HISTORIC STRUCTURES REPORT

PART I

ARCHITECTURAL DATA SECTION

ON

CHARCOAL HOUSE

Hopewell Village National Historic Site

National Park Service, Eastern Office, Design and Construction, Division of Architecture

Eastern Office, Design and Construction
Philadelphia, Pa. 19106

MDC-H

October 9, 1964

Memorandum

To: Regional Director, Northeast Region

From: Chief Architect, EODC

Subject: Historic Structures Report, Architectural Data Section, Part I, Charcoal House, Hopewell

Enclosed for your review and distribution are three copies of the subject report which was recommended by Chief Hall this date. A copy has been retained by this office.

The Part I, Historical Data Section has been received by this office as an aid in preparing the Architectural Data Section.

The Administrative Data Section has not been received by this office for review. Both the Historical and Administrative Data Sections will be reviewed at the same time.

ROBERT E. SMITH

Robert E. Smith

Enclosure

cc:
Assistant Director, Design and Construction
Superintendent, Hopewell

Chief Architect, EODC
Norman Souder, Historic Structures w/c of report
Historic Structures w/c of report (2)

SREvins:sre

HISTORIC STRUCTURES REPORT

ADMINISTRATIVE DATA

PART I

CHARCOAL HOUSE

Hopewell Village National Historic Site

See memo H30-RHA (NERO)
dtd 11-4-64

Prepared by
Benjamin J. Zerbey
Superintendent
October 1964

HISTORIC STRUCTURES REPORT

PART I

CHARCOAL HOUSE

Hopewell Village National Historic Site

APPROVAL SHEET

RECOMMENDED

/s/ Benjamin J. Zerbey Date 10/28/64
Superintendent

Date
Regional Director

Robert G. Hall Date 11-5-64
Chief, EODC

APPROVED

Date
Director

HISTORIC STRUCTURES REPORT

ADMINISTRATIVE DATA

PART I

CHARCOAL HOUSE

The Charcoal House (Building #9) is classified AAA in the Historic Structures Inventory. The building has remained essentially in its original state since the Historic Site was established. Some emergency shoring up of the roof was done following a heavy snow in 1958 when it suffered a partial collapse.

The Historical Section of this report mentions the need for archaeological investigations in connection with the restoration. The post piers for the connecting shed extension have been found in a previous dig. There are other submerged walls near the present Charcoal House which may be foundations of an earlier building used for the same purpose. This would make an interesting future project but it is not within the specified work for the restoration of the existing charcoal house. What is important, however, is the correct floor level of the building plus whatever information can be gained about how the south wall opening was closed in. An archaeologist should be detailed to Hopewell to perform this latter work.

The building will be opened and exhibited following restoration. It will be noted that the revised copy of PCP-115 does not include funds for audio-visual equipment. In the Interpretive Prospectus there is a proposal for a moving picture on charcoal making to be located in the Charcoal House. This is not recommended since the building is dark, dank, and cold through most of the year. Accumulated charcoal dust (which is quite appropriate) would also make the Charcoal House a most unpleasant place to watch a movie. It is recommended that appropriate tools such as baskets, wheelbarrows, rakes, and shovels be the only furnishings in this building except, of course, for a supply of charcoal.

Restoration of the Charcoal House should add no additional costs for operation and maintenance. The sparse, rugged, and relatively inexpensive furnishings will require no additional physical protection by uniformed personnel other than that provided by the present work force.

An attached copy of PCP-B-115-2 lists the latest cost estimate on accomplishing this restoration.

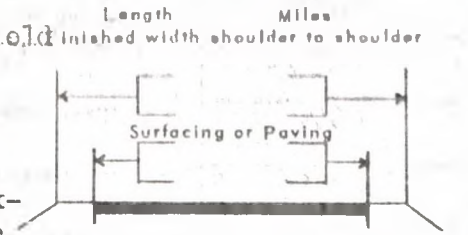
The Architectural Section of this report specifies the recommended work. This is entirely in agreement with the thoughts of this office.

Form 10-411
(Rev. 2/62)

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

PROJECT CONSTRUCTION PROPOSAL

1. Statement of requirements, proposed work and construction data, justification, etc. *(Use additional sheets as necessary.)*



The Charcoal House, 29' x 101' is constructed of native field stone. Walls are 16'-6" high and 2' thick. Frame annex was built into wide south opening in 1880. Roof is cedar shingle with two gabled windows on north side and gabled frame annex on south. Proposed work includes removal of entire roof and restoration, removal of 1880 annex with extension of connecting shed to South wall of Charcoal House, removal of windows in north wall and restoration of doors, repointing masonry, painting and whitewashing.

Because of poor condition of roof, restoration is necessary. Also 1880 late period additions must be removed. The Charcoal House was important as the building which housed the fuel for furnace operation. It will be used to portray the role of charcoal in iron manufacture.

2. Land Status *(if Govt.-owned, what agency)*, Water Rights, Research, Etc.

Government owned - N.P.S.

3. PCP Data Prepared by *(Name, Title & Date)*	4. Cross-reference PCP's to this Project:	6. CLASS C ESTIMATE	
R.D. Ronsheim 10/30/60	PCP numbers of previously completed portions:	Construction.....	$ 11,900
J. R. Prentice		Plans, Surveys, & Supervision.....	1,910
Revised by:	5. Construction by:	Contingencies.....	790
B. J. Zerbey 10/30/64	Day Labor [x] Contract [ ]	SUB TOTAL	14,600
	Work supervised by:	Exhibits, Audio-Visual Installations, etc.....	1,400
	Park [ ] Reg. [ ] Design Office [x]	GRAND TOTAL	$ 16,000

7. DISTRIBUTION OF COPIES

No	To
1	Director
2	EODC
2	Regional Director
1	Superintendent

8. Recommended by Park Office *(Signature, title, date)*

Benjamin J. Zerbey, Superintendent 10/30/64

9. Approved by Regional Office *(Signature, title, date)*

10. Reviewed by D&C Field Office *(Signature, Title, Date)*

11. Location within Area or Termini	12. Master Plan No.	13. Bldg. or Rt. # and Sec.
Furnace Group	NHS-3007	Bldg. #9

14. Region	15. Park	
N.E.	Hopewell Village National Historic Site	

16. Project

Restoration of Charcoal House

Berks & Chester (County)

Pennsylvania (State)

17. PCP Index No. B-115-2

18. P. S. & S. by BPR [ ] NPS [x]

CLASS / / (A) - Estimate based on working drawings
CLASS / / (B) - Estimate based on preliminary plans
CLASS / X / (C) - Estimate based on similar facilities in other parks

19. ESTIMATE

Item	Quantity	Cost
Restoration of building as recommended by Historic Structures Report and Approved Working Drawings		11,900
Architectural Research $500	Estimate Totals	
Archeological Research 400	Construction.....	$ 11,900
Historic Furnishings 500	Plans, Surveys, and Supervision.....	$ 1,910
$1,400	Contingencies.....	$ 790
	SUB TOTAL	$ 14,600
	Exhibits, Aud.-Vis. Installations, Etc.....	$ 1,400
	See breakdown at left GRAND TOTAL	$ 16,000

26799

HISTORIC STRUCTURES REPORT

HISTORICAL DATA SECTION

PART I

CHARCOAL HOUSE

Earl J. Heydinger
Supervisory Historian
Hopewell Village N.H.S.

HISTORICAL DATA ON CHARCOAL HOUSE

DESCRIPTION

The charcoal house, building 9, is a masonry and frame structure (T-addition and above the square) approximately 102 by 29 feet with a southern T-addition of approximately 26½ by 17½ feet (at the roof peak). Eave heights vary with ground contours from 15 to 17 feet; roof height at the comb is about 9½ feet.[1] The charcoal house is linked with the bridge house by the reconstructed connecting (ramp) shed.

FUNCTION

Both the charcoal house and the connecting (ramp) shed existed historically to protect charcoal from the weather. The main function of the larger structure was to store and to protect the winter fuel for year-round furnace operation.[2]

PREVIOUS REPAIRS

After government purchase in 1935, the CCC's reshingled the structure, and the NPS repaired this roof in 1947 and 1951.[3] Presently the roof needs considerable repair because the 42 inch snow of March 1958 broke cross tie timbers, the reason for the timber and wire supports now inside the structure.

UNKNOWN ERECTION DATE

A structure for the protection of charcoal had to be erected near furnace initiation in 1770. Precise erection date for any charcoal

house is unknown and repairs seemingly were too insignificant to enter the Journals.[4]

1800 INVENTORY SIZE

At the time of the Brooke-Buckley purchase, appraisers measured charcoal owned by a tenant operator at 56 feet 4 inches "one side", 24 feet 4 inches "one side" and 12 feet high. A note, "The bottom [the floor] of the coal house is supposed to be a level with a mark made with a pick on a jamb of the door,"[5] suggests that the floor level was not visible and that there was 12 feet of charcoal at the door of the coal house. However, a completely filled charcoal house on March 20 would be most unusual as charcoal making ended around November, or earlier. The 24 foot measurement of this Document almost duplicates the interior west-end dimension of the existing building, while the 56 foot "side" could easily be accomodated in its 97 foot interior length. Tenant Bishop may have partitioned off the measured area in anticipation of moving, but the "note" suggests that no floor level was visible. Hence, either the 1800 structure with an interior dimension of app. 24½ by 56½ feet did not survive or may be a part of the present structure masked by later repairs.

1801 REPAIRS

The 1801 Journal notes only roof and rafter repair to the coal house.[6] This is the sole entry, dealing with charcoal house repairs,

found to date in the surviving 18 Journals, Day and Waste Books.

NORMAL REPAIRS

That the considerable rebuilding during 1828 may have repaired or enlarged this building is a possibility.[7] Seemingly, normal repairs kept the charcoal house of the period in condition to store and to protect winter fuel until the depression of 1873-77. Hopewell furnace blowed out in 1877.

1880 "REBUILDING"

Management anticipated repairs when Hopewell planned to reopen in 1880.[8] While these repair specifications provided that the structure be almost completely rebuilt, Historian Bonsheim in his Cooling Shed Report[9] held that (1) the masonry repairs were mostly to the north and east sides, (2) the masonry walls were not raised two feet, (3) the entire roof was not rebuilt, (4) the west wall received little or no repair since this wall was not mentioned in Record "found-av[erage]"[10] calculations, and (5) these found-average calculations indicated a less than two-foot rebuilding of two walls, or sections of walls. Also exterior pointing-color changes had no matching level inside for wall additions. This Report recommended that the 1880 dormer windows be removed and that the present north windows become doors for charcoal stocking as in operating times.[11]

1880 FRAME T-ADDITION

The 1880 repair specifications, calling for an approximate 19 x 29 foot frame addition,[12] were accomplished, and the present frame T-addition of the charcoal house is of this date. This was also the thought of Architect N. Souder, who held that the T-addition had no siding when erected, but was closed later because rain and snow wetting of stored charcoal. These observations he based on existing construction features.[13]

Since this T-addition dates from 1880, it should be removed.

BAY OF CONNECTING (RAMP) SHED MISSING

Architect Souder also held that prior to 1880 the present (reconstructed) connecting (ramp) shed between the bridge house (building 10) and the charcoal house had extended to the masonry portion of the charcoal house. Further, he proposed that archeology might find support posts for an additional 16-foot bay to the north of the existing shed.[14] Regional Archeologist Cotter did locate a pair of post supports about where the architect had suggested.[15] This missing bay should be reconstructed.

PROBLEM THROUGH REMOVAL OF 1880 T-ADDITION

How the areas above the connecting (ramp) shed roof and the entrance into the charcoal house were closed before 1880 is unknown. A pre-1935 photo shows the charcoal house without doors.[16]


2 RAMP
1 BRIDGE HOUSE
3 T*ADDITION
4 CHARCOAL
HOUSE

NEED FOR ARCHEOLOGY

Surmisals based on charcoal-dust deposits locate an "earlier" charcoal house between Wall I (parallel and back of Wall H) and the office-store.[17] Other features nearer and around the existing structure include possible traces of the earlier east and west headraces, their flume support piers, a water line to the anthracite furnace, unknown structures as well as foundations for an earlier charcoal house. Harker Long also located the limestone-flux and ore piles at the southwest corner of the structure. Another ore pile extended from the "edge of the charcoal house" toward the office-store.[18] At the south side of this area is "Wall H extended", created without any archeological exploration.

Except for three limited digs, (1) Archeologist Cotter's discovery of Wall I in 1950, (2) Schumacher's 1955 trench which followed the east headrace pipe and (3) Powell's 1957 work which located cooling-shed posts at the structure's north side, the remainder of the area is almost untouched. The post hole work mentioned was the sole interior archeology. Other foundations and various floor levels may be buried in the interior.

FURNISHINGS

In addition to charcoal itself, charcoal baskets, wheelbarrows, charcoal rakes and shovels were equipment and tools used in the charcoal house.[1] All but wheelbarrows have survived at the Site.

FOOTNOTES CHARCOAL HOUSE

1. Drawings, NHS-HV 3054, sheets 1 and 2 of 4, and HV 2065.

2. Hopewell blasts before 1845 averaged 11½ months in the year. Kurjack Chart.

3. CCC reshingling in R.E. Appleman, Historical Report, French Creek Area, Aug. 19, 1935. NPS work by Hopewell Photos, 92-3 and 114-82.

4. Of the seventy surviving Records, 18 are Journals, Waste and Day Books, the source of detailed information. Gaps in Journals, etc. exist for periods, 1819-1824 and 1837-1846.

5. Hopewell Document X8000320. Appraisal of John Bishop Stock at Hopewell. This Document was NOT available to Mr. Ronsheim when he reported on the Cooling Shed in 1957.

6. Hopewell Record SM 43, Feb. 28, 1801. The Hopewell Document collection contains no cataloged documents on this 1880 rebuilding or about any charcoal house. Search of March 24, 1964.

7. Apple, Russel, Documentation for the Historical Base Maps, 1830-1840 II-115, lists 528½ days of work at the furnace alone.

8. Hopewell Record SM 34 Mar. 16, 1880, pages 265-268, 200, 201, 206. There are twice numbered pages in this Record.

9. Robert D. Ronsheim, Historic Building Report, Charcoal House and Charcoal Shed, Dec. 20, 1957, p. 14. Hereafter cited as Ronsheim.

10. Hopewell Record SM 34, p. 200 for "found av." calculations.

11. Ronsheim, p. 16 and see 2nd part of FN 6.

12. Hopewell Record, SM 34, p. 266.

13. Norman Souder, Notes on the Charcoal House, 12/23/57. File H30 Charcoal House.

14. Ibid.

15. Hopewell Photos P 1958-69, 70.

16. Hopewell Photo 122-1.

17. Statement, Superintendent Joseph R. Prentice to writer, and Architect Richard Donohoe in Architect's section of Ronsheim p. 2, probably from the same source.

18. M2215 Interview, Harker Long, p. [32].

FURNISHINGS

1. Document XBC 0320 of 1800 lists this equipment and these tools. This is one of many references.

HISTORIC STRUCTURES REPORT

PART I

ARCHITECTURAL DATA SECTION

ON

CHARCOAL HOUSE

Hopewell Village National Historic Site

Prepared by
Norman M. Souder
Architect
October 1964

for

United States Department of the Interior, National Park Service
Eastern Office, Design and Construction
Division of Architecture

HISTORIC STRUCTURES REPORT

PART I

ARCHITECTURAL DATA SECTION

ON

CHARCOAL HOUSE

Hopewell Village National Historic Site

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

RECOMMENDED

_____ Date_____
Superintendent

Robert G. Hall Date 10-9-64
Chief, EODC

_____ Date_____
Regional Director, Northeast Region

APPROVED

_____ Date_____
Director

TABLE OF CONTENTS

I. FOREWORD

The Charcoal House at Hopewell Village is a large stone building located on the hill above the furnace. The charcoal for the furnace was stored in the building after being hauled in from the Collier's pit in the woods.

The exact building date is not known. Architectural evidence indicates that it was erected in the early nineteenth century. The location and size of the earlier Charcoal House is uncertain. Archeology uncovered stone walls near the furnace which might possibly be the remains of an earlier Charcoal House.

The present structure underwent considerable changes in 1880, according to the furnace records. At this time the dormers were added to the north slope of the roof and the annex was built on the south side.

A heavy snow fall in 1958 caused the roof structure to collapse. Since that time the roof has been supported by a system of temporary posts, braces and cables.

The Part II, Architectural Data Section of the Historic Structures Report will deal in detail with the proposed restoration.

An earlier Architectural Data Section covering the combined Charcoal House and Charcoal Shed was prepared by Architect Richard Donahoe and submitted in December 1956. The adjoining shed portion was reconstructed in 1957.

Norman M. Souder
Architect
October 1964

II. EXISTING CONDITIONS - EXTERIOR

A. Walls

The Charcoal House, 29 feet wide by 101 feet long, is constructed of native rubble field stone. The walls are approximately 16'-6" high and two feet thick. The gables are vertical board siding.

There are three stone buttresses on the south wall. Two are located on either side of the large opening and the third is located mid-way between the opening and the southwest corner.

In 1880 a frame annex was built into the wide south opening. It appears to have been an open shed, later closed-in with vertical siding and fitted with sliding doors.

B. Roof

The existing roof is of wood cedar shingles. When the south extension was added, an additional gable was erected on top of the rafters of the original south roof slope. The original building had only two gables.

C. Fenestration

The building originally had no windows. The existing six light sash were inserted in the east and west gables in the 1920's. The three openings on the north wall were originally doors for filling the Charcoal House. The door openings have been partially filled-in with rough boarding and fitted with six over six light sash.

The extension has a pair of large sliding doors, opening on the south side.

III. EXISTING CONDITIONS - INTERIOR

A. Floor

The flooring is of earth. The present level is probably higher than the original due to the accumulation of charcoal dust, dirt and debris.

When the interior is cleared of stored material, an exploration of the floor area should be made to determine the original floor line.

B. Walls

The interior of the stone walls are exposed and remain unpointed in most areas and roughly broadpointed in others.

C. Roof

The roof structure is exposed on the interior. The 8" x 8" wall plates are separated into many sections due to repairs, and at present are held together by steel cables.

Six 6" x 6" ties span the width of the building to hold the north and south wall plates.

The roof rafters, spaced on approximately two foot centers, are a combination of the old poplar poles and modern replacements.

IV. RECOMMENDATIONS

It is recommended that the restoration of the Charcoal House include the following:

1. The removal of the entire roof structure and the restoration of the roof area.
2. The removal of the 1880 south frame annex and the extension of the connecting shed into the south opening of the Charcoal House.
3. The removal of the windows in the north wall and the restoration of the original pairs of doors in their place.
4. The repointing of the masonry as required.
5. The provision of two (2) pairs of doors for protection on the south opening into the connecting shed.
6. The painting of the exterior woodwork and the whitewashing of the exterior stone walls as indicated on the 1887 "Stokes" photograph.

ILLUSTRATION NO. 1

The Charcoal House from the southeast. The 1880 frame annex and the reconstructed connecting shed are shown in this photograph. The proposal for the restoration of the Charcoal House includes the removal of the frame annex and the extension of the connecting shed to the opening of the Charcoal House. The east gable of the reconstructed Charcoal Shed is at the right.

Photo: National Park Service, EODC
Boucher, September 2, 1964

EODC Neg. No. 154.137