1-95

Form 60

Supersedes No. 1-43

First LIGHTHOUSE DISTRICT

DEPARTMENT OF COMMERCE
LIGHTHOUSE SERVICE

DESCRIPTION

OF

PORTSMOUTH HARBOR

LIGHT STATION

State: New Hampshire

Corrected to May 1, 1935

1914

DESCRIPTION OF LIGHT STATION.

1. By whom described Thomas Sampson, Asst. Superintendent, date May 1, 1935

STATION.

2. Name of station, Portsmouth Harbor

3. Characteristic of light, Fixed green

4. Geographical position of light: Latitude, 43 ° 04′ 16″; longitude, 72 ° 42′ 33″.

5. Location, On Fort Point, New Hampshire, southwesterly side of the inner entrance to Portsmouth Harbor, New Hampshire

PREMISES.

6. Origin of title to site of station (public land, purchase, lease, military or naval reservation), Military Reservation

7. Date of reservation, deed, lease, or permission to occupy, Ceded by N. H. Feb. 14, 1791

8. Area of the entire site, 1¾ acres.; (*b*) area inclosed, whole; (*c*) type of fence, Board fence on N. & W. side, old fort walls on S. & E. side

9. Distance of tower from nearest high-water mark, Tower stands at high water mark

10. Wharf or landing on premises, None

11. Means by which the light station may be reached and distance to nearest post office or town, with name, By team or boat--New Castle, N. H.

12. Tower or other means used for supporting the lantern and apparatus, Tower

13. Number of separate lights, One

14. When first built or established, 1771

PREMISES—Continued.

15. When last thoroughly rebuilt, repaired, or renovated, 1877

16. Height of focal plane of lantern above mean high water (on sea and gulf coasts) or mean lake level on northern lakes and rivers, 52 ft.

17. Background of the lighthouse, upon which it is projected, as seen from seaward, Fort and village of New Castle

18. Color of tower, and how produced, White

19. Tower—Connected with keeper's dwelling, and how; or detached, Detached

20. Purpose of aid—Seacoast, lake coast, bay, harbor, channel, or range; for general or local navigation, Harbor light

21. Materials of which the tower is built, Cast iron lined with brick

22. Kind of stairway and steps, Cast iron diamond pattern

23. Size of glass for glazing tower windows, 20 7/8" x 10¼"

24. Number of windows in tower, and size of sash, 3 - 46½" x 25"

25. Number and size of doors, Two--one at entrance to tower, one at watch room

26. General remarks upon tower and site,

LANTERN AND LANTERN FIXTURES.

27. Order or class of lantern, 4th

28. If polygonal, state number of sides; if cylindrical, state diameter, Parapet--cylinders above parapet polygonal

29. Vertical or helical bars, Vertical; thickness of bars, ; height glazed, 35¾"

30. Number of plates in height, 1; in each side, 1

31. Thickness and size of plates, ½"--25½" x 35 1/8"

32. Unglazed side of lantern in plates and degrees of arc, None;
between what bearings (true and from seaward),

33. Materials of which the lantern is constructed, Cast iron

34. Roof, Cast iron made in ten sections, flanged and bolted on inside

LANTERN AND LANTERN FIXTURES—Continued.

35. Ventilator ball, Cast iron

36. Lightning-conductor spindle, Bronze with three pronged copper tip

37. Balustrade and outside gallery, One flat rail at top, round rail at bottom--12 posts Gallery cast iron

38. Lantern doors, and how fitted, Sheet iron with strengthening strips wrought iron-- hinges and catch

39. Floor of lantern—Of what materials, Cast iron

40. Watch-room door leading into lantern, and how fitted, Wooden trap door fitted with hinges and ring

VENTILATORS.

41. In parapet, wall, or lower part of lantern, Parapet

42. Lantern ladders for cleaning plate glass, outside, None

43. Curtain hooks inside of lantern—How fitted, Curtains hung by hooks

WATCH ROOM.

44. How fitted, Door leading from stairway and one closet

45. Bell wires, speaking tubes, or telephones for calling relief keepers—Kind, ---

46. Where led, ---

ILLUMINATING APPARATUS, ETC.

47. Kind of apparatus, Lens; intensity in English candles, 2,100

48. Name of maker, L. Sautter & Co.; year made,

49. Marks and number on apparatus, None

50. Order of apparatus, 4th Dioptric; inside diameter (inscribed circle, tangent to glass) of central drum, 19 5/8"

51. **If the apparatus is a parabolic mirror,** state (*a*) diameter of opening, ; (*b*) depth of mirror, ; (*c*) its focal length, ; (*d*) material of which it is made,

52. **If revolving,** time of revolution,

(*a*) duration of flash, sec.; (*b*) duration of eclipse, sec.

53. **If fixed,** or fixed varied by flashes, state arc of each fixed part in degrees, 90°;

(*a*) duration of fixed light, sec.; (*b*) eclipse, sec.; (*c*) flash, sec.

ILLUMINATING APPARATUS, ETC.—Continued.

54. Number of panels in the lens apparatus, ...

55. Number of flash panels, ...None....; arc of each, in degrees, ...

56. Number of elements in each panel of central drum of lens, ...5.....

57. Number of prisms in each panel *above* central drum of lens, ...5....; are they fixed or flash? .....

58. Number of prisms in each panel *below* central drum of lens, ...3....; are they fixed or flash? .....

59. How are the flashes produced—By the whole apparatus revolving .....; by revolving belt only .....; if by panels or vertical elements revolving outside of fixed lens, state the number of such panels, ...

60. **If by vertical elements,** state (*a*) the number in each panel, ...; and (*b*) the number of elements of fixed lens covered by the panel, ...

61. **If light is occulting,** state (*a*) the characteristic, ...

(*b*) Between what time limits may characteristic be varied without structural changes in mechanism? .....

(*c*) Are eclipses produced by sleeve, revolving screens, or valve (if gaslight)? .....

(*d*) Size of sleeve and amplitude of movement, ...

(*e*) Axis of rotation of screens, horizontal or vertical, ...; (*f*) relation of axis to vertical axis of illuminating apparatus, ...

(*g*) Do the screens revolve as parts, or independently, of illuminating apparatus? .....

(*h*) If about vertical axis, how many in circumference, ...; (*i*) time required for complete revolution, ...; (*j*) form, ...;

(*k*) how mounted (see Questions 62–65), ...;

(*l*) if actuated by clockwork, state order and maker, ...;

(*m*) date made, ...

If occultation is effected by valve, state (*n*) name of maker, ...;

(*o*) pattern, ...;

(*p*) does it operate reliably? .....

62. **If revolving,** does the apparatus revolve on chariot wheels, mercury float, or balls? .....

63. **If a chariot,** describe it and state the number and size of each pattern of wheels in it, ...

.....

ILLUMINATING APPARATUS, ETC.—Continued.

64. **If on mercury float,** give (*a*) inside diameter of trough, ...; (*b*) inside depth of trough, ...; (*c*) outside diameter of float, ...; (*d*) depth of float, ...; (*e*) weight of mercury required, in pounds, ...; (*f*) how often mercury is renewed? .....

65. **If on balls,** (*a*) describe the construction of the ball-raceways, whether they are flat surface or semicircular or V grooves, ...; (*b*) is a cage used to separate balls? .....; (*c*) state number of balls, ...; (*d*) diameter of balls, ...

66. Clock cord or chain, kind, ...; size, ...; length, ...; how led, ...; diam. and length of clock drum, ...

67. Length and inside dimensions of drop tube or weight box, ...; clock weight, ... pounds.

68. Length of time clock will run after one winding, ...

69. Does clock drive apparatus while being rewound? .....

70. How is the machinery protected? .....

71. How regulated? .....

72. Describe the pedestal, Hollow cast iron, flaring at top and bottom, is 5" diameter and stand 3' 4" high

73. Lens protector—Is there one? Yes; kind, linen

74. Draft tube leading into ventilator ball—Of what material, diameter, and how fitted and connected with damper tube when in place, None

75. **If colored light,** (*a*) how is the color produced? Green shade

(*b*) state where colored glass is attached, if to illuminating apparatus or to lantern, ...

76. If colored glass is inside of illuminating apparatus, describe its form, ...

77. Red sectors—Between what bearings, true (from seaward), ...

LAMPS, BURNERS, ETC.

78. Description of lamp: (*a*) give order, Incandescent Electric--200 Watt; (*b*) kind of illuminant, Electric C-7 fill
(*c*) intensity in English candles, 300 3,200 lumens

If oil, or oil vapor:

(*a*) number of wicks, or mantels, to burner, ...;

(*b*) diameter of outside wick, ...; (*c*) diameter of mantel, ...;

(*d*) if more than one mantel, also diameter of circumscribing circle, ...

If gaslight:

(*e*) state kind, ...; (*f*) number of burners, if more than one burner in group, ...; (*g*) kind of burner, ...;

(*h*) candlepower per burner, ...; (*i*) total candlepower of group, ...;

(*j*) size of burner in cubic feet of gas per hour, ...;

(*k*) consumption of gas per hour, ... cubic feet; (*l*) how is gas obtained?

.....

If gas is generated at station:

(*m*) describe generator, ...;

(*n*) state name of maker, ...;

(*o*) date of pattern, ...; (*p*) maximum capacity per hour, ... cubic feet.

If compressed gas is used:

(*q*) describe container and give number in service, ...; spare .....;

(*r*) capacity, ... cubic feet of free gas; (*s*) to what pressure charged, ... lbs.; (*t*) how is supply renewed? .....;

(*u*) if by substitution of full for empty container, at what intervals? .....

.....

79. Number of spare lamps at station, 2 oil lights as standby

80. Number of spare lamp burners at station, 2--one year's supply of electric lamps

CLOSETS IN TOWER.

81. How fitted and used, Closet in watch room fitted with four shelves and used for storing lamp supplies

OIL HOUSE OR ROOM.

82. Describe (*a*) where placed and how fitted, Red brick with white trimmings

(*b*) inside dimensions, 10' x 12'; (*c*) materials of which built, Brick;

(*d*) capacity in 5-gallon cans,

CLOSETS AND STOREROOMS.

83. Where placed, how fitted and used, Closet in fuel house used for paints

84. Damp or dry, suited or unsuited to the purpose for which they were designed, Dry and suitable

FOG SIGNAL.

85. Kind and character of apparatus, Bell struck by machinery

86. How much time is required to sound the signal? starts immediately; how long may the signal sound its characteristic with the quantity of air stored under pressure?

87. Characteristic: Single blow every 10 sec.

If whistle, trumpet, or siren:

Blast ___ sec.	Silent ___ sec.	Blast ___ sec.	Silent ___ sec.

If bell:

1 strokes	Silent 10 sec.	1 strokes	Silent 10 sec.

88. What parts of the fog-signal machinery are in duplicate? Spare equalizing springs

89. Location, with reference to lighthouse, to a particular danger or channel, or to the special object for which established, On the westerly side of the entrance to Portsmouth Harbor established as a guide to Portsmouth Harbor

90. Distance and direction, true, from lighthouse, Attached to tower on easterly side

91. Water supply for it, ---

92. How is it reached from the lighthouse? Wooden bridge

FOG SIGNAL—Continued.

93. Description of fog-signal building or buildings, Wooden building 8' x 8' - 8' high with flat roof, canvas covered, bell is hung on roof

94. If a bell, state (*a*) weight, 1,048 lbs.; (*b*) metal, Bell metal (*c*) diameter, 36"; (*d*) height, 42"; (*e*) if struck by clockwork, state time it will run with one winding, 5 1/3 hrs.; (*f*) maker and date, ; (*g*) weights for operating, lbs.

95. If a steam signal, describe boiler: (*a*) type, ; (*b*) length, ; (*c*) diameter, ; (*d*) horsepower, ; (*e*) maker and date, ; (*f*) Is there a heater? ; what kind? ; what size? ; how much does its use reduce the time of starting the fog signal?

96. If a steam engine is used: (*a*) kind, ; (*b*) number of revolutions per minute, ; (*c*) diameter of cylinder, ; (*d*) stroke of piston, ; (*e*) horsepower, ; (*f*) maker and date, ;

97. If internal combustion engines are used: (*a*) kind of engine, ; (*b*) maker, ; (*c*) date, ; (*d*) nominal size, ; (*e*) horsepower, ; (*f*) fuel used, ; (*g*) how started, ; (*h*) kind of compressor, ; (*i*) maker and date, ;

State if compressor is on same bed and geared with engine, or separate and belt-driven, or both pistons on same rod, ; if geared or belt-driven, state ratio, Describe compressor machinery, (*a*) diameter of cylinder, ; (*b*) stroke of piston, ; (*c*) number of revolutions per minute, ; (*d*) character and size of air-inlet valves, ; (*e*) kind of unloader, ; (*f*) diameter of delivery pipe,

FOG SIGNAL—Continued.

98. (*a*) Number air receivers, ...; (*b*) diameter, ...; (*c*) height, ...; (*d*) capacity cubic feet, each, ...; (*e*) pressure in each, ...; (*f*) make of reducing valve, if used, ...; (*g*) remarks, ...

99. **If whistle, trumpet, or siren,** pressure at which blown, ...

100. Diameter of whistle, ...; height, ...; distance between orifice and edge of whistle, ...; single tone, ...; chime, ...

101. **If disk or cylindrical siren,** .....; diameter of revolving part, ...; when made, ...; by whom made, ...; number, width, and length of ports, ...; revolutions per minute, ...; type of governor, ...; condition of revolving part, ...

.....

102. **If Daboll trumpet:** Class, ...; reed: length, ...; breadth, ...; thickness at base, ...; thickness at tip, ...

103. **If trumpet:** Length, ...; diameters, ...; material, ...

104. Timing device, ...

105. Height of whistle or trumpet above mean high water, ...

106. Direction, *true*, in which trumpet points, ...

107. Pressure and recording gauge, ...

DWELLINGS FOR KEEPERS.

108. Location with reference to lighthouse tower, 100 ft. from tower on N. W. side

109. Coloring, White--red roof--lead colored trimmings

110. Materials of which built, Wood

111. Number of dwellings, 1; number of rooms in each, 5 and bath with toilet, lavatory, and tub

112. Describe heating plant, Hot water heater to quarters Gurney #403C.

113. Number of keepers and assistants in ~~each~~ dwelling, 1 keeper

114. Which keepers are furnished quarters? .....

115. Which keepers are not furnished quarters? .....

116. Outhouses, Fuel house; coloring, White

117. Paths or walks on the premises, White wooden bridge connects tower with oil house and fort

118. Area susceptible of profitable cultivation, None; area cultivated or prepared for cultivation, None

DWELLINGS FOR KEEPERS—Continued.

119. Character of adjacent surrounding country—Soil, sandy, clay, marsh, swamp, wood, fast ground, or shifting sands, Rock

120. Furnish following data for stoves, kitchen sink, sink pump, and lamps in quarters:

Articles.	Keeper.	1st Assistant Keeper.	2d Assistant Keeper.	3d Assistant Keeper.
Stove, maker,	Portland S. F.	Co.		
Stove, size,	Queen Atlantic	#308		
Sink, maker,	---			
Sink, size,	---			
Pump, maker,	---			
Pump, size,	---			
LAMPS. (Give name, number, and make of all lamps in such set of quarters.)				

WATER FOR FOG SIGNAL, DRINKING, ETC.

121. How procured, City water in dwelling

122. Quality, Good

123. Quantity ample or not for the station at all seasons of the year, Ample

124. Liable or not to be injured by the inroads of storm tides and seas, No

125. If rain water in tanks or cisterns, what precautions have been taken to insure its purity?

126. Capacity of tanks or cisterns, and where placed, Cistern in cellar of dwelling 2,000 gals. Cistern water used for washing only

127. Tanks or cisterns—Of what material made, Brick

WATER FOR FOG SIGNAL, DRINKING, ETC.—Continued.

128. Is there a distilling apparatus at the station? No

Name of maker and date, ;

capacity, ; when installed, ; condition, ;

efficiency,

129. If from a well, describe and give depth,

130. Diameter, ; lined or not,

131. Water obtained by pump or bucket, Faucet in dwelling ; what power is used?

132. Distance from keeper's dwelling,

HEALTHFULNESS OF STATION.

133. General opinion in regard to the healthfulness of the light station and vicinity, Very healthful

134. Diseases—What are most prevalent at the station and in the vicinity? None

135. Do they prevail at particular seasons of the year, or not? No

136. Are there any local causes, such as swamps, marshes, etc., in the immediate vicinity of the lighthouse which are likely to be the cause of these diseases? No

137. Would draining or other artificial means employed on the lighthouse premises be likely to improve the sanitary condition of the light station? No

BOATS.

138. Furnish following data for each boat at station: None

Number.	Type.	Length.	Width.	When Built.	Date Received at Station.	Is Boat Fitted with Sails?	Suited to Work Performed.

BOATS—Continued.

139. If power boat, kind of engine, ... ; horsepower, ... ;

maker of engine, shop number, and date, ...

(*a*) type, size, number, and maker's name of spare coil, ...

.....

(*b*) type, size, number, and maker's name of magneto, ...

.....

(*c*) type and number of batteries, ...

(*d*) propeller wheel, diameter, ... ; pitch, ...

140. Where are boats kept at station? .....

LANDING, WHARF, BOATHOUSE, AND ROAD TO THE LIGHTHOUSE.

141. Description, No landing on boat slip

Good road from public road to station

142. Distance and direction of landing from lighthouse, ...

143. Hoisting engine, what kind? None ;

diameter of cylinder, ... ; number of revolutions per minute, ... ;

stroke, ... ; kind of boiler, ... ;

maker and date, ...

144. General Remarks: Septic tank outside; drain from toilet in dwelling