HISTORIC STRUCTURES REPORT

PART II

ARCHITECTURAL DATA SECTION

ON

THE SCALE HOUSE

Salem Maritime National Historic Site

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for

United States Department of the Interior, National Park Service,
Eastern Office, Design and Construction
Division of Architecture

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Salem Maritime National Historic Site

A P P R O V A L S H E E T

RECOMMENDED

_____ Date_____
Superintendent

Robert G. Hall Date 9-30-64
Chief, EODC

APPROVED

_____ Date 11-6-64
Regional Director, Northeast Region

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I. GENERAL

Very few changes have been made to alter the original appearance of the Scale House. This small one story red brick structure, with granite foundation, has a wood floor and roof framing and is shingled with slates. A thorough cleaning of both the interior and exterior and attention to details such as door locking devices, paint color, and masonry repointing will greatly add to the total restoration effort at Salem Maritime National Historic Site.

II. EXISTING CONDITIONS - EXTERIOR

A. Foundation

The foundation is of field stone, topped with long rough cut granite blocks. This granite shows above the ground line, about 12 inches on the front (west) side and 18 inches on the back (east) side, and forms the ledge upon which the floor joists rest along the north and south sides. There is about 6-1/2" between the top of the foundation wall and the finished floor line.

B. Walls

The red brick walls, approximately one foot thick, are laid in a common bond. There is a brick modillion cornice of four courses at the north and south eaves. A brick arch and the granite door and window sills are decorative features of the front (west) elevation. Traces of red paint can be clearly seen on the exterior mortar joints.

C. Roof

The roof construction consists of wood tie beams (6" x 6") bearing on wood plates (6-1/4" x 8-1/4") with rafters (4-1/4" x 8") and purlins (3" x 4") which carry the wood sheathing and slate shingles. The roof sheathing runs parallel to the slope of the roof. There is lead flashing along the ridge, with a later addition of tin flashing where the barge boards meet at the top.

Four rows of steel wire snow guards are to be found on the north side of the roof, adjacent to the neighboring walkway.

D. Windows, Doors and Wood Trim

1. Windows

The arched opening with its wood frame and panel, has been called a window on the paint bills, however, it is doubtful that glass was ever intended for this position. Wood panel inserts and wood louvers were used in these openings as well as leaded fan lights. An example of the panel insert, with white lines painted on a black background in imitation of a leaded fan window exists at number 17-1/2 Chestnut Street, Salem, having been taken from the Carriage House originally built for number 29 Chestnut Street, Salem.

The existing frame is rugged and might well have been used as a form for the brick arch. The frame and attached panel set on the granite sill and remain in position by means of its weight. The assembly can be pushed out from the inside.

2. Doors

The doors are of 3/4" vertical tongue and groove boards (4 inches wide) nailed to a frame of 2" x 6" members. The doors are in good condition. The vertical boarding might well be the original, but the frames have been repaired. These double leaf doors are secured from the interior by a wood bar

resting in notches provided for them in the wood jambs. A "U" shaped iron hook, attached to the bar, projects through the right door at a point 3 feet from the floor line to receive the lock (a modern padlock). This locking device is not original, as evidence shows that the left leaf was bolted to the sill and a large lock was attached to the inside of the right leaf. The spade-ended strap hinges are in excellent condition and are the originals.

3. Trim

Wood trim occurs as beaded large boards at the gable ends (bead along the bottom edge). The door jambs are wood, with a bead along the door side. Another wooden feature is the existing (much weathered) door stop at the right side of the door.

E. Fence

The restored fence which encloses three sides of the Scale House yard is in a deteriorated condition and repair is needed in several places, especially along the Orange Street side.

III. EXISTING CONDITIONS - INTERIOR

A. Flooring

A minimal crawl space exists below the flooring.

The sub-floor and finish floor boards range in width from 7" to 15-1/2" and run the long dimension of the building. The 2" x 8" floor joists span the short dimension and are spaced about 21" on center. Although the finish flooring is in fair condition, its appearance has been marred by large oil stained areas.

B. Walls

All interior brick work needs repointing. (Traces of the original pointing on the north exterior wall and the south interior wall are still extant). The interior walls should be cleaned of dust and dirt before and after repointing.

C. Roof Structure

The wooden roof structural members and sheathing are in good condition with the exception of the tie beams which should be treated to guard against further powder post beetle activity.

IV. REHABILITATION RECOMMENDATIONS

A. General

All wooden structural members have been investigated for rot and insect activity. The building is in generally excellent condition structurally, but active powder post beetles were found in the roof tie beams. Fumigation is therefore necessary and preservatives should be applied to the major structural members of the floor and roof and all exterior wood work.

B. Foundation

The field stone and granite block foundation is to be repaired where necessary and repointed.

C. Walls

All interior and exterior brick work is to be raked and repointed to match the original still existing on the building. (Note traces on the north exterior wall and the south interior wall. Thin incised lines appear on the joints). Traces of red paint on the exterior mortar joints may date from the second painting (when the building seems to have been painted iron oxide red) and will be disregarded for this restoration. The original pointing on the Scale House is similar to that found on the exterior of the Custom House, and all new work should be consistent in color and texture with that found there.

D. Roof

The tin flashing at the ridge where the barge boards meet should be removed, unless evidence that they may have been original comes to light. The lead ridge flashing was bent over at the gable ridges and folded flat against the barge boards. The tin was probably added later to cover the vertical joint of both the lead flashing and wood barge boards. Any missing or broken slates should be replaced. The wire snow guards will remain.

E. Windows, Doors and Wood Trim

1. Window

The Scale House arched gable opening contains the original frame and panel which sets on the granite sill. Investigation shows that the panel and applied trim were painted the same color as the rest of the exterior wood work and doors. This appears to be true for each time the building was painted. There is no trace of a design or date which might have been painted on the panel.

2. Doors

The size and location of a former door locking device can be seen on the inside of the right hand door. A comparison should be made with those locks found on the Bonded Warehouse (rear of Custom House). If a lock similar to those

found on the Bonded Warehouse proves to be the kind once used on the Scale House, one should be installed there. The key, once inserted into the lock, becomes the door pull.

The spade-ended strap hinges are original, but several modern bolts with nuts should be replaced to match the remaining original rivets. Minor repairs at the bottom of the wood doors are needed. Some of the wood members appear to be chipped, these areas should be replaced or wood filled.

The lower pintel on the right hand door has been incorrectly re-set (spike end acting as the pin), however, operation of the door has not been affected and a new pintel will not be needed.

Remains of a slide bolt are to be found on the inside of the left door, (bottom left-hand corner). There is also a hole in the granite sill to receive this bolt. The existing bolt evidence is probably not in the original position due to door damage. A second hole was drilled in the granite sill to receive the bolt in its new position.

A new bolt is to be provided and should be of a size conforming to the existing evidence.

Wooden door stops, one of which still exists, should be restored, as the doors will be opened to exhibit the interior of the building. The stop is a 2-1/2" x 2-1/2" x 6" wood block.

The top and bottom are beveled 45 degrees toward the front and the 6" flat side is nailed to the brick wall. There is to be a new stop at each side of the door opening and it should be placed about 3'-4" above the floor line and 8" from the corner of the building. Although there is no evidence of a device with which to keep the doors open against the walls, they should be provided at this time if found necessary.

3. Trim

New beaded barge boards the same size as those existing are to be provided.

F. Flooring

The existing finish flooring has become oil soaked in the course of maintenance activity and must be replaced with similar pine boards of 1" (net) thickness ranging in width of 7" to 15-1/2". The sub-flooring does not need to be disturbed. The nailing pattern is to be copied and nails similar to those removed are to be used.

G. Fence

The wooden Scale House fence is to be repaired in those sections that require it. Several vertical sheathing boards are rotting near the ground line where they are nailed to the horizontal framing members.

Marks (paint lines ?) found on the northwest corner of the Scale House should be checked as they may indicate the original position of this section of fence. All repairs should conform to the existing restoration and the entire fence should be painted to match the Scale House trim.

H. Paint

All the exterior wood work is to be painted. A study of paint layers has been made for this report. The findings, in chronological order are as follows: bare wood, medium ochre, iron oxide red, medium olive green, very dark green, and the present light ochre. Ochre was also the first color to be used on the Custom House and might have been used when the Scale House was built. (See letter on file in the Custom House from Dr. Ernest Allen Connally to Charles E. Peterson, dated March 10, 1959). Medium ochre is to be the paint color used and should match that which now exists on the Custom House. As ochre is not a stable color the ochre color should be mixed by using stable pigments.

V. COST ESTIMATE

(item plus labor involved)

1.	Fumigation	$ 150.00
2.	Wood preservatives	150.00
3.	Foundation work	25.00
4.	Brickwork (interior and exterior)	1,000.00
5.	Slate Shingles	50.00
6.	Hardware (lock, slide bolt, rivets)	200.00
7.	Door Repairs (wood)	100.00
8.	Wood door stops	50.00
9.	Fence Repair and Painting	400.00
10.	Scale House Painting	75.00
11.	New Finish Flooring	200.00
	TOTAL	$2,400.00

ILLUSTRATION NO. 1

View of the west front of the Scale House which is partially obscured by the Orange Street fence. The fence is a recent restoration but very little has been done to alter the original appearance of the building.

Photo: National Park Service

EODC Neg. No. 180.5

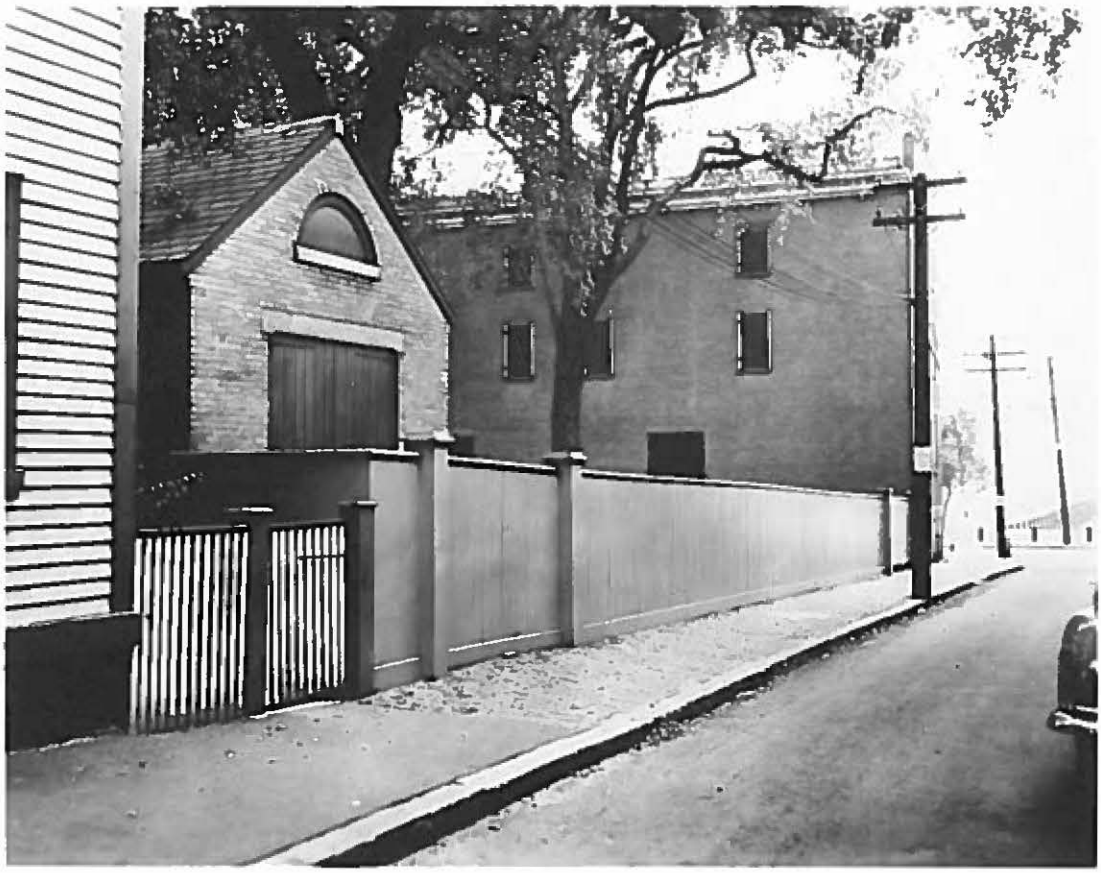


ILLUSTRATION NO. 2

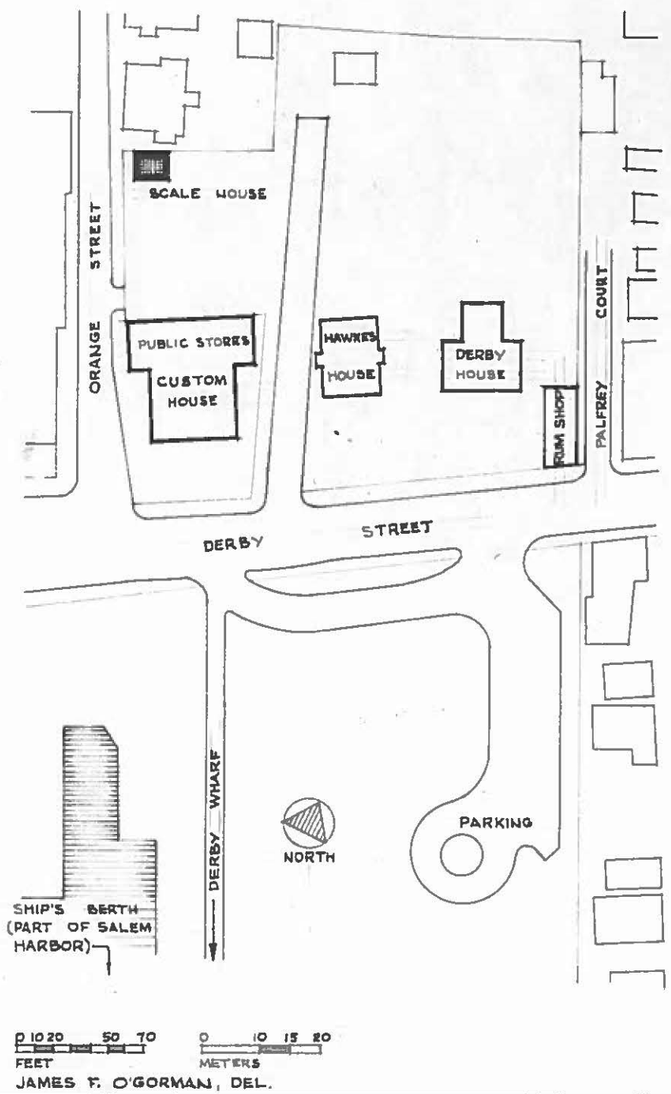
View of south side of the Scale House, the brick modillion cornice being one of the most interesting features. The double doors and the arched gable opening can be seen on the west front. Also notice the remains of the right hand door stops which is about 3 feet above the floor line and 8 inches from the southwest corner of the building.

Photo: National Park Service

EODC Neg. No. 180.6

SCALE HOUSE

SALEM MARITIME NATIONAL HISTORIC SITE



JAMES F. O'GORMAN, DEL.

SALEM, MASSACHUSETTS

ERECTED 1829: EBENEZER SLOCUM, JR., MASON
SAMUEL SIMONDS, PAINTER

THIS BUILDING HOUSED THE WEIGHING APPARATUS AT THE CUSTOM HOUSE AND PUBLIC STORES, ALSO IN H.A.B.S.

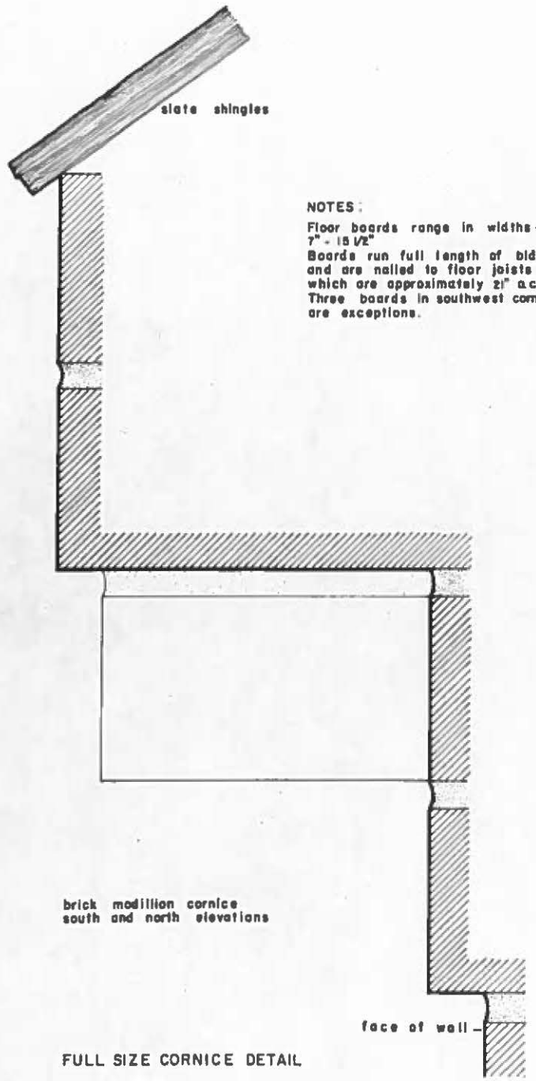
MEASURED AND DRAWN 1958 WITH FUNDS OF THE "MISSION 66" PROGRAM
NATIONAL PARK SERVICE

CHARLES E. PETERSON - SUPERVISING ARCHITECT
HISTORIC STRUCTURES

ERNEST A. CONNALLY	UNIV. OF ILLINOIS PROJECT SUPERVISOR
JOHN P. SHAW, ASSISTANT	UNIV. OF TEXAS
ROBERT L. BURKHART	PRATT INSTITUTE
THOMAS R DOLLE	UNIV. OF FLORIDA
BRIAN F. LARSON	UNIV. OF ILLINOIS
LARRY D. NICHOLS	UNIV. OF TEXAS
WALTON D. STOWELL	UNIV. OF PENNSYLVANIA
FRED A. VEGA, JR.	RHODE ISLAND SCHOOL OF DESIGN

WITH THE COOPERATION OF HAROLD I. LESSEM
SUPERINTENDENT SALEM MARITIME NATIONAL HISTORIC SITE

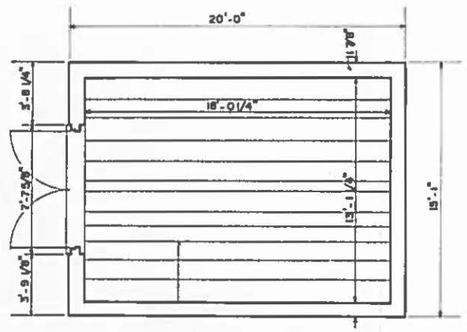
EASTERN OFFICE, PHILADELPHIA, PENNA. UNDER DIRECTION OF UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE, BRANCH OF PLANS AND DESIGN	NAME OF STRUCTURE SCALE HOUSE CUSTOM HOUSE YARD, 178 DERBY STREET, SALEM, MASS.	SURVEY NO. MASS-800	HISTORIC AMERICAN BUILDINGS SURVEY SHEET 1 OF 2 SHEETS	LIBRARY OF CONGRESS INDEX NUMBER



FULL SIZE CORNICE DETAIL

NOTES:

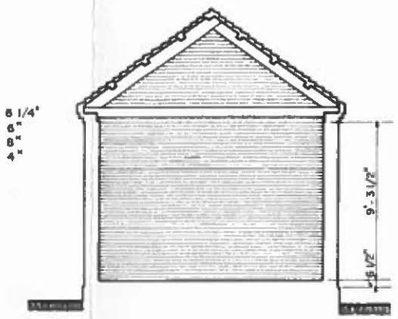
Floor boards range in widths – 7" - 15 1/2"
Boards run full length of bldg. and are nailed to floor joists which are approximately 21" o.c. Three boards in southwest corner are exceptions.



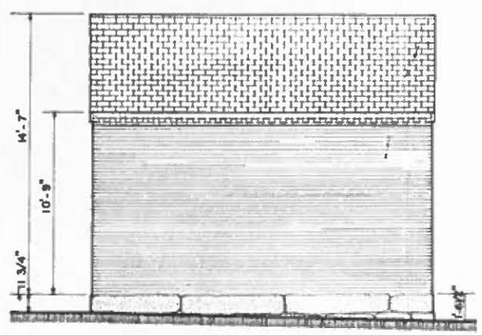
PLAN

NOTES:

Roof Construction
joists bear on wood sill 6 1/4" x 6 1/4"
joists 6" x 6"
rafters 4 1/4" x 8"
purlins 3" x 4"
sheathing
slate shingles
lead flashing at ridge



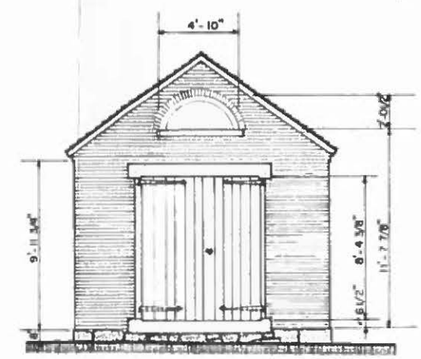
SECTION



SOUTH ELEVATION

GENERAL NOTES:

Brick modillion cornice on north and south walls.
Arched opening closed with one piece of wood and semicircular frame.
Granite sills and lintel – smooth finish on exterior faces.
Granite base – rough finish.
Iron hardware.
2" thick wood doors.
Door barred from interior – left door secured by wooden bar – U shaped iron hook attached to bar projects through right door receiving the lock.
red brick walls common bond.



WEST ELEVATION

WALTON D. STOWELL, DEL.
INKED BY JOHN P. SHAW

EASTERN OFFICE, PHILADELPHIA, PA.
UNDER DIRECTION OF UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE, BRANCH OF PLANS AND DESIGN

NAME OF STRUCTURE
SCALE HOUSE
CUSTOM HOUSE YARD, 178 DERBY STREET, SALEM, MASSACHUSETTS

SURVEY NO. MASS-800

HISTORIC AMERICAN BUILDINGS SURVEY
SHEET 2 OF 2 SHEETS