

MANANA ISLAND FOG SIGNAL STATION

United States Department of the Interior, National Park Service

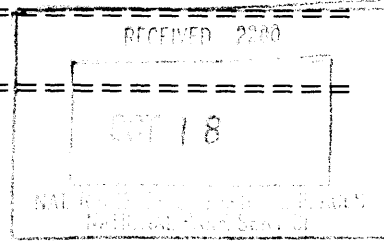
National Register of Historic Places Registration Form

1. Name of Property

historic name: Manana Island Fog Signal Station

other names/site number:

1412



2. Location

street & number: N/A

not for publication: N/A

city or town: Monhegan Island

vicinity X

state: Maine code: ME

county: Knox code: 013

zip code: N/A

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act of 1986, as amended, I hereby certify that this nomination and request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property meets the National Register Criteria. I recommend that this property be considered significant statewide. (See continuation sheet for additional comments.)

[Signature] ACTING
Captain, U. S. Coast Guard,
Chief, Office of Civil Engineering
Signature of certifying official

2/22/02
Date

Department of Transportation, U.S. Coast Guard
State or Federal agency and bureau

In my opinion, the property [checked] meets [] does not meet the National Register criteria.
(See continuation sheet for additional comments.)

[Signature]
Signature of commenting or other official

4/2/02
Date

STPD - Maine
State or Federal agency and bureau

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4. National Park Service Certification

I, hereby certify that this property is:

- entered in the National Register _____
 ___ See continuation sheet.
- determined eligible for the _____
 National Register
 ___ See continuation sheet.
- determined not eligible for the _____
 National Register
- removed from the National Register _____

___ other (explain): _____

[Handwritten Signature]
Signature of Keeper

12-2-02
Date of Action

5. Classification

Ownership of Property (Check as many boxes as apply)

- private
- public-local
- public-State
- public-Federal

Category of Property (Check only one box)

- building(s)
- district
- site
- structure
- object

Number of Resources within Property

| Contributing | Noncontributing | |
|--------------|--------------------------|------------|
| <u> 2 </u> | <input type="checkbox"/> | buildings |
| <u> 3 </u> | <input type="checkbox"/> | sites |
| <u> 5 </u> | <u> 1 </u> | structures |
| | <input type="checkbox"/> | objects |
| | <u> 1 </u> | Total |

Number of contributing resources previously listed in the National Register 0

Name of related multiple property listing: Light Stations of the United States

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6. Function or Use

Historic Functions (Enter categories from instructions)

Cat: transportation

Sub: water-related

Current Functions (Enter categories from instructions)

Cat: transportation

Sub: water-related

7. Description

Architectural Classification (Enter categories from instructions):

No Style

Materials--Tower (Enter categories from instructions):

engine house/fog signal bldg. -

foundation: brick

roof: asphalt shingle

walls: brick, trumpet tower section wood shingle

other: wood gutters

keeper's dwelling -

foundation: stone and brick

roof: asphalt shingle

walls: wood

other: wood gutters

oil house (now called sound house) -

foundation: brick and stone

roof: wood shingle

walls: brick and stone

others:

engine (hoist) house -

foundation: wood joist on rock

roof: asphalt shingle

walls: wood shingle

others:

tram -

foundation: wood on exposed rock

roof: N/A

walls: N/A

others: wood trestles with iron rail

Narrative Description (Describe the historic and current condition of the property.)¹

The Manana Island Fog Signal Station was established in 1855 on Manana Island opposite the harbor of Monhegan Island, located in the Atlantic Ocean approximately ten miles due south of Port Clyde, Maine. The only access to the island is by boat or helicopter. The present fog signal building was built in 1889 and continues as an active aid to navigation. The keeper's dwelling, while altered and enlarged, dates from 1855. The 1895 fuel house (former fog signal house) now

¹ The following description and associated photographs were reviewed in July 2002 by a U.S. Coast Guard Aid to Navigation team responsible for the property. A document verifying that the description and associated photographs reflect the current condition of the property is on file with the Office of Civil Engineering, U.S. Coast Guard Headquarters, Washington, D.C.

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converted to the sound house and the 1905 trolley and hoist house survive and are in good condition. The 1876 frame engine house was demolished in 1889, and the 1905 boat house was destroyed in 1991. The 1895 assistant keeper's quarters (former summer kitchen) was demolished, but the exact date is unknown. The station was automated about 1986. The radio beacon tower was taken down in 1995, and the station was solarized in 1997.

Site Description

The Manana Island Fog Signal Station is located on Manana Island, approximately 200 yards to the west of Monhegan Island, and approximately ten miles due south of Port Clyde, Maine, in the Atlantic Ocean. The fog signal building, keeper's quarters, and associated structures are located approximately on the top of the island nearer the western edge. The keeper's quarters are located immediately adjacent and east of the fog signal building, and the fuel house is located to the north of the fog signal building. The tram way leads from the boat landing on the east side of the island to just east of the station complex. The hoist house is located on the north side of the tram way at the highest elevation of the east side of the island.

Existing Resources²

Keeper's quarters (1855)

The 12-story frame keeper's quarters has been altered several times, however it remains a contributing resource. In 1876, it was raised 18 inches and the exterior clapboarded; in 1889, the foundation was replaced with brick underpinnings; in 1899, the interior of the dwelling was rearranged and an ell with two rooms added.³ The exterior of the keeper's quarters was sided with horizontal clapboard and had a wood shingle roof. The windows were six-over-six double-hung sash; the lintels over the windows had a slight hip; these have been altered to large glass pane one-over-one windows with flat lintels. The windows have been covered with plywood for protection from vandalism. The fenestration of the structure consists of five windows on the south side of the first level with a door and double window on the second level in the gable end. The east side has one window in the first and second levels, a half window in the basement wall, and a basement door at the south end of the east basement wall. The north side has one window on the first level, two windows in the gable end of the second level, and one window in the basement wall. A brick cistern is located in the basement portion of the dwelling probably dating from 1889 when the foundation was replaced. The 1889 Annual Report of the Lighthouse Board indicates a cistern was constructed as part of the fog signal building that was immediately adjacent to the dwelling. This new building and brick underpinning for the dwelling was constructed in the same year making it reasonable to assume the cistern, also of brick, was completed at the same time though actually built in the dwelling basement, not the fog signal building.

² Much of this narrative is derived from a site visit to Manana Fog Signal Station on September 2, 1998, by Ralph Eshelman, consultant to the National Maritime Initiative Office, National Register, History, and Education Programs, National Park Service, Washington; and from *U.S. Lighthouse Board Annual Reports*. It should be noted that new construction and alterations mentioned in the reports may date from the current year or prior year of the report.

³ *U.S. Lighthouse Board Annual Reports, 1876, 1889 and 1899.*

All the windows, molding, walls, and partitions on the first and second floor of the dwelling have been replaced with historically non-appropriate modern materials including sheet rock and one-over-one windowpanes. All the floors have been covered with carpet and the ceilings covered with acoustic drop ceilings. No original doors, interior or exterior, remain.

Brick engine house (1889)(fog signal building)

A brick engine house, 33 by 20 feet in plan, was built in 1889. A plaster ceiling was added in 1900. This building may have been constructed around the 1876⁴ frame fog signal trumpet tower incorporating it into the roofline; but, more likely, a new wooden trumpet tower was built as part of the brick structure in 1889. This is suggested by photographs which show the tower surmounting the brick engine house as appearing to be narrower with less slanting sides and with a flat roof line as opposed to the slightly hipped roof on the earlier tower. The wood frame of the tower appears to be original. It is possible the 1889 trumpet tower has been shortened from its original height. Three large round iron pressure tanks located in a shed-like attachment off the north side of the tower are all that remain from the fog signal equipment. The 1900 plaster and lath ceiling is still present in the signal house. A three corbel course brick cornice forms the top of the brick walls on the exterior of the structure where the roofline meets the walls. Fenestration of the structure consists of three windows with brick arches on the west side; the window in the middle has been bricked in, and the lintel has been replaced with a flat concrete lintel. The other two window openings have been filled in on the bottom and the upper un-bricked portion has been covered with plywood. The north side has a double door with a window on each side. These windows are also partially bricked in, and the remaining un-bricked portion of the openings has been covered with plywood. The original brick window lintels apparently have also been replaced with flat concrete lintels. The single window on the south side has been bricked in except for a ventilation funnel. The window retains its bricked arch lintel. A narrow, approximately one-foot, wooden ell connects the engine house to the dwelling. The floor of the engine house is concrete. One four-panel wooden door, which may be original, or an early replacement, survives and is lying against the north interior wall of the engine house; all doors in place are historically non-appropriate modern replacements.⁵

Oil house (1906)

A new oil house was built in 1906. It is not clear, but it appears this 1906 brick structure was built over the disused signal-house which had been converted to a fuel house in 1895. The east side of the structure has a plywood-covered door and on each side, a narrow wood framed ventilation opening. The door has a stone lintel. The door opening, and possibly the ventilation openings, date from the earlier structure (1895 and/or earlier). The north wall has no fenestration; the west wall has two wood framed ventilation openings like the north wall. A slightly hipped concrete roof once covered this structure as evidenced in the exterior wall of the east side. The 1906 half-story brick fuel house surmounts the older structure, and extending the

⁴ It is also possible that the 1879 trumpet was placed in the 1855 bell tower.

⁵ U.S. Lighthouse Board *Annual Reports, 1889 and 1900.*

width on the south side enlarged its original dimensions. A historically inappropriate modern, stainless door is located on the east side of this half-story with a wood frame ventilation opening in the gable end. There is a set of modern treated wooden steps and landing that lead to this upper door. The wood ventilation frame with wooden louvers is identical to the ventilation opening in the lower portion of the structure, suggesting they were all replaced and/or added in 1906. The building is presently used as the sound house where the modern fog signal equipment is housed.⁶

Tramway (1905)

A tram for hauling supplies was installed in 1901 and rebuilt in 1905 on the government right of way. The wooden tram way is made of treated lumber constructed in the mid 1990s replacing an earlier tram way. The original iron tram rails have been refastened on this new tramway. The tramcar is a rectangular wooden box fitted with four rail wheels. The tramcar lies off to the side of the tramway near its western terminus.⁷

Hoist house (1905)

A housing for the tram engine, called the hoist house, was also constructed in 1905. The wooden entrance door to the hoist house is located on the north side. It is made of vertical tongue-and-groove boards fastened to its wooden doorjamb with two hinges; the door and hinges may be original to the construction date. An exhaust pipe is located over the northeast corner of the door. There is a window on the east and west side of the house providing sight lines of the tramway. A lift up half-door located on the south side of the hoist house allowed for the tram car cable to run from the hoist engine to an iron eye located on the tramway. The present engine in the hoist house is a Lidgerwood gasoline engine, made in Elizabeth, New Jersey, number 1124.

Boat Landing

At the site of the former boat house built in 1905 is a treated wooden landing platform and boat way. The tramway connects to the east side of the landing. This landing was built in the 1990s replacing an earlier landing for the boathouse. It is not considered a contributing resource.

Others

An unidentified outbuilding (probably the oil house) was constructed in 1906.⁸ A treated wood platform occupies the site where a 200-foot radio beacon tower once stood north of the fog signal building; it was removed in 1995. Just north of the northeast corner of the dwelling is a cinder block structure with shed-like roof. This may have been a later cistern for the assistant keeper's quarters, which was converted to a powerhouse for the radio beacon. A power cable still runs

⁶ U.S. Lighthouse Board *Annual Report, 1895 and 1906*.

⁷ U.S. Lighthouse Board *Annual Reports, 1895, 1901 and 1905*.

⁸ U.S. Lighthouse Board *Annual Report, 1906*.

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from this structure toward the radio beacon site. This structure was apparently connected to the assistant keeper's dwelling at some point. A concrete foundation just northeast of the northeast corner of the keeper's dwelling appears to be the foundation of a later fuel house. The concrete foundation has walls about two feet high with no threshold suggesting it was built to confine any fuel leakage. Photographs suggest this was a rectangular frame structure with gable ends. It is possible this is the site of the 1906 fuel house. If so, the present sound house is the 1895 fuel house without a 1906 alteration.

Previously Existing Structures⁹*Fog Signal Bell Tower (1855)*

A 24-foot-tall, wooden frame bell tower was built in 1855. In 1868, it was reported that the top of the bell tower was re-sheathed and painted.¹⁰

Fog Signal Bell (1855)

A Daboll trumpet replaced the fog signal bell in 1870. The bell was erected on the southwest side of the fog signal building and served as a backup to the Daboll trumpet. It was removed to Monhegan Island in the 1990s.

Frame engine house (1876)

In 1870, it was reported that the fog bell had been replaced by an Ericsson engine and Daboll trumpet suggesting a fog signal building had been erected by this time. However, the 1876 report specifically mentions a new frame engine-house, 182 by 25 feet in plan. A plan entitled Manana Fog Signal, ME, dated 1876, confirms the date of this structure. The structure was lathed and plastered in 1887 and then demolished in 1889.¹¹

Assistant keeper's quarters (1895)

The summer kitchen was converted into an assistant keeper's dwelling in 1895. A concrete floor was laid in the cellar of the dwelling in 1899. Photographs show that this 12-story frame building was located immediately northeast of the keeper's dwelling.¹²

⁹ Much of this information was obtained from photographs and U.S. Lighthouse Board *Annual Reports*; copies of which are in the Manana Island Fog Signal Station inventory file, National Maritime Initiative office, National Register, History, and Education Programs, National Park Service, Washington, D.C.

¹⁰ U.S. Lighthouse Board, *Annual Report, 1868*.

¹¹ U.S. Lighthouse Board *Annual Reports, 1870, 1887 and 1889*.

¹² U.S. Lighthouse Board *Annual Reports, 1895 and 1899*.

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Summer kitchen (prior to 1895)

A summer kitchen was known to have existed prior to 1895 as it was reported in the same year it had been enlarged into an assistant keeper's dwelling.¹³

Boat house (1905)

A boathouse and boat way were rebuilt on the government right of way in 1905. A boat landing existed sometime prior to 1883 as the boat landing, steps, and boat cover were rebuilt, but the date of its construction is unknown. The 1905 boathouse and ways were severely damaged in a storm on 7 February 1978 and demolished in 1991.¹⁴ The boathouse was a rectangular structure built on piles with a landing deck built along part of the front or east side and south side of the structure. The boat way ran directly into the boathouse along the east end of the landing deck. A set of stairs, and later the tram way, connected to this deck. The boathouse had a double door for allowing the station boat to be pulled inside along the ways. A window was located on the north and south side. The structure had vertical siding and a wood shingle roof.

Fences and walkways

A close board fence was constructed around the station in 1906.¹⁵

Other structures

A wooden cistern with capacity for 1,050 gallons was constructed in 1884 for the keeper's dwelling, but its location is not identified. An engine operated wire cable for carrying coal was erected between the boathouse and the top of the hill in 1895. Photographs show other smaller buildings were built east of the dwelling near where the tram terminated, but their exact purpose and dates of use are unclear. The 200-foot aerial tower for the radio beacon north of the fog signal building was disestablished in 1995.¹⁶

Changes in Physical Appearance

The fog signal building retains its original exterior general physical appearance. Most important is the wooden trumpet tower built upon the brick engine house. This tower is believed to be the only steam operated fog signal trumpet tower extant. However, all the fog signal equipment, except for three pressure tanks housed in the shed-like extension off the tower, have been removed. Even the interior ladder to the tower is modern. The exterior of the keeper's dwelling has been altered by several additions. The interior has been significantly changed with new

¹³ U.S. Lighthouse Board *Annual Report, 1895*.

¹⁴ U.S. Lighthouse Board *Annual Reports, 1883 and 1905*.

¹⁵ U.S. Lighthouse Board *Annual Report, 1906*.

¹⁶ U.S. Lighthouse Board, *Annual Report, 1884*, p. 19; and *1895*.

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partitions, drop ceilings, and modern kitchen and plumbing. All the doors, windows, molding and trim have been replaced with historically inappropriate materials. The tramway is essentially new, only using the original 1905 trolley track. The fuel house is unique as it was originally built as an engine house, modified into a fuel house in 1895, and enlarged and raised in height by a second half-story in 1906. These modifications suggest the frugality of the service in adapting existing structures for new uses. Transporting building materials to this far offshore station would have been expensive. Only the hoist house remains essentially unchanged.

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8. Statement of Significance
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Applicable National Register Criteria (Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing)

- A** Property is associated with events that have made a significant contribution to the broad patterns of our history.
- B** Property is associated with the lives of persons significant in our past.
- C** Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- D** Property has yielded, or is likely to yield information important in prehistory or history.

Criteria Considerations (Mark "X" in all the boxes that apply.)

- A** owned by a religious institution or used for religious purposes
- B** removed from its original location
- C** a birthplace or a grave
- D** a cemetery
- E** a reconstructed building, object, or structure
- F** a commemorative property
- G** less than 50 years of age or achieved significance within the past 50 years

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Areas of Significance (Enter categories from instructions):

Maritime History
Transportation
Architecture

Period of Significance: 1855-1952

Significant Dates: 1855, 1870, 1872, 1877, 1876, 1912

Significant Person (Complete if Criterion B is marked above): N/A

Cultural Affiliation: N/A Known Design Source: none

Architect/Builder: U.S. Lighthouse Board

Narrative Statement of Significance (Explain the significance of the property.)

The Manana Island Fog Signal 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 along the coast of the United States. The northeast coast was a major transportation corridor for commercial fisheries from the early 19th through 20th centuries. The fog signal station at Manana Island is significant in being one of the few fog signal stations extant in the United States that is still operational and not a part of a light station (from 1855 until 1876 Manana Island fog signal station was operationally a part of Monhegan Light Station-- in 1876 Manana Island was designated a separate station).

Joseph Farwell, master of the steamer *Daniel Webster*, wrote to the lighthouse inspector Lieutenant W.B. Franklin, Portland, Maine, on September 12, 1853:

...One of the most important aids to navigation on the coast of Maine is a fog bell in Manana. The island of Monhegan is the island that all of our vessels on the coast take their departure from on leaving the coast, and is the most desirable headland to make on coming in from sea; and it is the only land that steamboats wish to make between Portland light and Whitehead light, and it is indispensably necessary to make Monhegan before you change your course either from Portland or Whitehead. The Manana is a small island, raken, as you may say, out of Monhegan island on the westerly side, and makes the harbor of Monhegan.

The only way to make it is to run and feel your way along the coast, stopping and going ahead until you find it. A sailing-vessel is obliged to run until she judges herself up, and then lay to until the fog clears up. Often a vessel or steamboat may be within a cables length of this island in the fog, and not know whether they are very near or not, or whether they are inside or outside of the island. A bell, well arranged on Manana, would announce to a vessel the position of the island, and from that they could take their departure for Portland if going west, and for Whitehead if going east.

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I think there is no point on our coast that needs so much the protection and particular attention of government, (as a good fog-bell well arranged,) as on the Manana.¹⁷

Significance of Fog Signal Stations

Fog signals such as bells and trumpets were usually part of light stations. However, some stations were solely fog signal stations; a few stations such as Cuckolds, Maine, and Lime Point, California, later had lights added to them. Fog signals and fog signal stations were important in areas susceptible to heavy fog that rendered lights of little or no use to mariners. The North Atlantic Coast and portions of the Pacific and Alaska Coasts are extremely foggy; the New England Coast is the foggiest. There are an average of 874 hours of fog a year on the coast of Maine while only 165 hours of fog on the South Atlantic and Gulf Coasts. In 1843, there were only four fog signals along the coast of Maine. In 1916 there were 586 fog signals along the Atlantic Coast, excluding sounding buoys, of which 334 were located north of Cape Lookout, North Carolina.¹⁸

The first fog signal, in what today is the United States, was a cannon mounted at Boston Light in 1719. The first fog bell established in this country was established in about 1808 at West Quoddy Head, Maine. A perpetual fog bell operated by the tide was established at Whitehead Light Station, Maine in 1838. Mechanical fog bell striking machines were introduced about 1860. The first air whistle and air trumpet were operated by compressed air generated by horse-powered compressors. Steam, and later internal combustion engines, soon replaced horsepower. Six steam whistles operated in Maine in 1870. Fog signal sirens, first introduced in 1867, were also steam and internal combustion engine, and later, electric operated. Vessels now use Radar, radio directional finders, loran, and GPS to navigate in fog. But fog signals are still employed as well, most eclectically operated and run seasonally and/or by automatic fog detectors which turn fog horns on and off by themselves.

Before such detectors, keepers of fog-signal stations were required to maintain a continuous watch, night and day, as the signal needed to be started promptly on the approach of fog. In days of steam-operated fog signals, it could take several hours to build up sufficient pressure for proper operation.

Significance and Historic Integrity of Manana Fog Signal Station

Manana Fog Signal Station is unique because of the 1889 wooden tower that housed the steam-operated fog signal trumpet mounted on the 1889 brick engine house. This is the only trumpet tower known to be extant in the United States and, as such, should be considered for listing in the National Register of Historic Places. There are a few extant wooden fog bell signal towers, but this is the only known extant trumpet tower. The 1895 fuel house is also worthy of consideration despite its 1906 alteration. The keeper's quarters, though altered several times continues to

¹⁷ U.S. Lighthouse Board, *Annual Report*, 1853.

¹⁸ George R. Putnam, *Lighthouses and Lighthouses of the United States*, Houghton Mifflin Company, Boston, 1917, pp. 226-228.

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reflect its original purpose and is considered a contributing resource. If the station is found ineligible for listing, a thorough photographic and drawing documentation project of the fog signal tower should be conducted before any more alteration or demolition of the structure takes place.

History¹⁹

The Lighthouse Board report for 1853 stated,

I think it of great importance that there should be a bell at Monhegan. The light-house is so far from the point where the bell should be situated, that the light-keeper could not attend to it, and it will be advisable, therefore, to have a house built on which the bell might be placed; and a man should be appointed whose sole duty should be to take charge of the bell. The proper site for the bell is on a small island which lies off Monhegan, called Manana. For the house and bell, and for purchasing the land, the sum of \$3,500 will be necessary.

An act of Congress, approved August 3, 1854, appropriated \$3,500 for the establishment of a fog signal and keeper's dwelling for Manana Island, Maine. A 1/4 acre of land with right of way to the water was purchased from the Monhegan Plantations heirs for \$53.98. In 1855, a 2,500 pound fog signal bell, cast in Boston in 1832, was mounted on a 24 foot-tall wooden frame attached to the keeper's dwelling. The fog bell was 55 feet above sea level and approximately one mile due west of the lighthouse on Monhegan Island. The fog signal was struck by hand until a J.D. Custer striking machine was installed in 1856.²⁰

An act of Congress approved July 28, 1866, appropriated funds for new & efficient fog signals including Manana Island. As a result, in 1870, the fog bell was replaced with a six-inch Ericsson engine and ten-inch Daboll trumpet, giving a 15-second blast every 55 seconds. In 1872, the Daboll trumpet was removed to Portland Head, Maine, and a six-inch steam fog whistle was installed, giving two 5-second blast every 60 seconds.²¹

¹⁹ Much of this narrative is derived from Manana Island Fog-Signal Station, Maine, short history, no author, no date, in National Archives files, and U. S. Lighthouse Board *Annual Reports, 1853-1906*; copies of which are in the Manana Island Fog Signal inventory file, National Maritime Initiative, National Register, History, and Education Programs, National Park Service, Washington, D.C.

²⁰ Hand written chronology of station, initialed EM?, dated April 13, 1912, Manana Site File, National Archives, Washington, D.C. The fog bell remained on Manana Island until moved by helicopter in the 1990s to the lighthouse museum on Monhegan Island. The bell became famous after being painted by Jamie Wyeth in his painting *Bronze Age*.

²¹ Because the Manana Fog Signal Station was operationally considered a part of the Monhegan Island Light Station from 1855 until 1876, some authors such as Edward Rowe Snow, *Famous Lighthouses of New England*, Boston, Massachusetts, 1945, and Bill Cadwell, *Lighthouses of Maine*, Gannett Books, Portland, Maine, 1986, p.135, have mistakenly indicated that the fog signal was originally placed on Monhegan Island and then moved back and forth between the two islands in an attempt to find the best strategic location. The Lighthouse Board *Annual Reports*, however, indicate the fog signal station was always located on Manana Island. The report for Monhegan Island in 1872 states a fog steam fog-whistle has been established at this station in place of a Daboll trumpet... Since the fog signal station was considered a part of Monhegan, the reference is presumed to mean the

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In 1876, the Manana Island fog signal was made into a separate station from the Monhegan Light Station. The fog signal site was considered too low and the sound masked in some directions by neighboring hills. Because of difficulty in obtaining title to a better site, the height of the signal was raised and the six-inch fog whistle replaced with a eight-inch whistle. The keeper's dwelling was raised 18-inches (apparently unrelated to the fog signal heightening) and exterior siding covered with clapboard, and a new sill and under floors were installed. A frame engine house for a duplicate fog-signal apparatus was built adjoining the keeper's dwelling, and a 50-foot-long boat way was built. In 1877, a first-class Daboll trumpet, operated by duplicate 32-inch caloric engines, was installed in the new engine house. The new fog signal characteristic was a 15-second blast every 40 seconds.

In 1887, it was reported the engine house was lathed and plastered, but in 1889, the frame engine house was demolished and a brick fog-signal house built on the same site. A new brick water cistern was also built for the dwelling. Brick underpinnings were also installed under the frame dwelling. In 1896, the old summer kitchen was enlarged and made into an assistant keeper's quarters. The signal house was turned into a fuel house, and a small engine-operated wire cable for carrying coal was erected between the top of the hill of the island and the boathouse.

In 1899, a four horsepower Hornsby-Akroyd oil engine and a Clayton air compressor in duplicate replaced the caloric engines. The interior of the keeper's house was rearranged and a two room ell attached. In 1900, a cooling tank was built, the cistern repaired, and a ceiling put into the fog signal house. The fog signal characteristic was changed to blasts of 10-seconds every 30 seconds. In 1901, the engine, formerly used to operate a fog bell, was installed for purposes of hauling supplies by tram from the boathouse to the station site. In 1905, the tram was moved to the government right of way, the boat way and boathouse rebuilt on the right of way, and an engine house with hoisting engine installed. In 1906, an oil house and close board fence were built.

In 1912, a first-class air siren, giving a group of three blasts of 3-seconds duration every 25 seconds followed by a silent interval of 35 seconds, replaced the first-class Daboll trumpet. The air siren signal was described in 1933 as a group of three blasts every 60 seconds: 3 blasts of 3-seconds each, followed by a period of silence of 35 seconds. The fog signal building was described as a brown, brick house. In 1946 and 1951, the station was described as consisting of an air diaphragm horn with radio beacon distance-finding station. In 1987, the station signal was described as 2 blasts every 20 seconds. The radio beacon and brick brown house were still reported as extant in 1987. The radio beacon tower was removed in 1995; the fog signal bell and boathouse were removed in the early 1990s.²²

Daboll on Manana was replaced by a whistle at the same site.

²² Bureau of Lighthouses, *Annual Report, 1912; Light List including Fog Signals, Atlantic and Gulf Coasts of the United States, 1933*, U.S. Department of Commerce, Lighthouse Service, Government Printing Office, Washington, D.C., 1933, pp. 16 and 17; *Light List Atlantic and Gulf Coasts of the United States, St. Croix River, Maine, to the Rio Grande including the U.S. West Indian Islands*, U.S. Government Printing Office, Washington, D.C., 1946, pp. 34 and 35; *Light List Atlantic and Gulf Coasts of the United States, St. Croix River, Maine, to the Rio Grande including the U.S. West Indian Islands*, CG-158, U.S. Government Printing Office, Washington, D.C., 1951, p. 34-35; and *Light List Volume I Atlantic and Gulf Coasts of the United States, from St. Croix River, Maine*,

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The fog signal station was described in 1930 as consisting of a brick fog signal house, two dwellings, an oil house, a boat house and slip, a tramway from boat house to dwelling, and a donkey boiler house, and fuel house. The land was appraised at \$75 and the improvements at \$21,575.²³

Fog Signal

The first fog signal used at the station was a fog bell that operated from 1855 until replaced with a steam operated first-class Daboll trumpet in 1870. The fog bell was retained as an emergency backup. In 1872 until 1876, the trumpet was replaced with a steam operated fog whistle. The whistle was not powerful enough for the site and was replaced in 1877 by a new first-class Daboll trumpet. The signal operated for 1,049 hours in 1884, operated for 1,211 hours in 1885, operated for 1,438 hours in 1886, operated for 1,577 hours consuming 31,460 pounds of coal in 1888, operated for 1,805 hours consuming approximately 16 ton of coal in 1890, operated for 1,122 hours consuming approximately 132 tons of coal in 1892, operated for 1,038 hours consuming approximately 13 tons of coal in 1893, and operated for 1,181 hours consuming approximately 16 tons of coal in 1894. The station used coal until 1902 when oil engines were installed still using a first-class Daboll trumpet. In 1912, the first-class Daboll trumpet was replaced with a first-class air siren. The present fog signal is a diaphone horn.²⁴

In 1910, \$2,000 was authorized for a light and fog signal or whistling buoy with submarine signal to aid this station. On March 4, 1911, appropriations for \$10,000 were made to improve the light at Monhegan Island and fog signal at Manana Island.²⁵

Keepers²⁶

In about 1877, a telegraph wire connecting Monhegan and Manana Island allowed the keeper at Monhegan to activate an electric gong situated in the bedroom wall of the fog signal station on Manana alerting that keeper that a fog bank was rolling in.²⁷

to *Ocean City Inlet, Maryland, First, Third, and Fifth Coast Guard Districts*, U.S. Government Printing Office, Washington, D.C., 1987, p. 1.

²³ Questionnaire Covering Real Estate Owned By The United States, for Manana Island Fog Signal Station, dated February 7, 1930; Manana Site File, National Archives, Washington, D.C.; copy in Manana Site File, National Maritime Initiative, National Park Service, Washington, D.C.

²⁴ U.S. Lighthouse Board *Annual Reports, 1855, 1870, 1872, 1877, 1884, 1885, 1886, 1888, 1890, 1892, 1893, 1894 and 1902*; Snow, p. 91; Charles Francis Jenney, *The Fortunate Island of Monhegan: A Historical Monograph*, from the *Proceedings of the American Antiquarian Society*, volume 31, with Additions, the Davis Press, Worcester, Massachusetts, 1922, p. 69; and Caldwell, p. 135.

²⁵ Hand written chronology signed EM?, dated April 13, 1912, Manana Site File, National Archives, Washington, D.C.

²⁶ Jenney, pp. 69-70.

²⁷ Snow, p. 91.

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Keepers at Monhegan Island Light Station assigned to Manana:

| | |
|------------------------------|-------------------------------------|
| Sylvester Davis | October 15, 1855-February 27, 1857 |
| Thomas Kinney | February 27, 18857-March 29, 1857 |
| Henry T. Studley | March 29, 1861-November 19, 1870 |
| Francis A. Brackett | May 29, 1871-December, 1872 |
| Bradbury Emerson, 1st Asst. | December 13, 1872-October 30, 1873 |
| Andrew J. Marston, 1st Asst. | December 26, 1873-February 28, 1876 |
| Frank E. Adams, 1st Asst. | March 16, 1876-April 11, 1876 |

Keepers assigned to Manana Fog Signal Station:

| | |
|-------------------------|----------------------------------|
| Frank E. Adams | April 11, 1876-March 24, 1878 |
| John W. Williams | March 25, 1878-January, 1883 |
| Charles S. Williams | January, 1883-June, 1890 |
| Daniel Stevens | June, 1890-September, 1902 |
| Frank C. Pierce, Asst. | February, 1895-September, 1902 |
| Frank C. Pierce | September, 1902-November 2, 1916 |
| Edward S. Farren, Asst. | September, 1902-March 1913 |
| Eugene W. Osgood, Asst. | March 1913- |
| Charles G. Dyer | November 3, 1916- |

The last civilian keeper was Henley C. Day who retired in 1956. Coast Guard personnel manned the station until automated in about 1986.

9. Major Bibliographical References

Clifford, Candace, *1994 Inventory of Historic Light Stations* (Washington, D.C.: Department of Interior, National Park Service, History Division, 1994).

Jenney, Charles Francis, *The Fortunate Island of Monhegan: A Historical Monograph*, from the *Proceedings of the American Antiquarian Society*, volume 31, with Additions, the Davis Press, Worcester, Massachusetts, 1922.

Light List including Fog Signals, Atlantic and Gulf Coasts of the United States, 1933 (U.S. Department of Commerce, Lighthouse Service, Government Printing Office, Washington, D.C., 1933).

Light List Atlantic and Gulf Coasts of the United States, St. Croix River, Maine, to the Rio Grande including the U.S. West Indian Islands (U.S. Government Printing Office, Washington, D.C., 1946).

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Light List Volume I Atlantic and Gulf Coasts of the United States, from St. Croix River, Maine, to Ocean City Inlet, Maryland, First, Third, and Fifth Coast Guard Districts (U.S. Government Printing Office, Washington, D.C., 1987).

Manana Island Fog-Signal Station, Maine, short history, no author, no date, National Archives; copy in the Manana Island Fog Signal inventory file, National Maritime Initiative, National Park Service, Washington, D.C.

Putnam, George R., *Lighthouses and Lighthouses of the United States*, Houghton Mifflin Company, Boston, 1917.

Questionnaire Covering Real Estate Owned By The United States, for Manana Island Fog Signal Station, dated February 7, 1930; Manana Site File, National Archives, Washington, D.C.; copy in Manana Site File, National Maritime Initiative, National Park Service, Washington, D.C.

Snow, Edward Rowe, *Famous Lighthouses of New England*, Yankee Publishing Company, Boston, Massachusetts, 1945.

U.S. Lighthouse Board, *Annual Reports*, 1853-1906.

Previous documentation on file (NPS)

- preliminary determination of individual listing (36 CFR 67) has been requested.
- previously listed in the National Register
- previously determined eligible by the National Register
- designated a National Historic Landmark
- recorded by Historic American Buildings Survey # _____
- recorded by Historic American Engineering Record # _____

Primary Location of Additional Data

- State Historic Preservation Office
- Other State agency
- Federal agency
- Local government
- University
- Other

Name of repository: National Archives; National Maritime Initiative, National Park Service; U.S. Coast Guard Headquarters, Historian's Office, Washington, D.C.

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10. Geographical Data

Acreage of Property: Less than one acre

USGS Quadrangle: Monhegan, ME

| | | | |
|-----------------|------|---------|----------|
| UTM References: | Zone | Easting | Northing |
| | 19 | 473683 | 4845608 |

Verbal Boundary Description:

The original property consisted of approximately 1/4 of acre near the middle of the island and includes a right of way to the water. This 1/4 acre property is shown as ABCD, and the engine house is labeled within the right of way on the attached plat.

Boundary Justification:

This boundary encompasses the extant buildings of the light station. The engine house is located within the right-of-way.

11. Form Prepared By

name/title: Ralph Eshelman, consultant under cooperative agreement with the U.S. Lighthouse Society

Edited and revised by Jennifer Perunko, NCSHPO Consultant, National Maritime Initiative, National Park Service

organization: National Park Service National Maritime Initiative

date: September 12, 1998 & July 2002

street & number: National Park Service (NRHE--2280), 1849 C St., NW, Room NC400

city or town: Washington state: DC zip code: 20240

telephone: 202-343-9508

MANANA ISLAND FOG SIGNAL STATION

=====
Property Owner
=====

(Complete this item at the request of the SHPO or FPO.)

name: U.S. Coast Guard, First District

street & number: 408 Atlantic Ave.

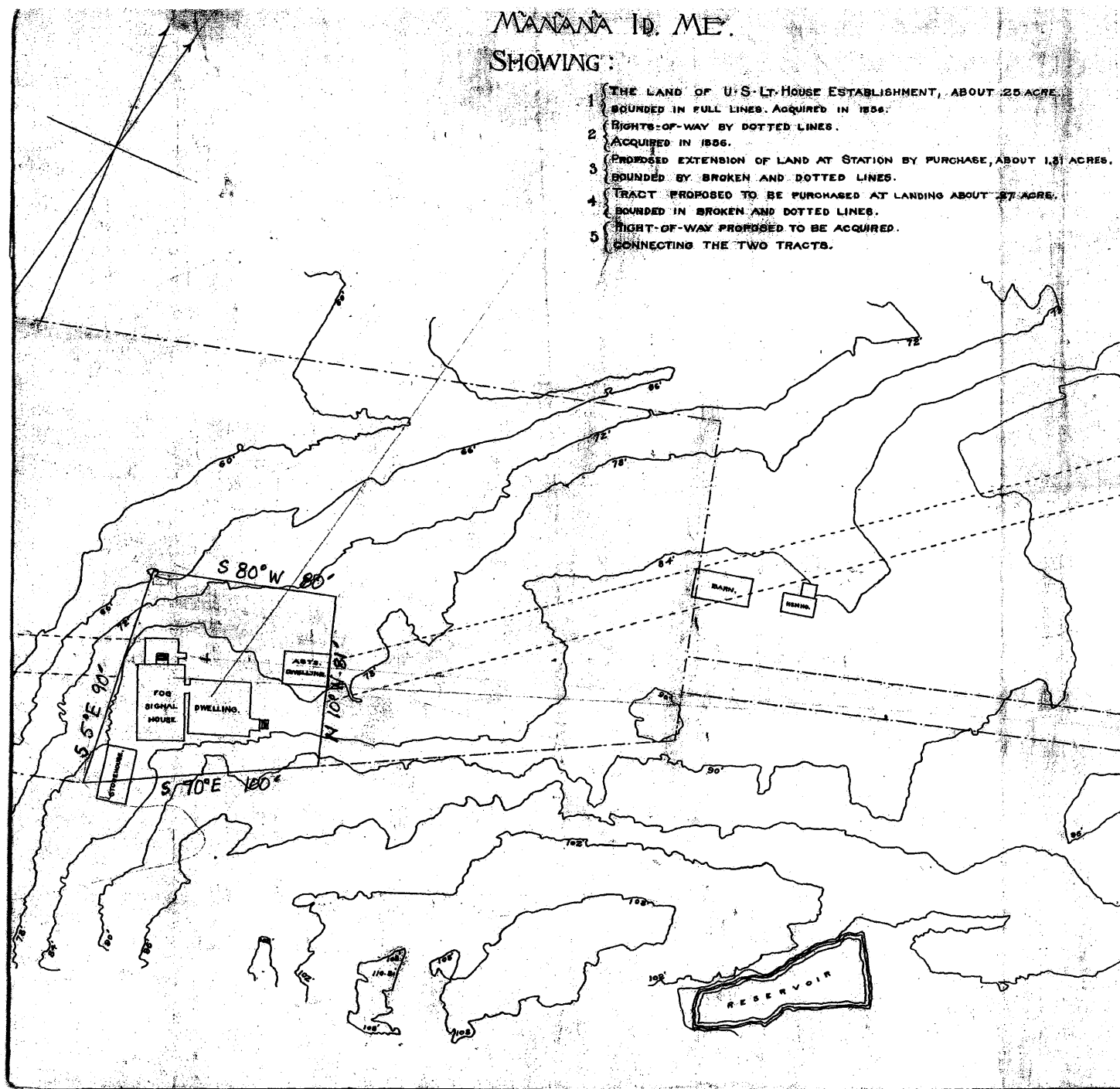
city or town: Boston state: MA zip code: 02110

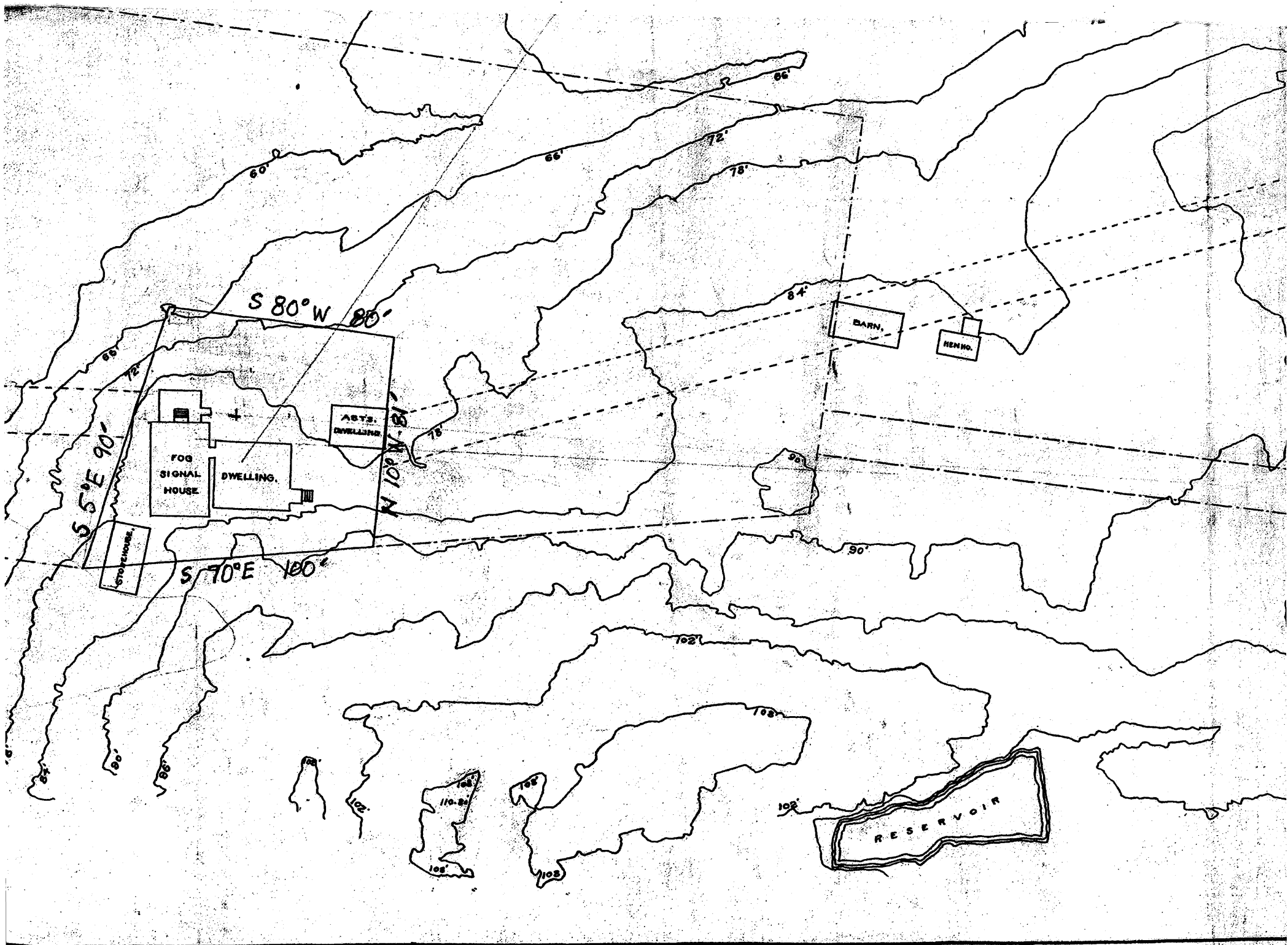
telephone: (617) 223-8352

MANANA ID. ME.

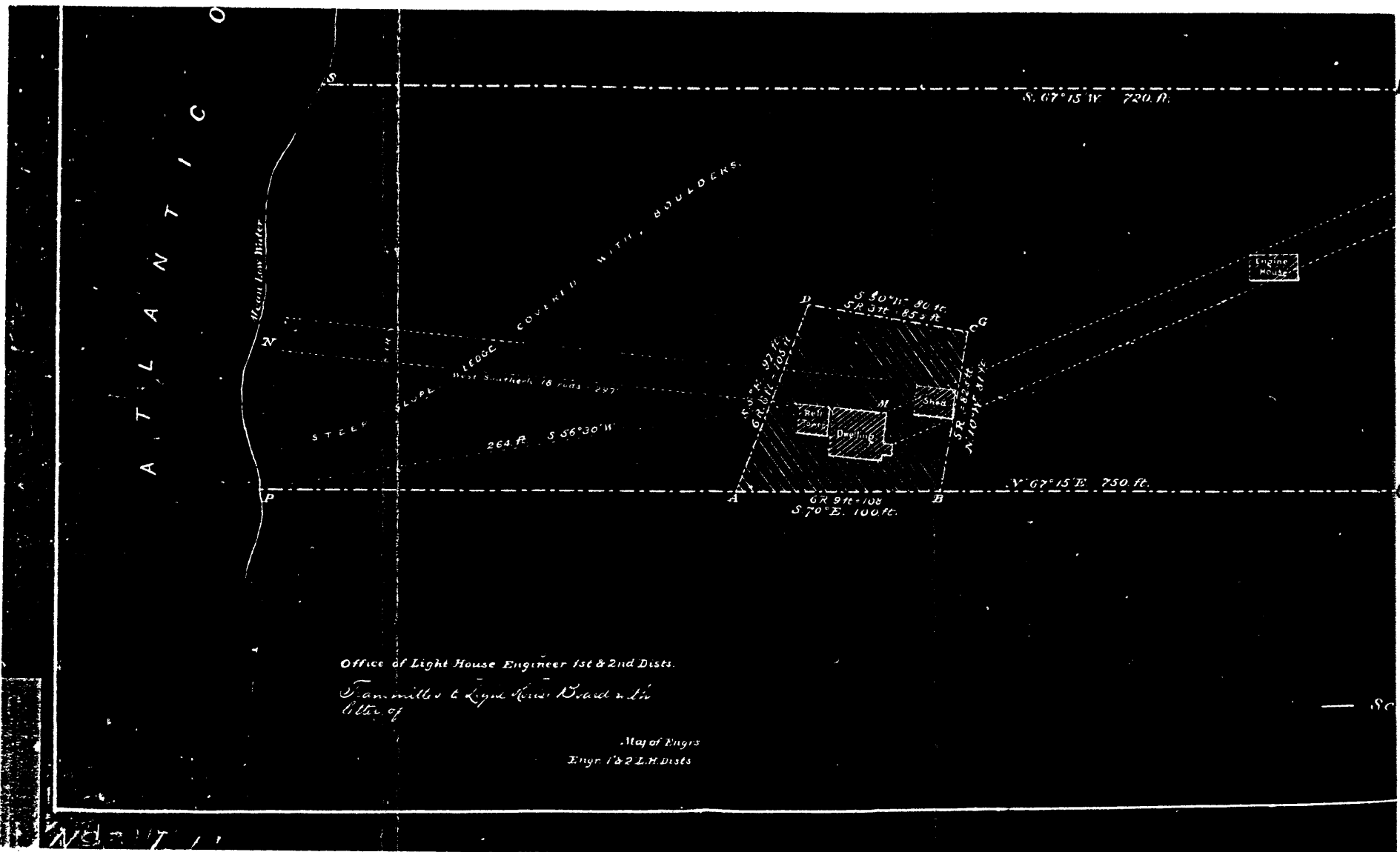
SHOWING:

- 1 THE LAND OF U. S. LT. HOUSE ESTABLISHMENT, ABOUT .25 ACRES. BOUNDED IN FULL LINES. ACQUIRED IN 1856.
- 2 RIGHTS-OF-WAY BY DOTTED LINES. ACQUIRED IN 1856.
- 3 PROPOSED EXTENSION OF LAND AT STATION BY PURCHASE, ABOUT 1.31 ACRES. BOUNDED BY BROKEN AND DOTTED LINES.
- 4 TRACT PROPOSED TO BE PURCHASED AT LANDING ABOUT .57 ACRES. BOUNDED IN BROKEN AND DOTTED LINES.
- 5 RIGHT-OF-WAY PROPOSED TO BE ACQUIRED. CONNECTING THE TWO TRACTS.





boat landing
 Hogman Is.
 ↗



see back for interpretation of letters

ABCD - land purchased at LAM right of way purchased by leads

Feb. 21 1856; Jan 21 1858; Dec. 7 1858, April 29, 1859 and June 15, 1859

PADCBQRS Tract proposed to purchase for station; about 3/4 acre

TUVW " " " " land adjacent land here

QXY Right of way proposed

> never acquired

some SW 55 rods or 107 1/2' for station to land (original)