Ponce de Leon Inlet Light Station
National Historic Landmark Study

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Images by Ralph Eshelman, 1997

Present and Historic Physical Appearance

A remarkably complete station, the Ponce de Leon Light Station consists of a 176-foot tall brick tower, a principal and two assistant keepers' dwellings, oil house, pump house, and three woodshed/privy structures. The principal buildings are arranged forming a courtyard effect, connected by brick pathways and surrounded by a white wooden picket fence. The Ponce de Leon Inlet Lighthouse tower is the second tallest brick lighthouse tower in the United States; only Cape Hatteras Lighthouse being taller. The Ponce de Leon Inlet Light Station is located on the northern side of the Ponce de Leon Inlet; bounded by the Atlantic Ocean on the east and the Halifax River on the west. The property is operated by the Ponce de Leon Inlet Lighthouse Preservation Association.

General Description: [1]

Existing Structures:

Contributing Resource:

Light Tower [2]

The Ponce de Leon Inlet light tower measures approximately 176 feet from ground level to the pinnacle. The height of the tower from the bottom of the foundation below ground level to the pinnacle of the lantern roof ventilator is 188 feet, 6½ inches. The foundation consists of a 45- foot-diameter, 12-foot-deep, hexagonal brick foundation with a round-shaped concrete apron extending from the brick edge outward. Each side of the hexagonal brick foundation is 176 inches wide. The concrete apron (including the brick foundation) extends outward 120 inches from the tower in a circular pattern except around the stairway to the entrance door where the concrete apron extends further to each side in a rectangular pattern. The brick tower consists of the frustum of a cone, 32 feet wide at the base tapering to 13 feet 6 inches at the top.

The brick walls are 8 feet thick at the base and 2 feet thick at the top. The focal plane of the light is 168 feet above sea level. The brick work was considered so fine that the tower was "red-washed" instead of painted so as not to diminish the beauty of the architecture. A granite cornice marks the base of the service room level.

The tower is fenestrated by ten windows and two doors (the entrance door and watch room gallery access door). The window openings have granite sills and lintels. There are four east facing windows directly over the tower entrance door including the window at the service room level and four windows facing the west side including the window at the service room. There are two additional windows at the service room level, one facing north and one south. Each window opening (other than at the service room level) has a brick and granite pediment hood with granite keystone. The windows are four-over-four double hung wood sash; the

top sash is stationary and semi-rounded on top to conform to the window opening. The window openings have cast iron surrounds in which the wooden window jams are set. Above the granite sill of the windows slanting metal covers are attached as a means of keeping pigeons from nesting on the sills. Most of the original brass window pulleys are still set in these jams but no longer used.

There are nine granite stairs plus a short landing leading from the walkway to the tower entrance. Four of these entrance stairs are cracked. Historic photographs suggest this may have taken place during the August 31, 1886, earthquake. There are two sets of double entry doors; the outer set is made of pine and is not original, the inner set is made of oak and appears to be original. Both sets of doors are set in cast iron frames. The inner doors are three-panel doors with the top two panels made of glass. Flanking the entrance is a decorative surround made of granite full pilasters, square in section. A granite course or water table surrounds the entire base of the tower. At the base of the service room level corbeled brick courses overlaid by a granite course form the base for eight brick pilasters which surround four windows. These support a corbel which in turn supports the watch room gallery deck. There are two 1-inch-wide cracks along the west side of the tower running from the upper windows to the ground. These may also have been caused by the August 31, 1886, earthquake.

The tower consists of an inner and outer brick wall connected by interstitial brick walls, similar to the spokes of a wheel. While the outer wall tapers, the inner wall retains a constant 12-foot diameter. The original brass hardware for the inner doors is intact. The floor of the ground level is made of white and black marble squares laid in a checkered pattern. The stairway to the lantern ascends clockwise and is made of cast iron with the hand rail made of wrought iron. The stairs are attached to the inner tower brick wall by brackets set in the brick wall. The rail is attached to the outer end of the stair treads; there is no rail along the tower wall. The steps are painted gray and the rails black. The walls of the tower are painted white except for the lower five feet along the stairs which are painted gray to hide hand prints from visitors climbing the steps. All stair and rail elements appear to be original. There are 194 steps to the watch room with nine semi-circular landings (21 steps between landings, except the upper landing which has 17 steps). The floor of each landing is cast iron. Each landing is supported below by four courses of corbeled brick and four cast iron brackets set in the inner brick tower wall. There are another 10 iron steps from the watch room to the lantern room. Each window is set back in an alcove from the central stairwell. The alcoves are made of brick with a three course semi-arch over the top and a white marble floor fronted with a cast-iron ledge on the outer edge to match the curvature of the brick tower wall. The alcoves have chain link fence guards stretched across the window openings for safety reasons (these are scheduled to be removed during the next renovation). At the base of the tower is a round circular rail or "well curb" with a radius of 1 foot, 6 inches, which surrounds the weight well.

The service room is made of brick and has four windows. The granite window sills are unpainted on the interior. The cast iron landing deck covers about two thirds of the circumference of the room. The deck is supported below by four brick courses, three of which are corbeled. A wooden cabinet is located on the deck. It is built to fit snugly against the inner wall of the tower and is painted green.

The watch room consists of interior brick walls against an exterior cast iron wall with a cast-iron inner deck and a cast-iron outer deck surrounded by an iron triple-rail gallery. The inner deck completely covers the landing except for sufficient space to climb up and down the 9-step access ladder. A second cabinet nearly identical to the service room cabinet is located at this level. It is also painted green. The upper gallery rail

serves as a hand rail; balusters run only between the bottom and middle rail. The watch room door to the gallery deck is made of iron with three hinges. The door is original as is both of two interior toggle closures and the door knob mechanism. A light pane has been added to the originally solid door. The present deck and rail were modified in 1982 and do not conform to the original design. The gallery is supported below by original cast-iron brackets. In the 1982 modification, the gallery deck was also supported by new, non-original brackets extending out from the lantern gallery above.

The lantern deck is made of cast iron and is surrounded by an iron balustrade gallery deck with single rail. The inner cast iron deck has glass light inserts to provide light below into the watch room area. All the lights are complete. The lantern is 16-sided and is made of brass, glass, and iron. Each side has three panes one over the top of the other. Every other side has a ventilator located just below the lower pane.

The roof has a high cone-shape, is made of copper, and surmounted by a copper ventilator ball with lightning pinnacle topped with platinum point. The dome ceiling is covered with zinc sheeting. The ventilator hood is extant and appears to be in good condition. There is no door from the lantern room to the lantern gallery deck; access is by iron ladder from below on the watch room gallery. Interior curtains once hung on hooks to protect the light lens during the day.

Ordered by the United States government after the Civil War, the first-order lens which was installed in the Ponce de Leon (Mosquito) Inlet Lighthouse in 1887, was constructed in 1867 by the firm of Barbier and Fenestre in Paris, France, and was stored in their warehouse until it was shipped to Mosquito (Ponce de Leon) Inlet 20 years later. Costing originally about $5,000 in 1867, the total cost for the lens, including the storage and shipping costs, was considerably more by the time it was installed. The lens without its cast-iron pedestal weighed about 2,000 pounds. With a diameter of 71½ inches, the beehive-shaped, classical Fresnel lens was a stationary, fixed- light lens consisting of 15 glass prism panels, three silvered, concave brass reflector panels, and brass framing which form a hollow cylinder 8½ feet high. The 15 glass prism panels facing the ocean consisted of lower, central, and upper panels, forming five glass sections. Each of these five sections covers 45 for a total of 225. The five lower glass prism panels contained eight thick triangular catadioptric prisms each. The five central prism panels contain a wide refractive belt prism with eight narrow triangular dioptric prisms above and eight below the belt. The five upper glass prism panels contain 18 thick triangular glass prisms. Opposing the five central prism panels, on the landward side of the lens, were three silvered, concave brass reflective panels, a rare feature for lenses of this period, covering a total of 135. These served to reflect the light from the light source towards the ocean-facing glass prisms. The lens was mounted on a six-foot tall cast-iron columnar pedestal, and as the lens was a fixed, steady light character, no rotation mechanism was utilized.

The lens was illuminated originally by a first-order hydraulic kerosene lamp with five concentric wicks, creating a light of 15,000 candlepower which could be seen 20 nautical miles out to sea. The Ponce de Leon Inlet Lighthouse was one of the first in the United States to be designed specifically for the use of the new "mineral oil" (kerosene) as an illuminant. In 1909, an incandescent oil-vapor (IOV) kerosene lamp was installed. In 1933, the tower was electrified and the first-order, fixed lens was removed in favor of a third order revolving (flashing) Fresnel lens from the discontinued Sapelo Island (Georgia) Lighthouse. The pedestal for the third-order lens was modified and mounted on top of the original first-order pedestal, both of which remain in the tower, today. With a 500-watt, frosted lamp inside, the third-order revolving lens produced 220,000 candlepower in its flash stage, with a range similar to that of the original first- order lens. It was

rotated by a 1/4 horsepower electric motor on large ball bearings. Although upgraded to a 1,000-watt lamp in 1967, the third-order lens remained operational in the tower until March, 1970, when the tower was decommissioned in favor of a new light mounted on a 50-foot, steel skeletal tower across the inlet on the Coast Guard Station. The third-order lens was removed for safe-keeping from the tower in 1971 and sent to the Coast Guard Academy Museum in New London, Connecticut. Ironically, the original first-order lens was not far away, having been stored in pieces in a warehouse at Mystic Seaport since 1946. In 1973, through the services of Rear Admiral E. L. Perry, Senator Gurney, and Representative Chappell, the third-order lens was returned to the lighthouse for display in the developing museum. On December 15, 1982, because of construction of a new high-rise beach condominium which obscured the light at the Coast Guard station, the Coast Guard reactivated the Ponce de Leon Inlet Lighthouse and placed a modern optic in the lantern. In March 1996, the FA 250 AC Rotating Beacon then in place in the tower was destroyed by lightning, and on March 31, 1996, the present optic, a Vega VBR-25 Marine Rotating Beacon, S/N 25057, made in New Zealand, was installed. In July 1997, the Coast Guard transferred custody of the original first-order lens from Mystic Seaport to the lighthouse so that this unique, original lens could be fully restored and displayed in the museum. [3]

In 1987, the interior of the tower was sandblasted and chemically cleaned, and painted white. Chain link fence guards were placed on the interior of all the tower windows. [4] In 1990, a new roof was placed on the generator building and copper gutters put on the historic structures.[5] In 1993, handicap ramps were built for access to the exhibit areas in the dwellings.[6] New sealant was placed around the lantern glazing in 1994.[7] Lightning destroyed the FA251-AC rotating light in 1996. It was replaced by a VBR-25 Marine Rotating Beacon. [8]

Principal Keeper's Dwelling

This 1887 dwelling is made of brick, square-shaped, with double-hipped, moderately steep pitched, composition shingle, roof. A central brick chimney protrudes from the roof peak of the structure. Just below the chimney is a roof vent or stepped (slightly raised or hipped) roof for ventilation purposes. Windows are six-over-six double-hung wood sash. Fenestration of the west side consists of two doors next to each other with a

window on each outer side of the doors plus a third window on the kitchen wing; the south side has one window on the main section and no opening on the kitchen wing; the east side has three windows on the main section and three windows on the kitchen wing plus a door made into the former breezeway section; and the north side has one window in the brick section and three windows in the wood enclosed section of the porch. A brick gable ended kitchen wing with brick chimney on the south end is attached off the southeast corner of the structure. The kitchen wing was originally separated from the main dwelling section by a short breezeway, but this opening was infilled in the late 1970s with wood and glass to provide more exhibit space. Under the kitchen wing portion of the structure is located a full cellar used for storage of supplies. A porch runs along two thirds of the south and part of the west side of the dwelling facing the center of the light station. The north side of the porch was enclosed by wood siding during 1921 and converted to indoor bathrooms, storage area, and screened porch. This enclosure is still intact. Much of the door hardware and all the floors appear to be original except the floor in the kitchen wing which may overlay the original floor. The chimneys are decorated with corbeled brick courses which give the top of the chimneys a stepped appearance. The windows have green shutters. The two doors on the west face are four-

panel wooden doors with three light panels over the top of each. A 5,000-gallon capacity brick cistern is located in the basement below the kitchen and accessed from an interior hatched entry through the floor between the pantries and entrance to the kitchen. The building is used for museum display purposes today.

First Assistant Keeper's Dwelling

This 1887 brick dwelling is rectangular-shaped with gable ends and a moderately steep pitched, composition shingle roof. A chimney is located at each east and west gabled end of the structure. Both the first and second assistant keepers' dwellings have wooden struts or diagonal brackets in the gable ends to support the roof overhang; one in the center of the gable peak and one each where the side wall meets the roof line. Windows are six-over-six double-hung wood sash. Fenestration consists of two doors and a window in between on the north side; two windows on the lower level and two smaller louvered openings in the upper gable ends; a door and window on the main section of the south side and two windows on the lower level and two smaller louvered openings in the upper gable end of the kitchen wing; and three windows on the lower level and two in the upper level of the gable end of the east side. A gable ended kitchen wing with brick chimney on the south end is attached to the southeast corner of the structure. A railed porch runs along the north side of the dwelling facing the center of the light station. The hand rail at the porch entry is not original milling. The porch floor is early though not original. Part of the rear or south porch was enclosed with wood siding during 1921 and made into indoor bathrooms, storage area, and screened porch. This enclosure was removed in the 1990s; a paint ghost of this earlier modification is still present on the brick wall of this formerly enclosed section. Much of the door hardware and all the floors appear to be original. A 3200-gallon-capacity cistern is located to the rear of the structure. The dwelling has been restored and furnished to the 1890 period containing some original furnishings once used in the dwelling.

Second Assistant Keeper's Dwelling

This 1887 brick dwelling is rectangular-shaped with gable ends and moderately steep pitched, composition shingle roof. A chimney is located at each east and west gabled end of the structure. Windows are six-over-six double-hung wood sash. The fenestration for the second assistant keeper's dwelling is the mirror image of the first assistant keeper's dwelling. A gable-ended kitchen wing with brick chimney on the north end is attached to the northeast corner of the house. A railed porch runs along the south side of the dwelling facing the center of the light station. Part of the rear porch was enclosed during the 1920s renovation and made into indoor bathrooms, storage area, and screened porch. Much of the door hardware and all the floors appear to be original. The walls in the kitchen have been covered with modern wood paneling and plaster surfaces in the dwelling coated with textured paint. This structure is used for museum display purposes today. Both the first and second assistant keepers' dwellings are essentially identical in construction. This structure was once used as the town hall. An original wall partition was removed presumably at this time.

All three dwellings are built with 12-inch brick. They have granite window sills, white painted trim, gray porch decks, white rails, dark green shutters, and dark green under the roof overhangs. The shutters are functional replicas of the original wood shutters. There are five wooden steps from ground level to the dwelling porches. Wheel chair ramps have been added to the dwellings. All of the wood lattice below the porches are painted green and are replacements. The wood flooring on some of the porches has been replaced, but does match the original milling. A below grade brick cistern with arched roof is located at one end of each assistant keeper's dwelling and a brick cistern is located in the basement under the kitchen wing of the principal

keeper's dwelling. All the structures have half round copper gutters and downspouts which originally connected to these cisterns. All three dwellings had bathroom additions made in 1921 by framing part of the porches and installing plumbing.

Oil House

The 1887 oil house is made of brick with a hipped roof. Two of the sides of the structure have a set of four cross shaped ventilation holes formed into the brick walls. The last upper three brick courses are corbeled out to meet the roof overhang. A square copper ventilator is located at the peak of the roof. A heavy wooden door is located on the east face. This door was originally copper sheeted for fire protection. The door sill and lentil as well as a step into the oil house are made of granite. There are two granite blocks inserted into the door frame of the brick where the door gudgeons are attached. The floor is concrete. Two large iron storage tanks located in the oil house date from 1927.[9] The oil house suffered a fire in the 1970s which destroyed the roof and about half of the original interior wall of the building; it was restored in 1989. New granite sills, headers, roof trusses, new copper roof, new door, and new cradles for the oil tanks were installed. Total restoration cost was over $30,000. The original roof was copper

Wood Sheds/Privies

Three brick wood sheds with attached privies were constructed about 1887 with cypress shingle roofs. Each wood shed has an access door on the side facing the center of the station with the privy door on the opposite side facing away from the station. A window is located in the gable end opposite the end where the privy is attached. There is no window on the side of the wood shed opposite the side with a door. The gable end of each privy has a small single wooden sash two pane window. Lintels over the original openings were constructed of flat brick arches. The roofs are currently composition shingle. In 1933 the woodshed behind the first assistant keeper's dwelling was turned into a generator building and a radio room added to the north side in 1943. This newer section is clearly visible as the brick is inconsistent with that of the earlier structure. A lean-to is attached to the east side of the radio room. The door to the wood shed associated with the second assistant keeper's dwelling is probably not original. [10]

Pump House

The pump house is not an original structure of the light station but nevertheless is a contributing structure. The frame pump house with tin roof was constructed about 1915 and used until about 1950. The pump house replaced a well and windmill pump which sat behind the site in 1907.

Walkways and Fences

Crowned brick walkways connect the various structures. Most of the walkways appear to be original though some have been modified in width and/or repaired over the years. A few walkways are made of modern brick or concrete cast sections made to appear to be brick such as from the ticket house to the second assistant keeper's dwelling. A white painted picket fence surrounds all the historic station structures except the oil house which lies outside this fenced area. The fence posts are made either of wood or concrete posts.

Non-Contributing Resources

Lens Exhibition Building

A 31 by 33 foot in plan brick building was constructed in 1994-95 to house the first-order lens from Cape Canaveral Lighthouse. The roof line is similar to that of the principal keeper's dwelling.

Entrance/Offices/Gift Shop Building

In 1992 a brick 2½-story structure was built from the design of the original 1884 multi residence. This 2-story plan, intended for the station keepers, was never built because of complaints at other light stations that this design resulted in a lack of privacy for the families. The present building was built a third larger than the original plan. [11]

Refreshment Building

A small frame refreshment building is located outside the fenced compound. It is not an original structure.

Previously Existing Structures:

First Light Tower

The first light tower was built on the south side of Mosquito Inlet in 1834-35. It was built of "hard-brick," 45 feet tall, round, 22 feet in diameter at the base, tapering to 10½ feet at the top. The walls were 3 feet, 6 inches thick at the base and tapering to 2 feet thick at the top. The lantern was made of iron and surrounded by a balustrade gallery with two railings. The light consisted of 11 lamps with metal reflectors designed and patented by Lewis, modified versions of the English Argand lamp. The lamps were hung on a chandelier. [12] This tower and the original keeper's dwelling have since eroded into the inlet as the inlet moved south.

1835 Keeper's Dwelling

The first original keeper's dwelling was a 1-story, 20 by 34 foot in plan structure.

Boat Houses

A open-sided, palm-thatched frame boat house was located at the landing area south of the light station at least by 1902.[13] A more substantial frame boat house was built to replace the older boat house by at least 1907. By 1914 two boat houses existed; one on the dock and one on the shore. The boat house on the shore became known as the "Buoy House" by 1917. It was replaced by a new buoy house in 1934. It was discontinued in 1946 and moved by raft to a fish camp owned by the former Principal Keeper Edward L. Meyer. [14]

Wharf

During construction of the lighthouse a landing platform was constructed at the site in 1884-85. A wharf was built at the landing in 1907. The wharf was completely rebuilt in 1929. In 1942 repairs were made to the "dock." The wharf eventually deteriorated and washed away.

Keepers Garage

A garage made of corrugated metal was built prior to 1921 near where the ticket building sits today. This structure was torn down in 1972.

Water Mill and Tank

An 8-foot Samson Windmill was built in 1907 and located just south of and immediately behind where the current pump house now stands. The windmill was disassembled about 1914. The water tower and tower existed from 1907 to about 1952.

Temporary Structures

In 1884, during construction of the present brick tower, temporary workman's quarters, office, kitchen, carpentry and blacksmith shops, storehouses and a mule drawn tramway were built. National Archive photograph 26-LG-28-50, dated 1885, shows a 1-story rectangular wood frame shingled roofed structure which was probably the workman's quarters. A porch is located off the end of the building which faced the tramway.

Conclusion

Ponce de Leon Inlet Light Station contains all of the original structures which were located within the enclosed fenced compound including all three of its 1887 keeper's dwellings and woodshed/privies. The pump house was added in 1915. Outside the central compound the oil house remains from the original construction.

All cedar shingle roofs have been replaced with non-compatible composition shingle on the dwellings. The watch room gallery deck and rail was replaced by a design not in keeping with the original design (this will be corrected with the next tower renovation scheduled within the next two years). The breezeway from the kitchen wing to the principal keeper's dwelling was infilled with wood and glass and the 1920s enclosure of the porch is still present. The original first-order lens was removed by the U.S. Lighthouse Service, but was returned in 1997 and is currently under restoration for display in the lens house, not in the tower. Much of the oil house was restored after 1970 vandalism damage.

Other than the previous notations, all of the contributing structures and fabric are original. Rare original fabric include door hardware (including the rare watch room gallery door hardware and inner entrance door hardware), original interior entrance door to tower, a rare and complete set of lantern inner deck glass lights, and the wooden floors of the dwellings.

Statement of Significance

The Atlantic Coast of the United States served as a major transportation corridor for commercial traffic from the late 18th through 20th centuries. This light station is significant for its association with federal governmental efforts to provide an integrated system of navigational aids and to provide for safe maritime transportation. The Ponce de Leon Inlet lighthouse tower is considered one of the most beautiful in North America. It was described in 1928 by Lighthouse Service Inspector Thomas H. Gregg as "the best proportioned and most beautiful tower in the District."[15] The overall station retains all of the original structures which have been preserved in excellent condition. It is open to the public as a museum while continuing in its role as an aid to navigation.

The preceding statement of significance is based on the more detailed statements that follow. [16]

Service as an Aid to Navigation and Importance to Maritime Trade

The Atlantic Coast was and still is the principal sea lane for the shipping of goods between ports south and north along the East Coast of the United States. Before the completion by 1940 of the Inland Waterway which runs from just north of Boston, Massachusetts, to Key West, Florida, the Atlantic coast was the only means of such travel and still is for larger ships. Ponce de Leon Inlet Lighthouse is one of many aids to navigation established by the United States to mark this shipping corridor.

As early as 1774, some type of beacon, probably a large fire, had been placed by the British to mark the Inlet. Oranges, rice, cotton, hides, lumber, naval stores, and valuable indigo were being shipped from flourishing plantations through the Inlet. In 1830, William de Peyster wrote to Congress a "Memorial" signed by 38 ship owners and plantation owners from Mosquito County and New Smyrna that "we are suffering in considerable privations, and difficulties, in the trade to this quarter in consequence of there being no Light House at Mosquito Inlet."[17] The resulting tower did not survive, resulting in more ships running aground. With each new wreck, demands would be made for better aids to navigation in the Inlet.

The Lighthouse Board in 1870 stated in its annual report in reference to Mosquito Inlet that "no soundings can be relied on, . . . the inlet may be opened or closed one or more times each year," and "the wrecks lying on or near the bar give a practical illustration of the uncertainty of the channel." The report also stated that the engineer who reconnoitered the inlet was of the opinion that the amount of commerce through the inlet did not justify a major light; however, as a major coastal light is required somewhere between Cape Canaveral and St. Augustine, a distance of 95 miles, Mosquito Inlet would be a good location as it could serve as a coastal light and harbor light, and the inlet afforded a safe place for the landing of building materials and supplies.[18] The new tower was completed in 1887.

Significance as Masonry Tower

The present light station embodies a distinctive design and method of construction that typified first-order coastal lighthouse construction on the East Coast of the United States during the second half of the 19th century. Prior to 1852 there was no uniformity in design of lighthouse towers and support structures. However in 1852 a Congressional legislative report recommended "that all constructions, renovations, and repairs to towers and building, be hereafter made upon the plans, estimates, and drawings, and under the personal superintendence of an officer of engineers of the army..."[19] This produced a somewhat uniformity in design and materials of subsequent lighthouse construction and remodeling.

Early lighthouses in this country were built on land to warn mariners of offshore shoals; it was not until the mid-nineteenth century that advances in building technology allowed offshore lighthouse construction. The earliest materials used for lighthouse construction were wood and/or rubble stone. Later cut stone and brick were used, allowing towers increased height for better visibility. Coastal lights, as opposed to harbor lights, were generally taller and used more powerful optics. The design of the tall brick towers consisted of a double wall with a hollow space between the walls, thereby lightening the load, creating an insulation "member," and reducing the overall cost in using less bricks. [20] When the first Cape Hatteras Lighthouse (1803) tower was heightened to 150 feet in 1854 it was the first of the "tall tower" lights to be built in the United States. The current Cape Hatteras Lighthouse (1870) is 198 feet, making it the tallest brick tower. At 176 feet, the Ponce de Leon Inlet Lighthouse tower is the second tallest brick light tower in the United States.

Technology

During the construction of the Ponce de Leon Inlet Lighthouse, the Lighthouse District Superintendent of Construction Herbert Bamber invented an adjustable, moveable "Working Platform" which increased the efficiency and ease of constructing masonry towers. Individual bricks were left out of the exterior tower wall every 10 feet vertically and horizontally so that supports for the platform could be set into the holes. Once the tower was completed the platform was lowered level by level and the gaps filled with bricks. This technique, first used at Ponce de Leon Inlet was adopted as standard practice for future brick masonry light tower construction

Brief History of Ponce de Leon Inlet Light Station [21]

There were 24 lighthouses in the United States in 1800. These early light stations marked entrances to harbors and estuaries; but only three were located south of Cape Henry, Virginia. By 1820 there were 55 lighthouses on the East Coast of the United States.

On June 30, 1834, Congress authorized $11,000 for the erection of a lighthouse on the south side of Mosquito Inlet. Winslow Lewis, a noted lighthouse builder at the time, was awarded a contract on October 31. [22] The light station was completed in February 1835 at a cost of $7,494. William H. Williams was appointed the first keeper with a salary of $450; however, because the government failed to order oil for the lamps the light was not immediately lit. Either before or during a violent storm in October 1835, Williams removed the lighting apparatus and stored it in the keeper's dwelling. The dwelling eroded into the inlet, however, and erosion partially undermined the light tower which then began to lean. On December 26 Seminole Indians made a raiding party on New Smyrna and ravaged the leaning lighthouse tower and removed at least one of the lamp reflectors; probably found in the ruins of the keeper's dwelling.[23] Because of troubled relations with the Native Americans, nothing was done to stop the erosion and the light tower fell in April 1836.[24] The Florida legislation sent an unsuccessful resolution to Congress on February 8, 1847, requesting a new lighthouse be built at mosquito Inlet.[25]

It was not until 1870 that the Lighthouse Board requested $60,000 for construction of a 150-foot- tall lighthouse. This same request was made repeatedly by the Board in 1871, 1872, 1873, and 1874.[26] The Lighthouse Board renewed its request in 1882, but by this time the amount estimated to complete the specifications for the light station was increased to $200,000. Congress on August 7 authorized $30,000 for a study and plans. [27] In 1883, Congress authorized $30,000 on March 3 for site selection and initial construction. Final working drawings were approved in July. The site selected was located on the north side of the inlet. It was determined the inlet was moving south and by locating the light station on the north side, it should not suffer the same fate as the 1835 tower. Ten acres for the light station were acquired on November 15 for $400 from Bartola C. Pacetti and his wife Martha. A contract for the metal work was awarded to J. P. Morris Company of Pittsburgh. [28]

In 1884 a small work party arrived at the site and constructed workmen's quarters and storehouses as well as cleared the construction site. A tramway was constructed from the landing site to the construction site to facilitate the transporting of building materials. Contracts were let for the iron work, stonework, 500,000 brick, and 1,200 barrels of cement. Construction began on the foundation on June 7. The Lighthouse Board requested an additional $75,000 to complete the work and begin work on a keeper's dwelling, but the request was denied; work ceased when the 1883 appropriation ran out. [29] Congress approved an additional

$40,000 on March 3, 1885. The appropriation came so late that work was postponed until after the hot summer months. [30]

Congress approved an additional $50,000 on August 4, 1886 and work began again on the light station. An additional 800,000 bricks were ordered in August. In October another 650,000 bricks, 1,000 barrels of cement, and 3,650 bushels of building sand were ordered. By the end of the year 470,000 bricks had been used and the tower stood at 51 feet. A contract for the copper roof and tin work was awarded to Hentzell & Son. Carpentry and blacksmith shops were also built. Five schooners employed in supplying the lighthouse materials were wrecked and an additional schooner "crippled."[31]

Congress authorized an additional $20,000 on March 3, 1887. The oil house was completed and the three keeper's dwellings and their outbuildings were ready for plastering. The oil house was one of the first and largest kerosene storage buildings in the United States. [32] A Fresnel first-order lens, constructed in 1867, was installed at Ponce de Leon Inlet Lighthouse in 1887. The light was first lit on November 1. William Rowlinski was the first principal keeper and Hardie Bryan the first assistant keeper. [33]

In 1900, the Lighthouse Board began converting lighthouses to electric service; however, due to the lack of direct access to power lines, the conversion came about slowly. Electricity did not come to the Ponce de Leon Inlet Light Station until 1933 when the light characteristic was changed from a fixed light to a revolving, flashing light. The first-order lens was replaced with a third-order lens removed from Sapelo Island, Georgia. The electric light began flashing on August 31. [34]

In 1940 a radio beacon was established at the station after several years of scavenging equipment. The radio room was located in the former master bedroom of the first assistant keeper's dwelling. [35]

In 1941, lighthouse family personnel were moved out of the station and the quarters turned over to Coast Guard personnel. The storage building behind the first assistant keeper's dwelling was turned into a generator building. Coast Guard personnel manned the station until 1952 when the station became fully automated. [36]

The Battelle Memorial Institute, under contract with the U.S. Department of Interior, established an experimental solar sea water distillation plant at the light station in 1958. The keeper's quarters became homes and workshops for the project personnel. Five stills were constructed southeast of the first assistant keeper's dwelling. [37] When the project disbanded, the stills were dismantled.

In 1963, Ponce Inlet becomes incorporated as a town and in October the 2nd assistant keeper's dwelling becomes the town hall. [38] In March 1970 the light which had shone since 1887 in the brick light tower was extinguished and a new light installed across the inlet at the Coast Guard station on a new 50-foot metal skeletal tower. That same year, a fire, believed to be caused by an arsonist, destroyed the oil house. The Fresnel lens was removed by the Coast Guard in 1970 for safe keeping and the property surrounded by a chain link fence to keep out vandals. [39]

The light station property was declared surplus in 1972 and deeded to the Town of Ponce Inlet. The light station was listed in the National Register on September 22, 1972. The Ponce de Leon Inlet Lighthouse Preservation Association was founded to restore and open the site to the public. [40] In 1978, a high-rise condominium planned on the south side of the inlet was found to obscure the modern beacon erected by the

Coast Guard in 1970. On December 15, 1982, the brick tower was reactivated as an aid to navigation. A FA251-AC rotating light was installed in the tower and made operational.

Current Use

The Ponce de Leon Light Station has been restored and open to the public since 1982. The principal keeper's dwelling and the second assistant keeper's dwelling are used as museums. The first assistant keeper's dwelling has been restored and furnished to it 1890s period. The oil house and one of the wood shed/privies are also interpreted and open to the public.

ENDNOTES

1. The general description was generated during Ralph Eshelman's site visit in 1997.
2. The construction plans for Ponce De Leon (Mosquito) Inlet complete with all measurements exist at the National Archives; copies are available in the inventory files at the National Maritime Initiative, National Park Service, Washington, D.C.
3. Thomas W. Taylor, "Building the Ponce De Leon Inlet Lighthouse," The Keeper's Log, volume XI, number 1 (Fall 1994), pp. 4-5; T. W. Taylor, "Cape Canaveral First Order Fresnel Lens," Newsletter, Ponce De Leon Inlet Lighthouse Preservation Association, Inc., volume XVII, number 3 (October, 1993), p. 1; T. W. Taylor, "The First Order Lens of the Ponce de Leon Inlet Lighthouse Newsletter, Ponce De Leon Inlet Lighthouse Preservation Association, Inc., volume XIX, number 4 (October, 1995), p. 4; and T. W. Taylor, "The Boat Houses at the Ponce De Leon Inlet Lighthouse," Newsletter, Ponce De Leon Inlet Lighthouse Preservation Association, Inc., volume XXI, number 3 (July, 1997), pp. 4 and 5; personal communication from Ann Caneer, director, Ponce De Leon Inlet Lighthouse Preservation Association, April 1998.
4. Newsletter, Ponce De Leon Inlet Lighthouse Preservation Association, Inc., volume X, number 1 (January, 1987), p. 1.
5. Newsletter, Ponce De Leon Inlet Lighthouse Preservation Association, Inc., volume XIII, number 1 (April, 1990), p. 2.
6. Newsletter, Ponce De Leon Inlet Lighthouse Preservation Association, Inc., volume XVII, number 3 (July, 1993), p. 2.
7. Newsletter, Ponce De Leon Inlet Lighthouse Preservation Association, Inc., volume XVIII, number 2 (April, 1994), p. 3.
8. W. T. Taylor, "Tower Light Destroyed by Lightning," Newsletter, Ponce De Leon Inlet Lighthouse Preservation Association, Inc., volume XX, number 2 (April, 1996), p. 4.
9. Engineer Construction Drawing File number 1503, dated 1921 indicates the oil house had a tin roof while Thomas W. Taylor, The Beacon of Mosquito Inlet: A History of the Ponce De Leon Inlet Lighthouse (privately printed by Taylor, Allandale, Florida, 1993), p. 39 states the roof destroyed in 1927 was copper.
10. "Condition Assessment Report Ponce de Leon Inlet Light Station, Kenneth Smith Architects, Inc. and Structural Engineers Group, draft May 6, 1997, p. 7.
11. "The Ponce Inlet Lighthouse Museum," Newsletter, Ponce de Leon Inlet Lighthouse Preservation Association, Inc. (April 1997), p. 4.
12. Diane D. Greer, "Ponce de Leon Lighthouse," National Register of Historic Places Inventory - Nomination Form (Division of Archives, History & Record Management, Tallahassee, Florida, 1971),

n. p. states the first lighthouse was wooden but there is no reference given; this is believed to be incorrect; see for example Alice Strickland, "Future of Historic Inlet Honoring Ponce de Leon Still Bright, Assured," Florida Conservation News (June 1979), p. 11.

13. Thomas Taylor, "The Boat Houses at the Ponce De Leon Inlet Lighthouse," Newsletter, Ponce De Leon Inlet Lighthouse Preservation Association, Inc., volume XXI, number 3 (July, 1997), pp. 4 and 5.
14. Taylor, "The Boat Houses at the Ponce De Leon Inlet Lighthouse,"(July, 1997), pp. 4 and 5.
15. Thomas H. Gregg, "Description of Ponce de Leon Inlet Light Station," 1928, p. 2.
16. For additional information, please refer to the "Summary Context Statement for NHL Lighthouse Nominations."
17. "Memorial to Congress by Inhabitants of Mosquito County and New Smyrna, March 13, 1830," enclosure in William de Peyster to Joseph M. White, March 28, 1830, N.A. 1st Congress, 1st Session, in The Territorial Papers of the United States, Clarence E. Carter, ed., Washington, D.C.: The National Archives and Records Service, General Services Administration, 1959, volume 4: The Territory of Florida, pp. 378-379. In 1927, the name Mosquito Inlet was changed to Ponce de Leon Inlet.
18. Taylor, 1993, pp. 9-10; and Taylor, 1994, p. 4.
19. Thirty-second Congress, First Session, S. Ex. Doc. 28.
20. Personal communication, Wayne Wheeler, President, U.S. Lighthouse Society, February 28, 1998.
21. This history largely taken from Thomas W. Taylor, The Beacon of Mosquito Inlet: A History of the Ponce De Leon Inlet Lighthouse (privately printed by Taylor, Allandale, Florida, 1993). A search for the station clipping files at the National Archives proved unsuccessful.
22. Taylor, 1993, p. 5; and Alice Strickland, "Future of Historic Inlet Honoring Ponce de Leon Still Bright, Assured," Florida Conservation News (June 1979), p. 11.
23. Taylor, 1993, pp. 6-7; and Strickland, p. 11. Reputedly one of the reflectors was worn by Coacoochee, leader of the Seminole raid, as a headdress at the Battle of Dunlawton three weeks later; many years later either another or the same reflector was found being used as a wash basin in a nearby home.
24. Taylor, 1993, p. 7.
25. Taylor, 1993, p. 8.
26. Lighthouse Board Annual Report, 1870, 1871, 1872, 1873, and 1874
27. Lighthouse Board Annual Report, 1882; and Taylor, 1993, p. 11.
28. Lighthouse Board Annual Report, 1883; Taylor, 1993, pp. 11-12; and Taylor, 1994, p. 4.
29. Lighthouse Board Annual Report, 1884; and Taylor, 1993, pp. 12-13. 30. Lighthouse Board Annual Report, 1885; and Taylor, 1993, p. 14.
30. Lighthouse Board Annual Report, 1886; Taylor, 1993, pp. 16-17; Taylor, 1994, pp. 6-7; Strickland, p. 12; and Halifax Herald (January 28, 1886) reported five out of eight or ten schooners so employed were "wrecked" and a sixth "crippled."
31. By 1885, kerosene became the principal illuminant for the lighthouses; whale oil had become more expensive as production decreased. However, because of the volatile nature of kerosene, Congress issued a series of small appropriations for the construction of separate fireproof oil houses at each lighthouse station. Installation of these structures was finally completed about 1918; the 1887 brick oil house at Ponce de Leon Inlet Light Station was part of this initiative.
32. Lighthouse Board Annual Report, 1887; and Taylor, 1993, p. 17.
33. Taylor, 1993, p. 40.
34. W. T. Taylor, "The Radio Beacon," Newsletter, Ponce De Leon Inlet Lighthouse Preservation Association, Inc., volume XVIII, number 4 (October, 1994), p. 4.

35. Taylor, 1993, pp. 43 and 44. In 1940 the radio room was the west bedroom of the former 1st Assistant Keeper's Dwelling; the new building was built in 1943.
36. Taylor, 1993, p. 45.
37. Taylor, 1993, p. 45.
38. Taylor, 1993, pp. 46-47.
39. Taylor, 1993, p. 47.

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