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Block Island South East Lighthouse
National Historic Landmark Study
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Note: All images are courtesy of the Southeast Lighthouse Foundation.

Present and Historic Physical Appearance



Block Island sits approximately 12 miles south-southeast off the coast of Rhode Island, squarely astride the coastal sealanes. The Block Island South East Lighthouse has stood atop Mohegan Bluff, high above the Atlantic Ocean, since 1874. The lighthouse and keepers quarters were meant to be showpieces for the U.S. Lighthouse Bureau. They were among the most elaborate built during the 1870s. South East light has been the focus of an intense preservation campaign. Local and national efforts forged a complex partnership to move the structure away from eroding bluffs and restore it to operation, with long-term preservation in mind.

The Light Tower and Keepers House

The principal structure of the lighthouse station consists of a 5-story brick light tower and 2- 1/2-story duplex residence with identical 1-1/2-story kitchen wings located at the rear. A short 1-1/2-story hyphen connects these two elements. Both the residence and tower are constructed of brick and have granite ashlar foundations and granite trim. Below ground the structure rests on a brick foundation. The tower lantern and gallery is of cast-iron and was cast by Paulding, Kemble & Company.

Following designs produced by the Light House Board in 1873, the residence and tower were built in 1874 by contractor T.H. Tynan of Staten Island, in the High Victorian Gothic style. The original lighthouse and attached keepers house structures retain a high level of integrity. To prevent it from slipping into the Atlantic as the bluff eroded away, the lighthouse was moved, during August 1993, approximately 250 feet back from the edge of Mohegan Bluffs. As the lighthouse remains within the historic boundaries of the station, the integrity of the light station's setting, feeling, and association has been maintained.

The Tower

The light tower is 67' high and is composed of an octagonal granite base, an octagonal pyramidal shaft, a circular cast-iron parapet surrounding an open octagonal gallery and a 16- sided lantern encircled by an open circular gallery. The whole is capped by a 16-sided pyramidal roof. Aside from the replacement of the original wrought-iron railings with galvanized steel railings in the two galleries, the replacement of the historic lens with an inappropriate substitute, and the replacement of the original iron-plate roof with copper, the tower structure is essentially unaltered.

The tower shaft consists of two brick shells connected by cross walls. The outer shell forms the hollow frustum of an octagonal pyramid while the inner one is the hollow frustum of a cone. At its base, the shaft has a 25-foot diameter, which decreases to a 15-foot diameter at the base of the lantern. The tower is entered through the connecting hyphen on the first floor and contains a circular iron stairway attached to the wall, with semi-circular landings on the second and third floors supported by wrought-iron beams and brick corbel tables. On the first

and third floors, six narrow double-hung sash windows in cast-iron frames, set in segmental arched openings in the north, east, and south walls, light the interior of the tower. Originally, the first floor served as the oil room. Today the three cast-iron and brick shelves, on which the lightkeepers stored 100-gallon oil butts, are still in place.

The Tower Gallery, Parapet and Lantern

The tower shaft ends at the fourth-story level in the superstructure with its gallery, parapet and lantern. On the exterior eight iron brackets with ornamental spandrels and pendants spring from a cast-iron cornice with brick frieze. These support the octagonal gallery and surrounding parapet. The watchroom has a cast-iron floor and is open to the lens room above. The room contains a pedestal and platform supporting the Fresnel lens. The platform consists of a modern expanded steel grate installed when the second lens was removed from the tower.

On top of the parapet drum is the 11.5' diameter lantern, which is fitted with 10' high windows on all 16 sides, each consisting of 3 fixed panes of glass. The function of the lantern is to protect the lighting apparatus from the weather. Narrow cast-iron galleries encircle both the outer and inner circumferences of the lantern. Sixteen circular skylights, each containing fourteen hexagonal glass prisms, are set in the deck plates of the outer gallery and serve to light the watchroom and vestibule below.

Lastly, crowning the top of the light tower, is the roof, made of 16 copper plates and rafters. The original roof consisted of sixteen iron plates and rafters with an iron cove cornice. The Coast Guard replaced the original iron roof with copper before turning the station over to the Southeast Lighthouse Foundation. The roof rests on the posts of the lantern's iron frame and is topped by a ball ventilator and lightning rod. The rooftop ventilator aided other ventilators in the lantern floor to carry off accumulations of gasses from the lamp.[1]

The Lens and Illuminant

In the center of the lantern, or lens, room is the fixed 1000-watt electric lamp, surrounded by the lenticular apparatus, which consists of 8 Fresnel lens panels, each composed of 3 sections set in brass frames. The height of the light's focal plane is 52'6" above ground and 204' above sea level. From 1929 until 1991 South East Light exhibited a fixed green light, the only first-order green light in New England, with a range in excess of 22 miles.

Originally, South East Light exhibited a fixed white light, and its illuminating apparatus consisted of a fixed six-panel Fresnel lens, manufactured by Barbier and Fenestre of Paris in 1873, lit by a four-wick Fink's Hydraulic Float lamp of 12,188 candlepower. As the landward side of the light did not require illumination, the traditional eight-paneled lens with five-wick lamp was not necessary. The lamp first burned lard oil, then was converted to kerosene in the 1880s, following the trend of other U.S. lighthouses. In 1889, the original lamp was replaced with a five-wick lamp. This was subsequently replaced in 1907 with a incandescent oil vapor (IOV) lamp, which increased the light's intensity to 45,690 candlepower, and electric light bulbs which increased the intensity even further.

In 1929 the original lens was moved to another location and the lens was changed from a fixed white light to a flashing green light. The change was needed in order to prevent confusion by mariners with other area lights on the approaches to New York, particularly Montauk Lighthouse, which also had a fixed white light. A revolving apparatus with a pedestal was added, which in combination with a new lens produced a flashing, as opposed to a fixed light. This lens flashed eight times per rotation, once every 3.7 seconds. The 1929 lens was a melding of various components. Three of the eight Fresnel panels were manufactured by Henry Lepaute of Paris, one in 1880, the remaining five by L. Sautter & Co., also of Paris, date unknown. To further differentiate the signal, the light was changed from white to emerald green, and the lamp was updated to 50,000 candlepower. Green light signals were rare because the color limits the extreme range of visibility for the light signal.[2]

The eight Fresnel bulls-eye lenses of the lens apparatus, each measuring 39-1/2" by 30-9/16", turned on a mercury float which allowed vibration-free, low-friction rotation. The mercury float was protected from evaporation by an oil bath and sheet metal cover. While offering many mechanical advantages, the mercury float presented a danger to anyone visiting the light if it was not regularly maintained. If the oil bath was allowed to evaporate for several years the mercury could be exposed to the atmosphere, giving off poisonous fumes. In 1990 this lens assembly was still in service, rotating on its mercury flotation system. For environmental and safety reasons the Coast Guard ordered the removal of the mercury bath in 1990 as part of a national campaign. The light was replaced by a modern revolving aircraft beacon on a steel tower several hundred feet behind the lighthouse. The aero-beacon flashed green every five seconds. The historic lens was retained in the tower in an inoperative condition.

Following the successful move of the lighthouse away from the bluff edge in 1993, the Coast Guard agreed to relight the tower in August 1994. Rather than modify the historic green 1929 revolving lens, the Coast Guard, claiming operational expediency, installed a complete first- order Fresnel lens taken from the Cape Lookout Lighthouse in North Carolina. The lens was restored by renewing the glazing compound that holds each prism in place. The cast iron lens pedestal and lantern room floor were replaced by a steel grate installed to accommodate the new lens. At the same time, the Coast Guard rebuilt the lantern room, which included replacement of the deteriorated cast iron roof with copper and installation of bulletproof glass windows to protect the lens.

The Cape Lookout lens does not match the original lens other than in its general size. The original 12-foot-high, 6-foot-diameter Southeast Light Fresnel lens of 1873-1929 had prisms on only 270 degrees of its circumference. Glass prism reflectors focused light rays out to sea from the landward side of the lens. The Cape Lookout lens has prisms facing 360 degrees. Six of the eight lens section are stamped with the maker's mark, L. Sautter & Co. In addition to the Cape Lookout Lens in the tower, the Southeast Lighthouse Foundation plans to exhibit the green 1929-1990 lens on-site as an educational device when the station opens to the public as a museum.

The new lens came from Cape Lookout Lighthouse, built in 1856 in Beaufort, North Carolina. It was last in place in North Carolina in 1980 and had been on display at the Coast Guard Support Center, Portsmouth, Virginia, after that time. The state of North Carolina has been engaged in discussions with the Coast Guard to return the Cape Lookout lens now installed in the Block Island Southeast light to its historic home. If the negotiations meet with success, then perhaps the green 1929 Block Island lens can be modified and returned to the tower, giving two preserved primary seacoast lighthouse towers their historically correct lenses and signals.

Keeper's Residence

The dwelling at South East Light is joined to the light tower by a perpendicular 1-1/2 story connecting wing at the center of its southeast facade. It consists of a 2-1/2 story main block and two 1-1/2 story rear kitchen wings. The main entrance is in the northeasterly side of the connector. There are two single-story porches, located on each side of the connecting wing. The porch posts on the southwesterly side have decorative beveled, bracketed posts, while the complementary porch on the other side exhibits 20th-century changes. A ramp leads up to the southeast porch and main entrance.

The fenestration on the facade consists of two 3/4-length 9-over-9 pane windows on the first story, with a 4-over-6 pane, centrally located wall dormer with segmental arched window head, on the second story level. Identical dormers fit in over the entry doors. On the gabled ends of the main block are two pairs of 6-over-6 pane windows on the first and second floors and one pair of 4-over-4 panes on the half-story level.

The kitchen wings to the northwest rear are connected to the main block by a single-story shingled framed passageway. Each wing is lit by a pair of 4-over-6 pane windows and a single 2-over-2 pane window in its outer wall and a single 6-over-6 pane window in its inner wall. The kitchen garrets are lit at the gable end by 2-over-2 pane windows that flank either side of the chimney block.

There have been very few changes to the residence. The original plan included two mirror- image apartments, the north one to be occupied by the keeper and the south one to be shared by the first and second assistant keepers. This floor plan remains virtually intact. One of the only changes to the plan occurred in 1938 when indoor bathrooms were installed, two on the second- floor level of the tower connector and another by the southwest entryway to the station. Other minor changes have been necessary because of storm damage or to add modern plumbing or electrical conveniences. However, none of the improvements has altered the outward appearance of the structure. On the outside, changes that have taken place include replacing the original shingle roof with a slate one (1886) and subsequently with an asbestos one (1923); the current roof is made of asphalt. In 1933 new higher chimney tops were added and, in the fall of 1993, following the requirements of the Americans with Disabilities Act, a ramp to aid the disabled was built along the easterly side of the building.

The light station was built in the Victorian Gothic style, which can be seen, for instance, in its steeply pitched roofs, the windows that extend into the roof line, the use of both brick and granite around the windows and in its overall massiveness. The use of chiseled granite adds a rugged quality to the structure and this, combined with the building's size and scale, gives a general air of strength to the lighthouse.

Other Structures of the Station

South East Light sits on the eastern edge of an approximately 10-acre plot of open land. Two other noncontributing buildings share the site today, a brick garage and a brick ranch house. A single-story gable-roofed structure, the garage was built in 1939. It sits south of the lighthouse and is now houses fog signal

equipment. The ranch house is also a single-story structure, with attached garage, and is located west of the lighthouse. The Coast Guard built the house in 1962 to serve as a residence, which it still does as well as the headquarters of the Southeast Lighthouse Foundation. There are three historic stone walls that surround the property that are considered contributing structures to South East Light. The walls pre-date the light station and were most likely constructed in the late eighteenth or early nineteenth century when the site was first cleared for agricultural use.

In the past, various other structures existed at the light station. These functional buildings either supported the needs of the families that lived at the site or accommodated aids to navigation, equipment or supplies. Over time they were updated or replaced, reflecting common practice at a functioning light station. Most of the outbuildings were located in a cluster inland to the northwest of the original site of the light. These outbuildings included: sheds, barns, garages, an oil tank, and oil house, a cistern, two different era radio stations, a privy, and a powerhouse. Historic photographs show that the majority of these were frame buildings. Reflecting the change from horse to automobile transportation, U.S. Coast Guard correspondence from 1939 indicates that the barns were replaced with the surviving brick garage.[3]

The first structure to house an aid to navigation on the site was the fog signal building, built in 1873. This was replaced in 1908 with a one-story brick structure after the original burned to the ground. In 1987, when the structure was at risk of falling over the eroded cliffs, the Coast Guard destroyed it.

Other structures formerly on the site included a signal station, built in 1898 when the United States and Spain were at war, and a telegraph office, built in 1903. In 1909 station outbuildings included an oil tank and oil house, coal sheds, siren house, a barn for radio equipment and radio and weather signal towers. The hurricane of 1938 destroyed a barn and storehouse that served the site. A military radar station was erected in 1943 during the Second World War. As many of the remaining structures were no longer in use in 1962 the lightkeepers received permission to remove all but the garage, ranch house and fog signal building.

Today, due to many years of advances in technology, restricted budgets, and other reasons, many Coast Guard light stations have few remaining original buildings. Thus, South East Light is similar to many stations in its lack of historic outbuildings. Historically, most of the 10-acre site at the lighthouse has been kept as open land. Photographs show that for a period, circa 1900, the outbuildings were enclosed by a picket fence, outside of which grazed sheep. There are no longer any fences at the site.[4]

When South East Lighthouse was built in 1874, approximately 300 feet of lawn lay between the structure and the edge of Mohegan Bluffs. Since that time, however, almost 250 feet of soil has eroded from the bluffs. The erosion problem has been known for some time. Even before construction of the lighthouse occurred, Block Islanders warned of the inadvisability of the location because of the steady erosion of soil at the Island's southeastern corner. For approximately the last 30 years the Coast Guard has been carefully monitoring the situation. In 1983 the citizens of Block Island began laboring to save their landmark. Concern became so strong that the National Trust for Historic Preservation entered the lighthouse on its 1990 and 1991 lists of "America's Eleven Most Endangered Historic Places."

In order to prevent the inevitable loss of the lighthouse, South East Light was moved back from the edge of Mohegan Bluffs between August 10 and 28, 1993, when it was only about 55 feet from disaster. Under the supervision of the Army Corps of Engineers, Expert House Movers performed a three-legged move of the light tower and dwelling, for a total of 360 feet. Peter Friesen designed the plan and International Chimney Corporation assisted. The 2,000- ton structure was hydraulically lifted, with its above-ground foundation attached, and then hydraulically pushed along metal tracks on roll beams. The successful move did not alter the fabric of the structure, and the lighthouse now rests on a location that geotechnical studies have determined will be safe for more than a century.



Although a technological feat, South East Light's move was not unique among lighthouses. Throughout the history of the lighthouse system, lighthouses have been moved to avoid destruction from erosion or other threats.[5] Highland or Cape Cod Light was moved last year. Several other important lighthouses, including Cape Hatteras light are slated to be moved in the next several years. As in each of these cases and in historic moves of lighthouses to prevent destruction, the relationship of South East Light to the sea and land has been maintained, the integrity of the lighthouse's relation to the seacoast has

been preserved. The alternative to moving the structure would have resulted in the loss, in the very near future, of this historic structure.

Now that South East Lighthouse has been saved from destruction, interior restoration work will proceed, utilizing the original U.S. Light House Board plans as a guide. The Southeast Lighthouse Foundation plans to maintain a museum at the station that will feature the material culture of the U.S. Coast Guard and the maritime history of Block Island. There are also plans to use part of the space for a bed and breakfast, featuring historic rooms with appropriate furnishings. The lighthouse will continue to be a working aid to navigation and continue to guide vessels around the southeastern corner of Block Island.



Notes

1. The description of the present and historic appearance of South East Lighthouse is drawn extensively from Mary M. Thomas, NPS Form RI-27, Historic American Engineering Record, "Block Island Southeast Light" (1984) and Richard Greenwood, NPS Form 10-900, National Register of Historic Places Inventory - Nomination Form, "Block Island South East Light" (1984).

2. U.S. Department of Transportation, United States Coast Guard, Light List, Vol. 1, Atlantic Coast (Washington, D.C.: U.S. Government Printing Office, 1930-1994); United States Coast Guard Aids to Navigation, 1945 (Washington, D.C.: United States Government Printing Office, 1946) p. 351.

3. Thomas, p. 36; Historic American Engineering Record, "Block Island Southeast Light - 1874, HABS/HAER Collection, Library of Congress, 1988, sheet 3 of 12.

4. Discussion of outbuildings and the land around the light station drawn extensively from the HAER Report and National Register Nomination for South East Lighthouse.

5. Francis Ross Holland, Jr., Great American Lighthouses (Washington, D.C.: Preservation Press, 1989), p. 67.

Statement of Significance

Block Island South East Lighthouse is outstanding as one of the finest lighthouses constructed by the U.S. Light House Board in the 19th century. The station has served as a primary aid to navigation since it was first lit and today is one of the last 12 lighthouses in the country still equipped with a lighted first-order Fresnel lens. South East Light also exemplifies a relatively brief era of architectural sophistication at the Light House Board. The picturesque quality of the steeply pitched Gothic roof and chiseled masonry of the lighthouse design provides one of the U.S.'s most powerful expressions of the romanticism inherent in the function and setting of the lighthouse. In the 19th-century history of maritime transportation and, in particular, the technology and architecture of lighthouses, South East Light is significant on the national level. It meets Criteria Exclusion 2 as a moved property that is essentially in the same historic setting and that derives its primary national significance from its architectural and historic importance.

The preceding statement of significance is based on the more complete study which follows.

Block Island and Navigation

Early in the history of New England, Block Island was recognized by mariners and others as an extremely dangerous location along the eastern seaboard. The island lies between Long Island and Rhode Island sounds in the center of the shipping lanes for vessels traveling from the south, or west from New York City. It was not until 1829, however, that a first effort was made to safeguard mariners from running aground on its shoals. During that year Congress appropriated funds for a light at the northern tip of Block Island. The North Light was built in 1829, but it provided little warning for ocean-going vessels passing by the Island's southern coast.

The need for a navigational aid on the south coast of Block Island grew considerably during the 19th century, due to a tremendous increase in maritime traffic along the eastern seaboard of the United States, in particular along the coast of the industrial Northeast. In 1860 a committee appointed by the General Court of

Massachusetts to investigate the need for a canal through Cape Cod reported that 10,000 vessels passed around the Cape each year.[1] By the 1870s and 1880s, the average annual number of vessels recorded at the Cross Rip Light Vessel, situated in Nantucket Sound, was 13,000.[2] Virtually all of these recorded vessels passed closely by Block Island on the preferred route around the Cape between Martha's Vineyard and Nantucket. These numbers give an indication of the volume of traffic, but do not even reflect vessels that docked in Providence and at other Narragansett Bay ports north of Block Island. Every sort of vessel: steam and sail, warships, yachts, passenger ships and cargo carriers traveled past the island.

The increase in seacoast traffic during the mid-19th century was due to both changes in technology as well as industrialization and the expanding U.S. economy. The introduction of the steam engine in the early 19th century dramatically changed maritime transportation, although its impact was not fully realized until the second half of the 19th century. At first steam-powered engines were developed for passenger vessels, but increasingly were employed for commercial transport. In 1850, approximately fifteen percent of the commercial vessels serving U.S. ports were propelled by steam.[3] During the latter half of the 19th century, ever greater numbers of individuals and goods were being transported by steamships, resulting in a larger number of vessels on the water.

Steam also contributed to the volume of cargo carried by sea. The growth of manufacturing in factories, especially in the Northeast, created a demand for raw materials, which frequently had to be imported from various parts of the country and abroad. Ships in turn carried the finished goods to markets elsewhere. In general, raw materials were transported north from the southern states and other ports to industrialized New England; this region in turn exported goods to the south. Boston and Providence became terminals for long-distance steamers that linked New England with southern ports and beyond to others on the Gulf of Mexico, the Pacific Coast and Europe.

Rhode Island's industrial economy expanded enormously during the second half of the 19th century. Providence emerged as the base of the state's industrial growth and became a central location for the receipt and transport of materials and goods. During the 1870s, the city was the largest coal receiving port in New England. Coal was a particularly vital commodity, as it was used to fuel steam-powered ships, railroads and factories and to heat the growing urban centers. Providence itself was the center of highly successful cotton, woolen and base metal industries. During the 1850s and 1860s, the cotton trade peaked and, from the Civil War period to 1890, the woolen industry boomed. The base metal industry was strong throughout the late 19th century. The raw cotton and wool and metals from southern states and other ports imported to support these industries were transported primarily by sea.

Passenger transport also contributed significantly to the high level of maritime traffic. More individuals were traveling along the New England coast because of steam-powered vessels, which were a more convenient way of traveling than via wind-driven vessels. Direct steamship routes were established between New York and Portland and New York and Boston. These in turn connected to local routes and other routes that crossed the globe.

The New England coast was especially crowded with passenger vessels during the summer months, because of the increase in recreational travel and the development of seaside vacation resorts. Especially after the Civil War and the rise in industrialization and urbanization, people took seasonal vacation from the cities. For health reasons as much as for pleasure, vacationers flocked to the New England coast, which was more accessible because of steam- powered trains and vessels. Along the southern coast of New England, Newport, Rhode Island became a popular resort as did the towns along the Cape Cod shore. Fisher's Island, Martha's Vineyard and Nantucket, which were accessible only by boat, also drew tourists.



Maritime Perils

The high volume of maritime traffic along the eastern seaboard produced a need for more aids to navigation to protect shipping. In addition, steam-powered vessels were traveling faster and many vessels were longer and deeper, putting mariners at greater risk than before. A series of spectacular disasters pointed to the danger. Passengers, shipowners and others connected to maritime activity ultimately demanded more effective aids to navigation.

The hazards of Block Island became more pronounced because of the crowded waters. In 1830 the passenger packet *Warrior* was cast ashore in a gale. Other wrecks followed along the seaboard. In 1856 the Collector of Customs at Newport petitioned Congress to build a lighthouse along the southern coast of the Island. Although money was appropriated, the funds were ultimately applied to moving and reconstructing the North Light. In 1858 the steamship *Palmetto*, one of the Boston and Philadelphia Steamship Company's fleet, sank off the southern shores of the Island. In the wake of this disaster, Nicholas Ball of Block Island mounted an extensive campaign to alleviate the Island's hazards by improving navigation around it. Ball's efforts ultimately led not only to the construction of South East Light, among other aids to navigation, but also to Block Island's emergence as a major steamship resort.

A merchant, hotel proprietor, land owner, entrepreneur and state Senator (1850s-1870s), Ball had grand plans for his home island. His first step was to begin organizing efforts, in 1867, to fund a breakwater and harbor for the east side of Block Island. This federally funded project was carried out between 1870 and 1876, although ships were able to dock beginning in 1874. With the Island accessible by steamship for the first time, Ball encouraged visitors by constructing the first of the Island's many large hotels, which accommodated 500, in 1873-74. Vacationers subsequently flocked to the Island, making it one of New England's most popular resorts.

Recognizing the need for maritime aids, Ball also started to garner support for construction of a second lighthouse on Block Island. In 1870, he met with Mr. Winslow, president of the steamship company that had lost the *Palmetto*, to gain the latter's backing. Ball then circulated, in January 1872, a petition among shipping firms and other interested businesses to lobby Congress for a lighthouse. He cast a wide net and approached parties from Maine, Massachusetts, Rhode Island, Connecticut, New York, New Jersey and Pennsylvania. As stated in the petition, Block Island was "passed by hundreds of vessels daily" and these vessels were "exposed to as much danger as at almost any other place on the entire coast of the United States."[4]

Finally, the U.S. Light House Board responded to the public outcry for a lighthouse on the Island's southern coast and recommended funding to erect one. In the spring of 1872, Congress appropriated $75,000 for the construction of a first-order light and fog signal.[5] Under the direction of Col. I.C. Woodruff, the chief engineer, plans were drawn up in the engineering department of the Third Light-House District, in which Block Island was located. In July 1873 the final plans for the lighthouse were approved by the Light House Board. The building contract was let to private builder T.H. Tynan of Staten Island, and another contractor, Paulding, Kemble & Company, won the bid to supply the cast-iron superstructure. Bailey & Debevoise constructed the lantern, and the lens apparatus was manufactured in France by Barbier & Fenestre.

Construction on the lighthouse began in 1874. Although the date stone on the lighthouse reads 1873, a letter from that year sent to Colonel Woodruff from Engineer Secretary Major Elliot gives permission to the former to enter into a contract with Tynan. Presumably, building construction commenced after the contract was signed.[6] On February 1, 1875, the light station, including a fog signal building, was in full operation. It has been in continuous operation as an aid to navigation since that time. Today, with a range in excess of 22 miles, the light remains one of the most powerful on the eastern seaboard; the Coast Guard still considers South East Light a vital navigational aid along the East Coast of the United States.

When South East Light was completed, it was considered one of the finest and best-equipped light stations in the country. Its first-order Fresnel lens and fog signal were technologically up-to-date, and in 1875 the light was the strongest on the New England coast. The light became part of a new generation of American lighthouses. South East Light was built during the heyday of the U.S. Light House Board, created in 1852, and epitomizes the Board's increased emphasis on technological sophistication over the course of the second half of the 19th century. It was a superb illustration of the considerable advances made by the Light House Board in the 22 years since it had been created.[7]

During the 58 years of its existence, the Light House Board succeeded in modernizing, professionalizing and standardizing the lighthouse system in the United States. One of its first acts was to adopt France's Fresnel pattern lenses combining refractive and reflective prisms.[8] This type of lens was developed by Augustin-Jean Fresnel (1788-1827), who developed glass prism lighthouse lenses and bright illuminants for the French light system. The U.S. Lighthouse Board ordered Fresnel lenses for all U.S. lights, most of which were installed in existing lighthouses by 1859. Further, it helped develop the technology for fog signals as aids to navigation and installed them at major light stations.

In addition to improving and modernizing light station technology, the Board built up a corps of professional personnel. It also worked on creating a unified, organized national system of well-placed aids along U.S. waterways and the seaboards. It quickly adopted the French system of classification. First-order lenses were employed for the largest seacoast lights and were designated to give warning of approaches to land. The second- through sixth-order lenses were utilized to mark headlands and points in lakes, bays and rivers. To further differentiate lighthouses, lights were also designated as fixed, revolving or flashing and were colored red

or white. Flashing lights were also set to flash at different intervals.

With its height and first-order lens, South East Light became an important link in the United States' system of primary seacoast lights. In the early 1870s, the primary lights in the Block Island area were, to the east, Gay Head Light on Martha's Vineyard and, to the west, Montauk Light, on the eastern end of Long Island. Over 120 other lighthouses around the United States coast were classified as primary aids, although less than fifty were equipped with first-order lenses.

In the 1870s, South East Light was sophisticated not only technologically, but also architecturally. Its high-style Victorian Gothic design is unusual among lighthouses, and its picturesque quality reflects, in both style and location, the prevailing public taste for picturesque and romantic images. Prior to the creation of the federal Board, lighthouse design in the United States was primarily functional with little stylistic elaboration. Designs were utilitarian and reflected geographic conditions more than current architectural styles. After the Light House Board was created, lighthouse plans were drawn up by an engineer under the direction of District Engineers, and a set of standard lighthouse designs was developed, many of which were employed repeatedly in various parts of the United States. These designs incorporated an increased attention to architectural style.

By the 1870s, the Board had reached a certain level of maturity in its designs. South East Light marks a high point of architectural sophistication for the Board. With its steeply sloping Gothic roofs and chiseled granite foundation and trim, it is a superb example of Victorian Gothic architecture. This inherently picturesque style of architecture was popular following the Civil War. The dramatic setting chosen for the lighthouse contributed to creating a highly romantic overall image at the southeast corner of Block Island.

That the Light House Board spent the time and money to build such a sophisticated structure might be explained for a couple of reasons. Block Island was becoming a popular summer resort in the 1870s, and the Board probably realized that the new lighthouse would be seen not merely by mariners but also by many vacationers. It could therefore serve as a highly visible representative of the Board and the U.S. government. President Grant's visit to South East Light in 1875 and his endorsement of the structure seems to affirm that the government felt it had a role to play in providing significant structures to the public.

South East Light was immediately popular, for Block Island visitors as well as for the island residents. Ulysses S. Grant's visit is representative of the attraction of the lighthouse. The romantic nature of the site drew many people, and the light station quickly became a tourist attraction and was soon listed in tourist guides as a major point of interest.[9] The image of the massive angular structure poised near the edge of Mohegan Bluffs was reproduced repeatedly on souvenir items and in prints and photographs. The lighthouse continues to draw visitors, and its image appears regularly in magazines and newspapers as a symbol of New England.

As the erosion of the bluff on which the lighthouse perched continued it became clear that the structure would fall into the sea within the next few years. Starting in 1983 the Block Island Historical Society led efforts to protect the lighthouse from destruction. A complex partnership evolved to save the light including: the U.S. Army Corps of Engineers, the Coast Guard, the Block Island Historical Society, The National Trust for Historic Preservation and others. Three Acts of Congress allowed the Federal government to fund the majority of the work and transfer the light to a non-profit organization for long term care.

The Coast Guard transferred Block Island Southeast Light on July 27, 1992 from the USCG to the Southeast Lighthouse Foundation of New Shoreham, Rhode Island. The Southeast Lighthouse Foundation is dedicated to restoring, preserving and protecting the light; increasing community awareness, knowledge and interest in the light: and preserving the history and public enjoyment of the lighthouse.

Despite the success of its design, South East Light is one of only two lighthouses of similar style and design built by the Light House Board. The Cleveland Light Station (Ohio), built in 1871, matches South East Light in general plan and configuration. The only differences between the two are that the Cleveland lighthouse was constructed of stone rather than brick, with different trim, and the Block Island light tower was not built as high as the one in Ohio (undoubtedly because of the high elevation at Block Island). In 1892 Cleveland Light was discontinued. The structure was demolished in the early 20th century, leaving South East Light the only lighthouse of its particular Victorian Gothic design in the U.S.

Today South East Light is one of only 12 lighthouses in the United States with a functioning first-order Fresnel lens. Because of its ability to represent an important era in the construction of aids to navigation by the U.S. Lighthouse Board, during one of the most active periods in American maritime history, and because of its architectural quality, South East Light deserves recognition on the national level.

Period of Significance

The period of significance for the South East Lighthouse is defined as 1874 to 1929. The structure was built in

1874. Over the course of the late 19th and early 20th centuries, the illuminating system underwent various technological changes. In 1929 the light changed from a fixed white to flashing green light and received a new lens; soon after it was electrified. As a primary light, the lighthouse and its associated navigational aids served steadily as vital aids to navigation along the eastern seaboard; the station has continued to do so up until the present.

Notes

1. Robert G. Albion, William A. Baker and Benjamin W. Larabee, New England and the Sea (Middletown, Conn.: Wesleyan University Press, 1972), p. 205.

2. Albion, Baker and Larabee, p. 200.

3. Harlan Hamilton, Lights and Legends (Stamford, Conn.: Wescott Cove Publishing Company, 1987), p. 15.

4. Nicholas Ball, "Lighthouses ... Block Island, R.I." (Transcript, 1890, Rhode Island Historical Society), p. 4, as quoted in Richard Greenwood, NPS Form 10-900, National Register of Historic Places Inventory - Nomination Form, "Block Island South East Light" (1984), 8.2.

5. In the meantime, Ball continued his efforts in regard to maritime aids. He is also responsible for the erecting, on Block Island, of two lifesaving stations, in 1872 and 1874, respectively, and a signal station, in 1880.

6. Mary M. Thomas, NPS Form RI-27, Historic American Engineering Record, "Block Island Southeast Light" (1984), pp. 21-22.

7. For further information regarding the fog signal, see Thomas, pp. 31-34.

8. For additional information regarding Fresnel lenses, see Thomas, pp. 7-12.

9. See for instance: "Ben Mush," Block Island: A Hand-book with Map (Norwich, Conn.: James Hall, 1877).

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