pc hard shell clam Bone: 3 mammalian rib frags 8 pc oyster shell 2 untypable frags.
	LEATHER 1 tibia, bird 1 tibia, bird 1 humerus (Ovis) 2 pc leather scraps 1 long bone (med. mammal

Site:

ARCHAEOLOGY-MARITIME MUSEUM

Schermerhorn Row Block

Test Pit Number: 7 (2 Fulton) Level: 4 (48" to 54"

Date:

1977

Lot Number: 33

Page 1 of 2

•	
Number	Item
	CERAMICS  1 pc redware with brown glaze 1 pc flower pot
	5 pc bisque fired earhtenware
	1 pc featheredged creamware 2 pc creamware with brown glaze 11 pc plain creamware body sherds 1 pc plain pearlware 1 pc shell edged pearlware
	TOBACCO PIPES  3 kaolin pipe stem frags ( 1 pc 4/64, 2 pc. 5/64)
•	CERAMICS CONT.  1 pc grey salt glazed stoneware 1 pc grey salt glaze stoneware with blue incised design 1 pc porous greyish stoneware 1 pc porous buff paste stoneware, dull brown glaze, pan rim
	1 pc red overglaze porcelain sherd
	1 large chunk porcelain bathroom tile (small circular units)
	GLASS  20 pc window glass 1 pc milk glass 2 pc dark green bottle neck and lip 8 pc dark green bottle body sherds 3 pc dark green bottle bottoms, with kick up
·	FAUNAL Shell: 4 hard shell clam frags 6 oyster shell frags Bone:1 tibia, bird 1 metacarpus (ovis or cervus) 1 rib frag (medium mammal) 1 mandible frag. species unidentifiable 2 mammal bone fragments

Site:

ARCHAEOLOGY-MARITIME MUSEUM Schermerhorn Row Block

Test Pit Number: 7 (2 Fulton)

Level: 4

Date: 1977

Lot Number: 33 cont.

Page 2 of 2

- rage 2 01	2		,
Number	I	tem	
	STRUCTURAL  2 rusted nails 1 red brick fragment 1 pc plaster 1 pc Pan Tile 1 asphalt tile frag. 4 pc roof slate 4 pc sandstone 3 pc schist/gneiss 2 pc siltstone 1 pc furnace slag		

Site:

ARCHAEOLOGY-MARITIME MUSEUM

Schermerhorn Row Block

Test Pit Number: 7 (2 Fulton)

Level:6 (60 to 68 inches)

Date: 1977.

Lot Number: 34

Number	Item
	CERAMICS  3 pc clear lead glazed redware 1 pc engine turned clear lead glazed redware 1 base of Jackfield Type redware vessel (teapot) 5 pc unglazed redware 1 pc flower pot 1 pc creamware feather edged plate rim 1 pc clouded ware 13 pc plain creamware body sherds
	1 pc green shell edged pearlware 1 pc blue and white handpainted pearlware 5 pc badly stained creamware or pearlware 1 pc plain pearlware
·	l pc buff paste stoneware bottle sherd, lead glazed l pc mottled brown stoneware l pc pink porous stoneware, grey salt glaze
> <del>-</del>	1 pc red overglaze porcelain
	TOBACCO PIPES 1 plain bowl fragment 1 stem frag bore dia 4/64
. ,	GLASS  17 pc dark green bottle glass body sherds 1 pc square bottle bottom 1 dark green bottle kick up 1 dark green bottle neck, flattened string rim 2 pc light blue bottle glass embossed "Daffy's Elixin base of wine glass 5 pc window glass 1 clear tumbler rim sherd
	1 clear tumbler rim sherd  STRUCTURAL  1 pc square cut red sandstone 5 red brick fragments

1 marble slab 17 pc roof slate

Site:

ARCHAEOLOGY-MARITIME MUSEUM Schermerhorn Row Block

Test Pit Number: 7 (2 Fulton)

Level 6

Date: 1977

Lot Number:

34 cont.

Page 2 of 2

Number	Item	
	LEATHER  2 shoe soles 8 leather scraps	
	FAUNAL Shell: 8 oyster shells 3 hard shell clams	
	Bone:1 radius, bird 1 metatarsus (cervus or ovis) 1 phalange (bos) 1 humerus (ovis) 1 tibia (ovis) 2 ribs (1 large mammal, 1 bird) 1 mammalian vertebra frag. 1 mammalian unidentifiable	
	METAL  1 modern nail 1 pc Admiralty Brass (larger than pc. from Lot 29. Tl one has heavy rivet and hinge joint, hand hammen 1 ceramic waster base 1 thin handle shaped wooden object with small drilled	red}
ı	WOOD 1 bag drift wood fragments	

Site: ARCHAEOLOGY-MARITIME MUSEUM

Schermerhorn Row Block

Test Pit Number 7 (2 Fulton)

(68 to 76")

Date: 1977

Lot Number:

35

Number	Item
·	CERAMICS  1 pc Yellowware mug handle 1 pc yellow slipped redware with lead glaze, bamboo- like combed decoration 1 pc redware bowl base, brown glaze 1 pc flower pot frag. 18 pc plain creamware sherds
	2 pc clear lead glazed earthenware 4 pc unglazed redware sheds 2 pc "Jackfield Type" redware sherds 4 pc dark brown glazed redware 1 pc engine turned redware 1 pc brown slip decorated redware 1 pc. plain delft sherd
	1 pc handpainted annular decorated pearlware 2 pc grey saltglaze stoneware 1 pc grey stoneware with cobalt decoration 3 pc porous "grey" stoneware, 2 with cobalt decoration 1 pc black basalt stoneware
	1 pc overglaze red and black handpainted porcelain 1 pc plain porcelain
	TOBACCO PIPES  I bowl frag. with mark T.D.  1 stem fragment, 5/64 bore dia.
•	GLASS  3 pc dark green bottle base with kick up 1 bottle neck with cork in neck 12 bottle glass body sherds 2 pc clear drinking glass 10 pc window glass

2 pc bottle neck sherds

Site: ARCHAEOLOGY-MARITIME MUSEUM

Schermerhorn Row Block

Test Pit Number: 7 (2 Fulton)

Level: 7

Date: 1977

Lot Number: 35 Cont.

Page 2 of 2

Number	Item			
	FAUNAL Shell: 22 oyster shells 7 hard shell clams			
	Bone: 1 pelvis (ovis) 1 radius (bird) 1 tibia (bird) 1 humerus (bird) 4 ribs (med. mammal) 2 cut long bones (large mammal) 1 metatarsus (ovis) 1 vertebra (medium mammal) • 1 tibia, distal end (sus)			
	4 unidentified bone fragments  LEATHER  4 bags shoe leather and scraps			
¥	WOOD  32 pieces driftwood  14 pc bark (pine)  1 pc pressed wood fiber	• ·		
	METAL 1 rusted nail		r.	•
	STRUCTURAL  18 pc roof slate 2 pc Pan Tile 5 red brick fragments	î.		
	LITHIC 2 pc red sandstone 1 pc unidentifed grey rock 1 pc siltstone MISC.	·		
	1 pc cork (bottle)	•		e.

Site: ARCHAEOLOGY-MARITIME MUSEUM

GLASS

.2 pc: window glass

Schermerhorn Row Block

Test Pit Number: 7 (2 Fulton St.

Level: 8 (76-90 in., sand)

Date: 1977

Page 1 of 2 .

Lot Number: 36

Number '	Item	
	CERAMICS	
-	10 pc. undecorated creamware 1 pc. creamware rolled chamber pot lid 1 pc. polychrome creamware, red line around rim inside and out, vine design with heart-shaped leaf, and red flower.	A STATE OF THE PARTY OF THE PAR
	1 pc. blue & white hand-painted pearlware 1 pc. ploychrome pearlware, brown band around rim, orange flowers, brown stem, green single-stroke leaf.	
	2 pc. polychrome pearlware, green and brown leaf decora 2 pc. plain white pearlware	tion *
	3 pc. unidentifiable white-paste earthenware (badly damaged)	
	2 pc. white salt-glazed stoneware teacup bases, with imperfections from firing in interior	
N <del>e</del>	unglazed exterior salt-glazed, interior	
	1 pc. very porous, pinkish stoneware, with thick blue glaze decoration 1 pc. porous buff stoneware, exterior grey salt-glazed,	
	with cobalt blue band, interior unglazed.  1 pc. porous pinkish stoneware, badly glazed brown ext.	. N
	1 pc. blue & white underglaze porcelain 1 pc. porcelain with gilt overglaze	
•	TOBACCO PIPES	(元) (日)
	2 stem frags., 5/64 in. bore diam.	

7 pc. dark green bottle glass, body sherds 1 pc. dark green bottle glass, kick-up

Site: ARCHAEOLOGY-MARITIME MUSEUM Test Pit Number: 7 (2 Fulton St.) Schermerhorn Row Block Level: 8 (76-90 in., sand) Date: 1977 Lot Number: 36 (Cont.) Page 2 of 2 Number Item LITHIC (Rock sample) 6 pc. black flint 1 pc. dark, dense silt-stone, with fossil 4 pc. schist/gneiss 1 quartz pebble 1 pc. unidetified conglomorate 1 pc. reddish-brown sandstone WOOD 16 pc. unidentified wood 6 pc. bark FAUNAL Shell: 10 pc. oyster shell (1 very worm eaten) 8 pc. clam shell Bone: 1 utensil handle, bone (?), with 3 rivet holes 1 scapula (Sp. unkown) 3 ribs (1 large mammal, 1 med. sized, 1 small) 1 vertebral frag. (large mammal) 2 Tibia (Ovis or Cervus) 6 unidetifiable bone frags. LEATHER 1 pc., approx. ½ inch thick STRUCTURAL MATERIAL 8 pc. red brick, with mortar 2 pc. roof slate \*pc. tar/asphalt 2 pc. plaster/cement 1 pc. plaster 27 pc. Pan Tile 8 pc. unidentified unglazed redware 1 pc. unglazed redware, with lug (from Pan Tile or jug ?)

Site:

ARCHAEOLOGY-MARITIME MUSEUM

Schermerhorn Row Block

Date:

1977

Test Pit Number: 7 (2 Fulton )

Level:7A Cribbing Feature

Lot Number: 8 feet

37

```
Number
                                 Item
       CERAMICS
           1 pc yellow slipped redware, slightly marbled, clear lead
             glaze on interior, piecrust edge
       GLASS.
           1 pc translucent white glass (light bulb frag?)
           2 pc. dark green bottle glass
       Godw
           3 pc wood
           4 pc pine bark
       FAUNAL
           Shell: 4 pc oyster shell
           Bone: 1 mammal rib
       STRUCTURAL
           2 small pieces roof slate
           3 pc red brick
           3 pc pan tile
       LITHIC
           1 pc tuft
           1 pc schist/gneiss
```

Site:

ARCHAEOLOGY-MARITIME MUSEUM

Schermerhorn Row Block

Test Pit Number: 4 (18 Fulton)

Level: 1 (0 to 11 inches)

Date:

1977

Lot Number: 38

CERAMICS  1 pc red earthenware, interior dark brown glaze 1 pc plain creamware 1 pc plain ironstone  GLASS  1 clear glass salt shaker, bottom embossed PATENTI NATHAN & WIGHT 1 embossed clear glass sherd 1 pc dark green bottle glass 1 pc window glass 3/16" thick  FAUNAL shell: 1 oyster shell	Number	Item
1 clear glass salt shaker, bottom embossed PATENTI NATHAN & WIGHT 1 embossed clear glass sherd 1 pc dark green bottle glass 1 pc window glass 3/16" thick FAUNAL		1 pc red earthenware, interior dark brown glaze 1 pc plain creamware
		1 clear glass salt shaker, bottom embossed PATENTE NATHAN & WIGHT 1 embossed clear glass sherd 1 pc dark green bottle glass
₹		

Site:

ARCHAEOLOGY-MARITIME MUSEUM

Schermerhorn Row Block

Date:

1977

Test Pit Number: 7 (2 Fulton)

Level: 9 (bottom clearing, pro-bably same as Level 8) Lot Number: 39

Number	Item
	CERAMICS  1 pc handpainted pearlware, green leaf design 1 pc handpainted pearlware, blue scallop design
	TOBACCO PIPES 3 undecorated pipe bowl fragments
	FAUNAL Shell: 2 hard shell clams 2 unifentifieable fragments
	STRUCTUREAL 6 pc Pan Tile
,	LITHIC 1 pc siltstone

Site:

ARCHAZOLOGY-MARITIME MUSEUM

Schermerhorn Row Block

Test Pit Number: 7 (2 Fulton)

Level: 10 (Auger test)

(90-110 inches)

Lot Number:

Date: 1977

Number Item CERAMICS 2 pc undecorated creamware 2 pc handpainted polychrome pearlware plate rim. scalloped edge, 2 orange bands below rim on interior row of orange dots between 1 pc handpainted pearlware, orange, blue, green, brown decoration 2 pc handpainted pearlware, brown band below rim on interior orangeand brown decoration on exterior 1 pc handpainted pearlware, green (?) band below rim on interior WOOD 1 fragment PLASTIC

1 pc plastic

STRUCTURAL .

1 red brick fragment

Site: ARCHAEOLOGY-MARITIME MUSEUM Schermerhorn Row Block

Test Pit Number:2 (193 Front) Level:1 (0-24")

Date: 1977

41 Lot Number:

Number	Item
	CERAMICS
	1 pc lead plazed red earthernware
	i I DC Sheli edded bearlware
	3 pc plain creamware, one with ribbed surface 1 pc buff paste eartenware, glazed surface gone
	GLASS
	1 pc light green bottle body sherd 1 pc window pane glass
**	₹
8	

Site:

Date:

ARCHAEOLOGY-MARITIME MUSEUM

Schermerhorn Row Block

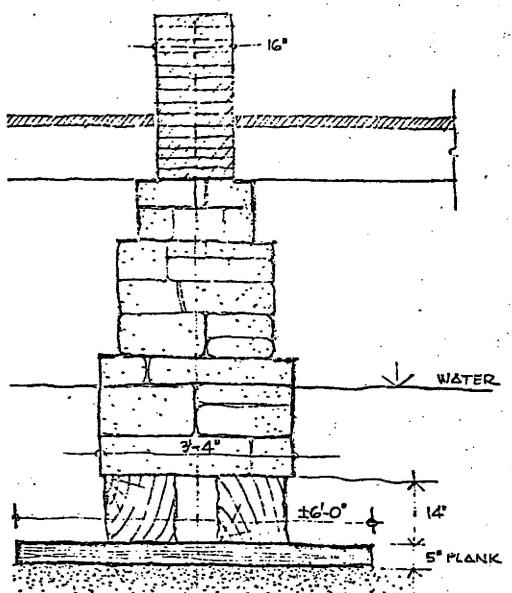
1977

Test Pit Number: 2 (193 Front)

Level: 5 (5 to 8 ')

Lot Number: 42

Number	Item
	LEATHER  1 shoe, (2 outer soles, 1 inner sole, 1 vamp, toeless 1 strap around heel)
,	FAUNAL Bone: 1 mandible (Wapiti) 3 ribs, large mammalian, 1 sawed 1 humerus, species unknown
-	OTHER 1 pc oakum
*	



This is a conjectural reconstruction of a typical foundation wall cross-section by the Restoration Architects. It is included here to aid in vizualizing the foundation walls that were exposed during 1977. Some details of walls exposed are shown in the profile drawings, which were made to show soil stratigraphy. The present report illustrates those walls primarily to demonstrate the relation to them of layers of earth.

This drawing shows, from bottom to top, spread-footer planks about 6 ft. long and 5 in. thick, laid at right angles to the wall. On top of these are two ca. 14 in. square beams, separated slightly. The foundation wall of roughly coursed stones rests on these beams, and has reductions in width ("step-outs") so that it is only about 2 ft. wide at its top, where the brick wall rests.

The 1977 excavations did not expose both sides of any wall, so the symmetry shown here is presumed. In Test 7, at No. 2 Fulton St., a horizontal boring was made through the 14 in. beam, which revealed an open space and another, similar, beam. The rest of the reconstruction is based on the revealed profile of one side of wall in four tests (the 1st, 3rd, 6th, & 7th), with spread-footer planks existing in each case and also confirmed in the 2nd Test, where the wall above that was covered with brick and cement-mortar.

#### Appendix

### Soil Sample Material

The lists which follow are the results of detailed analysis of soil samples which were taken at various levels in different test pits. Most of the artifacts we recovered were found by picking apart with hand and trowel, shovel or bucket loads of dirt which were spread out on plywood boards at the edge or near each pit. This recovered most of thelarge objects, or those which were very different in color or texture from the wet dirt (e.g. bovine long bones, or blue and white porcelain sherds) more easily than small, drab objects encased in the wet mud. As a correction for this bias we took entire bucket loads of fill selected at random, and washed them through a ) removing all sand, silt and clay partfine soil sieve (size 20, icles. The remaining material was bagged, and at a later date sorted and examined under magnification. This resulted in our acquiring a sample of very small sized organic material and small ceramic and glass chips.

It is apparent upon examination of these lists that a number of small items (eg fish scales and vertebra and seeds and nut sheels were present in the soil but were not recoverable except by sieving soil samples. However, it is also clear that no major category of finds was missed in the overall recovery effort, and that exhaustive screening of the soil would not have added materially to the culture al inventory. Most of the artifacts found in screening were too small to add any useful information for analysis. The most significant material in the screened samples is the food debris. This suggests

that in the future, detailed screening and floation of sections of the fill would give valuable data on cultural eating habits, and seasonality of the deposition of the material in the fill. This could be coordinated with a study of larger food debris, including all bone and shell fragments to enhance our knowledge of 18th and 19th Century diets as it is reflected in the waste material used for landfill.

A laist of organic material recovered in our sample follows:

4 Fulton Street Level 4

193 Front Street Level 1

1 piece reed

1 piece shell 1 piece bone

lpiece shell

, , , , , ,

3 pieces burnt bone

1 fish scale

165 John Street Level 2
1 leaf
1 seed hull
49 shell fragments
7 pieces bone (1 burnt)

189 Front St. Level 3 1 pc bone 21 pc. shell

165 John Street Level 4
1 seel hull
4 pieces bark
28 pieces shell
1 large mammalian vertebra
8 bone fragments
1 fish scale

2 Fulton Street Level 3
 1 peach pit
 9 pc shell
 11 pc bone(1 burnt)

2 Fulton Street Level 4 1 round seed cover 22 pc wood 13 pc shell 15 pc bone (1 burnt) 5 fish scales

2 Fulton Street Level 7
1 small round seed hull
1 large seed hull frag.
5 pcs shell
2 pc burnt bone

2 Fulton Level 8
 pine bark
 1 walnut shell
 1 snail shell
 1 fish scale (subsequently lost)

Change in sea level has been projected for the central Atlantic
seaboard for a long period of time, and for the New York Harbor specifically for a short period. United States Coast and Geodetic Survey
(now the National Oceanographic and Atmospheric Administration) records
kept at Fort Hamilton from 1893 to 1932, and at the Battery from 1921
to 1975 indicate an average rate of rise in Mean-Sea Level of about .006
ft. per year over the 82 year period (Office of Tides & Currents, personal communication, 15 Sept. 1977). If this rate can be safely projected for the eighty years before that, it would indicate a rise of about one foot (.972 ft.) since 1810, when well documented construction occurred between the filled-in Burling and Beekman Slips. Projected back even further, which is probably less accurate, this rate would indicate that sea level had risen about two feet in the three and a half centuries since the Dutch first started using the East River waterfront.

The long period of time is the 19,000 years of the very late Pleistocene and (since ca. 8000 B.C.) the Holocene. Estimates are based on Radiocarbon dates for freshwater peat taken at various known depths from the now submerged continental shelf near the Hudson Canyon, and from oysters that live only in shallow water. This evidence based on a number of articles (Stuiver & Daddario 1963, J. Kraft 1971, 1976, Newman et al. 1969, Emery et al. 1967, Emery & Carrison 1967, Redfield 1967).

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Here we will summarize the findings, which are that world-wide sea level was at a minimum of 300 ft. to 400 ft. below present about 19,000 years ago. At that time the Hudson River flowed through a cut or canyon across some 75 miles of continental shelf which are now submerged. As the final Wisconsin glaciation began to melt, sea level rose, reaching a rate of perhaps 3 or 4 ft. per century at its fastest, probably before 10,000 B.C. After that period the largest glacial masses were gone, and sea level, then about 70 ft. lower than at present, rose more slowly, at about 1 ft. per century. The rate of rise has slowed down again, sometime between 600 B.C. and 2000 B.C., when sea level may have been minus 10 ft. or more from modern level. There is some debate as to how fast the sea level has been rising in this most recent two— to four—thousand year period, but in general the rate is projected as between .25 ft. and .5 ft. per century.

Considering the extrapolations on which these estimates have been based, we consider it a remarkable convergence of findings that the last 82 years of carefully measured readings indicate a rise (for that period) of .006 ft. per year, which would be .6 ft. per century. Because the longer range estimates are also averages, a faster rate for a specific period need not be taken as a major deviation, indicative of a significant increase in the rate of sea-level rise. Rather, we feel that this preliminary analysis suggests an everage rate of about .5 ft. per century is reasonably accurate, with various fluctuations. This is based on

the correlation of lang term and short term data.

The NOAA office at Stony Brook, Long Island, has provided the following modern data (personal communication from Spiegel & Zamecnik 21 June 1977):
The difference between Mean High Water (MHW) and Mean Low Water (MLW)
on the East River at of Below the Brooklyn Bridge is 4.3 ft. The.
interval is 6 hours and 16 minutes.

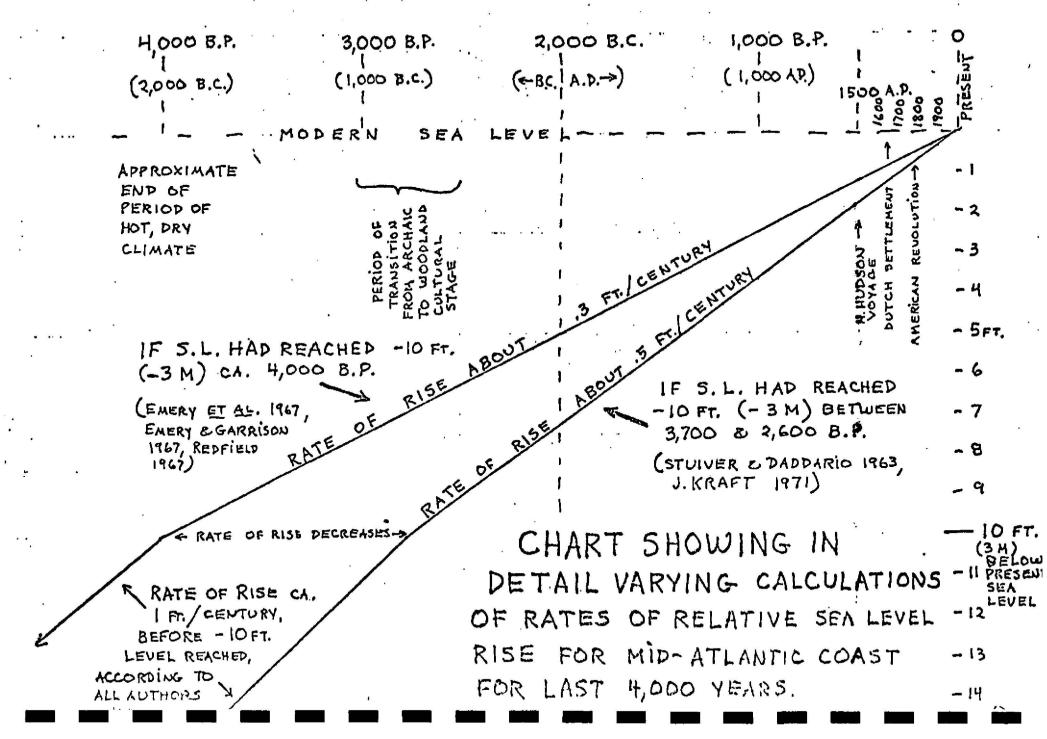
(Spring Tides are greater, and the difference then is 5.2 ft.))

The difference between the All-around mean water level (local Mean Sea Level, or MSL) on the East River at or below the Brooklyn Bridge and the U.S. C.& G.S. datum at Sandy Hook is + .52 ft.

Therefore MSL at the site block is approximately % ft. higher than at Sandy Hook, and the tidal variation is between about 4 ft. and 5 ft. We have incorporated this information, and the rise of about 1 ft. projected on the basis of the 82 year continuous tide record and the 21 year isolated annual readings before that (see copies in this appendix) into the approximate levels shown on the "SCHEMATIC PROFILE OF SCHERMERHORN ROW."

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CLIMATE WISCONSIN GLACIATION COOL 8" ". HOTEDRY **~** PRESENT MOIST WARM BCLAD APPROXIMATE MAXIMUM GLACIATION PERIOD END OF WISCONSIN 5,000 25,000 MODERIN SEA YEARS BEFORE PRESENT SLOWEST RISE NEAR MODERN SEA LEVEL CA. 30,000 10 B.P. CHART SHOWING -15 APPROXIMATE RELATIVE SEA LEVELS ON CENTRAL ATLANTIC MOST R. DID -20 COAST OF HORTH AMERICA FUR THE LAST 25,000 YEARS MAXIMUM -251 "DRAW DOWN" TO BELOW ASE DOM BETWEEN 300 FT.



The effect along the East River waterfront of lower sea levels in the past is obvious. At radically lower levels (i.e., before 8000 B.C., when levels were -70 ft. or more) the East River would not have been a river. Some time in the last five or six thousand years it was gradually flooded, and based on 1853 pre-dredging Coast Survey soundings (Viele 1855) which indicate a channel of between about 40 ft. and 60 ft. depth in the mid-19th century, it has been a substantial body of water for at least the last several thousand years.

However, even as recently as a few centuries before the Dutch came, overall levels were 3 or 4 ft. lower than at present, with the result that rocks (like those projecting through the seawall of Manhattan opposite Roosevelt Island) which are subject daily to tidal submergence now were then above all but storm tides, and probably were separated from the river by some tide flats. Certainly the shoreline was further into the river than it would be now, if it were not for human activities.

Thus a line such as the present South Street which can be documented to be lying hundreds of feet beyond (south east of, in most cases) the early Dutch shoreline, was itself the shoreline at a much earlier period and a lower sea level. Paleo-Indian and Archaic period humans doubtless were able to walk on surfaces which (if not long since dredged away or buried) would be beneath the East River today. This can be illustrated by examining borings and depth readings made in the 20th century, which reveal a considerable thickness (10 to 15 Ft.) of soft

organic silt, at elevations of -5 Ft. to -20 ft., lying beneath modern fill, and overlying thick deposits of sand and some clay above bed-rock. Some of this was exposed land at lower sea-levels, and it may be largely created by peat-like or similar depositional conditions as the East River bed-rock depression (probably glacially cut) was gradually submerged beneath rising seas.

The following schematic diagram shows the relationship of changes upward in sea-level over several thousand years to expansion outward of the waterfront line through man-made filling over the last three centuries. It is an imaginary cross section along a line running from northwest to southeast between and roughly parallel to Fulton and John Streets, and crossing Pearl, Water, Front, and South Streets. The horizontal scale is greatly compressed, and the vertical scale does not permit showing full depth to bedrock. It is based on the authors' cwn excavations during the summer of 1977, and on the following drawings made available through courtesy of Spiegal and Zamechnik, Inc. of New Haven, Connecticut:

Agreement "DQ". Borings Made by Osborne Drilling Corp., 195
Washington St., New York City, for Board of Transportation of the
City of New York. Drawn by R.E.T., April, 1925.

Route No. 101, Section No. 1, Contract Drawing No. A-2, May 9, 1926

Agreement "E-H", Route 101-A-1, Borings made in the East River, New

York City, by E.J. Longyear Exploration Co., Minnoapolis, Minnesota,

for the Board of Transportation of the City of New York, July 9, 1926

The Port of New York Authority, World Trade Center Study (East Side)

Typical Geologic Profiles, Dwg. WTC-SL-000, 10-24-60.

The Port of New York Authority, World Trade Center Study (East Side), Geologic Profiles, Dwgs. WTC-SL-001, -002, -003, -004, -005, &--006, January 26, 1961.

As can be seen, these changes in natural topography have been overwhelmed in the last three centuries by man-made changes. Even as the sea has been rising. New Yorkers have been creating land by fill, and both raising surface levels and greatly expending the land surface out into the East River, as well as into other parts of New York harbor, so that in most places the effect of higher sea level has been completely masked.



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY
Rockville, Md. 20352
C3311-618
SIPG

October 12, 1977

Dr. Edward McM. Larrabee 86 Snowden Lane Princeton, New Jersey 08540

Dear Dr. Larrabee:

Pertaining to your letter of July 19, 1977, we have enclosed summaries of yearly mean sea level for Governor's Island, New York (1856-1879); Fort Hamilton, New York (1893-1932); and The Battery, New York (1921-1975).

We were unable to relate the historical Governor's Island tide series to The Battery, but at Fort Hamilton, the historical series was connected to The Battery through differential levels.

At Fort Hamilton and The Battery, sea level has been increasing at the rate of 0.006 ft./year since 1893. Assuming that it was a linear trend, the sea level could have risen 1.0 feet between 1810 and 1975 in the vicinity of New York Harbor.

Sincerely,

German Handstond

James R. Hubbard Chief, Tidal Datums Section Tides and Water Levels Branch Oceanographic Division

Enclosures

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Governors Island	New York	Care	heast sic	l., Y
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1859	6.70	<del></del>	<del></del>	
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1866	6.55		<u> </u>	
1867	6.69		<u> </u>	
1868	6.61		<u> </u>	
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1870	6.81			
1871	6.61		4	
18.15	6.60			
1873	6.66			
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Brushes Heights above gero of staff as set May 2, 1893. Mesus are for

groups of 29 dars, perinning on the first of each month.

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		6.14   6.24   6.27   5.92     6.10   6.18   6.00   5.88     6.25   6.30   6.41   6.30     6.25   6.11   6.35   6.03     6.07   5.09   5.70   6.65	\$.09   0.97   5.50   5.33   5.92   5.09   6.23   6.03   5.00   5.95   \$.52   0.17   5.09   0.19   6.13   5.02   6.14   6.24   6.27   5.92   \$.18   5.06   6.00   6.22   5.06   6.05   6.10   5.13   6.00   5.33   \$.0-   0.01   0.10   0.1-   0.00   0.32   0.35   0.03   0.17   0.10   \$.20   0.10   0.21   0.10   0.22   6.25   0.30   0.41   6.30   \$.01   0.00   0.23   0.03   0.05   0.05   0.96   5.11   0.05   0.03   \$.00   0.96   0.23   0.05   0.05   0.96   5.11   0.05   0.03   \$.00   0.96   0.23   0.05   0.05   0.07   0.09   5.70   0.05	2.31	2.27	2.31	1.01	-10.0					· — · · · · · · · · · · · · · · · · · ·							1.
	79 1 59.71	3.14     3.24     3.27     3.92       3.10     3.18     6.00     5.33       3.25     3.33     3.17     3.10       6.25     3.30     3.41     3.30       3.96     3.11     3.33     3.03       6.07     3.09     5.70     3.33       3.03     3.84     5.81     3.43	5.04   0.97   5.50   5.33   5.92   5.09   6.23   6.03   5.00   5.95   5.52   0.17   5.05   0.19   6.13   5.02   6.14   6.24   6.27   5.92   6.18   5.06   6.00   6.22   5.06   6.05   6.10   6.13   6.00   5.33   6.25   6.25   6.25   6.25   6.25   6.25   6.25   6.25   6.25   6.25   6.25   6.20   6.	2.31   3.55   5.60   5.42   5.71   5.55   5.36   5.53   5.62   5.34   6.35   5.34   5.73   5.39   5.35   5.51   5.72   5.25   5.95   5.74   5.04   5.97   5.50   5.35   5.92   5.09   6.23   6.03   6.00   5.95   6.52   6.17   6.99   6.13   5.02   6.14   6.24   6.27   6.92   6.15   6.00   5.33   6.15   6.00   5.33   6.15   6.00   5.33   6.15   6.00   6.32   6.16   6.25	2.27   3.28   8.99   6.53   3.29   5.57   5.65   5.58   5.50   3.45     6.31   6.55   6.50   5.62   5.71   6.55   5.55   5.58   6.62   5.54     6.33   5.84   5.73   5.89   8.28   6.51   5.72   5.85   5.96   6.74     6.04   6.97   6.50   6.53   6.98   5.99   6.23   6.03   6.00   5.95     6.52   6.17   5.59   6.19   6.13   5.92   6.14   6.24   6.27   5.92     6.18   6.05   6.50   6.52   5.06   6.05   6.10   6.13   6.00   5.83     6.24   6.25   6.10   6.14   6.24   6.27   6.20     6.25   6.10   6.11   6.24   6.25   6.25   6.25   6.30   6.41   6.30     6.26   6.10   6.11   6.23   6.05   6.25   6.25   6.25   6.25   6.25     6.27   6.28   6.28   6.05   6.55   6.67   6.07   6.55   6.65     6.28   6.75   6.26   6.65   6.65   6.67   6.07   6.55   6.65     6.29   6.27   6.26   6.25   6.25   6.27   6.25   6.25     6.20   6.21   6.22   6.25   6.25   6.25   6.25   6.25     6.20   6.21   6.22   6.25   6.25   6.25   6.25   6.25     6.20   6.21   6.22   6.25   6.25   6.25   6.25   6.25     6.20   6.21   6.22   6.25   6.25   6.25   6.25     6.20   6.21   6.22   6.25   6.25   6.25   6.25     6.20   6.21   6.22   6.25   6.25   6.25   6.25     6.20   6.21   6.22   6.25   6.25   6.25   6.25     6.20   6.20   6.20   6.20   6.20	2.32   2.43   2.43   2.43   2.43   2.44   2.45	1		1000   1000   1000   1000   1007   1005   1007   1010   1011   1010	أست										
		3.14   3.24   3.27   3.92     3.10   3.18   3.00   3.33     3.25   3.03   3.17   3.10     3.25   3.30   3.41   3.30     3.26   3.11   3.28   3.03     3.27   3.09   5.70   3.35     3.03   3.84   5.81   3.43     71.93   72.51   71.79   59.71	5.04   0.97   5.50   5.33   5.98   5.09   6.23   6.03   5.00   5.95   5.52   5.17   5.05   5.19   5.13   5.02   5.14   5.24   5.27   5.92   5.18   5.05   5.00   6.52   5.06   6.05   6.10   6.13   6.00   5.33   6.24   5.25   6.	\$\frac{3}{5}\$	2.27   0.23   0.09   0.13   0.29   5.57   5.65   5.58   5.50   0.43   0.51   0.55   0.50   5.43   0.55   0.50   5.45   0.55   0.55   0.55   0.55   0.55   0.55   0.55   0.55   0.55   0.55   0.55   0.55   0.55   0.57   0.55   0.57   0.55   0.57   0.55   0.57   0.55   0.57   0.55   0.57   0.55   0.57   0.55   0.57   0.55   0.57   0.55   0.57   0.55   0.57   0.55	2.21	1.0	100   100	1000   1000   1000   1007   1007   1005   1006   1007   1010   1007   1010   1007											
ing of means, 19 years (1893-1911) = 112.50; Mean = 5.921 ft.	93 5.81	6.14 6.24 6.27 5.92 6.10 5.13 6.00 5.33 6.25 6.03 6.17 6.10 6.25 6.30 6.41 6.30 6.96 5.11 6.35 6.03 6.07 5.09 5.70 5.65 6.07 5.69 5.81 5.43 71.96 72.51 71.79 69.71 6.00 6.04 5.93 5.51 2. 1593, 14.73 ft. below 8.1.2 ng on the first of each posth.	5.04   0.97   5.50   5.33   5.98   5.99   6.23   6.03   5.00   5.95   5.52   5.17   5.55   5.19   5.15   5.02   6.14   5.24   6.27   5.92   5.18   5.06   6.00   6.22   5.06   6.05   6.10   6.13   6.00   5.33   6.25   6.25   6.25   6.25   6.25   6.25   6.25   6.20   6.20   6.20   6.20   6.20   6.20   6.20   6.20   6.25   6.25   6.25   6.25   6.25   6.20   6.41   6.30   6.20   6.21   6.25   6.	5.31	2.37	2.11	2.21 0.22 0.03 0.03 0.03 0.03 0.05 0.73 0.03 0.05 0.07 0.03 0.03 0.03 0.03 0.03 0.03 0.03	100	1000 1000 1000 1000 1000 1000 1000 100					<del></del> _			·			
of means, 19 years (1893-1911) = 112.50; Nean = 5.921 ft.	93 5.81	3.14       3.24       3.27       3.92         3.10       3.13       6.00       3.33         3.35       3.03       3.17       3.10         3.25       3.30       3.41       3.30         3.96       3.11       3.33       3.03         3.97       3.09       5.70       3.33         3.03       3.84       5.81       3.43         71.90       72.51       71.79       39.71         6.00       6.04       5.93       5.51         2. 1593, 14.73       71. below 8.42         ng on the first of each month.	5.02	5.31 5.33 5.30 5.30 5.42 5.71 5.35 5.35 5.38 5.62 5.34 6.35 5.34 5.75 5.35 5.38 6.51 5.72 5.25 5.96 6.74 6.35 5.34 5.75 5.35 5.38 6.51 5.72 5.25 5.96 6.74 6.52 6.17 5.55 5.19 6.13 5.02 6.14 6.24 6.27 5.92 6.18 6.50 6.20 6.22 5.06 6.05 6.10 6.18 6.00 5.33 6.28 6.26 6.20 6.22 6.25 6.25 6.25 6.20 6.25 6.20 6.25 6.25 6.25 6.25 6.25 6.25 6.25 6.25	2.37	2.27	2.1	100   100   100   100   100   100   100   100   100   101	190	-;	2207 200	1.200=	<del> </del>			<del></del>	<del></del>			
Man Sea Level.	93 5.81 below B.N.S ech month.	6.14 6.24 6.27 5.92 6.10 6.18 6.00 5.83 6.25 6.03 6.17 6.10 6.25 6.30 6.41 6.30 6.96 5.11 6.35 6.03 6.07 5.09 5.70 5.65 6.03 6.84 5.81 5.45 71.96 72.51 71.79 69.71 6.00 6.04 5.93 5.81 2. 1595, 14.73 ft. below 3.1.2 ng on the first of each month. Yean = 5.921 ft.	5.04	5.31	2.37	1.12 0.35 0.03 1.13 0.25 0.33 0.05 0.75 0.35 0.57 0.08  2.27 0.28 0.09 0.13 0.25 5.57 0.65 0.52 5.00 0.43  2.31 0.35 0.00 0.32 0.75 0.55 0.55 5.55 5.62 5.34  2.32 0.33 0.30 0.38 0.38 0.38 0.31 0.72 5.85 5.95 0.74  2.34 0.57 0.50 0.35 0.38 0.38 0.31 0.72 5.85 5.96 0.74  2.34 0.57 0.50 0.19 0.19 0.19 0.14 0.24 0.27 0.92  2.18 0.00 0.00 0.52 0.06 0.00 0.12 0.06 0.05 0.10 0.18 0.00 0.33  2.22 0.17 0.22 0.23 0.03 0.03 0.03 0.17 0.10  2.32 0.10 0.11 0.10 0.05 0.00 0.22 0.25 0.30 0.41 0.30  2.32 0.10 0.11 0.00 0.05 0.00 0.22 0.25 0.30 0.41 0.30  2.32 0.00 0.00 0.00 0.00 0.00 0.00 0.00	2.2 0.65 0.03 0.03 0.05 0.05 0.05 0.76 0.56 0.77 0.05 0.77 0.05 0.77 0.05 0.05 0.07 0.05 0.07 0.05 0.07 0.05 0.07 0.05 0.07 0.05 0.07 0.05 0.07 0.05 0.07 0.05 0.07 0.05 0.07 0.05 0.07 0.05 0.07 0.05 0.07 0.05 0.07 0.05 0.07 0.05 0.07 0.05 0.07 0.05 0.05	100 100 100 100 100 100 100 100 100 100	150   150	a,							900 0 300	· — — — — — — — — — — — — — — — — — — —		
Mean Sea Level.	93 5.81 below B.N.S ach month.	3.14   3.24   3.27   3.92     3.10   3.13   5.00   5.33     3.25   3.03   3.17   3.10     3.26   3.30   3.41   3.30     3.96   3.11   3.35   3.03     3.07   3.09   5.70   3.35     3.03   3.84   5.81   3.43     71.93   72.51   71.79   39.71     6.00   6.04   5.93   5.31     2. 1593,   14.73   ft. below B.V.2     ng on the first of each month.     Year = 5.921   ft.	5.04   6.57   5.50   5.38   5.98   5.99   6.23   6.03   5.00   5.95   5.52   6.17   5.95   6.19   6.13   5.02   6.14   6.24   6.27   5.92   5.18   5.05   6.00   6.52   5.05   6.05   6.10   5.18   6.00   5.33   6.00   5.21   6.00   6.52   5.05   6.05   6.25   6.25   6.20   6.10   6.20   6.21   6.20   6.20   6.20   6.22   6.25   6.20   6.21   6.30   6.21   6.20   6.24   6.25   6.05   6.25   6.25   6.20   6.25   6.22   6.25   6.25   6.25   6.25   6.25   6.25   6.20   6.23   6.04   6.24   6.25   6.25   6.25   6.25   6.25   6.24   6.25   6.25   6.25   6.25   6.25   6.25   6.25   6.25   6.25   6.25   6.25   6.25   6.25   6.26   6.27   6.25   6.25   6.25   6.27   6.25   6.27   6.27   6.25   6.25   6.25   6.25   6.25   6.25   6.28   6.27   6.25   6.25   6.25   6.25   6.25   6.29   6.27   6.25   6.25   6.25   6.25   6.20   6.27   6.25   6.25   6.25   6.25   6.20   6.27   6.25   6.25   6.25   6.25   6.20   6.27   6.25   6.25   6.25   6.25   6.20   6.27   6.25   6.25   6.25   6.20   6.27   6.25   6.25   6.25   6.20   6.27   6.25   6.25   6.20   6.27   6.25   6.25   6.20   6.27   6.25   6.20   6.20   6.27   6.20   6.	5.31	1803   1904   1905   1906   1907   1908   1909   1910   1911   1912	2.27	1003 1904 1905 1506 1507 1908 1909 1910 1911 1912	1800   1801   1802   1803   1807   1808   1808   1810   1811   1812	1800   1800   1801   1802   1807   1808   1807   1810   1811   1812											جيد سنا
Man Sea Level.  1903 1904 1905 1906 1907 1908 1909 1910 191  1905 1904 1905 1906 1907 1908 1909 1910 191  1905 1905 1906 1906 1906 1906 1906 1906 1906 1906	93 5.81 below B.W.S ech mosth.	3.14 5.24 5.27 5.92  6.10 5.13 5.00 5.33  5.25 5.03 5.17 5.10  6.25 6.30 6.41 6.30  5.96 5.11 6.55 5.03  6.07 5.09 5.70 5.65  71.95 72.51 71.79 59.71  6.00 6.04 5.93 5.81  2. 1593, 14.73 ft. below 3.72  ng on the first of each month.  Year # 5.921 ft.	5.92   6.97   5.50   5.38   6.92   5.99   6.23   6.03   5.00   5.95   5.52   6.17   5.95   5.19   6.13   5.02   6.14   6.24   6.27   5.92   5.18   5.05   6.00   6.52   5.05   6.05   6.10   5.18   6.00   5.33   5.55   5.21   6.00   6.52   5.05   6.05   6.10   5.18   6.00   5.33   5.56   5.21   6.00   6.52   5.05   6.05   6.25   6.25   6.20   6.41   6.30   6.23   6.10   6.41   5.16   5.00   6.22   6.25   6.25   6.20   6.41   6.30   6.24   6.75   6.95   6.95   6.95   6.95   6.97   5.00   5.70   6.65   6.24   6.75   6.55   6.65   6.55   6.67   6.67   5.00   5.70   6.65   6.24   6.75   6.55   6.35   6.35   6.39   6.29   6.25   6.64   5.61   6.45   6.24   6.75   6.55   71.20   70.53   70.11   71.95   72.51   71.79   59.71   6.20   6.57   6.52   6.93   5.63   6.84   6.00   6.04   5.93   5.81   6.24   6.35   6.05   6.05   6.05   6.05   6.05   6.04   5.93   5.81   6.25   6.25   6.25   6.25   6.25   6.25   6.25   6.25   6.25   6.26   6.27   6.27   6.25   6.25   6.27   6.25   6.27   6.27   6.27   6.27   6.25   6.05   6.27   6.25   6.27   6.28   6.10   6.24   6.30   6.24   6.30   6.29   6.20   6.21   6.20   6.20   6.20   6.22   6.25   6.26   6.25   6.25   6.25   6.27   6.25   6.25   6.25   6.28   6.20   6.25   6.25   6.20   6.	5.31	1903   1904   1905   1506   1507   1903   1009   1010   1511   1512   1595   1294   1995   1597   5.97	2.02 0.03 0.03 0.03 0.03 0.03 0.05 0.73 0.05 0.57 0.05 0.27 0.05 0.27 0.05 0.27 0.05 0.07 0.03 0.25 0.07 0.03 0.25 0.07 0.03 0.03 0.03 0.03 0.03 0.03 0.03	1903   1904   1905   1906   1907   1908   1609   1910   1911   1912   1998   1998   1998   1909   1910   1911   1912   1998		1900   1900   1910   1901   1907   1908   1907   1910   1911   1912							5 72			5 33	5/162
Man Sea Level.  1903 1904 1905 1906 1907 1908 1909 1910 191  2est Pest Fest Fest Fest Fest Fest Fast Fest 5.55 2.64 5.66 5.90 5.59 5.60 5.78 5.93 5.6	93 5.81 below B.W.S sch mosth. 911 1919 Seet Feet	3.14 5.24 5.27 5.92  6.10 5.13 6.00 5.33  5.25 5.03 5.17 5.10  6.25 6.30 6.41 6.30  6.96 5.11 6.35 5.03  6.07 3.09 5.70 5.63  6.03 5.84 5.81 5.45  71.95 72.51 71.79 69.71  6.00 6.04 5.93 5.81  2. 1693, 14.73 ft. below 8.1.2  ng on the first of each month.  Year = 5.921 ft.  18 1969 1910 1911 1912  18 Feet Feet Feet  50 5.73 5.93 5.80 5.35 5663	### Saa Level.    1803   1904   1905   1506   1507   1903   1909   1910   1911   1919   1921   1924   1925   1904   1905   1506   1900   5.95   1900   5.95   1900   5.95   1900   5.95   1900   5.95   1900   5.95   1900   5.95   1900   5.95   1900   5.95   1900   5.95   1900   5.95   1900   5.95   1900   5.95   1900   1900   1910   1911   1910   1921   1925	5.31	1903   1904   1905   1506   1507   1908   1507   1508	2.5	1903   1904   1905   1906   1907   1908   1909   1910   1911   1919   1928   1928   1928   1928   1929   1929   1928   1928   1928   1929   1929   1928   1928   1928   1928   1929   1929   1928   1928   1929   1929   1928   1928   1929   1929   1928   1928   1929   1929   1928   1928   1929				C+02 ; D+2;	. 5.23		· 22 - 4-17 1	5.45					
Maan Sea Level.    1903   1904   1905   1906   1907   1909   1900   190	93 5.81 below 3.4.2 sch mosth. S11 1919 best Feet 5.60 5.33 5.96 3.43	3.14 5.24 5.27 5.92  6.10 5.13 6.00 5.33  5.25 5.03 5.17 5.10  6.25 6.30 6.41 6.30  6.96 5.11 6.35 5.03  6.07 3.09 5.70 5.63  6.03 5.84 5.81 5.45  71.95 72.51 71.79 59.71  6.00 6.04 5.93 5.81  2. 1593, 14.73 ft. below 3.3.2  ng on the first of each month.  Year = 5.921 ft.  Year = 5.921 ft.  50 5.73 5.93 5.50 5.35 5663  5 5.55 5.57 5.95 5.43 557/	100	5.31	1803   1904   1905   1506   1507   1909   1010   1911   1912	2.1	0.33	1906   1.58   1906   1.58   1906   1907   1905   1.05   1910   1911   1912	1903   1904   1905   1906   1907   1908   1909   1910   1911   1912	.		<del></del>				5.55	5.67	5,96	3,43	55.11
Hear Sea Level.    1803	93 5.81 below 3.4.6 sch mosth.  911 1912 2ee+ Feet 3.60 5.36 5.36 5.37	3.14 5.24 5.27 5.92  6.10 5.13 6.00 5.33  5.25 5.03 5.17 5.10  6.25 6.30 6.41 6.30  6.37 5.09 5.70 5.63  6.07 5.09 5.70 5.63  71.95 72.51 71.79 59.71  6.00 6.04 5.93 5.81  2. 1593, 14.73 ft. below 3.1.2  ng on the first of each month.  Year = 5.921 ft.  Year = 5.921 ft.  13 1969 1910 1911 1912  14 Feet Feet  50 5.73 5.93 5.60 5.35 5663  5 5.55 5.67 5.96 5.43 551/  51 5.72 5.89 5.66 5.67 56.95	### Sea Level.    1903   1904   1905   1506   1507   1903   1909   1910   1911   1919	1903   1904   1905   1906   1907   1909   1910   1911   1912     1903   1904   1905   1906   1907   1909   1910   1911   1912     1903   1904   1905   1906   1907   1908   1909   1900   1907     1903   1904   1905   1906   1907   1908   1909   1900   1907     1903   1904   1905   1906   1907   1908   1909   1900   1907     1903   1904   1905   1906   1907   1908   1909   1900   1907     1903   1904   1905   1906   1907   1908   1909   1900   1907     1903   1904   1905   1906   1907   1908   1908   1908   1908     1908   1908   1908   1908   1908   1908   1908   1908   1908     1908   1908   1908   1908   1908   1908   1908   1908     1908   1908   1908   1908   1908   1908   1908   1908     1908   1908   1908   1908   1908   1908   1908     1908   1908   1908   1908   1908   1908   1908     1908   1908   1908   1908   1908   1908   1908     1908   1908   1908   1908   1908   1908   1908     1908   1908   1908   1908   1908   1908   1908     1908   1908   1908   1908   1908   1908   1908     1908   1908   1908   1908   1908   1908   1908     1908   1908   1908   1908   1908   1908   1908     1908   1908   1908   1908   1908   1908     1908   1908   1908   1908   1908   1908     1908   1908   1908   1908   1908   1908     1908   1908   1908   1908   1908     1908   1908   1908   1908   1908   1908     1908   1908   1908   1908   1908   1908     1908   1908   1908   1908   1908   1908     1908   1908   1908   1908   1908     1908   1908   1908   1908   1908     1908   1908   1908   1908   1908     1908   1908   1908   1908   1908     1908   1908   1908   1908   1908     1908   1908   1908   1908   1908     1908   1908   1908   1908     1908   1908   1908   1908   1908     1908   1908   1908   1908     1908   1908   1908   1908     1908   1908   1908   1908     1908   1908   1908   1908     1908   1908   1908   1908     1908   1908   1908   1908     1908   1908   1908   1908     1908   1908   1908   1908     1908   1908   1908   1908     1908   1908   1908   1908     1908   1908   1908   1908     1908   1908   1	1903   1904   1905   1506   1507   1908   1099   1910   1911   1912     1908   1904   1905   1506   1507   1908   1099   1010   1911   1912     1908   1904   1905   1506   1507   1908   1508   1508   1508   1508   1508   1508   1508   1508     1908   1908   1908   1908   1908   1908   1908   1908   1508   1508     1908   1908   1908   1908   1908   1908   1908   1908   1508     1908   1908   1908   1908   1908   1908   1908   1508   1508     1908   1908   1908   1908   1908   1908   1508   1508     1908   1908   1908   1908   1908   1908   1908   1908     1908   1908   1908   1508   1508   1508   1508   1508   1508     1908   1908   1908   1508   1508   1508   1508   1508     1908   1908   1908   1908   1508   1508   1508     1908   1908   1908   1508   1508   1508   1508     1908   1908   1908   1908   1508   1508   1508     1908   1908   1908   1508   1508   1508   1508     1908   1908   1908   1508   1508   1508   1508     1908   1908   1908   1508   1508   1508   1508     1908   1908   1908   1508   1508   1508   1508     1908   1908   1908   1508   1508   1508     1908   1908   1908   1508   1508   1508   1508     1908   1908   1908   1508   1508   1508     1908   1908   1908   1508   1508   1508     1908   1908   1908   1508   1508   1508     1908   1908   1908   1508   1508   1508     1908   1908   1908   1508   1508   1508     1908   1908   1908   1908   1908   1908   1908     1908   1908   1908   1908   1908   1908   1908     1908   1908   1908   1908   1908   1908   1908     1908   1908   1908   1908   1908   1908   1908     1908   1908   1908   1908   1908     1908   1908   1908   1908   1908   1908   1908     1908   1908   1908   1908   1908   1908     1908   1908   1908   1908   1908     1908   1908   1908   1908   1908   1908     1908   1908   1908   1908   1908     1908   1908   1908   1908   1908     1908   1908   1908   1908   1908     1908   1908   1908   1908   1908     1908   1908   1908   1908   1908     1908   1908   1908   1908   1908     1908   1908   1908   1908   1908     1908   1908	1903   1904   1905   1506   1507   1903   1909   1510   1511   1912	1803   1804   1805   1806   1807   1807   1808   1807   1808   1808   1809		1907   1908   1908   1907   1907   1908   1907   1908   1901   1912	.	5.83 5.69	5.62	5.≟7	5.74	5.61	5.55 5.72	5.67 5.89	5.96 5.36	5,43 5,37	55.11 56.95
Main Sea Level.    1803	93 5.81 below 3.4.5 sch mosth. 911 1912 best Fest 3.96 5.43 5.36 5.37 5.02 5.30	3.14 5.24 5.27 5.92  6.10 5.13 6.00 5.33  6.25 5.03 5.17 5.10  6.25 6.30 6.41 6.30  6.96 5.11 6.35 5.03  6.07 5.09 5.70 5.35  6.03 5.84 5.81 5.43  71.95 72.51 71.79 59.71  6.00 6.04 5.93 5.81  2. 1593, 14.73 ft. below 3.1.2  ng on the first of each month.  Year # 5.921 ft.  13 1909 1910 1911 1912  14 Feet Feet  50 5.73 5.95 5.60 5.35 5663  55.73 5.95 5.36 5.37 56.95  51 5.72 5.89 5.36 5.37 56.95  53 5.79 6.30 5.02 5.30 59.44	1904   0.57   5.50   5.35   5.92   5.99   6.23   6.03   5.00   5.95	1803   1904   1905   1906   1907   1909   1910   1911   1912	1.02	1903   1904   1905   1506   1507   1508   1507   1508	1903   1904   1905   1506   1507   1903   1009   1910   1911   1919   1903   1904   1905   1506   1507   1508   1509   1506   1509	1903   1904   1905   1906   1907   1908   1006   1910   1911   1912	1903   1904   1905   1907   1905   1007   1905   1007   1907   1905   1007		5.83 5.69 6.83 5.69 6.09 6.0	5.62 5.82 5.62	5.≟7 5.94	5.74 5.94	5.61 5.56	5.55 5.72 5.79	5.67 5.69 6.30	5.96 5.36 5.02	5,43 5,37 5,30	55.11 56.95 39.44
Ham Sea Level.   1904 1905 1906 1907 1903 1909 1910 193   Jest Feet Feet Feet Feet Feet Feet Feet F	93 5.81 below 3.4.5 sch mosth.  911 1912 bet Feet 1.60 5.33 5.66 5.67 5.02 5.80 5.05 6.01	3.14   3.24   3.27   5.92     3.10   3.13   3.00   3.33     3.25   3.30   3.41   3.30     3.96   3.11   3.25   3.63     3.03   3.64   3.81   3.43     3.03   3.64   3.81   3.43     71.93   72.51   71.79   59.71     6.00   6.04   5.93   5.81     2.1593, 14.73   ft. below 3.1.2     22   1593, 14.73   ft. below 3.1.2     22   23   3.50   3.35   5.63     3.5.55   5.67   5.96   3.43   5.77     3.5.72   5.89   5.36   5.37   5.69     3.5.73   5.73   5.30   5.30   5.74     3.5.72   5.89   5.36   5.37   5.69     3.5.73   5.13   3.05   3.01   60.33     3.66   3.16   3.29   6.30   5.94   6.30     3.56   3.16   3.29   6.30   5.94   6.30     3.66   3.16   3.29   6.30   5.94   6.30     3.66   3.16   3.29   6.30   5.94   6.30     3.67   3.68   3.60   3.94   6.30     3.66   3.16   3.29   6.30   5.94   6.30     3.67   3.68   3.60   3.94   6.30     3.68   3.16   3.29   6.30   5.94   6.30     3.68   3.16   3.29   6.30   5.94   6.30     3.68   3.16   3.29   6.30   5.94   6.30     3.68   3.16   3.29   6.30   5.94   6.30     3.68   3.16   3.29   6.30   5.94   6.30     3.68   3.16   3.29   6.30   5.94   6.30     3.68   3.16   3.29   6.30   5.94   6.30     3.68   3.16   3.29   6.30   5.94   6.30     3.68   3.68   3.68   3.68     3.68   3.68   3.68   3.68     3.68   3.68   3.68     3.68   3.68   3.68     3.68   3.68   3.68     3.68   3.68   3.68     3.68   3.6	1904   0.57   2.50   5.35   5.92   5.99   6.23   6.03   5.00   5.95	1903   1904   1905   1904   1905   1504   1907   1908   1408   1408   1908	1903   1904   1905   1906   1907   1908   1099   1010   1911   1912     1903   1904   1905   1906   1907   1908   1099   1010   1911   1912     1903   1904   1905   1906   1907   1908   1097   1908   14.73   1.73   1.73   1.73     1904   1905   1906   1907   1908   1.85   1.85   1.85   1.85   1.85     1905   1905   1.85   1.85   1.85   1.85   1.85     1905   1905   1.85   1.85   1.85   1.85     1905   1905   1.85   1.85   1.85     1905   1905   1.85   1.85   1.85     1905   1905   1.85   1.85     1905   1905   1.85   1.85     1905   1905   1.85   1.85     1905   1905   1.85   1.85     1905   1.85   1.85     1905   1.85   1.85     1805   1.85   1.85     1805   1.85   1.85     1805   1.85   1.85     1805   1.85   1.85     1805   1.85   1.85     1805   1.85   1.85     1805   1.85   1.85     1805   1.85   1.85     1805   1.85   1.85     1805   1.85   1.85     1805   1.85   1.85     1805   1.85   1.85     1805   1.85   1.85     1805   1.85   1.85     1805   1.85   1.85     1805   1.85   1.85     1805   1.85     1805   1.85   1.85     1805   1.85   1.85     1805   1.85   1.85     1805   1.85   1.85     1805   1.85   1.85     1805   1.85   1.85     1805   1.85   1.85     1805   1.85   1.85     1805   1.85   1.85     1805   1.85   1.85     1805   1.85   1.85     1805   1.85   1.85     1805   1.85   1.85     1805   1.85   1.85     1805   1.85   1.85     1805   1.85   1.85     1805   1.85     1805   1.85   1.85     1805   1.85   1.85     1805   1.85   1.85     1805   1.85   1.85     1805   1.85   1.85     1805   1.85	1903   1904   1905   1506   1507   1903   1909   1910   1911   1912	1931   1932   1933   1933   1935	1903   1904   1905   1506   1507   1905   100   1910   1911   1912	190		5.53   5.69 6.33   5.69 6.69   6.0 6.57   6.2	5.62 5.82 5.62 5.62	5.≟7 5.94 5.93 5.23	5.74 5.94 5.94 6.21	5.61 5.56 6.04 6.06	5.55 5.72 5.79 6.31	5.67 5.89 6.30 5.13	5.96 5.36 5.02 6.05	5.45 5.57 5.50 6.01 5.94	55.11 56.95 59.44 60.33
######################################	93 5.81 below 3.4.48 sch mosth.  911 1919 bet Feet 5.60 5.38 5.66 5.67 5.02 5.80 5.05 6.01 5.50 5.94 5.04 5.94	3.14   5.24   5.27   5.52     3.10   5.13   6.00   5.33     3.35   3.30   3.41   3.30     5.25   3.30   3.41   3.30     5.26   3.69   5.70   3.35     6.07   3.69   5.70   3.35     71.93   72.51   71.79   59.71     6.00   6.04   5.93   5.51     2. 1593,   14.73   ft. below 3.1.2     22 03 the first of each month.     12 03 the first of each month.     13 1969   1910   1911   1912     14 Feet   Feet     5.921   ft.     15 5.72   5.67   5.96   5.45   55// 5.66     5.79   6.30   5.02   5.50   59.44     6.31   5.13   6.05   6.01   60.33     3.66   5.16   6.29   6.30   5.94   6.07     5.15   6.24   5.04   5.94   6.175     6.16   6.29   6.30   5.94   6.07     6.31   5.13   6.05   6.01   60.33     7.91   6.30   6.30   5.94   6.07     7. 5.15   6.24   5.04   5.94   6.175     6.16   6.29   6.30   5.94   6.75     6.31   5.13   6.05   6.01   60.33     7. 5.15   6.24   5.04   5.94   6.75     6.16   6.29   6.30   5.94   6.75     6.16   6.29   6.30   5.94   6.75     6.16   6.29   6.30   5.94   6.75     6.16   6.29   6.30   5.94   6.75     6.16   6.29   6.30   5.94   6.75     6.16   6.29   6.30   5.94   6.75     6.16   6.29   6.30   5.94   6.75     6.16   6.29   6.30   5.94   6.75     6.16   6.29   6.30   5.94   6.75     6.16   6.29   6.30   5.94   6.75     6.16   6.29   6.30   5.94   6.75     6.16   6.29   6.30   5.94   6.75     6.16   6.29   6.30   5.94   6.75     6.17   6.20   6.20   6.20   6.20     7. 5.15   6.24   5.04   5.94   6.75	5.04	1903   1904   1905   1506   1507   1908   1609   1610   1911   1912	1937   3.23   3.00   3.13   3.29   5.57   3.65   3.52   5.50   3.65   3.35	1903   1904   1905   1506   1507   1908   1909   1910   1911   1912	1982   1983   1984   1985   1984   1985   1984   1985	1903   1904   1905   1906   1907   1908   1001   1910   1911   1912	1-1	· · · · · · · · · · · · · · · · · · ·	5.53 5.65 6.55 5.65 6.69 5.00 6.57 6.2 6.22 6.1	5.62 5.82 5.62 5.05	5.≟7 5.94 5.93 5.23 5.25	5.74 5.94 5.94 6.21 6.09	5.61 5.56 6.04 6.06 6.07	5.55 5.72 5.79 6.31 5.16 5.15	5.57 5.89 6.30 6.30 6.29 6.24	5.96 5.36 5.02 6.05 6.30 5.04	5,43 5,67 5,60 6,01 5,94 5,94	55.11 56.95 59.44 60.3 62.07
	93 5.81 below 3.4.6 sch mosth.  911 1912 bet Feet 3.60 5.36 5.36 5.37 5.02 5.30 5.30 5.94 5.30 5.94 5.19 3.12	3.14   5.24   5.27   5.92     6.10   5.13   6.00   5.33     5.35   5.03   5.17   5.10     6.25   5.30   6.41   6.30     5.96   5.11   6.35   5.03     6.07   3.09   5.70   5.65     6.03   5.84   5.81   5.46     71.95   72.51   71.79   59.71     6.00   6.04   5.93   5.51     2.1593, 14.73 ft. below 3.1.2     ng on the first of each month.     wean = 5.921 ft.     wean = 5.921 ft.     5.72   5.89   5.66   5.67   5.69     5.73   5.73   5.95   5.95   5.91     6.31   6.30   6.02   5.50   59.44     6.31   6.13   6.05   6.01   60.3     6.36   5.16   6.29   6.50   5.94   62.07     7.515   6.24   5.04   5.94   61.15     2.527   5.10   5.19   6.12   62.18     6.31   6.29   6.50   5.94   62.07     6.31   5.13   6.24   5.04   5.94   61.15     6.31   5.13   6.24   5.04   5.94   61.15     6.31   5.13   6.24   5.04   5.94   61.15     6.31   5.13   6.24   5.04   5.94   61.15     6.32   5.57   5.10   5.19   6.12   62.18     6.33   5.10   5.19   6.12   62.18     6.34   5.15   6.24   5.04   5.94   61.15     6.35   5.57   5.10   5.19   6.12   62.18     6.36   6.27   6.50   5.94   62.18     6.37   6.37   5.10   5.19   6.12   62.18     6.38   6.16   6.29   6.50   5.94   62.18     6.39   6.50   5.94   62.18     6.30   6.50   6.50   5.94   62.18     6.31   6.24   5.04   5.94   62.18     6.32   6.35   5.10   5.19   6.12   62.18     6.32   6.35   6.30   5.94   62.18     6.32   6.35   6.35   6.35   6.35     6.32   6.35   6.35   6.35   6.35     6.32   6.32   6.32   6.32   6.32   6.32     6.32   6.32   6.32   6.32   6.32   6.32     6.32   6.32   6.32   6.32   6.32   6.32     6.32   6.32   6.32   6.32   6.32   6.32     6.32   6.32   6.32   6.32   6.32   6.32   6.32     6.32   6.32   6.32   6.32   6.32   6.32   6.32   6.32     6.32   6.32   6.32   6.32   6.32   6.32   6.32   6.32   6.32     7.22   7.	1904   0.97   5.50   5.33   5.92   5.99   6.23   6.03   5.00   5.55	1821   3.53   3.60   5.42   5.71   5.55   5.50   5.53   5.62   5.54     5.35   5.36   5.76   5.53   5.53   5.53   5.51   5.72   5.23   5.63   5.62     5.36   5.77   5.59   5.33   5.59   5.23   6.63   5.00   5.55     5.52   5.17   5.59   5.19   5.10   5.02   5.14   5.24   5.27   5.52     5.18   5.05   5.00   6.22   5.06   6.05   5.10   5.13   6.00   5.33     5.30   5.30   6.22   5.06   6.05   5.10   5.13   6.00   5.33     5.30   5.30   6.22   5.06   6.05   5.25   6.25   6.30   6.41   6.50     5.31   5.00   6.21   5.00   6.22   6.25   6.25   6.30   6.41   6.50     5.32   5.00   5.05   5.23   5.05   5.55   5.56   5.07   5.65     5.32   5.30   5.35   5.35   5.35   5.55   6.07   5.69   5.70   6.65     5.32   5.33   5.35   5.35   5.35   5.35   6.07   5.05   5.65     5.32   5.35   5.35   5.35   5.35   5.35   6.07   5.65   5.70   6.65     5.32   5.35   5.35   5.35   5.35   5.35   6.07   5.65   5.70   6.65     5.32   5.35   5.35   5.35   5.35   5.35   5.25   5.25   71.79   69.71     5.30   70.43   65.55   71.20   70.53   70.11   71.95   72.51   71.79   69.71     5.30   5.57   5.52   5.55   5.35   5.35   5.35   5.57   5.95   5.51     5.42   5.42   5.42   5.45   5.45   5.45   5.45   5.45   5.45     5.53   5.54   5.55   5.55   5.55   5.57   5.95   5.55     5.52   5.29   5.29   5.55   5.45   5.45   5.45   5.45     5.53   5.65   5.62   5.47   5.74   5.61   5.72   5.99   5.65   5.67     5.53   5.65   5.62   5.47   5.74   5.61   5.72   5.99   5.65   5.67     5.53   5.65   5.62   5.47   5.74   5.61   5.72   5.99   5.65   5.67     5.60   5.61   5.62   5.94   5.95   5.55   5.79   5.50   5.79     6.67   6.07   6.01   5.62   6.25   6.21   6.04   6.04   6.31   6.29   6.30   5.94     6.57   6.03   5.22   5.23   6.23   6.21   6.04   6.34   6.24   5.04   5.94     6.57   6.05   5.05   5.25   6.25   6.21   6.05   5.40   5.24   5.04   5.94     6.57   6.05   5.05   5.25   5.25   6.25   6.21   6.07   5.25   6.07   6.07   5.25   6.07   6.07   5.25   6.07   6.07   5.25   6.07   6.07   5.25   6.07   6.07   5.25   6.07   6.07   6.27   6.24	1903   1904   1905   1506   1507   1903   1609   1910   1911   1912	1903   1904   1905   1506   1507   1508   1509	191   191   192   193   193   194   194   194   194   194   194   194   194   194   194   194   194   194   194   194   194   195	1904   1904   1905   1906   1907   1908   1909   1910   1911   1912	100   100	· · · · · · · · · · · · · · · · · · ·	5.53 5.55 5.33 5.6 6.09 5.0 6.57 6.2 6.22 6.1 6.37 5.0	5.62 5.62 5.05 5.05 5.05	5.47 5.94 5.93 5.23 5.25 6.28	5.74 5.94 5.94 6.21 6.09 5.03	5.51 5.56 6.04 6.06 6.07 5.42	5.55 5.72 5.79 6.31 5.16 5.15 5.57	5.57 5.89 6.30 6.30 6.29 6.24	5.96 5.36 6.02 6.05 6.30 5.04 5.19	5.45 5.67 5.60 6.01 5.94 5.94 5.12	55.11 56.95 39.44 60.33 62.07 61.15
Lean Sea Level.   1903   1904   1905   1906   1907   1908   1909   1910   193   1994   1995   1906   1907   1908   1909   1910   193   1994   1995   1995   1996	93 5.81 below 3.4.6 sch mosth.  911 1912 bet Feet 3.60 5.36 5.96 5.43 5.36 5.97 5.02 5.80 5.01 5.94 5.04 5.94 5.46 6.33	3.14   5.24   5.27   5.92     6.10   5.13   6.00   5.33     5.35   5.95   5.17   5.10     6.25   6.30   6.41   6.30     5.36   5.11   6.35   6.03     6.07   5.69   5.70   5.65     71.95   72.51   71.79   59.71     6.00   6.04   5.93   5.51     2.1593, 14.73   ft. below 3.1.2     ng on the first of each month.     year = 5.921   ft.     year = 5.921   ft.     5.72   5.89   5.36   5.37   56.93     5.73   5.73   5.96   5.43   55.71     5.72   5.89   5.36   5.37   56.93     6.31   5.13   6.05   6.01   60.33     6.36   5.16   6.29   6.30   5.94   6.20     7   5.13   6.24   5.04   5.94   6.15     2.7   6.29   6.32   6.46   6.35   6.21     6.29   6.30   5.94   5.94   6.21     6.29   6.30   5.94   5.94   6.15     6.29   6.30   5.94   5.94   6.15     6.29   6.32   6.46   6.35   6.21     6.29   6.32   6.46   6.35   6.23     6.29   6.32   6.46   6.35   6.23     6.29   6.30   5.94   6.21     6.29   6.32   6.46   6.35   6.23     6.29   6.32   6.46   6.35   6.23     6.29   6.30   5.94   6.21     6.29   6.30   5.94   6.21     6.20   6.32   6.46   6.35   6.23     6.21   6.22   6.46   6.35   6.23     6.22   6.25   6.46   6.35   6.23	5.05	1903   1904   1905   1904   1905   1904   1904   1907   1907   1908   1908   1908   1909	1803   1904   1905   1506   1507   1903   1609   1910   1911   1912	10.00	1903   1904   1905   1906   1907   1908   1907   1908   1908   1909	100	100		5.53 5.69 6.55 5.69 6.57 6.2 6.22 6.1 6.37 5.0	5.62 5.62 5.05 5.05 5.05 6.15	5,47 5.94 5.95 5.23 5.25 6.28	5.74 5.94 5.94 6.21 6.09 5.03	5.51 5.56 6.04 6.06 6.07 5.42 6.27	5.55 5.72 5.79 6.31 6.16 5.15 6.57 0.29	5.67 5.69 6.30 6.13 6.29 6.24 5.10	5.96 5.36 6.02 6.05 6.30 5.04 3.19	5.45 5.57 5.50 6.01 5.94 5.54 3.12 6.55	55.11 56.95 59.44 60.33 62.03 61.15 62.18
	93 5.51 below 5.4.5 sch mosth.  911 1912 best Fest 5.60 5.33 5.66 5.67 5.02 5.60 5.05 6.01 5.50 5.94 5.12 5.46 6.33 5.45 6.33	3.14 5.24 5.27 5.92 6.10 5.13 6.00 5.33 5.35 5.93 5.17 5.10 6.25 6.30 6.41 6.30 5.96 5.11 6.35 5.03 6.07 5.09 5.70 5.65 6.03 5.84 5.81 5.45 71.96 72.51 71.79 59.71 6.00 6.04 5.93 5.51 2. 1593, 14.73 ft. below 3.1.2 22 03 the first of each conth.  1	1903   1904   1905   1306   1807   1908   1009   1910   1911   1912	1903   1904   1905   1906   1907   1909   1909   1907   1907   1908	1803   1904   1905   1506   1506   1507   1909   1910   1911   1912	1.0	1903   1904   1905   1904   1905   1908   1909	100	100   100		5.53 5.65 6.35 5.65 6.09 6.0 6.57 6.2 6.22 6.1 6.37 6.0 6.22 5.10	5.62 5.32 5.62 5.05 5.05 5.22 6.15 2.59	5.47 5.94 5.95 5.23 5.25 5.28 6.19 5.31	5.74 5.94 5.94 6.21 6.09 5.03 6.04	5.61 5.56 6.04 6.06 6.07 5.42 6.27 6.37	5.55 5.72 5.79 6.31 6.16 5.15 5.57 6.29 5.96	5.67 5.69 6.30 5.13 6.29 6.24 5.10 6.32 6.13	5.96 5.36 6.02 6.05 6.30 5.19 6.46 5.45	5.45 5.37 5.30 6.01 5.94 5.94 5.12 6.33 6.11	55.11 56.95 59.44 60.33 62.18 62.18 62.18
	93 5.81 below 5.4.5 sch mosth.  911 1912 bet Feet 5.60 5.35 5.65 5.67 5.02 5.60 5.05 6.01 5.30 5.94 5.45 5.12 5.45 5.11 5.77 5.92	3.14 5.24 5.27 5.92  6.10 5.13 6.00 5.33  5.35 5.93 5.17 5.10  6.25 6.30 6.41 6.30  6.96 5.11 6.35 5.03  6.07 3.09 5.70 5.65  6.03 5.84 5.81 5.45  71.96 72.51 71.79 59.71  6.00 6.04 5.93 5.81  2. 1693, 14.73 ft. below 3.1.2  12 on the first of each conth.  12 ven # 5.921 ft.  13 5.72 5.89 5.36 5.37 5.69  15 5.72 5.89 5.36 5.37 5.99  16 6.31 5.13 6.05 6.01 60.33  16 6.31 5.13 6.05 6.01 60.33  16 6.31 5.13 6.05 6.01 60.33  17 5.92 6.32 5.46 5.33  18 6.95 6.13 5.25 5.11 6/84  18 6.95 5.14 5.77 5.92 59.26	1.00	18	1803   1904   1905   1904   1905   1904   1905   1904   1905   1904   1905   1904   1905   1904   1905   1904   1905   1904   1905   1904   1905	1.2	1903   1904   1905   1904   1905	1.00	1.0	r	5.53 5.69 6.35 5.69 6.09 6.00 6.57 6.2 6.22 6.1 6.22 6.1 6.22 5.10 6.20 5.00	5.62 5.32 5.62 5.05 5.05 6.15 2 5.99	5.±7 5.94 5.95 5.23 5.25 6.28 6.19 5.31 5.38	5.74 5.94 5.94 6.21 6.09 5.03 6.04 5.94	5.51 5.56 6.04 6.06 6.07 5.42 6.27 6.37 5.51	5.55 5.72 5.79 6.31 6.31 6.15 6.29 5.96 6.05	5.57 5.89 6.30 5.13 6.29 6.24 5.10 6.32 6.13	5.96 5.36 6.02 6.05 6.30 5.04 5.19 6.46 5.45	5.45 5.67 5.60 6.01 5.94 5.94 5.12 6.55 6.11	55.11 56.95 60.33 62.03 61.15 62.18 62.18 61.84
######################################	93 5.81 below 3.1.2 below 3.1.2 sch costh.  911 1912 best Fest 5.60 5.33 5.66 5.67 5.02 5.30 5.05 6.01 5.30 5.94 5.25 5.11 5.77 5.92 5.35 6.52	3.14   5.24   5.27   5.92     6.10   5.13   6.00   5.33     5.35   5.03   5.17   5.10     6.25   6.30   6.41   6.30     6.37   3.69   5.70   5.63     6.07   3.69   5.70   5.63     6.03   5.64   5.81   5.43     71.95   72.51   71.79   59.71     6.00   6.04   5.93   5.81     2. 1593,   14.73   ft.   below 3.42     ng on the first of each mouth.     Nean = 5.921   ft.     19.09   1910   1911   1912     ng on the first of each mouth.     Nean = 5.921   ft.     19.09   5.70   5.93   5.60   5.35   55/1     15.72   5.89   5.36   5.37   56/93     15.72   5.89   5.36   5.37   56/93     15.73   5.13   6.05   6.01   60.33     16.05   5.16   6.29   6.30   5.94   6.01     17.50   6.30   5.19   6.12   62/9     18.10   6.29   6.30   5.94   6.01     18.10   6.29   6.30   5.94   6.01     18.10   6.29   6.30   5.94   6.01     18.10   6.29   6.30   5.94   6.01     18.10   6.29   6.30   5.94   6.01     18.10   6.29   6.30   5.94   6.01     18.10   6.29   6.30   5.94   6.01     18.10   6.29   6.30   5.94   6.01     18.10   6.29   6.30   5.94   6.01     18.10   6.29   6.30   5.94   6.01     18.10   6.29   6.30   5.94   6.01     18.10   6.29   6.30   5.94   6.01     18.10   6.05   6.15   6.25   6.11   6.84     18.10   6.05   6.15   6.25   6.11   6.84     18.10   6.05   6.15   6.25   6.11   6.84     18.10   6.05   6.15   6.25   6.11   6.84     18.10   6.05   6.15   6.25   6.15   6.25     18.10   6.05   6.15   6.35   6.35   6.25     18.10   6.05   6.15   6.35   6.35   6.35     18.10   6.05   6.15   6.35   6.35   6.35     18.10   6.05   6.15   6.35   6.35   6.35     18.10   6.05   6.15   6.35   6.35   6.35     18.10   6.05   6.35   6.35   6.35   6.35     18.10   6.05   6.35   6.35   6.35   6.35     18.10   6.05   6.35   6.35   6.35   6.35     18.10   6.05   6.35   6.35   6.35   6.35     18.10   6.05   6.35   6.35   6.35   6.35     18.10   6.05   6.35   6.35   6.35   6.35     18.10   6.05   6.35   6.35   6.35   6.35     18.10   6.05   6.05   6.05   6.05   6.05     18.10   6.05   6.05   6.05   6.05   6.05   6.05     18.10   6.05   6.05	5.92 5.17 5.55 5.19 5.35 5.92 5.99 6.23 6.03 5.00 5.95 5.15 5.52 5.17 5.95 5.19 6.25 5.10 6.24 6.27 5.92 5.15 6.16 6.24 6.27 5.92 5.15 6.16 6.24 6.27 5.92 5.15 6.16 6.25 5.00 6.22 5.05 6.05 5.10 5.15 6.00 5.33 6.17 5.10 6.21 5.05 6.00 6.22 5.05 6.25 6.25 6.25 6.30 6.41 6.30 6.21 6.30 6.21 6.30 6.21 6.30 6.41 6.30 6.21 6.30 6.21 6.30 6.41 6.30 6.23 6.30 6.41 6.35 6.20 6.20 6.20 6.20 6.20 6.20 6.20 6.20	1903   1904   1905   1906   1907   1908   1910   1911   1910	1903   1904   1905   1506   1507   1509   1508   1508   1509	1-2	1921   1921   1921   1921   1921   1921   1921   1921   1922   1922   1923   1924   1924   1924   1924   1925   1924   1925	100	100   100	, , , , , , , , , , , , , , , , , , ,	5.53 5.69 6.35 5.69 6.09 6.00 6.57 6.2 6.22 6.1 6.22 6.1 6.22 6.1 6.20 5.00 5.20 5.00	5.62 5.32 5.62 5.05 5.05 5.22 6.15 2.59 . 5.77	5.÷7 5.94 5.95 5.25 5.25 6.28 6.19 5.31 5.38 6.55	5.74 5.94 5.94 6.21 6.09 5.04 5.04 5.09 5.90	5.61 5.56 6.04 6.07 5.42 6.27 6.37 5.64	5.55 5.72 5.79 6.31 6.31 6.15 6.29 5.96 6.05 6.05	5.57 5.89 6.30 5.13 6.29 5.24 5.10 6.22 6.13	5.96 5.36 6.02 6.05 6.30 5.04 5.46 5.45 5.45	5.45 5.50 6.01 5.94 5.94 5.94 6.12 6.55 6.11 5.92	55.11 56.95 60.33 62.07 62.18 62.18 61.84 59.20 57.5
Lagra Sea Level.	93 5.81 below 5.4.6 sch mosth.  911 1919 bet Feet 5.60 5.36 5.96 5.67 5.02 5.60 5.30 5.94 5.46 5.94 5.45 5.12 5.46 5.35 5.45 5.11 5.77 5.92 5.35 5.52	3.14   5.24   5.27   5.92     6.10   5.18   6.00   5.33     5.35   5.03   5.17   5.10     6.25   6.30   6.41   6.30     6.37   5.69   5.70   5.33     6.03   5.64   5.81   5.43     71.95   72.51   71.79   59.71     6.00   6.04   5.93   5.81     2. 1593, 14.73   ft. below 5.72     2. 1593, 14.73   ft. below 5.72     2. 1593, 15.73   ft. below 5.72     3. 00   first of each month.     1. 191   191   191   191     1. 192   193   193   193     3. 5.55   5.57   5.96   5.45   55/1     5.72   5.89   5.36   5.37   5.92     6.31   5.72   5.89   5.36   5.37     6.36   5.79   6.30   6.02   6.30   5.94     6.31   5.13   6.05   6.01   60.33     6.32   6.33   5.13   5.14   5.94   6/1/5     7. 5.15   6.24   5.04   5.94   6/1/5     7. 5.96   6.15   5.45   6.11   6/184     6.16   6.05   5.14   5.77   5.92   57.56     6.04   5.33   5.35   6.52   57.56     6.05   5.14   5.77   5.92   57.56     6.06   5.36   5.35   6.55   6.11   6/184     6.06   5.33   5.35   6.52   57.56     6.06   5.33   5.35   6.52   57.56     6.06   5.33   5.35   6.52   57.56     6.06   5.33   5.35   6.52   57.56     6.06   5.33   5.35   6.52   57.56     6.06   5.33   5.35   6.52   57.56     6.07   5.33   5.35   6.52   57.56     6.06   5.33   5.35   6.52   57.56     6.07   5.33   5.35   6.52   57.56     6.08   5.34   5.77   5.92   57.56     6.09   5.33   5.35   6.52   57.56     6.00   5.33   5.35   6.52   57.56     6.00   5.33   5.35   6.52   57.56     6.00   5.33   5.35   6.52   57.56     6.00   5.33   5.35   6.52   57.56     6.00   5.33   5.35   6.52   57.56     6.00   5.33   5.35   6.52   57.56     6.00   5.33   5.35   6.52   57.56     6.00   5.33   5.35   6.52   57.56     6.00   5.33   5.35   6.52   57.56     6.00   5.33   5.35   6.52   57.56     6.00   5.33   5.35   6.52   57.56     6.00   5.33   5.35   6.52   57.56     6.00   5.33   5.35   6.52   57.56     6.00   5.33   5.35   6.52   57.56     6.00   5.33   5.35   6.52   57.56     6.00   5.33   5.35   6.52   77.62   77.48     7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7.	5.92   6.97   5.90   5.33   5.92   5.99   6.23   6.23   5.92   5.95   5.52   5.17   5.95   5.19   5.13   5.92   5.14   5.24   6.27   5.92   5.18   5.96   5.06   6.22   5.06   5.05   5.05   5.05   5.06   5.13   5.00   5.33   5.23   6.25   6.30   6.41   6.50   5.23   6.23   6.23   6.25   6.20   6.25   6.30   6.41   6.50   5.25   6.23   6.23   6.25   6.25   6.20   6.25   6.20   6.25   6.20   6.25   6.20   6.25   6.25   6.20   6.25   6.20   6.25   6.20   6.25   6.20   6.25   6.20   6.25   6.	1803   1804   1805   1806   1808   1808   1809   1808   1809   1808   1809	1903   1904   1905   1304   1507   1908   1009   1010   1911   1912	1-2   0.20   0.23   0.3   0.25   0.25   0.75   0.50   0.57   0.50     0.37   0.23   0.30   0.42   0.71   0.53   0.35   0.52   0.43     0.35   0.34   0.73   0.43   0.25   0.31   0.72   0.25   0.74     0.35   0.34   0.73   0.43   0.25   0.31   0.72   0.25   0.74     0.35   0.36   0.73   0.43   0.25   0.31   0.72   0.25   0.75     0.35   0.17   0.55   0.19   0.25   0.30   0.03   0.03   0.00   0.95     0.35   0.17   0.55   0.19   0.13   0.90   0.23   0.63   0.00   0.95     0.35   0.17   0.55   0.19   0.12   0.90   0.10   0.13   0.00   0.33     0.40   0.10   0.40   0.12   0.06   0.05   0.10   0.13   0.00   0.33     0.40   0.10   0.41   0.10   0.12   0.25   0.25   0.25   0.30   0.41   0.30     0.30   0.10   0.41   0.10   0.10   0.22   0.25   0.30   0.41   0.30     0.35   0.10   0.41   0.10   0.10   0.10   0.25   0.25   0.30   0.41   0.35     0.30   0.10   0.41   0.13   0.03   0.05   0.34   0.11   0.35   0.03     0.30   0.10   0.41   0.13   0.03   0.05   0.34   0.11   0.35   0.03     0.30   0.10   0.41   0.13   0.03   0.05   0.37   0.09   0.70   0.70     0.30   0.10   0.41   0.13   0.03   0.05   0.07   0.09   0.70   0.70     0.30   0.70   0.70   0.13   0.03   0.05   0.07   0.09   0.70   0.70     0.30   0.70   0.50   0.13   0.03   0.05   0.07   0.09   0.70   0.70     0.30   0.30   0.30   0.10   0.30   0.00   0.00   0.00     0.30   0.30   0.30   0.10   0.30   0.00   0.00   0.00     0.30   0.30   0.30   0.30   0.30   0.30   0.30   0.00     0.30   0.30   0.30   0.30   0.30   0.30   0.30   0.30     0.30   0.30   0.30   0.30   0.30   0.30   0.30     0.30   0.30   0.30   0.30   0.30   0.30   0.30   0.30     0.30   0.30   0.30   0.30   0.30   0.30   0.30     0.30   0.30   0.30   0.30   0.30   0.30   0.30     0.30   0.30   0.30   0.30   0.30   0.30   0.30     0.30   0.30   0.30   0.30   0.30   0.30   0.30     0.30   0.30   0.30   0.30   0.30   0.30   0.30     0.30   0.30   0.30   0.30   0.30   0.30   0.30     0.30   0.30   0.30   0.30   0.30   0.30   0.30     0.30   0.30   0.30   0.30   0.30   0.30   0.30     0.30   0.30   0	12-2   3-25   3-25   3-15	100.   100.	100	F	5.53 5.65 6.09 5.0 6.57 6.2 6.22 6.1 6.37 5.0 6.22 5.10 6.20 5.10 6.20 5.10 70.77	5.62 5.62 5.05 5.05 5.22 5.22 5.35 70.29	5.47 5.94 5.93 5.23 5.25 6.28 6.19 5.31 5.38 6.55 71.62	5.74 5.94 5.94 6.21 6.09 5.03 6.04 5.54 5.99 71.01	5.61 5.56 6.04 6.07 5.42 6.27 6.27 5.64 70.63	5.55 5.72 5.79 6.31 6.16 5.15 6.29 5.96 6.05 6.05	5.57 5.89 6.30 5.13 6.29 6.24 5.10 6.13 6.13 7.002	5.96 5.36 6.02 6.05 6.30 5.04 5.46 5.45 5.33 72.33	5.45 5.57 5.50 6.01 5.94 5.54 6.12 6.35 6.11 5.92 0.52	55.11 56.95 59.44 60.33 62.18 62.18 62.37 61.84 59.26 57.58
	93 5.81 below 5.4.5 ech mosth.  S11 1912 best Feet 6.60 5.35 6.60 5.43 6.60 5.96 6.01 6.50 5.96 6.01 6.50 5.96 6.19 6.12 6.46 6.33 6.45 6.33	3.14   5.24   5.27   5.92     5.10   5.18   6.00   5.33     5.25   5.03   5.17   5.10     6.25   6.50   6.41   6.50     6.27   3.09   5.70   5.65     6.07   3.09   5.70   5.65     6.03   5.64   5.81   5.45     71.95   72.51   71.79   59.71     6.00   6.04   5.93   5.51     2. 1593, 14.73 ft. below 3.1.2     ng on the first of each porth.	5.92   6.97   5.90   5.33   5.92   5.99   6.23   6.23   5.92   5.95   5.52   5.17   5.95   5.19   5.13   5.92   5.14   5.24   6.27   5.92   5.18   5.96   5.06   6.22   5.06   5.05   5.05   5.05   5.06   5.13   5.00   5.33   5.23   6.25   6.30   6.41   6.50   5.23   6.23   6.23   6.25   6.20   6.25   6.30   6.41   6.50   5.25   6.23   6.23   6.25   6.25   6.20   6.25   6.20   6.25   6.20   6.25   6.20   6.25   6.25   6.20   6.25   6.20   6.25   6.20   6.25   6.20   6.25   6.20   6.25   6.	5.31 5.34 5.70 5.35 6.22 5.71 5.35 5.35 5.35 5.35 5.35 5.37 5.34 5.37 5.35 5.24 5.70 5.35 6.23 6.31 5.72 5.25 5.25 5.96 6.27 5.35 6.23 6.31 5.72 5.25 5.96 6.23 6.03 5.00 5.95 5.35 5.26 5.17 5.95 5.35 5.92 5.03 5.02 5.14 5.24 6.27 5.22 5.17 5.95 6.19 5.10 5.02 5.14 5.24 6.27 5.22 5.18 5.05 5.00 6.22 5.06 6.05 6.10 5.18 6.00 5.33 5.25 5.25 5.25 5.25 5.25 5.25 5.25	1.00	1.27	1971   1971   1972   1973   1973   1975	100   100   124   10	100   100   100   100   100   100   100   101	F	5.53 5.69 6.35 5.69 6.09 6.0 6.57 6.2 6.22 6.1 6.37 6.0 6.22 6.1 6.20 5.0 5.22 5.10 72.61 70.7	5.62 5.32 5.62 5.05 5.05 5.22 6.13 5.99 7.77 7.335 7.70.29	5.47 5.94 5.95 5.23 5.25 5.28 6.19 5.31 5.38 6.65 71.32	5.74 5.94 6.21 6.09 5.03 6.04 5.09 5.90 71.01	5.61 5.56 6.04 6.07 5.42 6.27 6.27 5.64 70.63	5.55 5.72 5.79 6.31 6.15 6.15 6.29 5.96 6.05 6.05 6.02	5.67 5.89 6.30 5.13 6.29 6.24 5.10 6.52 6.13 5.14 5.33 70.02	5.96 5.36 6.02 6.05 6.30 5.04 5.19 6.46 3.25 5.35 72.35	5.45 5.37 5.30 6.01 5.94 5.12 6.33 6.11 5.92 6.32 70.22 5.85	55.11 56.95 59.44 60.33 62.18 62.18 62.37 61.84 59.26 57.58

Notice The following hostings are not be written to lines "A" and "B" on encreasive forms, and in the order here given: Corrected RWI, Corrected LWI, Read LW, West Liv, West Title Level, Mean See Level, Mean Corrected Mean Reade, Mean Billy, Nean Ditt, Corrected DRD, therefore DRD, there better, only expected these forms and Mean all Mean all Mean and LW, rescentions. For a series of a vector from put two instances in line "Ma," and the following the mean and the series of the series of substances. The series of the s

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LOAR" AND SEGMENC RERVEY rether Fort Familton, New York. December 30, 1892. Overalian end December 1, 1920. (U.S.U.& G.Survey Hema Tida Laval. 1921 1922 1915 1920 1914 1915 1917 1919 1915 1918 ا دوج Pop t Faet Post +يہدي 722-F22: 323 7127 Feat 5.48 5.63 5.70 (5.64) (5.87)5.95 5.59 5.55 5.57 \_5,Q4\_ J .... 5.76 5,85 5.90 5.94 \*(5.78) (6.12) 5,35 5.49 5.52 5.55  $\nabla_{x_{i}} V_{i}$ 5.93 5.97 5.82 5.87 5.46 5.85 5.75 5.39 (5.79) 5.23 6.04 5.97 6.22 6.25 5.92 5.74 6.27 5.21 5.95 5.83 Apr. 6,25 6.59 5.09 6.37 5.73 5.99 5.07 6.00 5.12 5.36 11. 6.40 5.18 5.18 6.15 6.37 6.13 6.01 | 6.03 | 6.17 **₺.**39 6.25 5.23 6.25 3.15 5.31 6.04 6.17 5.95 o.17 6.24 5.20 6,24 6.140 5.48 5.31 3,27 5.13 5.10 5.59 5.22 A . Z 0.25 6.30 3.50 6.05 6.32 6.15 6.09 6.22 6.24 6.12. Seat 6.42 5.99 5.22 6.27 6.11 6.20 5.96 5.21 5.41 6.25 6.40 6.03 5.94 5.99 5.93 6.15 5.26 6.02 5.98 5.77 No7. 5.84 5.79 5.42 5.73 6.12 5.88 (5.95) 5.95 5.70 5.97 72.23 72.15 73.0% 62.21 74.01 70.52 : 71.73 72.53 71.32 : 72.20 6.02 6.17 6.09 ნ.მი 5.98 6.03 5.93 ; \$0.8 6.01 i 5.20 1913-1920 U.S.Coast and Geodetic Survey. 1921-1922 U.S. Army Engineers. all heights are reduced to staff of May 2, 1693, 14.78 ft. below 9.11.2. Parentheses indicate inferred values. Northly means are for groups of 29 days, peginning on the first of each month. Interpolated from attentic City (MTh oblined by opplying me on MSL-MTh, 1917419194 19:) Mean Saa Level. 1915 1913 1914 1915 1917 1918 1919 1920 1921 1922 P. Lanrcet Pant. ∃e÷t Post Fagt. Faet  $\mathbb{F}^{2}$ ! Feet Boot. 5.96 5.59 (5.92) 5.75 5.60 10.03 5.68 5.72 Jac :5.81 5.95 5.790 5.41 5.53 5.02 5.60 (5.83) 5.88 5.70 1 30 1 5.92 5.95 | 6.04 6.04 5.52 5.29 | 5.32 5.90 .5.2-5.34. 6.26 6.30 5.92 5.01 5.83 6.34 6.01 6.10 Acr. 1.165 - 1.1.2. - 1.2.6.2. 6.31 5.05 | 5.1÷ | 6.05 5.17 5.42 5.78 6.43 6.255 5.C4 6.C3 6.21 6.43 6.23 6.18 6.41 6.48 6.29 6.28 5,19 5.28 5.99 5.23 6.09 6.19 2.13/ 342 3 5.20 5.19 6.34 6.28 6.316.53 6.201 ō.15 6.43 5.15 : 6.19 5.13 6.30 6.25 6.27 6.09 6.37 6.230 6.27 6.15 6.25 5.98 6.45 6.32 ماظان . ú. 6.06 " 5.01 5.00 5.49 3.25 6.106 5.32 .... 5.04 5.98 (329) 2.77 5.48 1 5.93 5.35 6.18 5.03 5.60 i 72.52 : 72.65 72.34 172.93 172.47 75.55 70.55 74.65 6 37 6.14 5.90 <u>6.08</u> 6.04 6.07 6.05 5.22 6.03 all heights are reduced to staff of May 2, 1895. Parentheses indicate inferred values. Corthly means are for groups of 29 days, beginning on the first of न्य द्वारा प्राप्त कराता । स्टब्स ecco month. Irst 1~ = 5 yu (1993-1920) = 15,09 " 5 H holand James 1/2 - 005 /1121-MTL & 11TL

Now.—The following bendings are to be written in lines "A" and "B" on successive forms, and in the order here area; Comment HWL Corrected Low. Mean HW. Mean Low. Mean Edg. Corrected Didg. Co

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Station: For Hamilton, Hy

Fream Lade liver 1935 1126 1937 1932 1935 1130 Jan 4.98 452 507 450 461 440 417 767 482 5.33 I'm 474 511 480 490 512 467 478 469 488 514 No. 494 540 486 460 NOV 474 466 458 5.58 4.72 10: 496 517 406 482 500 480 531 450 5.09 5.13 502 518 573 483 503 518 507 Nov 504 533 506 June 520 519 508 509 514 541 532 504 549 530

July 525 508 515 516 514 532 509 324 554 535 Aug 524 526 516 542 543 504 520 539 Oct. 522 521 521 4 91 543 528 540 532 530 5.5L 526 531 502 500 548 534 533 Nov. 534 4881 436 484 512 489 502 49! 502 560 486 518 473 424 506 5990 6163 59 99 5951 60 29 Dec. 497 441 419 486 306 1074-60 09 63 10 63 07 Mean 511 506 501 449 514 503 496 502 526 Rowans: Montaly means for means 1927 and 1929 are from C. & G. Sarrey observe lors and are for calendar months. Means for other years on this sheet are From U.S. Egineers observations and are for 29 gay groups. All neans are referred to a datum 5 feet helow ist on 15.86 feet below 3.1. 2. + here for For Wadowath downations. The haif The level 38 400 (1593-1920) = 5.45 feet at 1.593-1911 Mean 1 Levels 150 1927 1928 4 44 4.64 4.73 ..5..17. 503 4.59 ...5.23 5.26 5.17 553 506 515 494 5.24 Dec. S .m. 67 10 60 62 518' . 505 11016 MTL + 0.03 = MSL though 1922

Nort —The following bending are to be written in lines "A" and "B" enisted edite forms, and in the order here divent Corrected LWI, Consected LWI, Mend EW, Mend LW, Mend LW, Mend EW, Mend LW, Mend EW, Mend DEQ, Consected DEQ, Conse

TIDES: MONTHLY MEANS OF SOR Level Station: Whitehall St. Wharf, NY.C.

Latitude 40° 42'0 Longitude 74° 94'7

Observations begin ..... May 24, 1720

Observations end 37

which is \_\_\_\_ 22.06 \_\_\_\_ feet below B.M. 748. \_\_\_\_

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والمعادس بعدي والمرابع		 	.,							40 111 0,11 ,2			,,,,,	FOR	YEAR	· ror	A1.	. 10
*	YEAR	JAN.	Fen.	Ман,	Arr.	May	JUNE 	JULY	Αυα.	Sept.	Ocr.	Nov.	Dre.	Sum	MEAN	SUM	MEAN	17 Year Mea
	7920	185	<del></del>				5.57	5.30	5.45	5:43	5:42	3.32	3:24		2.3		er 2/3	
(1)	1921	491	6.31	5,04	5.37	5.74	5.44	6:43	- 5:31	5143	5,12	6:37	(497)	1.3.44	5.29	5.29	.5.29	
.¥ (2)	1922	4.68	4.89	4.99	5.09	5.22	5.52	5.34	<i>5</i> .32	5.38	5.30	5.12	4 ن ت	61.69	(5.14)	10.11-3	522	
(3)	1923	5.02	4.83	4.92	5.19	5.18	5.25	5.28	5.28	5.26	5.35	5.40	5.00	61.96	(5-15)	15.60	5.20	i.
(4)	1924	4.61	5.19	5.47	5.21	5.48	5.34	5,23	5.40	5.34	5.29	5.07	4.62	62.25	5.19	20.79		
. (5)	1925	5.19	4.41	4.78	5.14	5.18	5.20	5.26	5.26	5.42	5.08	4.99	4.81	61.22	5.10	30.98		<b>?</b>
(0)	1926	4.57	5.00	4.69	494	5.14	5,20	5.25	5,49	5.50	5.34	4.97	5.01	61.10	5.09 1			ii.
(7)	1927	4.61	5.16	5.17	5710	5.30	(5.32)	(5.22)	ř	5.36	5.40	5.19	5.16	62.50	5.21	36.19		•
(8)	1128	4.53	4.72	4.88	4.94	57.24	5:35	5:33	5:49	5.50	5.08	4.86	4.71	60.63	5.05	41.24		
· , (9)	1927	4.34	5:03	4.99	5:51	4.98	5:39	5:2/	3:28	5:39	6.12	5.10	4.90	61.24	5-10	46.34 51.40		ā
(10)	1930	4.85	4.77	4.80	4.85	5.05	5.06	5:23	57.38	2:32	5:49	4.86	5.01	60.77	3.06	56.61		
(ii)	1431	4.77	4.86	5:57	5,10	5723	5:45	5.50	5:53	5143	5:30	4.96	4.83	62.55	5.21	61.81.		
(12)	1932	57/6	5:08	475	5706	5708	5730	6:35	5:34	5:57	3:20	5:55	3:06	62,44	5,20	67.11.		•
(13)	1933	5.30	4.71	3,00	5.43	5:40	5.48	5.54	57.64	5.67	5:45	5:02	4.94	63.58	5.30	72.26		•
(14)	1934	4,87	4.56	4.89	5.30	5.16	5.40	5.37	5.37	5.56	5.39	5:10	4.84	61.81	5.15	77.55		
(15)	1935	4.89	4.78	5.02	5.49	5.19	5:50	5.42	5.49	5.45	5:32	5780	5.13	1	5.29	82.77		
(16)	1936	4.81	4.94	5.42	5.13	5.07	5.41	5.55	5.34	5.41	5.40	4.94	5.04	62.61	5.72	88.10		•
(17)	1937	5.19	5.37	4.87	5.48	5.40	5.47	5.54	5.36	5.52	5.43	5.25	3.11	64.01	5.33			
(18)	1938	5.35	5,23	5.26	5.24	5.42	5.42	5.37	5.47	5.55	5.77	5.30	5.23	64.61	5.38	93.48		5.20
(19)	1939	5.06	5.11	5.28	5.39	5.56	5.59	5.53	5.71	5.63	5.47	5.3/	4.99	64.63	5,39		5.21	5.21
(20)	19.40	4.87	5.46	5.03	5.41	5.71	5.59	5.44	5.56	5.59	5.57	5.18	5.23	16 -	5.39			5.22
(21)	1941	5.35	4.97	4.90	5.45	5.36	5.55	5.51	5.48	5.44	5.33	5.20	5.13	63.67	5.31	115.00	5.22	. 15.23
j (22)	1972	5.10	4.71	5:43	5.43	5.47	5.68	5.61	5.62	5.78	5.70	5,37	5.04	65,14	5,1/3	120.36		5.24
(23)	1943	5.13	4.96	5.16	5.20	5.40	5.54	5.55	5.67	5.70	5.76	57.39	4.83	64.27	5736	125.78		5.26
(21)	1944	5.12	4.99	5.27	5.42	5.38	5.63	5.5Y	5.56	5.59	5.60	5.88	4.47	64.99	5712	(A) (A)		5.28
(25)	1945	4.91	5.03	5.45	5.35	5.71	5.65	5.68	5.66	5.75	. 5.59	5.77	5.45	66.20	5.52	131.30	5.26	5.29
Jan. (26)	1946	5.15	5.03	5.46	5.48	5.57	5.56	5.59	5:77	5.72.	57/	5.46	5.04	65.56	5.46	136.76	12	S. 31
(27)	1947	5.13	4.84	5.18	5:40	5.56	5.73	5.60	5:72	3.68.	5.52	5.85	4.90	65:11	3.43	142.19	5.27	. 5.341
(28)	1948	5.10	5.28	5:48	5.35	5.68	5.77	5.46	5.61	5.66	5.91	5.58	5.54	66.62	5.55	147.74	5.28	5.36.
1 (29)	1949	5.43	5.37	5.11	5.42	5.56	5.48	5.58	5.67	5.67	5.77	5.50	4.71	65,34	5.45	153.19	528 5.28	5.36
(30)	1950	5,01	5,18	4.74	5.27	5.30	5.30	5.36	5.53	5.69	5.6/	5.69	552	44.20	5.35	158.54	3.40	* *****
المراكب والمنسوب	7,000		7	6 72	* Y7	5.91	5.36	3	3.71 3	1.62	5171	31.41	5.15		5 - 2 9	F1 - 1 ' '		

922-1926 .. interpolated from half-tide level values

NT OF COMMERCE D GEORIES SURVEY August 1933	:	TIDES: MONTHLY I	MEANS OFSZ	
Station:	Battery	NYC	Latitude	Longitude
	- 1			***************************************
Datam is			which is	_ fect below R. M

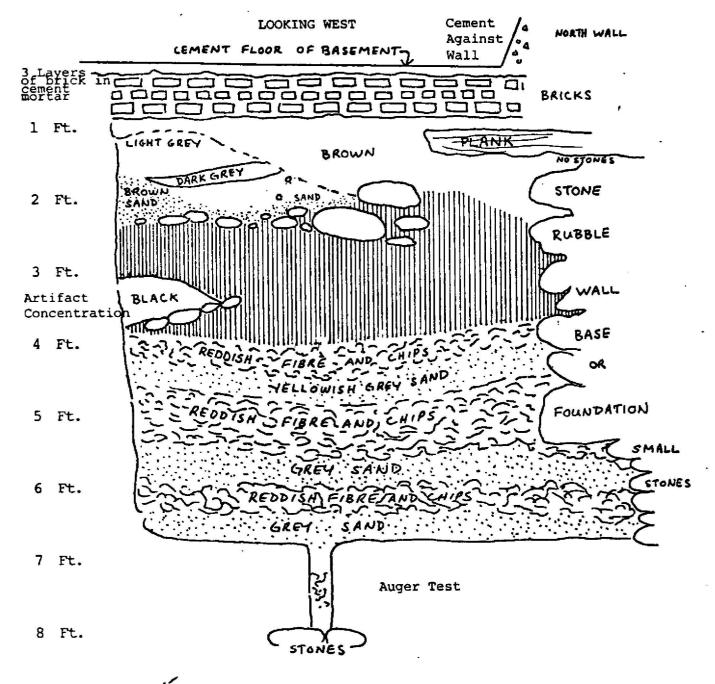
Linear quantities in feet ...... Time in hours .....

YEAR JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC. SUPER S	ir Mesu
VEAR JAN.   FRII.   MAR.   APR.   MAY   JUNE   JULY   AUG.   SEPT.   OCT.   NOV.   DEC.	
SUM MEAN SUM MEAN 19- 76	•
3(1) 1951 5.16 5.19 5.76 5.51 5.72 5.86 5.55 5.71 5.65 5.78 5.46 5.15 66.50 5.54 164.08 5.29	5.38
(2) 1952 5.33 5.31 8.49 5.55 5.71 5.63 5.49 5.57 5.72 5.38 5.57 5.69 66.44 5.54 169.62 5.30	5.40
(1) 1053 545 505 549 555 580 554 559 567 568 574 566 506 66.48 554 175.16 5.31	5.42
(1) 1004 525 532 512 535 578 572 563 556 5.65 5.65 5.43 5.15 65.6/ 5.47 180.63 5.31	5.43
(5) 1955 522 516 512 580 554 575 567 591 570 5.98 5.56 5.03 66.49 5.54 186.17 5.32	5.44
163 1656 555 518 552 5.67 5.44 5.63 5.70 5.88 5.87 5.88 5.59 5.40 67.33 5.61 191.78 5.33	5.46
17 1000 1464 531 559 523 552 552 555 5.60 5.58 5.76 5.44 5.27 65.36 5.45 197.23 5.33	5.46
(8) 1958 (5.56) (5.30) (602) (5.93) 5.60 5.69 5.78 5.79 5.87 5.99 5.42 5.15 68.10 5.68 202.91 5.34	5.48
(0) 1959 5.04 4.95 5.26 5.66 5.26 5.61 5.52 5.66 5.69 5.82 5.47 5.59 65.53 5.46 208.37 5.34	5.48
14 (11) 10/01 5/2+ 524 546 558 573 589 575 590 6.03 5.84 5.52 5.17 67.83 5.65 214.07 5.35	
110 1961 6.17 6.58 5.23 5.80 5.68 5.59 5.76 5.44 5.25 5.64 5.32 5.34 66.78 5.56 219.58 5.36	
1131 1131 11 52 6 40 5 41 5 38 5 63 570 5 64 5 63 5 554 5 66 5 08 65 48 5 46 630 74 3 31	
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" 150 CHA CAL FOO CAY F. FO 5.75 5.75 5.60 5.77 5.66 5.57 5.58 67.74 5.60 241.79 5.38	
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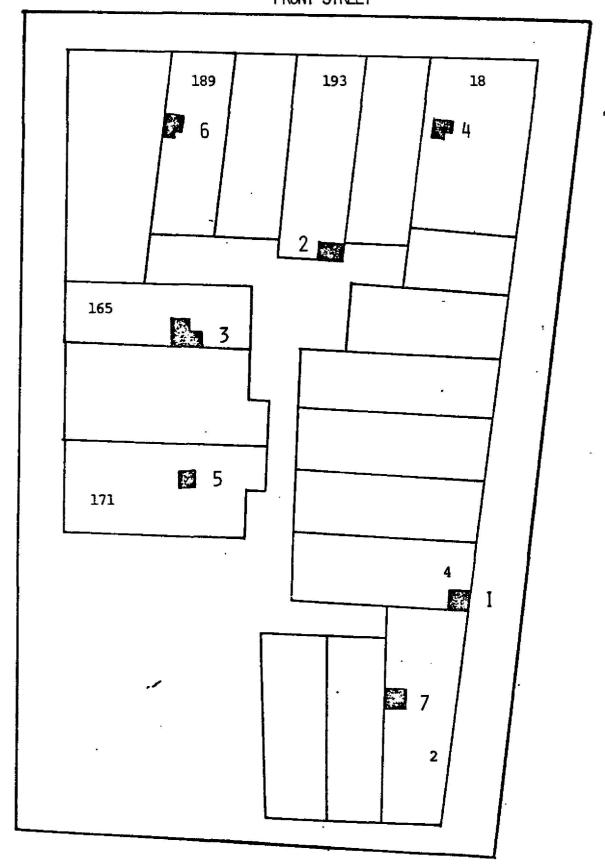
# STRATIGRAPHIC SECTION TEST PIT # 2

# 193 FRONT STREET



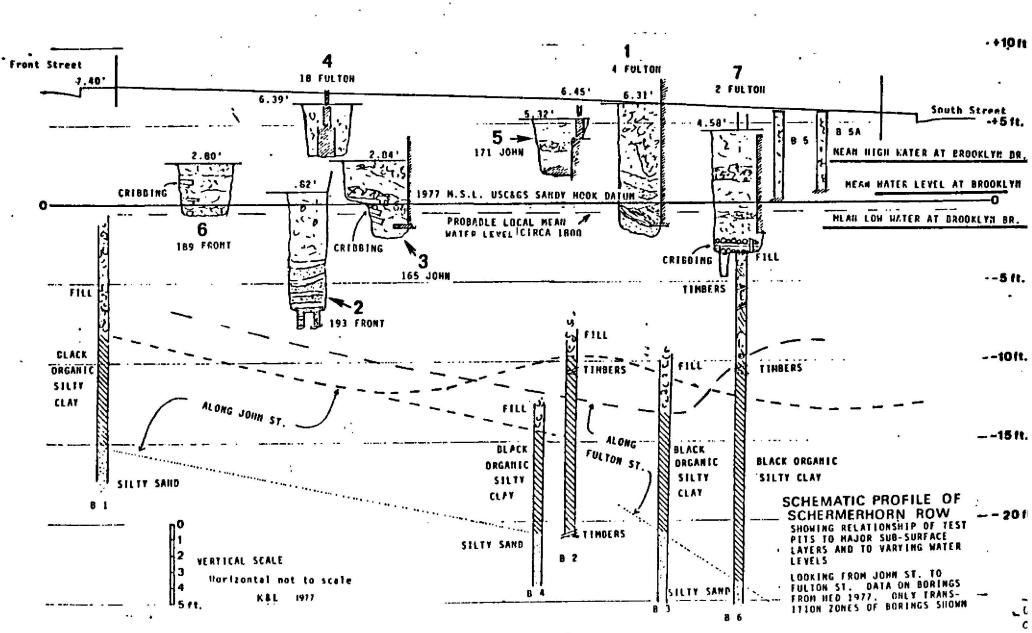
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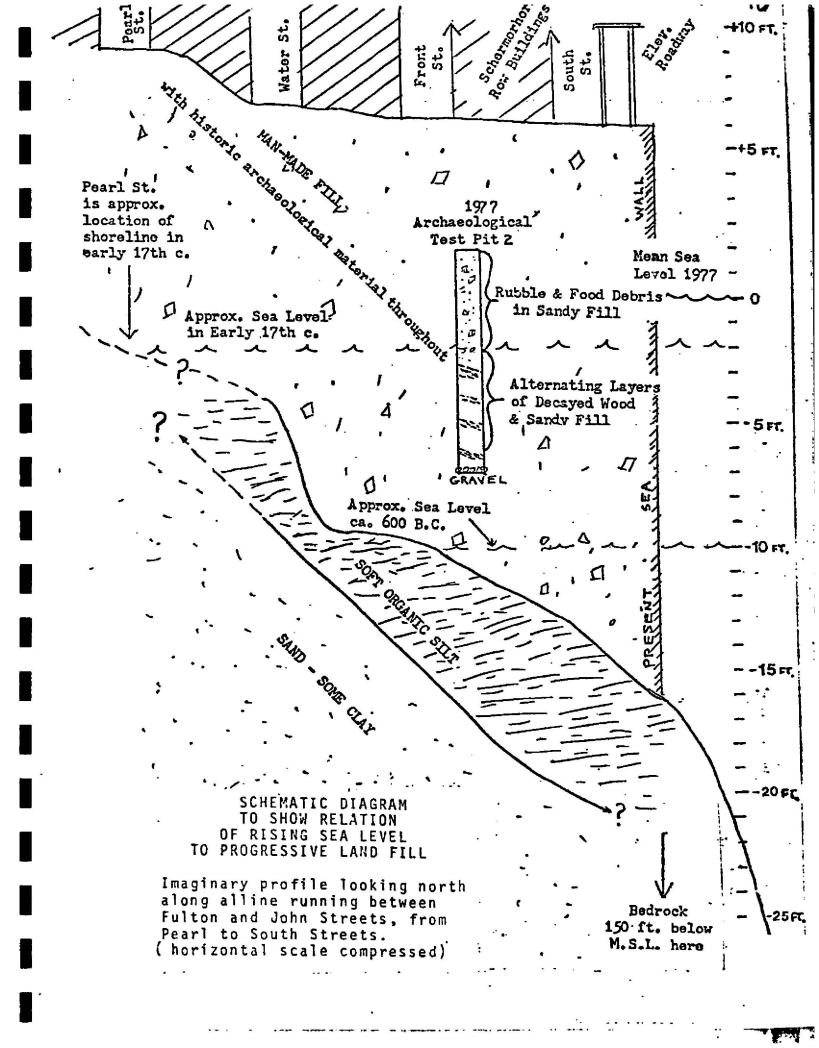
# SCHERMERHORN ROW BLOCK LOCATION OF 1977 TESTS FRONT STREET



SOUTH STREET

FULTON STREET





- Abbott, R. Tucker
  1962 <u>Seashells of the World</u>. New York: Golden Press
- Atkinson, David and Adrian Oswald
  1969 London Clay Tobacco Pipes"

  Archaeological Association
  171 -227.

  Atkinson, David and Adrian Oswald

  Journal of British

  . vol. 32 (3rd Series)
- Baiter, Richard
  1975 Manhattan Waterfront . City of New York
  - Booth, Mary Louise 1867 <u>History of the City of New York.</u>
- Brose, David S.
  1967 "The Custer Road Dump Site, An exercise in Victorian Archaeology". The Michigan Archaeologist, Vol. 13, No. 2.
- Cornwall, I.W.

  1956 Bones for the Archaeologist . London: Phornix House Ltd.
- Cotter, John L.

  1958 Archeological Excavations at Jamestown Colonial
  National Park and Jamestown National Historic Site
  Virginia. Archeological Research Series Number Four,
  National Park Service, U.S. Department of the Interior:
  Washington D.C.
- Deetz, James
  1967 <u>Invitation to Archaeology</u>. The Natural History Press,
  Garden City, New York.
- de Jonge, C.H.
  1971 <u>Dutch Tiles</u>. Praeger Publishers Inc.
  - de Noyelles, Daniel
    1974 <u>Brick Brands and Manufacturers of the Hudson River</u>
    Valley and the <u>Metropolitan New York City Market</u>.
  - Emery, K. O., and Louis E. Garrison 1967 "Sea Levels 7,000 to 20,000 Years Ago" <u>Science</u>, Vol. 157 (No. 3789) pp. 684-687.
  - R.L. Wigley, Alexandr Bartlett, Meyer Rubin, and E. S. Barghoorn. "Freshwater Peat on the Continental Shelf" Science, Vol. 158 (No. 3806) 1301-1307.
  - Hallowell, Christopher L.
    1974 "Disappearance of the Historic Ship <u>Tijger</u>" in <u>Natural History</u>, Vol. LXXXIII, No. 7, pp 12-29.
- Hed, Alex 1977 Study of Foundation Conditions at Schermerhorn Row Block. Final Report . URS/Madigan - Praeger, Inc.

Huey, Paul R.

- 1969 a "Archeological Site in New York City" Memorandum of 25 Aug. 1969 to Mark Lawton
- 1969 b "Old Slip" Typescript report and illustrations of September 1969 artifact recovery.

Humphrey, Richard V.

1969 "Clay Pipes from Old Sacremento" <u>Historical Archaeology</u> Vol. 3, pp 12-33.

Jeremy, John David, ed.

1970 Henry Wansey and His American Journal, 1794. American Philosophical Society, Independence Square, Phila. (Memoirs, Vol. 82)

Kazimiroff, Theodore

n.d. "Special Announcement, December 28th, 1969" from the Office of the President of the Borough of the Bronx, Borough Historian" regarding "The Archaeologic excavation of the buried bed of the East River at Coenties and Old Slip and from Water to South Street".

Kouwenhaven, John A.

1953 The Columbia Historical Portrait of New York. Garden City, N.Y. Doubleday & Company, Inc.

Kraft, John C.

1971 "Sedimentary Facies Patterns and Geologic History of a Holocene Marine Transgression" Geological Society of America Bulletin Vol. 82 (No. 8) pp 2131-2158.

and Ronald A. Thomas

1976 "Early Man at Holly Oak, Delaware". <u>Science</u> Vol. 192 (No. 4241) pp 756 - 761.

Luke, Myron H.

1953 "Character of the New York Business Community, 1800-1810". New York History, Vol. 34.

Mc Kee, Harley J.

Introduction to Early American Masonry:
Stone, Brick, Mortar and Plaster . National
Trust/Columbia University Series on the Technology
of Early American Buildings, No.1. National Trust
for Historic Preservation in the United STates,
Washington, D.C.

Morris, Percy A.

1973 A Field Guide to Shells of the Atlantic Coasts and the West Indies. Houghton Mifflin Company: Boston).

Noel Hume, Ivor

- 1962 a A Guide to Artifacts of Colonial America Alfred A. Knopf: New York).
- 1969 b "Pottery and Porcelain in Colonial Williamsburg's Archaeological Collections" Colonial Williamsburg Archaeological Series No. 2.
- 1974 All the Best Rubbish . Harper & Row.

Olsen, Stanley J.

1973 Mammal Remains from Archaeological Sites: Part 1
Southeastern and Southwestern United States.
Cambridge Mass. The Peabody Museum.

Newman, Walter W., David H. Thurber, Harvey S. Zeiss, Allan Rokach, & Lillian Musich

1969 "Late Quaternary Geology of the Hudson River Estuary A Preliminary Report" <u>Transactions of the New York Academy of Sciences</u>. Series 2, Vol. 31, No. 5, pp 548 570.

Rath, Frederick L. Jr.

Schermerhorn Row Block, Preliminary Historic
Structures Report (A Synopsis). Preservation
and Restoration Pffice of Parks and Recreation. Empire State Plaza, Albany, N.Y. 12238.

Redfield, Alfred C.

1967 "Post Glacial Change in Sea Level in the Western North Atlantic Ocean" Science Vol. 157 (No. 3789) pp. 687 -692.

Riley, John J.

1958 A History of the American Soft Drink Industy Bottled Carbonated Beverages 1807 - 1957. American
Bottlers of Carbonated Beverages, Washington D.C.

Ritchie, William A.

1969 The Archaeology of New York State. Garden City, N.Y. The Natural History Press.

Rosebrock, Ellen Fletcher

- 1974 Walking Around in South Street . Discoveries in New York's Old Shipping District. New York: South Street Seaport Museum.
- 7. 1975 Counting House Days in South Street: New York's early Brick Seaport Buildings, New York: South Street Seaport Museum.

Salwen, Bert

1973 "Archeelogy in Megalopolis" in Charles L. Redman (ed.)
Research and Theory in Cutrent Archeology. John Wiley
& Sons, New York.

∠, Sarah Bridges & Joel Klein

"An Archaeological Reconnaissance at the Pieter Claesen Wyckoff House, Kings County, New York." New York State Archaeological Association, <u>The Bulletin</u>, No. 61, July 1974.