

UNITED STATES DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE

**NATIONAL REGISTER OF HISTORIC PLACES  
INVENTORY -- NOMINATION FORM**

FOR NPS USE ONLY	
RECEIVED	JUN 7 1978
DATE ENTERED	NOV 15 1978

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

**1 NAME**

HISTORIC  
Liston Range Rear Light Station  
AND/OR COMMON

**2 LOCATION**

STREET & NUMBER  
About 1/2 mile east of Rt. 13 on State Road 2  
CITY, TOWN  
Port Penn  
STATE  
Delaware

VICINITY OF  
 VICINITY OF  
CODE  
10

CONGRESSIONAL DISTRICT  
One  
COUNTY  
New Castle  
CODE  
002 03

NOT FOR PUBLICATION

**3 CLASSIFICATION**

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

**4 OWNER OF PROPERTY**

NAME  
Multiple - See Continuation Sheet  
STREET & NUMBER

CITY, TOWN  
VICINITY OF  
STATE

**5 LOCATION OF LEGAL DESCRIPTION**

COURTHOUSE,  
REGISTRY OF DEEDS, ETC.  
Public Building  
STREET & NUMBER  
Rodney Square  
CITY, TOWN  
Wilmington  
STATE  
Delaware

**6 REPRESENTATION IN EXISTING SURVEYS**

TITLE  
Delaware Cultural Resource Survey, N-1632  
DATE  
1975  
DEPOSITORY FOR SURVEY RECORDS  
Division of Historical & Cultural Affairs  
CITY, TOWN  
Dover  
STATE  
Delaware

FEDERAL  STATE  COUNTY  LOCAL

## 7 DESCRIPTION

CONDITION		CHECK ONE	CHECK ONE
<input type="checkbox"/> EXCELLENT	<input type="checkbox"/> DETERIORATED	<input type="checkbox"/> UNALTERED	<input checked="" type="checkbox"/> ORIGINAL SITE
<input checked="" 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		

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### DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

The Liston Range Rear Light Station is located on State Road 2, about one-half mile east of Route 13. Its location is determined by the relationship of the light to the front light, and to the ship channel in the Delaware River.

Measuring 120 feet from its base at the focal plane of its light, the Liston Range Rear Light is a skeletal tower with a central cylindrical shell built around a central stairway. Both the skeletal framework and the central shell are founded upon masonry foundations consisting of seven separate footings. Six peripheral footings, placed equidistant from the center of the tower, support the 9-inch wrought iron I-beams which constitute the verticals of the skeletal tower. The verticals rise on a slope of one horizontal to six vertical. Each vertical consists of five sections. The bracing of the tower is connected into the joints of these sections. Horizontal braces between the verticals at each joint, and radial braces between the verticals and the central shell, constitute the main bracing. Additional support is provided by diagonal tie rods between adjoining verticals and between the verticals and the staircase shell. The tie rods carry sleeve-nuts so that the tension on each rod can be adjusted.

The core of the Range Light is the staircase shell. It is eight feet in diameter and is formed of thirty wrought iron bands, each forty-eight inches high. The exterior of the shell was originally painted black. At the base of the shell is a vestibule. It is constructed of cast-iron and is detailed in the Greek Revival mode with galvanized iron being employed for the cornices and the dentils of the classical pediment over the door. There were originally two doors on the vestibule. The outer one was a panelled, hinged, wooden door. It has been replaced with one fabricated of sheet metal. The inner door was located at the juncture of the vestibule with the shell. It was curved and slid between the outer metal wall of the shell and its inner tongue and groove wooden lining. This sheet iron door was removed at an undetermined date. Two classically-designed cast-iron window frames pierce the sides of the vestibule. Similar frames are appropriately placed on the shell. All of the windows originally had wooden sash. These deteriorated and were recently removed and the openings covered with sheet metal. A circular stairway rises from the base of the light to a point a short distance below the watchroom. The stair is constructed around a central cast-iron column with a nine-inch diameter. When built, there were 152 steps and 5 landings. Some of the steps have been removed so that more floor space could be obtained in the originally semi-circular watchroom. The watchroom is presently reached by a ladder-like stairs through a hatch in its floor. Another set of ladder-like stairs allows access from the watchroom to the lantern. The latter is the uppermost room in the structure and contains the lighting apparatus.

The floor of the lantern projects beyond the shell of the staircase below. The diameter of the lantern room is 8'8", slightly larger than the watchroom below it. A gallery projects 2'9" beyond the shell of the lantern room. Access to the gallery is obtained through a door with a pedimented, cast-iron frame. A cast-iron window

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frame, large enough to receive a 44-inch square glass, also pierces the wrought iron shell of the lantern. The conical lantern roof is formed of six sections supported on T-iron rafters and lined with zinc. It is surmounted by a cast-iron ventilator ball with twelve openings. A galvanized iron cornice marks the edge of the lantern roof.

The lighting apparatus of the Liston Range Rear Light has been changed several times since it was designed. Originally, the structure was equipped with a range lens 29-inches in diameter with a prismatic reflector. Illumination was supplied by an oil-fired, double-wick burner with a Funck lamp. In 1906, the tower received a new Second Order range lens with a prismatic reflector. The prisms in the lens and reflector were set in brass fixtures bolted to a cast-iron pedestal base. On the pedestal, between the lens and the reflector, stood a Second Order, oil-fired, air pressure lamp with three round wicks. Up until about 1930, the fixed light, which shone 24 hours a day, was tended by a keeper. The electrification of the lamp in the mid-1930's effected the discharge of the keepers; electric lamps did not need such constant attention. The current lighting apparatus consists of a single 250-watt bulb, mounted in an automatic lamp changer which holds three standby bulbs. Whenever a bulb blows out, the change is automatically cycled to a new one. This system was installed in 1976. Presently, the light is serviced only once or twice a month by the U. S. Coast Guard Station in Gloucester, New Jersey.

Located quite close to the base of the light are two dwellings and two outbuildings. These made up the lighthouse complex and were erected between 1907 and 1913. The residences were erected for the keeper and assistant keeper, who tended the light. One of the outbuildings is a barn, the other, an oil house and privy. All of the structures reflect the Greek Revival style.

The keeper's house is the residence to the west and is the largest building in the complex. It is a four-bay, two-story, frame dwelling sheathed in aluminum siding. The cruciform-shape, hipped roof is sheathed in metal and there is a cove cornice beneath the projecting eaves. The windows have one-over-one light sash. A porch, supported by Tuscan columns, encircles the front of the house. The assistant keeper's house is a two-story, three-bay, modified-T shape, frame structure sheathed in asbestos siding. The hipped roof is covered with composition shingles and projects about a foot beyond the wall of the house. There is no cornice; however, an unadorned bed mould marks the top of the wall beneath the eaves. A screened porch, supported by Tuscan columns, spans the front of the structure. To the rear of the assistant keeper's house is a barn, which has been recently modified, and which is presently used as a garage. It is a rectangular, frame building with a combination of clapboard and vertical board siding. The hip of its roof is surmounted by a hipped roof ventilator, which has a window in each end.

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The cove cornice beneath the projecting eaves is similar to that on the keeper's house. The one-story, brick oil house and privy, located to the rear of the keeper's house, also has a hipped roof and a cove cornice.

The Liston Range Rear Light Station is located on the north side of Road 2 in a large lawn area. The residences are located closest to the road. A drive, which runs between them, turns at the base of the light and terminates at the barn/garage. There is a modern farmhouse located quite close to the complex on the west. To the north and east are cultivated fields. Only those buildings specifically mentioned above are included in the nominated area.

# 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 checked="" 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 checked="" 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 1877, 1907, 1913

BUILDER/ARCHITECT

## STATEMENT OF SIGNIFICANCE

The significance of the Liston Range Rear Light as a navigational aid is undisputed. In addition to this, its form of construction is significant from an engineering point of view, and the keeper's houses and outbuildings at its base form a complex with considerable architectural integrity.

The Delaware River has long been a major transportation route important to the commercial development of its contiguous states and to cities such as Wilmington and Philadelphia. In terms of the river's navigability, the stretch of the Delaware from Philadelphia to Delaware Bay is quite broad, but not particularly deep. Its main channel passes alongside numerous shoals and islands, and these hazards sometimes made navigation of the Delaware a dangerous proposition. Recognizing this danger, and hoping to minimize it, in the second half of the 19th century the U. S. Light House Establishment set about the task of marking portions of the Delaware's main channel with range lights. These lights operated in pairs and stood on a line representing an elongation of the axis of the river's channel. A front light, mounted on a low tower or house, stood near the river's edge. A rear light, supported on a much taller structure, stood at an inland location, a considerable distance behind the front light. When a mariner saw the two lights - one shining directly above the other - he knew that his vessel was on the line of the river's channel and passing clear of islands and shoals.

In the early 1870's, the Light House Establishment proposed the erection of range lights to mark the channel of the Delaware from Reedy Point south to Ship John Shoal. In 1875, Congress approved the work and appropriated \$55,000 for their construction. The Port Penn Range Rear Light was first illumined on April 2, 1877. It stood on a farm called Hazel Glen, west of Port Penn. In about 1904, a new ship channel was dredged in the Delaware. Some of the range lights were abandoned, others moved. The Port Penn Range Rear Light was moved one-and-a-half miles northwest to the new Liston Range Rear Light Station near Biddle's Corner. A Philadelphia contractor disassembled, moved, and re-erected the structure at a cost of \$5,345, or about one-third the cost of a new tower. The tower was re-lit on May 15, 1906.

The rear lights constructed for the Light House Establishment were, since 1860, tall skeletal iron towers. Compared to wood, iron was a stronger, more durable material, better suited for a tall structure. Compared to masonry, it was less expensive and because it could be pre-fabricated by the builder, it could be erected much more quickly. In fact, it was required that the towers be erected

# 9 MAJOR BIBLIOGRAPHICAL REFERENCES

Lankton, Larry - Historic American Engineering Record Survey, DE-10.  
 Unpublished report and drawings, August, 1976.  
 Record Group 26, National Archives.

# 10 GEOGRAPHICAL DATA

ACREAGE OF NOMINATED PROPERTY about 1-3/4 acres

UTM REFERENCES

A	1	8	445	4	5	4	0	0	0	4	3	7	4	8	8	5				
	ZONE		EASTING			NORTHING							ZONE		EASTING			NORTHING		
C																				
D																				

VERBAL BOUNDARY DESCRIPTION

The nominated area consists of an imaginary polygon which fronts on Road 2 for 225 feet and which runs back from the road parallel with and 15 feet from the west side of the barn for 175 feet and parallel with and 15 feet from the east side of the keeper's house for 230 feet. The other side of the polygon is formed by connecting these two lines. It includes the light, two residences and two outbuildings.

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

STATE	CODE	COUNTY	CODE
STATE	CODE	COUNTY	CODE

# 11 FORM PREPARED BY

NAME / TITLE Ann Steele, Student, University of Delaware and  
Joan M. Norton, Architectural Historian

ORGANIZATION	DATE
<u>Division of Historical &amp; Cultural Affairs</u>	<u>April, 1978</u>
STREET & NUMBER	TELEPHONE
<u>Hall of Records</u>	<u>(302) 678-5314</u>
CITY OR TOWN	STATE
<u>Dover</u>	<u>Delaware 19901</u>

# 12 STATE HISTORIC PRESERVATION OFFICER CERTIFICATION

THE EVALUATED SIGNIFICANCE OF THIS PROPERTY WITHIN THE STATE IS:

NATIONAL X STATE     LOCAL    

As the designated State Historic Preservation Officer for the National Historic Preservation Act of 1966 (Public Law 89-665), I hereby nominate this property for inclusion in the National Register and certify that it has been evaluated according to the criteria and procedures set forth by the National Park Service.

STATE HISTORIC PRESERVATION OFFICER SIGNATURE

TITLE Director, Division of Historical & Cultural Affairs

DATE 6/5/78

FOR NPS USE ONLY

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

	DATE <u>11.15.78</u>
DIRECTOR, OFFICE OF ARCHEOLOGY AND HISTORIC PRESERVATION	KEEPER OF THE NATIONAL REGISTER
ATTEST <u>Marcella ...</u>	DATE <u>11-13-78</u>
KEEPER OF THE NATIONAL REGISTER	

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and inspected at the builder's place of business before being shipped to the construction site. In one significant respect, the Liston Range Rear Light differs from many of the others erected by the Light House Establishment. It is constructed of wrought, rather than cast, iron. Although wrought iron, because of its corrosion resistance and its resistance to cracking, would have seemed an appropriate choice for tall structures exposed to the elements and to wind loads, the Light House Establishment most often resorted to cast-iron.

In 1907, to complete the Liston Range Rear Light Station, the Light House Establishment erected a keeper's house, barn, and oil house. In about 1913, it erected an assistant keeper's house. These structures which are detailed in the Greek Revival style complimented the detailing on the lighthouse structure. Together, they form an architecturally-integrated complex which has been little altered since it was erected. The station originally consisted of a four-and-a-half-acre area. The houses and outbuildings were sold to private individuals after the manning of the station was discontinued in the 1930's. The U. S. Coast Guard retains ownership of the light and services it from its station in Gloucester, New Jersey.

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Liston Range Rear Light Historic District

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REPRESENTATION IN EXISTING SURVEYS

Historic American Engineering Record Survey DE-10

1976

Federal

Bureau of Archaeology and Historic Preservation  
Heritage Conservation & Recreation Service  
Department of the Interior  
Washington, D.C.



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Liston Range Rear Light Historic District

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OWNER OF PROPERTY

Commandant (G-FLP-3/71)  
United States Coast Guard  
400 Seventh Street, S.W.  
Washington, D.C. 20590

Harold S. Harman  
R.D. #1, Box 196  
Middletown, Delaware 19709

W. Erwin Spicer  
R.D. #1, Box 195  
Middletown, Delaware 19709