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COMPLETION REPORT

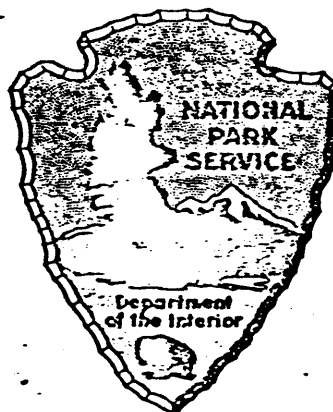
WORK ORDER NO. DAY LABOR

APOSTLE ISLANDS NATIONAL LAKESHORE
STABILIZATION OF THE SAND ISLAND LIGHT STATION
(work order title)

STABILIZATION ON HS-06-142A, HS-06-142C

MIDWEST REGIONAL OFFICE
RAY KUNKEL AND JOHN OCHMAN, PROJECT SUPERVISORS

CONTRACT NO. DAY LABOR



NATIONAL PARK SERVICE
UNITED STATES DEPARTMENT OF THE INTERIOR

UNITED STATES DEPARTMENT OF THE INTERIOR
NATURAL PARK SERVICE

FACE SHEET FOR COMPLETION REPORT

Park APOSTLE ISLAND NATIONAL LAKESHORE Location in Park SAND ISLAND	Region MIDWEST State(s) WISCONSIN County or Counties BAYFIELD/ ASHLAND	Work Order No. DAY LABOR Fund Symbol Year Programmed FY 77 PCP No. Master Plan No. Master Plan Corrected By As Built Drawings By RAYMOND KUNKEL Date Started 5/77 Date Completed 8/77
☐ Contract and/or ☒ Day Labor		
Work Order Title STABILIZATION OF THE SAND ISLAND LIGHT STATION APOSTLE ISLAND NATIONAL LAKESHORE		

DESCRIPTION OF FIXED ASSETS
(For completion by employee in charge of project)

TOTAL COSTS
(For completion by FFO)

HISTORIC BUILDINGS:

LIGHTHOUSE HS-06-142A
PRIVY HS-06-142C

(B) STABILIZATION OF STRUCTURES

(SEE COST BREAKDOWN
ON NEXT TWO PAGES)

TOTAL

\$ 10,000.00

DISTRIBUTION		THE FIXED ASSET DESCRIBED ABOVE HAS BEEN COMPLETED IN ACCORDANCE WITH APPROVED DRAWINGS, SPECIFICATIONS, AND AUTHORIZED CHANGES	
No.	To		
		Submitted	Title: Date:
		By: _____	_____
		Approved	Title: Date:
		By: _____	_____
		COSTS VERIFIED	Title: Date:
		BY _____	_____

COMPOSITION OF COST FOR COMPLETION REPORT

* Order Number

DAY LABOR

Fund Symbol

Park

APOSTLE ISLAND NATIONAL LAKESHORE

Location in Park

Region

MIDWEST

Year Programmed

FY77

SAND ISLAND

Work Order Title

STABILIZATION OF SAND ISLAND LIGHTHOUSE

COMPOSITION OF COST

COSTS CHARGED TO FUNDS ALLOTTED TO FIELD FINANCE OFFICE

(1) Personal Services..... \$8,650.00

(2) Travel.....

(3) Contract Work..... 75.00

(4) Supplies and Materials..... 1,270.00

(5) Other Direct Expenses.....

(6) Operation of Equipment.....

(7) Depreciation of Equipment.....

(8) Purchase of Construction Equipment.....

(9) Purchase of Other Accountable Equipment.....

(10) Other Costs:

(11) TOTAL COST CHARGED TO FFO FUNDS..... \$ 10,000.00

OTHER COSTS:

(12) PS&S, AP, and/or Facilitating Services @ _____ %..... \$

(13) Inventory and Other Non-Fund Costs

(14) GROSS WORK ORDER COSTS..... \$

LESS:

(15) Residual Value of Construction Equipment on Line 8..... \$

(16) Other Credits

(17) NET COST OF FIXED ASSETS..... \$

Identify other costs and other credits by line item entry, on an attached schedule, or explain in narrative.

Sand Island

Sand Island Light Station:

- 1.) Scraping & painting of exterior trim.
- 2.) Tuckpointing of masonry work.

Acct.	6601-300	Personnel Services	8,650.00
		Contract Work	75.00
		Supplies & Materials	<u>1,270.00</u>
		TOTAL	10,000.00

NARRATIVE STATEMENT

STABILIZATION OF SAND ISLAND LIGHT STATION

(name of project)

WORK ORDER NO. DAY LABOR

DESCRIPTION OF WORK Exterior stabilization on the Lighthouse, light tower and privy. Replacement of all deteriorated window frames and sashes, painted all exterior metal and wood trim, tuckpoint tower and keeper's house. Improved water drainage along structures, constructed temporary shutters and general site work.

PLANS AND SPECIFICATIONS for this project were prepared (by the Design Office of the San Francisco Service Center) or by

PROJECT ACTIVITIES

Preliminary Surveys were made by Midwest Region

Construction Layout was made by Ray Kunkel and John Ochman

(no.) bids were received and opened (date)

Award of Contract No. Day Labor was made to

APOSTLE ISLANDS NATIONAL LAKESHORE

for

Notice to Proceed was issued on 5-77 and the
(date)
date of 5-77 was established as the first day of
the contract.

Construction work consisting of stabilization of the Sand Island Light
Station

started on 5-77
(date)

(NOTE: In the following space describe the actual construction work. Include unusual weather, geological and latent conditions encountered; list of subcontractors and what they did; new methods of construction or techniques used; new types equipment used, etc. If the work was ordinary standard construction with nothing unusual, say so and don't elaborate.

For construction projects involving water systems, include:

1. Water right applications, permits and license numbers to the extent they have been obtained.
2. If a well replaces or supplements a surface supply, or if a surface source replaces or supplements a well, or if the point of surface diversion is changed, the effect on existing water rights based on application, permit, license and/or decree will be a part of the report.
3. Name of the water source, available flow, and capacity of diversion works including pumps if not shown on construction plans.)

Stabilization work was started in the summer of 1975. Only
a small portion of the total stabilization was completed that
year. The major stabilization project was started May of 1977,
on the lighthouse. Below is an outline of the work completed
on each structure:

LIGHTHOUSE AND ATTACHED LIGHT TOWER HS-06-142A

- 1) The removal and scraping of all loose and scaling paint.
- 2) All wood and metal surfaces have been primed and painted.

This included the painting of all windows, doors, jamb
opeing, soffit and fascia trim. All metal trim on the

light tower has been painted. The metal angle on the main lighthouse was not scheduled for painting until next season.

- 3) The cracked cylindrical vent on top of the light tower roof was repaired with structural epoxy.
- 4) Tuckpointed only the badly deteriorated joints of the tower and main keeper's quarters.
- 5) Temporary shutters were constructed for all windows and door opening.
- 6) General interior and exterior site cleanup.
- 7) Replacement of deteriorated window sash in the NE corner of basement.

PRIVY - HS 06-142C

- 1) Scraped and removed all loose and scaling paint.
- 2) All wood surfaces have been primed only.
- 3) General interior and exterior site cleanup.

NOTE:

- 1) Improvement of water drainage along each structure.
- 2) All debris and trash which had been accumulated throughout the years had been removed.
- 3) All paint that was determined for these structures are close to the historic color. These colors were used only until a complete paint analysis has been accomplished.
- 4) Mortar mix used for tuckpointing was of a soft texture. This was used only until a complete mortar analysis has been accomplished.

5) A half pint of boiled linseed oil was added to each gallon of primer.

6) Mortar mix used for tuckpointing:

One part of white masonry cement

One part of hydrated lime

Seven parts sand

Stop Order No. _____ was issued effective at the close of business on

_____ because of _____
(date)

Work was resumed on _____

_____ (date)

(list additional Stop Orders, if any)

(List extension of time granted, if any)

On _____, Change Order No. 1 was issued
(date)

(describe Change Order and the reason)

Overruns and Underruns on Contract Bid Schedule

(NOTE: List major overruns and underruns on contract and give reason)

Underrun on day labor project. Job went well and no major
problems.

LIMITS OF PROJECT

(NOTE: Include the following:

1. Utility Systems

- a. Water Systems-to facilitate the preparation of water rights proofs, separate the diversion system including reservoir from the distribution system.
- b. Length, type and sizes of lines.
- c. Size, capacity and type of treatment plants, pumping stations, etc.

2. Roads and Trails

- a. Length, width, and type of road or trail. EXAMPLE: 5.6 Miles, plant mix, surfaced secondary road with 6" crushed stone base and 20 ft. paved width.
- b. Size, in sq.yds. or sq.ft. and capacity of parking areas.
- c. Length of roads, trails and parking areas. Obliterated.

3. Buildings

Number of buildings, the NPS building number, square footage, principal building materials and furnishings, if any.

LIGHTHOUSE HS-06-142A This structure is a 1½ story Random
Coursed Brownstone Construction, with a foundation
consisting of the same material. Windows are wooden,
double hung design, roof consists of a metal shingle
material. All soffit and fascia trim are wood and has
been painted.

PRIVY HS-06-142C This structure is a brick construction

with a stone foundation. Roof is composed of a metal shingle material. The soffit and fascia are trimmed out of wood. The window and door material are also wood.

The _____

constructed under this work order (has) or (has not) resulted in a usable unit. (NOTE: If it is not a usable unit, explain.) _____

RECOMMENDED COLORS

The recommended paint colors were all keyed to the Munsell Color System. The paints were purchased from the Benjamin Moore Paint Company.

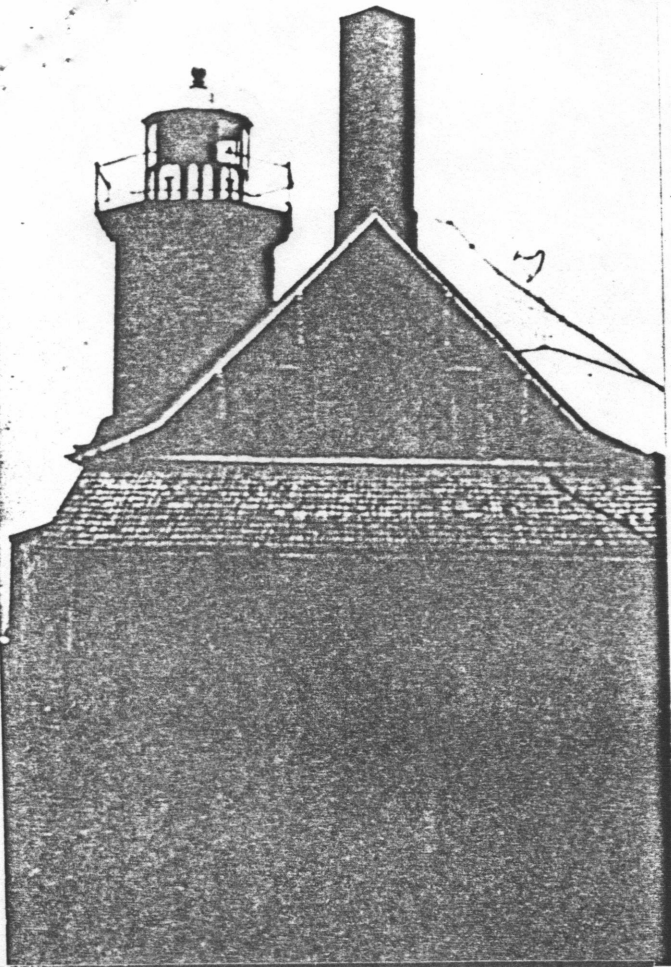
- 1) Lighthouse Outside. Window trim
Park Green 10G. 3/4
Benjamin Moore Park Green 131-40
- 2) Lighthouse outside. Window trim (back side) and soffit trim.
Off-White 5Y. 9/1
Benjamin Moore (Rustic White) No. 100-00
- 3) Lighthouse Outside. Breezeway or small shed
Off-White 5Y. 9/1
Benjamin Moore O(Rustic White) No. 100-00
- 4) Light Tower Outside. Trim
Black 25.R N. 0.5/
Hue
Benjamin Moore Black 131 80
- 5) Privy Outside. Trim
Light Gray 2.5R N 4.5
Hue
Benjamin Moore Light Gray



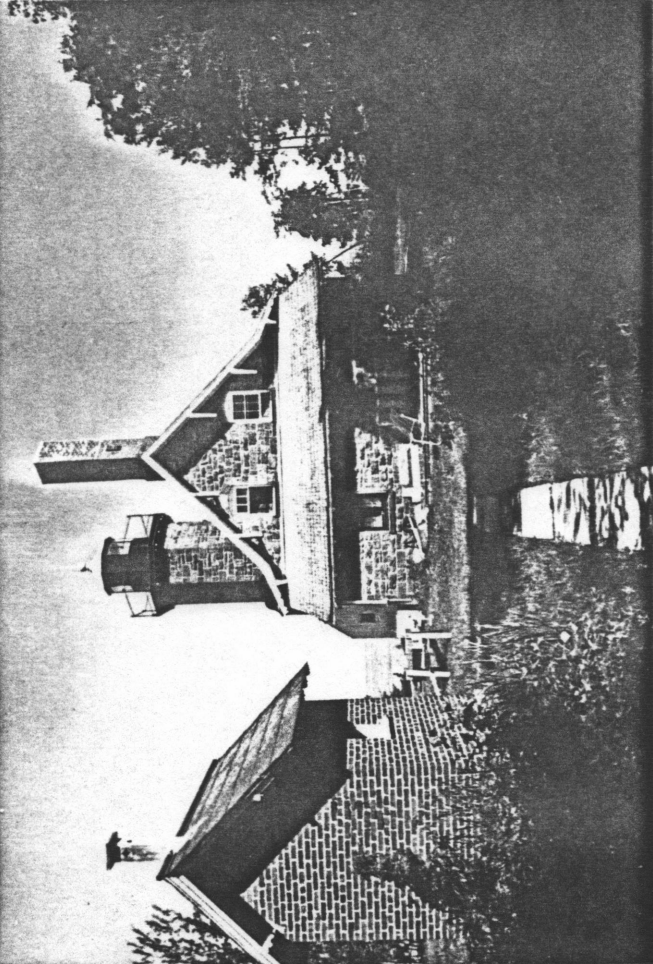
- 1) Photo showing the condition of the north side of the lighthouse before stabilization took place.



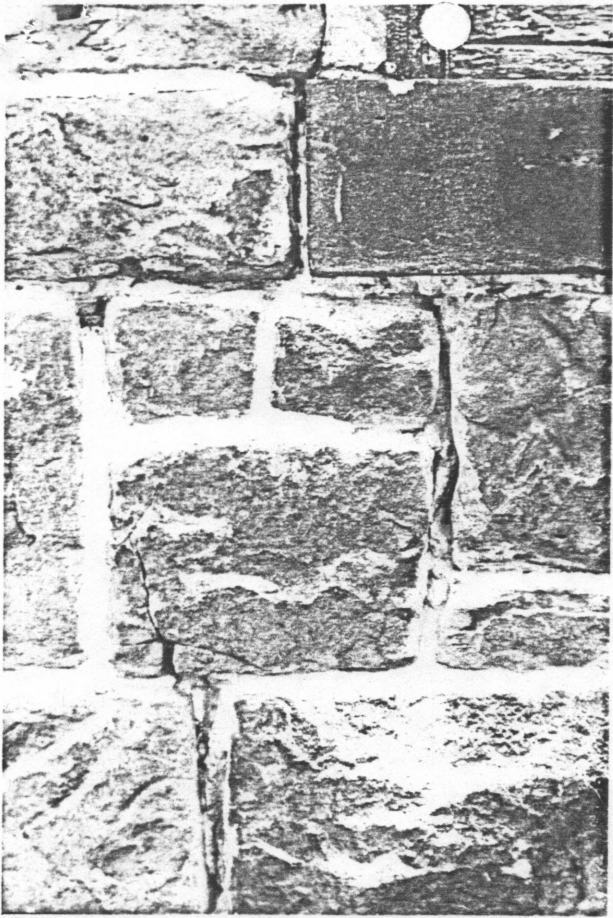
- 2) East view of lighthouse showing debris being cleaned up around structures. Fill was needed along this east side to correct the water drainage problem.



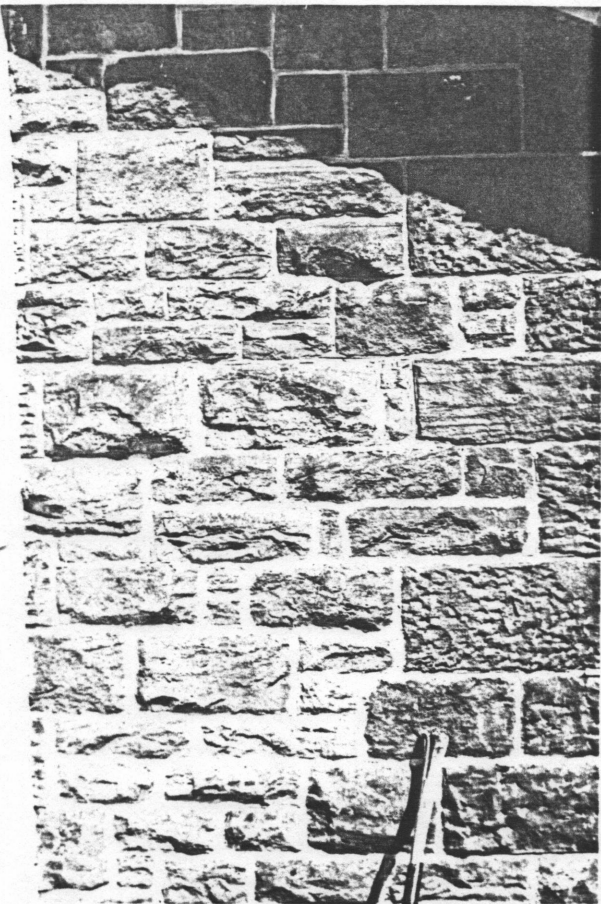
- 3) South view show the condition of lighthouse before project got started.



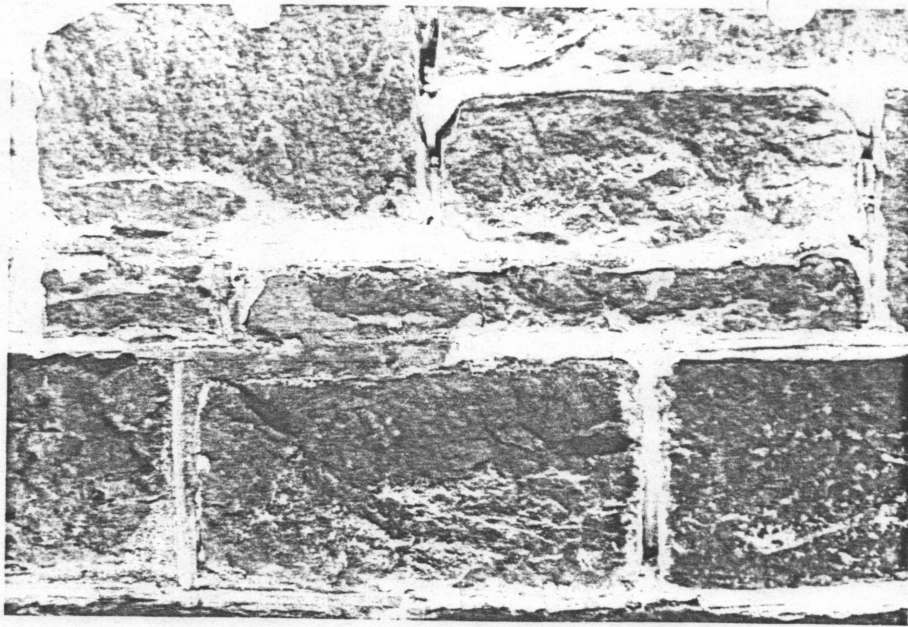
- 4) Photo taken during the construction stage. Majority of the painting had been accomplished in this photo (south side of lighthouse)



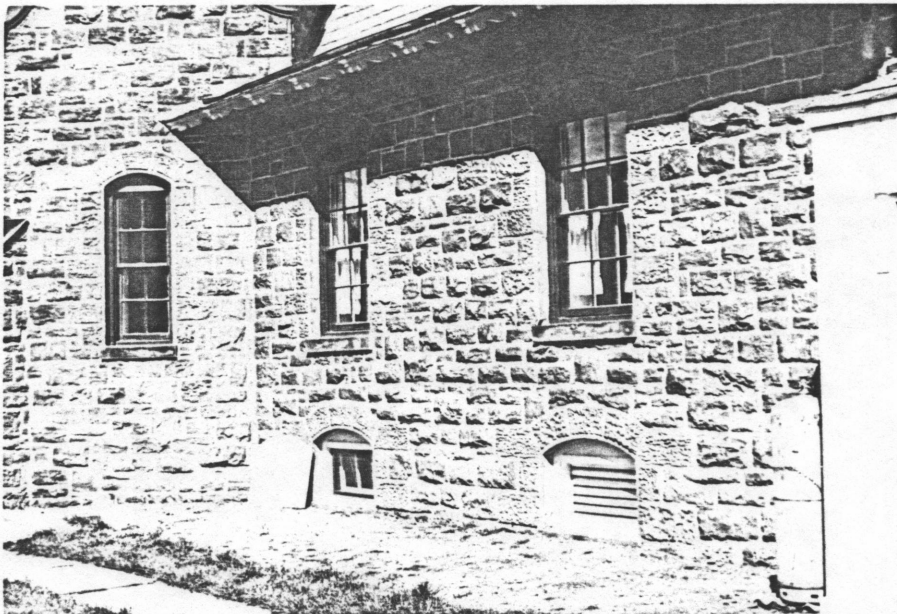
- 5) View showing the condition of the exterior sandstone wall of the lighthouse.
 - A) Closeup view showing condition of joints before tuckpointing.
 - B) Shows new mortar in place.



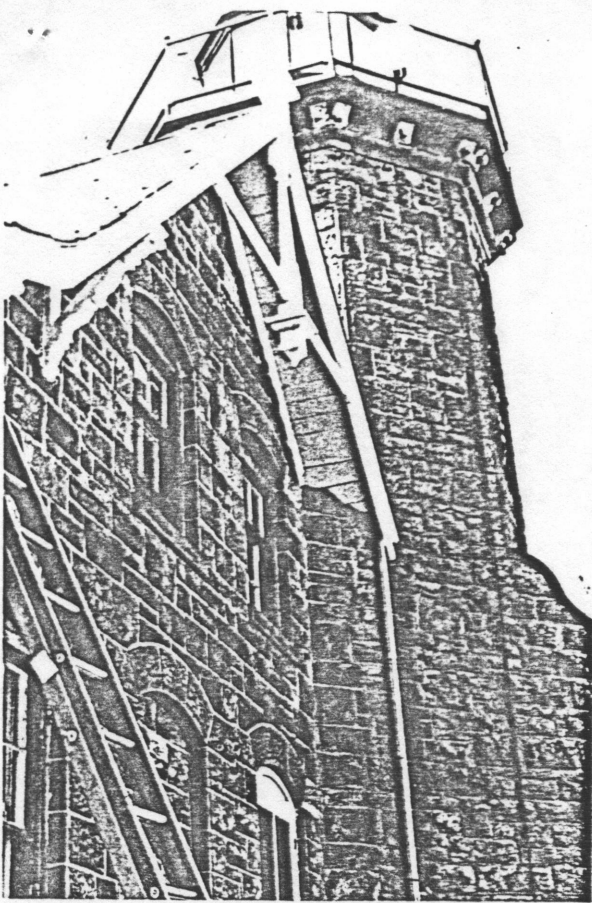
- 6) Photo showing an area of the sandstone wall of the lighthouse after the tuckpointing technique was used.



- 7). Photo showing condition of the sandstone wall of the lighthouse. All major deteriorated joints were tuckpointed. Arrow shows an area which at one time was repaired using a rich mortar mixture. The result of the rich mixture is causing the joints to be harder than the sandstone; therefore, if any movement occurs, the stone will crack. We recommended use of a 6-1-1 mixture until a mortar analysis was made.



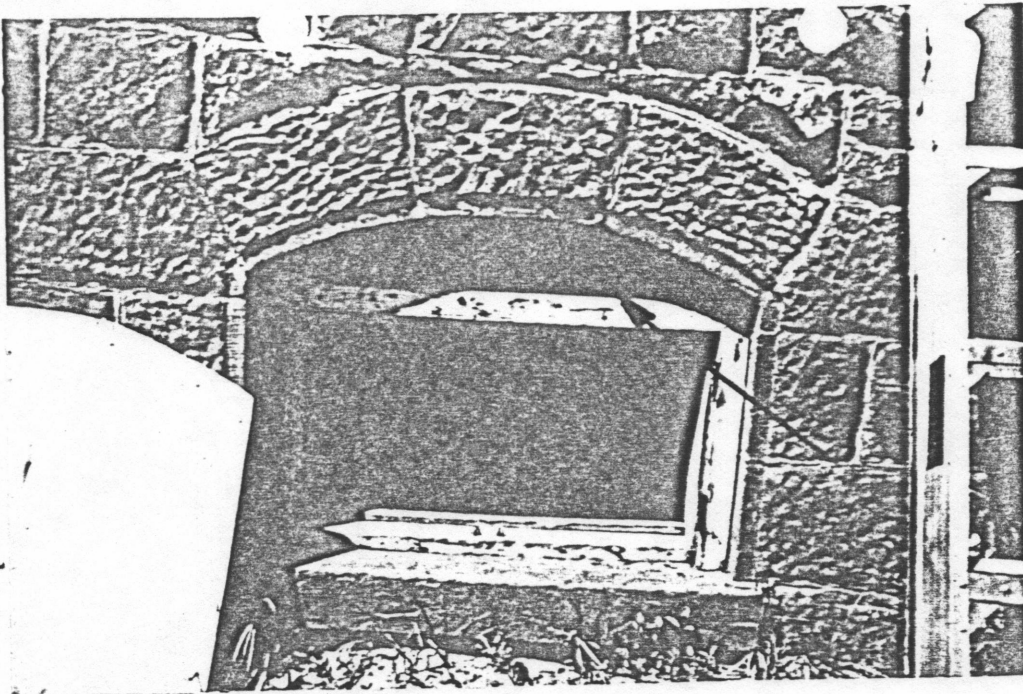
- 8)- West side of lighthouse showing condition of walls after tuckpointing.



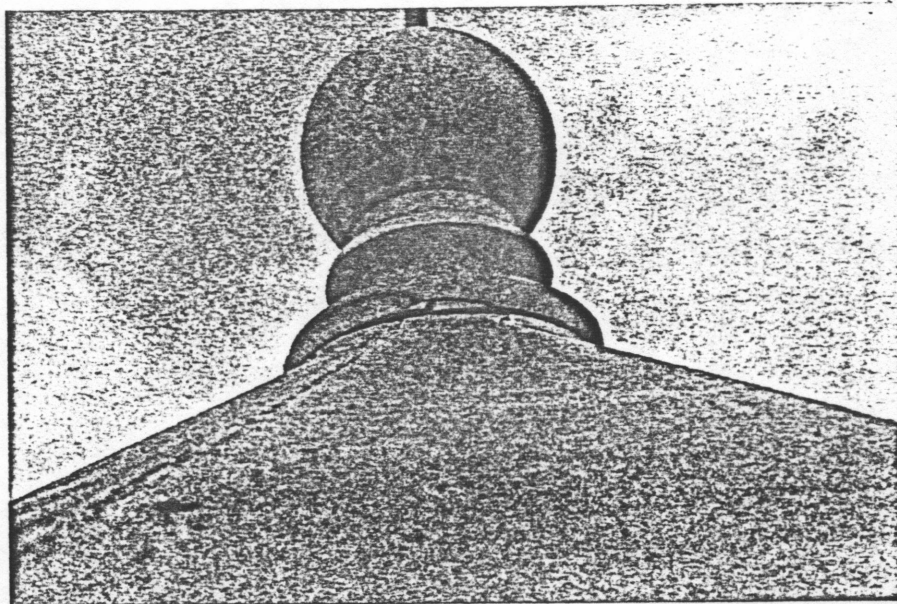
9) North view of lighthouse and tower showing window and eaves painted.



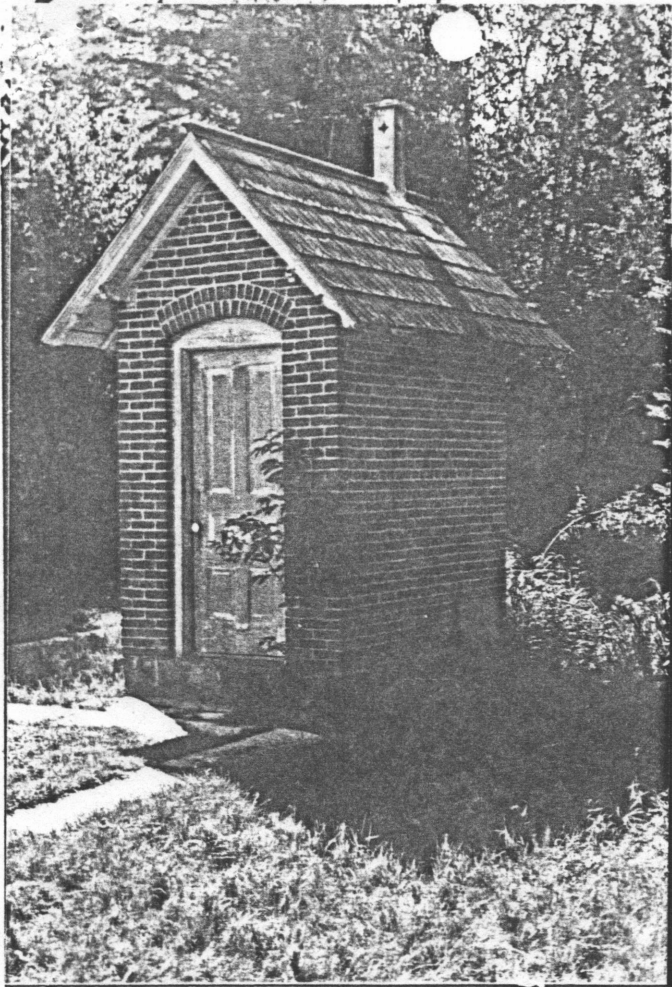
10) Southwest view showing lighthouse stabilization work near completion.



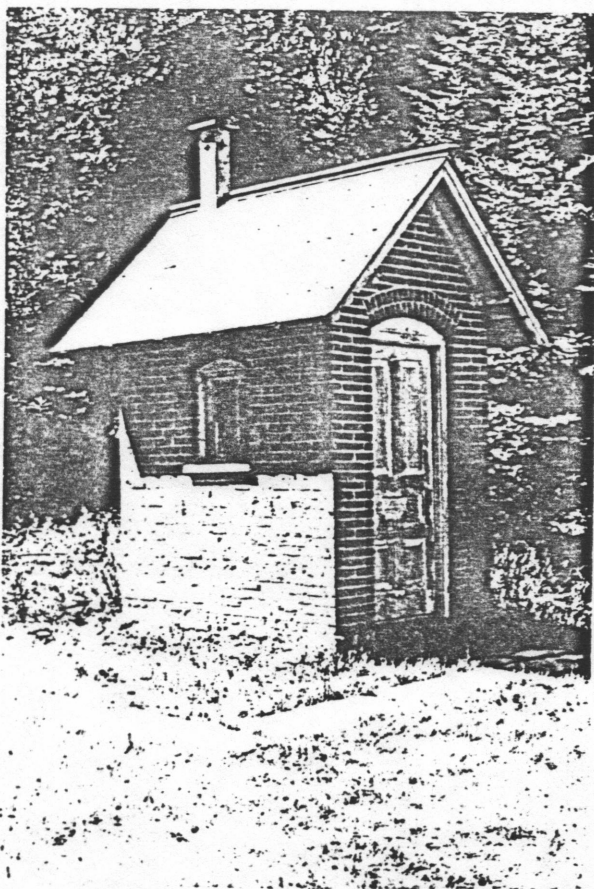
- 11) Photo showing deterioration in the upper section of window area. A new frame was constructed in the same design. Portion of the old frame was used to repair other window sashes. (Northeast basement window of lighthouse)



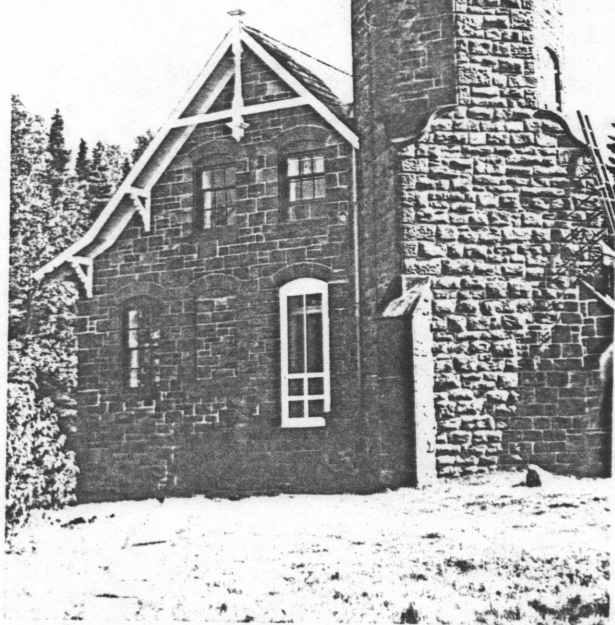
- 12) Photo showing cracked cylindrical vent on top of the light tower. Vent was repaired by using structural epoxy and then primed and painted.



13) North view of privy showing condition of structure before work was started.



14) Northeast view of privy HS-06-142c. Photo showing all wood surfaces has been prepared and was ready for painting.



15) Photo showing stabilization work
completed on the lighthouse (north
view) HS-06-142A