

HISTORIC STRUCTURES REPORT

ADMINISTRATIVE DATA

PART III

WEST HEADRACE FLUME

Hopewell Village National Historic Site

Prepared by Benjamin J. Zerbey Superintendent October 1964

see memo H30-RHA Std 10-21-64

HISTRIC STRUCTURES REPORT

PART III

VEST HEADRAGE FLIME

Hopewell Village National Historic Site

APPROVAL SHEET

RECOMMENDED

/s/ Benjamin J. Zerbey	Date 10/16/64
Superintendent Kohut E Suith	Date 10-28-64
Chief, EODC, acting	
APPROVIDE	
Regional Director	Date

HISTORIC STRUCTURES REPORT

ADMINISTRATIVE DATA

PART III

WEST HEADRACE FLUME

The West Headrace Flume was first reconstructed in 1951 following restoration of the Hopewell Water Wheel. The six forebay piers were located by the various archeologists working at the site since 1940. J.C. Fisher Motz excavated Pier #1 in 1940 and located it precisely. Cotter and Schumacher located the other piers in 1950 and '51. All of these were restored to their original height and width in 1951. The wooden superstructure of the flume as created in 1951 was a compromise due to fund limitations and the urgency to get the water wheel in operation. Surplus lumber from some of the old CCC buildings on the site was used. The floor and siding of the trough of the 1951 flume consisted of "bull pine" which was not treated with wood preservative and quickly rotted.

Various informants gave the dimensions of the flume as four feet wide by one foot high. Mr. Sheriden Painter, a local contractor and one who saw the flume in his youth, drew up detailed dimensions for an accurate restoration. These were evidently ignored in 1951 because of lack of funds.

By 1961, the West Headrace Flume had become so badly rotted that it was in a state of near collapse and restoration of the correct original flume became a necessity.

Description of the Work

The detailed sketch of a cross section of the historic flume prepared from interviews with "Sherd" Painter was used as the basis for the reconstruction. This sketch, attached to Part I of this report, was followed without deviation.

Four by four oak timbers were used for the bunks of the flume.

This material was purchased from a local saw mill and was given a soaking treatment in cfeosote solution for several days. The oak bunks or yokes were mortised and tenoned by the Hopewell maintenance crew in March 1964. Supporting 8" x 8" timbers were given several brush applications of creosote.

As recommended in Part I of this report we used Longleaf Yellow

Pine for the trough of the flume. The material purchased was

full li" tongue and groove which was fabricated at a local planing

mill. The trough sides were li" x 12" yellow pine which were

grooved at the bottom to accommodate the tongue of the trough decking

thereby providing a tight water seal. The trough material received

several brush and spray applications of creosote.

Foreman Charles Seidel, former Building Restoration Specialist, and his crew began construction of the new flume on April 27. The existing piers were used without any modification, however, some masonry work was necessary at the water cutoff where the race entered the forebay. Work was completed on May 14.

No extensive changes were made here but a small realignment of the stone wall was required to widen the opening to four feet.

A large sycamore tree was thus cleared by a few inches. It appears that when a portion of the retaining wall was rebuilt in 1951 it followed a gentle curve. The restored wall straightened out this curve.

Historical or Archeological Evidence

No new evidence came to light during this restoration project.

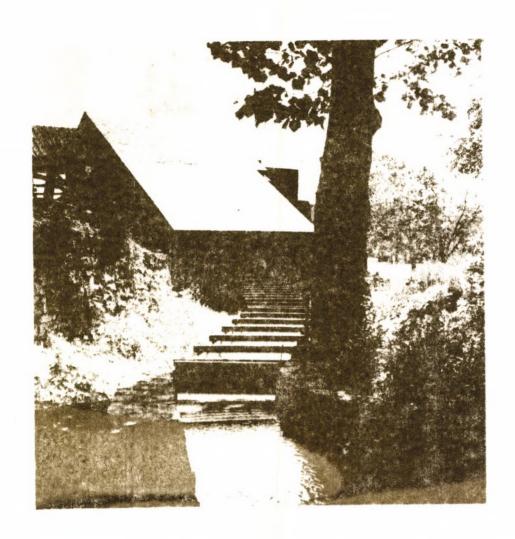
The pier stones as located look much more in scale supporting the four foot wide flume.

Photographs

A series of photographs is attached to this report showing the flume under construction and after completion. A number of "before" photographs are included in Part I of the report on this structure.



View of the flume from the sennesting shed on top of the furness bank.



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Resetting of Headrace Wall at the gate where water enters the West Headrace Flume.



View of Forebay Pier #2 where flume enters Wheelhouse on the right. Note that pegs have not been sawed off awaiting final curing of the oak timbers.

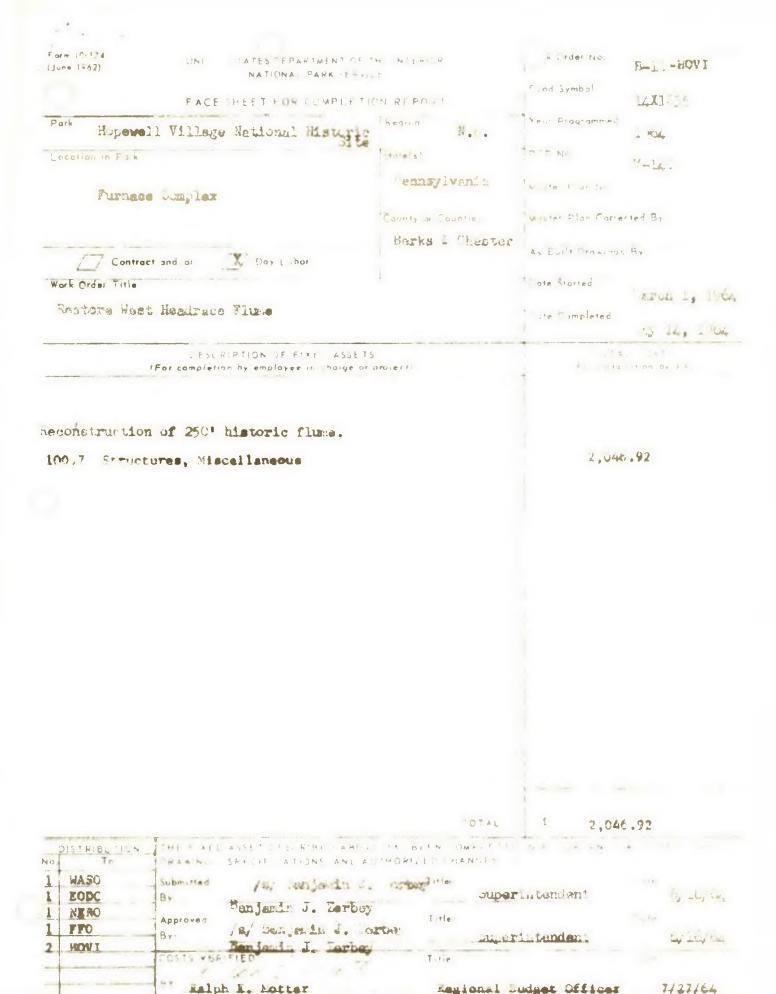


Four foot wide restored flume clears large Sycamore tree by a few inches. This tree did not interfere with the laying out of the flume but it came quite close.

UNITED STATES DEPARTMENT OF THE INTERIOR

I NAME OF AREA Hopewell Village M.H.S.	
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2. PROPOSED WORK	Pennsylania
E. PROPUSED WORK	
Restore West Headrace Flume	
3 DIMENSIONAL DATA	
4 wide, 1 high x 100 long	supported by 5 memorry plers. First and the sender to coulder
4 LAND STATUS AND DATA	Strawng of Faring
All Coverement owned.	in Or
5 W STRUCTION DATA	
Wooden flume or trough to be diversions and supported by	built of trested wood in the above dirensions with gates, 5 masonry piers.
had been completed on the ap	pearance of the original flume. An accurate restoration of flume is falling apart, needs constant maintenance and one.
7 MISSELCANEOUS DAYA- REMARKS REPOR	I WEFFRENCES
See "Proposed Restoration of June 15, 1936.	Old Ironmaking Village", Regional Historian Appleman,
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See "Proposed Restoration of June 15, 1936. B DATA ON THIS FORM PREPARED BY	Old Ironmaking Village", Regional Historian Appleman, PCC CHCSS HEFTHEREES 15 1511MATE CLASS C 1,900 None
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Master Plan Drawing N .



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COMPOSITION OF COST FOR COMPLETION REPORT

Restors west Headrace Flice

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ocation in	Park			 -			
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ork Order	title						

COMPOSITION OF COST

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COST	S CHARGED TO FUNDS ALLOTTED TO FIELD FINANCE OF CE			
(1)	Personal Services	5 940.48		
(2)	Travel			
(3)	Contract Work			4
(4)	Supplies and Materials	824.11		
5.	Other Direct Expenses			
12	Operation of Equipment			
71	Depret attan of Equipment.			
787	Purchase of Construction Equipment			
9)	Purchase of Other Accountable Equipment			
-10)	Other Costs:			
	(HI) TOTAL COST CHARGED TO FFO FUNDS	********	975	1,754.59
OTHE	R COSTS			
(12)	PS&S, AP, and or Facilitating Services •	282.33		
(13)	Inventory and Other Non-Fund Costs			
	(14) GROSS WORK ORDER COSTS	ANNXXXXXXXX	5	2,045.92
LEUS				
(15)	Mesicual Value of Construction Equipment on Lins 3	5		
(16)	Other Credits			
	(17) NET COST OF FIXED ASSETS	AXXX + 4 X Y A X Y		2,046.92