

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: 89001468 Date Listed: 05/29/90

Greens Ledge Lighthouse Fairfield 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.


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)

1468

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 24 1989

DATE ENTERED

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

1 NAME

HISTORIC

AND/OR COMMON

Greens Ledge Lighthouse

2 LOCATION

STREET & NUMBER Long Island Sound, south of Five Mile River and
west of Norwalk Harbor

CITY, TOWN

NOT FOR PUBLICATION

CONGRESSIONAL DISTRICT

VICINITY OF Rowayton

STATE
Connecticut

CODE

COUNTY

Fairfield

CODE

2 CLASSIFICATION

CATEGORY	OWNERSHIP	STATUS	PRESENT USE
<input type="checkbox"/> DISTRICT	<input checked="" type="checkbox"/> PUBLIC	<input type="checkbox"/> OCCUPIED	<input type="checkbox"/> AGRICULTURE
<input checked="" type="checkbox"/> BUILDING(S)	<input type="checkbox"/> PRIVATE	<input checked="" type="checkbox"/> UNOCCUPIED	<input type="checkbox"/> MUSEUM
<input type="checkbox"/> STRUCTURE	<input type="checkbox"/> BOTH	<input type="checkbox"/> WORK IN PROGRESS	<input type="checkbox"/> COMMERCIAL
<input type="checkbox"/> SITE	PUBLIC ACQUISITION	ACCESSIBLE	<input type="checkbox"/> EDUCATIONAL
<input type="checkbox"/> OBJECT	<input type="checkbox"/> IN PROCESS	<input type="checkbox"/> YES RESTRICTED	<input type="checkbox"/> ENTERTAINMENT
	<input type="checkbox"/> BEING CONSIDERED	<input checked="" type="checkbox"/> YES UNRESTRICTED	<input type="checkbox"/> GOVERNMENT
		<input type="checkbox"/> NO	<input type="checkbox"/> INDUSTRIAL
			<input type="checkbox"/> MILITARY
			<input checked="" type="checkbox"/> TRANSPORTATION
			<input type="checkbox"/> OTHER
			<input type="checkbox"/> PRIVATE RESIDENCE
			<input type="checkbox"/> RELIGIOUS
			<input type="checkbox"/> SCIENTIFIC

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, Legal Dept., 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
<input type="checkbox"/> EXCELLENT	<input checked="" type="checkbox"/> DETERIORATED	<input type="checkbox"/> UNALTERED	<input checked="" type="checkbox"/> ORIGINAL SITE
<input type="checkbox"/> GOOD	<input type="checkbox"/> RUINS	<input checked="" type="checkbox"/> ALTERED	<input type="checkbox"/> MOVED DATE _____
<input type="checkbox"/> FAIR	<input type="checkbox"/> UNEXPOSED		

DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

Greens Ledge Lighthouse (Light List #973), established in 1902, is located on a waterbound site at the southwestern end of the Norwalk Islands, an archipelago near the Connecticut shore in western Long Island Sound. It marks a rock ledge in the approach to Norwalk Harbor from the west, replacing an earlier stone lighthouse which still stands more than a mile to the northeast on Sheffield Island. The structure consists of a cast-iron tower, resting on a black cylindrical cast-iron foundation with a flared rim and supporting a circular watchroom and lantern. The tower presently is painted brown on the lower half and white on the upper half. Included on the site are a riprap protective breakwater and a boatlanding.

Standing in ten feet of water, the foundation is made of curved cast iron plates, fitted together with bolts through molded flanges on the inside edges. The foundation cylinder flares out in a trumpet shape to accommodate a deck upon which the lighthouse rests. Concrete filling stabilizes and strengthens the foundation and surrounds a cavity left at the top for the brick-lined basement and cisterns.

Five courses of curved cast-iron plates, assembled in the same manner as the foundation, make up the four story tower. A brick lining strengthens and insulates the tower, providing an anchorage for the winding cast-iron stairs which rise on the periphery of each story. A curved sheet metal wall supports the inside end of the treads and risers, providing a wall for storage closets and cupboards in the space above and below the steps in the stairwells.

A gallery or deck encircles the lighthouse at three levels: outside the first story, the watchroom, and the lantern. Originally roofed over, the first story gallery was edged with ornate cast-iron stanchions with triple railings. Alternate stanchions rose to the level of the roof as a support. The roof has been removed. Presently, metal pipes replace the cast-iron stanchions, which, along with metal remnants of the gallery roofing system, are scattered atop the riprap surrounding the lighthouse.

A checker tread surface marks both the watchroom gallery and the lantern gallery, each edged with a simple flat metal railing. The lantern gallery railing is supported by pipe stanchions bolted to the underside of the deck. On the watch gallery, a triple railing is supported by

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Greens Ledge Lighthouse

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cylindrical stanchions topped by spherical knobs. Each stanchion is anchored by a threaded bar, passed down through the edge of both the deck and a hollow sleeve, cast as part of a supporting bracket. The connection is secured with a cast-iron pendant.

Architectural detail is characterized by flat window openings, segmentally-arched lintels, and doorways flanked by pilasters. The east-facing metal entry door is a replacement for the outermost of two doors which originally filled the rectangular opening. The cast-iron door surround contains a simple, stylized eared lintel of flat profile with a segmentally-arched top and straight base. The lintel is set on ogee consoles above flanking pilaster which rest on simple plinths. On the first, second and third stories, the cast-iron window surrounds are of similar design, the consoles reduced to brackets and the plinths replaced by projecting sills. Windows are double hung sash with flat-topped wood frames and wood interior sills. The windows on each of the first three stories are arranged to accommodate the space arrangement within. The first floor, used as a kitchen, has one short window to accommodate built-in equipment. The second story includes two rooms, one larger than the other. The partitions, if not original, appear to be early alterations. Used as a bathroom, the smaller room may be a very early example of indoor facilities in a conical cast-iron light tower. The third story is undivided. Walls on all levels of the tower consist of painted brick; floors consist of cast-iron wedge-shaped segments, bolted together on the upper side and supported on a central cast-iron column which rises from the basement to the watchroom floor. Seven I-beams, radiating from the central column and resting on the brick lining walls, support the watchroom floor. On the fourth story are six porthole windows. The asphalt tile flooring of other stories is missing here, while sections of the cast-iron floor system and brick lining wall are exposed. Additionally, much of the woodwork has been removed.

The cylindrical cast-iron watchroom and lantern are of standardized manufacture, presently stripped of much detail. In the watchroom vertical beaded board sheathing originally covered the walls. Two I-beams, originally enclosed, span the diameter of the ceiling to support the lantern above. Double-leaf iron hatch covers at the top of curved ship's ladders permit access to both the watchroom and the lantern. The lantern, seven feet in diameter, contains glass panes, 25 inches across,

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framed with diagonal brass astragals. Cast-iron plates containing circular ventilators with adjustable covers make up the lower half of the lantern walls. The conical cast-iron roof supports a spherical iron ventilator and lightning deflector rod. Within the lantern stands the modern lighting equipment, two electric bulbs under a hinged dome of heavy glass. This equipment was manufactured by Crouse-Hinds, Syracuse, N.Y. The original equipment, installed in February 1901, was a fifth order lens with a flashing red light. Three months later a fourth order lens was installed, showing a fixed white light with red flashes every fifteen seconds.

8 SIGNIFICANCE

PERIOD	AREAS OF SIGNIFICANCE -- CHECK AND JUSTIFY BELOW			
<input type="checkbox"/> PREHISTORIC	<input type="checkbox"/> ARCHEOLOGY-PREHISTORIC	<input type="checkbox"/> COMMUNITY PLANNING	<input type="checkbox"/> LANDSCAPE ARCHITECTURE	<input type="checkbox"/> RELIGION
<input type="checkbox"/> 1400-1499	<input type="checkbox"/> ARCHEOLOGY-HISTORIC	<input type="checkbox"/> CONSERVATION	<input type="checkbox"/> LAW	<input type="checkbox"/> SCIENCE
<input type="checkbox"/> 1500-1599	<input type="checkbox"/> AGRICULTURE	<input type="checkbox"/> ECONOMICS	<input type="checkbox"/> LITERATURE	<input type="checkbox"/> SCULPTURE
<input type="checkbox"/> 1600-1699	<input type="checkbox"/> ARCHITECTURE	<input type="checkbox"/> EDUCATION	<input type="checkbox"/> MILITARY	<input type="checkbox"/> SOCIAL/HUMANITARIAN
<input type="checkbox"/> 1700-1799	<input type="checkbox"/> ART	<input checked="" type="checkbox"/> ENGINEERING	<input type="checkbox"/> MUSIC	<input type="checkbox"/> THEATER
<input type="checkbox"/> 1800-1899	<input type="checkbox"/> COMMERCE	<input type="checkbox"/> EXPLORATION/SETTLEMENT	<input type="checkbox"/> PHILOSOPHY	<input checked="" type="checkbox"/> TRANSPORTATION
<input checked="" type="checkbox"/> 1900-	<input type="checkbox"/> COMMUNICATIONS	<input type="checkbox"/> INDUSTRY	<input type="checkbox"/> POLITICS/GOVERNMENT	<input type="checkbox"/> OTHER (SPECIFY)
		<input type="checkbox"/> INVENTION		

SPECIFIC DATES built 1902

BUILDER/ARCHITECT Philadelphia Construction Co.

STATEMENT OF SIGNIFICANCE

Greens Ledge Lighthouse, established in 1902, is significant as a typical example of a pre-fabricated cast-iron conical lighttower on a cast-iron tubular foundation. The engineers of the U.S. Lighthouse Board developed this type of foundation in 1873 for underwater sites such as Greens Ledge. The materials, construction, architectural detail and interior finish at Greens Ledge Light reflect the standardized design for conical cast-iron lighttowers in the second phase of their development. This lighthouse is significant as well for the part it played in the improvement of the aids to navigation system of Long Island Sound, where it warns of a submerged rock ledge at the western boundary of the Norwalk Islands group.

During the 1890s, when Norwalk Harbor was being developed by federal appropriation for increased commercial traffic, the approach to that harbor past the Norwalk Islands presented a hazard to deeper draft vessels. A decision was made to build a replacement for the old (1868) lighthouse on Sheffield Island, itself a replacement for a masonry light tower built in 1826. Two new aids to navigation were to be located on water-bound sites at either end of the group of islands, to guide ships into the channel behind the islands from both the east and west. Greens Ledge and Peck Ledge Lighthouses were proposed to Congress in 1896. On March 3, 1899, an appropriation of \$60,000 was granted for the construction of Greens Ledge. The erection of the foundation and superstructure was undertaken in 1900 by the Philadelphia Construction Company.

Greens Ledge Lighthouse is significant also as an example of the standardized cast-iron light-house developed by the U.S. Lighthouse Board engineers in the last quarter of the nineteenth century. During this period most of the remaining sites for lighthouses posed engineering challenges. Wave-washed lighthouses off the southern coasts had been successfully secured to their sites by iron piles, either anchored in rock or screwed deep into sandy shoals. In the northern states where floating ice made such construction unsafe, underwater sites such as reefs, shoals, and ledges had been utilized only at vast expense in manpower and material. Massive masonry foundations were required, such as those built for Minot's Ledge in Massachusetts and Race Rock in Long Island Sound.

See Continuation Sheet

9 MAJOR BIBLIOGRAPHICAL REFERENCES

see continuation sheet

10 GEOGRAPHICAL DATA

ACREAGE OF NOMINATED PROPERTY 1400 square feet
UTM REFERENCES see location map

A	ZONE	EASTING	NORTHING	B	ZONE	EASTING	NORTHING
C	ZONE	EASTING	NORTHING	D	ZONE	EASTING	NORTHING

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

John Milner Associates, Inc.

DATE

October 22, 1985

STREET & NUMBER

309 North Matlack Street

TELEPHONE

(215) 436-9000

CITY OR TOWN

West Chester

STATE

Pennsylvania 19380

12 CERTIFICATION OF NOMINATION

STATE HISTORIC PRESERVATION OFFICER RECOMMENDATION

YES

NO

NONE

[Signature]
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

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

Betty L. Savage

DATE

5/29/90

DIRECTOR, OFFICE OF ARCHEOLOGY AND HISTORIC PRESERVATION

DATE

ATTEST:

[Signature]
KEEPER OF THE NATIONAL REGISTER

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With the development of cast-iron technology in mid-century, a tubular foundation constructed of that material and filled with concrete became a feasible alternative to stone. Major Elliot, engineer of the U.S. Lighthouse Board, developed this type of foundation in 1873. Made of identical curved cast-iron plates, with flanges extending toward the inside of the curve and knees molded in for reinforcement, these foundations were assembled with bolts into rings at the construction site. Then successive rings were bolted together, lowered onto the prepared site and filled with concrete or stones. These foundations proved to be as strong and stable as masonry, and since they could be mass-produced, realized substantial savings in design time, production and transportation costs. Cast iron became the preferred material for lighthouse foundations and was widely used between 1873 and ca. 1910.

Greens Ledge is built upon such a foundation, here with a flared top rim. Photographs taken in 1901 document construction of the lighthouse. One shows assembly of the three lower courses of the cylinder on the wharf at Wilsons Point, another, placement of the cylinder at Greens Ledge, and a third, construction on site that fall, prior to the deposit of the riprap.

Little ornamentation was applied to the tubular cast-iron lighthouse. However, at least three different phases of architectural ornamentation may be discerned. The first phase is represented in the deeply molded, arched and pedimented window and door hoods and segmentally arched window sashes at Stratford Point (1881) and Saybrook Breakwater (1887). The second phase is notable at Greens Ledge where cast-iron window and door surrounds and the brackets which support the watchroom gallery and covered deck have a simplified classical detailing and rectilinear window sashes are enclosed in shallower, plainer cast-iron surrounds. As early as 1885 the second phase had been introduced into the present Third District at Delaware Breakwater Lighthouse. In 1901 a third phase of ornamentation was introduced at Harbor of Refuge, Lewes, Delaware. This phase was characterized by greater abstraction of door and window trim and a molded cornice in place of brackets. Thus, Greens Ledge represents the latter part of the middle phase of cast-iron lighthouse design.

United States Department of the Interior
National Park Service

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Greens Ledge Lighthouse
Norwalk, CT

Description (continued):

In 1989, Greens Ledge Lighthouse was re-photographed and examined in the field in order to bring the National Register documentation fully up to date. Following are the features or characteristics of the lighthouse that differ from its condition and appearance as described in the National Register Inventory/Nomination form prepared in 1985.

The entry faces south, not east.

Window openings are sealed with plywood; sash has been removed but interior surrounds remain.

Greens Ledge Lighthouse still retains the requisite degree of integrity for National Register eligibility.

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National Park Service

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Greens Ledge Lighthouse
Norwalk, CT

Photographs
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All photographs:

1. GREENS LEDGE LIGHTHOUSE
2. Norwalk, CT
3. Photo Credit: HRC, Hartford, CT
4. May 1989
5. Negative filed with Connecticut Historical Commission,
Hartford, CT

Caisson and tower, camera facing east
Photograph 1 of 7

Typical exterior window treatment, camera facing west
Photograph 2 of 7

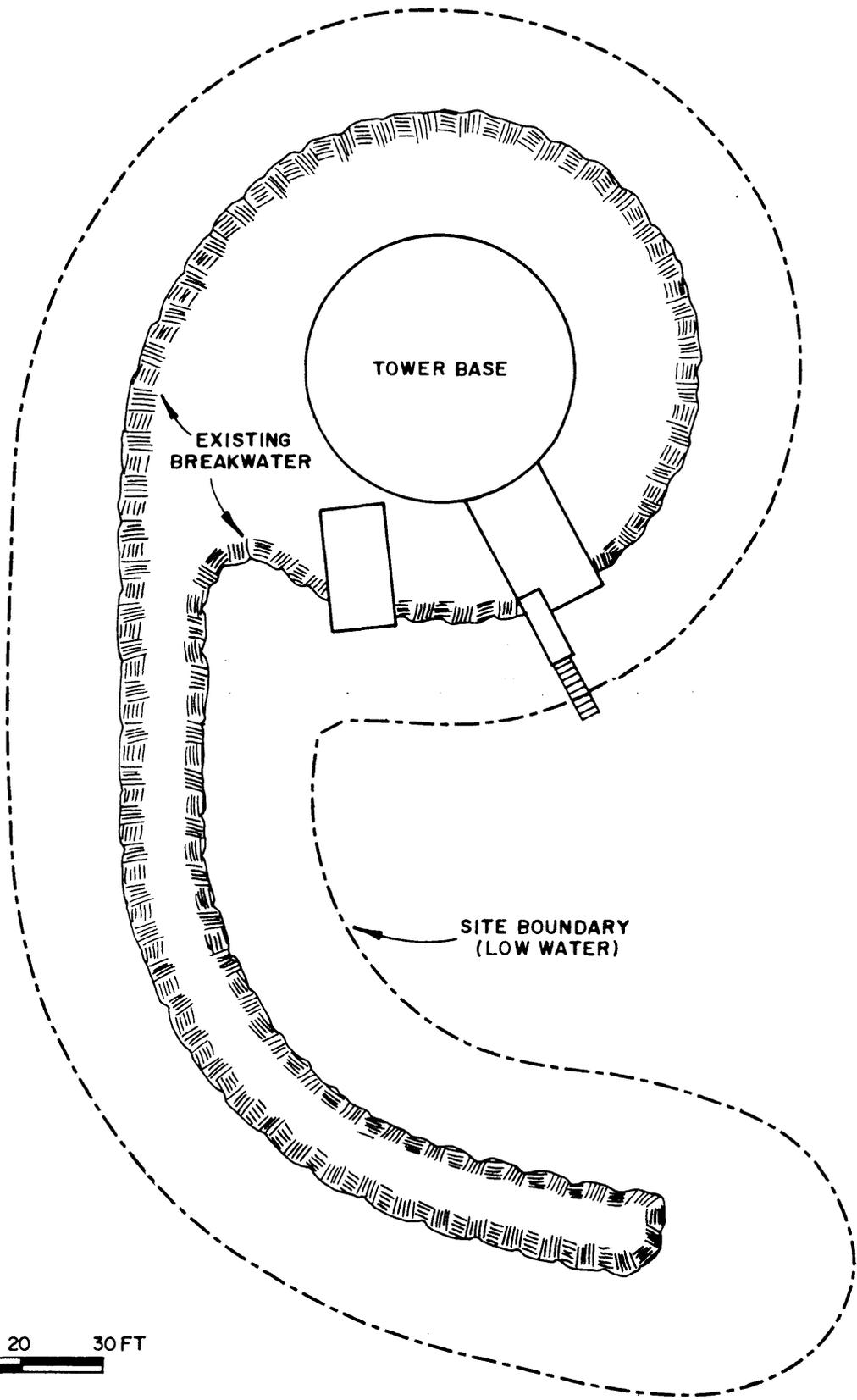
Entry, camera facing east
Photograph 3 of 7

Lantern-deck railing, camera facing northeast
Photograph 4 of 7

Orb ventilator with birdspike and lightning rod, atop lantern,
camera facing south
Photograph 5 of 7

Watchroom floor, showing flanged sections
Photograph 6 of 7

Typical interior window treatment
Photograph 7 of 7



SITE PLAN

GREENS LEDGE LIGHTHOUSE
Fairfield County, Connecticut