3119

U. S. LIGHT-HOUSE ESTABLISHMENT.

LIGHT-HOUSES

FOR

FULLER'S ROCK, SASSAFRAS POINT,

Sand Spit. Beacon

AND

PUMHAM ROCK,

PROVIDENCE RIVER, R. I.

Folio Sassafras Pt
Drawer ~~30~~ 32
No 2625

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1871.

FULLER'S ROCK,

PROVIDENCE RIVER, R. I.

Folio Sassafras Pt
Drawer 33
No 2625

PROPOSALS FOR MATERIALS AND LABOR

FOR

THREE PERMANENT LIGHTS IN PROVIDENCE RIVER,

RHODE ISLAND.

OFFICE OF LIGHT-HOUSE ENGINEER, THIRD DISTRICT,

Tompkinsville, N. Y., May 2d, 1871.

Separate sealed proposals will be received at this office until noon of the 29th day of May, 1871, as follows:

1st. For the labor and materials for a granite pier at Fuller's Rock, Providence River, having a diameter of 18 feet at base, 15 feet at top, and 12 feet high. Fuller's Rock is bare at ordinary high water.

2d. For a granite rip-rap foundation up to low water, and a granite pier of the same dimensions as that for Fuller's Rock, at Sassafras Point.

3d. For the materials and labor for a frame building (keeper's dwelling) 28 feet square, one story and mansard roof, and tower, for the Light at Pumham's Rock.

The plans and specifications for the above works are to be had at this office on application therefor.

Proposals must be in duplicate, accompanied by a guarantee, in duplicate, and a printed copy of this advertisement attached to each proposal. They must be addressed to the undersigned, endorsed on the envelope "Proposals for Materials and Labor for Rrovidence River, R. I."

This office reserves the right to reject any or all bids, should they be deemed disadvantageous to the interests of the United States.

I. C. WOODRUFF,

Lieut. Col. of Engineers, Engineer 3d Light-house District.

SPECIFICATONS

FOR A

LIGHTED BEACON

TO BE ERECTED ON

SASSAFRAS POINT, PROVIDENCE RIVER, R. I.

The details, with their dimensions and arrangements, are shown on the drawings numbered from 1 to 5, both inclusive, and set forth in these specifications.

The complete structure is represented on Plate No. 1, the principal features of which are alluded to in the following

GENERAL DESCRIPTION.

The beacon is composed of a pier of granite built on a foundation of rip-rap, and supporting a wooden tower with lantern.

FOUNDATION.

The foundation is to be placed on the sand spit, in 3 feet of water. The exact locality will be designated by the Agent of the Light-house Board.

It is to be formed of irregular blocks of granite, varying in weight from $\frac{3}{4}$ of a ton to 2 tons, placed in rip-rap, of the form of a frustum of a cone of 54 feet in diameter at the base, 34 feet in diameter at the top, (low water mark,) and 3 feet in height.

After the completion of the stone pier, this foundation is to be protected by irregular blocks of granite weighing from 3 to 5 tons each, placed with care and close together, and without any small stones or chips between the blocks.

SASSAFRAS POINT,

PROVIDENCE RIVER, R. I.

Folio Sassafras pt
DRAWER 32
2625

SPECIFICATIONS

FOR A

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TO BE ERECTED ON

FULLER'S ROCK, PROVIDENCE RIVER, R. I.

The details, with their dimensions and arrangements, are shown on the drawings numbered from 1 to 5, both inclusive, and set forth in these specifications.

The complete structure is represented on Plate No. 1, the principal features of which are alluded to in the following

GENERAL DESCRIPTION.

The beacon is composed of a pier of granite supporting a wooden tower with lantern.

STONE PIER.

The pier is to be of the form of a frustum of a cone, eighteen (18) feet in diameter at the base, fifteen (15) feet in diameter at the top, and twelve (12) feet high. Form and dimensions.

It is to be built of a facing of granite in six courses, each 2 feet high, alternately headers and stretchers, of the dimensions shown on the plan. Facing of granite.

The backing to be of rubble masonry, laid in cement mortar. Backing of rubble masonry.

The headers to be not less than 2 feet wide on face, and not less than 5 feet long. Headers.

The stretchers to have not less than 2 feet beds, and to be of the lengths shown on the plan. Stretchers.

The coping to be composed of seven pieces, and to cover the entire pier, as shown on plan. Coping.

Cutting. All the beds of the stone to be cut level to the entire depth, and the joints to be cut to an even surface to allow a joint for mortar $\frac{3}{8}$ inch wide.

The top of the coping to be cut with a pitch of $\frac{1}{4}$ inch to the foot.

A level bed to be cut for the sill of the tower, and six holes to be drilled into the coping to receive the iron bolts which secure the sills of the tower to the pier.

Rockfacing. All stones to be rockfaced with chisel draughts one (1) inch wide cut around the edges. The rockfacing to project uniformly $2\frac{1}{2}$ inches beyond the draughts.

Iron clamps. The stones forming the coping of the pier to be secured to each other by galvanized iron clamps of the form and dimensions shown on the plan. The clamps to be let into the stones, and the holes to be filled in with melted lead.

Preparing the rock. The stone pier is to be founded on the highest part of Fuller's Rock. The rock is to be leveled off sufficiently smooth to receive the first course.

Stones to be laid in cement mortar. All the stone to be laid in full beds of cement mortar, the joints to be thoroughly grouted, struck smooth on the face, and cut to an even width.

The cement mortar to be composed of one (1) part of hydraulic cement and two (2) parts of sand.

Cement. The cement to be of the best quality, fresh burnt, well ground, securely packed in paper-lined barrels, and kept dry until used. The strength must be ascertained by some reliable test.

Sand. The sand to be clean, sharp, and free from salt.

Step-ladder of wrought iron. A step-ladder of wrought iron, of the form and dimensions shown on the drawing, to be provided and firmly secured to the pier by wrought-iron bolts.

The stringers of the step-ladder to be connected with two iron posts at the top of the pier, the posts to be firmly secured into the coping.

WOODEN TOWER.

General description and dimensions. The tower to be of the form of a frustum of a hexagonal pyramid, eight (8) feet wide, between parallel sides, at the base, 4 feet 6 inches at the top, and thirteen (13) feet in height.

The height from base to focal plane to be fourteen (14) feet, as shown on Plate No. 1.

The frame of the tower is to be of white pine, of the following dimensions: Frame.

Sills, 4 feet 6 inches; floor beams, 3 feet 6 inches; corner posts, 4 feet 4 inches; plates, 4 feet 6 inches.

The floor beams to be covered with white pine flooring, 1¼ inch thick, tongued and grooved, and not over 5 inches wide, well nailed to the beams. Floor.

The frame is to be sheathed outside with one course of 1¼ inch white pine flooring, tongued and grooved, not over 5 inches wide, planed on the inside, and well put together with white lead, also with one course of Eastern siding 6 inches wide, planed on the outside. Sheathing.

The corners to be covered with white pine strips of the form and dimensions shown on Plate No. 3, well put together and properly secured. Corner strips.

All the nails used to be galvanized. Nails to be galvanized.

The entrance door to be of 1¼ inch white pine flooring strips, double thick, not over 5 inches wide, tongued and grooved, and put together with white lead and secured with brass screws. Door.

It is to be hung with galvanized iron strap-hinges of the form and dimensions shown on Plate No. 4.

A suitable brass lock and key to be furnished for the door.

A platform of 1½ inch pine plank, planed on both sides, of the form and dimensions shown on Plate No. 3, to be provided and well secured to the sides of the tower. Platform.

Another platform of one (1) inch pine plank, planed on both sides, to be provided for supporting the illuminating apparatus, as shown on Plate No. 3. It is to be well secured to the plate of the tower. Platform for supporting the lens.

The space between these two platforms to be arranged as a closet, with two sliding paneled doors running with brass rollers on a brass bar. Closet.

A step-ladder of white pine, of the form and dimensions shown on Plate No. 3, to be made and provided with two pairs of galvanized iron hooks and eyes secured to the stringers. Step-ladder of white pine.

Four additional eyes to be secured to the outside of the tower where shown on the drawing.

Table. A table of white pine to be provided and secured to the inside of the tower by galvanized iron strap-hinges, as shown on Plate No. 4.

Two movable legs to be secured to the underside for supporting the table when needed.

Oil-butt stand. An oil-butt stand of hard wood, of the form and dimensions shown on Plate No. 4, to be provided and well secured to the floor.

Air registers. Three air registers, which will be furnished by the Light-House Board, have to be placed and well secured where indicated on the plan.

Copper sheathing. The top plate of the tower, the platform for supporting the illuminating apparatus, also the top of the entrance, to be covered with 16-ounce sheet copper, well soldered at the joints to render it perfectly water-tight.

LANTERN.

The form and dimensions of the lantern and its details to be as shown on Plate No. 5.

The upper and lower frame rings to be composed of six (6) cast-iron segments, of the form shown on Plate No. 5, neatly fitted together at the joints, and secured to the wooden plate by brass screws.

The rebates for the glass and the glass stops, as well as the surfaces of contact with the lower ends of the astragals, to be planed.

The astragals to be of cast iron. The ends to be faced, and the rebates for the glass to be planed.

The glass stops and screws to be of bronze, and to be secured as shown.

The horizontal glass stops at the upper and lower sides of panels to be of wrought iron.

Roof of lantern. The roof to be composed of plate iron $\frac{1}{8}$ inch thick, riveted on the edges, as shown on drawing. In the centre, the plate iron is secured to a cast-iron centre-piece, to which is also secured the cast-iron pinnacle, as shown on the plan.

Smoke-stack. A smoke-stack of sheet copper, of the form shown on the detail drawing, to be well secured to the roof by rivets, and made perfectly water-tight.

Bolts to be "finished." All bolts for the lantern to be neatly fitted and "finished."

The lantern and plate glass will be furnished by the Light-house Board, but will have to be put up by the contractor.

PAINTING.

All the wood work, outside and inside, to be painted with three coats of best quality white lead and pure linseed oil, of such tints as the Agent of the Light-house Board may direct.

The iron work to be painted with red lead and linseed oil before it leaves the shop.

The outside of the lantern to be painted black. The inside to be painted with three coats of best white zinc.

Final clause.

The contractor shall not take advantage of any omissions of details that may become manifest, or alterations that may become necessary during the progress of the work, but he will be expected to refer to the Agent of the Light-house Board, the Board claiming the right to order any details to be provided without additional cost to the Government, should it become evident that such details were originally intended, or that they will be essential to the proper construction of the work.

Plate.	Details.	Page.
XIII.	Risers	32
	Roof of lantern	33
	Roof, mansard	29
	Sashes and doors	31
	Sash fastenings	31
	Sheathing, external	29
	Shutters for cellar windows	32
	Stairs	32
	Stairs of cellar	33
	Steps, stone	28
XIII.	Supply room	34
	Treads	32
X, XI, XII.	Wainscoting	32
	Watch-room	29
	Windows of first story	31
	Windows, dormer	31
	Windows of cellar	31
	Windows of pantry	31
	Windows of tower	31
	Window, blind	31

ALPHABETICAL LIST OF DETAILS.

(Pumham Rock Beacon.)

Plate.	Details.	Page.
XV.	Air registers	34
	Ash draw	34
	Astragals and glass stops	33
X, XI, XII.	Back plastering, preparing for	30
	Balusters	33
II.	Base	28
	Base board	32
	Blinds	32
	Blind window	32
	Bolts to be "finished"	34
	Bridging	29
	Cellar	27
	Cement, first quality	28
XI.	Chimneys	34
	Cistern	28
	Cleaning of house	36
	Closets	32
	Counter-plastering	34
	Description, general	27
	Door hinges and locks	31
	Doors	30
X, XI.	Doors of vestibule	30
XI.	Doors of kitchen	30
	Doors of lantern	30
	Doors of parapet	30
IX, XII.	Dressings	31
	Final clause	36
IX, X, XI.	Finish, outside	30
X, XI.	Finish, inside	30
XI, XII.	Flashings	34–35
	Floors	29
III.	Floor, first	29
IV.	Floor, second	29
I.	Foundation	27
V to VIII.	Framing	29
XV.	Frame rings	33
	Furring for ceilings	35
	Glass	31
XI, XII.	Gutters	30–35
	Handrail	32
	Holes for stovepipes	34
	Kitchen	32
	Ladder	33
	Laths	35
XV.	Lantern	33
II.	Leaders	36
	Lead and tin work	35
	Lightning conductor	36
XV.	Lining with zinc	33
	Mortar	28
	Nails, galvanized	29
	Newel post	33
	Openings for leaders and overflow pipe	28
	Openings for cellar windows	28
	Overflow pipe	36
	Painting	36
	Plastering	35
XIII.	Railing of lantern	34