

REHABILITATION OF THE EXTERIOR DOORS AT JOHN BROWN'S FORT, BUILDING #63

**HARPERS FERRY NATIONAL HISTORICAL PARK
HARPERS FERRY, WEST VIRGINIA**

HISTORIC STRUCTURES RECORD OF TREATMENT



HISTORIC PRESERVATION TRAINING CENTER

**Department of Interior
National Park Service
4801A Urbana Pike
Frederick, MD 21704**

REHABILITATION OF THE EXTERIOR DOORS AT JOHN BROWN'S FORT, BUILDING #63

HARPERS FERRY NATIONAL HISTORICAL PARK
FY00

HISTORIC STRUCTURES RECORD OF TREATMENT

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Accounting

United States Department of the Interior
National Park Service

Composition of Cost for Completion Report

Work Order Number:

3850-9907-477

Fund Symbol: 477**Year Programmed:**
FY00**Park:** Harpers Ferry National Historical Park**Region:** NCR**Location in Park:** John Brown's Fort Bldg. # 63**Work Order Title:** Rehabilitation of the Exterior Doors

Composition of Cost

Costs Charged to Funds Allotted to Field Finance Office

(1) Personal Services

\$19,960.00

(2) Travel

(3) Contract Work

(4) Supplies and Materials

2,353.00

(5) Other Direct Expenses

347.00

(6) Operation of Equipment

835.00

(7) Depreciation of Equipment

(8) Purchase of Construction Equipment

(9) Purchase of Other Accountable Equipment

(10) Overhead

7,832.00

Total Cost Charged to FFO Funds**\$31,327.00**



Narrative

Narrative Statement

REHABILITATION OF THE EXTERIOR DOORS AT JOHN BROWN'S FORT, BUILDING #63 Harpers Ferry National Historical Park, FY00

Work Order # 3580-9907-477

Description of Project

The doors, frames, transoms, side-lites, thresholds, and hardware of three door units, the five arched, clerestory windows as well as the two rectangular windows of John Brown Fort, Building #63 were rehabilitated. The integrity of the three door units and windows was restored by repairing and replacing selective units, and the causes of decay inherent to the door units were mitigated.

Project History

This report describes the work started by the Historic Preservation Training Center (HPTC) on February 21, 2000. Work was completed on April 21, 2000. The scope of the project initially included the doors, frames, transoms, side-lites, thresholds and hardware of the three door units. A memo dated February 7, 2000 attached an amendment to the project to include repairing the five arched, clerestory windows as well as the two rectangular windows of the John Brown Fort. Only the scope, schedule and the cost estimate of the final Project Agreement were modified. Three punch list items were completed by May 18, 2000.

The Fort, located at the Harpers Ferry National Historical Park, Harpers Ferry, West Virginia, was built in 1848. Since its construction, the fort has been moved at least four times and presumably has undergone changes to fabric and design with each move. In 1976, The Denver Service Center (DSC) prepared construction documents for the extensive repairs made to the structure. Due to its four relocations, the campaign of repairs in 1976, and its location in the pernicious environment of the river bottom land, it is likely that there is little extant historic fabric in the wooden components of the door units. In February 1998, the HPTC prepared a condition assessment report with associated preservation repairs for the John Brown fort. In preparation for the John Brown Symposium, the Park saw fit to preserve the Fort. As a result, the HPTC was requested to provide a preservation team to perform some of the tasks specified in that report. Several HAFE staff members worked with the HPTC crew, with the intent of providing them with training.

Clearance

Section 106 clearance of this work was handled under the Programmatic Agreement among Harpers Ferry National Historical Park, The Advisory Council on Historic Preservation and the West Virginia State Historic Preservation Office Regarding 1996 Flood/Storm Recovery Efforts approved by the Advisory Council on April 30, 1999.

Summary of Work

A primary item in the Task Directive called for the preservation of three door units, one window transom, five arched clerestory windows and two rectangular windows. Work began with the removal of all windows, transoms and side-lites. All sashes were numbered and labeled according to the fenestration nomenclature indicated in the Condition Assessment completed in February 1998. In an effort to maintain security and protection from the weather, temporary plywood coverings were installed over the window openings, except in WT107, where Plexiglas was installed, as was called for in the pre-construction meeting. The temporary panels were installed, by the least invasive means possible, utilizing the existing screw holes. Several of the components from Guard Room door (D101) were removed including the brick mold on the east side, 3 of 4 vertical supports of the framing system, left and right sidelight sills, left and right-side panels. The mullion between sections A and B was removed from WT102, the subsill of W110, the remaining mullions in WT102, the sill of WT102 and D101 for replication. Temporary panels were also installed while the doors were removed; however, one of the doors was always in place during the project, to allow public access to the Engine Room (101).

The sash were taken to the HPTC woodshop in Frederick, Maryland for repairs. The Harpers Ferry (HAFE) maintenance shop was used for millwork for replacement jambs, door side-lite sills, side panels on W101, and the subsill of W110. Mahogany was used for all replacement components, as specified in the Project Agreement. Other millwork was done at the HPTC Shop. This included fabrication of materials such as brick molds, mullions, and various window components. All replacement materials were treated with water repellent wood preservative, as prescribed in the project agreement. D101 was taken to HPTC for repair.

The window and doorjambs were prepared for repairs and painting. Repairs to the jambs were primarily done with epoxy. An epoxy consolidant was used first, then an epoxy filler was used to build up the deteriorated areas. Once cured, chisels and sandpaper were used to shape the repairs. Jambs were damp scraped to remove loose paint and caulking. The jambs were then sanded to attain a paintable surface, and primed, using an oil-based primer.

Treatment of the sash and casings was performed at the Jenkins Facility of HPTC. All lead work was performed in a designated structure and in compliance with the aforementioned compliance plan. All sash were identified and all lights (panes of glass) were labeled prior to removal. During the glass removal process, wooden boxes were placed under the sash frame and a heat gun was used to heat the air space under the sash. This allowed the glass to heat more evenly and increased the rate of retention. Putty softeners were used in conjunction with pieces of Masonite to heat the glazing. Scrapers and utility knives were then used to remove the warm glazing. Once the glass was removed, the paint was removed by means of damp scraping, using various hand profile scrapers, hand-held misters, and heat guns. As this project was not designated as a lead-abatement project, paint was removed to a sound surface, or as necessary to perform repairs. Prior to any repairs, the wood components were vacuumed with a HEPA vacuum and wiped down with a trisodium phosphate solution. Once the glass was removed, it was stored until it could be cleaned for reinstallation.

Existing components were inspected, and if found to be in good condition, no work was performed. In most cases, some repairs were necessary and in a limited number of instances, it was necessary to replace components. Where it was necessary, components were replaced with mahogany. The typical repairs were accomplished using dutchmen or epoxy-based wood filler. All repairs and glass replacement were documented on shop drawings, which have been included in this report.

Following the repair the sash were reglazed. The existing glass was cleaned and reinstalled when possible.

Broken lights were replaced with salvaged historic glass or modern restoration glass. Putty beds were primed with a boiled linseed oil. The glass was back-bedded and held in place with glazing points, and then face-glazed. The glazing compound was a pure linseed oil putty, which required approximately 28 days to cure.

Once the glazing was cured, the glass was cleaned again, in preparation for the paint. An alkyd primer was used, followed by two latex topcoats, using both interior and exterior paints on the corresponding surfaces. Due to rodent infestation at the HPTC shop, approximately 50 percent of the sash had to be reglazed, which altered the schedule slightly. Colors and specifics of the paints used are documented in the Material Data/Vendors section of this report.

The subsill of W110 was completed, back primed, and set in place. Replacement of the sill of WT102 was completed. Replacement jambs, sills for DSL1 and DSL2 were installed. The locations and types of wood replacement are documented in the drawings of this report. Masonry work was performed by HAFE staff, to set the sills on the east elevation. Flagstone was installed under the new sill to replace the mortar joint that was in excess of one inch. This was approved by Lynne Wigfield and Peter Dessauer.

Preliminary swab tests indicated a low level of lead in certain elements. Paint chip samples were sent to Mets Labs for analysis, which confirmed the presence of lead. In the sample taken from WT102, the lead represented 4.35 percent by weight. The other three samples had less than one percent lead, by weight.

Due to the presence of lead, an OSHA Written Compliance document (which is included in this document) was written. That document established the protocol for handling materials with lead-based paint on site, and at the HPTC shop facility. As a part of this, all employees handling the materials with lead-based paint were certified as Lead Abatement Workers. They were required to wear proper personal protective equipment, and were also subject the medical surveillance, as established in the protocol document. Two sash did not require any new glazing. Twenty-four of the sash were completely reglazed, equaling sixty-three percent of the sash. Only twenty-five lights did not have any glazing replaced, representing eight percent of the lights.

As was the case with the sash, jambs and other components, an initial inspection was conducted to determine the level of treatment necessary. Repairs to the doors included dutchman repairs affixed by means of galvanized cut nails and polyurethane glue. Epoxy was used to fill the smaller cracks. Again, the replacement material used was mahogany. Because the doors did not have any lead-based paint, they were sanded in the shop, prior to paint application.

Hardware was cleaned by means of wire brush, then primed and painted. The paint system used for the hardware utilizes a cold galvanizing compound, followed by latex topcoats.

The sash were reinstalled by means of stainless-steel fasteners, and are not painted or caulked shut, for easy removal. This feature should be maintained for future maintenance. Doors were rehung, with hardware attached and waxed where appropriate.



Selected Photographs



Photo 1: Guard Room Door (D101) and side-lites prior to repairs.



Photo 2: Deterioration of door jamb due to moisture damage.



Photo 3: Moisture damaged side-panel from Guard Room Door.



Photo 4: Deteriorated mullion and sill of WT103.



Photo 5: Dutchman repair of arched sash, using mahogany.



Photo 6: Installation and clean-up of site.



Photo 7: Installation of transom and side-lite sash.



Photo 8: John Brown's Fort at close of project.



Project Agreement

I. DESCRIPTION OF THE PROJECT

Work to be executed under this Project Agreement consists of rehabilitating the doors, frames, transoms, side-lites, thresholds, and hardware of three door units on the north elevation of John Brown's Fort, Building # 63. The Fort, located at the Harpers Ferry National Historical Park, Harpers Ferry, West Virginia, was built in 1848. Since its construction, the fort has been moved at least four times and presumably has undergone changes to fabric and design with each move. In 1976, the Denver Service Center (DSC) prepared construction documents for the extensive repairs made to the structure. Due to its four relocations, the campaign of repairs in 1976, and its location in the pernicious environment of the river bottom land, it is likely that there is little extant historic fabric in the wooden components of the door units. In February, 1998, the Historic Preservation Training Center (HPTC) prepared a condition assessment report with associated preservation repairs for the John Brown Fort. Recently, the HPTC has been requested to provide a preservation team to perform the some of the tasks specified in that report.

The three door units exhibit a number of deficiencies which have root causes in poor initial design, severe environmental conditions, insect infestation, and a poor choice of construction materials. This phase of work has two primary goals: first, restoring the integrity of the door units by repairing and replacing selective units, and second, mitigating any causes of the decay that are inherent to the door units. All work performed by the HPTC will be guided by the "Condition Assessment Report and Preservation Repairs" prepared by the HPTC and dated February, 1999.

In general, the HPTC will replace rather than repair badly deteriorated non-historic components. Replacement material will be of a species determined at a later date and shall accommodate the function, appearance, and environment. No heroic measures will be taken to save non-historic material. Material whose period of construction cannot be identified will be treated as historic material and will be repaired if possible. *Preliminary swab tests indicate a low level of lead in certain elements; therefore, tasks associated with those elements will be performed in compliance with OSHA Standard 1926.62.*

II. SCOPE OF THE PROJECT

The Historic Preservation Training Center will serve as the preservation specialists to complete the rehabilitation tasks of the three door units of the John Brown Fort. When complete, this work will result in door units that are in good condition, have an increased serviceable life, and are better able to function.

TASK: #1. Develop Door Repair Drawings and Door Removal Plan

Prepare drawings for the repair of each door unit. Drawings or measured field sketches which will address hardware, thresholds, transoms, jambs, etc. Develop a schedule for removing doors and installing temporary doors if necessary. These drawings and schedules will be included in the Record of Treatment.

TASK: #2. Rehabilitate Door Unit D101, DSL1, DSL2, and WT101

General: Remove entire door unit including door, side-lites, jamb, and transom from site and perform repairs at HPTC wood crafting shop. Abate lead as necessary to make wood repairs and provide a sound substrate for paint finishes. Re-point masonry as needed to install transom and jamb using a type 'O' mix (1 part cement: 2 parts lime: 7 parts sand.) The actual mix may vary slightly based on findings of the HAFE exhibits specialist. Reinstall wood components using galvanized cut nails to match historic fasteners and nailing patterns.

Door and Jamb: Remove deteriorated components and repair or replace; species of wood to be determined by HPTC project supervisor and HAFE architect. Match extant size and profiles with new components. Treat all replacement material or repaired components with water repellent wood preservative and apply alkyd primer prior to repair, installation, or assembly. Any unpainted and unseen wood components such as nailers will be treated with borates or replaced with CCA treated lumber. After the door and jamb are repaired, they will receive two topcoats of latex paint (color to be specified by the park; best quality Benjamin Moore.) Re-install door and jamb with serviceable existing hardware. Verify condition of threshold and repair or replace.

Side-lites and transom: Remove failed glazing. Remove deteriorated wood components and repair or replace; species of wood to be determined by HPTC project supervisor and HAFE architect. Match extant size and profiles with new components. Treat all replacement material or repaired components with water repellent wood preservative and apply alkyd primer prior to repair, installation, or assembly. Replace any broken panes of glass with double strength glass. Backbed and glaze using linseed oil putty. Any unpainted and unseen wood components such as nailers will be treated with borates or replaced with CCA treated lumber. After the side-lites and transom are repaired they will receive two topcoats of latex paint (color to be specified by the park; best quality Benjamin Moore.)
Re-install side-lites and transom door.

Hardware: Remove existing door hardware from jambs and doors. Remove all paints and rust using paint strippers and steel wool. Apply rust consolidant and metal primer prior to latex topcoats.

TASK: #3. Rehabilitate Door Unit D102 and WT102

General: Repair on site or remove entire door unit including doors, jamb, and transom from site and perform repairs at HPTC wood crafting shop. Re-point masonry as needed to install transom and jamb using a type 'S' mix (1 part cement: 2 parts lime: 7 parts sand.) Reinstall wood components using galvanized cut nails to match historic fasteners and nailing patterns.

Doors and Jamb: Remove deteriorated components and repair or replace; species of wood to be determined by HPTC project supervisor and HAFE architect. Match extant size and profiles with new components. Treat all replacement material or repaired components with water repellent wood preservative and apply alkyd primer prior to repair, installation, or assembly. Any unpainted and unseen wood components such as nailers will be treated with borates or replaced with CCA treated lumber. After the doors and jamb are repaired, they will receive two topcoats

of latex paint (color to be specified by the park; best quality Benjamin Moore.) Re- install doors and jamb with serviceable existing hardware. Verify condition of threshold and repair or replace.

Transom: Remove failed glazing. Remove deteriorated wood components and repair or replace; species of wood to be determined by HPTC project supervisor and HAFE architect. Match extant size and profiles with new components. Treat all replacement material or repaired components with water repellent wood preservative and apply alkyd primer prior to repair, installation, or assembly. Replace any broken panes of glass with double strength glass. Backbed and glaze using linseed oil putty. Any unpainted and unseen wood components such as nailers will be treated with borates or replaced with CCA treated lumber. After the transom is repaired it will receive two topcoats of latex paint (color to be specified by the park; best quality Benjamin Moore.) Re- install transom.

Hardware: Remove and existing door hardware from jambs and doors. Remove all paints and rust using paint strippers and steel wool. Apply rust consolidant and metal primer prior to latex topcoats.

TASK: #4. Rehabilitate Door Unit D103 and WT103

General: Repair in place or remove entire door unit including doors, jamb, and transom from site and perform repairs at HPTC wood crafting shop. Re-point masonry as needed to install transom and jamb using a type 'S' mix (1 part cement: 2 parts lime: 7 parts sand.) Reinstall wood components using galvanized cut nails to match historic fasteners and nailing patterns.

Doors and Jamb: Remove deteriorated components and repair or replace; species of wood to be determined by HPTC project supervisor and HAFE architect. Match extant size and profiles with new components. Treat all replacement material or repaired components with water repellent wood preservative and apply alkyd primer prior to repair, installation, or assembly. Any unpainted and unseen wood components such as nailers will be treated with borates or replaced with CCA treated lumber. After the doors and jamb are repaired, they will receive two topcoats of latex paint (color to be specified by the park; best quality Benjamin Moore.) Re- install doors and jamb with serviceable existing hardware. Verify condition of threshold and repair or replace.

Transom: Remove failed glazing. Remove deteriorated wood components and repair or replace; species of wood to be determined by HPTC project supervisor and HAFE architect. Match extant size and profiles with new components. Treat all replacement material or repaired components with water repellent wood preservative and apply alkyd primer prior to repair, installation, or assembly. Replace any broken panes of glass with double strength glass. Backbed and glaze using linseed oil putty. Any unpainted and unseen wood components such as nailers will be treated with borates or replaced with CCA treated lumber. After the transom is repaired it will receive two topcoats of latex paint (color to be specified by the park; best quality Benjamin Moore.) Re- install transom.

Hardware: Remove and existing door hardware from jambs and doors. Remove all paints and rust using paint strippers and steel wool. Apply rust consolidant and metal primer prior to latex topcoats.

NOTE: *All preservation work performed by the Historic Preservation Training Center will comply with the Secretary of the Interior's Standards for historic projects.*

III. STRUCTURE DESCRIPTION

The masonry structure known as John Brown's Fort was designed and constructed as an engine/guard house in 1848. It is a one-story gable roofed structure that gained its significance when John Brown stormed the Harpers Ferry armory and seized the engine house. Having been moved at least four times, the structure is likely to have been modified during its existence. In 1976, The roof framing, roof, cupola, and many millwork elements were all replaced.

IV. DATA COLLECTION

The following documents provided historical, existing condition assessments, structure specific recommendations, and management guidelines for this project:

"Condition Assessment Report and Preservation Repairs", prepared by Tony Donald and Tom Vitanza, HPTC, dated February 1988.

V. COMPLIANCE

Section 106 clearance of this work will be handled under the Programmatic Agreement HAFE has with the West Virginia SHPO for the flood/storm recovery program. The agreement was approved by the Advisory Council on April 30, 1999.

VI. PROJECT COORDINATION

The successful execution of this project will depend upon the timely completion of any and all necessary actions as outlined by each of the following parties to this Project Agreement:

HPTC: Review existing documentation and reports and prepare a Project Agreement and associated cost estimate describing project work.

Coordinate phasing of the work performed by the HPTC's preservation team. Particular attention will be paid to the temporary closing of exits during site work. A plan of closures will be submitted to the park.

Conduct resource orientation, preconstruction, final inspection, and other such on-site, project-related meetings as required. Provide project supervision and inspection services for all work performed by the HPTC's preservation team.

Provide crafts people to perform all construction activity outlined in Section VII, Products.

Provide weekly reports on project progress and activities will be sent electronically.

Photographs documenting all aspects of the project will be taken and submitted to the park.

HAFE: Consistent with the provisions of this Project Agreement, provide access to the project site for the preservation team and any related contract or supply or service contract associated with the project work or as stipulated at the preconstruction conference.

Transfer funds in a timely manner after a final Project Agreement has been prepared and approved.

Provide any and all necessary clearances and/or permits for the project including federal, state, and local permits required.

Review, comment, and approve/reject all project submittals in a timely manner.

Designate a single administrative contact for the duration of the project.

Provide use of park rest room facilities for the duration of the project.

Matters regarding site-related issues (access, closures, signing, etc.) will be determined by the HPTC and HAFE. The HPTC's project leader may vary from time-to-time, but at all times a designated person will retain on-site authority and serve as the immediate HPTC project contact. HPTC project leaders do not have approval authority on matters concerning time, money, scope of work, or design changes. Matters regarding project objectives and/or design-related issues will be determined by approved compliance and design documents; any unresolved issues or changes will be handled between HAFE and the HPTC's supervisory staff. Matters regarding logistics and/or techniques of project execution will be determined by the HPTC. Further refinement of these roles and responsibilities will be discussed at the preconstruction meeting.

VII. PRODUCTS

Products to be furnished by the agreements within this Project Agreement from the HPTC to the HAFE are:

1. Completion of construction tasks as detailed in Section II of this Project Agreement.
2. Preparation of a Record of Treatment that documents the project with a narrative, correspondence, photographs, sketches, weekly reports, materials lists, etc.

The HPTC shall prepare a Record of Treatment for this project in accordance with the NPS

Director's Order (DO) #28, Cultural Resource Management. The Record of Treatment includes account data, photographs, sketches, narrative, and correspondence outlining the course of work, conditions encountered, and materials used.

The HPTC shall provide limited distribution of the Record of Treatment. Broad distributions of the Record of Treatment as outlined in Appendix D, DO #28 shall be the responsibility of the park. The HPTC shall provide the original Record of Treatment copy packaged in an archival folder and in loose-leaf format to the park with all-original photographs and negatives. The park shall also receive a spiral bound copy of the report with selected photos for their record. In addition, the Park shall receive an electronic version issued on a CD-ROM. The HPTC shall retain a copy with duplicates of all photographs for the HPTC's library. The HPTC shall distribute spiral bound Record of Treatment reports with photocopied images and selected photographs to the HPTC Deputy Superintendent, the designated Project Leader, the System Support Office, the Harpers Ferry Center Library, and the DSC Technical Information Center.

VIII. ESTIMATED SCHEDULE

Final Project Agreement:	August, 1999
Project Start Date:	December, 1999
Project Completion Date:	April, 2000
Distribute Project Record:	August, 2000

IX. COST ESTIMATE

TASK: #1. Develop Door Repair Drawings and Door Removal Plan

LABOR	
(1) Exhibits Specialist @ 1 wk.	1,360
SUBTOTAL	1,360

TASK: #2. Rehabilitate Door Unit D101, DSL1, DSL2, and WT101

LABOR	
(1) Exhibits Specialist @ 1 wk.	1,360
(1) Preservation Specialist @ 2 wk.	2,170
(1) Maintenance Helper @ 2 wk.	1,800
MATERIALS	
Wood pine, paint, primer, glass, etc.	300
SUBTOTAL	5,630

TASK: #3. Rehabilitate Door Unit D102 and WT102

LABOR	
(1) Exhibits Specialist @ .5 wk.	680
(1) Preservation Specialist @ 1 wk.	1,085

(1) Maintenance Helper @ 1 wk.	900
MATERIALS	
Wood pine, paint, primer, glass, etc.	150
SUBTOTAL	2,815

TASK: #4. Rehabilitate Door Unit D103 and WT103

LABOR	
(1) Exhibits Specialist @ .5 wk.	680
(1) Preservation Specialist @ .5 wk.	543
(1) Maintenance Helper @ .5 wk.	450
MATERIALS	
Wood pine, paint, primer, glass, etc.	50
SUBTOTAL	1,673

ITEM #5. Project-Related Costs

Tool Maintenance	225
Vehicles	480
Project Supervision	1,000
SUBTOTAL	1,705

COST SUMMARY

Task #1. Subtotal	1,360
Task #2. Subtotal	5,630
Task #3. Subtotal	2,815
Task #4. Subtotal	1,673
Item #5. Subtotal	1,705
SUBTOTAL	13,183
Overhead	4,394
TOTAL	17,577

***NOTE:** HPTC's salaries are calculated on a pay period basis. The number of pay periods is based upon an estimate of the total amount of hours required for each team member to complete the required project tasks. The hourly rate for each occupation is determined by combining the*

direct hourly rate plus benefits with a prorated amount for the indirect costs of annual and sick leave, holidays, and training time.

X. PROJECT TEAM

HPTC: Chris McGuigan, Project Supervisor
Amy Hite, Project Leader

HAFE: Peter Dessauer, Historical Architect

XI. TRAINING

It is the objective of the HPTC to expand our programs by providing opportunities for all NPS employees to receive training which increases their appropriate levels of sensitivity and responsibility in the recognition and implementation of historic preservation of cultural resources. The focus of HPTC's training is on work-based learning and skill improvement.

Various aspects of this project offer different learning opportunities for those involved in its execution. The HPTC shall make every effort to maximize the training potential of the project described in this Project Agreement by scheduling HPTC's staff, program participants, and Park personnel to appropriate project duties. General training objectives have been developed for this project and are listed below:

1. To repair extant door units in a historical fashion using modern tools. Joinery, molding profiles will match historic elements.
2. To repair an historic glass transoms and sidelights preserving historic joinery techniques while employing modern power tools.

XII. SAFETY

Worker and visitor safety is a primary concern within the NPS. Safety awareness and compliance shall be both a team and individual concern, with all parties striving to attain a safer work environment.

GENERAL

- This HPTC project is a hard hat area in compliance with OSHA regulations. All persons entering the designated work area will wear an approved hard hat at all times. The HPTC section chiefs are the only individuals who may grant exception to this HPTC policy.

- The HPTC Project Leader is the primary “competent person” on site, for enforcing compliance with all safety-related issues.
- Project leaders shall conduct weekly “tailgate safety meetings” with workers assigned to the project.
- All HPTC project work shall be conducted in accordance with OSHA regulations – 29 CFR Part 1926.
- Employees will conduct all work activities consistent with applicable OSHA standards and the HPTC safety plan.
- The project leader will develop a safety plan to effectively deal with the challenges presented by employee exposure to lead.
- On all HPTC projects, the HPTC is responsible for completing and submitting all applicable forms required for reporting an accident and following through until all requirements are met. The HPTC Project Leader, under the direction of the HPTC Project Supervisor is the primary responsible person for completing the necessary paperwork, gathering data, etc.

PRESERVATION WORK ASSIGNMENT - GENERAL GUIDELINES

To foster a better understanding of the Historic Preservation Training Center’s (HPTC) programs and mission, and to enable Park staffs to develop a sense of ownership and feeling of personal involvement in the park project, we have developed the Preservation Work Assignment Program. This program will be offered only if the assignment will afford a “good” training experience for the park staff. Factors such as project leader and crew skill, knowledge and experience levels, type of project, etc., will be considered before the assignment is offered.

The Project Supervisor or HPTC Superintendent will ask the Maintenance Chief of the host park if they would like any of their staff to work with our crew on the project. If they are agreeable, employees will be identified by the park. Developmental objectives will be established after meeting with the park staff.

Midway through the assignment, a progress report (Verbal if assignment is two weeks, written if longer) will be sent to the park staff to solicit their input about how the assignment is progressing. Any problems that have arisen will be solved by the Maintenance Chief and the HPTC Project Supervisor or HPTC Superintendent.

At the end of the assignment, participants will be issued a training certificate, and evaluations will be sent to the participant, the Maintenance Chief/Supervisor, and the Project Leader.

The following criteria will be negotiated between the Maintenance Chief and HPTC Project Supervisor or HPTC Superintendent:

- ◆ Park staff must work the agreed upon number of days on the project

in order to achieve the established objectives.

- ◆ Park staff will work the same schedule as the HPTC crew or as close to it as possible.
- ◆ Park staff must notify the HPTC Project Leader as soon as possible when their employee has called in sick or is taking annual leave. Likewise, the HPTC Project Leader will notify park staff when the crew must return to the HPTC before scheduled. This includes inclement weather arrangements.
- ◆ Park staff must take breaks and lunch period at the project site and not return to the maintenance yard.
- ◆ Park staff must work at the project site during their entire assignment and not leave to perform other park duties.
- ◆ Park staff must provide own tools.

If it is arranged for a park employee to come to the HPTC to work in the Shop, the Training Manager should be notified so that travel arrangements can be made. All of the other above information applies to this situation also.

I. DESCRIPTION OF THE AMENDMENT

Work to be executed under this Amendment includes repairing the five arched, clerestory windows as well as the two rectangular windows of the John Brown Fort. The seven window units exhibit a number of deficiencies which have root causes in poor initial design, severe environmental conditions, insect infestation, and a poor choice of construction materials. This phase of work has two primary goals: first, restoring the integrity of the window units by repairing and replacing selective units, and second, mitigating any causes of the decay that are inherent to the door units. All work performed by the HPTC will be guided by the "Condition Assessment Report and Preservation Repairs" prepared by the HPTC and dated February, 1999.

Only the scope, schedule, and the cost estimate of the final Project Agreement will be modified; all other sections of that document will remain in effect. The costs of this project have been estimated based on the park supplying six person weeks of training/assistance.

In general, the HPTC will replace rather than repair badly deteriorated non-historic components. Replacement material for all of the doors and the additional seven windows will be of either Mahogany or Spanish cedar. No heroic measures will be taken to save non-historic material. Material whose period of construction cannot be identified will be treated as historic material and will be repaired if possible. *Preliminary swab tests indicate a low level of lead in certain elements; therefore, tasks associated with those elements will be performed in compliance with OSHA Standard 1926.62.*

II. SCOPE OF THE PROJECT

The Historic Preservation Training Center will serve as the preservation specialists to complete the rehabilitation tasks of the three door units of the John Brown Fort. When complete, this work will result in door units that are in good condition, have an increased serviceable life, and are better able to function.

TASK: #1. Develop Window Repair Drawings and Window Removal Plan

Prepare drawings for the repair of each window unit. Develop a schedule for removing windows and installing temporary window covers. These drawings and will be included in the Record of Treatment.

TASK: #2. Rehabilitate Seven Window Units

Sash: Remove window sash as necessary to perform repairs at HPTC wood-crafting shop. Abate lead as necessary to make wood repairs and provide a sound substrate for paint finishes. Remove glazing as necessary. Repair or replace wood components as necessary. Allow for 20% replacement components. Replace any broken panes of glass with historic glass. Backbed and glaze using linseed oil putty. Reinstall wood components using galvanized cut nails to match historic fasteners and nailing patterns.

Jamb: Remove deteriorated components and repair or replace with either mahogany or cedar. Match extant size and profiles with new components. Treat all replacement material or repaired components with water repellent wood preservative and apply alkyd primer prior to repair, installation, or assembly. Any unpainted and unseen wood components such as nailers will be treated with borates or replaced with CCA treated lumber.

Finish: After the window and jamb are repaired, they will receive two topcoats of the best quality Benjamin Moore latex paint (color to be specified by the park.)

VIII. ESTIMATED SCHEDULE

Final Project Agreement:	August, 1999
Project Start Date:	February 22, 2000
Project Completion Date:	May 04, 2000
Distribute Project Record:	September, 2000

X. COST ESTIMATE

The Park has agreed to assign two carpenters to work with the HPTC preservation crew for one and one half pay periods each during this project. The training details will provide the HAFE personnel with a wide variety of field and shop experience both with the doors and the windows.

TASK: #1. Develop Window Repair Drawings and Window Removal Plan

LABOR	
(1) Exhibits Specialist @ 1 wk.	1,360
SUBTOTAL	1,360

TASK: #2. Rehabilitate Seven Window Units

LABOR	
(1) Exhibits Specialist @ 2 wk.	2,720
(1) Preservation Specialist @ 2 wk.	2,170
(1) Maintenance Helper @ 2 wk.	1,800
MATERIALS	
Wood pine, paint, primer, glass, etc.	1,645
SUBTOTAL	8,335

ITEM #3. Project-Related Costs

Tool Maintenance	206
Vehicles	412
SUBTOTAL	618

COST SUMMARY

Task #1. Subtotal	1,360
Task #2. Subtotal	8,335
Item #3. Subtotal	618
SUBTOTAL	10,313
Overhead	3,437
TOTAL	13,750

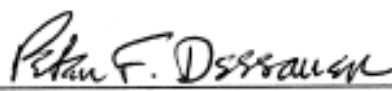


FINAL PROJECT AGREEMENT

REHABILITATION OF THE EXTERIOR DOORS
AT JOHN BROWN'S FORT, BUILDING # 63
HARPERS FERRY NATIONAL HISTORICAL PARK
Harpers Ferry, West Virginia

August 1999

RECOMMENDED:  DATE: 8/25/99
SUPERINTENDENT, HISTORIC PRESERVATION TRAINING CENTER

CONCURRED:  DATE: 8/31/99
HISTORICAL ARCHITECT, HARPERS FERRY NATIONAL HISTORICAL PARK

APPROVED:  DATE: 8/31/99
SUPERINTENDENT, HARPERS FERRY NATIONAL HISTORICAL PARK

Submitted by:
National Park Service
Historic Preservation Training Center
4801-A Urbana Pike
Frederick, Md. 21704

Compliance

**Advisory
Council On
Historic
Preservation**

The Old Post Office Building
1100 Pennsylvania Avenue, NW, #809
Washington, DC 20004

Brace
copy to sup.
RECEIVED
99 MAY -6 PM 12:24
HARPERS FERRY NHP
HARPERS FERRY, W.V.

APR 30 1999

Donald W. Campbell
Superintendent
Harpers Ferry National Historical Park
National Park Service
P.O. Box 65
Harpers Ferry, WV 25425

REF: Programmatic Agreement
Flood/Storm Recovery Efforts
Harpers Ferry National Historical Park
Harpers Ferry, Jefferson County, West Virginia

Dear Mr. Campbell:

Enclosed is your copy of the fully executed Programmatic Agreement for the referenced project. By carrying out the terms of the Agreement, you will fulfill your responsibilities under Section 106 of the National Historic Preservation Act and the Council's regulations. The original Agreement will remain on file at our office.

Thank you for your cooperation.

Sincerely,

Martha Catlin

Martha Catlin
Historic Preservation Specialist
Office of Planning and Review

Enclosure

PROGRAMMATIC AGREEMENT
AMONG
HARPERS FERRY NATIONAL HISTORICAL PARK
THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
AND THE WEST VIRGINIA STATE HISTORIC PRESERVATION OFFICE
REGARDING 1996 FLOOD/STORM RECOVERY EFFORTS

WHEREAS, the National Park Service (NPS) and the National Conference of State Historic Preservation Officers (NCSHPO) executed a Nationwide Programmatic Agreement on July 17, 1995, that establishes a framework for taking into account the effects of park system operation, management and administration on historic properties (as defined in 36 CFR Part 800), delegates historic preservation compliance responsibilities to Park Superintendents, and specifically identifies a number of programmatic exclusions that exclude certain undertakings from further review by either the Council or the West Virginia State Historic Preservation Office (SHPO), consistent with section IV.A. of the 1995 Nationwide Programmatic Agreement; and

WHEREAS, Harpers Ferry National Historical Park (HFNHP), National Capital Region (NCR), NPS, administers many routine undertakings within the park that are not included within the present programmatic exclusions specified in the Nationwide Programmatic Agreement, and that may have an effect on historic properties (as defined in 36 CFR Part 800), which are therefore subject to review under Sections 106, 110(f) and 111(a) of the National Historic Preservation Act as amended (NHPA; 16 U.S.C.470 *et seq.*) and the regulations of the Council (36 CFR Part 800); and

WHEREAS, HFNHP experienced flooding episodes on January 20, 1996 and September 6, 1996 that damaged historic properties and required recovery efforts that may affect these properties; and

WHEREAS, HFNHP has a recent, comprehensive inventory of structures in the park determined to be eligible for the National Register of Historic Places, List of Classified Structures (LCS), and has substantial documentation for archeological resources within the park; and

WHEREAS, HFNHP has established compliance procedures for reviewing all undertakings for potential effects to historic properties, as specified in the Nationwide Programmatic Agreement, and as applied directly to HFNHP as described in Stipulation I.A1. of this agreement; and

WHEREAS, HFNHP has a staff of cultural resource specialists who meet the professional qualifications in 48 FR 44738-40 in the fields of archeology, curation, history, historic landscape architecture, and historic architecture to carry out its historic preservation programs and responsibilities; and

WHEREAS, HFNHP and the West Virginia SHPO have agreed to develop separate agreement documents within the next 5 years to outline procedures for future floods/storms and routine park maintenance; and

WHEREAS, HFNHP and the West Virginia SHPO have agreed that activities listed in Stipulation I. constitute a comprehensive list of all 1996 flood/storm recovery work as identified at the time of the execution of this

agreement including those actions that fall under the programmatic exclusions of the 1995 Nationwide Programmatic Agreement; and

NOW, THEREFORE, HFNHP, the West Virginia SHPO, and the Council mutually agree that HFNHP will carry out its Section 106 responsibilities in accordance with the following stipulations.

STIPULATIONS

HFNHP shall ensure that the following stipulations are carried out:

I. PROJECT REVIEW OF ROUTINE UNDERTAKINGS

A. Consistent with section IV A. of the 1995 Nationwide Programmatic Agreement, HFNHP will review the undertakings listed in I.B of this agreement, without further consultation with the West Virginia SHPO, provided:

1. a compliance committee established by the park's Chief of Interpretation and Cultural Resource Management (who also serves as the park's section 106 coordinator) reviews all proposed undertakings that may impact cultural resources. This committee is chaired by the section 106 coordinator and consists of the following additional park staff members: Chief Ranger, Chief of Maintenance, Chief of Natural Resource Management, Historical Architect, Historical Landscape Architect, Archeologist, and other staff members when appropriate. This committee meets bi-weekly to review undertaking proposals. For section 106 compliance, the Chief of Interpretation and Cultural Resource Management consults with the appropriate staff, the State Historic Preservation Office (SHPO), and the Advisory Council on Historic Preservation (ACHP) to determine the proper preservation/mitigation actions for a proposed project. The committee reviews and determines whether the proposed methods and techniques for the project are appropriate. When an effect will occur, these actions are documented on the NPS "Assessment of Actions Having an Effect on Cultural Resources" (XXX) form prepared and processed by a member of the compliance committee. With the Park Superintendent's approval, this form is submitted to the Council and SHPO. Those projects determined to fall under the category of programmatic exclusions under the 1995 Nationwide Programmatic Agreement are reviewed by the park compliance committee and documented in a compliance database with no further review.

2. that HFNHP identifies the Area of Potential Effects (APE) for each undertaking using the definition contained in 36 CFR Part 800.2(c);

3. that HFNHP identifies and evaluates historic properties within the APE in a manner consistent with the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation and National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation, and assesses the likelihood that unidentified properties exist in the APE;

- a. HFNHP has a List of Classified Structures (LCS) that includes all structures in the park, determined eligible for the National Register. A comprehensive National Register nomination was completed for HFNHP; this nomination was listed in the National Register on October 15, 1966. Consultation with the SHPO regarding identification and evaluation of historic structures will not be required unless the NPS

identifies possible changes in a structure's integrity since it was listed in the LCS and National Register Nomination. HFNHP will continue to maintain an updated inventory of historic structures.

b. Archeological monitoring/testing will be conducted for each undertaking that has the potential to affect archeological resources. As archeological monitoring/testing takes place, documentation in the form of a letter of "no effect" or an Assessment of Effect form will be submitted to the SHPO.

c. If archeological resources are identified that may qualify as historic properties, HFNHP shall ensure that they are evaluated in accordance with 36 CFR Part 800.4(c) to determine their eligibility for inclusion in the National Register of Historic Places.

4. that HFNHP finds that effects on cultural resources in or eligible for the National Register will not be adverse based on criteria in 36 CFR Part 800.9. Any undertaking that has the potential to adversely effect archeological resources determined eligible for the National Register will require consultation with the SHPO in accordance with 36 CFR Part 800; and

5. that the decisions regarding these undertakings are made and carried out in conformity with applicable NPS policies, guidelines, and standards, and are documented by HFNHP using the form for "Assessment of Actions Having an Effect on Cultural Resources."

6. that the "no effect" determination is defined as "projects having little or no potential to have an effect on eligible or listed resources" allowing for the possibility of unforeseen events causing a project to have an unexpected effect on resources, in which case HFNHP will consult with the SHPO.

B. In addition to the undertakings identified in Stipulation IV.B of the 1995 Nationwide Programmatic Agreement, the following undertakings, conducted according to the *Secretary of Interior Standards for Rehabilitation*, may be reviewed under the terms of IA of this Agreement:

VIRGINIUS ISLAND

A number of flood recovery activities will take place on Virginius Island. The majority of undertakings will have little or no potential to have an affect and are in areas that have had previous archeological testing or where the slated activities will not impact cultural resources. In several areas where architectural stabilization is needed, archeological monitoring and/or testing will be necessary. These areas will be documented on a case by case basis and that documentation provided to the SHPO pursuant to Stipulation IA.3b.

Activities Include:

1. desilting of raceway vaults and foundation ruins;
2. stockpiling and staging located in areas known to have been previously disturbed or in areas that have been surveyed and determined to have no cultural deposits;

18. replacement of wooden front porch (first floor) Building 45;
19. modifications to rear and west drainage of Building 45 with all earth moving activities monitored by an archeologist;
20. general interior finishes: new portland cement plaster, replace wood trim, paint, repairs/new plaster ceilings, replace wood floors, stabilize and repair historic plaster in situ (example Building 38 interior);
21. replace/repair and paint rotten or damaged doors and doorways;
22. replace/repair and paint rotten or damaged windows and window frames;
23. repair and paint exterior stairs and porches;
24. replace/repair and paint exterior finishes (wood trim and stucco);
25. foundation stabilization (pointing missing mortar) of Building 45A, stabilize/repair Episcopal Church ruins, roof replacement on Blacksmith Shop;
26. stabilization and painting of John Brown Fort: repairs to roof, windows, doors, walls, and cupola and correction of landscape drainage;
27. stabilization/repairs and painting of interior and exterior Building 48 features;
28. slate roof and masonry repairs to Package 110 Buildings (8,9,10,11,11A,12,12A);
29. repairs/replacement of Buildings 38 and 45 wood shingle roofs;
30. repairs/replacement of Building 39 roof;
31. repairs/replacement of Building 44 slate roof;
32. repairs/replacement of Buildings 1A,1B,1C, and 1D roofs, windows, doors, plaster, stucco, masonry, porches, steps, rails, and repainting;
33. interior repairs to Building 1A, plaster ceiling removal and replacement, HVAC upgrade;
34. roof replacement on Building 40 – also masonry repairs and repainting;
35. repairs to windows, doors, millwork, roofs and painting on Buildings 3, 15, 37, 38, 39, 40, and 43;

**BOLIVAR HEIGHTS, CAVALIER HEIGHTS, LOUDOUN HEIGHTS, MARYLAND HEIGHTS,
POTOMAC WAYSIDE**

Activities Include:

- 61. clearance and clean-up;
- 62. repair roads, trails, landscape, and waysides;

II. PERSONNEL QUALIFICATIONS

- A. HFNHP shall ensure that all historic preservation work performed pursuant to this agreement is carried out by or under the direct supervision of a person or persons whose qualifications are consistent with OPM Standards, 36 CFR Part 61, and Section 112 (a) (1) (B) of the National Historic Preservation Act. Specialists who are not federal employees must meet the standards in 36 CFR Part 61.
- B. If the level of professional expertise at HFNHP changes, the parties will consult to determine whether the Agreement needs to be modified or terminated.

III. MONITORING OF PERFORMANCE UNDER THE AGREEMENT

- A. HFNHP shall ensure that any documentation pertaining to activities carried out pursuant to this agreement are provided to the West Virginia SHPO, as appropriate, and, upon request, to other interested parties.
- B. HFNHP shall ensure that reporting of PA-governed project activities and their status is submitted to the West Virginia SHPO annually in the same month in which the agreement is executed.
- C. If necessary, the parties to this agreement shall engage in further consultation to review implementation of the terms of this agreement and determine whether revisions are needed. If revisions are needed, the parties to this agreement will consult in accordance with 36 CFR Part 800 to make such revisions.

IV. DISCOVERY PROVISION

In the event of an unexpected occurrence or discovery that has an unexpected adverse affect to an eligible or listed resource, or during which previously unidentified resources are discovered, or unexpected prehistoric or historic materials are encountered, HFNHP shall ensure that the West Virginia SHPO is notified.

V. DISPUTE RESOLUTION

- A. Should the West Virginia SHPO or Council object within 30 days to HFNHP's decisions or actions pursuant to

this Agreement, HFNHP will consult with the objecting party to resolve the objection. If HFNHP or the objecting party determine that the objection cannot be resolved, HFNHP shall request the further comments of the Council pursuant to 36 CFR Part 800.6(b). Within 30 days after receipt of all pertinent documentation, the Council will either:

1. provide HFNHP with recommendations which HFNHP will take into account in reaching a final decision regarding the dispute; or
2. notify HFNHP that it will comment pursuant to 36 CFR Part 800.6(b). Any Council comment provided in response to such a request will be taken into account by HFNHP in accordance with 36 CFR Part 800.6(c)(2) with reference only to the subject of the dispute; HFNHP'S responsibility to carry out all actions under this agreement that are not the subjects of the dispute will remain unchanged.

- B. At any time during implementation of the measures stipulated in this agreement, should an objection be raised by interested or affected parties, HFNHP shall take the objection into account and consult as needed with the objecting party, the West Virginia SHPO, as appropriate, or the Council to resolve the objections.

VI. AMENDING THE AGREEMENT

- A. Any party to this Agreement may request that it be modified or amended, whereupon the parties will consult in accordance with 36 CFR Part 800.13 to consider such an amendment.
- B. HFNHP, the West Virginia SHPO and the Council may develop additions to Stipulations I.B and I.C that identify other types of undertakings that they mutually agree may be exempted from review or reviewed internally by HFNHP. Any such additions will be incorporated into this Agreement by an amendment executed by the parties.

VII. TERMINATING THE AGREEMENT

Any party to this Agreement may terminate it by providing thirty- (30) days notice to the other parties. The parties will consult during the period prior to termination in order to seek agreement on amendments or other actions that would negate termination. In the event of termination, HFNHP will follow the processes and provisions set forth in the 1995 Nationwide Programmatic Agreement with regard to individual undertakings covered by this Agreement.

VIII. TERMS OF THE AGREEMENT

- A. This Agreement shall become effective after the date of the last signature and will remain in effect for five years from that date.
- B. At the end of the five-year period, the parties may agree to renew the Agreement based on an exchange of letters expressing mutual agreement by all signatory parties.

IX. FAILURE TO IMPLEMENT THE TERMS OF THE AGREEMENT

HFNHP will, as applicable, follow provisions of 36 CFR Part 800.4 through 800.6 or follow the processes and provisions of the 1995 Nationwide Programmatic Agreement with regard to individual undertakings covered by this Agreement.

Execution and implementation of this Agreement evidences that HFNHP has satisfied its Section 106 responsibilities for all individual undertakings referenced in this Agreement.

ADVISORY COUNCIL ON HISTORIC PRESERVATION

By: John M. Smith Date: 4/3/99
Executive Director

WEST VIRGINIA STATE HISTORIC PRESERVATION OFFICER

By: Susan M. Pierce Date: 4/8/99
West Virginia State Historic
Preservation Officer

HARPERS FERRY NATIONAL HISTORICAL PARK

By: Bruce J. Noble Jr. Date: 3/10/99
Superintendent

NATIONAL PARK SERVICE
DIRECT TEMPORARY HIRE OR LOCAL CONTRACT
14X1039 CONSTRUCTION APPROPRIATION
PWE 404 & 477

=====

DATE: September 1, 1999

PARK: Harpers Ferry National Historical Park PACKAGE NO.: HAF-199 (was 1996)

PROJECT TITLE: Flood/Storm Damage Recovery

FY APPROPRIATED: 1999 COST ACCOUNT NO.: 3850-9903-477

AMOUNT REQUESTED: \$ 17,577.00 PROJECT TYPE: 91

LOCAL CONTRACT ? ☐ TEMP. HIRE ? ☐ # OF HIRE ☐

EXPECTED CONTRACT DATE: September, 1999 HIRING PERIOD: _____

START DATE: October, 1999 COMPLETION DATE: August, 2000

DESCRIPTION/SCOPE OF WORK: The Historic Preservation Training Center (HPTC/NPS) will perform the work - Day Labor. The Contract scope includes rehabilitation of the three principal arched doorways on the north elevation of the historic John Brown Fort, HAF Building #63, erected 1848 as the town fire station - repairs to the doors, frames, transoms, side-lites, glazing, putty, thresholds, hardware, painting, and reinstallation of all carpentry features as necessary to replace rot and flood/storm damages; to make them flood and water resistant; functional and accurate for interpretation and the historic scene; and strong enough to withstand flood load impacts.

HPTC Point of Contact: Doug Hicks/Norma Dale

REGIONAL OFFICE APPROVAL: Vikki Kjekstad, NCR-Budget 202-619-7269
(PERSON RESPONSIBLE & OFFICE)

WORD: FORM_DL.DOC

OPTIONAL FORM 90 (7-90)

FAX TRANSMITTAL

To <u>C. MCGUIGAN</u>		From <u>N. DALE</u>	
Dept./Agency <u>FYE</u>		Phone # _____	
Fax # _____		Fax # _____	

NSN 7540-01-317-7368

5010-101

GENERAL SERVICES ADMINISTRATION



Correspondence

H30(HPTC)

February 7, 2000

Memorandum

To: Superintendent, Harpers Ferry National Historical Park

From: Superintendent, Historic Preservation Training Center

Ref: Rehabilitation of the Exterior Doors at John Brown Fort, Building #63,
Harpers Ferry National Historical Park

Subject: Amendment to the Project Agreement

Attached is an amendment to the Project Agreement of the referenced project. In essence, the Amendment serves to expand the current scope of work to include seven additional windows at the John Brown Fort. This amendment was requested by the Park architect and has been discussed with the Assistant Superintendent. The HPTC has also committed to completing the project before the John Brown Symposium begins in May 2000.

If we can provide any additional information regarding this document, please do not hesitate to contact either Doug Hicks at 301.663.8206 or Chris McGuigan at 301.698.5784.

H. Thomas McGrath

Enclosure

cc:
P. Dessauer, HAFE Architect
L. Wigfield, HAFE Exhibits Specialist
T. Fox, HAFE Chief of Maintenance

H30(HPTC)

May 16, 2000

Memorandum

To: Superintendent, Historic Preservation Training Center

From: Project Leader, Historic Preservation Training Center

Ref: Rehabilitation of the Exterior Doors at John Brown Fort, Building #63,
Harpers Ferry National Historical Park

Subject: Final Inspection Meeting Minutes

The subject meeting was on Monday, May 15, 2000 at 11:00 a.m. The meeting convened at the site of the John Brown Fort. In attendance at the meeting were:

Lynne Wigfield, Exhibit Specialist, Harpers Ferry NHP
Peter Dessauer, Historical Architect, Harpers Ferry NHP
Catherine Bragaw, Park Ranger, Harpers Ferry NHP
Chris McGuigan, Section Chief, Historic Preservation Training Center
Amy Hite, Exhibit Specialist Intern, Historic Preservation Training Center

All completed work was inspected and accepted by Peter Dessauer and Lynne Wigfield. Several punch list items were identified and will be completed by May 18, 2000:

1. Repair, prime and paint sills of W109 and W108
2. Wax lock for D103
3. Fabricate and install exterior battens for W109 and W110

It should be noted that all windows have been installed with stainless steel fasteners, and are not painted or caulked shut, for easy removal. This feature should be maintained.

Excess paint will be turned over to the Park. An artifact box will be turned over to Mia Parsons or Nancy Hatcher.

If there are any questions or comments, please direct them to either Chris McGuigan or Amy Hite at 301.698.5784, both of the Historic Preservation Training Center.

Amy C. Hite

cc: (electronic distribution)
Superintendent, HAFE
Chief of Maintenance, HAFE
Historical Architect, HAFE
Exhibit Specialist, HAFE
Park Ranger, Catherine Bragaw, HAFE



Weekly Reports

**NATIONAL PARK SERVICE
HISTORIC PRESERVATION TRAINING CENTER
WEEKLY FIELD REPORT NUMBER # 01
FY-00**

PARK: Harpers Ferry National Historic Park

PROJECT: Rehabilitation of The Exterior Doors, At John Brown's Fort, Building #63

DATE: March 2, 2000

WEEK ENDING: February 25,2000

GENERAL

This week had only 3 workdays, as Monday was a federal holiday. Lynne Wigfield approved the use of flagstone to reduce the mortar joint (greater than 1 inch), under the subsill of W110. Two park maintenance personnel were assigned to the crew on a cross-over detail for 3 days.

WORK PERFORMED THIS WEEK

On Tuesday the sash of all windows (WT101, WT102, WT103, WT104, WT105, WT106, WT107, WT108, W109, W110, DSL1, and DSL2) were removed. All sash were numbered and labeled according to the fenestration nomenclature indicated in the Condition Assessment completed in February 1998. Plywood coverings were installed over the window openings, except in WT107, where Plexiglas was installed, as was called for in the pre-construction meeting. Also removed from D101 were, brick mold on the east side, 3 of 4 vertical supports of the framing system, left and right sidelight sills, left and right-side panels. The mullion between sections A and B was removed from WT102 for replication. The sash were taken to the HPTC Shop in Frederick, Maryland for repair.

Wednesday more components were removed, to include the subsill of W110, the remaining mullions in WT102, the sill of WT102 and D101. Millwork began at the HAFE maintenance shop for replacement jambs, DSL1 and DSL2 sills, side panels on W101, and the subsill of W110, using Mahogany. All wood/mahogany replacement materials were treated with water repellent wood preservative, as prescribed in the project agreement. D101 was taken to HPTC for repair. Prep work including scraping loose paint, and removing caulking was begun on WT102, WT104, and WT105 openings.

Thursday materials were prepared at HPTC shop. Individual lights of the sash were labeled, and removal of glazing was begun. Fabrication of the side panels was completed. The subsill of W110 was completed, back primed and was set in place. Prep work continued on WT104 opening. Epoxy repairs, consolidation, and filling of WT102, and WT103 began. Replacement of the sill of WT102 was completed. Replacement jambs, sills for DSL1 and DSL2 were installed. All new components were treated and primed in accordance with the above-mentioned protocol.

PROJECTED WORK FOR THE UPCOMING WEEK

Continue removal of glazing, preparation of sash for repair
Begin repair of sash, off-site.

VISITORS TO THE SITE

Lynne Wigfield, HAFE, daily, discussed installation of flagstone under subsill being replaced
Peter Dessauer, HAFE, Tuesday, Thursday, inspect job site
Tim Fox, HAFE, Monday, inspect job site

SAFETY

The wearing of hard hats was the safety topic for the week.

WEATHER

The weather was temperate with sunny conditions, light breezes, and some light rain on Wednesday. Temperatures ranged from the high 30's to the high 40's.

PERSONNEL ASSIGNED TO THE PROJECT

One Exhibits Specialist (Project Leader)
Two Carpenters [one HAFE staff]
One Wood Crafter [HAFE staff]
One Preservation Specialists (Intern)
Two Maintenance Workers (- 3 days)
Two Maintenance Helper Trainees (- 3 days)

RECAP

Starting Date:	February 22, 2000
Completion Date:	May 4, 2000
Percentage Completed:	10 %
Starting Balance:	\$ 31, 327.00

Amy Hite
Project Leader, NPS-HPTC
cc: electronically
Don Campbell, Superintendent, HAFE
Tim Fox, Chief of Maintenance, HAFE
Peter Dessauer, Historical Architect, HAFE
Lynne Wigfield, Exhibit Specialist, HAFE

**NATIONAL PARK SERVICE
HISTORIC PRESERVATION TRAINING CENTER
WEEKLY FIELD REPORT NUMBER # 02
FY-00**

PARK: Harpers Ferry National Historic Park

PROJECT: Rehabilitation of The Exterior Doors, At John Brown's Fort, Building #63

DATE: March 10, 2000

WEEK ENDING: March 10,2000

GENERAL

All work was conducted at the HPTC shop. The results of the paint chip samples that were sent for analysis of lead content were positive. In the sample taken from WT102, lead is present, representing 4.35 percent by weight. The other three samples had less than 1 percent lead, by weight.

Notification was received this week that the masonry work under the subsills of W109 and W110 was completed the week ending February 25, 2000.

WORK PERFORMED THIS WEEK

The removal of glazing and preparation of sash continued. Sash prepared for repairs included the following: WT102 – A, B, C, D; WT103 – A, D; WT104 – D; WT105 – B; WT106 – A,B; WT107 – B; WT108 – C; DSL1 and DSL2.

Repairs were begun on those same sash. This work included total replacement of some components, dutchman, both fork and laminated, and epoxy repairs. Documentation of said repairs is included in the field sketches and in a repair schedule.

PROJECTED WORK FOR THE UPCOMING WEEK

Continue removal of glazing, preparation of sash for repair
Continue repair of sash, off-site
Begin glazing sash

VISITORS TO THE SITE

None

SAFETY

The protocol for handling leaded materials was distributed and presented to the crew.

WEATHER

The weather was moderate with sunny conditions, light breezes. Temperatures ranged from the high 40's to the low 60's.

PERSONNEL ASSIGNED TO THE PROJECT

One Exhibits Specialist (Project Leader)

One Carpenters

One Preservation Specialists (Intern)

Two Maintenance Workers

Two Maintenance Helper Trainees

RECAP

Starting Date: February 22, 2000

Completion Date: May 4, 2000

Percentage Completed: 20 %

Starting Balance: \$ 31, 327.00

Amy Hite

Project Leader, NPS-HPTC

cc: electronically

Don Campbell, Superintendent, HAFE

Tim Fox, Chief of Maintenance, HAFE

Peter Dessauer, Historical Architect, HAFE

Lynne Wigfield, Exhibit Specialist, HAFE

**NATIONAL PARK SERVICE
HISTORIC PRESERVATION TRAINING CENTER
WEEKLY FIELD REPORT NUMBER # 03
FY-00**

PARK: Harpers Ferry National Historic Park

PROJECT: Rehabilitation of The Exterior Doors, At John Brown's Fort, Building #63

DATE: March 10, 2000

WEEK ENDING: March 10,2000

GENERAL

N/A

WORK PERFORMED THIS WEEK

The removal of glazing and preparation of sash continued. Sash prepared for repairs included the following: WT101 – A, B, C, D; WT103 – B, C; WT104 –B, C; WT105 – C, D; WT106 – C, D; WT107 –A, C, D; WT108 – A, B, D; W109 – a, b; W110 – a, b.

Repairs to the sash this week were made in the same fashion as stated in Weekly Field Report #02. Those repairs were completed on the following sash: WT101 –A, B; WT102 – A, B, C, D; WT103 – B, C, D; WT106 – A, B; WT107 – B, C; WT108 – A, C, D; W109 – a, b; W110 – b, DSL1 and DSL2. Of the repairs made to date there were twenty components completely replaced, some of which were muntins, bottom rails and stiles. Twelve epoxy repairs and eight dutchman repairs were made. All of these repairs are documented in detail on the repair schedule and on the field drawings.

Glazing began this week. The method employed is as follows: the beds were primed with raw linseed oil, all lights were back-bedded using a pure linseed oil glazing, which is also used for the face-glazing. The original glass that was able to be retained was used, and if not available, it was replaced in-kind, with historic glass. The lights were then set using a point-set. Once all lights were set, the excess back-glazing was cut off, to expose the profile that determined the width of the face-glazing. Face-glazing was done by hand, using glazing knives. The glazed sash were stored in a heated space with circulated air. When possible, the sash were taken out into the direct sunlight, as it is thought that the UV light accelerates the curing process of the glazing. Based on previous experience, the linseed oil glazing can take up to four weeks to cure. Glazing was completed on the following sash: WT102 – A, C, D; WT103 – B, D; WT104 – C, D; WT105 – B, C; WT107 – B, C; WT108 – A, B; W109 – b; W110 – b; DSL1 and DSL2.

PROJECTED WORK FOR THE UPCOMING WEEK

Continue removal of glazing, preparation of sash for repair
Continue repair of sash
Continue glazing sash
Remove doors
Begin preparation of doors
Begin repair of doors

VISITORS TO THE SITE

None

SAFETY

The proper use of heat guns was the safety topic of the week.

WEATHER

The weather was warm with sunny conditions, light breezes. Temperatures ranged from the mid 60's to the high 70's.

PERSONNEL ASSIGNED TO THE PROJECT

Two Exhibits Specialists (1 Project Leader)

Two Carpenters

One Preservation Specialist (Intern)

Two Maintenance Workers

Two Maintenance Helper Trainees

RECAP

Starting Date:	February 22, 2000
Completion Date:	May 4, 2000
Percentage Completed:	60 %
Starting Balance:	\$ 31, 327.00

Amy Hite

Project Leader, NPS-HPTC

cc: electronically

Don Campbell, Superintendent, HAFE

Tim Fox, Chief of Maintenance, HAFE

Peter Dessauer, Historical Architect, HAFE

Lynne Wigfield, Exhibit Specialist, HAFE

**NATIONAL PARK SERVICE
HISTORIC PRESERVATION TRAINING CENTER
WEEKLY FIELD REPORT NUMBER # 04
FY-00**

PARK: Harpers Ferry National Historic Park

PROJECT: Rehabilitation of The Exterior Doors, At John Brown's Fort, Building #63

DATE: March 23, 2000

WEEK ENDING: March 17, 2000

GENERAL

Doors 102b, and D103a, b were removed and brought to the shop. All work was conducted at the HPTC shop. Repair to the sash were completed this week. It should also be noted that WT105 – A and D did not require any repairs or reglazing.

Blood lead levels were taken this week on Ralph Doell and Chris Schrock, the two crewmembers primarily involved in the paint and glazing removal. Those results should be available within two weeks.

WORK PERFORMED THIS WEEK

The removal of glazing and preparation of sash was completed.

Repairs to the sash this week were completed on the following sash: WT106 – C, D; W110 – a. A total of twenty-six sash components were replaced, amounting to fifteen percent. There were twenty epoxy and ten dutchman repairs executed on the sash, for a combined total of fifty-six repairs. All of these repairs are documented in detail on the repair schedule and on the field drawings.

Glazing was completed this week. Sash glazed this week: WT101 – A, B, C, D; WT102 – B; WT103 – A, C; WT104 – A, B; WT106 – A, B, C, D; WT107 – A, D; WT108 – C, D; W109 – a; and W110 – a. As previously mentioned, two sash did not require any new glazing. Twenty- four of the sash were completely reglazed, equaling sixty-three percent of the sash. Only twenty-five lights did not have any glazing replaced, representing eight percent of the lights.

Repairs to D101 included dutchman repairs affixed by means of galvanized cut nails and polyurethane glue. Epoxy was used to fill the smaller cracks. The material used was mahogany, and the method was the same as that described in Weekly Field Report #02.

Hardware was cleaned by means of wire brush, then primed and painted. The paint system used for the hardware utilizes a cold galvanizing compound (RUSTOLEUM, ZINC-SELE), followed by latex topcoats (MoorGlo – Latex House and Trim – black 096 80).

The paint system employed on the wood components is the application of one coat of alkyd primer, (Benjamin Moore) followed by two topcoats of latex (Benjamin Moore – MoorGlo (JOBR), as prescribed in the Project Agreement.

PROJECTED WORK FOR THE UPCOMING WEEK

Continue door preparation
Continue door repairs
Continue painting doors
Continue preparation of door hardware
Continue painting of door hardware

VISITORS TO THE SITE

None

SAFETY

The use of personal protective equipment while working with epoxies was discussed.

WEATHER

The weather was cool and partly cloudy. Temperatures ranged from the mid 40's to the mid 60's.

PERSONNEL ASSIGNED TO THE PROJECT

One Exhibits Specialist (Project Leader)
Three Carpenters
One Woodcrafter
One Preservation Specialist (Intern)
Two Maintenance Workers
One Maintenance Helper Trainee

RECAP

Starting Date:	February 22, 2000
Completion Date:	May 4, 2000
Percentage Completed:	70 %
Starting Balance:	\$ 31, 327.00

Amy Hite
Project Leader, NPS-HPTC
cc: electronically
Don Campbell, Superintendent, HAFE
Tim Fox, Chief of Maintenance, HAFE
Peter Dessauer, Historical Architect, HAFE
Lynne Wigfield, Exhibit Specialist, HAFE

**NATIONAL PARK SERVICE
HISTORIC PRESERVATION TRAINING CENTER
WEEKLY FIELD REPORT NUMBER # 05
FY-00**

PARK: Harpers Ferry National Historic Park

PROJECT: Rehabilitation of The Exterior Doors, At John Brown's Fort, Building #63

DATE: March 25, 2000

WEEK ENDING: March 24,2000

GENERAL

Preparation, repairs, and painting continued at the HPTC shop. On-site work was conducted for two partial days.

WORK PERFORMED THIS WEEK

Repairs to D102 – b, D103 – a and b were completed. Original fabric was used for repairs where possible, other dutchman used mahogany, treated as described in earlier Weekly Field Reports. Details as to the specific locations of the repairs made are included in the field sketches. The doors were primed and received the first of two topcoats to be applied. Hardware for these same doors was removed from the structure and taken to the HPTC shop for preparation and painting.

The sill of D101 was corrected to slope to the exterior of the structure. The side panels of D101 were primed and installed. D101 was taken to the site to be held until installation.

PROJECTED WORK FOR THE UPCOMING WEEK

Continue door preparation
Continue door repairs
Continue painting doors
Continue preparation of door hardware
Continue painting of door hardware
Rehang D102b, and D103a, b

VISITORS TO THE SITE

None

SAFETY

Safe practices while using the table saw were discussed.

WEATHER

The weather was cool and cloudy, with rain for three days. Temperatures ranged from the mid 40's to nearly 70.

PERSONNEL ASSIGNED TO THE PROJECT

One Exhibits Specialist (Project Leader)
Two Carpenters [1 for 1 day]
One Preservation Specialist (Intern) [3 days]
One Maintenance Helper Trainee [2 days]

RECAP

Starting Date:	February 22, 2000
Completion Date:	May 4, 2000
Percentage Completed:	70 %
Starting Balance:	\$ 31, 327.00

Amy Hite
Project Leader, NPS-HPTC
cc: electronically
Don Campbell, Superintendent, HAFE
Tim Fox, Chief of Maintenance, HAFE
Peter Dessauer, Historical Architect, HAFE
Lynne Wigfield, Exhibit Specialist, HAFE

**NATIONAL PARK SERVICE
HISTORIC PRESERVATION TRAINING CENTER
WEEKLY FIELD REPORT NUMBER # 06
FY-00**

PARK: Harpers Ferry National Historic Park

PROJECT: Rehabilitation of The Exterior Doors, At John Brown's Fort, Building #63

DATE: March 30, 2000

WEEK ENDING: March 30,2000

GENERAL

Preparation, repairs, and painting continued at the HPTC shop. On-site work was conducted for part of one day.

WORK PERFORMED THIS WEEK

D102a was removed and taken to the HPTC shop for repairs. Repairs to D102 – a began. Two boards were replaced, and some minor epoxy repairs were performed. Details as to the specific locations of the repairs made are included in the field sketches.

The final application of paint was completed on D102b, and D103a and b. Hardware was painted and reattached. D102b and D103a were rehung. Hinges for D101 were installed and the door was hung.

PROJECTED WORK FOR THE UPCOMING WEEK

None

VISITORS TO THE SITE

None

SAFETY

Safe practices while using the table saw were discussed.

WEATHER

The weather was cool and cloudy, with scattered rain for most of the week. Temperatures ranged from the mid 40's to the mid 60's.

PERSONNEL ASSIGNED TO THE PROJECT

One Exhibits Specialist (Project Leader)

One Carpenter [3 days]

One Maintenance Helper Trainee [2 days]

RECAP

Starting Date:	February 22, 2000
Completion Date:	May 4, 2000
Percentage Completed:	80 %
Starting Balance:	\$ 31, 327.00

Amy Hite
Project Leader, NPS-HPTC
cc: electronically
Don Campbell, Superintendent, HAFE
Tim Fox, Chief of Maintenance, HAFE
Peter Dessauer, Historical Architect, HAFE
Lynne Wigfield, Exhibit Specialist, HAFE

**NATIONAL PARK SERVICE
HISTORIC PRESERVATION TRAINING CENTER
WEEKLY FIELD REPORT NUMBER # 07
FY-00**

PARK: Harpers Ferry National Historic Park

PROJECT: Rehabilitation of The Exterior Doors, At John Brown's Fort, Building #63

DATE: May 1, 2000

WEEK ENDING: April 21,2000

GENERAL

No work was conducted on this project during the weeks of April 3-7 and April 10 – 14 while the sash glazing was curing. The work performed addressed in this report was conducted April 17 – 21.

WORK PERFORMED THIS WEEK

Sash were primed and ultimately received two topcoats. The paint system consisted of alkyd exterior primer (Benjamin Moore – Moorwhite) and latex topcoats (Benjamin Moore – MoorGlo Soft Gloss Latex House and Trim Paint). Due to rodent infestation, approximately 50 % had mouse damage to the glazing. These sash were reglazed using DAP 33, as it has a more rapid curing time. One sash required wood repairs as a result of the Rodentia.

Prior to priming, the lights / glass had to be cleaned using razor blades. Eighty percent of the sash were primed and received one topcoat. Eight sash received a second topcoat, as specific groups of windows were completed to facilitate installation in an orderly manner. DSL 1 and 2, WT108 a-d, WT 102 a and b had two topcoats. W109 and W110 were the only four sash to not be primed this week.

PROJECTED WORK FOR THE UPCOMING WEEK

Complete painting of sash
Install Sash
Complete site work

VISITORS TO THE SITE

None

SAFETY

Hazards of handling sash were discussed.

WEATHER

The weather was cool and cloudy, with rain for most of the week. Temperatures ranged from the 50's the mid 60's.

PERSONNEL ASSIGNED TO THE PROJECT

One Exhibits Specialist
One Carpenter
One Maintenance Worker

RECAP

Starting Date:	February 22, 2000
Completion Date:	May 4, 2000
Percentage Completed:	90 %
Starting Balance:	\$ 31, 327.00

Amy Hite
Project Leader, NPS-HPTC
cc: electronically
Don Campbell, Superintendent, HAFE
Tim Fox, Chief of Maintenance, HAFE
Peter Dessauer, Historical Architect, HAFE
Lynne Wigfield, Exhibit Specialist, HAFE

**NATIONAL PARK SERVICE
HISTORIC PRESERVATION TRAINING CENTER
WEEKLY FIELD REPORT NUMBER # 08
FY-00**

PARK: Harpers Ferry National Historic Park

PROJECT: Rehabilitation of The Exterior Doors, At John Brown's Fort, Building #63

DATE: May 22, 2000

WEEK ENDING: April 28,2000

GENERAL

Site work was completed, pending final inspection, which is scheduled for May 15, 2000. No work was conducted on this project during the weeks of April 3-7 and April 10 – 14 while the sash glazing was curing. The work performed addressed in this report was conducted April 17 – 21.

WORK PERFORMED THIS WEEK

Sash were primed and received two topcoats. The paint system consisted of alkyd exterior primer (Benjamin Moore – Moorwhite) and latex topcoats (Benjamin Moore – MoorGlo Soft Gloss Latex House and Trim Paint). Due to rodent infestation, approximately 50 % had mouse damage to the glazing. These sash were reglazed using DAP 33, as it has a more rapid curing time. One sash required wood repairs as a result of the Rodentia.

Eighty percent of the sash were primed and received one topcoat.

PROJECTED WORK FOR THE UPCOMING WEEK

Complete painting of sash
Install Sash
Complete site work

VISITORS TO THE SITE

None

SAFETY

Hazards of handling sash were discussed.

WEATHER

The weather was cool and cloudy, with rain for most of the week. Temperatures ranged from the 50's the mid 60's.

PERSONNEL ASSIGNED TO THE PROJECT

One Exhibits Specialist
One Carpenter
One Maintenance Worker

RECAP

Starting Date:	February 22, 2000
Completion Date:	May 4, 2000
Percentage Completed:	90 %
Starting Balance:	\$ 31, 327.00

Amy Hite
Project Leader, NPS-HPTC
cc: electronically
Don Campbell, Superintendent, HAFE
Tim Fox, Chief of Maintenance, HAFE
Peter Dessauer, Historical Architect, HAFE
Lynne Wigfield, Exhibit Specialist, HAFE



Material Data/Vendors

Vendor	Material	Location Used
Drawing Board Plus 926 East Street Frederick, Maryland 21701 301.695.3810	Blueprints, Vellum, Copies	Shop, on-site
Frederick Memorial Hospital/Rose Hill 1560 Opposumtown Pike Frederick, Maryland 21702 301.698.3001	Medical Surveillance	Employees
Garst Paint Center, Inc. 1111 East Street Frederick, Maryland 21701 301.662.8242	Primer, paint, caulk, scrapers, tri-sodium-phosphate	Wood components, HPTC facility, door, and window openings
Home Depot 5517 Urbana Pike Frederick, Maryland 21704 301.620.0571	Fasteners, various hand tools	Hardware, HPTC facility and door and window openings
J. Gibson McIlvain Co. P.O. Box 222 Route 7 White Marsh, Maryland 21162 410.335.9600	Mahogany	Replacement of various components
Lowe's 5611 Buckeystown Pike Frederick, Maryland 21701 301.668.3350	Miscellaneous items	HPTC facility and door and window openings
Lumber Yard of Charles Town Rte. 340 E Marlus Rd Charles Town, West Virginia 25414 304.728.6201	Plywood, lumber	Temporary panels

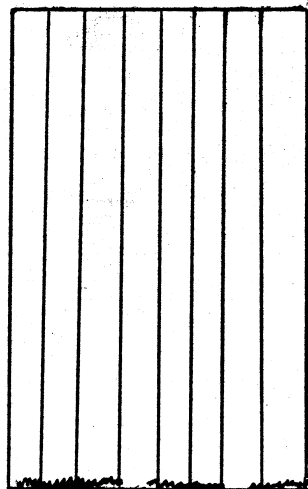
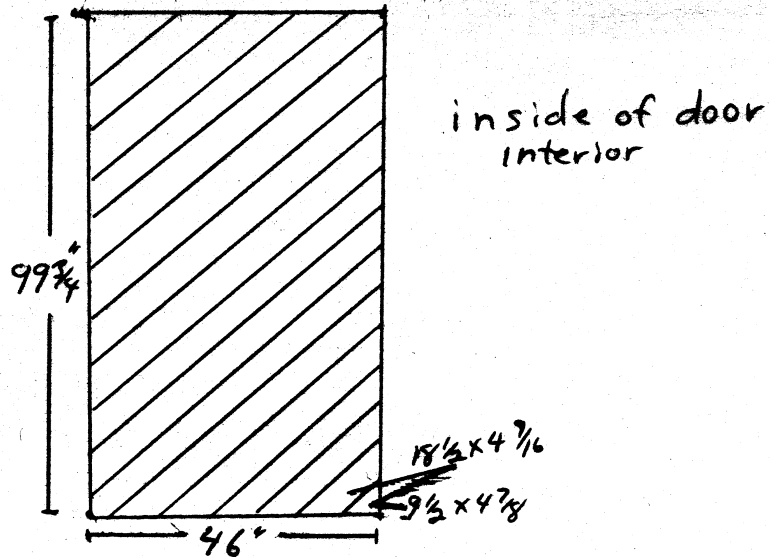
Vendor	Material	Location Used
May's Hardware 1818 Rosemont Avenue Frederick, Maryland 21702 301.694.9424	#16 Zinc-coated screws	Door hinges
METS Laboratories 179 Smallwood Village Center Waldorf, Maryland 20602 301.870.1995	Paint chip analysis	
Offut Sharpening Service 10666 Daysville Road Walkersville, Maryland 21793 301.845.8544	Blade sharpening	
Quality Farm & Country 5728 Buckeystown Pike Frederick, Maryland 21704	Hitch pins	
Ritz Camera Center #331 Francis Scott Key Mall Suite 426 5500 Buckeystown Pike Frederick, Maryland 21703 301.694.3282	Photo processing	Project documentation
Roberts Electric Motors Inc. 5841 Urbana Pike Frederick, Maryland 21704 301.663.5757	Tool repair	
Sterling Clark Lurton 184 Commercial Street Malden, MA 02148 781.322.0163 Customer # 01281 / HPTC	Glazing compound	Window sash throughout house
Staples 5557 Urbana Pike Frederick, Maryland 21704 301.663.0643	Miscellaneous items	Project documentation



Field Drawings

Order	Door 3 102 A	Date 3-30-00	Date	Account
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All Hardware painted black — IronClad Metal & Wood Enamel
 One coat of primer — Alkyd Benjamin Moore
 two coats of finish — Latex Exterior paint
 nuts, bolts, and washers have been replaced with
 new. All same sizes All nails used are cut nails



Epoxy fill in of all cracks

Area		NATIONAL PARK SERVICE WILLIAMSPORT PRESERVATION TRAINING CENTER		of
Project	John B. ...	By	D. Mott	Checked
Feature	Door #102	Date	2-16-00	Pkg.
				Account

9 9/16"

these cracks were small and filled with Exopy

all Hardware cleaned wire brushed and primed and painted. All screws replaced with brass

rotten spot which was Exopy filled

1x6x10" Dutchman repair
This was done with wood preservative painted on inside piece. Jointed with 45° angle and glued with

Door #102
Left Door - 9 9/16" x 45 3/4" polyurethane glue.

Back side of Door
Look at dotted line showing what was done on Backside bottom corner.
replacement piece 1 1/4 x 1 1/4" triangle mahogany wood used on all replacements

Door 103a repairs

Area <i>Maple Ferry</i>	WILLIAMSPORT PRESERVATION TRAINING CENTER		of
Project <i>John Brown's Cabin</i>	By <i>D. Mott</i>	Checked	Pkg.
Feature <i>Door repairs</i>	Date <i>7-20-00</i>	Date	Account

Door #103b (right side bay door)

overall size $46\frac{1}{4}" \times 99\frac{3}{4}"$

All repairs done on bottom of doors.

Replacement material mahogany

All replacements have been nailed with cut nails
painted with wood preservative on both sides

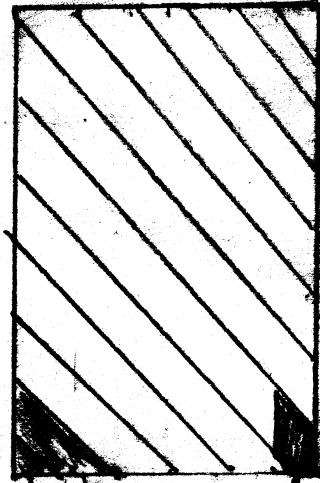
Front side



Repair $5\frac{1}{4}" \times 9"$

Repair $8" \times 6\frac{1}{4}"$

Cracks repaired with epoxy

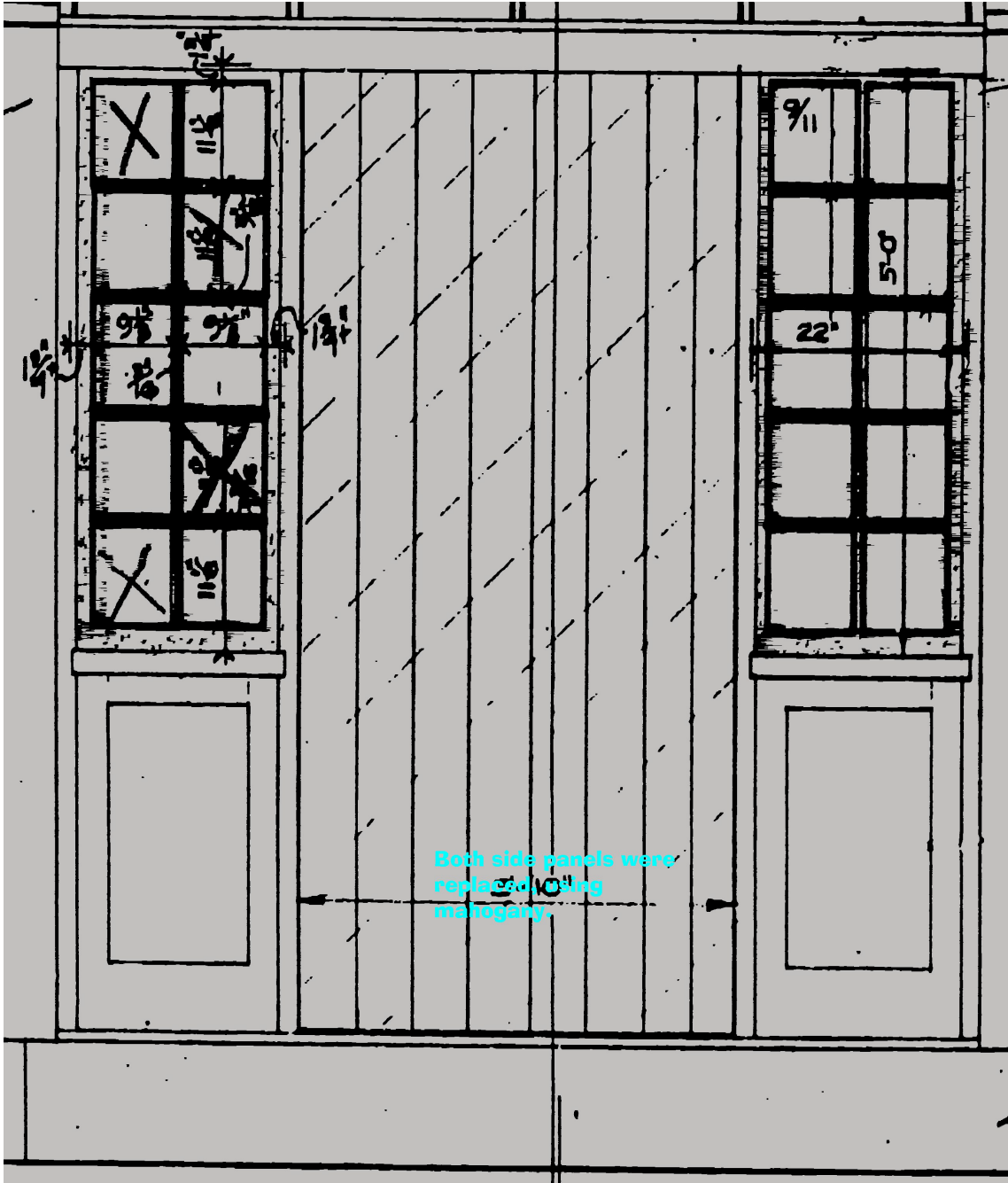


$6" \times 21\frac{3}{4}"$

$9" \times 11\frac{1}{2}"$

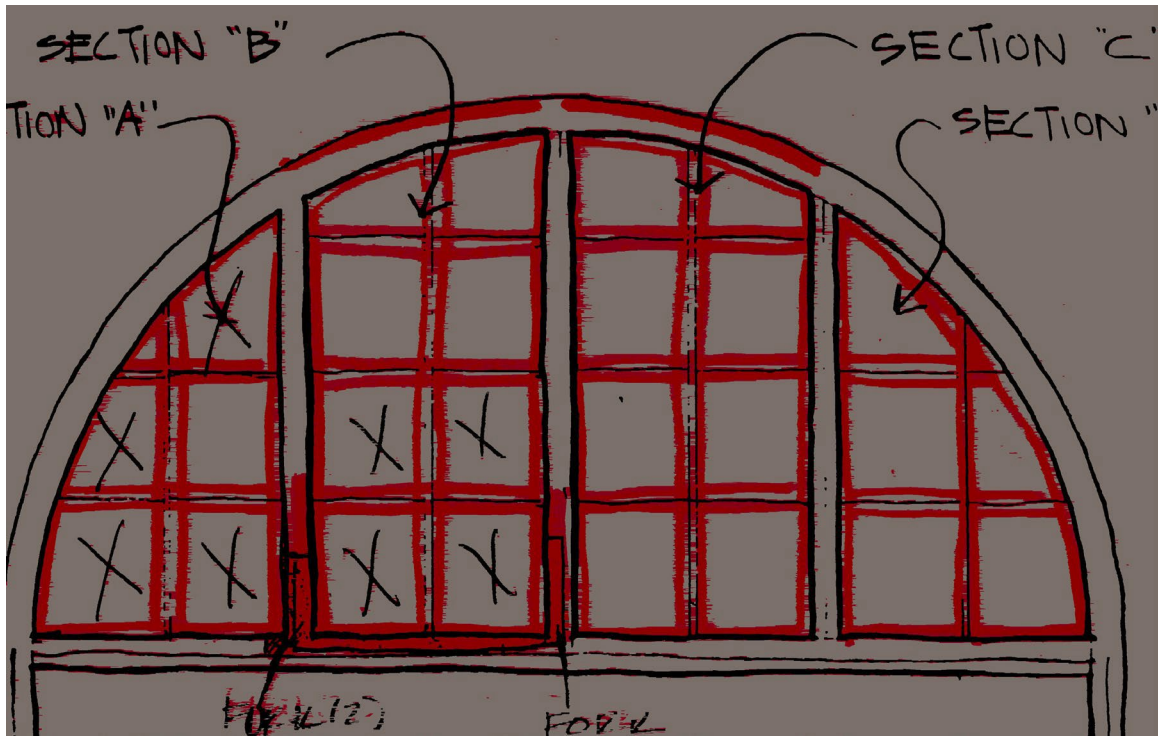
$5" \times 9\frac{1}{2}"$

D103b repairs

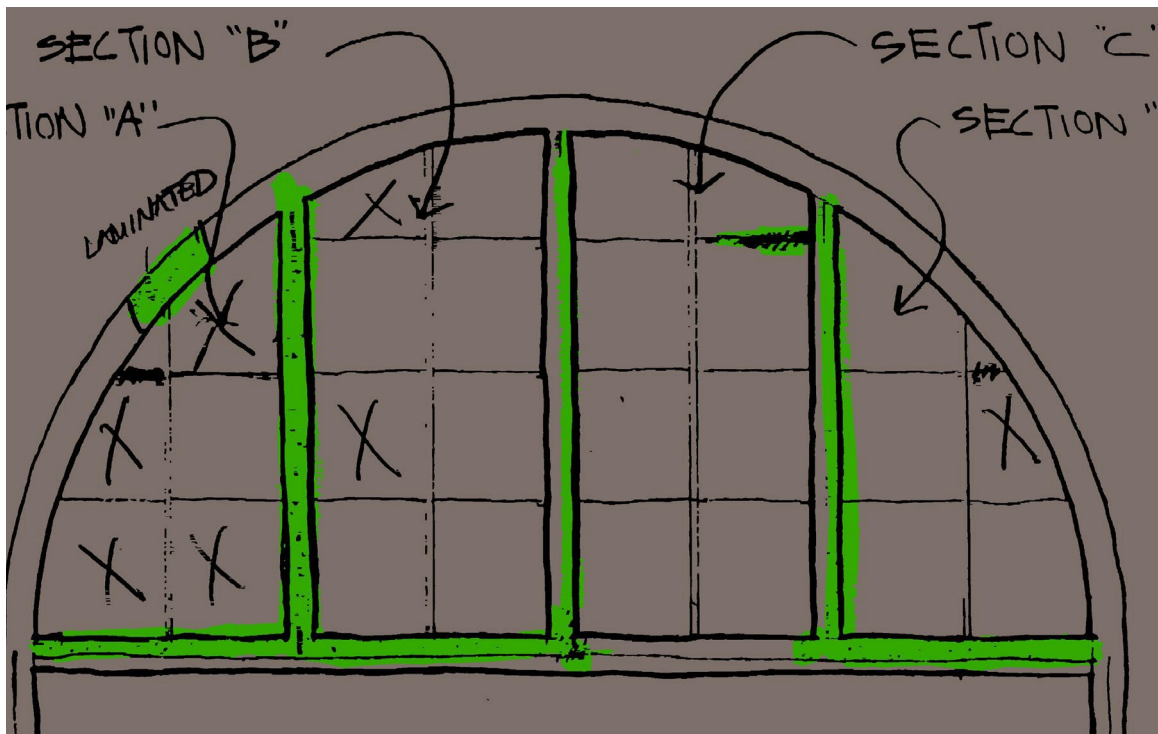


Door side-lites and panels for Guard Room.

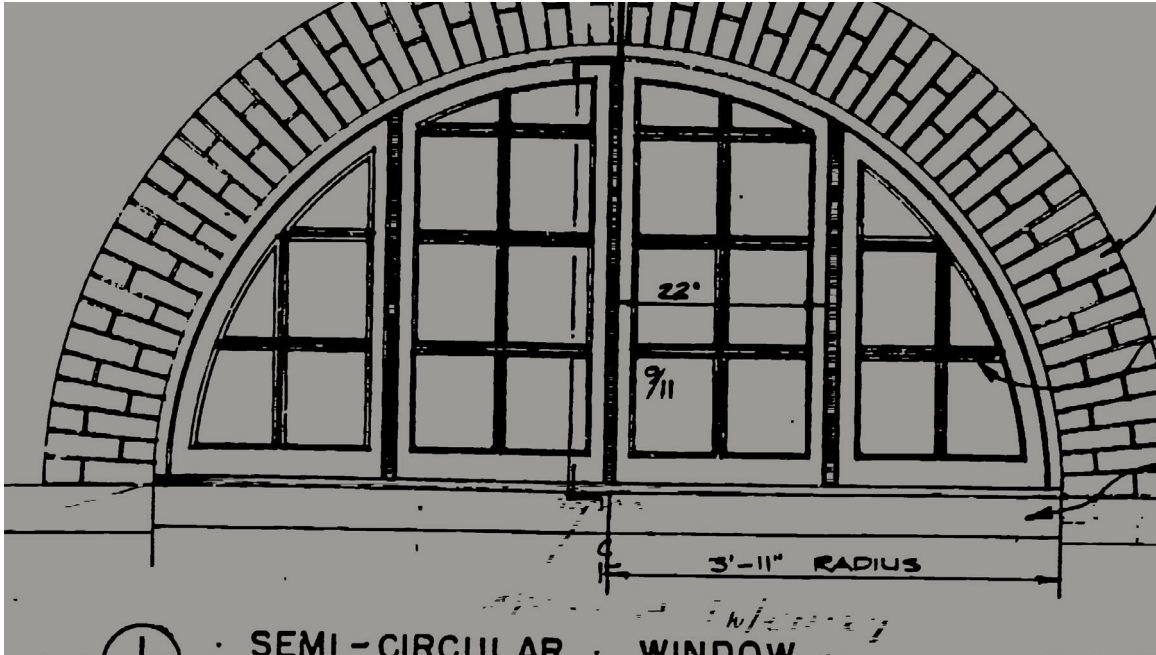
All repairs and replaced glazing are highlighted. Lights that have been replaced are indicated by an X.



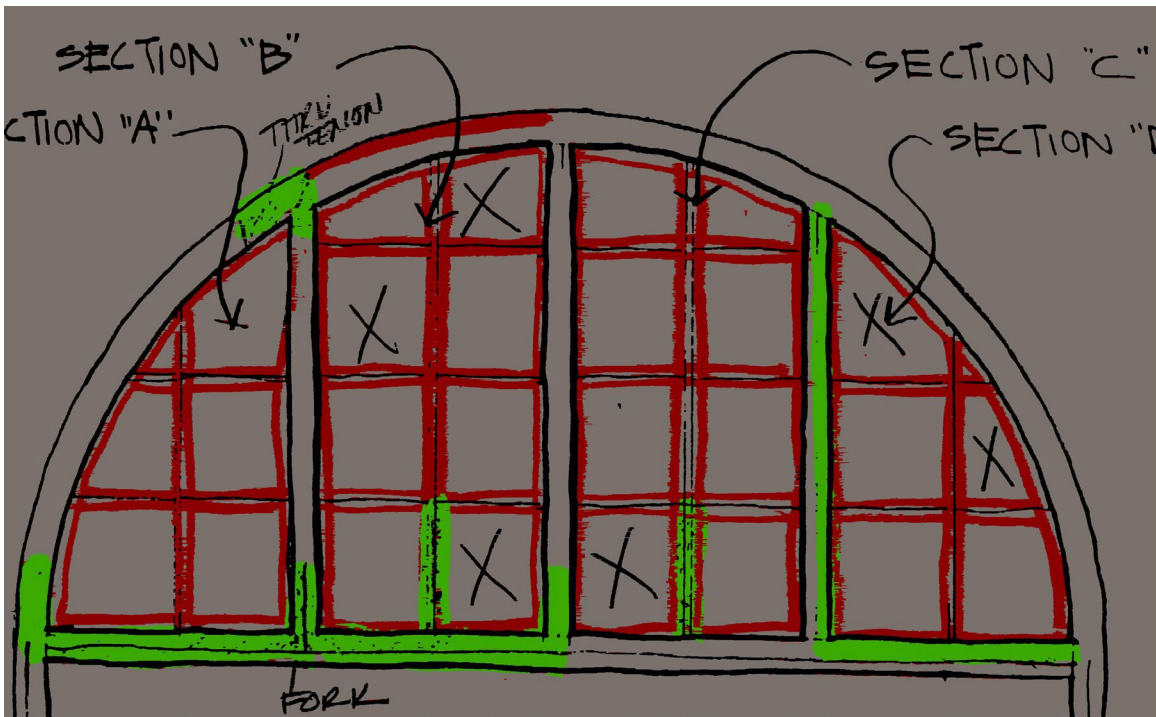
WT101



WT102



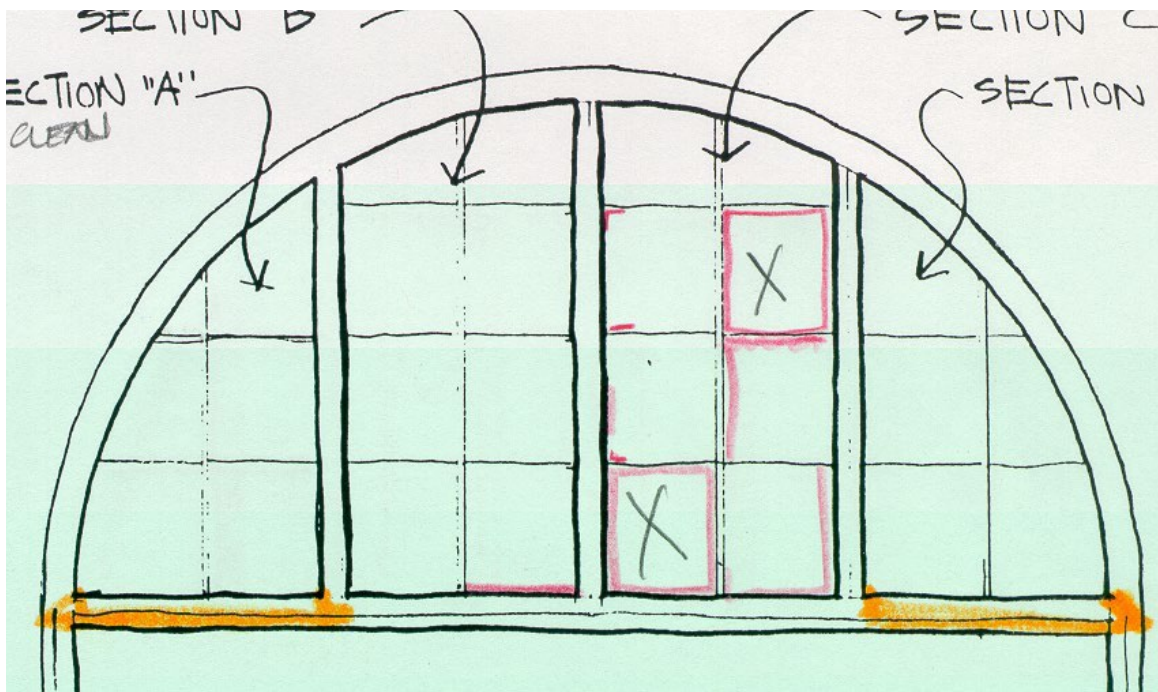
Mullions replaced for WT102



WT103 repairs



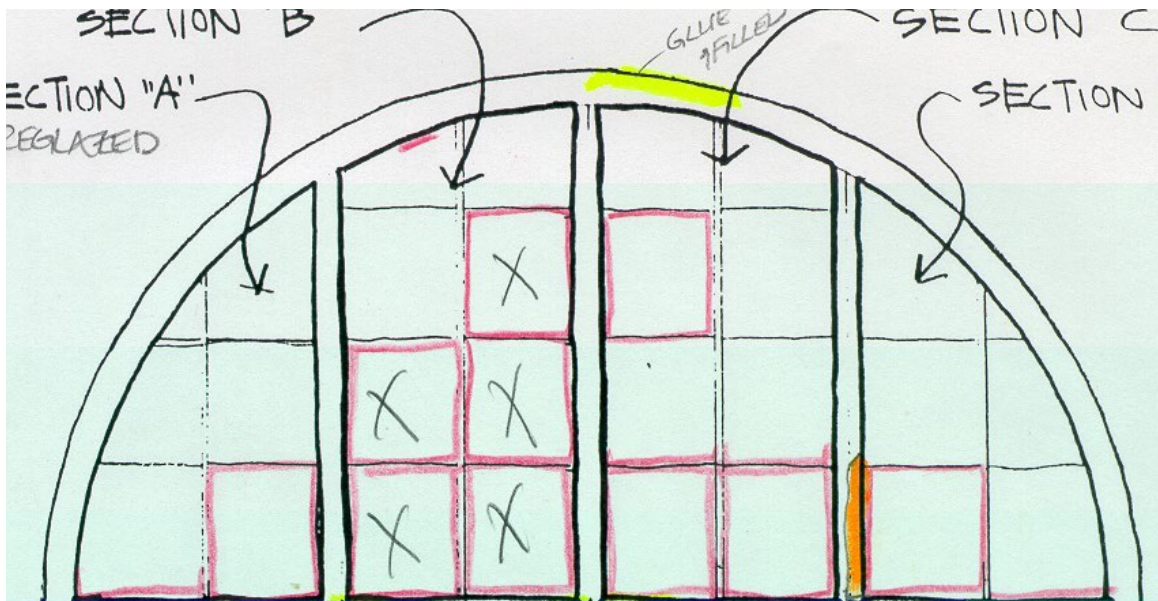
WT104



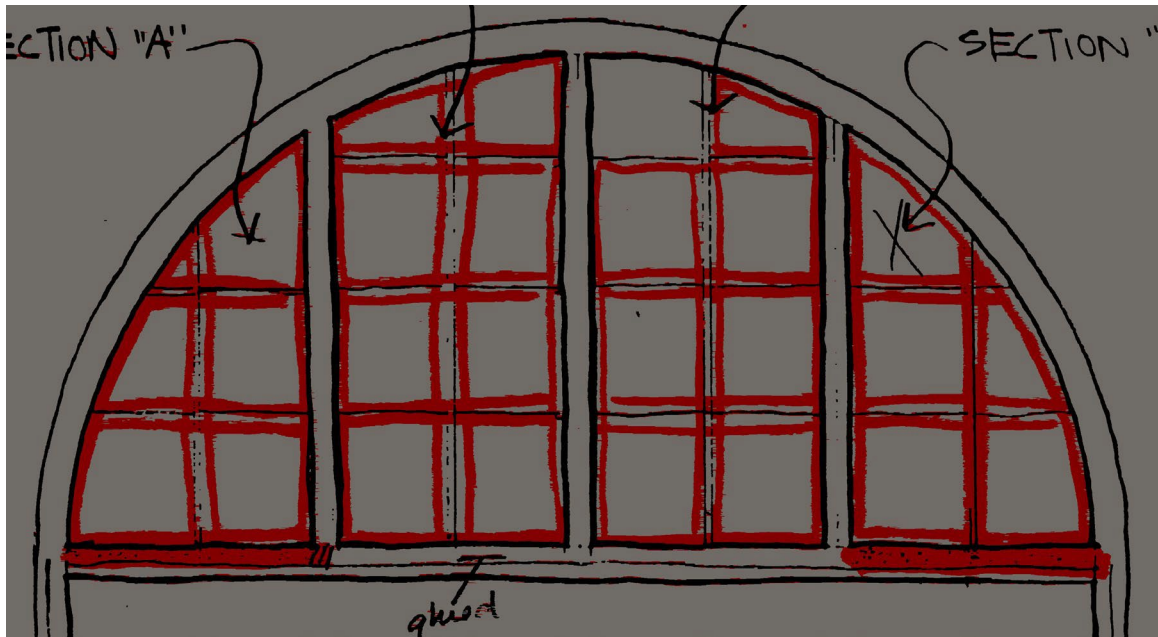
WT105



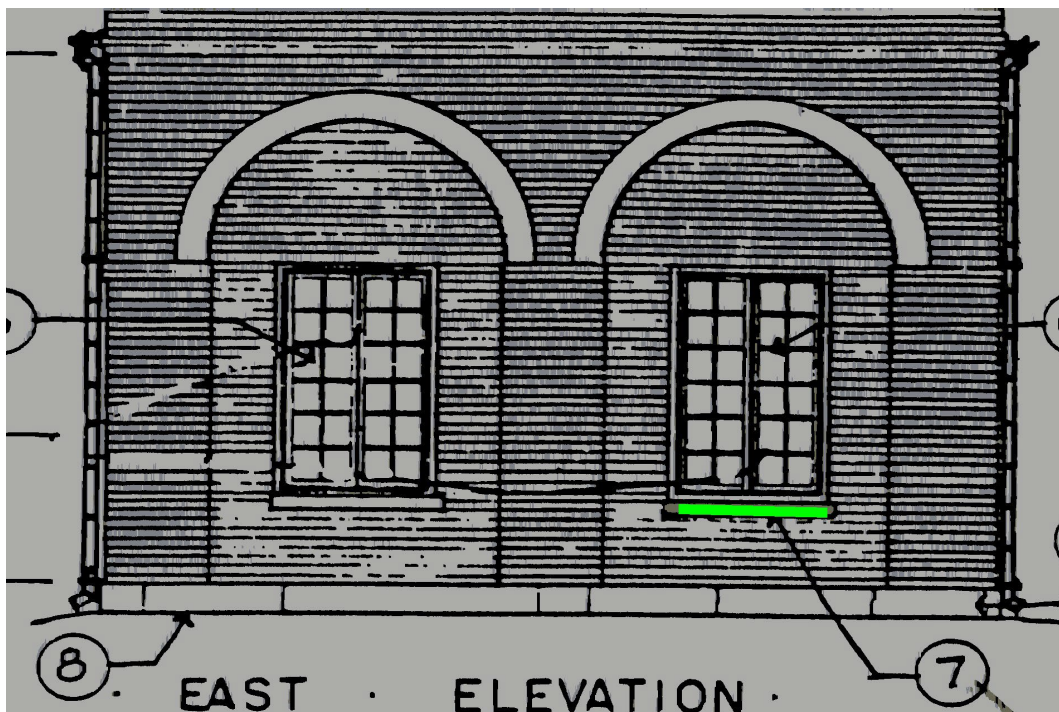
WT106 repairs



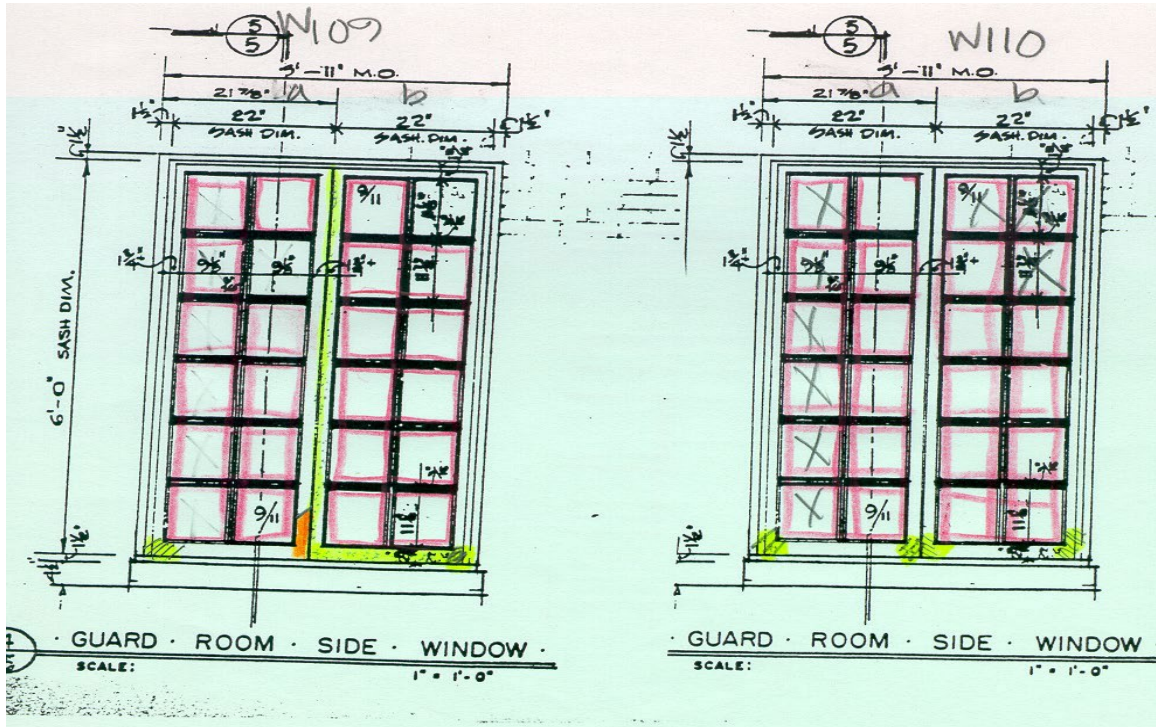
WT107 repairs



WT108



Sill replaced with mahogany and reset in mortar



W109 and W110 repairs



Miscellaneous

OSHA Written Compliance Plan

February 29, 2000

This plan has been developed to comply with the OSHA Construction Lead Standard, 29 CFR 1926.62.

1. Location of Project

This job will take place both on-site at Harpers Ferry National Historic Park, John Brown's Fort, Harpers Ferry, West Virginia and at the Jenkins Cannery, Frederick, Maryland. Lead inspection performed by Historic Preservation Training Center Staff (using lead check swabs) did not initially indicate the presence of lead-based paint, however, tests conducted after components were removed indicate the possible presence of lead-based paint on the substrate, that appears to have been abated at an earlier date. The existing lead-based paint represents a hazard to workers. Paint chips have been sent to the lab for further analysis.

2. Brief Description of the Job

This job is not a total abatement. The disturbance of the lead-based paint will be caused by four actions: 1) removal historic components for repair, 2) off-site abatement of those components which need to be repaired, 3) wet scraping of deteriorated painted surfaces in preparation for recoating, and 4) the sanding of sound paint and exposed substrate.

3. Schedule

Schedule of work will be intermittent. The removal of historic fabric has already been completed, with the exception of four of the doors. Fabric removal took place on February 22. Surface preparation for painting activities will also began that week and will continue for the next two weeks, with on-site surface preparation resuming at a later date.

Surface preparation for painting will be a twostep process: 1) surfaces will be damp scraped, then 2) sanded using sanders with vacuum hook up.

4. Equipment and Materials

Various profile hand scrapers and handheld misters will be used to damp scrape the painted surfaces. Shrouded sanders attached to a HEPA vacuum will be used to feather the edges of intact paint. A Vactagon brand HEPA vacuum or a smaller Nilfisk HEPA vacuum will be used for all vacuuming activities. Sash components will be washed with a tri-sodium phosphate (TSP) solution prior to being moved into the shop facility.

5. Crew

All of the following crewmembers will be involved in both the removal of historic components and the surface preparation of lead-based paint coated surfaces. All of the crewmembers have attended the one-day lead-paint abatement training for workers and are certified by the state of Maryland.

6. Competent Person

Amy Hite, who has successfully completed the 40-hour lead-based paint abatement for supervisors training course, will be onsite and will act as the competent person for occupational health and safety issues. Amy will conduct daily inspections of the work areas to ensure that control measures, work practices, personal protective equipment, and hygiene facilities are used as prescribed in this document.

7. Control Measures

The painted surfaces are largely intact, and approximately 5-10 percent of the paint will be removed.

All sanding of painted sash components will be conducted in the lead shed, as a containment measure. To reduce generation of leaded dust in the work areas, paint chips and dust will be vacuumed on at least a daily basis with HEPA filtered vacuums. Final cleaning will be accomplished by three successive cleanings consisting of HEPA vacuuming alternated with wet mopping with trisodium phosphate solution. The use of HEPA vacuums and wet cleaning methods will minimize worker exposures.

8. Technology Considered in Meeting the Permissible Exposure Limit

The *HUD Guidelines for the Evaluation and Control of Lead Hazards in Housing* and other publications were reviewed to determine the appropriate engineering controls to be used in this project. The only specialized equipment that will be utilized for this project are HEPA-filtered vacuum cleaners and handheld sanders equipped with vacuum hook-up. Handheld misters will be used for dampening surfaces prior to scraping. Natural ventilation will be utilized, as mechanical ventilation with HEPA-filtered exhaust fans has not been found to reduce worker lead exposures with the methods that will be used during this project.

9. Respirators

All individuals in the work area will be provided with a half-mask, air-purifying respirator equipped with HEPA cartridges or a powered air-purifying respirator if so requested.

Respirators will be required during historic component removal, surface preparation for painting, manual scraping, cleaning activities, and final cleanup. Respirator use during other activities, including initial setup (such as laying down plastic for containment), and enclosure and encapsulation after surface preparation is not necessary, *unless* the workers nearby (same interior room or outside wall) are performing activities for which respirators are required.

10. Protective Clothing

Disposable protective clothing will be worn at all times inside the work area. Protective clothing will be made of Tyvek. Protective clothing will always be HEPA vacuumed before it is removed.

11. Hygiene Facilities

Workers will use the lead trailer as the changing room. Workers will clean their protective suits with the HEPA vacuum prior to entering the changing room. Once in the changing room, workers will remove their protective suits and respirators for temporary storage. Handwashing facilities, located in the Jenkins Cannery warehouse will be used to decontaminate workers. The facility contains one utility sink and one toilet. After work is complete, the trailer will be HEPA vacuumed then washed down with a TSP solution.

12. Air Monitoring Data

For each individual task, i.e., damp scraping, or sanding, air monitoring will be performed. An air monitor will be worn by one worker performing the activity. The monitoring period will be approximately 2 hours to establish an 8-hour average.

13. Medical Surveillance

A medical surveillance plan is in effect for the work crew. The blood lead level testing will be performed by Corporate Health Services, a division of Frederick Memorial Hospital, located in Frederick, MD (301)698-3003. All workers will have their blood lead level tested before a project that disturbs lead-based paint begins. This baseline blood lead level will be compared to the blood lead level taken after 28 working days in a lead risk environment. A final blood lead level will be taken at the completion of the project. Worker blood lead increases of 10 ug/dl or more will trigger an investigation of protective equipment and work practices. All workers are informed of their blood lead levels as soon as they are received.

14. Training

All workers have been trained using the one-day EPA Worker Training Curriculum. The training was conducted by Leadtec Services, Inc. In addition, each employee has been given a copy of this plan and a daily protocol guide which outlines specific hygiene and work task techniques employed by each worker.

15. Disposal of Hazardous Waste

Waste and debris should be placed in appropriate sealed containers (the metal drums) located in the lead shed. It will be stored in the drums and will be disposed of by a designated contractor.

Plan completed by: Amy Hite
February 5, 1999

Ahite:ah:C:\HPTC\JOBR leadprtc.doc

Key Personnel

HAFE

Peter Dessauer, Historical Architect 304.535.6040

Lynne Wigfield, Exhibits Specialist 304.535.6188

Mervin Knotts, Work Leader 304.535.6027

David Fox, Interpreter 304.535.6282

HPTC

Amy Hite, Project Leader 301.698.5784

Chris McGuigan, Project Supervisor 301.698.5784

Dean Wigfield, Lead Craftsman 301.698.5784

Paint Schedule

Component	Primer and Paint
Wood members	Benjamin Moore Alkyd Primer Benjamin Moore MoorGlo Latex (JOB mix)
Metal Hardware	Rustoleum Zinc-Sele (Cold Galvanizing Compound) primer Benjamin Moore MoorGlo Latex House & Trim – Black 09680

JOHN BROWN'S FORT
Harpers Ferry National Historical Park
Harpers Ferry, West Virginia

REHABILITATION OF THE EXTERIOR DOORS
AT JOHN BROWN'S FORT, BUILDING #63

CONTENTS OF ARTIFACTS BOX

- 1) Right side style with narrow putty bed
- 2) Window muntin
- 3) Window mullion
- 4) Window style – narrow putty bed
- 5) Bottom rail of sash – narrow putty bed
- 6) Bottom rail of sash – wide putty bed
- 7) Interior board from Door 102a
- 8) Exterior board from Door 102a
- 9) Interior corner board from Door 102a
- 10) Interior board from Door 102b
- 11) Interior board
- 12) Interior board
- 13) Interior board
- 14) Interior board
- 15) Door jamb
- 16) Door jamb
- 17) Screws