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1981

ARCHAEOLOGICAL MONITORING OF TEST TRENCH EXCAVATIONS AT SAILORS' SNUG HARBOR, STATEN ISLAND, NEW YORK

1981

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ARCHAEOLOGICAL MONITORING OF TEST TRENCH EXCAVATIONS AT SAILORS' SNUG HARBOR

PURPOSE OF EXCAVATION: To check the structural stability of footings in buildings where adaptive re-use would cause an increase in load bearing capacity.

DURATION OF EXCAVATION: July 27, 1981 - July 28, 1981

EXCAVATORS:

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Arthur Rothman
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ARCHAEOLOGIST:

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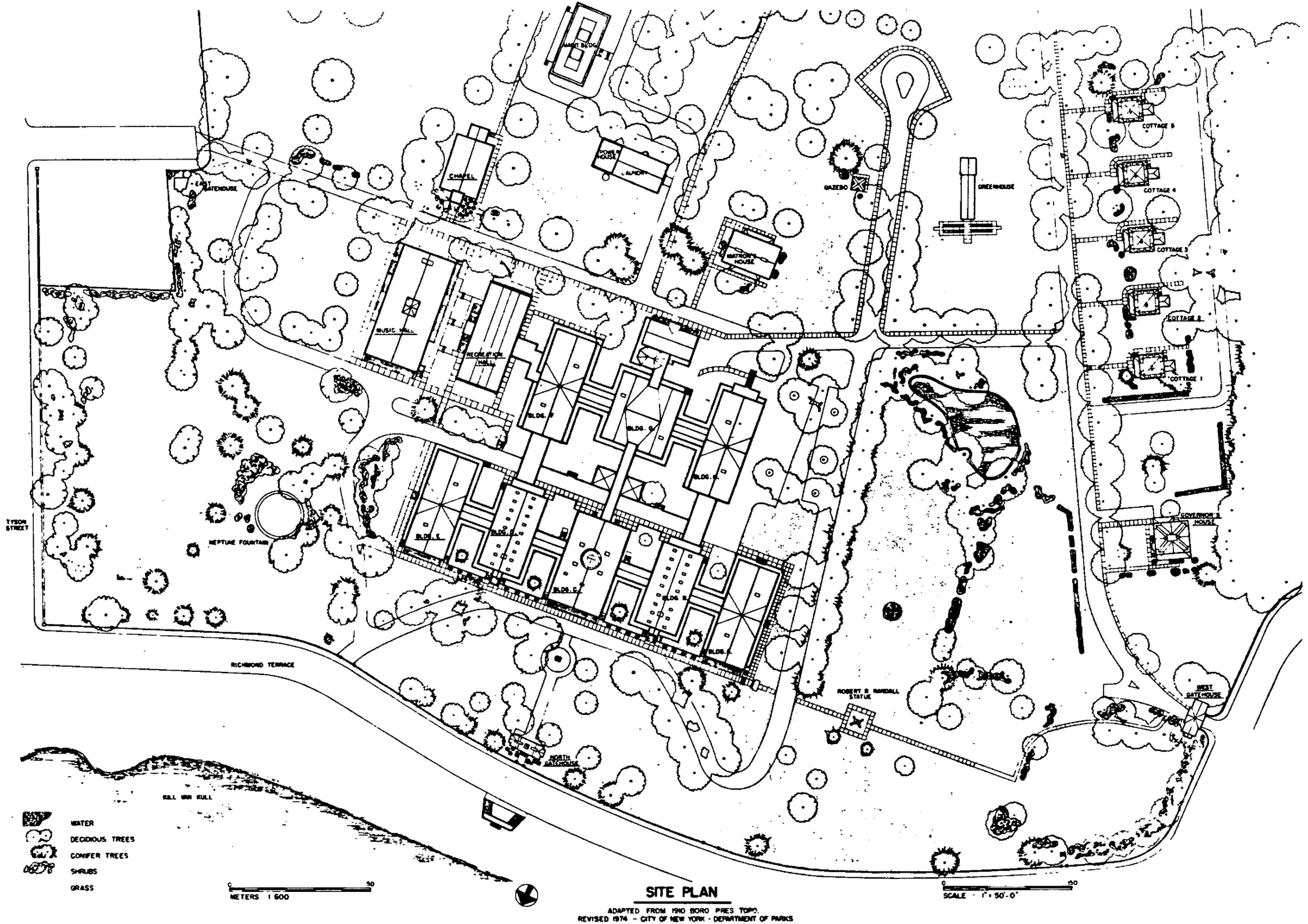
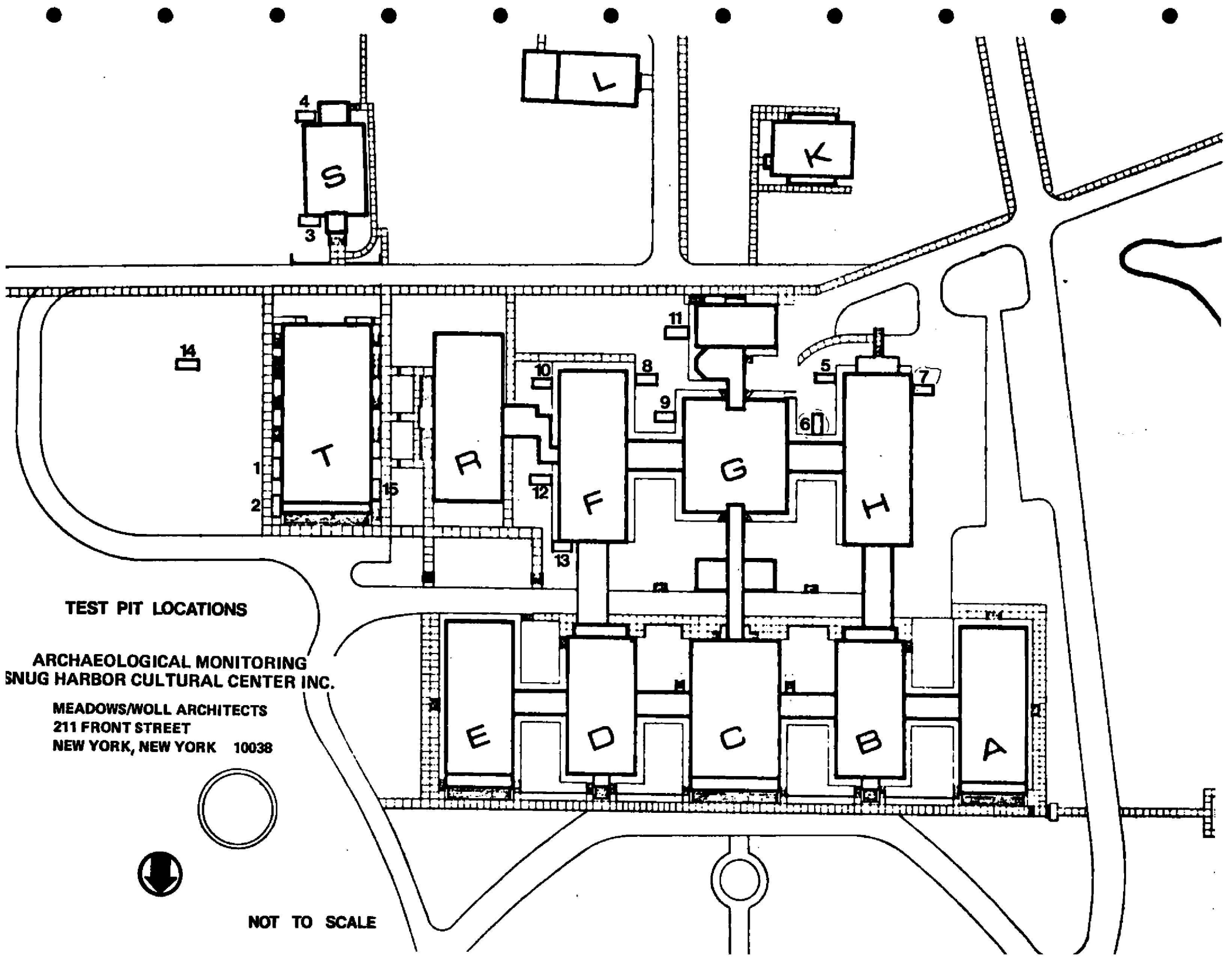
METHOD OF EXCAVATION: Backhoe Trenching



SITE PLAN

ADAPTED FROM 1910 BORO PRES TOPO.
REVISED 1974 - CITY OF NEW YORK - DEPARTMENT OF PARKS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TEST PIT LOCATIONS
ARCHAEOLOGICAL MONITORING
SNUG HARBOR CULTURAL CENTER INC.
MEADOWS/WOLL ARCHITECTS
211 FRONT STREET
NEW YORK, NEW YORK 10038
NOT TO SCALE

Fifteen (15) test pits were dug on the grounds of Sailors' Snug Harbor in the area of the Music Hall, Chapel, Buildings F, G, and H, and on the site of the Randall Memorial Church. All test pits were dug by backhoe trenching against the building foundations and/or retaining walls of areas encircling the buildings. The only exception to this is Test Pit #14 which was dug on the site of the Memorial Church. The average size of the test pits was 6' in length, 3.5' in width, and 7' in depth. All excavation was monitored and stratigraphy recorded. Artifacts were picked out from the back dirt, recorded and bagged by unit provenience.

On the first day of testing, 11 units were dug. Due to safety considerations all the test pits had to be backfilled at the end of the day.The time limitations placed on the archaeological monitoring and reporting did not allow for the recording of all test pit walls. Of the test pits that had some distinctive stratigraphy, one wall was recorded and the profile is included in the report. Photographic documentation was also completed.

The backhoe excavated earth until the footing was exposed. This was an average of 7' in depth. Some of the test pits were deeper, up to 9'. Due to the great depth and steepness of the walls, the recording of stratigraphy was very difficult and unsafe. Due to the location of the test pits, most walls lacked stratigraphy. All the tests were in areas that had been backfilled when the walls were built. Most of the stratigraphy consists of an approximately 8" thick layer of gray-brown silty topsoil, an orange-brown silt layer of approximately 12" and then many feet of homogeneous fill material such as silt mixed with ash, cinders, brick rubble and boulders. Due to the poor documentation of the building process at Snug Harbor, it is impossible to determine if the fill is even original to the Harbor or if it was brought in from elsewhere.

The test pits were excavated at the following locations:

1) Music Hall, mid-way of east elevation
2) Music Hall, northeast corner
3) Chapel, northeast corner
4) Chapel, southeast corner
5) Bldg. H retaining wall, southeast corner
6) Hyphen GH retaining wall - midway of south elevation
7) Bldg. H - southwest corner
8) Bldg. G retaining wall - southeast corner
9) Bldg. F retaining wall - southwest corner
10) Bldg. F retaining wall - southeast corner
11) Bldg. G retaining wall - midway of east elevation
12) Intersection (northeast) of F and FR hyphen retaining wall

13) Bldg. F - northeast corner
14) Randall Memorial Church area - 60' east of Music Hall, 66' north of the roadway
15) Music Hall - northwest corner

DOCUMENTATION OF CONSTRUCTION, ALTERATIONS, AND CHANGE OF USE IN THE BUILDINGS AFFECTED BY THE TESTING (TAKEN FROM THE HISTORIC STRUCTURES REPORT)

Sailors' Snug Harbor was the first naval hospital and retirement home founded in America. The first building, begun in 1831, was designed by Minard Lafever and was followed by many more as the institution grew. Today Snug Harbor is a National Historical Landmark and considered to be the finest group of Greek Revival buildings in the United States.

MUSIC HALL

Designed by Robert W. Gibson, a New York architect, the construction of the building was begun in 1890 and completed in 1892. In 1894 a permanent storm vestibule was built at the entrance. A few years later iron staircases were installed on the exterior. There is no other record of alterations to this building or the surrounding area.

CHAPEL

Designed by James Solomon, the cornerstone was laid in 1855 and the building completed in 1856. In 1893, after completion of the Randall Memorial Church, the chapel was moved to the rear and eastward about 200' to its present location behind the Music Hall.

BUILDING G

Designed and constructed by James Solomon, this building was begun in 1854 and was completed in the fall of 1855. The basement contained a dining hall, kitchen and office of the steward, with dormitory space on the second and third floors. The building was constructed on the site of the 1846 kitchen,

which was demolished to accomodate the new building. In 1872, the areaway around the building was reconstructed. "The area around the dining hall basement was to be taken down and rebuilt with stone." (Historic Structures Report p. 4 16/2)

In 1876 a new kitchen was constructed south of Building G. The two story building housed the kitchen on the ground floor and a clothing storeroom on the upper floor. In 1889 a new office for the Steward was constructed along the passageway connecting the kitchen and the south side of the dining hall.

In 1949, Harvey Corbett, an architect from New York was retained to remodel part of Building G to serve as the Hospital for the Harbor.

BUILDING H

This building was constructed in 1876 as a dormitory, and was modernized as the infirmary when the hospital was demolished in 1951.

RANDALL MEMORIAL CHURCH SITE

Designed by Robert W. Gibson, the church was constructed in the years 1890-1892. The interior was destroyed by fire on Christmas Eve in 1906 and was restored by Gibson in 1907. The church was demolished in 1952. The church had a full basement which was filled with building material and leveled when the building was destroyed.

TEST PIT DESCRIPTIONS & PROFILES

TEST PIT #1

This test pit is located at the east elevation of the Music Hall, 15' north of the first floor entrance. Below the grass root mat is a topsoil layer of dark-grayish brown organic silty loam with fine roots to a depth of 12". Below this is a light brown silt layer extending to 20". The rest of the soil appears to be fill without stratigraphy but with reddish brown mottling. The backdirt is fairly clean with some broken brick appearing from the bottom of the pit at 7'.

TEST PIT #2

This test pit is located at the northeast corner of the Music Hall, immediately against the monumental stairs, parallel and tangent to the east elevation. Below the turf is a grayish-brown organic silty loam topsoil layer with roots extending 12"-14". Below this is a layer of orange-brown clayey silt with some inclusions of fine sand extending to 3'2". This is followed by a dark band of grayish-brown compact silt ending at 4'4" and a reddish brown silt to 7'4". The north wall contains large chunks of limestone. Some of the pieces have polished sides. These pieces could possibly be connected to the Randall Memorial Church or to the Music Hall as both buildings were constructed at the same time. Pieces could have been unsuitable for finishing and therefore discarded as backfill.

TEST PIT #3

This test pit is located at the northeast corner of the Chapel and dug parallel and tangent to the north (main) chapel facade. The topsoil is a dark brown silt with a heavy root mat extending to about 12". Below this is a series of layers of dry sandy silt, extremely fine and lighter in color with depth. Immediately below the topsoil is an orange brown layer of sandy silt to about 30". Below this is a layer of light orange brown sandy silt extending to about 4'. The layer to the footing is of tan sandy silt. The back dirt is very loose, fine and silty, almost the quality of very fine beach sand but contains fill such as pieces of brick, whole bricks and rocks.

TEST PIT #4

This test pit is located at the southeast corner of the chapel and dug parallel and tangent to the southern elevation of chapel. The soil profile differs from the front of the chapel where it contained very fine sandy silt. Here below the 12" of gray-brown organic silty topsoil is a layer of orange-brown compact silt resembling clay. This extends about 30" below grade. Below this

is a layer of reddish-brown shale, sand, and silt to the bottom of the footing. This layer contains much shale stone, and brick fill. The soil has some iron content.

TEST PIT #5

This test pit is located at the southeast corner of the retaining wall of Building H. The top layer is gravel with a bituminous binder to 4". Below this is an almost black layer of silt and gravel which is very moist and clay-like and extends to 2'6". At this depth a layer of cinder appears to 3'. This is a combination of coal, burnt shell, ash, cinders and bone ash. At about 3' there is evidence of a possible original dark brown topsoil layer. Above this layer is all fill. The topsoil layer is 12" thick. Below this is an orange brown clayey silt subsoil to the footing.

TEST PIT #6

This test pit is located at the center of the south retaining wall for the areaway directly behind the south elevation of hyphen G-H. Thetop layer is 4"-6" of gravel witha bituminous binder followed by a 10"-12" layer of dark gray brown silt separated from the orange brown claying silt layer of 14" by a gravel lens. At 2'6" a gray brown sandy silt mixed with cinders appears for 6". At 3' there is a layer of orange-brown silt followed by a dark brown clayey silt with traces of burnt shell, charcoal and bone ash to 3'10" below grade. This is followed by a 18" layer of brown-black clayey silt extending to 5'-2" and interrupted by a 4" gravel lens at 4'5". The last layer is of orange-brown sandy silt to 7'.

TEST PIT #7

This pit is located at the southwest corner of Building H, perpendicular to the west wall. This is the area of the current parking lot which is covered with blacktop. The first 3" are backtop followed by 3" thick slate slabs. Below this is a homogeneous fill layer lacking stratigraphy. This layer consists of much brick and rubble mixed with reddish brown silt. The south wall of the test pit is a wall of flagstone and brick forming one room in the cellar which had been bricked up years before. This room had been a lightwell for a cellar window before it was paved over.

TEST PIT #8

This test pit is located at the southeast intersection of Building G and hyphen FG against the east retraining wall. The topsoil layer consists of 6" of dark brown silt with roots followed by a layer of light brown silt to 2'6". The rest of the soil consists of homogeneous fill to the bottom of the test pit at 7'.

TEST PIT #9

This pit is located in the southwest corner of the retaining wall at F. The profile consists of a dark gray brown silty topsoil with a root mat extending from 16"-18". This is followed by an orange-brown fine silt with traces of fine sand and brown mottling to 2'6". Below this is reddish brown glacial till consisting of very fine silt with some pebbles, very dense to the bottom of the trench at 6'. There is a narrow cinder lens located below the topsoil. The fill is extremely clean and with almost no rocks.

TEST PIT #10

This test pit is located at the southeast corner of the retaining wall at Building F. The soil profile consists of a dark brown silty topsoil wih root hairs to 10", a layer of cinder and ash to 18", light brown silt with traces of fine sand to 3'6" and reddish brown glacial till (silty sand and gravel with boulders and cobbles) to 7'. Soil becomes more purple with depth.

TEST PIT #11

This pit is located in the dumpster area of Building G, next to the southeast retaining wall. The first layer is a grayish brown silty topsoil with many roots, to 10" followed by a brownish black layer of silt with gravel to 2'2". This is followed by a light beige very fine silty sand to 3'9". The next layer is of orange clayey silt to 4'9" and a more brown layer of dense silt to 6'9". The soil contains some broken brick and rock fill. Some brick rubble is evident in the north wall of the pit, about 30" down.

TEST PIT #12

This pit is located at the northeast intersection of Building F and Hyphen FR. The test is cut perpendicular to the retaining wall. The soil profile consists of light grayish brown silty topsoil with root hairs to 4" followed by a light brown silt layer with gravel of 1" thickness with some inclusions of tan-orange sandy silt. The remaining fill consists of moist purple red clay silt with pebbles becoming more shaley towards the bottom. Some boulders are located in the bottom of the pit at a depth of 7'.

TEST PIT #13

This pit is located at the northeast corner of Building F parallel and tangent to the north wall. The soil profile consists of extremely clean fill beginning with a 3" layer of dark brown moist silty topsoil. This is followed by a very black moist silt lens of 3/4" thickness, then light brown silt with red and black mottling to 8". Below this is a layer of reddish brown moist

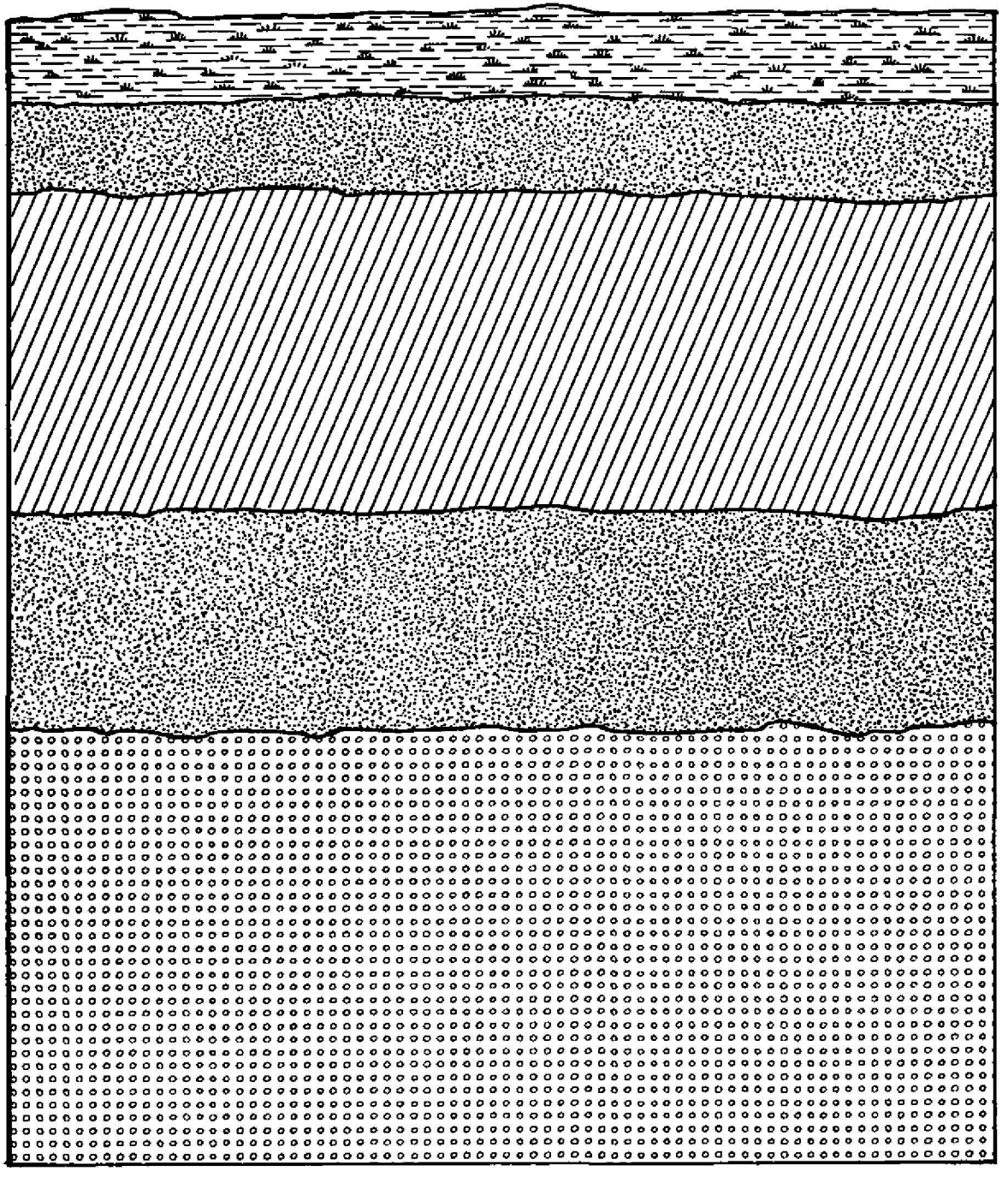
silt with some sand to 12", reddish brown silt to 4' followed by light orange-brown, very fine silt wih broken brick and a few rocks to 6'. The last layer consists of purple-brown silt with gravel to a depth of 8'.

TEST PIT #14

This test pit is located on the site of the Randall Memorial Church 60' east of the Music Hall and 66' north of the roadway. This is the basement area of the church which was filled in with building material. The foundation (interior structural support pier) is present in the southern wall of the test pit. The soil profile consists of 7" of light grayish brown clayey silt followed by a 2" layer of orange-tan mottled clay silt. A layer of orange-brown clayey slt extends to about 2' followed by a black topsoil-like silt with inclusions of building materials, especially crumbled limestone and cinder to 3'. This is followed by a 5' layer of fill and rubble from the church.

TEST PIT #15

This test pit is located at the northwest wall of the Music Hall between the tunnel stairway and basement lightway. The test pit soil is all fill due to the location of the Music Hall wall and stairwell wall. The soil is extremely moist clay which stays together very well. The top layer is 2" of gravel and brown-black silt followed by a 4" layer of gray brown clayey silt of 4". The fill is mottled orange and brown clay with black silt inclu- sions leading to orange brown and reddish clay and is about 5' thick. The last layer is a red-brown silty sand and gravel of heavy density. The total depth is 9'. There is a 6" layer of mortar and cinder at about 4' in the west wall.



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TEST PIT NO. 2
EAST ELEVATION

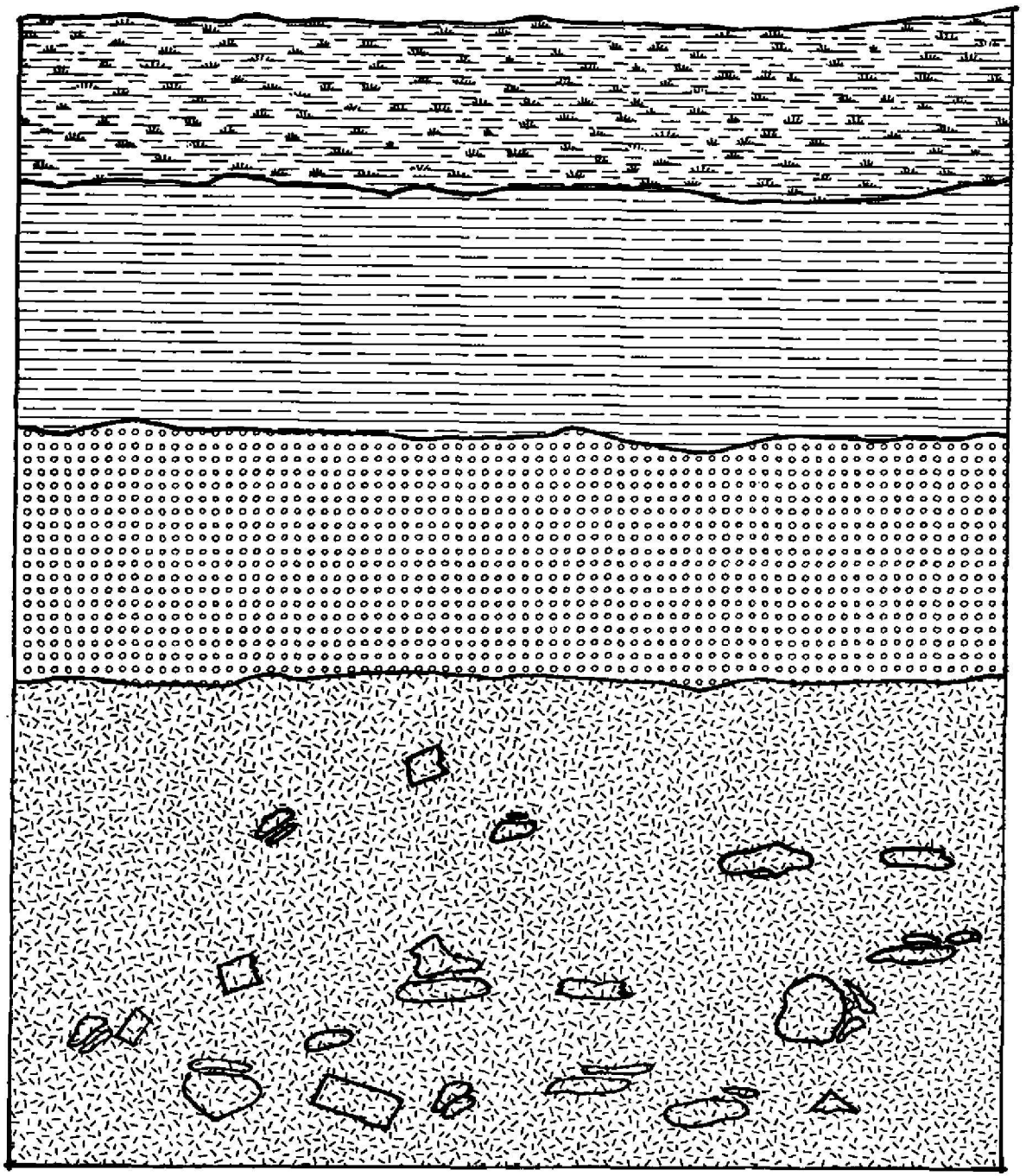
1" = 1'

GRAY BROWN ORGANIC SILTY LOAM WITH ROOTS

GRAY BROWN SILT

ORANGE BROWN CLAY SILT

REDDISH BROWN SILT



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TEST PIT NO. 3
NORTH ELEVATION

1" = 1'

DARK BROWN SILT WITH ROOTS

ORANGE BROWN SANDY SILT

LIGHT ORANGE BROWN SANDY SILT

TAN SANDY SILT

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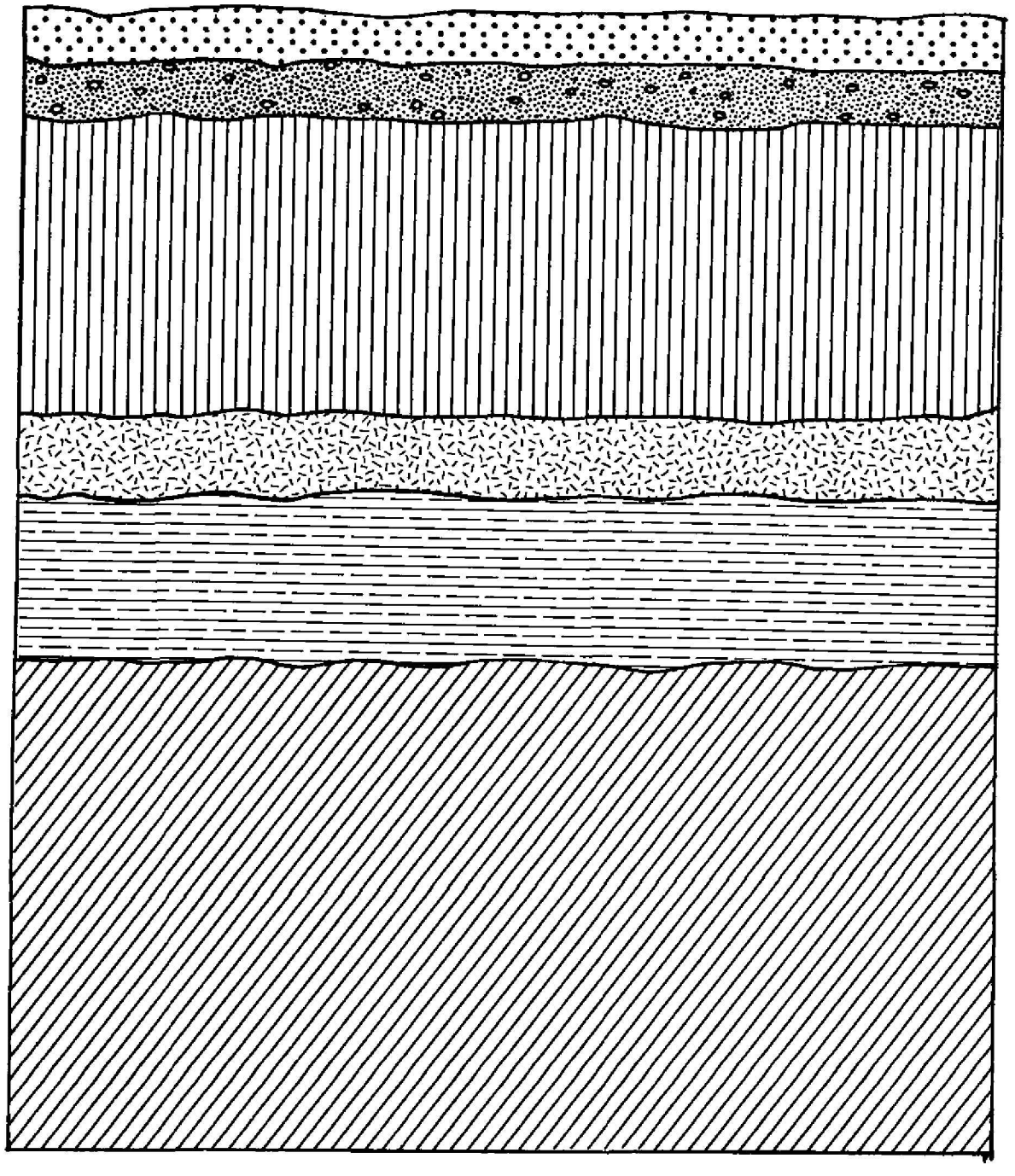
TEST PIT NO. 5
SOUTH ELEVATION

1" = 1'



GRAVEL WITH BITUMINOUS BINDING

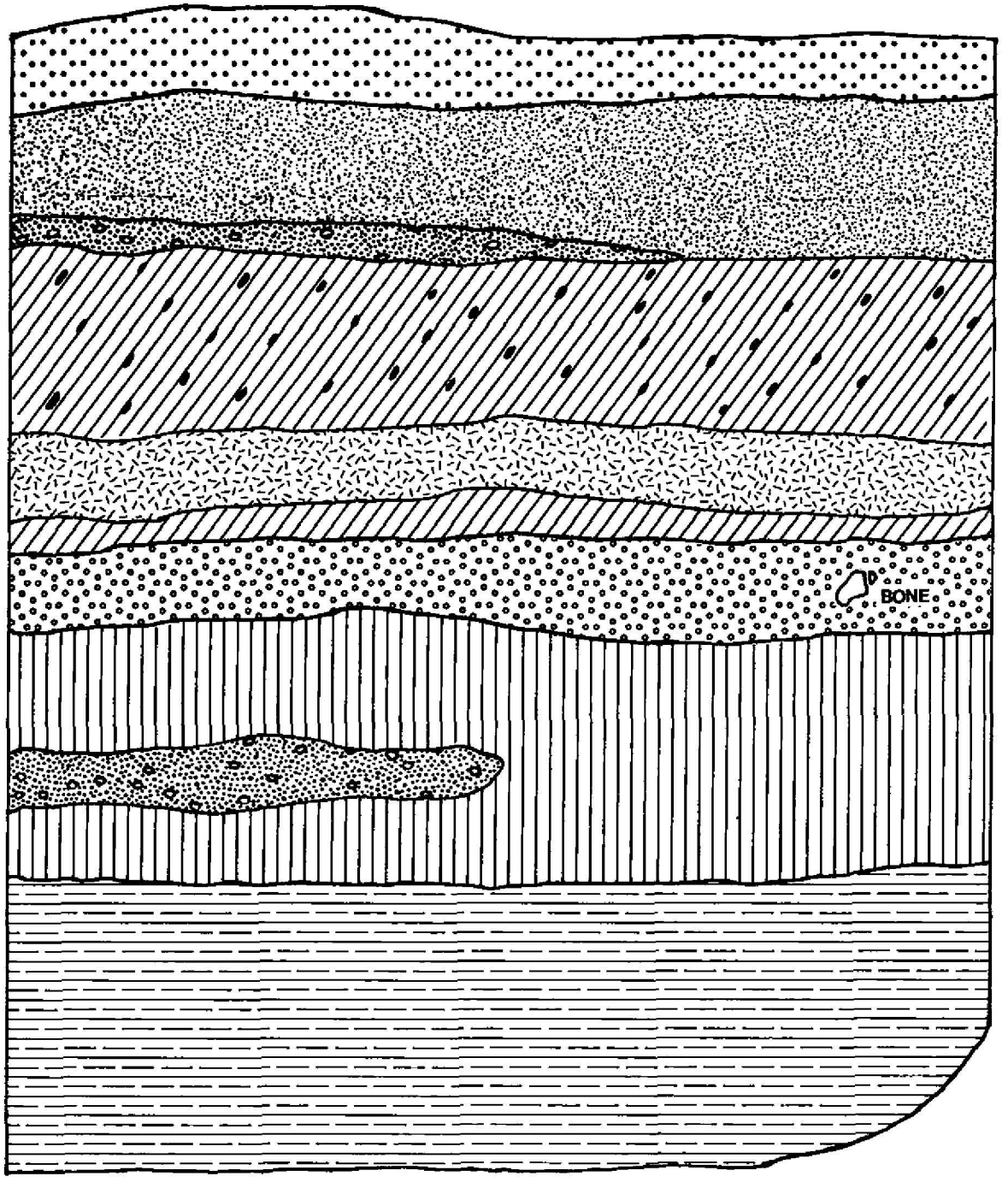
GRAVEL AND SILT

BROWN BLACK CLAY SILT WITH GRAVEL

CINDERS

DARK BROWN SILT

ORANGE BROWN CLAY SILT



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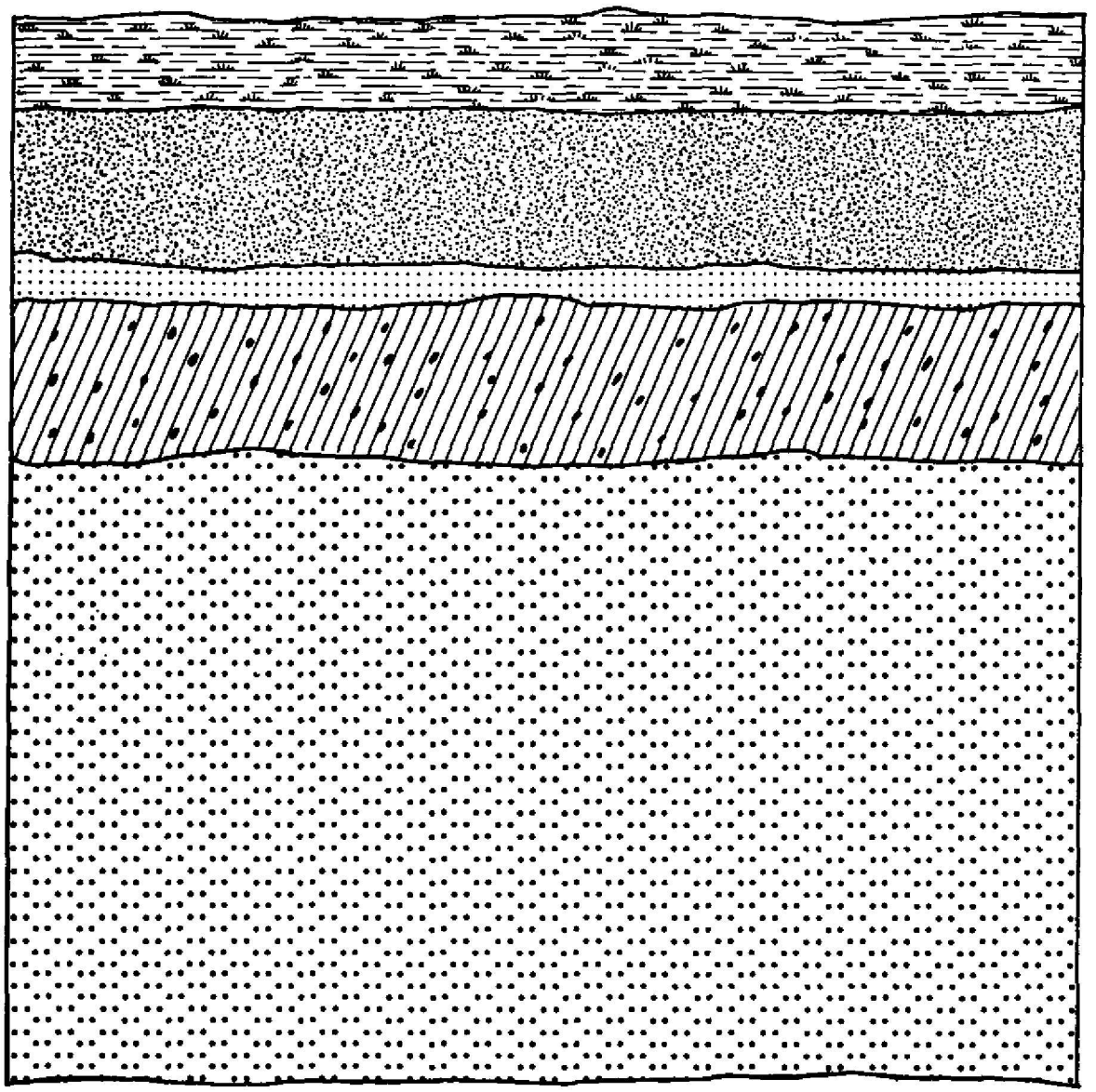
TEST PIT NO. 6
EAST ELEVATION

1" = 1'

- GRAVEL WITH BITUMINOUS BINDING
- DARK GRAY BROWN SILT
- GRAVEL
- ORANGE BROWN CLAY SILT WITH TRACES OF SAND
- GRAY BROWN SANDY SILT WITH CINDERS
- ORANGE BROWN SILT
- DARK BROWN CLAY SILT
- BROWN BLACK CLAY SILT
- ORANGE BROWN SANDY SILT



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TEST PIT NO. 9
SOUTH ELEVATION

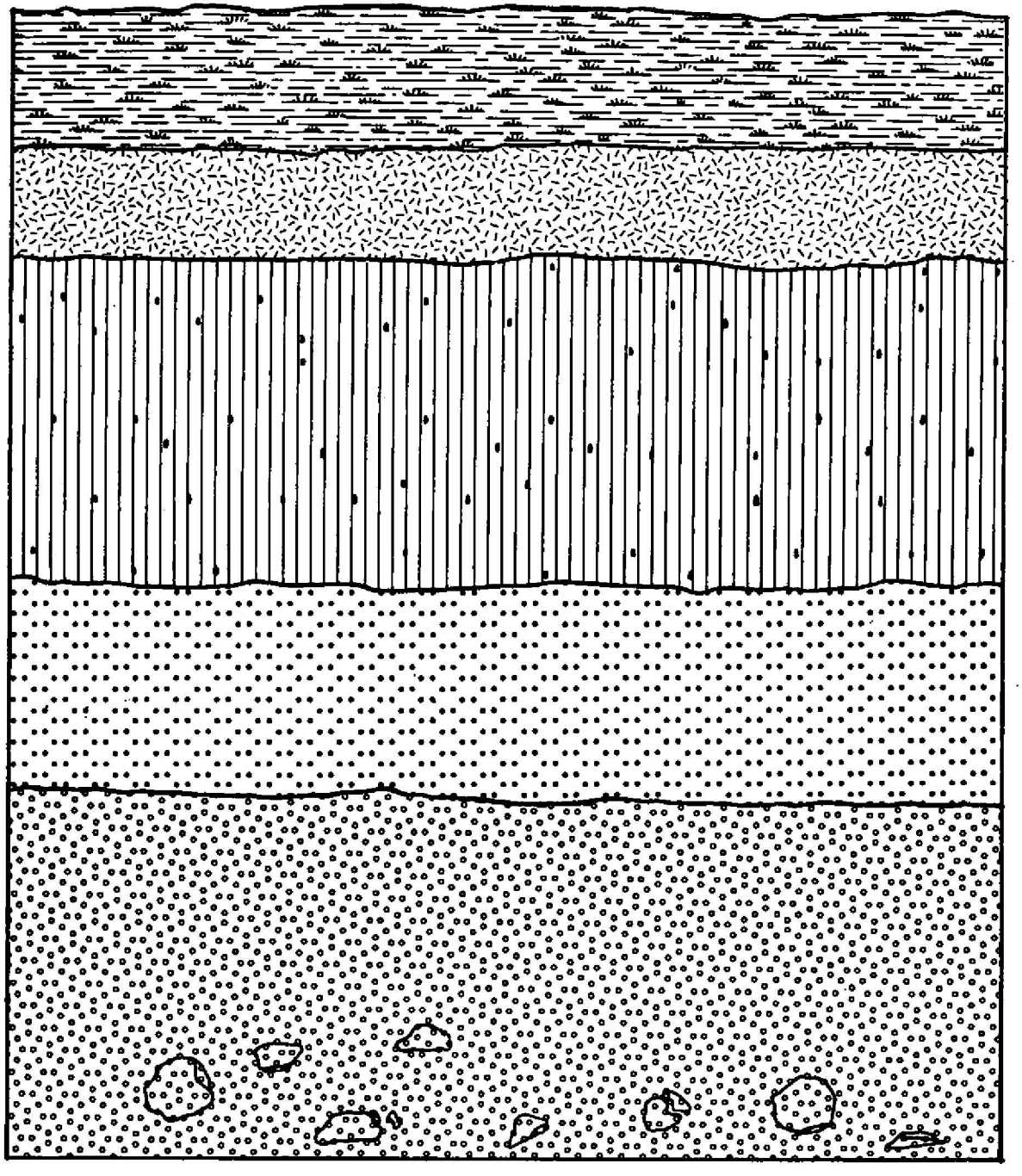
1" = 1'

GRAY BROWN SILTY TOPSOIL WITH ROOTS

DARK GRAY BROWN SILT

ORANGE BROWN MOTTLED SILT WITH TRACES OF FINE SAND

REDDISH BROWN GLACIAL TILL WITH PEBBLES



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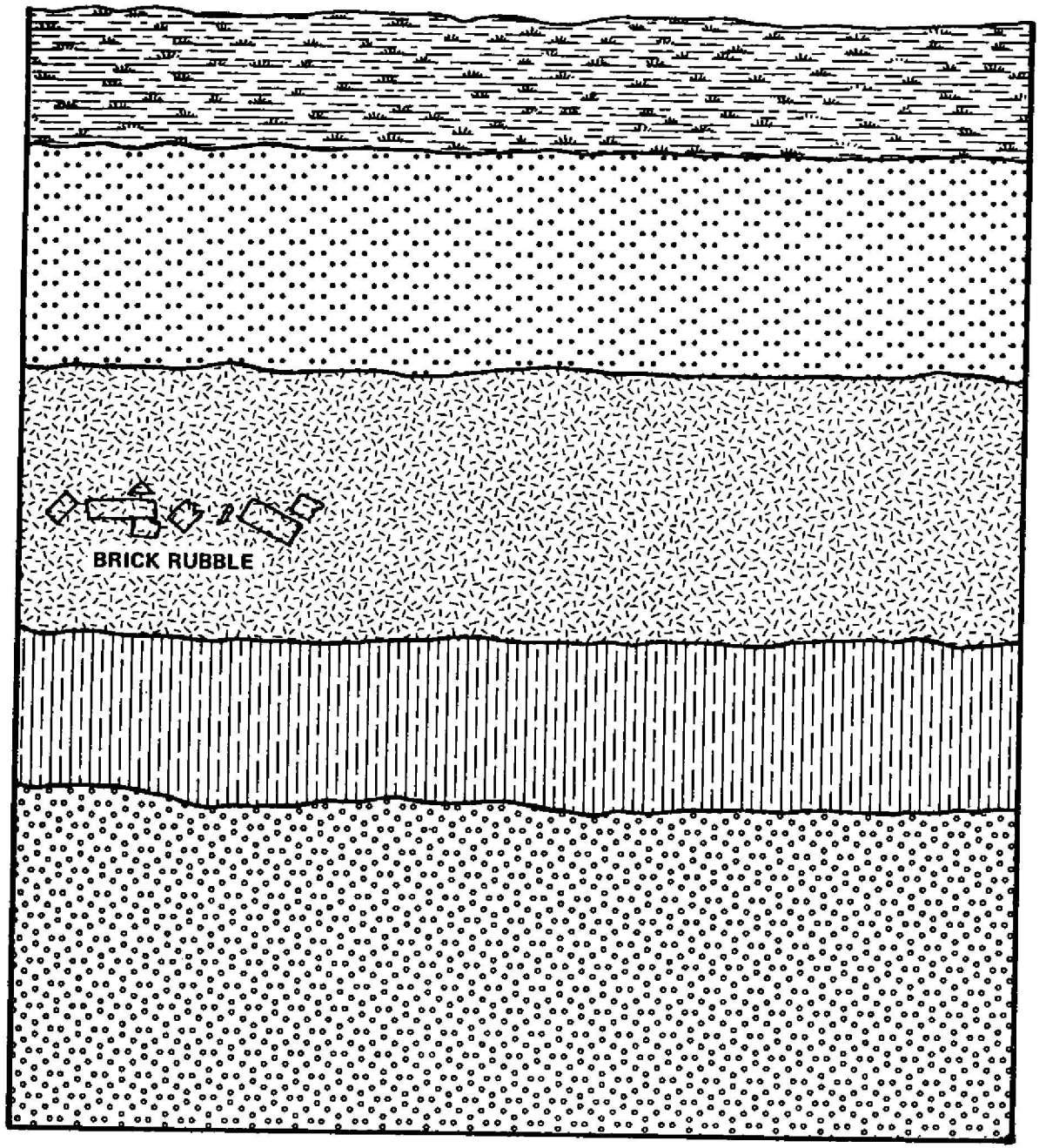
TEST PIT NO. 10
SOUTH ELEVATION

1" = 1'

- DARK BROWN SILTY TOPSOIL WITH ROOTS
- CINDER AND ASH MIXED WITH SMALL AMOUNTS OF SAND AND SILT
- LIGHT BROWN SILT WITH TRACES OF FINE SAND
- REDDISH BROWN GLACIAL TILL WITH SILTY SAND AND GRAVEL
- REDDISH PURPLE GLACIAL TILL WITH BOULDERS AND COBBLES



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TEST PIT NO. 11
NORTH ELEVATION
1" = 1'

GRAY BROWN SILTY TOPSOIL WITH ROOTS

BROWN BLACK SILT WITH GRAVEL

LIGHT BEIGE FINE SILTY SAND

ORANGE CLAY SILT

BROWN CLAY SILT

ARTIFACTS

Test Pit #1: molded glass goblet stem and pedestal fragment with a partial raised letter inscription on pedestal: ST 1870 PAT D
20th century double glazed white stoneware fragment
plaster and mortar fragments

Test Pit #2: limestone samples
twine
structural tile fragment
brick fragments
slag, bone and coal fragments
clear and brown glass fragments
nail

Test Pit #3: no artifacts were recovered from this test pit

Test Pit #4: heavily rusted water pipe fragment

Test Pit #5: salt glaze stoneware rim fragment
shell fragments
metal paint tube
glass
coal and cinder fragments

Test Pit #6: large mammal bone fragment
plastic tube fragment
shell fragments
creamware fragment
kaolin pipe fragment

The bone fragment was located in dark brown clayey silt believed to be original top soil. The remainder of artifacts were extracted from back dirt. Since this is the area of successive kitchens the cinders, bones, and shell fragments are expected.

Test Pit #7: slag, burnt shell and shell fragments
very small shells, 1" in length
mammal vertebrae, medium size, possibly from a pig or large dog
creamwarefragment
stoneware fragment

Test Pit #8: nail
bone fragment
creamware fragment

Test Pit #9: projectile point

Test Pit #10: oyster shell
burnt shell fragments
clay underground pipe fragment

Test Pit #11: shell fragments
creamware fragment

Test Pit #12: no artifacts were recovered

Test Pit #13: no artifacts were recovered

Test Pit #14: five different types of polished marble
slate pieces with attached plaster
circuit breaker box with two cartridge fuses attached to a piece of slate
wood fragments
flue pipe fragment
stoneware, creamware and porcelain fragments
clear green, yellow, and blue glass fragments
window glazing putty

Test Pit #15: structural tile fragments
porcelain, creamware and earthenware sherds
milk, green, and clear glass fragments
shell fragments
pipe stem fragment
brick fragments
metal fragment
limestone pieces

SUMMARY

Most of the test pits lacked significant stratigraphy due to previous backfilling. This backfilling occurred when the retaining walls around the buildings were constructed, the Music Hall built, and the Chapel moved to its present location. Due to the poor building documentation available it is not possible to determine if the dirt and rubble used as backfill was from the area of construction or if was brought in from elsewhere.

The artifacts recovered from Test Pit #6, excavated in the area of two successive kitchens, one demolished in 1846 and one still in use up to 1976, reinforced the function of the area. The high incidence of cinders, bone and shell fragments was expected. This is not enough material to conclude the fill local however, as bone, shell, and cinder fragments appear in six of the 15 test pits. These six test pits are located in the southern corners of Buildings F,G, and H. The addition to Building G, Building F and Building H were all constructed within the same time period, 1876-1877, so that it is probable that the areaway retaining walls were backfilled with the same material. Except for Building F, the northern corners of the buildings were not tested due to the inability of the backhoe to clear the connecting archways. Test pit #13, located in the northeast corner of Building F showed no incidence of a cinder-type material. This test pit, excavated parallel and tangent to northern facade, contained extremely clean fill, with almost no boulders or bricks.

The stratigraphic provenience of the artifacts was difficult to ascertain due to the large amounts of dirt removed by the backhoe shovel and to the lack of distinct stratigraphy. Artifacts were bagged by unit provenience only.

The artifacts recovered were for the most part building materials, cinder, bone and shell fragments, and 20th century glass and ceramic sherds. In Test Pit #5, a salt glazed stoneware rim fragment was found but this appears to be from a turn of the century vessel, if not later. Test Pit #6 contained a creamware fragment and a kaolin pipe bowl fragment. The pipe bowl fragment contains a mold line with an eight point straight line star on either side of the mold mark. The diameter of the stem opening at the heel of the bowl is approximately 5/64 of an inch. Test Pit #7, #8, and #11 contained single creamware fragments. Test Pit #9 contained what appears to be an unfinished projectile point. Made from a dark gray shale, it is unnotched with the base coming to a converging point.

The greatest amounts of artifacts were recovered from Test Pit #14 and 15. Test Pit #14 was excavated on the site of the Randall Memorial Church. The backhoe dug into the basement area of the church which now contains the building rubble. One of the structural piers from the inside of the basement was evident in

the southern wall of the test pit. This proves that the rubble from the demolished church was pushed into the basement area, buried and leveled. The samples of building materials extracted will help to document the finishes used on the structure.

Test Pit #15 yielded a great assortment of artifacts including a small pipe stem fragment and several creamware fragments. No provenience or origin can be assigned to these artifacts as the test pit contained only fill material.

Although initially believed that subsurface examination of the building foundations would yield significant achaeological data, it was soon discovered that previous excavations and backfilling of the areas tested had destroyed any important archaeological deposits. From the documentation published in the Historic Structures Report, and from the visual observation of surface aberrations in the area around the buildings, it can be safely assumed that the area of the Snug Harbor Cultural Center has substantial archaeological potential. This potential should be realized through more careful digging and analysis than allowed by backhoe trenching.