

HISTORIC STRUCTURES REPORT

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Part III

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STONE LIBRARY

Adams National Historic Site

December 1962

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HISTORIC STRUCTURES REPORT

PART III

ON

STONE LIBRARY

Adams National Historic Site

Completion Report

by

Wilhelmina S. Harris

Superintendent

December 1962

HISTORIC STRUCTURES REPORT

PART III

ON

STONE LIBRARY

A P P R O V A L S H E E T

RECOMMENDED

Wilhelmine S. Harris
Superintendent

Date 12-18-62

APPROVED

Regional Director, Northeast Region

Date _____

FOREWORD

This report contains the description of the rehabilitation work from the start to the completion. Mr. Wistar was the Supervising Architect. His advice was sound and effective.

Wilhelmina S. Harris
Superintendent
December 1962

HISTORIC STRUCTURES REPORT - PART IIICONTRACT NO. 14-10-0529-1505REHABILITATION OF THE STONE LIBRARY - ADAMS NHSCOMPLETION REPORTNARRATIVE

The Architectural Data Section of Part I of the Stone Library contained a very realistic description of the work necessary for rehabilitation on both the exterior and interior of this building. Exploratory work was done by Melvin Hoadley which cost \$192. This exploratory work gave an indication of the extent of repair which was necessary and this information contributed to the reports which were to follow later.

Repair to the roof was assigned on a separate purchase order issued directly to Norman Pemberton. He was paid \$979 and his work consisted of the following: All roof flashing was carefully checked and replaced where necessary with 16 oz lead coated copper. Flashing along the top frame of skylight, at roof ridge, (matching existing) and at joining of hood roof over the entrance and main wall was replaced. Skylight frame and sash was checked and parts replaced where necessary. Sash glass had the putty renewed and the whole skylight was recaulked, making it watertight, and given a coat of heavy roofing paint. The roof slate was carefully removed where necessary to install flashing. Roofers cement was renewed where necessary. Loose

slates were reroiled. Missing or broken slates were replaced with slates to match existing in color and size. New sheathing was replaced where leaking had rotted the old roof sheathing. Under the south wall eaves a hanging gutter 5" diameter, 20 oz copper was installed. At west end of gutter 3" square, 20 oz copper leader with elbow turn out at bottom long enough to spill water 12" clear of west corner of building was installed.

Before the foundation of the east and south walls were dug out and crushed stone put in, the whole library was fumigated by Safety Fumigant Company of Hingham, Massachusetts at a cost of \$165.

Architects Judd and Wistar of Eastern Office, Division of Design and Construction submitted working drawings which were approved by the Director on May 9, 1962. Invitations to bid were sent out March 28, 1962. The contract was awarded to low bidder, Arthur E. King, 584 Randolph Avenue, Milton 86, Massachusetts on April 20, 1962. Work began on April 23, 1962. While the original bid was \$9760, the three change work orders raised the contract to \$10,414. Architect Thomas Wistar, Jr. was appointed Project Supervisor.

The scope of work under this contract consisted mainly of a general rehabilitation of the fabric, both on the exterior and interior, particularly behind the bookcases which had been badly rotted at their base. The work included repointing the masonry

walls, installing storm doors, painting the exterior woodwork, replacing the rotted bottoms of the gallery posts with steel stilts, and painting the plaster ceiling.

The exterior pointing was done at once before the vines, which cover much of the walls, came out in leaf. The brick chimney was able to be repaired without having to be taken down.

In the interior the entire panelling of the east wall was removed. The reason for the sagging of the book shelves over a long period of time was found to be due to the disintegration of the studs behind the panelling.

Illustration No. 1 shows the installation of inflammable paper foil to protect the books which remained on the shelves on the south, west and north walls. The photograph also shows the bracing up of the shelves while the foundation was being replaced.

Illustration No. 2 shows the east wall after pointing up had taken place on the inside and weather proofing applied. This was a very gratifying piece of work because for many years the dampness had caused great damage to the east wall of the library.

Illustration No. 3 shows the wall after completion.

Illustration No. 4 shows panelling over fireplace, the mantel repaired and in the northeast corner the new installation of the heating unit.

Illustration No. 5 shows the whole east wall as it appears after work was completed and books returned to the shelves.

The contract was altered by Change Order No. 1. The foundation of the bookcases, as called for in the specifications, along the entire north wall and portions of the west wall were found to be in good condition and this work was eliminated. The saving for this amounted to \$1500. All of the bookcase tongued and grooved board backing and plaster of the entire east (fireplace) wall was removed. The inside face of masonry was pointed up and weather proof cement applied. 3" x 4" wood furring studs were fastened to the wall by a ramset method. Any unsound backing boards were made tight or replaced. All surfaces of wood furring were painted with 5 per cent pentachlorophenol solution. Across the chimney breast and wherever possible, before re-erection of the bookcases, the uprights were fastened to the backing boards by drilling and screwing from the face of backing into the back edge of the uprights. Each backing board was fastened to each stud by at least two narrow head nails driven at an angle. The amount for this additional work was \$1700. With the credit of \$1500 for the work eliminated as described above the additional work only changed the original contract by \$200.

Fourteen (14) additional days to complete the contract was allowed with this change order.

Change Order No. 2 concerned an alteration in the heating duct layout. (1) The two existing heating air ducts which had previously been installed on the top shelf near the ceiling were reinstalled at floor level with directional louvered grilles. The existing return air ducts was raised to the top of the cupboard where it had originally been installed. This added \$195 to the contract. (2) The balcony had been sagging for a long time and examination showed that the oak dowels had broken. The balcony was raised and steel dowels were used instead of the oak. At each end of the steel dowel wooden plugs were inserted matching the casing of the posts and preserving the original appearance. This was an additional \$135. The total cost of the two projects listed under Change Order No. 2 added a total of \$330 to the original contract.

Change Order No. 3 related to the electrical service of the library. Formerly we had a very unsightly electrical conduit which was installed soon after the area became a National Site. Architect Wistar had a water proof receptacle at the end of the pipe on the exterior of the library installed in a very inconspicuous place. Then the connection for electric power for the interior of the building was changed to the heating vault and installed in the cupboard where the cold air return is. This is much more convenient and improved the appearance of the entrance to the library. The sum of \$124 was added to the original contract.

The broken marble mantelpiece was reset and cemented together with condensed milk. This is a superb piece of repair.

After the rotted area at the bottom of the door frames had been removed and new material added each door was fitted with a storm sash interchangeable from glass for the winter to screening for the summer. This greatly added to the safety of the building since the screen installation is so firm and able to resist vandalism. The storm doors will save a considerable amount of heating during the winter months. The painting conformed to the existing colors and was done in a highly satisfactory manner. All loose tiles in the floor were reset and the gallery ladder which had been lacking hardware for hanging was put in order.

Supervisor Wistar made his final inspection on June 7, 1962 and Illustration No. 5 shows the library in its completed form. It is gratifying to see that this interesting and important library had been so carefully and so thoroughly done that even members of the Adams Family cannot believe the rehabilitation work was performed.

ILLUSTRATION NO. 1

The installation of inflammable paper foil to protect the books which remained on the shelves on the south, west and north walls. The photograph also shows the bracing up of the shelves while the foundation was being replaced.



ILLUSTRATION NO. 2

The east wall after pointing up had taken place on the inside and weather proofing applied. This was a very gratifying piece of work because for many years the dampness had caused great damage to the east wall of the library.



ILLUSTRATION NO. 3

The wall after completion.



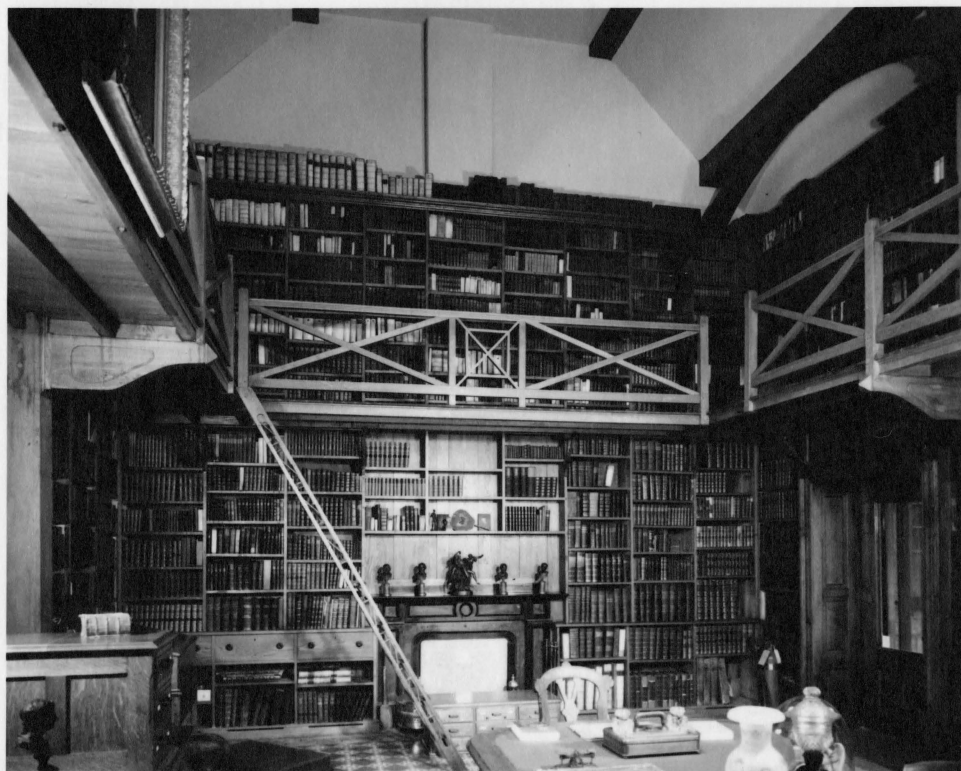
ILLUSTRATION NO. 4

The panelling over the fireplace, the mantel repaired and in the northeast corner the new installation of the heating unit.



ILLUSTRATION NO. 5

The whole east wall as it appears after the work
was completed and books returned to the shelves.



SECTION I

REPOINTING OF EXTERIOR WALLS AND CHIMNEY

1. SCOPE OF WORK: Provide labor, materials and equipment for raking and repointing the mortar joints in the exterior stone and brick masonry walls and chimney stack where missing, loose or where repointing is needed in the judgment of the Contracting Officer. Rebuild chimney if necessary. Remove vines where directed.

2. SAMPLES: Before proceeding with the work, samples of the mortar to be used shall be submitted for the Contracting Officer's approval. Samples shall be submitted and enough time shall elapse to establish the permanent color of the mortar as matching existing mortar joints before approval is given.

3. FEDERAL SPECIFICATIONS: Where reference is made in these specifications to certain Federal Specifications, such Federal Specifications shall become and form a part of the Contract and shall be considered as incorporated in these specifications. The latest revised edition of such applicable Federal Specifications shall apply to this work.

4. MATERIALS:

a. Brick: Any brick needed to replace damaged brick or loose brick which cannot be reused shall be furnished by the Contractor of a size suitable for maintaining existing coursing and opening dimensions and shall compare in suction rate, color and texture with sound brick as found in place in the existing walls. New brick must be approved by Contracting Officer.

b. Mortar: Mortar for pointing shall contain 1 part cement, 2-1/2 parts Mortaseal or equal, and not more than 8 parts sand by volume. It shall match existing mortar in color and texture.

c. Cement: Cement for mortar shall be Non-Staining White Portland Cement conforming to Federal Specification SS-C-192.

d. Lime: Lime for mortar shall be U.S.G. Mortaseal or equal.

e. Sand: Sand shall be clean, hard, durable sand of a brown color and shall pass a No. 12 sieve. Sand shall not be brought to the job in bulk quantities until a sample of the sand which the Contractor proposes to use has been approved by the Contracting Officer.

Repointing of Exterior Walls and Chimney

f. Water: Mortar shall be as dry as possible with just enough water added to obtain cohesion when the joint is properly caulked. The exact amount of water added shall be subject to the approval of the Contracting Officer. Water shall be clean and free from any matter either in suspension or solution, which, in the opinion of the Contracting Officer, exists in such quantities as to render the water unfit for the intended.

g. Coloring: No lampblack or other artificial coloring shall be added to the mortar mix, but all mortar-joints shall match in color and texture the approved sample of pointing. The choice of sand will determine the color obtained.

5. SHORING AND BRACING: Responsibility for the loss of any walls or part thereof from wind or other cause is solely the responsibility of the Contractor. Take precautions to prevent damage through rain or snow.

6. SCAFFOLDING: Furnish, maintain and move, as required, all scaffolding necessary for the completion of the work. Erect and maintain all scaffolding in strict accordance with the requirements of all State and Federal laws.

7. METHODS AND WORKMANSHIP:

a. Laying Brick: Repairs or replacements in the brick masonry shall be made in a workmanlike manner and in such a way that the new work will match the existing work. All beds on which brick are to be laid shall be properly cleaned and wetted to insure good bonding to the new work. All brick shall be shoved into full beds of mortar, and all joints shall be completely filled. Joints in the new work shall match the approved sample of mortar in color, texture and general appearance.

b. Pointing: All joints in brick required to be pointed shall be carefully raked-out to a depth of 3/4" or further, if necessary, in order to remove all defective mortar. The joints shall then be thoroughly cleaned of dust and loose material. Pointing mortar shall be caulked into the joints with a suitable caulking tool in sufficient quantities to be thoroughly packed in. The faces of the joints shall be tooled to match the existing work. The type of joint required will be explained in detail on the job by the Contracting Officer's representative. No pointing or masonry work will be done in cold weather when there is a possibility of freezing.

c. Cleaning: Clean off any excrescence or excess mortar which may become lodged on the face of the brick or stone. Leave all surfaces free of mortar or stain therefrom, at the completion of work.

SECTION II

REPAIRS TO BOOKCASES

1. SCOPE:

a. Unless directed otherwise, the entire bookcase foundations shall be replaced as herein specified. The repair to the bookcases shall be done without removing books above the lowest fixed shelf. These books shall be protected by plastic dust covers. The tile floor of the library is to remain and is to be entirely covered and thoroughly protected by the contractor with heavy water-proof canvas while the work is in progress. The Contractor also is to thoroughly protect the woodwork above from damage. All work must be performed by skilled carpenters and to the complete satisfaction of the Contracting Officer.

b. The shelves and uprights below the fixed shelf about 34" from the floor are to be carefully removed to allow the men to work beneath them. These are to be protected and stored elsewhere as directed by the Contracting Officer and are to be put back in place as directed when the foundation work, to be constructed below them, is complete.

c. All casings and face boards of structural members shall be carefully removed at the floor to inspect condition.

2. PROCEDURE: Repairs shall be done, three bookcase sections at a time, around the room.

a. Set up shoring brackets, at least one to each section of shelves, as shown on drawings, to underpin bookcases. Brace these brackets from existing posts by timber frame laid out on floor over canvas covering as outlined on plan. Wedge brackets tight under shelf. Brace between brackets.

b. Remove bookcase uprights, bottom shelf, baseboard and wood frame below. Remove bottom backing board, plaster and furring behind it. Remove present fill below bookshelves to form trench with 45° slope from edge of floor slab as shown on drawing. Upon excavation, this fill shall be carefully removed from the premises.

c. Under each upright support of bookshelves, including those at doorway reveals, pour in place reinforced concrete bracket supports to be cut into face of foundation wall as shown on drawings. Set anchor bolts in concrete to secure wood sleepers. Concrete mix shall be 1:2:4 by volume using 8-1/4 gallons of water per bag of cement.

d. Parge inside face of foundation wall to bottom of excavation with waterproof cement and apply two coats of RIW or equal approved damp-proofing in accordance with manufacturers' directions. Backfill trench between concrete brackets with crushed stone or gravel, well packed down. As a preventive against termites, soak new fill with a 1% chlordane water emulsion at a rate of 2 gallons to five linear feet of trench.

e. Bolt Honduras mahogany blocks to concrete brackets and set mahogany cross members into them. Replace rotted furring where necessary with wood, soaked in a solution of 5% pentachlorophenol in mineral spirits. Reset present uprights on base strips screwed to blocks. Remove shoring brackets. Apply present baseboard finish, recut to form slot below new shelf edge as shown on drawing. Lay down in each section of bookcase new 3/4" A-1 pine plywood removable bottom shelf rabbeted at front to reset on front edge strip. Apply new furred-out bottom backing board fitted between bookcase uprights. This shall be screwed at top through furring blocks into bookcase backing to form slot.

f. Reinforce bookcase uprights over fireplace as directed by Contracting Officer.

3. MATERIAL: Unless specified otherwise replacement of finish wood shall be of first quality and same species as that replaced. Replacement of structural members such as foundation framing shall be of honduras mahogany.

SECTION III

STORM DOORS AND SASH

1. SCOPE:

a. Frames: Examine the existing wood frames at the bottom of the jambs in openings numbers 1, 2, 3 and 4. Those that have rotted are to be patched with white pine to match in detail the existing part. All to be carefully patched so that the joints will not show after being painted.

b. Storm Sash: Opening number 4 is not to have storm sash. Furnish and install in existing wood frames of openings numbers 1, 2 and 3, shown on plan, wood storm-doors and transom sash, with stops, all to be White Pine grade B according to American Lumber Standards and of first quality millwork. Glass in transom sash to be fixed and A quality double strength. Glass in door sash to be set in aluminum metal framed panels as detailed or similar, held in place by removable wood mouldings, fastened with oval head 1-1/4" #10 brass screws. Also provide for the door sash aluminum fly screen inserts to be interchangeable with the glass inserts. All to be as shown on drawing.

2. INSTALLATION OF WOOD DOOR AND TRANSOM SASH:

a. All wood sash are to be removable. Each transom sash is to have three 1-1/2" #14 brass screws, screwed vertically into the curved top of the wood head of the sash, one in the middle and one about 2" from each end. The heads of the screws are to be cut off leaving about 1/2" of the shanks projecting. Round holes are to be bored vertically in the bottom of the curved top member of the existing wood frames and lined with brass collar to receive the screws in the transom to act as dowels.

b. All angles, plates and screws are to be brass.

The sash shall be fastened to the frames with 1-1/8" L x 1-1/2" w x 1/8" angles using 1-1/2" #10 oval head screws, 2 to a leg. These angles are to be screwed to the inside face of sash and the existing wood frames as shown on drawing and as described below.

All transoms are to have an angle on each stile near the bottom centering on the bottom rail.

All door sash below transom sash where they meet the existing wood frames are to have angles on the stile, one centering on the top rail, one centering on bottom rail and one in the middle of the stile.

At opening No. 1 where the door occurs, the fixed half of door sash is to have angles as specified above, also two angles at the bottom, one on each side centering on the stiles which are to be screwed to lead shields set in the stone sill. The top rail of this sash is to have two flat plates $3/4"$ x $1-3/4"$ x $1/8"$ set vertical 2" from each end of the rail to the center of the plate and screwed to the rail and the transom above with oval-head $1-1/4"$ #10 screws.

3. HARDWARE: Furnish and install on door No. 1, 1-1/2 pr. of $3-1/2"$ x $3-1/2"$ solid brass butts and one bronze panic bolt, exit only, type 66EO with paddle handle, with keeper mounted flush as manufactured by Von Durpin. Projection of panic bolt must be checked for clearance between new door and old and adjusted if necessary.

SECTION IV

REPAIRS TO GALLERY POSTS

1. The Contractor shall carefully remove the oak casings from the four posts shown on the 1/4" scale plan and examine the bottom of the 6" x 6" posts inside the casings. The part of the posts that have rotted at the bottom shall be cut off level. Provide and set under each post a 4" diameter lally column cut to the required height with 5-1/2" x 5-1/2" x 1/8" steel plates welded to the top and bottom. Each plate shall have 4 holes bored in them at the corners so that the top plate can be screwed to the post and the bottom plate screwed to lead shields which are to be set on the concrete slab under the tile floor. The oak casings are to be replaced after the inner posts have been fixed as specified above.

SECTION V

PAINTING

1. SCOPE: All old and new exterior woodwork and all new interior woodwork and ceiling shall be painted with paint or stain as manufactured by Pratt and Lambert, Inc. or approved equal according to the following schedule:

a. Exterior Woodwork - colors to match existing

(1) Old woodwork - 2 coats

1 coat P & L House Paint Exterior Primer
1 coat P & L Vendura Trim and Shutter Finish

(2) New woodwork - 3 coats

1 coat P & L House Paint Exterior Primer
2 coats P & L Vendura Trim and Shutter Finish

b. Interior Woodwork - stain to match existing

(1) New woodwork - 3 coats

1 coat Fillex, each gallon thinned with 1/2 gallon mineral spirits.
1 coat P & L oil stain to match existing
1 coat 38" Pale Trim Varnish Dull

c. Plaster Ceiling - 3 coats - color to match existing

1 coat Vapex Wall Primer (may be omitted if previously painted).
2 coats Lyt-all Flowing Flat.

2. PREPARATION OF SURFACES: All surfaces to be painted shall be brushed and sanded clean of loose paint, dust, dirt, grease and other extraneous matter which would effect the finished work. All surfaces must be dry and temperature above 40° when painting is done. Small cracks in ceiling shall be spackled before painting.

Painting

5-1

SECTION VI

MISCELLANEOUS INTERIOR REPAIR

1. MANTEL:

The cracked marble mantel shelf of the fireplace shall be carefully removed and repaired by experts with metal clamps screwed to the lower face of the shelf.

2. TILE FLOOR:

Any loose tile in the floor shall be reset, missing tile replaced to match and broken tile carefully repaired.

3. INTERIOR SHUTTERS:

The existing interior shutters at doorways shall be refitted and adjusted to close properly.

4. GALLERY LADDER:

Recondition ladder to gallery and supply missing hardware for hanging.

5. PLASTER CEILING:

Cut out and replaster any wide cracks in ceiling.