UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES
EVALUATION/RETURN SHEET

REQUESTED ACTION: RESUBMISSION

PROPERTY NAME: Southwest Ledge Lighthouse

MULTIPLE NAME: Operating Lighthouses in Connecticut MPS

STATE & COUNTY: CONNECTICUT, New Haven

DATE RECEIVED: 4/16/90 DATE OF PENDING LIST:
DATE OF 16TH DAY: DATE OF 45TH DAY: 5/31/90
DATE OF WEEKLY LIST:

REFERENCE NUMBER: 89001475

NOMINATOR: FEDERAL

DETAILED EVALUATION: Y

✓ ACCEPT ___ RETURN ___ REJECT 5/29/90 DATE

ABSTRACT/SUMMARY COMMENTS:

Early example of tubular cast iron foundation lighthouse which played an important role in post-Civil War harbor improvements at New Haven.

Initial return comments have been addressed.

RECOM./CRITERIA Accept A+C
REVIEWER Savage
DISCIPLINE Architectural History
DATE 5/29/90

DOCUMENTATION see attached comments Y/N see attached SLR Y/N

NPS Form 10-900-a
(8-86)

OMB Approval No. 1024-0018

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number _____ Page _____

SUPPLEMENTARY LISTING RECORD

NRIS Reference Number: 89001475 **Date Listed:** 05/29/90

Southwest Ledge Lighthouse | Middlesex | CT
Property Name | **County** | **State**

Operating Lighthouses in Connecticut
Multiple Name

This property is listed in the National Register of Historic Places in accordance with the attached nomination documentation subject to the following exceptions, exclusions, or amendments, notwithstanding the National Park Service certification included in the nomination documentation.

for Beth L. Savage
Signature of the Keeper

05/29/90
Date of Action

==========

Amended Items in Nomination:

8. Statement of Significance: Level of Significance

All properties included in the multiple property nomination Operating Lighthouses in Connecticut were considered to meet the criteria within a statewide context.

10. Geographical Data: Acreage

The acreage is <1.

This information has been confirmed with John Herzan, National Register Coordinator, CTSHPO, by telephone.

DISTRIBUTION:
National Register property file
Nominating Authority (without attachment)

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES
EVALUATION/RETURN SHEET

REQUESTED ACTION: NOMINATION

PROPERTY NAME: Southwest Ledge Lighthouse

MULTIPLE NAME: Operating Lighthouses in Connecticut MPS

STATE & COUNTY: CONNECTICUT, New Haven

DATE RECEIVED: 8/24/89 DATE OF PENDING LIST: 9/05/89
DATE OF 16TH DAY: 9/21/89 DATE OF 45TH DAY: 10/08/89
DATE OF WEEKLY LIST:

REFERENCE NUMBER: 89001475

NOMINATOR: FEDERAL

REASONS FOR REVIEW:

APPEAL:	N	DATA PROBLEM:	N	LANDSCAPE:	N	LESS THAN 50 YEARS:	N
OTHER:	N	PDIL:	N	PERIOD:	N	PROGRAM UNAPPROVED:	N
REQUEST:	N	SAMPLE:	Y	SLR DRAFT:	Y	NATIONAL:	N

COMMENT WAIVER: N

___ACCEPT ✓ RETURN ___REJECT 10/6/89 DATE

ABSTRACT/SUMMARY COMMENTS:

All comments for entire nomination.

RECOM./CRITERIA Return
REVIEWER Lewis
DISCIPLINE Architectural History
DATE 10-6-89

DOCUMENTATION see attached comments Y/N see attached SLR Y/N

CLASSIFICATION

___count ___resource type

STATE/FEDERAL AGENCY CERTIFICATION

FUNCTION

___historic ___current

DESCRIPTION

___architectural classification
___materials
___descriptive text

SIGNIFICANCE

Period Areas of Significance--Check and justify below

Specific dates Builder/Architect
Statement of Significance (in one paragraph)

___summary paragraph
___completeness
___clarity
___applicable criteria
___justification of areas checked
___relating significance to the resource
___context
___relationship of integrity to significance
___justification of exception
___other

BIBLIOGRAPHY

GEOGRAPHICAL DATA

___acreage ___verbal boundary description
___UTMs ___boundary justification

ACCOMPANYING DOCUMENTATION/PRESENTATION

___sketch maps ___USGS maps ___photographs ___presentation

OTHER COMMENTS

Questions concerning this nomination may be directed to

Phone (202) 343-9540

Signed Beth L. Savage Date 10-6-89

Form No. 10-306 (Rev. 10-74)

1475

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES INVENTORY -- NOMINATION FORM

FOR FEDERAL PROPERTIES

FOR NPS USE ONLY
RECEIVED AUG 2 4 1989
DATE ENTERED

SEE INSTRUCTIONS IN *HOW TO COMPLETE NATIONAL REGISTER FORMS*
TYPE ALL ENTRIES -- COMPLETE APPLICABLE SECTIONS

1 NAME

HISTORIC
Southwest Ledge Lighthouse

AND/OR COMMON
Southwest Ledge Lighthouse

2 LOCATION

STREET & NUMBER Southwest end of the east breakwater at the entrance to New Haven Harbor — __NOT FOR PUBLICATION

CITY, TOWN — X VICINITY OF New Haven — CONGRESSIONAL DISTRICT

STATE Connecticut — CODE — COUNTY New Haven — CODE

3 CLASSIFICATION

CATEGORY	OWNERSHIP	STATUS	PRESENT USE	
__DISTRICT	X PUBLIC	__OCCUPIED	__AGRICULTURE	__MUSEUM
X BUILDING(S)	__PRIVATE	X UNOCCUPIED	__COMMERCIAL	__PARK
__STRUCTURE	__BOTH	__WORK IN PROGRESS	__EDUCATIONAL	__PRIVATE RESIDENC
__SITE	**PUBLIC ACQUISITION**	**ACCESSIBLE**	__ENTERTAINMENT	__RELIGIOUS
__OBJECT	__IN PROCESS	__YES: RESTRICTED	__GOVERNMENT	__SCIENTIFIC
	__BEING CONSIDERED	X YES: UNRESTRICTED	__INDUSTRIAL	X TRANSPORTATION
		__NO	__MILITARY	__OTHER:

4 AGENCY

REGIONAL HEADQUARTERS: *(If applicable)*
U.S. Coast Guard Third District, Governors Island
STREET & NUMBER

CITY, TOWN
New York — VICINITY OF — STATE New York 10004

5 LOCATION OF LEGAL DESCRIPTION

COURTHOUSE, REGISTRY OF DEEDS, ETC. U.S. Coast Guard Third District, Governors Island
STREET & NUMBER

CITY, TOWN
New York — STATE New York 10004

6 REPRESENTATION IN EXISTING SURVEYS

TITLE see thematic form

DATE

__FEDERAL __STATE __COUNTY __LOCAL

DEPOSITORY FOR SURVEY RECORDS

CITY, TOWN — STATE

7 DESCRIPTION

CONDITION		CHECK ONE	CHECK ONE
__EXCELLENT	__DETERIORATED	__UNALTERED	X ORIGINAL SITE
__GOOD	__RUINS	X ALTERED	__MOVED DATE_____
X FAIR	__UNEXPOSED		

DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

Southwest Ledge Lighthouse (Light List #957), established on January 1, 1877, marks a hazardous underwater rock formation on the east side of the main channel into New Haven Harbor. Presently painted white, the eight-sided lighthouse is a one story cast-iron dwelling richly detailed in the Second Empire style with a lantern capping its two-story mansard roof. The foundation, a cast-iron cylinder, is surrounded by riprap, which extends as a breakwater toward the northeast. The breakwater was constructed after the lighthouse was established. The only other structure on the site is a concrete footing for a crane, once used as a landing aid.

The superstructure is built atop a cylinder made of curved iron plates, bolted together through flanges cast into the periphery of the inner surface of each plate. The cylinder rises from a poured concrete base situated within a protective ring of riprap eleven feet below the water. Its interior is filled with stones and concrete, except for a cavity at the top center which houses a square, brick-walled cellar space and a brick vaulted cistern. By 1911 joints in the foundation had opened, and bands and straps were applied at three levels to mitigate the problem.

A projecting square cast-iron platform rests atop the cylinder, providing a gallery around the base of the superstructure. A system of immense cast-iron brackets supports the outer edges of the gallery. At the corners the brackets join, strengthening the transition from foundation to gallery. Edging the gallery are remnants of the original, flat cast-iron, double railing, supported by cylindrical iron stanchions with spherical finials and slender cylindrical intermediate vertical braces.

In plan, the superstructure is a square with beveled corners. It contains three stories, one at main deck level and two beneath the mansard roof. On the roof rests the octagonal lantern surrounded by a gallery with railing and capped with an ogee octagonal roof.

A double-leafed entrance door is located on the west facade. Above the replacement sheet metal doors, a glass transom is flanked by cast-iron consoles which support a molded, flat doorhood with a recessed panel and an axial, round-arched detail. Below the consoles, flanking pilasters rest on plain plinths. Centered on each of the remaining seven sides of the first story is a cast-iron window surround. The shallow pitched

See Continuation Sheet

peak of its projecting lintel contains a recessed panel, while the lesser projection of the plain jambs ends below projecting sills in a pointed detail. All window openings on the first story are flat-topped. Those on the four principal sides contain six-over-six wood sash, while all others contain four-over-four sash. Each corner of the first story is finished with a cast-iron pilaster with recessed panelling and a molded cap. The pilasters visually support a full entablature which encircles the lighthouse. The entablature consists of a stepped and molded architrave, bracketed frieze, and molded cornice. The brackets, ornamented with rosettes on their projecting faces, continue the recessed panel motif utilized in pilasters and door hood.

The cast-iron mansard roof, detailed to resemble standing seam roof construction, features a gabled dormer centered on each of the four main elevations at the second story level and a bullseye window directly above to light the third story. Detailing on the dormer windows includes a round-arched window opening within a surround featuring a keystone, incised detail, rosettes, a peaked, molded cornice, and footscrolls above projecting sills. The bullseye window surrounds on the third or watchroom level consist of a molded upper half with keystone detail, eared corners, and three drops with rosettes below. A compound molding at the top of the mansard undergirds a cast-iron gallery. The gallery is edged with a double railing of flat section on round stanchions. Although its spherical knobs are now missing, the railing appears original.

The sides of the octagonal lantern are divided in half horizontally. Each of the upper sections contains a pane of glass measuring 39 inches by 34 inches, while each of the lower sections contains a cast-iron panel. At the bottom of each glass pane on the interior is a metal strip containing the original condensation channels. Four of the lantern panels contain round ventilators. The northeast panel is pierced by a set of doors which lead to the lantern gallery. The outer door is metal, while the inner door is wood, matching the beaded board paneling of the lantern interior. The high domed ceiling of the lantern is formed of thick sheet metal. The center hole to the ventilator is covered over. Over each glass pane is a pair of attachments, most likely intended for shutters or curtain rods. The floor of the lantern is composed of four quadrants of cast-iron. One of the quadrants

contains a hatch with a single-leaf cover providing access to the watchroom below.

On the interior of the tower, the brick walls of the basement support the iron sills of the superstructure, which are marked "Phoenix Iron Co., Philadelphia." Upper floors are built of wood, supported on wood joists. Straight flights of stairs on the west side of the tower are lighted by west-facing windows on each level. The remaining space is divided into two rooms per story. However, the second story partition is presently removed. Closet space was created adjacent to the staircase or within the rooms. Walls and ceiling are covered with beaded board, tongue and groove paneling, while the interior window jambs, lintels, and projecting sills are cast as part of the iron shell of the structure.

The focal plane of the lighting apparatus is sixty-eight feet, eight inches above high water. At present the lighting equipment within the lantern is automated and electric, housed in a circular-plan lens with diagonal astragals mounted on a pedestal. The fog signal, manufactured by the Pennwalt Corporation, occupies the southwest corner of the first story gallery.

8 SIGNIFICANCE

PERIOD	AREAS OF SIGNIFICANCE -- CHECK AND JUSTIFY BELOW				
_PREHISTORIC	_ARCHEOLOGY-PREHISTORIC	_COMMUNITY PLANNING	_LANDSCAPE ARCHITECTURE	_RELIGION	
_1400-1499	_ARCHEOLOGY-HISTORIC	_CONSERVATION	_LAW	_SCIENCE	
_1500-1599	_AGRICULTURE	_ECONOMICS	_LITERATURE	_SCULPTURE	
_1600-1699	_ARCHITECTURE	_EDUCATION	_MILITARY	_SOCIAL/HUMANITARIAN	
_1700-1799	_ART	X ENGINEERING	_MUSIC	_THEATER	
X 1800-1899	_COMMERCE	_EXPLORATION/SETTLEMENT	_PHILOSOPHY	X TRANSPORTATION	
_1900-	_COMMUNICATIONS	_INDUSTRY	_POLITICS/GOVERNMENT	_OTHER (SPECIFY)	
		_INVENTION			

SPECIFIC DATES built 1876-1877 BUILDER/ARCHITECT Major George H. Elliot, Engineer Secretary for the Lighthouse Boa

STATEMENT OF SIGNIFICANCE

Southwest Ledge Lighthouse, established in 1877, is highly significant among Connecticut lighthouses. The superstructure constructed for this site was installed on the grounds of the Centennial Exposition in Philadephia in 1876; a lighthouse keeper lived within and tended the lamp which was exhibited nightly from July 4, 1876, until the close of the Exhibition. The pre-fabricated, cast-iron tube foundation "for an iron lighthouse for a marine site on the tubular plan," installed at Southwest Ledge in 1876, appears to be the earliest example of this type of construction remaining in the Third District, if not in the nation. Designed by Major George H. Elliot, Engineer-Secretary for the Lighthouse Board in the early 1870s, the tube foundation was meant for northern underwater sites, where screw-pile lighthouses were menaced by floating ice. This design is considered of great importance in the development of lighthouse engineering. The superstructure of the lighthouse represents a transition; its Second Empire detailing carries on the feeling of the combined dwelling and lighthouse of the 1860s and 1870s, which emphasized the domestic aspect of the structure and reflected the national preference for revival styles. Yet in the utilization of cast-iron as a building material, pre-fabricated and bolted together on the site, the Southwest Ledge Lighthouse ushered in the succeeding period in which conical cast-iron towers gave little outward indication of their use as dwellings. The prototype for the pre-fabricated conical towers seems to have been the Hunting Island, South Carolina, lighthouse. This was a much taller structure, established in 1873, designed for easy disassembly and reconstruction in a new location when erosion threatened the original site. Southwest Ledge is significant as well as a component of the post-Civil War program of improvements to New Haven Harbor.

The harbor improvements undertaken at New Haven after the Civil War included a recommendation from V.C. Houston in 1868 that Southwest Ledge, which impinged on the shipping channel, be blasted rather than marked with a lighthouse. However, after the funding was appropriated suggesting a new type of foundation and tubular pier to support a lighthouse on Southwest Ledge.

At the Southwest Ledge site, as at Stratford Shoal, this new procedure involved forming a ring of riprap, within which cement was poured to level the rock of the ledge. But at Southwest Ledge, Woodruff planned the use of a tubular pier made of curved plates of cast-iron, flanged

See Continuation Sheet

9 MAJOR BIBLIOGRAPHICAL REFERENCES

see continuation sheet

10 GEOGRAPHICAL DATA

see location map

ACREAGE OF NOMINATED PROPERTY _____

UTM REFERENCES

	ZONE	EASTING	NORTHING		ZONE	EASTING	NORTHING
A				B			
C				D			

VERBAL BOUNDARY DESCRIPTION

see site plan

LIST ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OR COUNTY BOUNDARIES

see thematic form

STATE	CODE	COUNTY	CODE
STATE	CODE	COUNTY	CODE

11 FORM PREPARED BY

NAME / TITLE

Dorothy B. Templeton/Historian

ORGANIZATION — DATE

John Milner Associates, Inc. — October 22, 1985

STREET & NUMBER — TELEPHONE

309 North Matlack Street — (215) 436-9000

CITY OR TOWN — STATE

West Chester — PA 19380

12 CERTIFICATION OF NOMINATION

STATE HISTORIC PRESERVATION OFFICER RECOMMENDATION

YES X NO ____ NONE ____

STATE HISTORIC PRESERVATION OFFICER SIGNATURE

In compliance with Executive Order 11593, I hereby nominate this property to the National Register, certifying that the State Historic Preservation Officer has been allowed 90 days in which to present the nomination to the State Review Board and to evaluate its significance. The evaluated level of significance is ____National ____State ____Local.

FEDERAL REPRESENTATIVE SIGNATURE

TITLE — DATE

FOR NPS USE ONLY

I HEREBY CERTIFY THAT THIS PROPERTY IS INCLUDED IN THE NATIONAL REGISTER

Beth M. Savage — DATE 5-29-90

~~DIRECTOR, OFFICE OF ARCHEOLOGY AND HISTORIC PRESERVATION~~

~~ATTEST:~~ — DATE

for KEEPER OF THE NATIONAL REGISTER

GPO 899-214

toward the interior of the curve for connection with iron bolts and connected into courses or rings which could be bolted together, one atop the other, to form a cylinder. A diving-bell could be used to guide the setting of the lowest horizontal ring of cast-iron tube foundation into position. Filled with rocks and cement, the pier would form a stable base for the superstructure. The superstructure also was to be built of cast-iron plates, bolted together in the form of a Second Empire style house with a steeply pitched mansard roof. Atop the roof would be the lantern.

Ramsey and Carter of Baltimore were granted the contract for the metal work in June 1875. In 1876, they arranged to ship the lighthouse intended for Southwest Ledge to the grounds of the Philadelphia Centennial Exhibition for display. In June of that year it was agreed that the identical lighthouse superstructure being manufactured for Ship John Shoal, Delaware, be shipped to New Haven when completed, so that work could proceed at Southwest Ledge. The lighthouse on display in Philadelphia would be shipped to Delaware at the close of the Exhibition.

After completion of Southwest Ledge Lighthouse, the program of harbor improvements continued with both the dredging of channels and the construction of riprap breakwaters. Southwest Ledge Lighthouse became the southwestern terminus of one such breakwater. In 1911, the tubular foundation was reinforced with straps and buckles. During the depression, more than $13,000.00 was appropriated by Congress for work on Southwest Ledge Lighthouse; riprap was added surrounding the lighthouse, and two boat cranes on concrete pads were installed. Evidence of the cranes remains to the north and south of the lighthouse, on top of the riprap.

Barnard, J. G., "Lighthouse Engineering as Displayed at the Centennial Exhibition," American Society of Civil Engineers Transactions, Vol. 8 (March 1879) pp. 55-94.

Civil Engineering Drawings, microfilm, U.S. Coast Guard Academy Library, Reels 5A and 6.

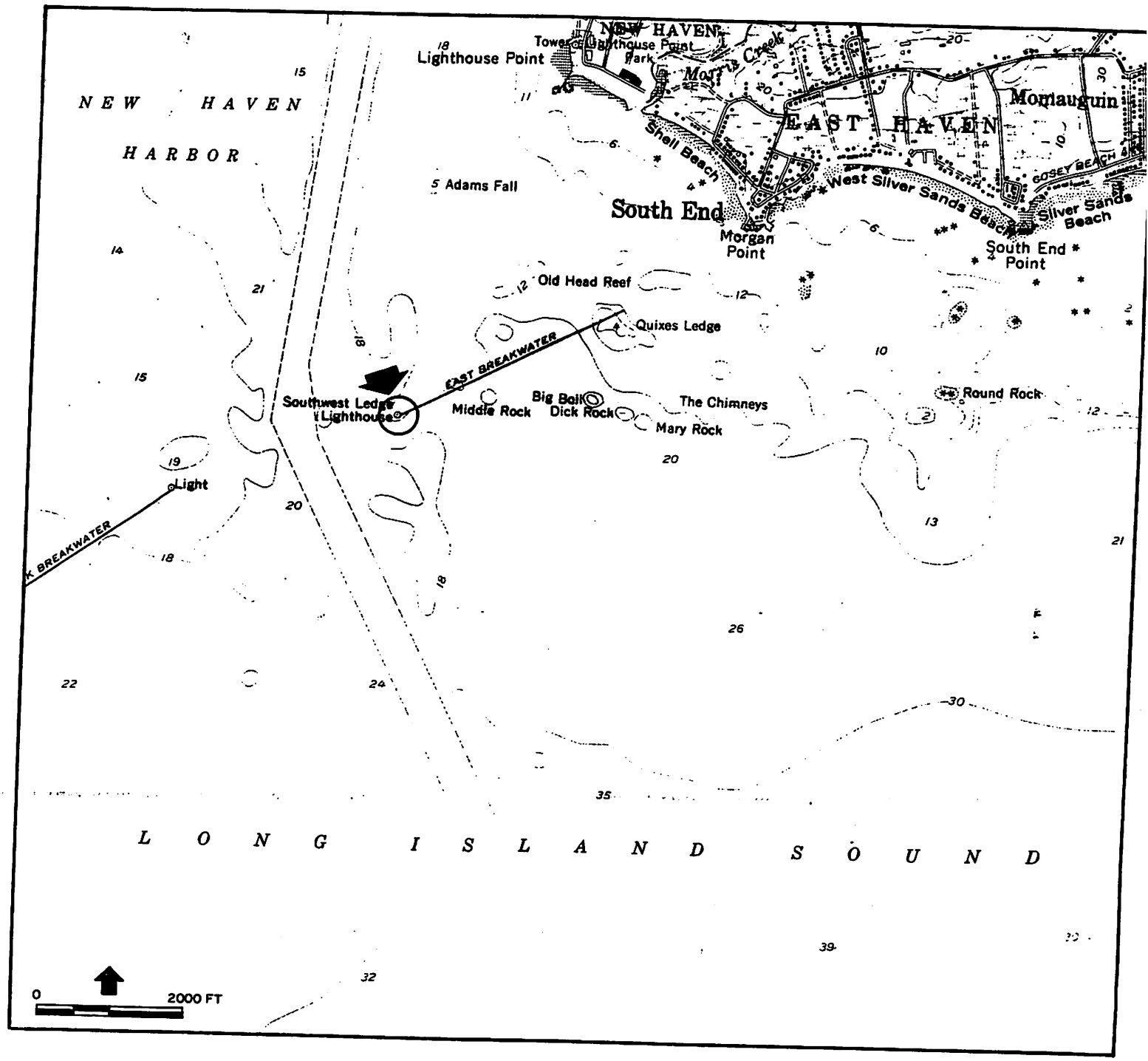
Mystic Seaport Photo Collection, Mystic, Connecticut.

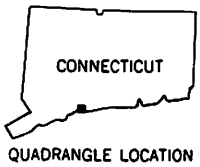
New Haven Historical Society, photo collection, New Haven, Connecticut.

Osterweis, Rollin, Three Centuries of New Haven (New Haven: New Haven Colony Historical Society, 1952).

Plans, Elevations, and Sections, 1874-1875, National Archives, Cartographic and Architectural Branch, 3-22-S, 4-6, 7-17, and 24.

U.S. Lighthouse Board, Annual Report of the Lighthouse Board, 1872, 1874-1881, 1883-1884, 1887-1889, 1892, 1894-1899, 1902 (Washington, D.C.: U.S. Government Printing Office).



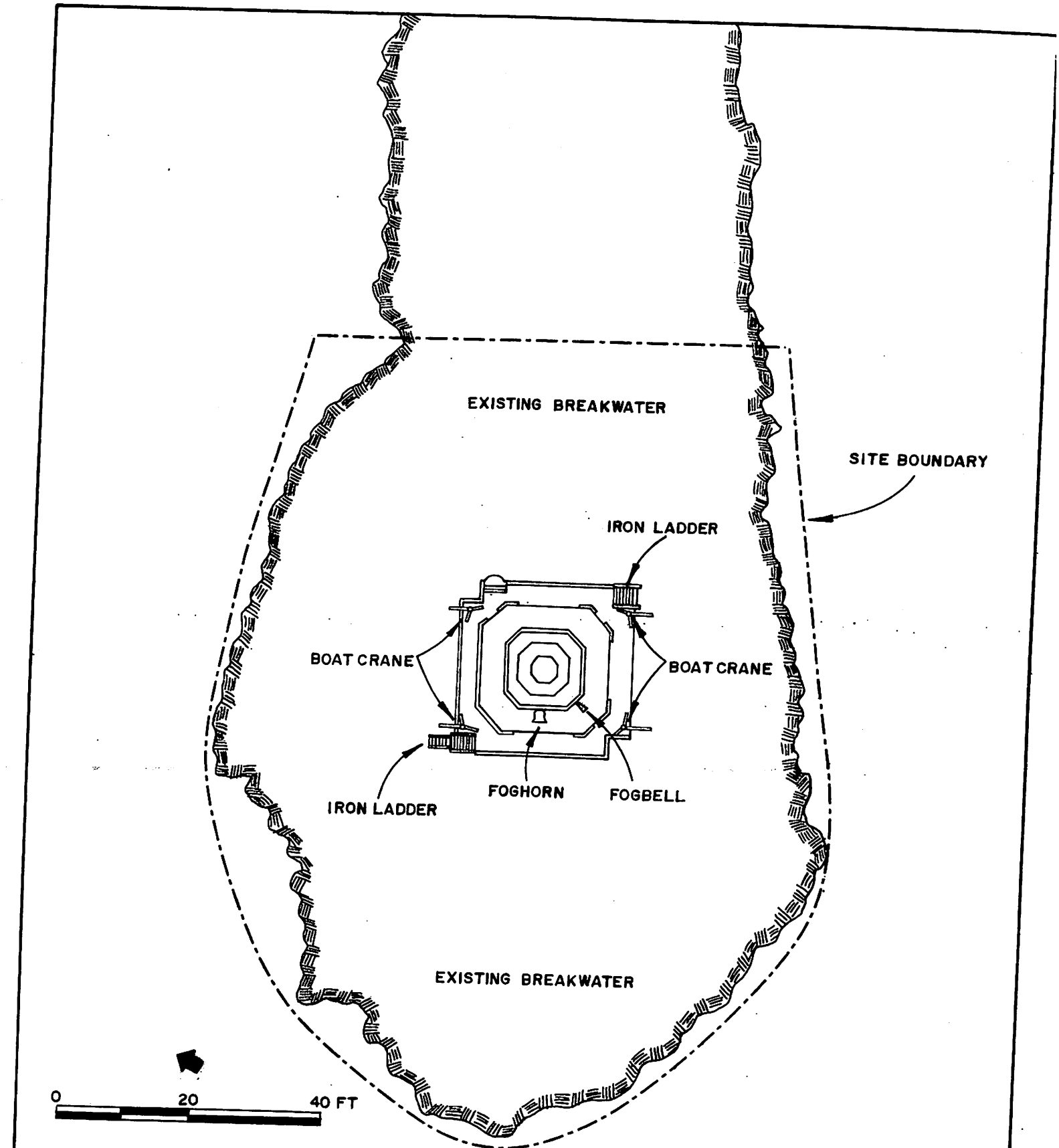


QUADRANGLE LOCATION

SOUTHWEST LEDGE LIGHTHOUSE
New Haven County, Connecticut

Woodmont, Connecticut Quadrangle, 1960
1:24000

UTM References:
18.674020.4566300



SITE PLAN

SOUTHWEST LEDGE LIGHTHOUSE
New Haven County, Connecticut