

COMPLETION REPORT

WORK ORDER NO:

ROOF REPLACEMENT, BUILDINGS 57 AND 58, CAMP HILL

L HARPERS FERRY NATIONAL HISTORICAL PARK

NATIONAL PARK SERVICE

HARPERS FERRY, WEST VIRGINIA

CONTRACT NO. 1443-CX305997902



NATIONAL PARK SERVICE  
UNITED STATES DEPARTMENT OF THE INTERIOR

AUGUST 1998

BY: RENZO RIDDO, PROJECT INSPECTOR  
DENVER SERVICE CENTER, NATIONAL PARK SERVICE

EDITOR: PETER F. DESSAUER, HARPERS FERRY ARCHITECT

PLEASE RETURN TO:

TECHNICAL INFORMATION CENTER  
DENVER SERVICE CENTER  
NATIONAL PARK SERVICE

## ACKNOWLEDGMENTS

PROJECT: HARPERS FERRY NATIONAL HISTORICAL PARK  
ROOF REPLACEMENT, BUILDINGS 57 AND 58  
PKG. HAFE-DS65  
CONTRACT NO. 1443CX305997902, DRWG. NO. 385/41,067

### PRINCIPAL PERSONS ON PROJECT TEAM:

1. Donald Campbell, Superintendent, Harpers Ferry NHP
2. Tim Fox, Chief of Maintenance, Harpers Ferry NHP
3. Bob Wilhide, Maintenance Supervisor, Harpers Ferry NHP
4. Jon Holbrook, Project Manager, Denver Service Center
5. Robert Simmonds, Project Architect, Denver Service Center
6. Patrick MacDonald, Structural Engineer, Denver Service Center
7. Marilyn Hogue, Contracting Officer, Denver Service Center
8. Peter F. Dessauer, Project Supervisor and Contracting Officers Representative, Denver Service Center
9. Renzo Riddo, Project Inspector, Denver Service Center
10. Ajay Bhatt, General Contractor, Southeastern Roofing Co.
11. Bob Irving, Slate Roof Subcontractor
12. Steve Should, Virginia Riggers, Subcontractor
13. Lanny Fishel, A.A. Scaffolding, Subcontractor

UNITED STATES DEPARTMENT OF THE INTERIOR  
National Park Service

HAFE-DS65  
Harpers Ferry National Historical Park

14-Day

Prompt

Payment

XXXXXXXXXX

30-Day

Prompt

Payment

## UNIT PRICE CONTRACT

|                                                                                                           |                                           |                                  |
|-----------------------------------------------------------------------------------------------------------|-------------------------------------------|----------------------------------|
| ESTIMATE NO.<br>Six(6)                                                                                    | For (Period):<br>July 22 -August 28, 1998 | Date:<br>28, Aug.1998            |
| CONTRACT NO.: 1443CX305997902                                                                             | COMPLETION DATE: October 12, 1998         | Extended Date:                   |
| CONTRACTOR: Southeastern Roofing Company of Pineville, P.O. Box 253<br>Barboursville, West Virginia 25504 |                                           | Original Contract: \$ 246,728.00 |
| SUBJECT: Roof Renovation, Buildings 57 and 58                                                             |                                           | Chg. Orders: 1<br>\$ (11,372.79) |
| LOCATION: Jefferson County, West Virginia                                                                 |                                           | Total Contract: \$ 235,355.21    |

| ITEM NO. | CONTRACT QUANTITY |                                                                   | QUANTITY TO DATE | UNIT PRICE   | AMOUNT TO DATE |
|----------|-------------------|-------------------------------------------------------------------|------------------|--------------|----------------|
| 1        | 2200 SF           | Removal and Installation of Roof Sheathing at Buildings 57 and 58 | 2,200.00         | \$ 4.23      | \$ 9,306.00    |
| 2        | 80 LF             | Installation of New 2x8 Ceiling Joists at Building 5              | 80.00            | \$ 15.96     | \$ 1,276.80    |
| 3        | 100 CF            | Brick Resetting                                                   | 100.00           | \$ 43.26     | \$ 4,326.00    |
| 4        | 60 LF             | Brick Repointing                                                  | 60.00            | \$ 77.53     | \$ 4,651.80    |
| *5       | LS                | Remainder of Roofing Work                                         | 100%             | \$215,314.93 | \$215,314.93   |
| 6        | 200 EA            | Furnish Historic Brick                                            | 200.00           | \$ 2.35      | \$ 470.00      |
| *7       | DELETE            | Roof Inspection                                                   | DELETE           | \$ 945.91    | DELETE         |
| *8       | DELETE            | Insulation                                                        | DELETE           | \$ 9,882.58  | DELETE         |
|          |                   | Bond                                                              |                  |              | \$ 10,127.00   |

|                                                                                                                              |                                                                                  |                                    |
|------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|------------------------------------|
| RECOMMENDED BY: (Project Supervisor) jsm<br><i>Peter F. Dessauer</i> Peter F. Dessauer<br>August 28, 1998.<br>Peter Dessauer | DATE: Agreement reached between Contractor and Project Supervisor<br>28-Aug.1998 | SUMMARY                            |
| APPROVAL: (Contracting Officer)                                                                                              |                                                                                  | TOTAL TO DATE: \$235,355.21        |
|                                                                                                                              |                                                                                  | LESS RETAINED AMOUNT               |
|                                                                                                                              |                                                                                  | NET \$ 235,355.21                  |
|                                                                                                                              |                                                                                  | LESS PREVIOUS PAYMENT \$224,579.78 |
|                                                                                                                              |                                                                                  | LESS LIQUIDATED DAMAGES \$         |
|                                                                                                                              |                                                                                  | DUE THIS ESTIMATE \$ 10,775.43     |
| \$10775.43 is final payment of previous retainer.                                                                            |                                                                                  | % COMPLETE TO DATE 100%            |
|                                                                                                                              |                                                                                  | % TIME 100%                        |

ACCOUNT NO.: 3851-7606-515

TIN NO.: 56-0726878

TFSC - NO

If there are questions about this payment please call Jan Muirhead at (303) 969-2709

To AOC: 04/ /98

Recvd: 04/06/98

Completion Report  
Harpers Ferry  
Buildings 57 & 58

## NARRATIVE STATEMENT

As part of Harpers Ferry NHP's flood/storm recovery program, the roof replacement of buildings 57 and 58 became Denver Service Center (DSC) package number HAFE DS65, PT 21:

HAFE Building 57 - Historic Brackett House  
HAFE Building 58 - Historic Morrell House

## WORK ORDER NO.:

**DESCRIPTION OF WORK:** The work of this contract consists of selective demolition of existing metal roofing, roof structural framing and sheathing repair, masonry chimney repairs, new slate roofing, flashing, gutter repairs and new gutter work, painting, and installation of attic insulation in buildings 57 and 58.

**PLAN AND SPECIFICATION:** These were prepared by Robert Simmonds, project architect, DSC.

**STATUS OF AS-CONSTRUCTED DRAWINGS:** Drawings were submitted to DSC for corrections on August 4, 1998.

## PROJECT ACTIVITIES:

The construction contract no. 1443-CX305997902 was awarded to Southeastern Roofing Company of Pineville Inc., P.O. Box 253, Barboursville, West Virginia 25504, in the amount of \$246,728 on August 19, 1997. A pre-construction conference in Harpers Ferry, West Virginia, was held on December 19, 1997, and the notice of proceed for January 5, 1998, was issued.

The contractor began setting up office and mobilizing on April 17, 1998.

The contractor did all the demolition and site grading. The subcontractors performed the remaining work. A list of subcontractors is included in this completion report.

On February 3, 1998, Modification No. 1 was issued--request for a proposal (RFP) roofing material update:

1. Specification section 07315 slate shingles, change from 9" x 16" x 3/16" to 12" x 24" x 3/8" underlayment, delete "Nailfast" 30# felt, add EPDM 45 MI loose laid.
2. Specification section 07600 flashing and sheet metal. Add flashing to eave, rake and ridge 16 ounce lead coated copper (LCC) gutter support, change from brass to stainless at no cost to the Government.

On July 14, 1998, a substantial completion walk through was held with Robert Simmonds; Renzo Riddo, DSC; Peter Dessauer, Harpers Ferry; Tim Fox, Harpers Ferry; Bob's Roofing subcontractor; and Ajay Bhatt, general contractor, Southeastern Roofing. After the walk through, a punchlist was created, and the buildings were considered substantially complete.

For the next four weeks, the contractor continued to complete the punchlist created on July 14, 1998.

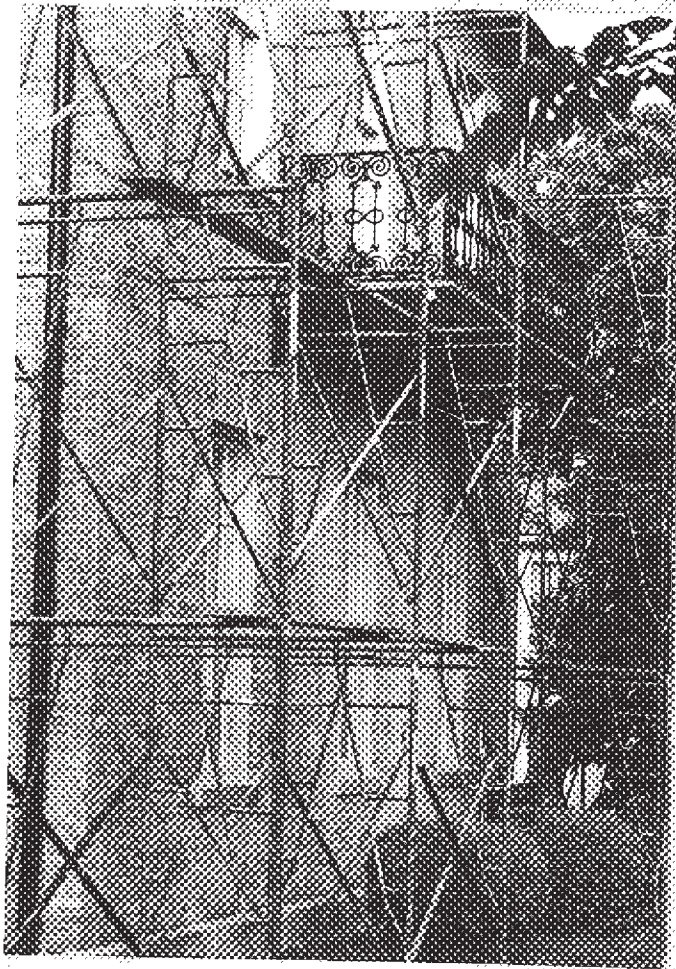
No liquid damages were assessed.

#### LIMIT OF PROJECT

|                                                                    |                                 |
|--------------------------------------------------------------------|---------------------------------|
| Removal and installation of roof sheathing at Buildings 57 and 58. | 2,200 S.F. @ 4.23 = \$ 9,306.00 |
| Installation of new 2x8 ceiling joists at Building 58.             | 80 L.F. @ 15.96 = \$ 1,276.80   |
| Brick resetting                                                    | 100 C.F. @ 43.26 = \$ 4,326.00  |
| Brick repointing                                                   | 60 L.F. @ 77.53 = \$ 4,651.80   |
| Remainder of roofing work chimney                                  | L.S. lump sum = \$215,314.93    |
| Furnishing historic brick                                          | 200 each @ 2.35 = \$ 470.00     |
| Bond                                                               | \$ 10,127.00                    |
| Total bid                                                          | \$235,355.21                    |

Total roof 57/58 S.F. replaced = approximately 4300 S.F., which comes to about \$54.73 S.F. cost of \$235,355.21 total.

## PROJECT PHOTOGRAPHS



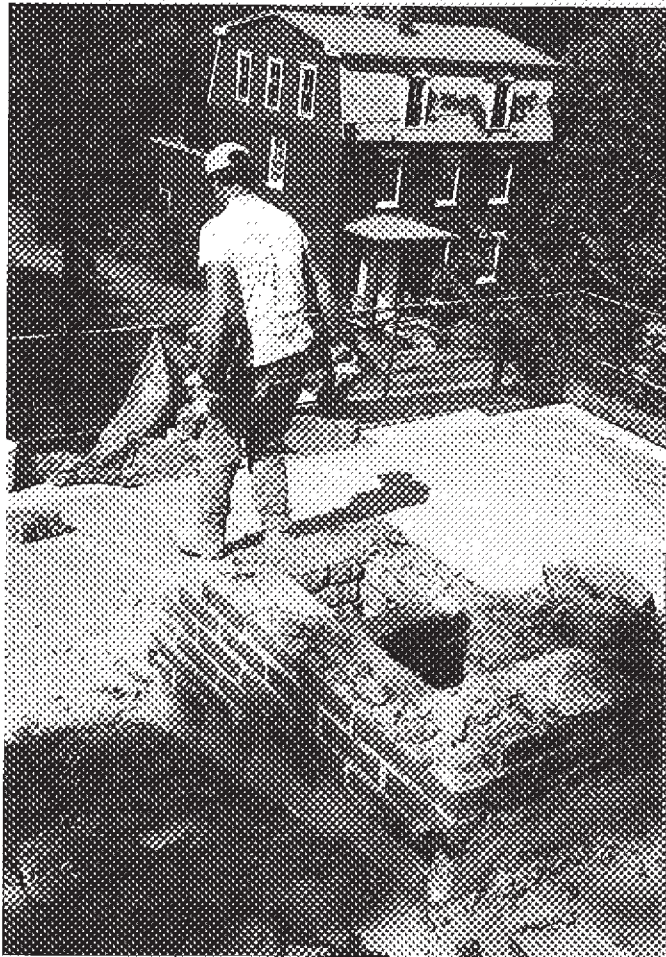
Scaffolding was set to permit all vertical surfaces to be observed and reached by hand. Bldg. 58



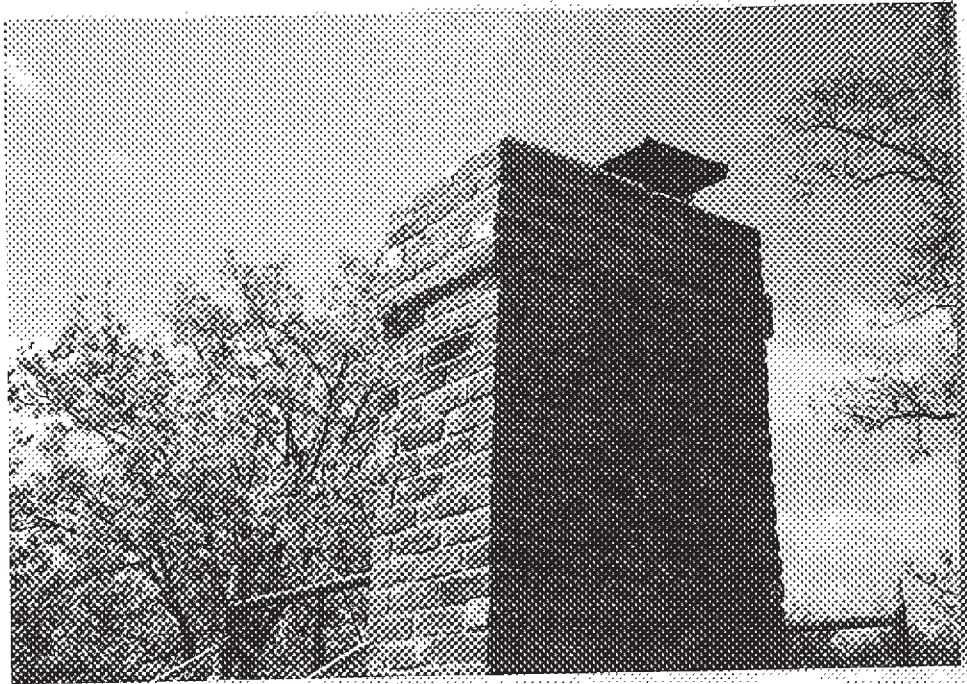
Construction of temporary employees' entrance. Bldg 58



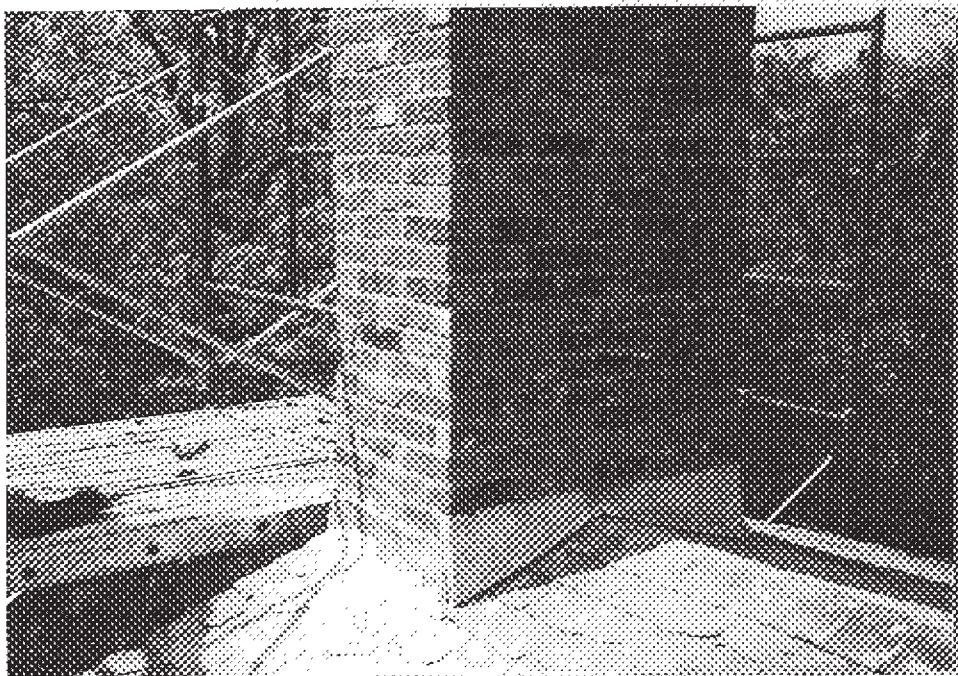
Chimney repair and rebuilt. Bldg 58



Chimney repair  
and rebuilt.  
Bldg 58



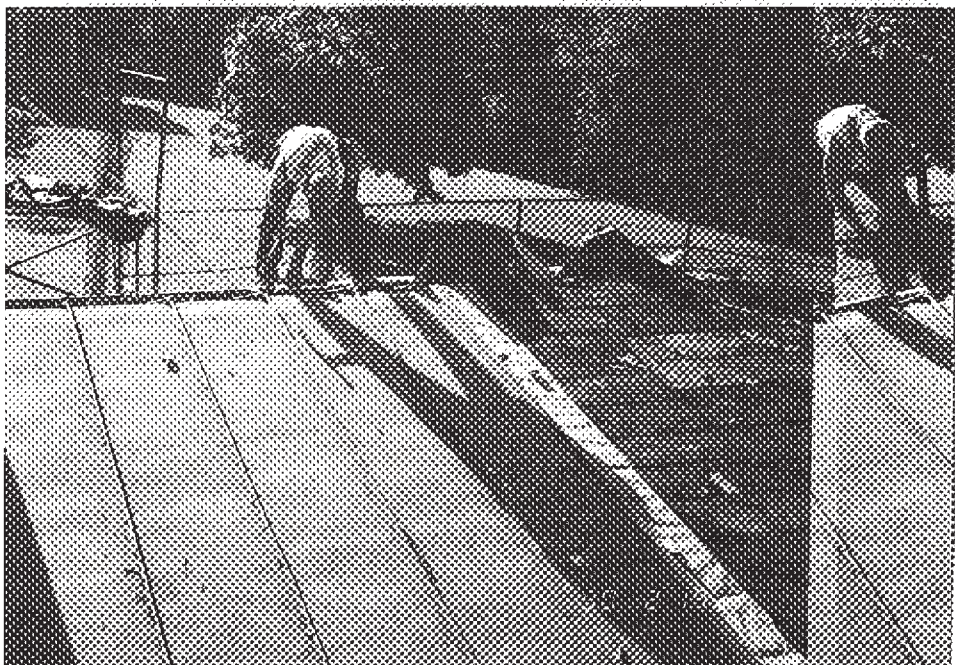
Chimney masonry work completed. Bldg 58



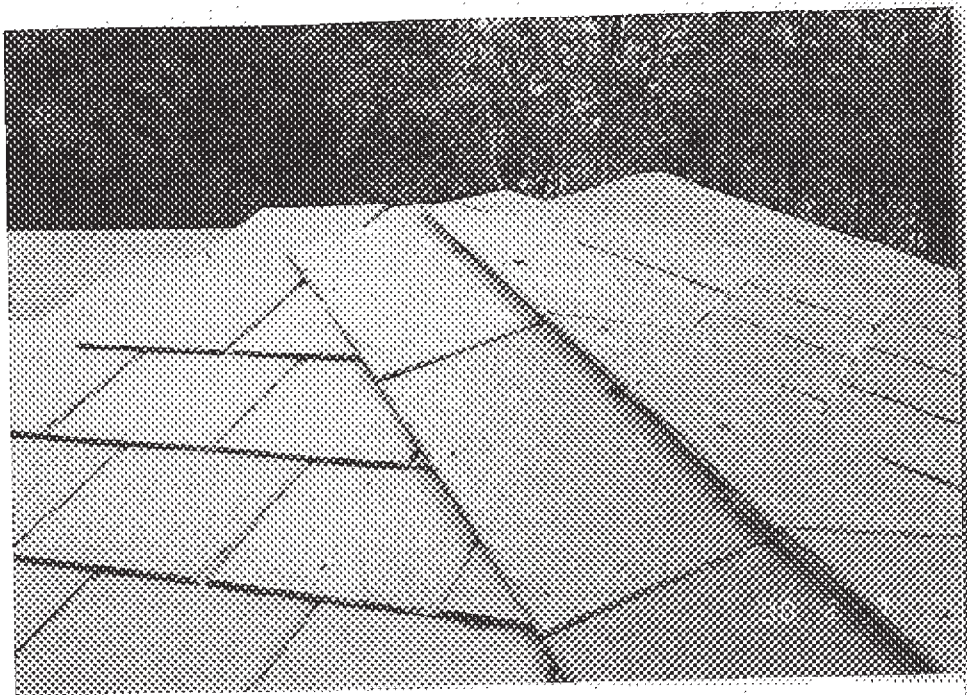
Chimney masonry work completed. Bldg 58



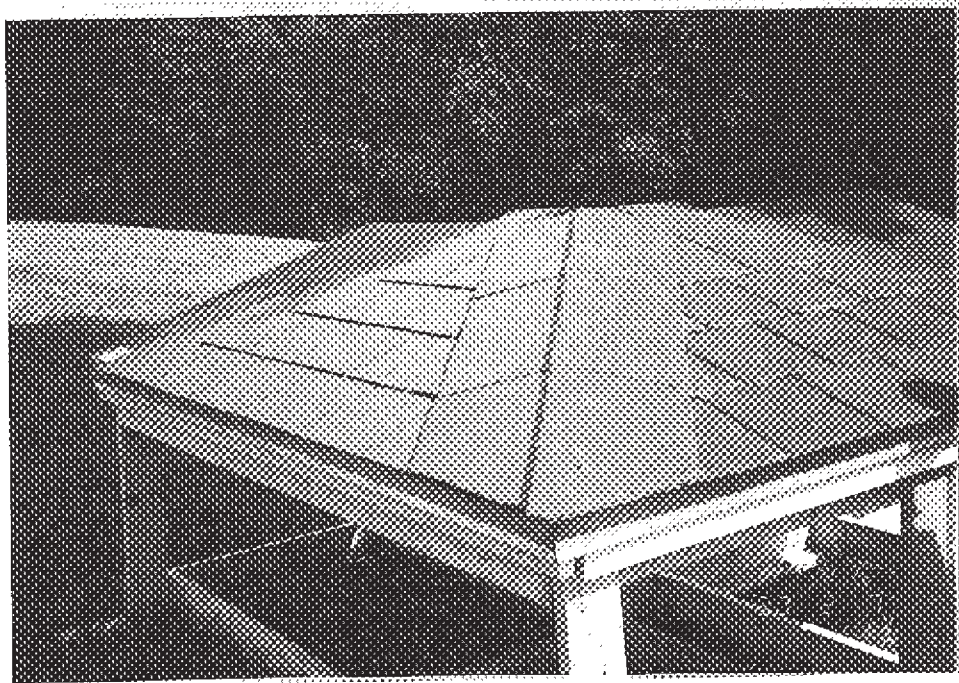
Demolition of existing metal roof. Bldg 57



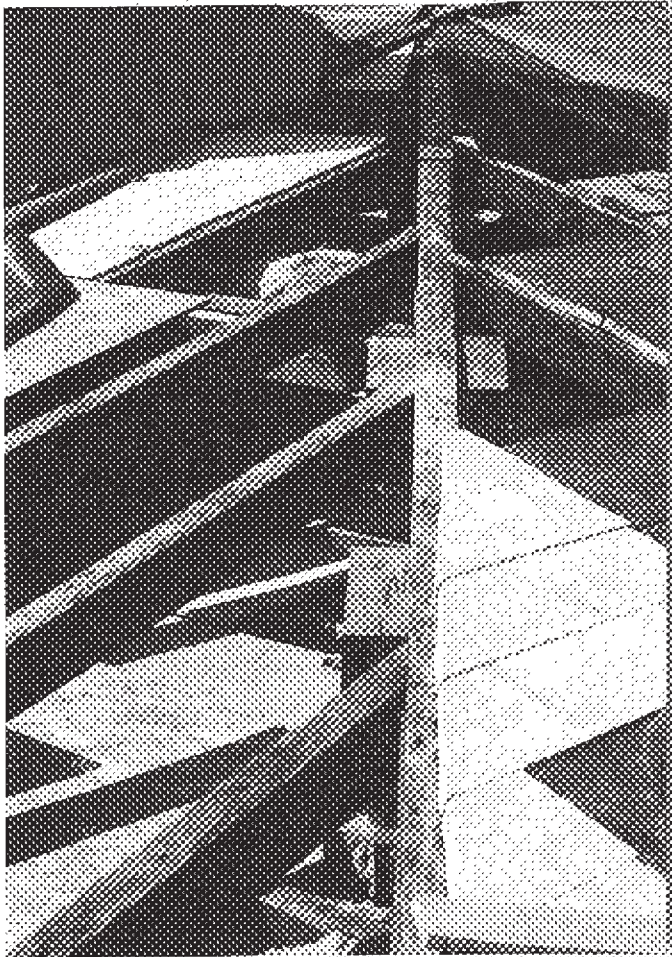
Demolition of existing metal roof. Bldg 57



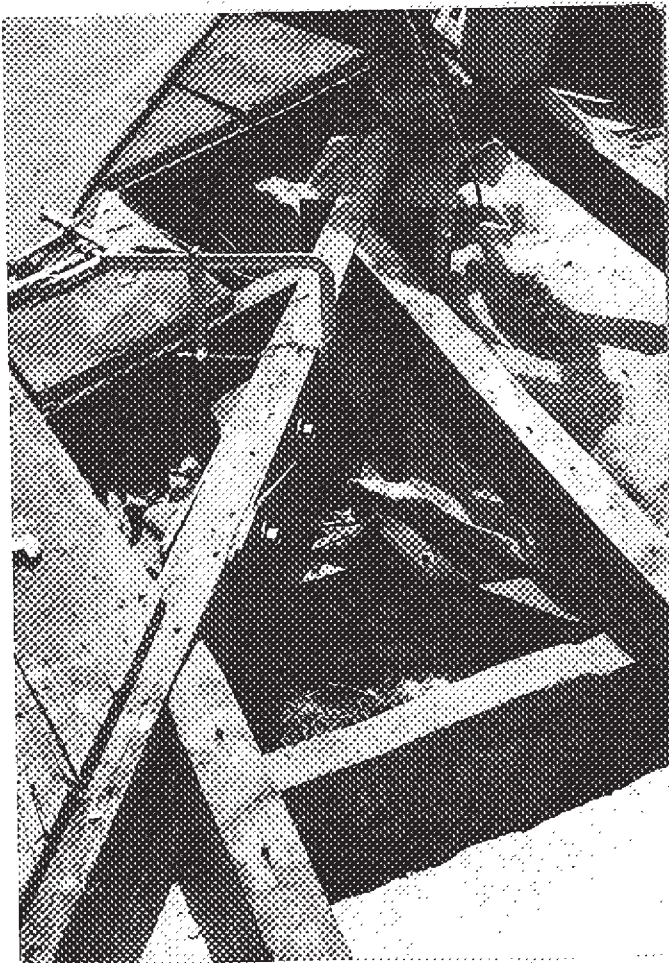
Slate shingles hipped mock up. Bldg 57



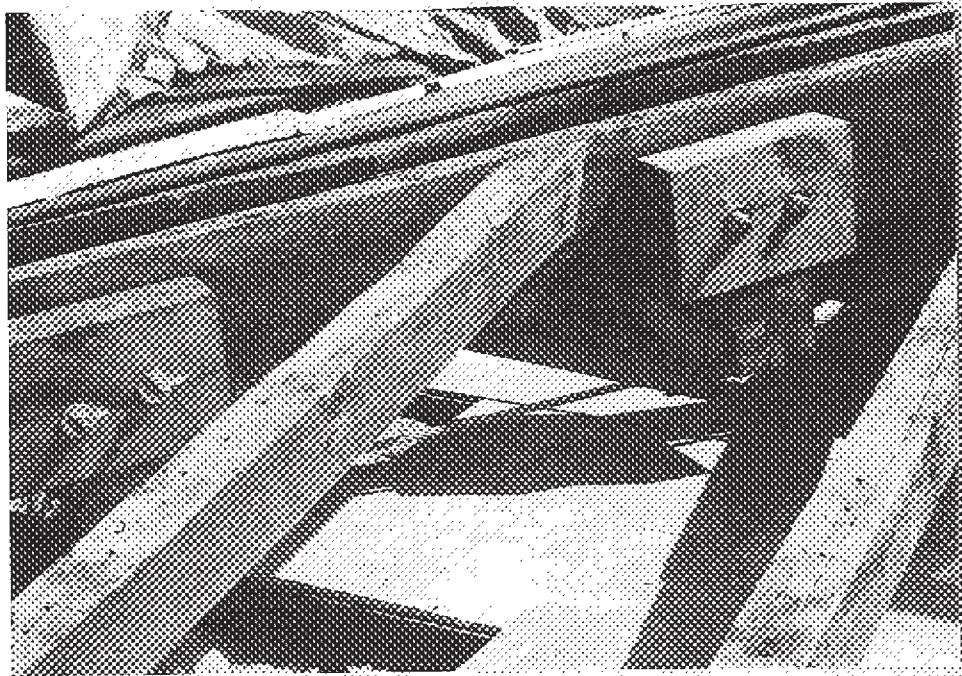
Slate shingles hipped mock up. Bldg 57



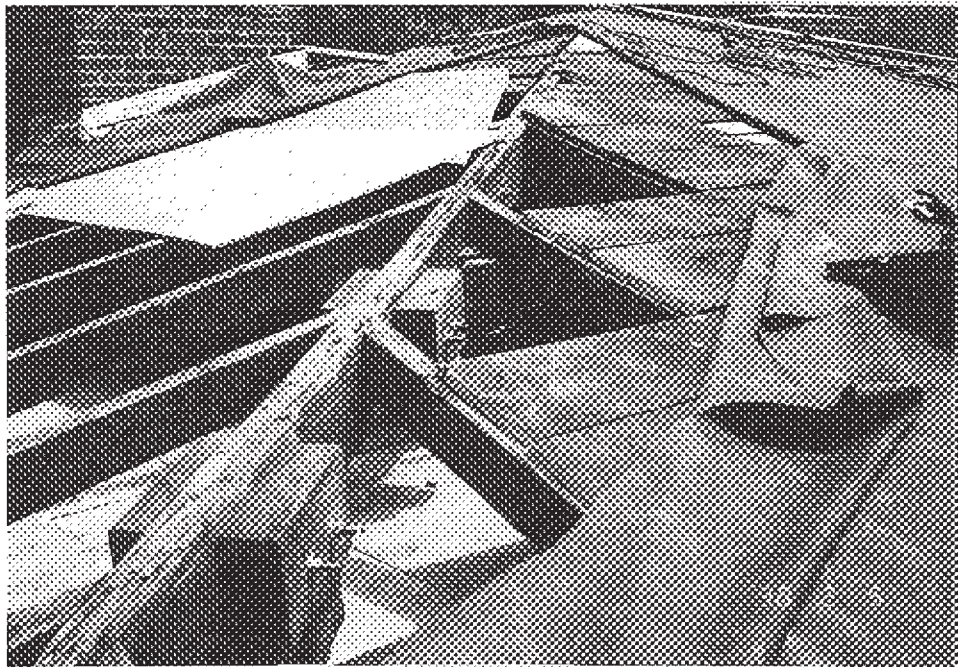
Framing and sheathing  
needed to be repaired.  
Bldg 57



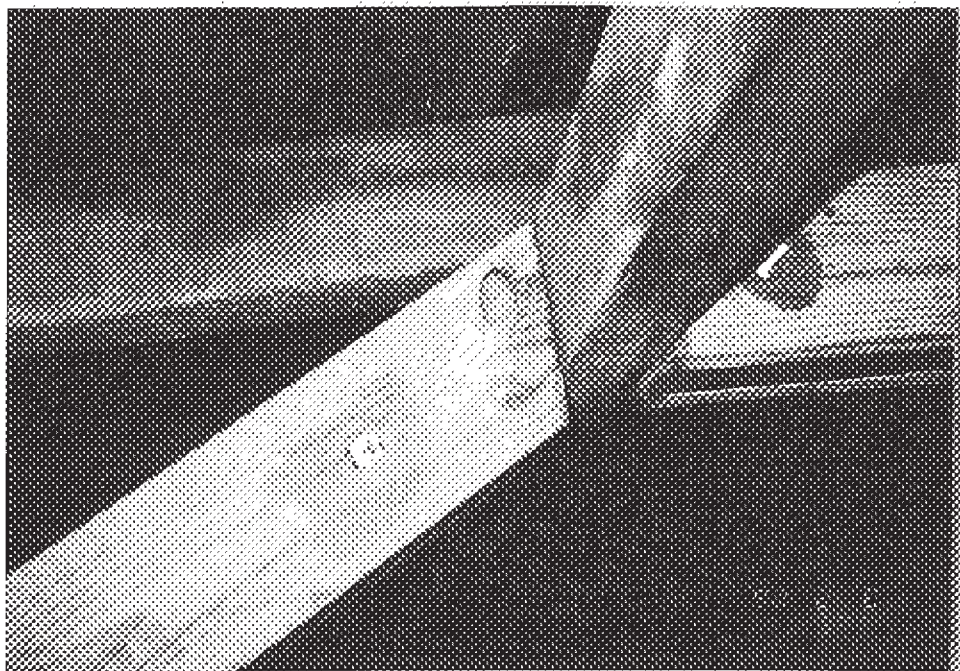
Repair of the main truss.  
Bldg 57



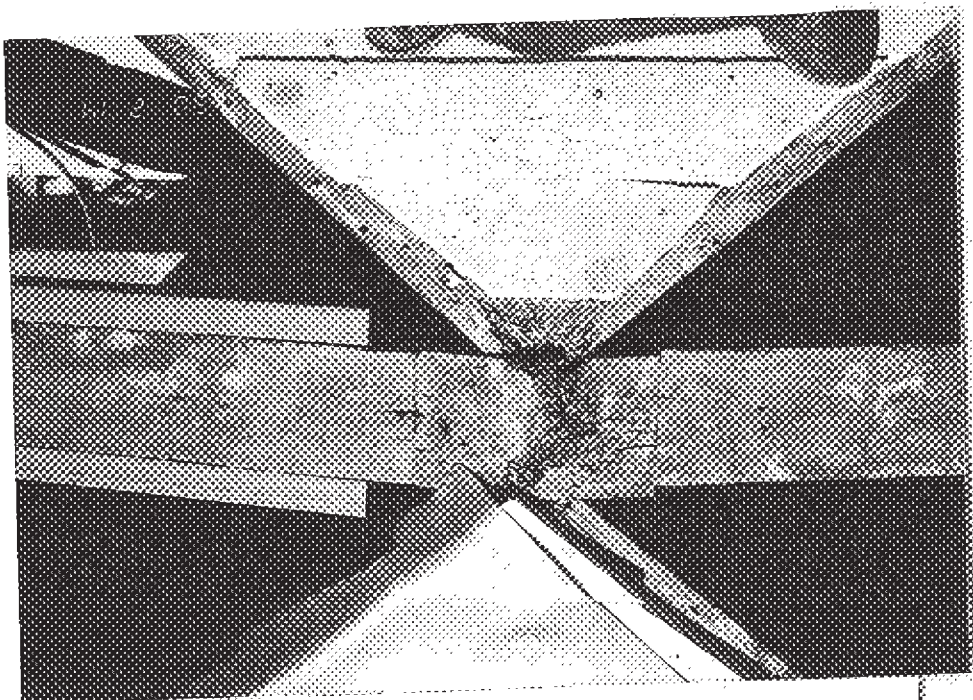
Wood blocking to maintain  
cable configuration. Bldg 57



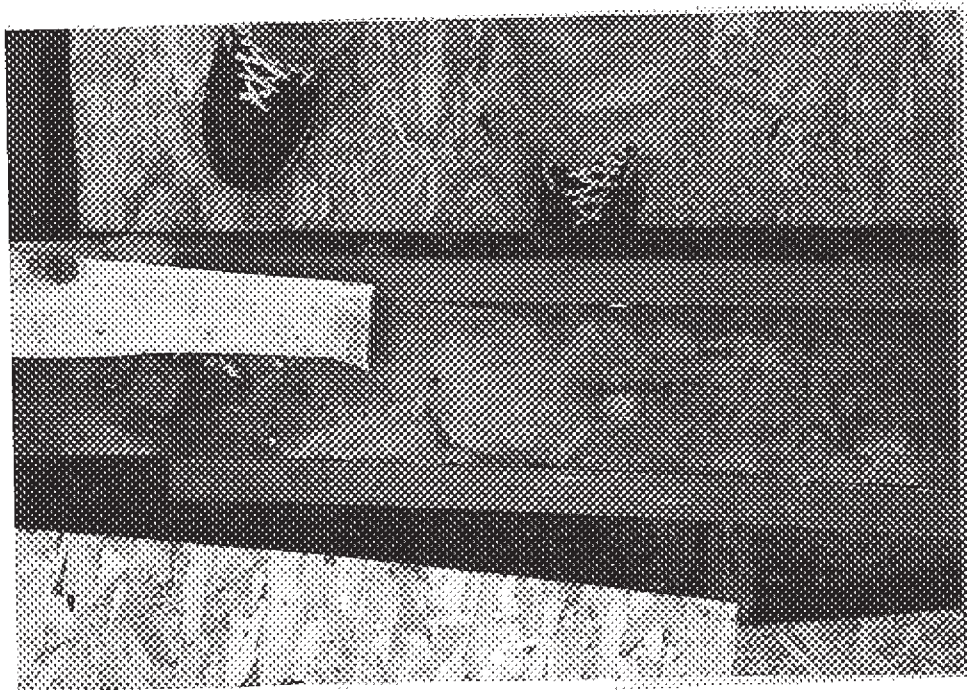
Hip truss reinforcement. Bldg 57



Fastened 2x6 to purling with  
1/2" bolts at 12" o.c. Bldg 57



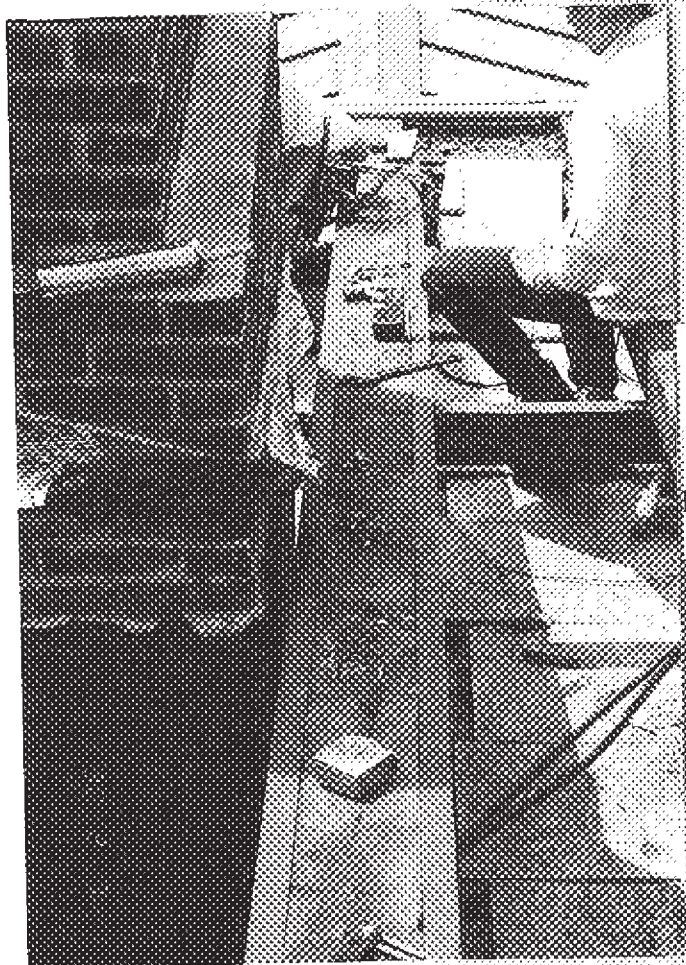
Install 2-cax7.25 each side of  
top cord. Bldg 57



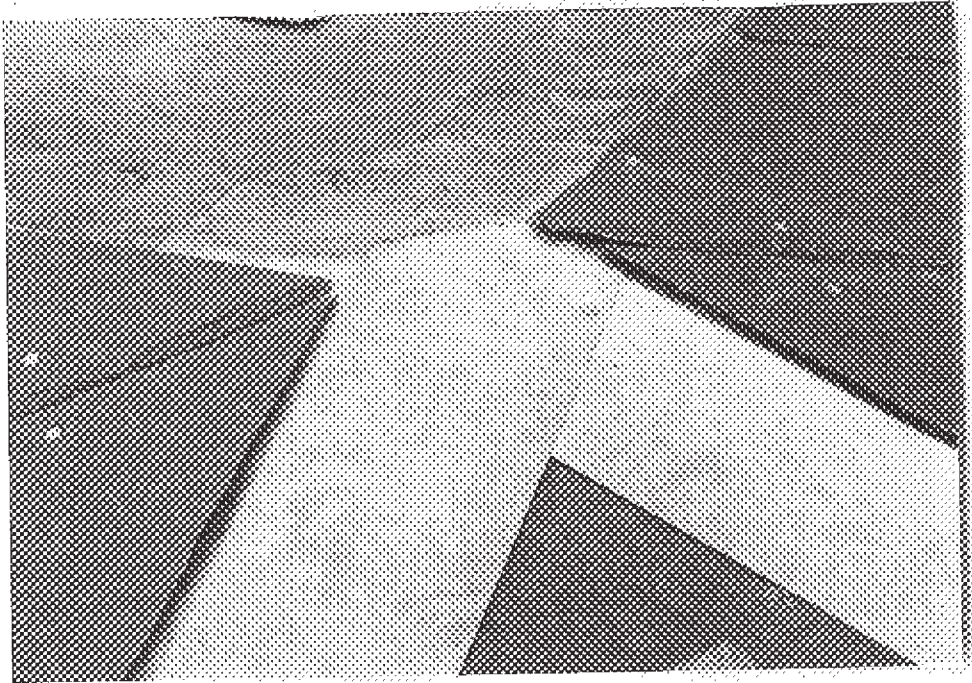
Install 2-cax7.25 each side of  
top cord. Bldg 57



Install 2-cax7.25 each side  
of the top cord. Bldg 57



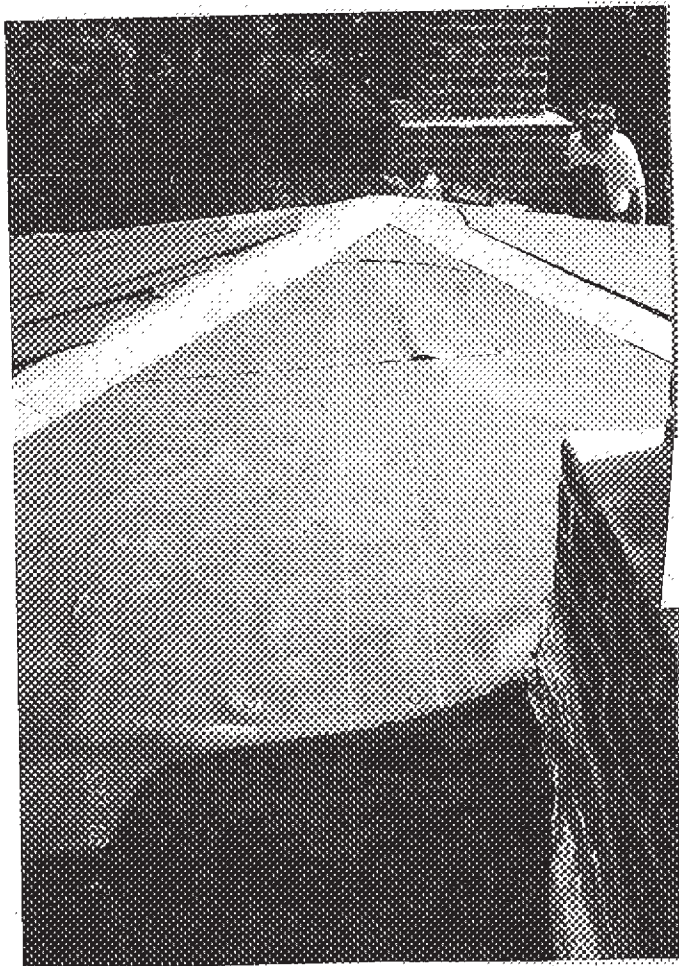
Main truss reinforcement. Bldg 57



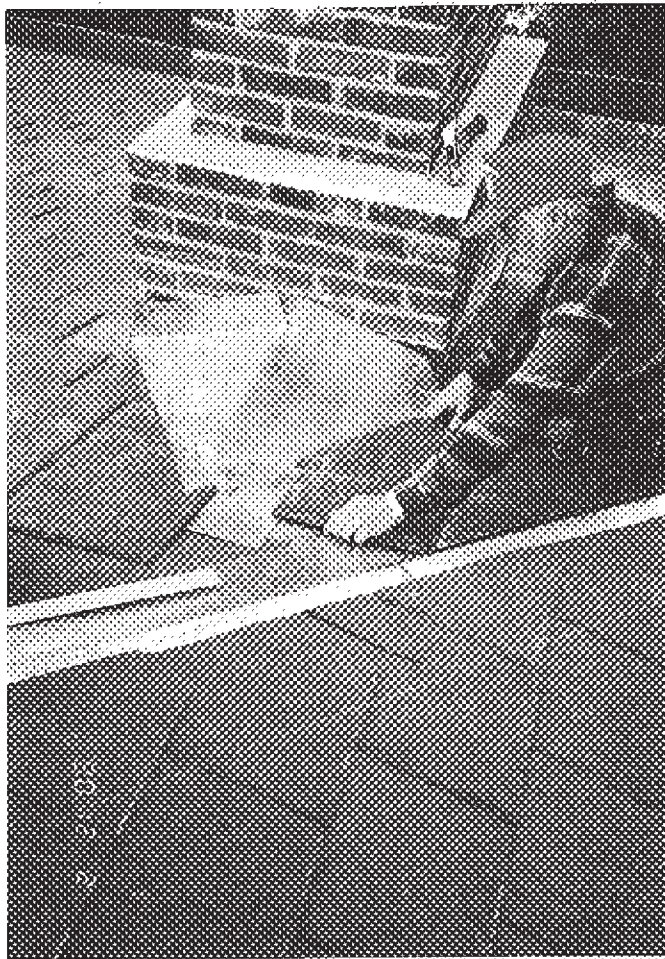
Plan at hip eave. Bldg 58



Plan and hip apex. Bldg 57



Plan at hip eave. Bldg 58



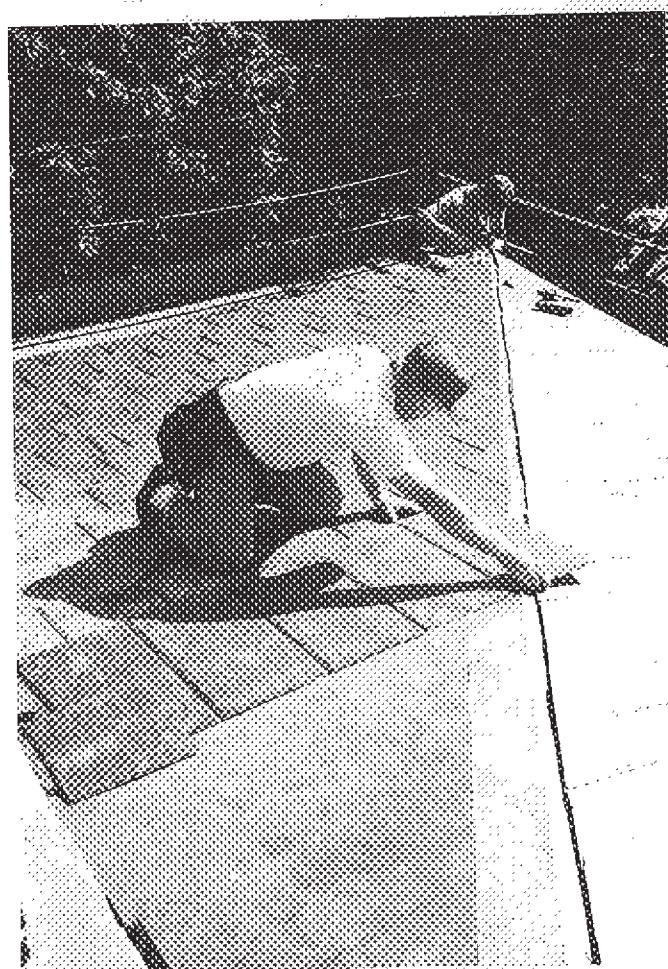
Cricket detail 16 oz. LCC  
crickett over rosin sized paper.  
Bldg 57



Point with elastic  
cement over lap  
comb slate. Bldg 57



Overlap and cut of comb slate. Bldg 58



Overlap and cut of  
comb slate. Bldg 58



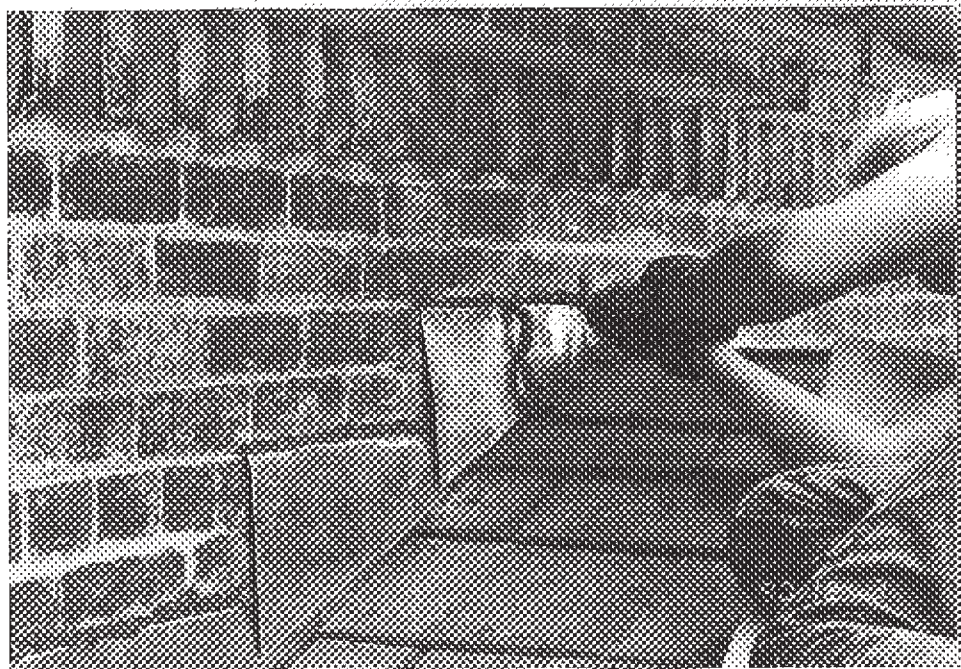
Cutting slate.



Cutting slate.



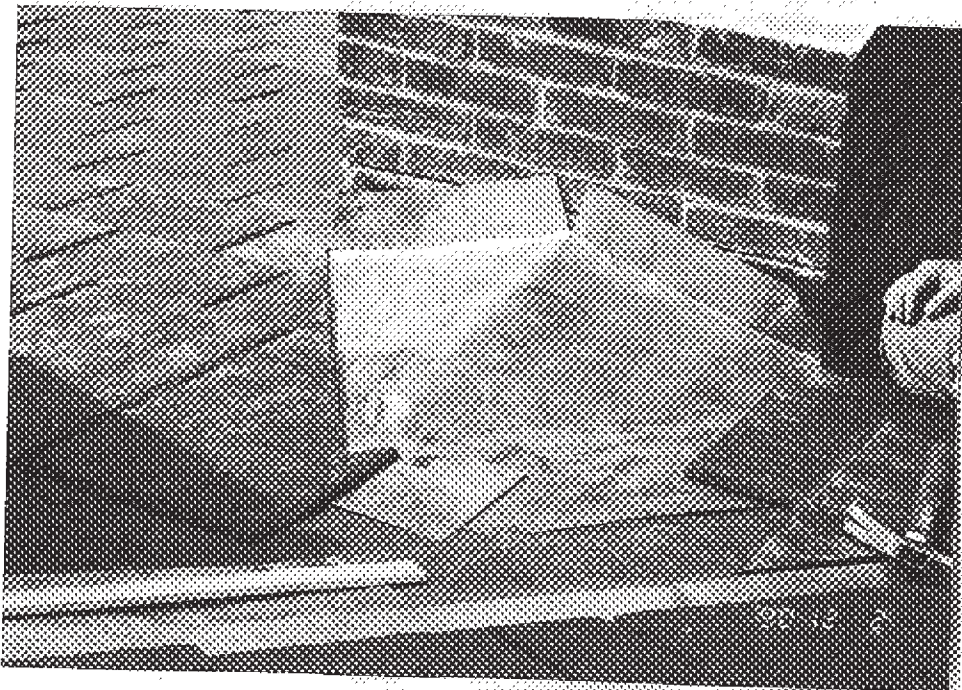
Typical counterflash  
set into brick joint.



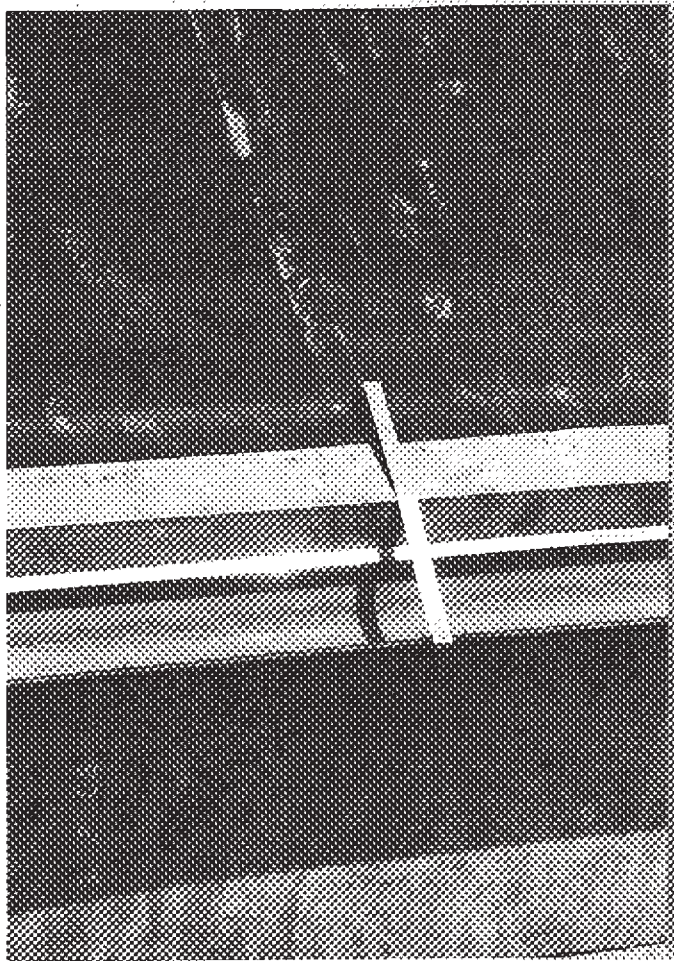
Counterflash set into raked mortar  
joint. Anchor with 1" long lead  
wedges 1" long. Joint was filled  
with 1/4" of face with lead  
oakum. Dresse to face with lead  
wool and tool.



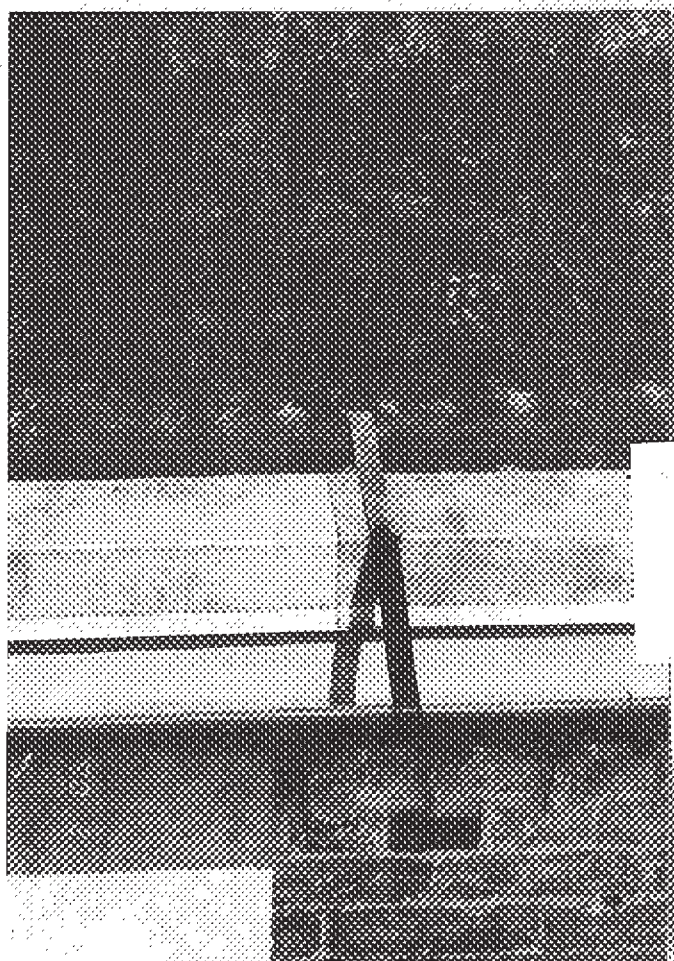
Cricket detail 16 oz. LCC crickett  
over rosin sized paper.



Cricket detail 16 oz. LCC crickett  
over rosin sized paper



Reinforce existing  
gutter with 20 oz. lead  
coated copper 1" wide  
straps.



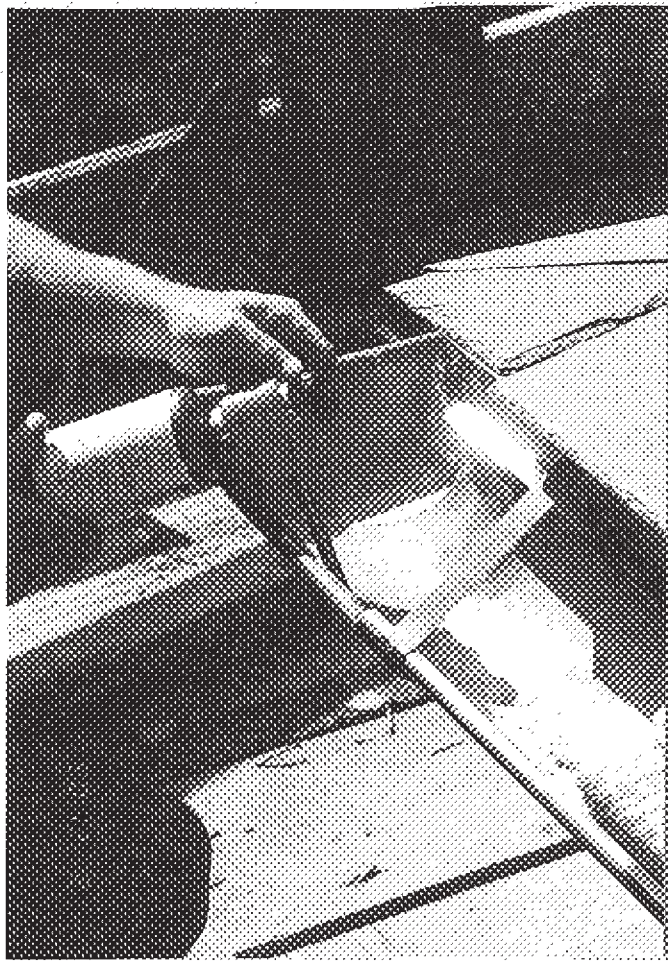
Reinforce existing  
gutter with 20 oz. lead  
coated copper 1" wide  
straps.



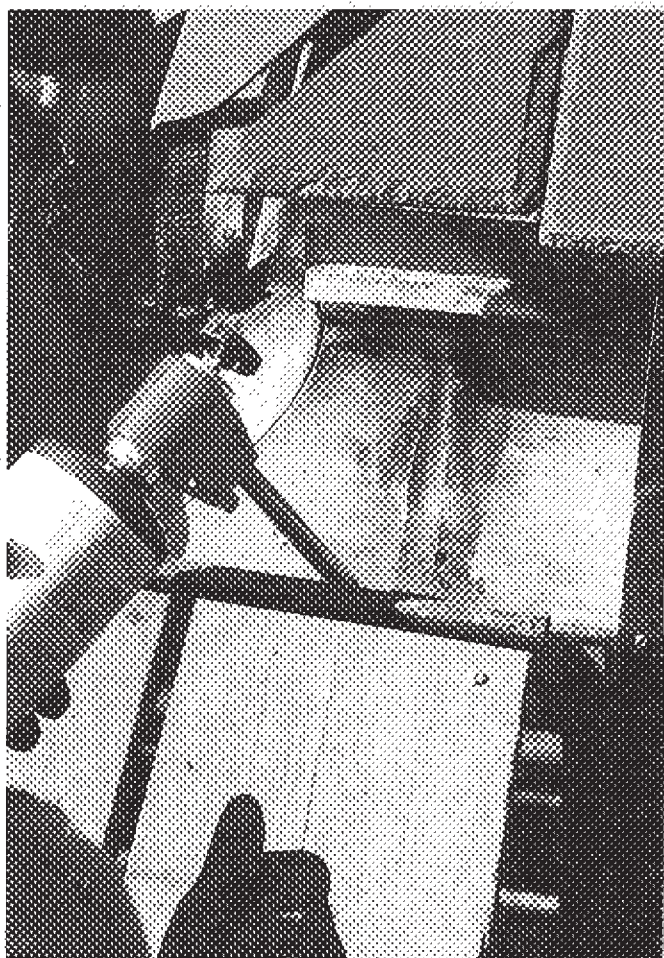
Step flashing.



Step flashing.



Field soldering.



Field soldering.



Completed slate roof.

LIST OF SUBCONTRACTORS (Bldg. 57 & 58 new slate roof):

| <u>Trade</u>        | <u>Company</u>   | <u>Contact</u> | <u>Address</u>                                | <u>Phone</u> |
|---------------------|------------------|----------------|-----------------------------------------------|--------------|
| Roofing             | Bob's Roofing    | Robert Irving  | Charles Town, WV<br>25414                     | 304/725-5772 |
| Structural<br>Steel | Virginia Riggers | Steve Should   | 675 Poor House Rd.<br>Winchester, VA<br>22603 | 304/733-2229 |
| Scaffolding         | A.A. Scaffolding | Lanny Fishel   | 2305 N.E.<br>Washington, DC<br>22018          | 202/526-8800 |

Source of slate--Robert Irving presented a sample of 12"x24" slate which came from Penargyl, Pennsylvania. Quarry--Daley & Sons, Penargyl, PA, telephone--610/863-4172.