



PRESERVATION MARYLAND

INVITATION TO BID

Williams Schoolhouse Phase II Restoration

Preservation Maryland, a nonprofit organization headquartered in Baltimore, Maryland, is soliciting lump sum bids from qualified firms for construction services to complete restoration work on the historic Williams Schoolhouse, located at 11347 Big Pool Road, Big Pool, MD 21711, within the boundaries of Fort Frederick State Park.

To be considered as eligible, Respondents must be legally licensed as applicable under pertinent laws in the State of Maryland and have demonstrated experience with similar projects in historic preservation.

Preservation Maryland requests that interested parties respond to the solicitation on or before **4:30 pm ET on Tuesday, August 25, 2026.**

Please note the full list of Attachments included in this bid package:

- *Attachment A: Scope of Work and Specifications*
- *Attachment B: Annotated Drawings, Demolition and Restoration Key Notes*
- *Attachment C: Bid Form*
- *Attachment D: Schedule of Values*
- *Attachment E: Preliminary Site Access and Operations Questionnaire*
- *Attachment F: Site & Building Conditions | Maps, Photos, & Interior Elevations*
- *Attachment G: Completed Scope of Work | Exterior Restoration (2022)*
- *Attachment H: Exterior Renovation Project Plans (2022)*
- *Attachment I: Paint Analysis (2019)*

1. CLIENT

Preservation Maryland is a statewide non-profit working to protect Maryland's unique and irreplaceable heritage while creating a more equitable and sustainable future. The organization harnesses the power of historic places to revitalize and reinvest in communities, advocate, and build the historic trades workforce for the benefit of all Marylanders. To learn more, visit www.preservationmaryland.org.

2. PROJECT OVERVIEW

2.1 Background

The Williams Schoolhouse, located within Fort Frederick State Park in Big Pool, Maryland, is owned by the State of Maryland and managed by the Maryland Department of Natural Resources – Maryland Park Service (DNR). This late 19th-century, one-room frame structure features a gable roof and board-and-batten siding, encompassing approximately 486 square feet. The building tells a nuanced story of Maryland's free Black community before and after the Civil War, and represents an important part of the park's rich cultural landscape.

Preservation Maryland, in partnership with DNR, is undertaking this project to accurately restore the interior of the Williams Schoolhouse while retaining as much historic fabric as possible. The restoration will prepare the building for the installation of an interior exhibit and build upon exterior work completed on the structure in 2022. While the primary scope of work for this project focuses on interior restoration, a handful of minor exterior elements will also be addressed.

Please see *Attachment G* for full scope of work pertaining to completed 2022 exterior restoration tasks. Additionally, paint analysis was conducted in 2019; see *Attachment I*.

2.2 Description

Acting as project manager on behalf of DNR, Preservation Maryland is seeking construction services for the restoration work alluded to above and further outlined below.

The goal of this project is to accurately restore the schoolhouse in such a manner as to retain as much historic fabric as possible to ensure its longevity and prepare the structure for an interior interpretive exhibit. Construction services are expected for completion of the scope of work discussed in Section 3 and detailed fully in *Attachment A: Scope of Work and Specifications*.

Objectives include:

- **Restoring the historic integrity of the structure's interior** to reflect its late 19th- to early 20th-century appearance, guided by historical documentation and preservation best practices.
- **Retaining and conserving as much original historic fabric as possible**, including surviving plaster, beadboard, wood flooring, windows, and doors.
- **Addressing necessary exterior repairs and improvements**—including regrading, gutter and siding repair, and selective painting—to ensure a weather-tight building envelope.
- **Installing new mechanical, electrical, and security systems** that meet current codes and operational needs while remaining sensitive to the building's historic character.
- **Preparing the building for future exhibit installation**, coordinating with the concurrent interpretive design project to accommodate select exhibit-related infrastructure.

This project is being executed in partnership with the Maryland Department of Natural Resources. As such, both Preservation Maryland and DNR staff will be involved throughout the entire project. Preservation Maryland will serve as the main point of contact, contract signatory, invoice recipient, and liaison between the hired project professionals and any relevant government agencies, which will include coordination of document submittal. It is anticipated that DNR will be involved in project meetings, documentation review (as applicable), and site visits, and will serve as final authority on decisions.

2.3 Schedule

Work is expected to begin immediately upon contract execution and conclude as expeditiously as possible. The overall project schedule shall comply with the following hours: **7 A.M. to 6 P.M., Monday-Friday**, during designated work periods to be determined in coordination with DNR.

3. SERVICES, SCOPE OF WORK, AND SPECIFICATIONS

The precise scope of work is subject to feedback from the selected Contractor and budget limitations. However, anticipated work to be undertaken by the Contractor may include, but is not limited to, furnishing all labor, equipment, materials, supplies, insurance, etc., necessary to complete the items noted in *Attachment A: Scope of Work and Specifications*.

Work recommended and performed shall adhere to the Secretary of the Interior's Standards and local, state and federal laws and regulations.

4. PROJECT BUDGET

This project is supported by grant funding for all related expenses and will be contracted based on a lump sum in negotiation with the selected Respondent. In no event shall the selected Respondent be entitled to receive more

than the contracted amount unless authorized in advance and in writing by Preservation Maryland. Competitiveness of the bid will be considered as part of the evaluation.

5. CONSTRUCTION REQUIREMENTS

5.1 Site access

Construction efforts shall be coordinated with DNR and not impact business and/or scheduled events at Fort Frederick State Park.

To grasp how the potential Contractor envisions running onsite efforts, we are requesting that respondents complete a preliminary questionnaire (*Attachment E: Preliminary Site Access and Operations Questionnaire*)—indicating such things as hours of operation, staging, parking, signage, etc.—and include it in their submittal. Upon contract award and project kick-off, the selected Contractor will be able to refine answers per DNR and Preservation Maryland input. To fine-tune responses to the questionnaire, please refer to the provided [aerial map](#) of the site (included in *Attachment F: Site & Building Conditions / Maps, Photos, & Interior Elevations*).

Note: After project kick-off, Contractor will be obligated to develop and provide an approximate schedule indicating when project personnel plan to be on-site, including but not limited to the following: Date(s) of and time needed for onsite work; SOW item/activity taking place; Corresponding consultant(s) expected to be onsite, specifying primary or subconsultant(s); If broader DNR team is needed for scheduling; If a Ranger onsite is needed.

5.2 Environmental and Sustainability Requirements

The Contractor shall:

- Employ construction best management practices that minimize dust production and onsite sedimentation transport, as applicable.
- Employ construction best management practices that minimize noise generation during construction times.
- Keep the premises and surrounding area free from accumulation of waste materials or rubbish caused by operations under the contract and employ processes that ensure the generation of as little waste as possible. Waste disposal in landfills shall be minimized. At completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery and surplus materials from and about the project site. All material unsuitable for salvaging/reuse/recycling must be disposed of in a legal manner.
- Ensure construction site and staging areas are returned to pre-construction conditions once construction is complete.
- Adhere to all applicable federal, state, and local laws and acquire permits, where required.
- Comply with designated worktime schedules in coordination with DNR.
- Ensure safety at all times during pre-construction and construction activities, according to applicable safety standards, procedures, and laws.
- As applicable, contact Miss Utility, prior to work, as per Maryland law (2010 Maryland Underground Facilities Damage Prevention Law).
- If ground disturbance is required, the Park Manager must be contacted before work begins.

6. INSTRUCTIONS TO RESPONDENTS

6.1 Where to Deliver Submittal

All submittals must be provided as a single PDF attached to an email delivered to Colleen Poulton at CPoulton@presmd.org.

6.2 Submittal Due Date

All submittals are due on or before **4:30 pm ET on Tuesday, August 25, 2026**.

6.3 Pre-Bid Meeting

~~Respondents may choose to attend a pre-bid meeting at 10:30 am ET, Wednesday, July 22, 2026. Please email Colleen Poulton at CPoulton@presmd.org by 4:30 pm ET Monday, July 20, 2026 to confirm attendance.~~

For details regarding the building and overall site, please refer to *Attachment F: Site & Building Conditions | Maps, Photos, & Interior Elevations*.

6.4 Preparation of Submittal

Respondents must submit the following:

- Completed *Attachment C: Bid Form*
- Completed *Attachment D: Schedule of Values*
- Completed *Attachment E: Preliminary Site Access and Operations Questionnaire*
- Company profile
- Examples of similar projects (to reduce page count, hyperlinks to project examples are encouraged)
- List and resumes of key personnel and proposed subcontractors
- At least three (3) client references, including the full name, phone number, and email address for the primary point of contact and a one-to-two sentence description of the nature of the project

Respondents shall send one (1) digital copy of the submittal as an attachment to an email and are encouraged to include as much pertinent data and information as necessary to ensure proper evaluation.

6.5 Subcontracts

Respondents must identify all portions of the work intended to be performed through subcontractors. Acceptance of the submittal does not constitute approval of the subcontractors identified in the submittal.

6.6 Minimum Qualifications

Respondents must demonstrate personnel assigned are legally licensed as applicable under pertinent laws in the State of Maryland and have demonstrated experience with similar projects in historic restoration.

For purposes of this Qualification, “similar project” shall be understood to include the multiple of the following elements: 1) repair or replacement of historic plaster using traditional lime-based materials; 2) color matching, paint removal, lead-safe work practices, and decorative painting for historic paint and finishes; 3) restoration or replication of historic millwork; 4) integration of modern systems (HVAC, electrical, security) within historic interiors; 5) floor repair and treatment using traditional methods; and 6) work performed in compliance with the Secretary of the Interior’s Standards for the Treatment of Historic Properties.

6.7 Small Business Enterprise (SBE), Minority Business Enterprise (MBE) and/or Woman-Owned Business Enterprise (WBE)

Respondents are not required to be or have subcontractors who are certified SBE, MBE, and/or WBE companies. However, use of SBE, MBE, and/or WBE companies is encouraged and may be weighted as an element of the evaluation process.

6.8 Inquiries

Every request for a written interpretation or correction must be received by **12:00 pm ET on Tuesday, August 4, 2026**, in order to be considered. Requests may be submitted by e-mail to CPoulton@presmd.org. Interpretations, corrections and supplemental instructions will be communicated by written addendum to this solicitation to all prospective Respondents by **4:30 pm ET on Friday, August 7, 2026**.

Submission constitutes acknowledgment of receipt of all addenda. Submittals will be construed as though all addenda had been received. Failure of the Respondent to receive any addenda does not relieve Respondents from any and all obligations under the proposed submittal.

6.9 Rejection of Submittal

Submittals must be delivered to the specified email address and received by the required due date to be eligible for evaluation. Submittals will be considered irregular and may be rejected if they show material omissions, additions not called for, conditions, limitations, unauthorized alternatives or other material irregularities. Preservation Maryland may consider incomplete any submittals not prepared and sent in accordance with the provisions specified herein and reserves the right to waive any minor deviations or irregularities in an otherwise valid submittal.

6.10 Withdrawal of Submittal

Respondents may withdraw their submittal prior to the designated due date if they send such a written request to Preservation Maryland. Respondents may be permitted to withdraw their submittal after the due date for good cause, as determined by Preservation Maryland in its sole judgment and discretion.

7. EVALUATION

Each response will be evaluated in accordance with the indicated criteria:

1	Background and Qualifications a) Past relevant experience following SOI Standards b) Special expertise and qualifications of personnel, as applicable
2	Project Management a) Names and functions of personnel assigned b) Commitment to project completion, with sensitivity toward work hour restrictions, the finalized schedule, and agreed upon budget c) Ability to meet project needs, including current workload d) QA/QC methods
3	Technical Merit a) Demonstrated comprehension of tasks to be completed and specifications to adhere to (as seen within <i>Attachment A: Scope of Work and Specifications</i>) b) Completeness and clarity of submittal c) Adequately addresses project goal(s) and objective(s)
4	Bid Competitiveness a) Reasonableness and competitiveness of proposed bid relative to the project scope, proposed approach, and demonstrated qualifications

Acceptance of the successful Respondent's submittal does not create a contractual relationship between Preservation Maryland and the successful Respondent.

Preservation Maryland reserves the right to award the agreement to the next available Respondent in the event the successful Respondent fails to enter into the agreement, or the agreement with said Respondent is terminated within 30 days of the effective date.

8. CONTRACT AWARD

Successful delivery of a submittal binds the successful Respondent to perform the work upon acceptance of the submittal and Preservation Maryland's execution of a contract provided by the successful Respondent.

Upon acceptance of the submittal, the successful Respondent must provide:

- Contract for review
- Completed Form W9
- Satisfactory evidence of insurance coverage as required by the State of Maryland and Preservation Maryland including but not limited to:
 - General Liability coverage with minimum limits of no less than \$1,000,000.00 per claim
 - Automobile Liability coverage to include Owned, Non-Owned, and Hired Autos, with minimum combined single limits of no less than \$1,000,000.00 per claim
 - Workers' Compensation and Employer's Liability coverage with minimum limits of no less than that required by Maryland law
 - Professional Liability coverage, if applicable, with minimum limits of no less than \$1,000,000.00 per claim
 - Builders Risk Insurance, with minimum coverage for no less than the total value of the entire construction project on a replacement cost basis
- If ACH payment preferred: Name and email address of individual to whom a secured form can be sent to obtain necessary information

Preservation Maryland reserves the right to cancel award of the contract without liability at any time before it has been fully executed by all parties. Failure upon the part of the successful Respondent to execute the contract or timely submit the required documentation will be just cause, if Preservation Maryland so elects, for award of the contract to be rescinded.

ATTACHMENT A:

SCOPE OF WORK AND SPECIFICATIONS – Williams Schoolhouse Phase II Restoration

The proposed project shall include, but is not limited to, the following:

- a. Remove remaining sheet goods and wallpaper from plaster walls and ceiling.
- b. Remove paint from approximately 250 SF of surviving beadboard dado and window frames/casing.
- c. Remove baseboard throughout.
- d. Repair approximately 400 SF of plaster.
- e. Install approximately 170 SF of new lath and plaster.
- f. Install approximately 60 LF of salvaged and new $\frac{3}{8}$ " beadboard dado with cap.
- g. Install new stools, aprons, and casing on two windows.
- h. Replace existing apron on one window.
- h. Ensure all windows are in good operating condition.
- i. Install new casing on one doorway.
- j. Ensure door operates smoothly.
- k. Remove nails and patch wood floor as needed; remove mastic and sand lightly.
- l. Thoroughly clean floor; scrub with lye.
- l. Cut in access hatch on rear (west) gable end. Include head flashing, trim, and lock. Paint to match the rest of the exterior.
- m. Remove old ceiling insulation and replace with new blown in cellulose insulation.
- n. Install cold climate electric mini split HVAC system with a ceiling mounted cassette.
- o. Install new electrical service, including meter, panel, outlets and lighting.
- p. Install security system.
- q. Paint all walls and ceiling with distemper paint in accordance with historic finishes study.
- r. Refinish all woodwork with stain and shellac in accordance with historic finishes study.
- s. Faux finish interior of front door to match interior woodwork.
- t. Patch various holes and cracks on exterior to ensure a tight building envelope.

- u. Touch-up paint on exterior as needed.
- v. Repair leaking gutters.
- w. Lower grade along north wall of schoolhouse and seed.

Contractor shall adhere to the following specifications for methods and materials:

1. Plaster:

- a. Loose plaster shall be re-adhered to the underlying lath using Acrylic, latex or polymer emulsion adhesive.
- b. Missing lath shall be replaced with new $\frac{3}{8}$ " by 1- $\frac{1}{2}$ " rough sawn wood lath.
- c. New plaster shall be a traditional three coat installation to match the original consisting of:
 - i. Scratch Coat: 1 part NHL 2, [1.5] [2] parts of sand, proportioned by volume and natural hair reinforcement.
 - ii. Brown Coats: [1 part NHL 2, [2] [2.5] parts of sand, proportioned by volume and natural hair reinforcement.
 - iii. Finish Coat: [1 part NHL 2 and [2.5] [3] parts of sand, proportioned by volume.

2. Trim

- a. All woodwork shall be clear grade Douglas Fir or Southern Yellow Pine.
- b. Window and door casing shall be custom milled to match surviving examples exactly.
- c. Dado paneling shall be $\frac{3}{8}$ " tongue and groove milled to match surviving examples.
- d. Dado cap shall be custom milled to match surviving examples on the south and west walls.

3. Floors

- a. Flooring shall be random width Douglas Fir or Southern Yellow Pine matching the dimensions of the original material being patched.
- b. Once patched, floors shall be spot sanded, scrubbed with lye and left unfinished.

4. Finishes

- a. All paint shall be stripped from surviving original woodwork in order to restore its original stained finish. This includes window casing, window jambs, window

stops, window stools, window aprons, door casing, beadboard dado and dado cap.

- b. Woodwork shall be stained and finished with a red garnet shellac that matches the original finish.
- c. Stripping methods including IR heat or conventional heat gun that can remove paint without entirely removing the original shellac should be attempted before using chemical strippers.
- d. If the original shellac finish remains mostly intact, the finish shall be restored using denatured alcohol, touch-up in crevices and damaged areas shall be done with oil paints before a fresh coat of shellac is applied.
- e. Prepare sample areas of finish for approval by the project manager.
- f. After cleaning and repairs, walls shall be finished with yellow ochre distemper finish matching the color identified in the historic finishes report.
- g. An unrestored witness panel shall be retained in accordance with exhibit design. Project manager will mark in the field.
- h. After cleaning and repairs, the ceiling shall be finished with a traditional lime whitewash as identified in the historic finishes report.
- i. Window sash shall be painted white with semi-gloss latex enamel finish in accordance with the historic finishes report.
- j. The door interior shall be faux finished to match the rest of the interior woodwork.
 - i. Apply a yellow ochre ground coat.
 - ii. Apply two or more coats of brown wash that is tooled to approximate wood grain.
 - iii. Finish with garnet shellac to match the rest of the woodwork.

5. Exterior

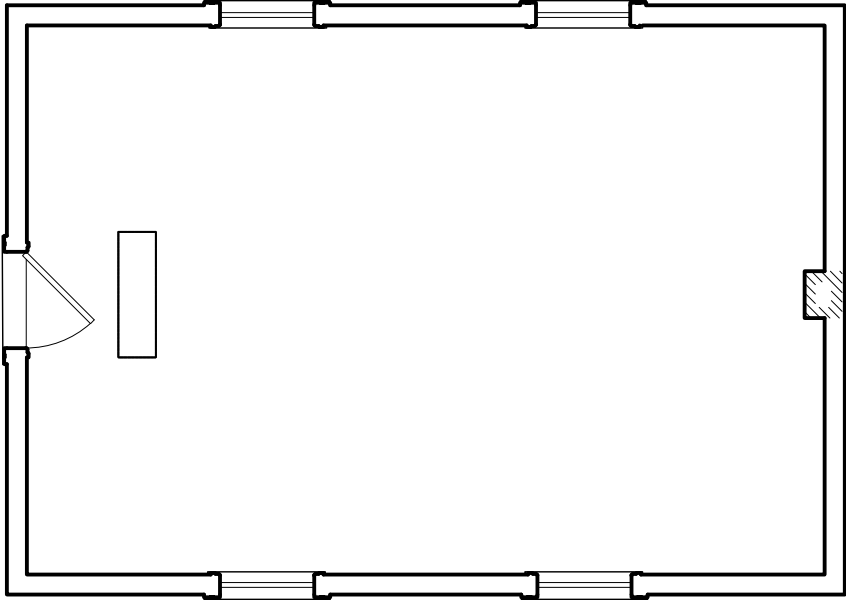
- a. Repair gutters to prevent leaks.
- b. Patch any holes or gaps to ensure a tight building envelope. This work may involve use of latex caulk, wood dutchman repairs and epoxy repairs.
- c. Touch-up paint as needed after patching.
- d. Lower grade on the north facade to ensure a minimum of 8" of space between the siding and finish grade.

- e. Install attic access door in the west gable end. The door shall mimic the board and batten exterior in order to reduce visibility. Include trim and flashing to prevent water intrusion.

6. Electric/HVAC

- a. Install new electric panel, service line and meter. Electric panel shall be located on the west wall and be concealed to the greatest extent possible.
- b. Wire interior for 10 outlets. Three on both the north and south walls and two on the east and west walls. Outlets shall be installed in the beadboard dado and finished with brown receptacles and plated.
- c. Install adjustable track lighting in the ceiling along the north and south walls. Coordinate lighting specifications with exhibit designer.
- d. Install security system. Coordinate with park staff on specifications.
- e. Design and install cold weather electric mini split HVAC system. Use ceiling mounted cassettes and run lines through attic. Locate condenser at the west gable end.

Attachment B





DEMOLITION KEY NOTES:

- ① EXISTING BASEBOARD TO BE REMOVED.
- ② REMOVE CUT DOWN BEADBOARD DADO. RETAIN FULL LENGTH PIECES.
- ③ REMOVE WALLPAPER. STABILIZE OR DEMOLISH FAILED PLASTER AS NEEDED. SOUND PLASTER TO REMAIN



State of Maryland
DEPARTMENT OF NATURAL RESOURCES

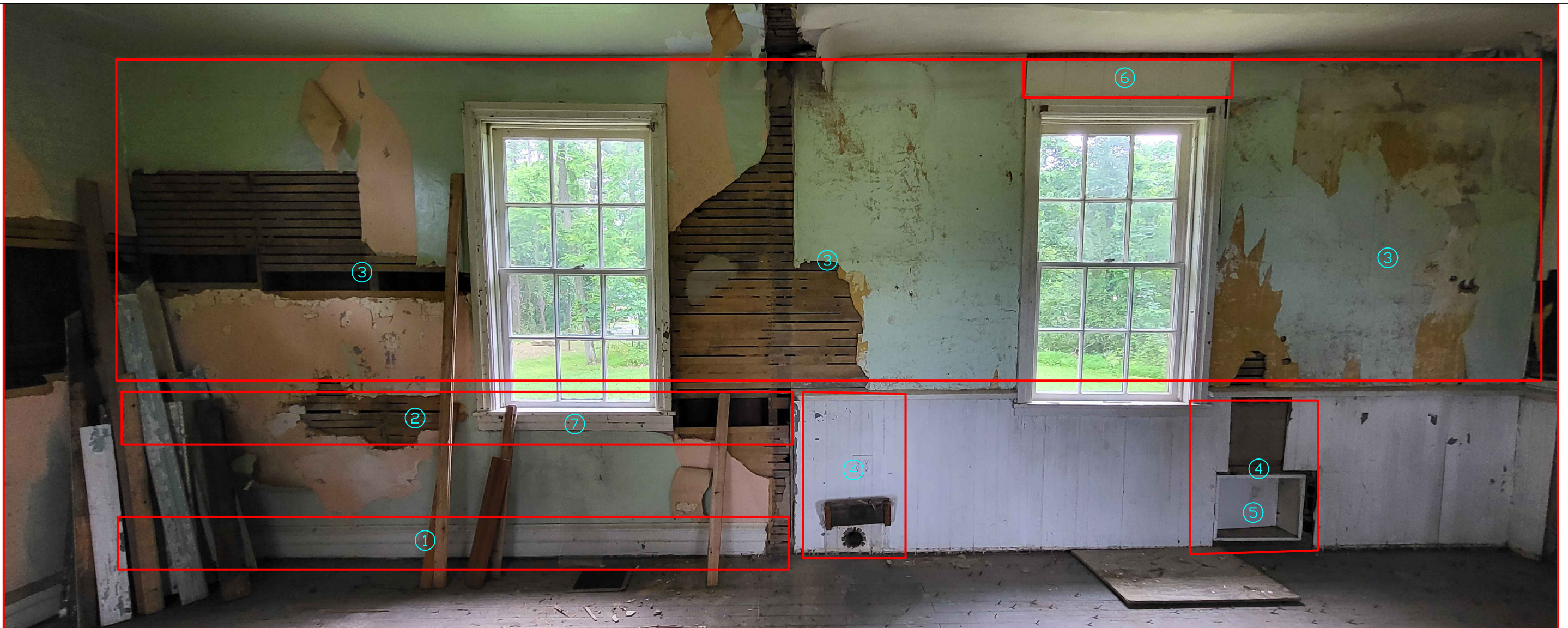
NORTH WALL DEMOLITION

WILLIAMS SCHOOLHOUSE INTERIOR RESTORATION
FORT FREDERICK STATE PARK
11347 BIG POOL ROAD
BIG POOL, WASHINGTON COUNTY, MARYLAND

Date: 6/25/2026
Drawing Number:

A-1

SHEET 1 OF 10



DEMOLITION KEY NOTES:

- ① EXISTING BASEBOARD TO BE REMOVED.
- ② CUT AND REMOVE PLASTER TO PREPARE FOR DADO NAILER
- ③ REMOVE WALLPAPER. STABILIZE OR DEMOLISH FAILED PLASTER AS NEEDED. SOUND PLASTER TO REMAIN
- ④ REMOVE CUT DOWN BEADBOARD DADO. RETAIN FULL LENGTH PIECES.
- ⑤ REMOVE WOODEN BOX INSERT
- ⑥ REMOVE REMAINING PANELING
- ⑦ REMOVE LATER WINDOW APRON



State of Maryland
DEPARTMENT OF NATURAL RESOURCES

SOUTH WALL DEMOLITION

WILLIAMS SCHOOLHOUSE INTERIOR RESTORATION
FORT FREDERICK STATE PARK
11347 BIG POOL ROAD
BIG POOL, WASHINGTON COUNTY, MARYLAND

Date: 6/25/2026
Drawing Number:
A-2
SHEET 2 OF 10



DEMOLITION KEY NOTES:

- ① EXISTING BASEBOARD TO BE REMOVED.
- ② CUT AND REMOVE PLASTER TO PREPARE FOR DADO NAILER
- ③ REMOVE WALLPAPER. STABILIZE OR DEMOLISH FAILED PLASTER AS NEEDED. SOUND PLASTER TO REMAIN



State of Maryland
DEPARTMENT OF NATURAL RESOURCES

EAST WALL DEMOLITION

WILLIAMS SCHOOLHOUSE INTERIOR RESTORATION
FORT FREDERICK STATE PARK
11347 BIG POOL ROAD
BIG POOL, WASHINGTON COUNTY, MARYLAND

Date: 6/25/2026
Drawing Number:
A-3
SHEET 3 OF 10



DEMOLITION KEY NOTES:

- ① REMOVE WALLPAPER. STABILIZE OR DEMOLISH FAILED PLASTER AS NEEDED. SOUND PLASTER TO REMAIN
- ② REMOVE BEADBOARD DADO. RETAIN FULL LENGTH PIECES.
- ③ REMOVE REMAINING PANELING



State of Maryland
DEPARTMENT OF NATURAL RESOURCES

WEST WALL DEMOLITION

WILLIAMS SCHOOLHOUSE INTERIOR RESTORATION
FORT FREDERICK STATE PARK
11347 BIG POOL ROAD
BIG POOL, WASHINGTON COUNTY, MARYLAND

Date: 6/25/2026

Drawing Number:

A-4

SHEET 4 OF 10



RESTORATION KEY NOTES:

1 REPAIR EXISTING PLASTER AS NEEDED.

2 INSTALL NEW LATH AND PLASTER

3 INSTALL NEW BEAD BOARD DADO AND CAP INCLUDING NECESSARY NAILERS

4 INSTALL NEW DADO CAP AND APRON

5 RETAIN AND RESTORE SURVIVING DADO.

6 INSTALL NEW CASING, STOOL AND APRON



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NORTH WALL RESTORATION

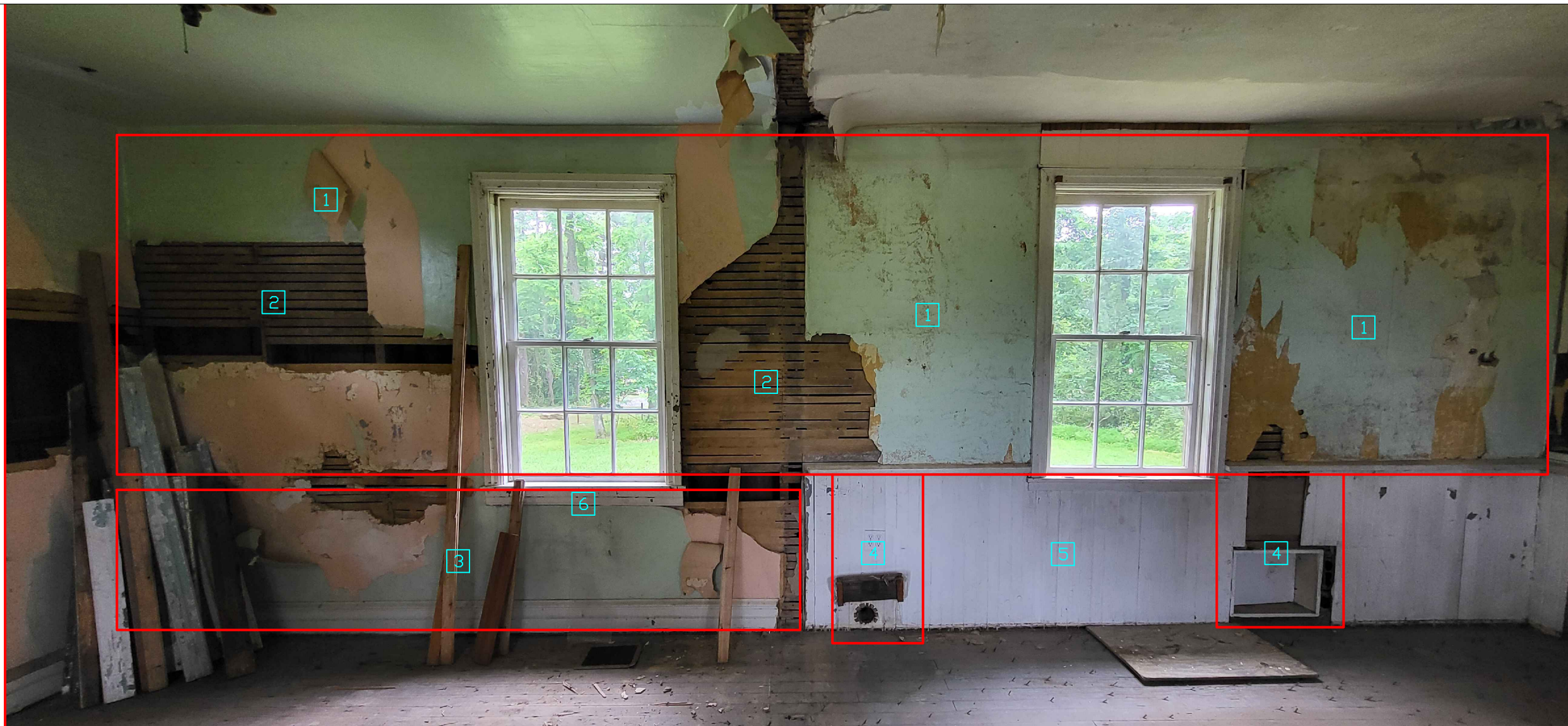
WILLIAMS SCHOOLHOUSE INTERIOR RESTORATION
FORT FREDERICK STATE PARK
11347 BIG POOL ROAD
BIG POOL, WASHINGTON COUNTY, MARYLAND

Date: 6/25/2026

Drawing Number:

A-5

SHEET 5 OF 10



RESTORATION KEY NOTES:

1 REPAIR EXISTING PLASTER AS NEEDED.

2 INSTALL NEW LATH AND PLASTER

3 INSTALL NEW BEAD BOARD DADO AND CAP INCLUDING NECESSARY NAILERS

4 PATCH BEADBOARD

5 RETAIN AND RESTORE SURVIVING DADO.

6 INSTALL NEW APRON



State of Maryland
DEPARTMENT OF NATURAL RESOURCES

SOUTH WALL RESTORATION

WILLIAMS SCHOOLHOUSE INTERIOR RESTORATION
FORT FREDERICK STATE PARK
11347 BIG POOL ROAD
BIG POOL, WASHINGTON COUNTY, MARYLAND

Date: 6/25/2026
Drawing Number:

A-6

SHEET 6 OF 10



RESTORATION KEY NOTES:

1 REPAIR EXISTING PLASTER AS NEEDED.

2 INSTALL NEW LATH AND PLASTER

3 INSTALL NEW BEAD BOARD DADO AND CAP INCLUDING NECESSARY NAILERS

4 INSTALL NEW CASING



State of Maryland
DEPARTMENT OF NATURAL RESOURCES

EAST WALL RESTORATION

WILLIAMS SCHOOLHOUSE INTERIOR RESTORATION
FORT FREDERICK STATE PARK
11347 BIG POOL ROAD
BIG POOL, WASHINGTON COUNTY, MARYLAND

Date: 6/25/2026

Drawing Number:

A-7

SHEET 7 OF 10



RESTORATION KEY NOTES:

- 1 REPAIR EXISTING PLASTER AS NEEDED.
- 2 INSTALL NEW LATH AND PLASTER
- 3 INSTALL NEW BEAD BOARD DADO AND CAP INCLUDING NECESSARY NAILERS

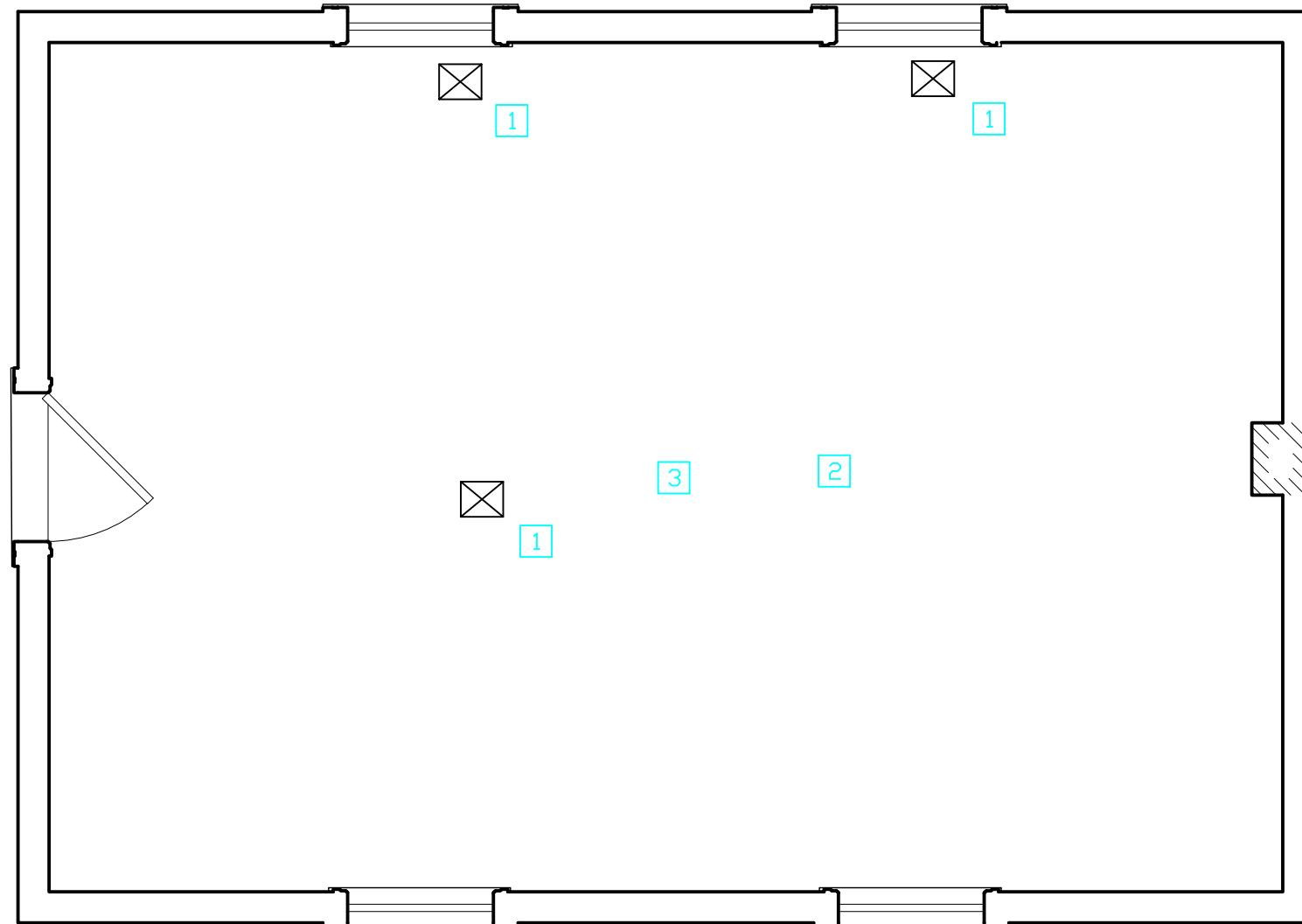


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WEST WALL RESTORATION

WILLIAMS SCHOOLHOUSE INTERIOR RESTORATION
FORT FREDERICK STATE PARK
11347 BIG POOL ROAD
BIG POOL, WASHINGTON COUNTY, MARYLAND

Date: 6/25/2026
Drawing Number:
A-8
SHEET 8 OF 10



RESTORATION KEY NOTES:

- 1 PATCH FLOORING
- 2 REMOVE NAILS
- 3 REMOVE MASTIC, SAND, AND SCRUB WITH LYE



State of Maryland
DEPARTMENT OF NATURAL RESOURCES

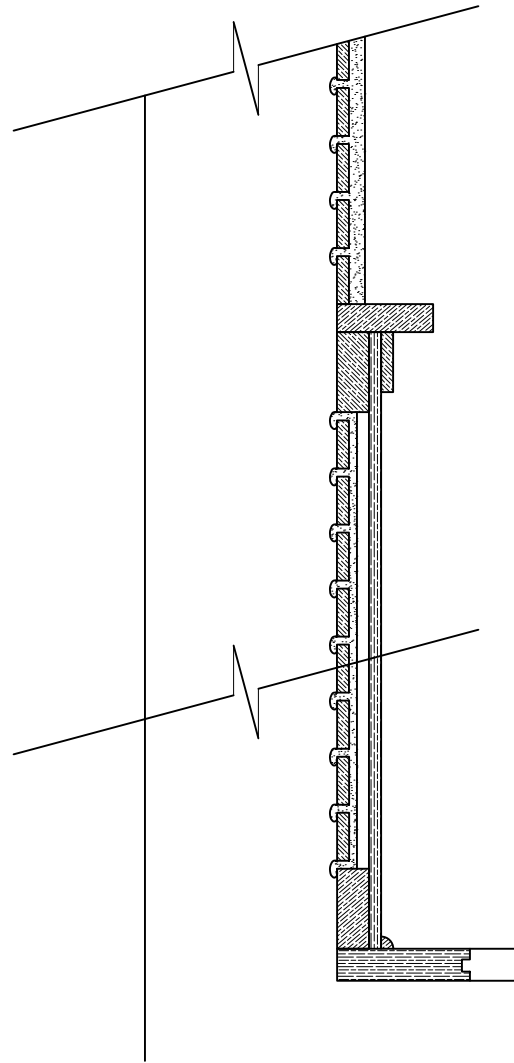
FLOOR RESTORATION

WILLIAMS SCHOOLHOUSE INTERIOR RESTORATION
FORT FREDERICK STATE PARK
11347 BIG POOL ROAD
BIG POOL, WASHINGTON COUNTY, MARYLAND

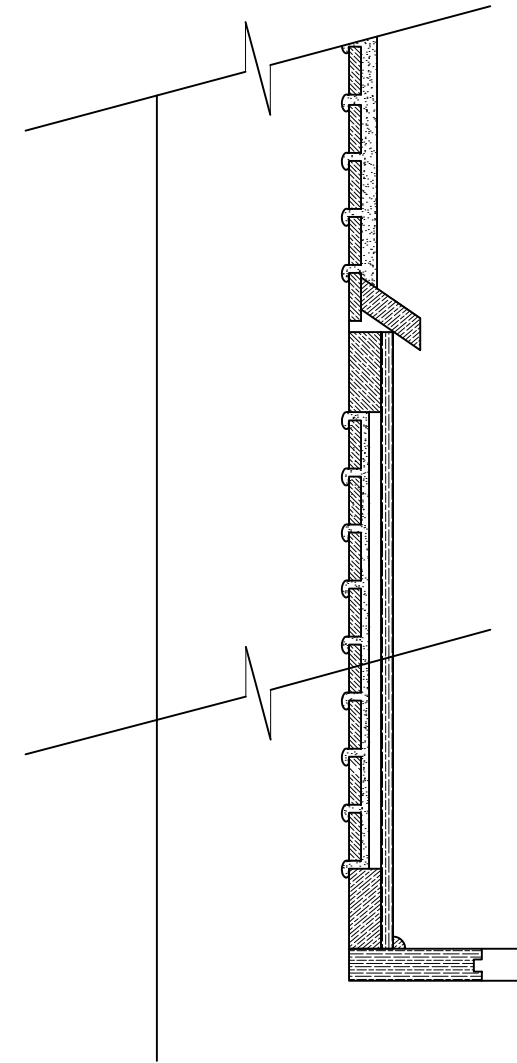
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Drawing Number:

A-9

SHEET 9 OF 10



DADO AND CAP FOR WEST WALL



DADO AND CAP FOR NORTH, SOUTH, AND EAST WALLS



State of Maryland
DEPARTMENT OF NATURAL RESOURCES

DADO DETAILS

WILLIAMS SCHOOLHOUSE INTERIOR RESTORATION
FORT FREDERICK STATE PARK
11347 BIG POOL ROAD
BIG POOL, WASHINGTON COUNTY, MARYLAND

Date: 6/25/2026
Drawing Number:
A-10
SHEET 10 OF 10

ATTACHMENT C: BID FORM

Bid Time:

Bid Date: _____

Location: Email to cpoulton@presmd.org

BID FROM:

Name: _____

Address: _____

BID TO: PRESERVATION MARYLAND

PROJECT: WILLIAMS SCHOOLHOUSE PHASE II RESTORATION

1. Base Bid

Having carefully examined the full bid package, which includes:

- Invitation to Bid;
- *Attachment A: Scope of Work and Specifications;*
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- *Attachment I: Paint Analysis (2019)*

as well as the premises and all conditions affecting the proposed construction, the undersigned proposes to provide all labor, materials, services, taxes and equipment necessary for, or incidental to, the construction of the project in accordance with *Attachment A: Scope of Work and Specifications* within the time set forth below, for the lump sum base bid of:

\$ _____
Dollar Amount Is to Be Shown Numerically

2. Schedule of Values

Complete *Attachment D: Schedule of Values*, indicating cost per work item. Total of scheduled values must equal Base Bid.

3. Conditions and/or Bid Qualifications

Attach a list of any/all conditions and/or bid qualifications. If none, write "None" below.

4. Completion Time

If awarded the Contract, Bidder agrees that the work will be substantially complete and ready for final payment in accordance with the Contract Documents within:

_____ consecutive calendar days of the date established in a written notice to proceed.

Number of Days Is to Be Shown Numerically

5. Additional Services

List the labor rates for additional services and percentage for O.H. & P. on Change Orders:

Labor Rates:		O.H. & P.:	%
Personnel	Rate		

6. Special Considerations

By submission of a Bid, the Contractor agrees that, if quantities of material required to complete the Work are increased by Change Order, no special material ordering or scheduling considerations are necessary (e.g., minimum quantity orders or lead times), unless explicitly noted below. If none, write "None" below.

7. Addenda

The undersigned acknowledges receipt of Addenda as listed below and represents that any modifications to the Work called for in these Addenda are included in the Base Bid. If Addenda have been received, list Addendum number(s) and date(s). If no Addenda have been received, write "None" below:

Addendum Number	Dated

8. Performance and Payment Bond

If bid equals or exceeds \$100,000, the Bidder shall furnish bonds covering the faithful performance of the Construction Project and payment of all obligations arising thereunder, as stipulated herein:

- The surety underwriting the bonds shall have not less than an "A" rating.
- Unless otherwise provided, the bonds shall be written on AIA Document A312, Performance Bond and Payment Bond.
- Both bonds shall be written in the amount of the Construction Project Sum and shall be dated on or after the date of the Contract.
- The cost of bonds shall be included in the Contract Sum. The amount of any Change Order which adds to or subtracts from the Contract Sum shall include any corresponding adjustment to the cost of bonds.
- The Contractor shall require the attorney-in-fact who executes the required bonds on behalf of the surety to affix thereto a certified and current copy of the power of attorney.
- The Contractor shall deliver the required bonds and evidence of the surety's rating to the Owner not later than ten (10) days following the date of execution of the Contract.

9. Assurances

The undersigned, in accordance with the information provided in the bid package for the construction of the above-named project, does hereby declare:

- a. That the undersigned understands that the Owner reserves the right to reject any and all bids and to waive any formality.
- b. That, if awarded the Contract, the undersigned will enter into an Agreement as provided by the Contractor and execute required performance and payment bonds, as applicable, within ten (10) days after receipt of the Intent to Award, will commence work within five (5) days after the date of the Notice to Proceed, and will complete the Contract fully within the time for completion as indicated.
- c. That this bid may not be withdrawn for a period of thirty (30) days after the bid opening.
- d. Bids submitted by a "Joint Venture" shall be signed by representatives of each part of the Joint Venture. The licenses of each component part of the Joint Venture shall also be listed in the bid submittal. Therefore, joint venture bidders shall indicate at least two (2) signatures and two (2) license numbers on the Bid Form. Joint Venture bidders shall indicate at least two (2) signatures on the Bid Form even if they are licensed as a joint venture.

Respectfully Submitted:

Name of Bidder (Typed or Printed)

Address

(Signature and Title)

Contractor's Joint Venture License Number(s) or Contractor's License No.

Telephone Number

Fax Number

Federal ID Number or Social Security Number

Date of Bid

Attachment D

Schedule of Values

[illegible]

Preliminary Site Access and Operations Questionnaire

- Contract signatory
 - Name: _____
 - Phone: _____
 - Email: _____
 - Address: _____
- Site access coordination needs:
 - Is access to the interior needed? How/where will the team enter the building?

 - Who is the vendor point of contact? Different than the onsite point of contact?

- Hours of access:
 - What daily hours will the vendor be on-site? _____
 - What days of the week? _____
 - How long is the project expected to take? _____
- Defining staging areas:
 - Is a staging area needed? ☒ Yes ☐ No
 - Where will it be located? DNR requests staging in immediate vicinity to schoolhouse
 - What is the anticipated SF? _____
 - Will it be enclosed? _____
- Vendor parking:
 - Is parking needed? ☐ Yes ☐ No
 - How many vehicles? _____
 - Where? _____
- Placement of signage:
 - What, if any, signage will be posted?

- Where?

- Temporary fencing (if applicable):

- Will there be a temporary construction fence? ☐ Yes ☐ No

- What are the specs and dimensions? _____

- Anticipated duration of placement? _____

- Limit of Disturbance:

- Is there expected disturbance? Area?

- Will vegetation be removed? What/where?

- Road/Traffic Impact:

- Does the work require blocking the road/redirecting traffic? ☐ Yes ☐ No

- Will it have any impact on surrounding roadways? ☐ Yes ☐ No

Attachment F: Site & Building Conditions | Maps, Photos, & Interior Elevations

Williams Schoolhouse Aerial



Williams Schoolhouse in Fort Frederick State Park





Front of Schoolhouse (East Exterior) / Side of Schoolhouse (South Exterior)



Front of Schoolhouse (East Exterior) / Side of Schoolhouse (North Exterior)



Front Entrance of Schoolhouse (East Exterior)



Back of Schoolhouse (West Exterior)



North Interior



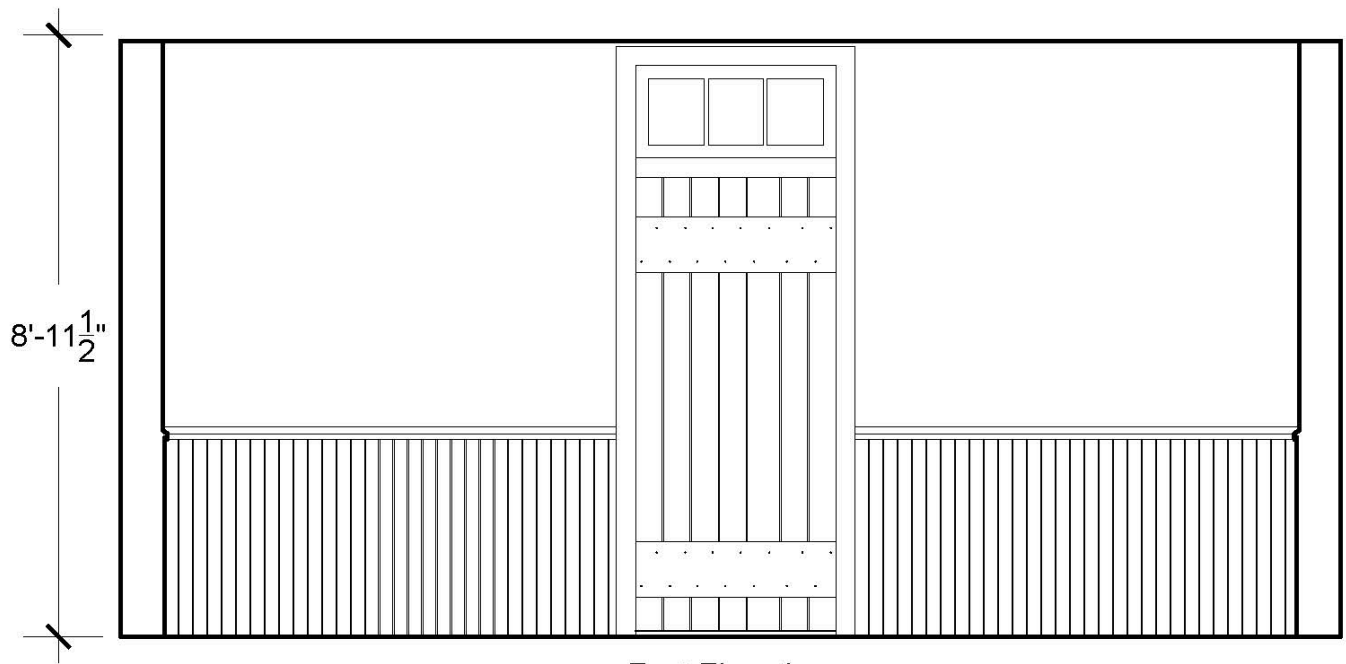
South Interior



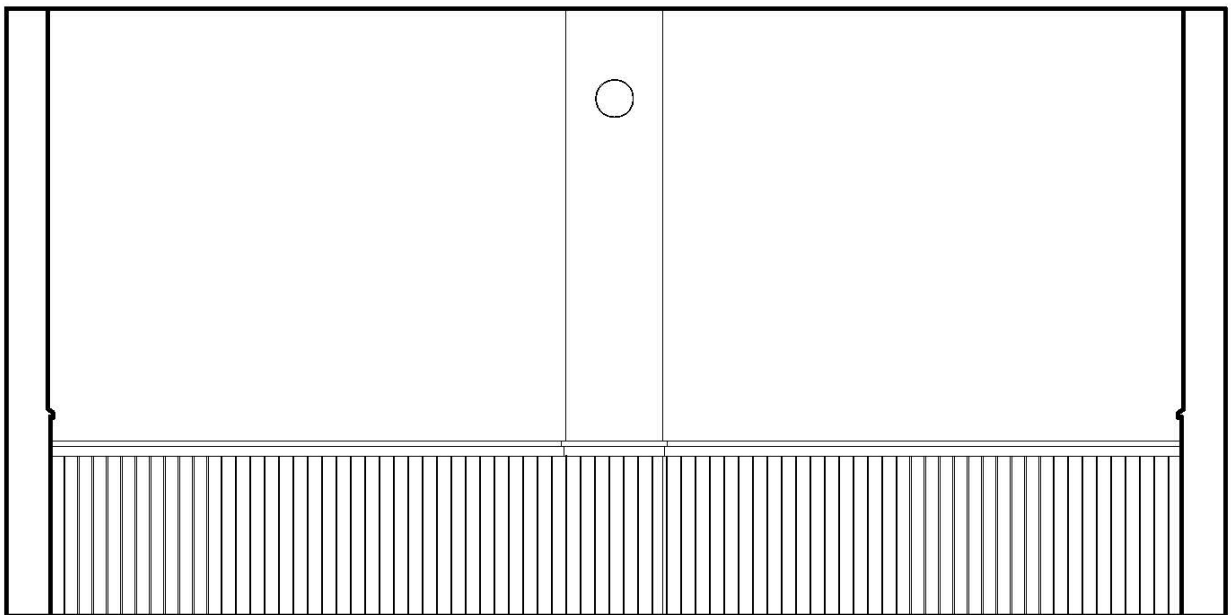
Back of Schoolhouse (West Interior)



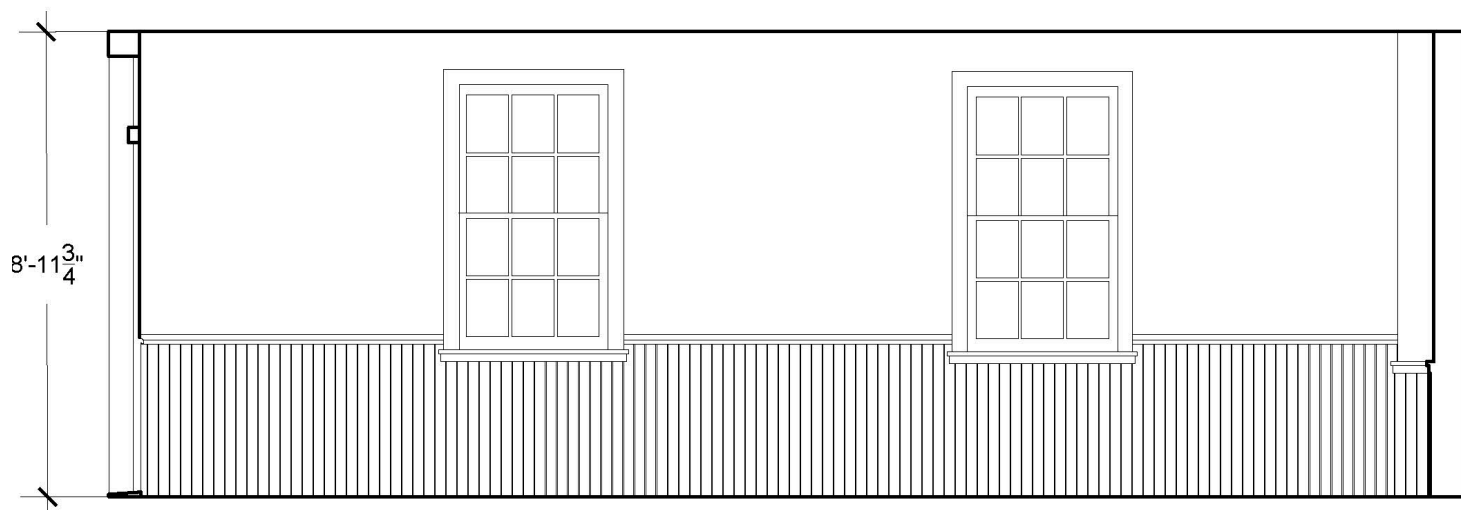
Front of Schoolhouse (East Interior)



East Elevation

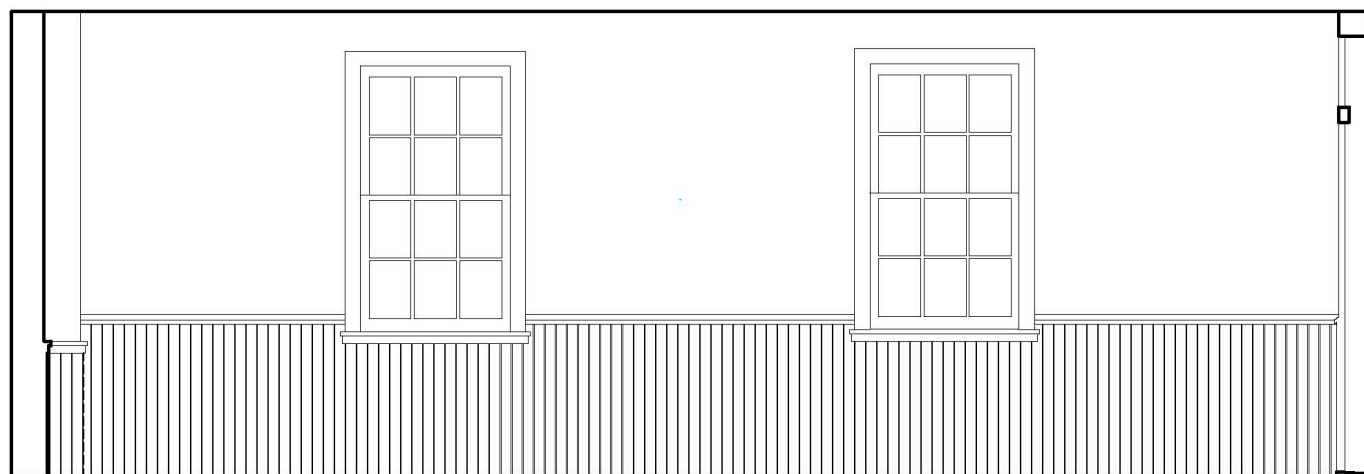


West Elevation

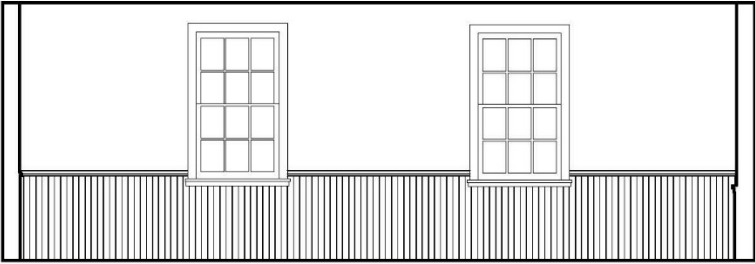


South Elevation

24'-11 3/4"

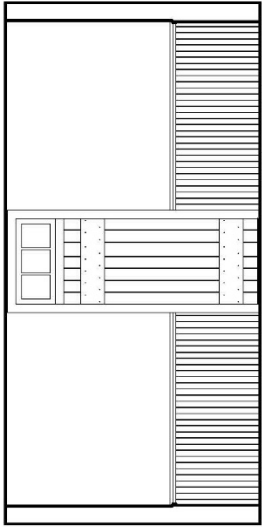


North Elevation

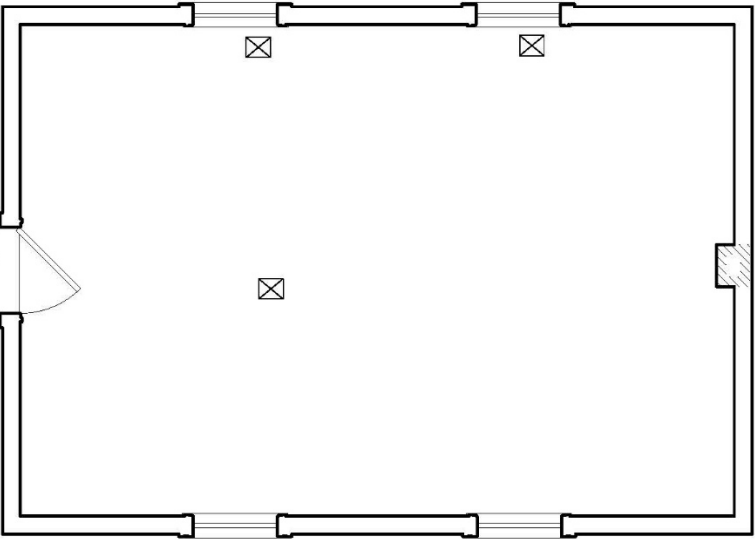
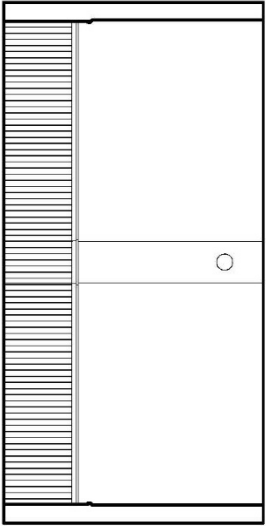


South

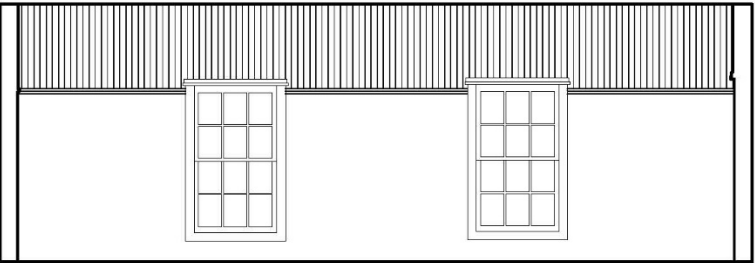
East



West



North



Completed Scope of Work | *Williams Schoolhouse Exterior Restoration (2022)*

SCOPE

This project consists of the Contractor providing all labor, equipment, materials, supplies, insurance, etc., necessary to remove and replace windows, install fascia boards, custom build entrance door & transit window and paint the exterior of the Williams School House at Fort Frederick State Park. The project is located at Fort Frederick State Park, 11347 Big Pool Road, Big Pool, and Washington County, Maryland 21711.

The proposed project shall include but is not limited to the following:

- a. Remove /Abate approximately 100 LF of asbestos window glazing.
- b. Remove and reinstall two (2) existing first floor windows (North Side) to original location. Mill custom trim to replicate original window trim for the two (2) north side windows. NOTE : Exterior only!
- c. Infill/reframe two (2) existing door entrances and two (2) window openings a total of approximately 80 SF.
- d. Remove and infill one (1) gable window approximately 20 SF.
- e. Remove two (2) windows and reframe to prepare for new custom-built entrance door & transom window at that location. Install custom trim to replicate window trim at new custom door location.
- f. Install approximately 300 SF of vertical board siding and approximately 1,200 LF of batten strips.
- g. Install all necessary 2x wood framing to the west end wall/gable to prepare for the installation of board & Batten strips.
- h. Installation of epoxy surface patch (Unit Price #1).
- i. Repair four (4) historic windows to like new condition:
 - a. Remove all exterior trim (North side Only) & replace with custom/replicated trim. South side shall be repaired in place.
 - b. Interior and exterior paint removal
 - c. Removal and repair of sash if needed (including reglazing where necessary)
 - d. Replace all broken windowpane glass
 - e. Repairs to the wooden components as needed with 2-part epoxy (UNIT PRICE #1)
 - f. Weatherstripping and reinstallation of the sash
 - g. Prime and repaint
 - h. NOTE: National Park Service (NPS) PRESERVATION BRIEFS 9 Repairs of Historic Wooden Windows shall be the standard for repairs.

- j. Paint all exterior finishes. Doors, boxing boards, and existing/newly install vertical boards & batten.
- k. Contractor shall remove and properly dispose of any debris resulting from the work contained in this contract.
- l. Contractor shall maintain a clean work site, and upon completion of work, return the site to a preconstruction condition.

NOTE: All quantities and sizes listed above are approximate. The Contractor shall be responsible to obtain his or her own measurements for the project and bidding purposes.

Unit Prices:

- Unit price #1 “Surface Patch”
- Estimated Quantity: 2 Gallons

STANDARDS AND CODES

1. The Contractor shall comply with OSHA (Occupational Safety and Health Administration) and MOSHA (Maryland Occupational Safety and Health Administration) regulations regarding construction safety and health standards throughout the duration of this project.

2. All work shall be performed in accordance with applicable code requirements and standards as defined by the Maryland Code Administration “Maryland Building Performance Standards” (MBPS), and the latest editions of the:

- International Building Code (IBC)
- International Residential Code (IRC)
- International Plumbing Code (IPC)
- International Mechanical Code (IMC)
- National Electric Code (NEC)
- International Energy Conservation Code (IECC)
- Maryland Accessibility Code (MAC)
- National Fire Protection Association 101 Life Safety Code (NFPA)
- International Ground Source Heat Pump Association (IGSHPA)
- Maryland Department of Transportation – State Highway Administration Standard Specifications for Construction Materials 4
- National Ready Mix Concrete Association (NRMCA)
- National Park Service (Preservation Brief 9)
- MDE Control of Asbestos COMAR 26.11.21

- OSHA 3142-12R 2004 Lead in Construction
- and any local amendments or modifications to the Standards made by the local jurisdiction which may be applicable to the work.

MATERIALS AND SUPPLIES

1. General:

- All materials shall be as specified or approved equal by the DNR Project Engineer.
- All materials shall be new and where applicable shall be delivered to the job site with labels intact and legible.
- The Contractor shall be responsible for the coordination, off-loading and proper storage of all materials and supplies up until the time of the final inspection.
- Materials shall be stored in a safe area, out of the way of traffic. Storage site location shall be approved by the Project Engineer prior to the storage of any materials on site. All materials and supplies shall be stored up off of the ground surface and protected from weather with a waterproof covering. Any special storage instruction required by the material manufacturer shall be performed by the Contractor as if specified herein.
- Any materials that have not been specifically mentioned, but are necessary for the complete, safe, and satisfactory completion of the project shall be provided by the Contractor as if specified herein.

2. Specific: Lumber for Framing, boxing, siding/baton & custom door/window.

- Framing lumber (wall studs, horizontal girt beams/ purlins and needed blocking) shall be rough sawn 2x native pine made to size for the conditions.
- Siding boards shall be 1" thick x 11¼" wide rough sawn Douglas Fir #1 common with a moisture content of less than 8%. Boards shall be joined on both edges and planed on one side.
- Baton strips shall be 1"x 3" rough sawn Douglas Fir #1 common with a moisture content of less than 8%. Batons shall be joined on both edges and planed on one side.
- Boxing boards shall be 1" rough sawn Douglas Fir #1 common with a moisture content of less than 8%. Width of boards shall be field verified.
- Soffit vents shall be aluminum 3" round screened vent manufactured by Maurice Franklin (RL-100) or approved equal. **Note:** Vents shall be painted the same color as boxing boards.

- f. Fasteners for installation of the siding, baton strips and boxing boards shall be galvanized common hand nails properly sized for application.
- g. Custom door shall be a true 1" or 5/4 thick T/G select grade (#1) white oak with a moisture content of less than 8%.
- h. Custom built transom window frame shall be select grade (#1) white oak moisture content of less than 8%.
- i. Window glass for new custom transom and replacement windowpanes shall be cylinder-blown glass or approved equal.
- j. Weatherstripping for restored windows and new custom door shall be Spring Bronze manufactured by Wm A. Kilian Hardware CO. or approved equal.
- k. **Unit price #1:** Surface epoxy patch shall be, two-part epoxy, moldable, sand able, stainable wood filler manufactured for use on external/interior wood surfaces. Perma Chink E-Wood or approved equal.

3. Specific: Paint, Primer, Window Glazing

- a. Window glazing shall be UGL 31506 glazing compound or approved equal. Glazing push points shall be Red Devil 1710 or approved equal.
- b. Primer for all exterior finishes shall be Fresh Start (094) manufactured by Benjamin Moore or approved equal.
- c. Paint for the boards, baton and exterior side of doors and windows, shall be Aura or Regal exterior manufactured by Benjamin Moore or approved equal. Sheen shall be satin.

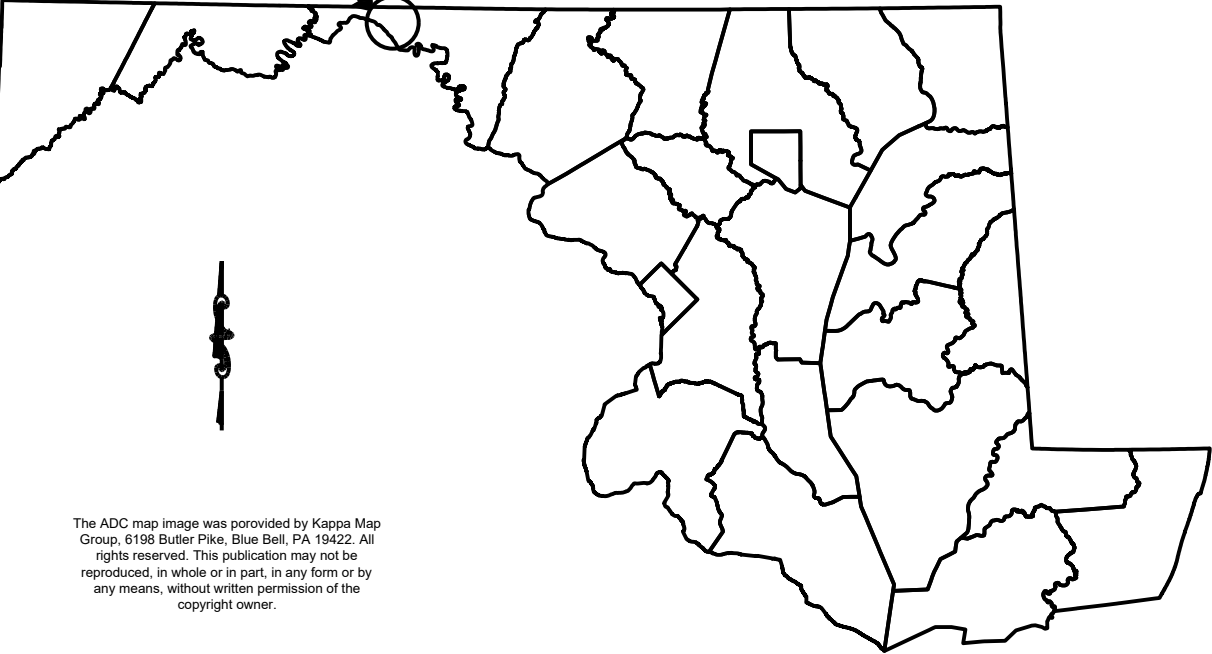
FORT FREDERICK STATE PARK
EXTERIOR RENOVATION - SCHOOL HOUSE

11347 BIG POOL RD
BIG POOL, WASHINGTON COUNTY, MARYLAND
PROJECT NO. EC22-09515-03

FOR THE
STATE OF MARYLAND
DEPARTMENT OF NATURAL RESOURCES
ENGINEERING AND CONSTRUCTION

TAWES STATE OFFICE BUILDING D-3
580 TAYLOR AVENUE
ANNAPOLIS, MARYLAND 21401-2351

FT. FREDERICK S.P.

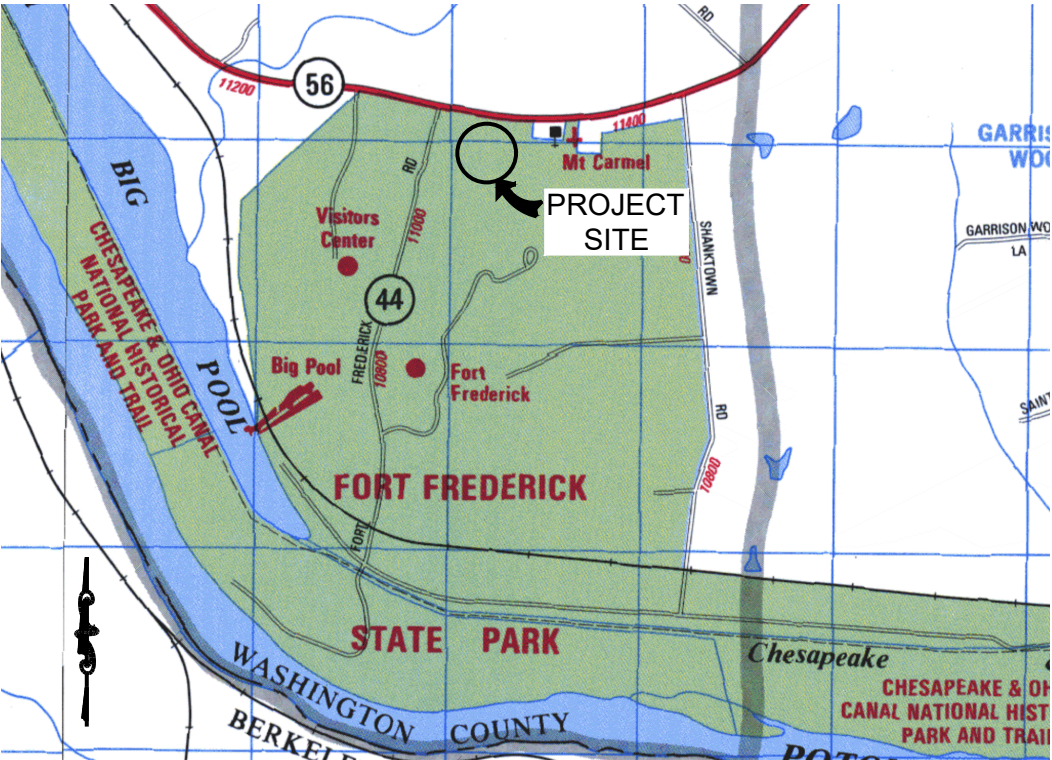


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VICINITY MAP
SCALE: N.T.S.

LIST OF DRAWINGS

SHEET	DESCRIPTION
CS-1	COVER SHEET
A-1	DEMOLITION PLAN
A-2	PROPOSED PLAN
A-3	PROPOSED ELEVATIONS
A-4	PROPOSED DETAILS
A-5	WINDOW SCHEDULE
A-6	PROPOSED DOOR DETAILS



LOCATION MAP
SCALE: N.T.S.

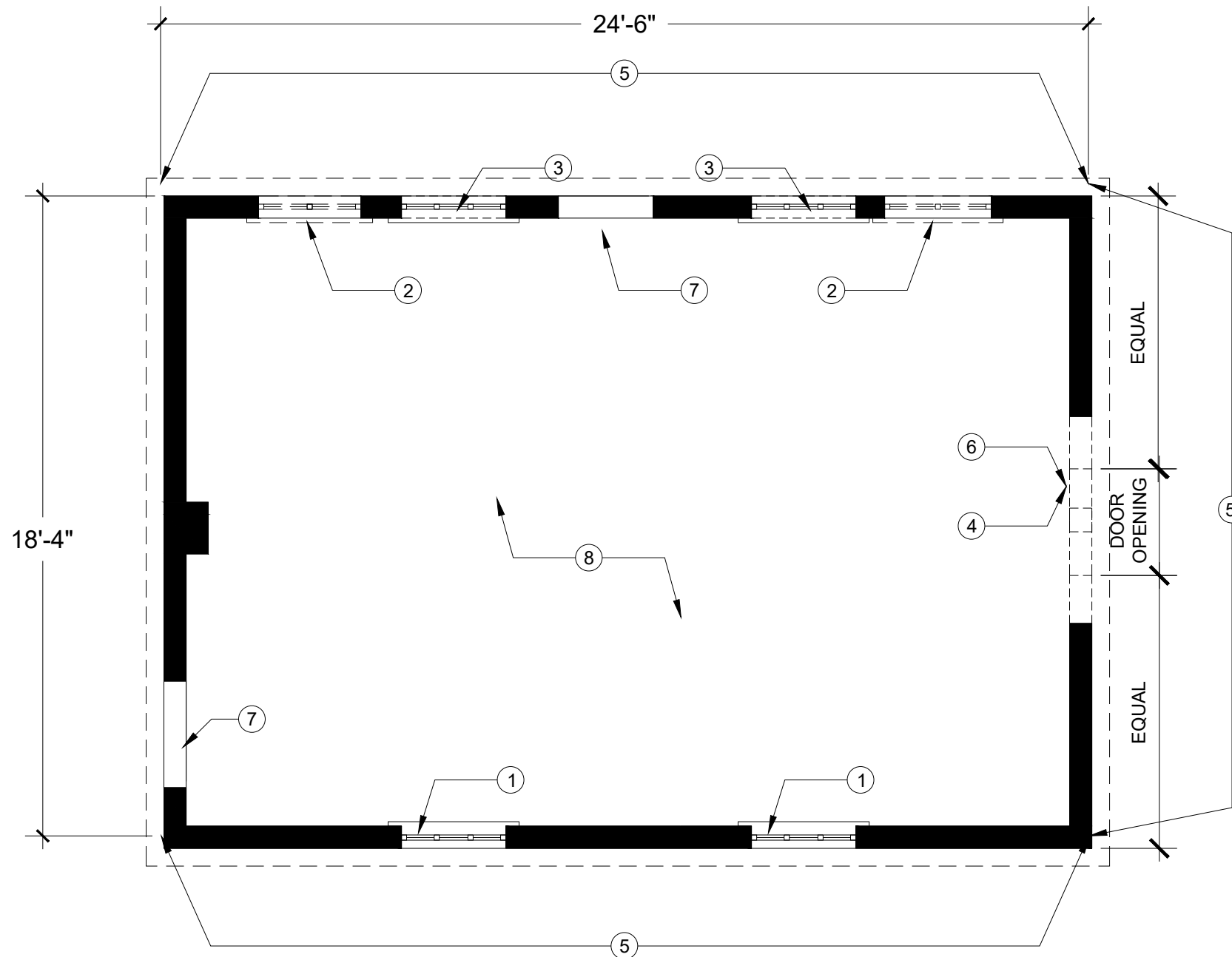


State of Maryland
DEPARTMENT OF NATURAL RESOURCES
Engineering & Construction

COVER SHEET

EXTERIOR RENOVATION
FORT FREDERICK STATE PARK
11347 BIG POOL ROAD
BIG POOL, WASHINGTON COUNTY, MARYLAND

Project Number:
EC22-09515-03
Date: 03/07/22
Drawing Number:
CS-1
SHEET 1 OF 7



A FLOOR PLAN DEMOLITION
SCALE: 1/4" = 1'-0"

DEMOLITION KEY NOTES:

- ① EXISTING WINDOW TO REMAIN IN PLACE. CLEAN, ABATE EXISTING ASBESTOS CAULKING AND REPAIR WINDOW AS NEEDED TO MAKE IT FULLY FUNCTIONAL.
- ② EXISTING WINDOW TO BE RELOCATED TO BE CAREFULLY REMOVED FOR INCLUSION IN THE PROPOSED CONSTRUCTION. CLEAN, ABATE EXISTING ASBESTOS CAULKING AND REPAIR WINDOW AS NEEDED TO MAKE IT FULLY FUNCTIONAL.
- ③ CUT EXISTING WALL TO FACILITATE INSTALLATION OF THE SALVAGED WINDOWS. UTILIZE THE ORIGINAL FRAMING TO DETERMINE EXACT LOCATION.
- ④ REMOVE EXISTING WALL TO FACILITATE INSTALLATION OF PROPOSED DOOR. SHORE WALL AS NECESSARY.
- ⑤ CLEAN AND PREPARE EXISTING BOARD SIDING TO RECEIVE NEW FINISH. REMOVE NAILS, STAPLES ETC TO FACILITATE FINISH.
- ⑥ REMOVE EXISTING GABLE WINDOW. ABATE CAULK / GLAZING PRIOR TO WINDOW REMOVAL.
- ⑦ REMOVE EXISTING DOOR FRAMES & INFILL FRAME THESE AREAS TO MATCH ADJACENT WALL FINISHES.
- ⑧ ALL INTERIOR FINISHES SHALL REMAIN. PROTECT ALL INTERIOR FINISHES FROM DAMAGE DURING THE PROJECT.

DIMENSIONS SHOWN AS APPROXIMATE.
CONTRACTOR SHALL VERIFY MEASUREMENTS
FOR THE PURPOSE OF BIDDING.

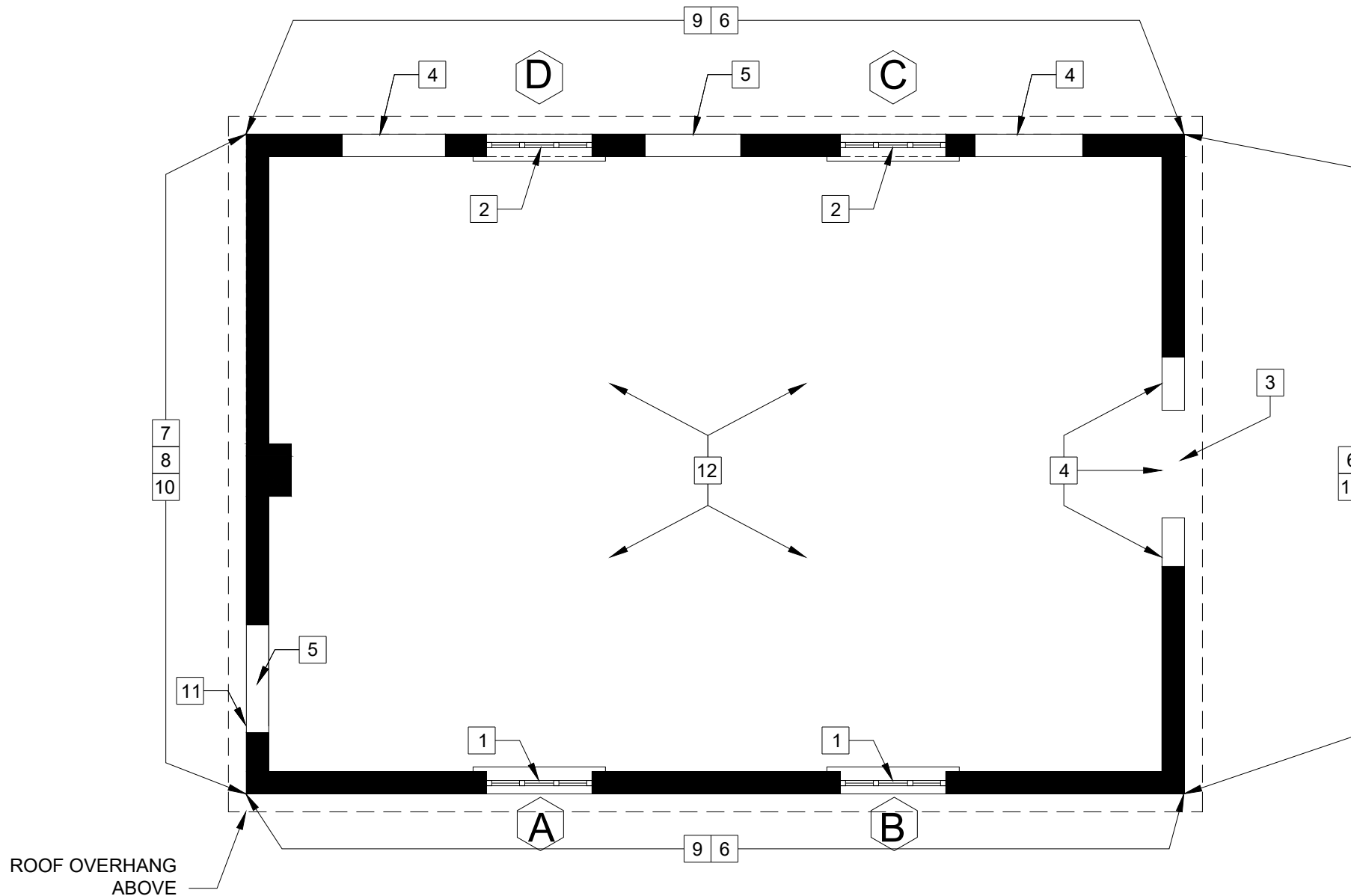


State of Maryland
DEPARTMENT OF NATURAL RESOURCES
Engineering & Construction

DEMOLITION PLAN

EXTERIOR RENOVATION
FORT FREDERICK STATE PARK
11347 BIG POOL ROAD
BIG POOL, WASHINGTON COUNTY, MARYLAND

Project Number:
EC22-09515-03
Date: 03/07/22
Drawing Number:
A-1
SHEET 2 OF 7



A FLOOR PLAN NEW WORK
SCALE: 1/4" = 1'-0"

NEW WORK KEY NOTES:

- 1 EXISTING WINDOW, CLEANED, PAINTED AND REPAIRED .
 - 2 EXISTING WOOD WINDOWS, CLEANED, PAINTED AND REINSTALLED IN NEW LOCATION. SALVAGED WINDOWS TO BE LOCATED WHERE THE ORIGINAL WOOD LINTEL OCCURS IN EXISTING FRAMING. FIELD VERIFY LOCATION.
 - 3 3'-0" x 8'-0" WOOD DOOR WITH TRANSOM. INSTALL DOOR IN LOCATION OF EXISTING DOOR LINTEL. FIELD VERIFY.
 - 4 INFILL FRAME WINDOW OPENINGS WITHIN THE WALL AND FINISH WITH BOARD AND BATTEN SIDING TO MATCH EXISTING EXTERIOR. (INCLUDING GABLE ATTIC WINDOW.)
 - 5 INFILL FRAME DOOR OPENINGS WITHIN THE WALL AND FINISH WITH BOARD AND BATTEN SIDING TO MATCH EXISTING EXTERIOR.
 - 6 CLEAN AND PREPARE EXISTING BOARD SIDING WITH NEW 1 x 3 WOOD BATTENS AND PAINT EXISTING EXTERIOR PER SPECIFICATIONS.
 - 7 INSTALL NEW BOARD AND BATTEN SIDING TO MATCH EXISTING.
 - 8 CLEAN AND PREPARE NEW BOARD AND BATTEN. PAINT TO MATCH EXISTING PER SPECIFICATIONS.
 - 9 INSTALL NEW VENTED SOFFIT PER SPECIFICATIONS.
 - 10 INSTALL NEW SOLID FACE SOFFIT PER SPECIFICATIONS.
 - 11 FABRICATE AND INSTALL NEW CRAWL SPACE ACCESS PANEL TO INCLUDE FRAMEWORK. VERIFY EXISTING OPENING IN FIELD.
 - 12 PROTECT ALL INTERIOR FINISHES FROM DAMAGE DURING THE PROJECT.
- LETTERING CORRESPONDS TO THE WINDOW SCHEDULE ON PAGE 6.

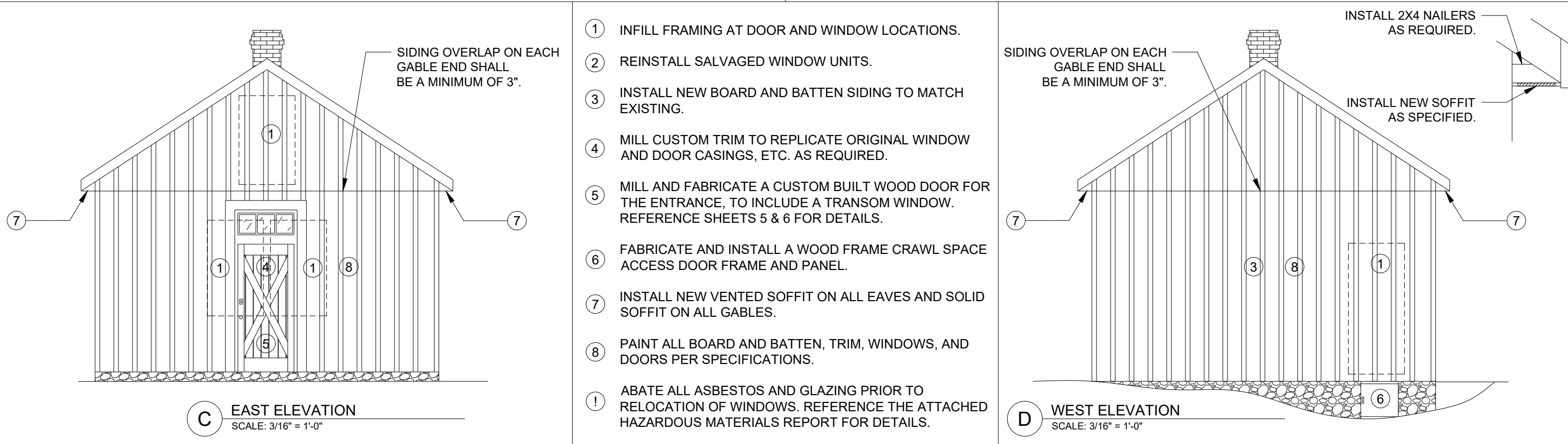
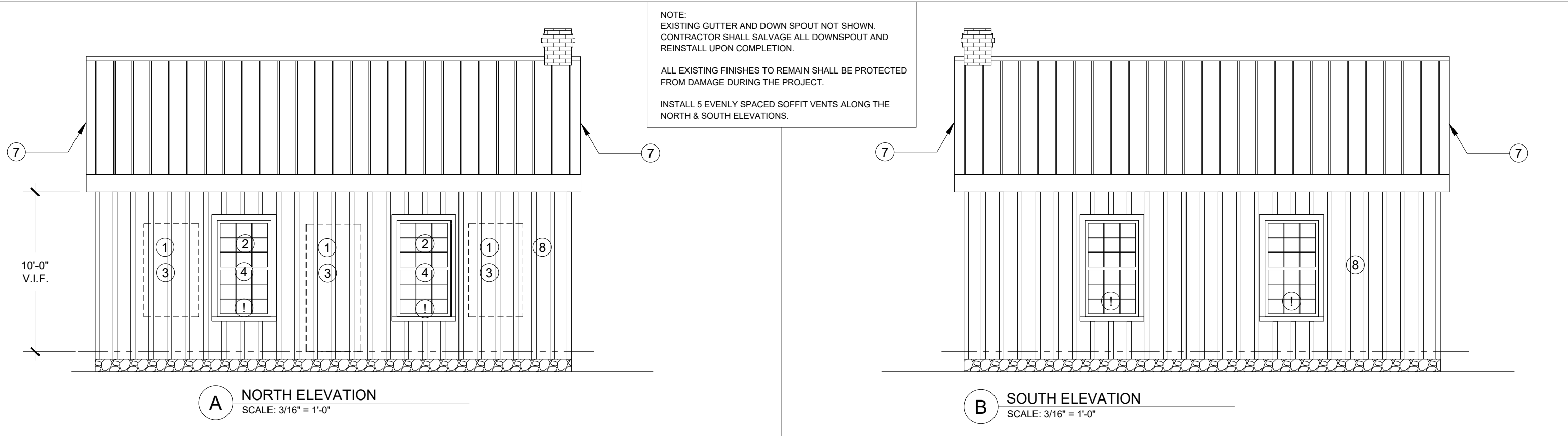


State of Maryland
DEPARTMENT OF NATURAL RESOURCES
Engineering & Construction

PROPOSED PLAN

EXTERIOR RENOVATION
FORT FREDERICK STATE PARK
11347 BIG POOL ROAD
BIG POOL, WASHINGTON COUNTY, MARYLAND

Project Number:
EC22-09515-03
Date: 03/07/22
Drawing Number:
A-2
SHEET 3 OF 7



PROPOSED ELEVATIONS

EXTERIOR RENOVATION
FORT FREDERICK STATE PARK
11347 BIG POOL ROAD
BIG POOL, WASHINGTON COUNTY, MARYLAND

PAINT COLORS SHOWN AS APPROXIMATE. REFERENCE THE ATTACHED ANALYSIS REPORT FOR DETAILS.

DRAWINGS ARE FOR REFERENCE PURPOSE ONLY. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR REVIEW AND APPROVAL PRIOR TO FABRICATION. ALL TRIM SHALL BE MILLED TO MATCH EXISTING.



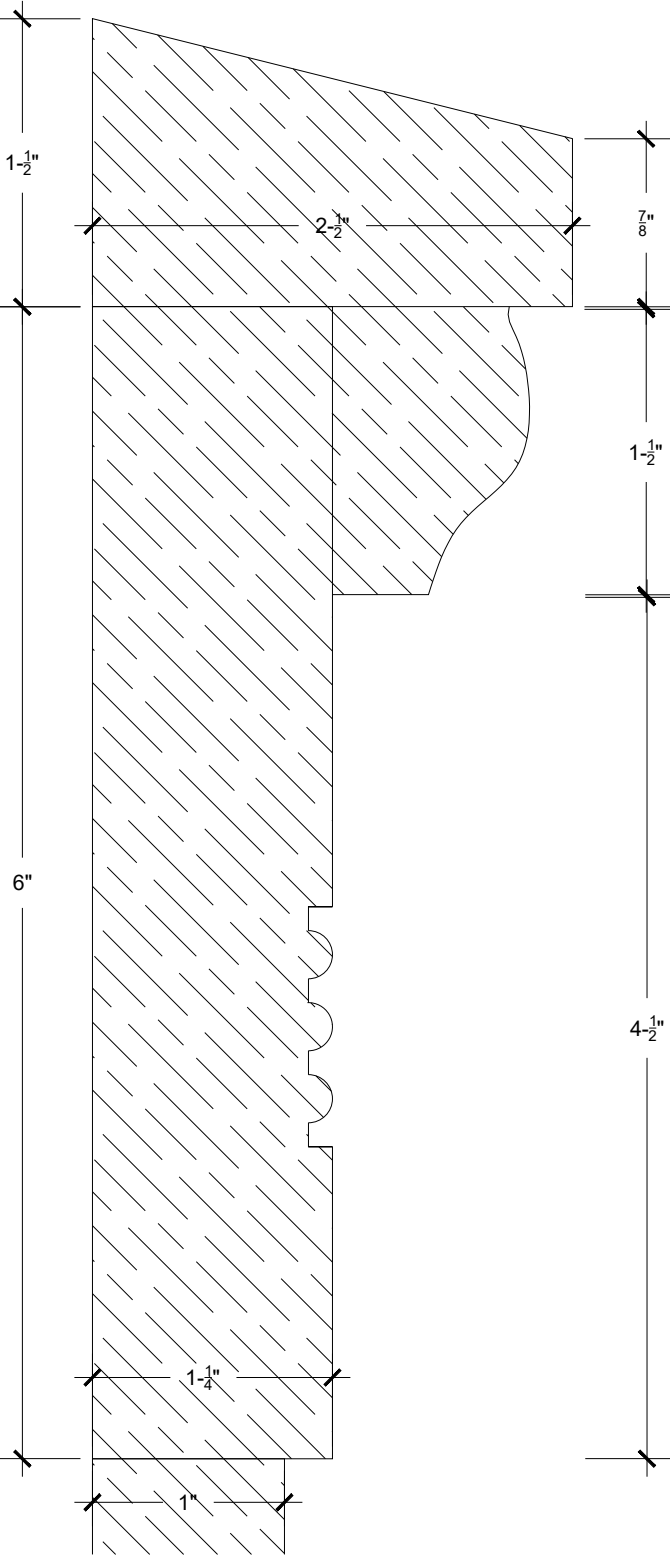
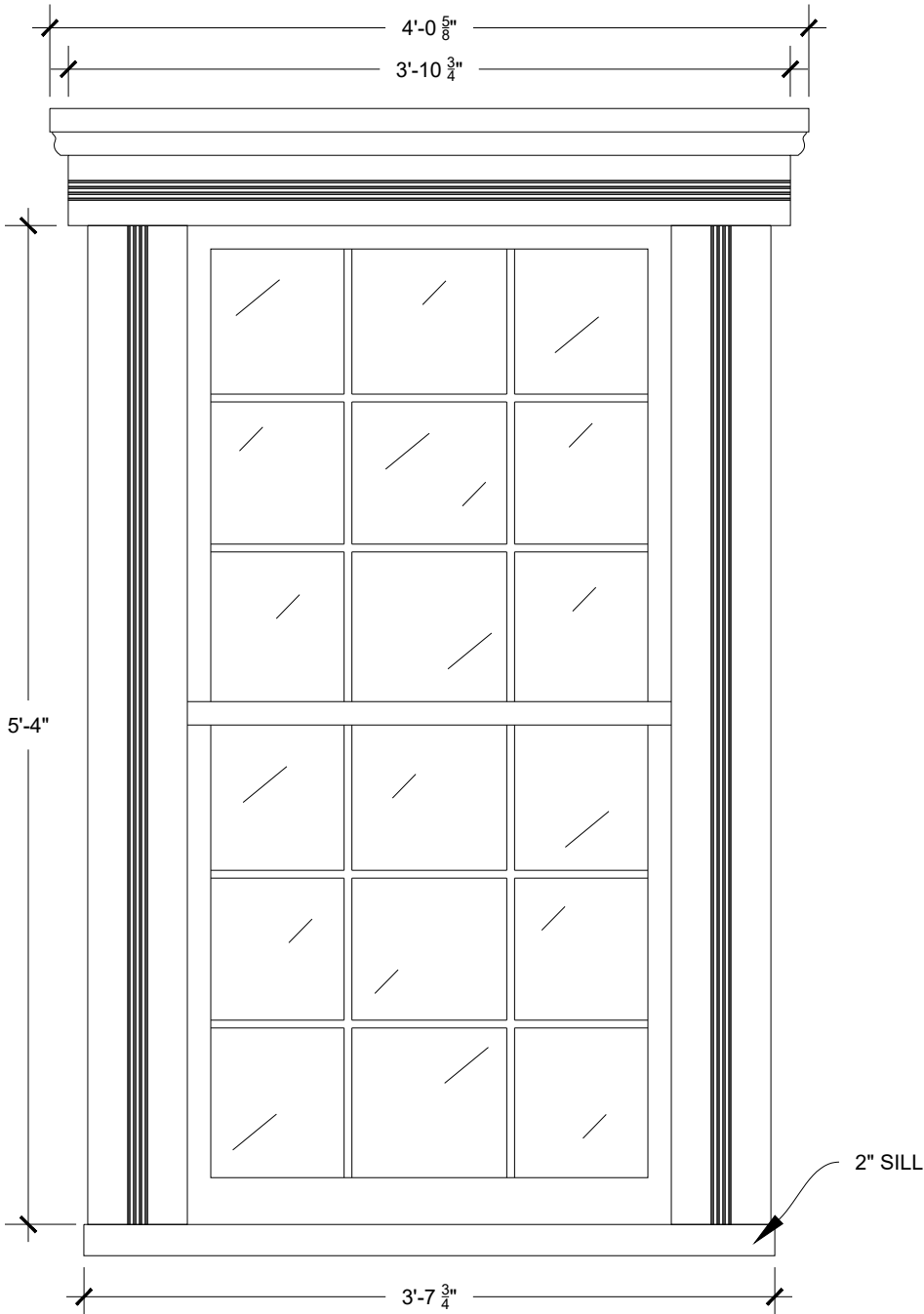
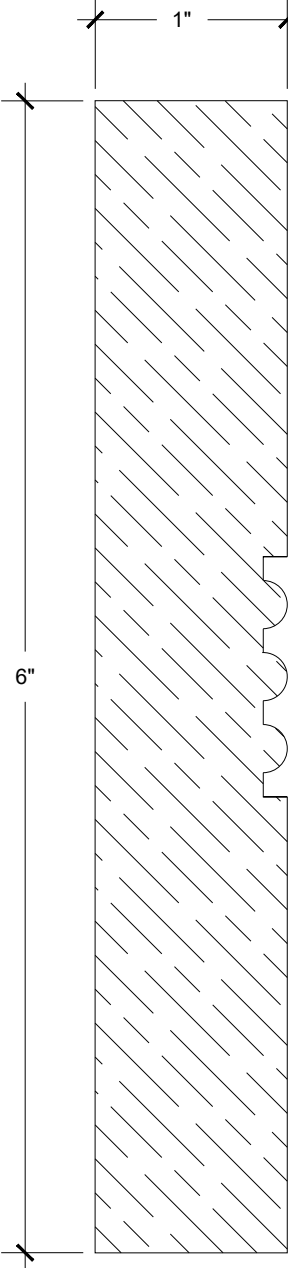
BOARD / BATTEN
BENJAMIN MOORE
6046-M
"FORT FREDERICK SCHOOL BROWN"



FRAME / CASING / TRIM
BENJAMIN MOORE
1245 "SEQUOIA"



WINDOW SASH
BENJAMIN MOORE 2108-60
"ABALONE"



A COLOR SELECTIONS
SCALE: NO SCALE

B WINDOW & DOOR CASING PROFILE
SCALE: 1" = 1"

C TYPICAL WINDOW TRIM SCHEMATIC
SCALE: 1" = 1'-0"

D ARCHITRAVE DETAIL
SCALE: 1" = 1"



State of Maryland
DEPARTMENT OF NATURAL RESOURCES
Engineering & Construction

PROPOSED DETAILS

EXTERIOR RENOVATION
FORT FREDERICK STATE PARK
11347 BIG POOL ROAD
BIG POOL, WASHINGTON COUNTY, MARYLAND

Project Number:
EC22-09515-03
Date: 03/07/22
Drawing Number:
A-4
SHEET 5 OF 7

NOTE: ALL WINDOWS SHALL BE OPERABLE UPON PROJECT COMPLETION.



- WINDOW TO REMAIN IN CURRENT LOCATION.
- EXTERIOR TRIM TO REMAIN IN PLACE.
- PROPERLY ABATE ALL LEAD PAINT PER MDE STANDARDS.
- PROPERLY ABATE ALL ASBESTOS WINDOW GLAZING.
- AS REQUIRED, REPAIR SASH, FRAMES, AND SILL AS UNIT PRICE # 1.
- REPLACE 1 GLASS PANE AND REGLAZE / CLEAN REMAINING GLASS FROM ALL DEBRIS.
- INSTALL WEATHER STRIPPING AND REINSTALL SASH
- PRIME AND PAINT PER SPECIFICATION.

A SOUTH WINDOW TREATMENT
SCALE: NO SCALE

- WINDOW TO REMAIN IN CURRENT LOCATION.
- EXTERIOR TRIM TO REMAIN IN PLACE.
- PROPERLY ABATE ALL LEAD PAINT PER MDE STANDARDS.
- PROPERLY ABATE ALL ASBESTOS WINDOW GLAZING.
- AS REQUIRED, REPAIR SASH, FRAMES, AND SILL AS UNIT PRICE # 1.
- REGLAZE / CLEAN GLASS FROM ALL DEBRIS.
- INSTALL WEATHER STRIPPING AND REINSTALL SASH
- PRIME AND PAINT PER SPECIFICATION.

B SOUTH WINDOW TREATMENT
SCALE: NO SCALE

- WINDOW TO BE CAREFULLY REMOVED AND REINSTALLED AT NEW LOCATION.
- REMOVE, REPLICATE, AND REPLACE EXTERIOR TRIM.
- PROPERLY ABATE ALL LEAD PAINT PER MDE STANDARDS.
- PROPERLY ABATE ALL ASBESTOS WINDOW GLAZING.
- AS REQUIRED, REPAIR SASH, FRAMES, AND SILL AS UP # 1.
- REGLAZE / CLEAN GLASS FROM ALL DEBRIS.
- INSTALL WEATHER STRIPPING AND REINSTALL SASH
- PRIME AND PAINT PER SPECIFICATION.

C NORTH WINDOW TREATMENT
SCALE: NO SCALE

- WINDOW TO BE CAREFULLY REMOVED AND REINSTALLED AT NEW LOCATION.
- REMOVE, REPLICATE, AND REPLACE EXTERIOR TRIM.
- PROPERLY ABATE ALL LEAD PAINT PER MDE STANDARDS.
- PROPERLY ABATE ALL ASBESTOS WINDOW GLAZING.
- AS REQUIRED, REPAIR SASH, FRAMES, AND SILL AS UP # 1.
- REPLACE 1 WINDOW PANE AND REGLAZE / CLEAN REMAINING GLASS FROM ALL DEBRIS.
- INSTALL WEATHER STRIPPING AND REINSTALL SASH

D NORTH WINDOW TREATMENT
SCALE: NO SCALE

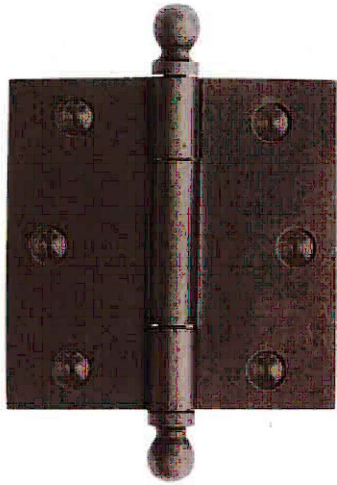


State of Maryland
DEPARTMENT OF NATURAL RESOURCES
Engineering & Construction

WINDOW SCHEDULE

EXTERIOR RENOVATION
FORT FREDERICK STATE PARK
11347 BIG POOL ROAD
BIG POOL, WASHINGTON COUNTY, MARYLAND

Project Number:
EC22-09515-03
Date: 03/07/22
Drawing Number:
A-5
SHEET 6 OF 7



3" CAST IRON DOOR HINGE W/ BALL FINIALS. ANTIQUE PEWTER FINISH.



#6 X 1/2" OVAL HEAD SLOTTED BRASS WOOD SCREW W/ AN ANTIQUE PEWTER FINISH.



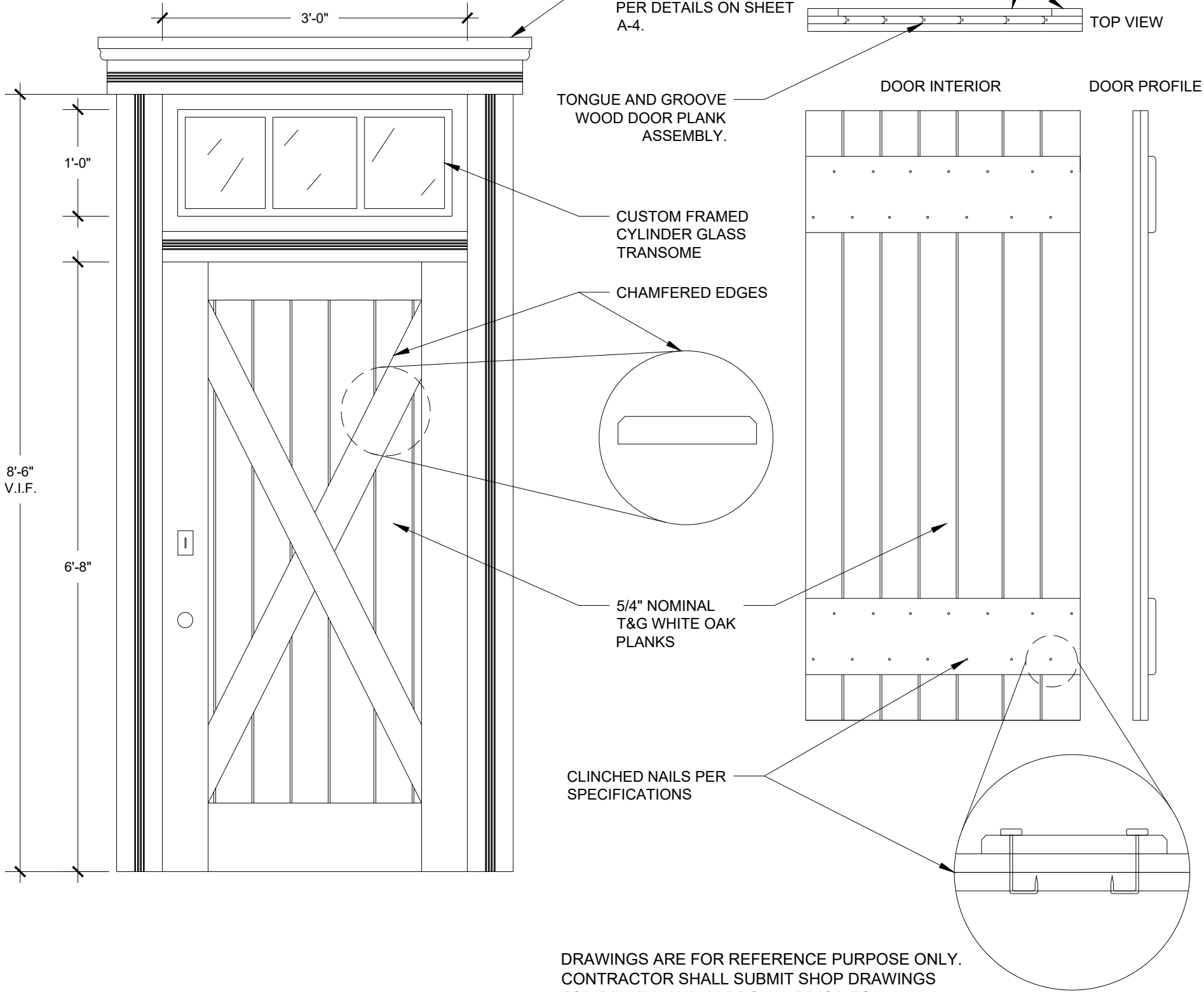
CAST IRON VERTICAL RIM LOCK SET W/ BENNINGTON STYLE KNOBS - MATTE BLACK FINISH.



WROUGHT STEEL SINGLE CYLINDER DEADBOLT - MATTE BLACK FINISH.

BASIS OF DESIGN: HOUSE OF ANTIQUE HARDWARE. REFERENCE SPECIFICATIONS FOR DETAILS.

A DOOR HARDWARE
SCALE: NO SCALE



B EXTERIOR DOOR SCHEMATIC
SCALE: 3/4" = 1'-0"



State of Maryland
DEPARTMENT OF NATURAL RESOURCES
Engineering & Construction

PROPOSED DOOR DETAILS

EXTERIOR RENOVATION
FORT FREDERICK STATE PARK
11347 BIG POOL ROAD
BIG POOL, WASHINGTON COUNTY, MARYLAND

Project Number:
EC22-09515-03
Date: 03/07/22
Drawing Number:
A-6
SHEET 7 OF 7

Attachment I

Historic Paint Finishes Study:

The Original finishes of the Fort Frederick Colored School, Washington County, Maryland

1899-1914



Conducted at the request of:

Mr. Peter Morrill, Curatorship Program Manager
Land Acquisition and Planning
Department of Natural Resources
580 Taylor Avenue
Annapolis Maryland 21401

Mr. Rob Bailey
Land Acquisition and Planning
Department of Natural Resources
580 Taylor Avenue E-3
Annapolis Maryland 21401

By:
Matthew J. Mosca, Historic Paint Finishes Specialist
Artifex, Ltd.
2641 North Charles Street
Baltimore, Maryland 21218 www.matthewjmosca.com
18 October 2019

Table of Contents

Introduction	3
Technical Program	4
The Original Exterior	6
Illustration 2: North elevation looking above porch ceiling	7
Examination of the Samples from the Exterior	8
Board and Batten Siding	8
Paint Sequence for Board and Batten Siding	11
Window frames/casings and sash: later siding	12
North Elevation Door frame	13
Paint Sequence for Exterior North Door Frame	16
Window Frames and Sash: South Elevation, W 4, W 5	17
Paint Sequence for Window Frames/Casings	19
Paint Sequence for Window Sash	21
 Finish Schedules: First Finish Period: construction 1899	 22
 Second Finish Period: pre-1914	 22
The Interior	24
Floor plan with sample locations indicated	25
 Examination of the Samples from the Interior	 27
Note regarding the original finish of the chair rail cap	29
 West wall Plaster field above the chair rail	 30
Ceiling Plaster	31
Added wall, ca. 1914	32
 Recommendation for restoration finishes of the Interior Schoolroom	 35
 Color Standards: CIE Lab Coordinates, Hunter Lab	 36
 Color Standards: Exterior	 38
 Color Standards: Interior	 43
 Color Standards: Second copy of Special Standards	 45

Historic Paint Finishes Study: The original finishes of the Fort Frederick Colored School Washington County, Maryland

Introduction:

Two site visits were made to the Fort Frederick Colored School, in order to collect a sufficient amount of sample for examination. The second visit was undertaken because of the unusual appearance of some of the samples collected during the first visit, which appeared to be complete while at the site. The condition of the exterior samples indicated that the original paint was generally not made of the best materials having a considerable amount of filler solids present rather than actual pigment. It may be that the painters thinned the paints on site, perhaps due to a shortage.

One of the principal components of the early paints was a basic paint: lithopone, which is a combination of two white pigments: a mixture of inorganic compounds, widely used as a white pigment powder. It is composed of a mixture of barium sulfate and zinc sulfide. These insoluble compounds blend well with organic compounds and confer opacity. It was made popular by the inexpensive cost; it was introduced in the 1870's. Initially there was a problem with the pigment darkening in ultraviolet light but this was solved by 1890 with the introduction of a small amount of cobalt salts to the pigment.

Another issue is the relative low quality of the oil binder. The production of linseed oil actually declined over time, which is somewhat counter intuitive. Early linseed oils were cold pressed, though some heat was necessary to remove the outer husks of the seeds. This heat introduction is what triggered yellowing. During the nineteenth century advances were made in extraction, but requiring added heat to extract more oil. Finally, late in the nineteenth century, chemical extraction of the oil was introduced. The chemical extraction resulted in an oil that was the most subject to discoloration, eventually turning a brownish yellow. Because of the low quality of the paints, the cross sections appear lighter than the colors actually appear in finish.

There are two separate finish periods for the exterior. The first dates to construction in 1899 and the second certainly occurred before the sale of the building in 1914. The second finish period is considerably more simple and less interesting than the first finish.

Technical Program

1. Collection of Samples:

The samples were collected during two visits to the site in September and early October 2019. The samples showed extreme deterioration and heavy surface particulate accumulation particularly for the exterior samples.

2. Exposures:

Small exposures were made under the stereo-microscope, permitting the examination of the finish surfaces, and for color matching. As is frequently the case, the cross section does not show the finish to best advantage in all cases: in this case, the colors generally appeared lighter than they actually are.

Laboratory Examination

3. Stereoscopic and Polarized-light Microscopy, and Microchemistry:

All samples are examined in cross section and obliquely. For this study, all of the samples were mounted for cross sections and polishing. Polishing is done to 8000 micron polishing grit. These samples are mounted in Bio-plastic polymer resin. The samples are ground and polished for examination using top lighting and ultraviolet lighting. The samples will also be subject to spot testing for lead components. The photomicrographs are the basis for the study of relative number of paint layers, providing archaeological information that can assist in determining the period finish. Additional pigment identification will be done using polarized light microscopy. Pigments of interest will be extracted using a tungsten needle and will be mounted for examination using the Olympus BMAX-50 polarized light microscope. The identification of the pigments will follow the system of particle identification from the McCrone Research Institute of Chicago. Examination of the finishes will include the use of shortwave ultraviolet light to reduce the yellowing of the oil binders under controlled conditions.

4. Color matching is done under controlled fiber optics illumination using the Olympus SZ-1145 stereomicroscope, and daylight filtering. The preferred color standards are from the Munsell Color System, however, in view of the wide gaps between Munsell Standards, other color standards have been used.

All color standards other than the Munsell Color Standards will be read by the X-rite SP62 Sphere Spectrophotometer to provide CIE Lab coordinates, Hunter-Lab coordinates and a Munsell Color Conversion Number. The CIE Lab coordinates provide a tripartite written identification system, making it possible to assign a written equivalent for any color. This is very important for the record, as it is possible to reconstruct the color from the coordinates in the distant future.

6. Photomicrographs:

A very important means of recording chromochronological data is photomicrography: photographs taken through the microscope of particularly informative samples. This allows for clear indications of the conditions seen under the microscope, and how the recommendations were achieved. The report includes photomicrographs that are annotated with information in the

report. This report includes many photomicrographs of mounted samples that will provide clear information that indicates the number of [particularly early] paint layers. In addition, some photomicrographs of unmounted samples may also provide significant information on the finishes of interest. The photomicrographs provide the data on the finishes in a manner consistent with current practices. The entire report, including all of the photomicrographs will be in modern digital form. The photomicrographs are not for color matching, but only for general indication: this is particularly the case for this site because of the nature of the original paint materials.

7. Report preparation:

The report brings together all the aforementioned material in a comprehensible manner and focused on the early finishes, when the building was used for its original purpose, as a school.

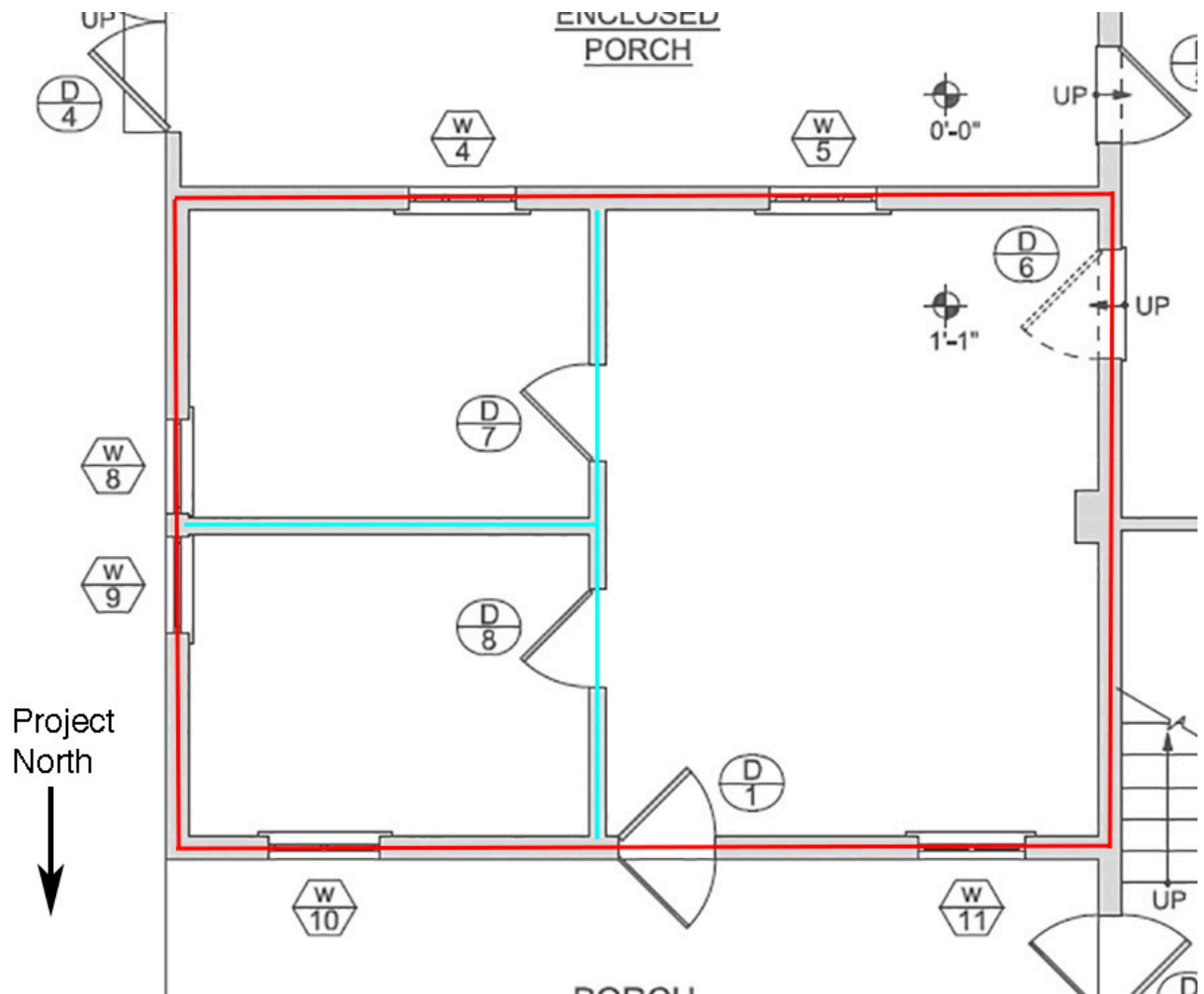
Spectrophotometer readings of color standards are also executed to render all color standards into the CIE Lab System of Color Notation and Munsell Conversion Numbers, all of which are included in the report. Color standards for all of the finishes to be restored will also be included in the reports.

Respectfully submitted this date:

Matthew J. Mosca
Historic Paint Finishes Specialist
Artifex, Ltd.

The Original Exterior:

Illustration 1: The original plan of this one room schoolhouse is shown by the superimposed red lines of the drawing below.



The two windows, W8 and W9 are believed to have replaced the original door into the one room school house. In 1914 the building ceased to be a school and was sold to O. Scott Snook and it appears that there was an addition to the [project] west side and the porch added to the north. Removing the porch ceiling boards permitted a view of the original exterior board and batten siding.

The early board and batten siding is in place, and an initial concept of the sequence of the exterior finishes can be perceived.

The other possible original element would be the door frame of the North Door, D 1. This may have been reused from the east elevation, however, **the paint layering is not conclusive.** Other factors should be taken into account, however the North Door Frame, D 1, is examined below.

Illustration 2: North elevation, looking above the porch ceiling

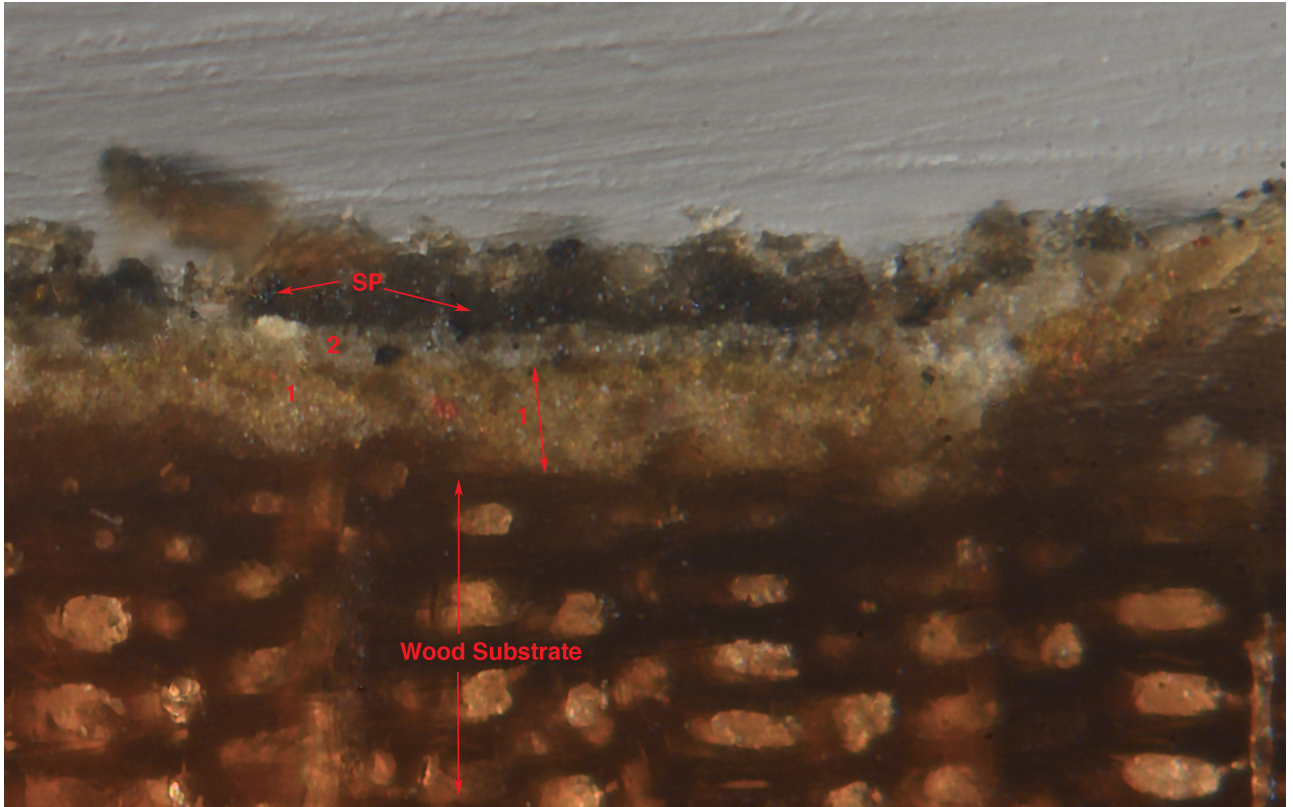


Note: The ca. 1899 board and batten siding is clearly seen; [the first two finishes are on the board and batten siding]. Note the yellow enamel finish [3] that was painted at the time of the installation of the porch ceiling: this would have been 1914, when the building was sold and became a residence. The later asbestos siding [4] may be seen just above the line of the most recent aluminum siding [5]. This initial sequence indicates that there were two separate painting campaigns for the exterior when the building was the Fort Frederick Colored School.

Examination of the Samples from the Exterior:

Sample Exterior 1: Project North elevation: Batten from original Board Siding:

Photomicrograph: Mounted sample, Olympus BMAX-50 polarized light microscope/ 10x objective, (100x total microscopic magnification) with Nikon D7100 digital camera body Lexar Media 1GB flash card Dolan Jenner Fiber optics illuminator, daylight filtering.

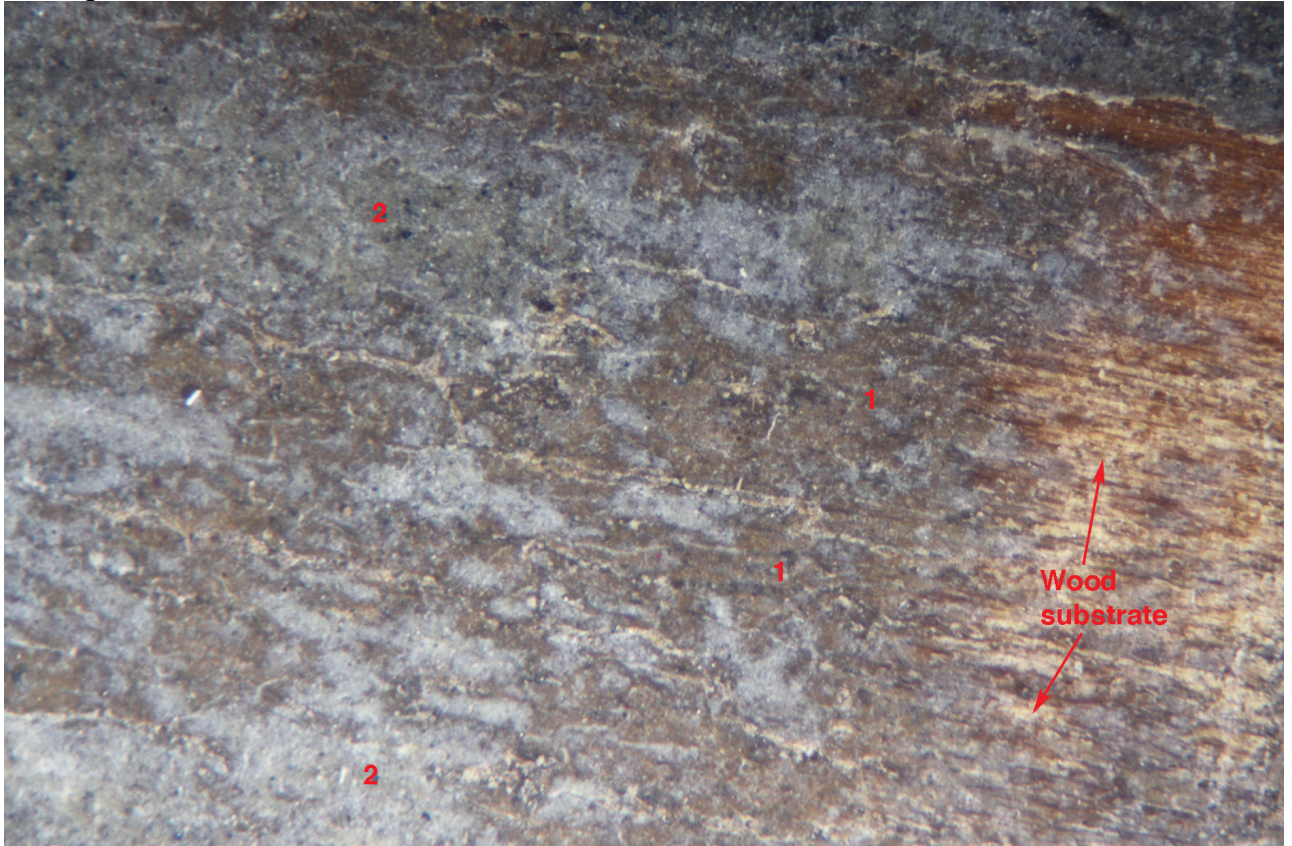


Note: The sample has been mounted in polymer resin, cut and polished to 8000 micron grit polishing cloth for additional examination. The wood substrate is clearly seen at the base of the sample and is indicated. The first paint finish [1] is indicated. This finish looks dramatically different in cross section; it appears much lighter than it actually is. This appears to be due to relative particle size of the pigments used. The color is a moderate grayish brown. The first finish would date to ca. 1899. The second finish is light gray prepared with a bluish lamp black pigment in a non-lead based white base, dating to before ca. 1914. Note the exceptionally heavy surface particulate on the surface of the second finish [SP].

Sample Exterior 2: Project North elevation: Batten from original Board Siding

Surface exposure, under the microscope

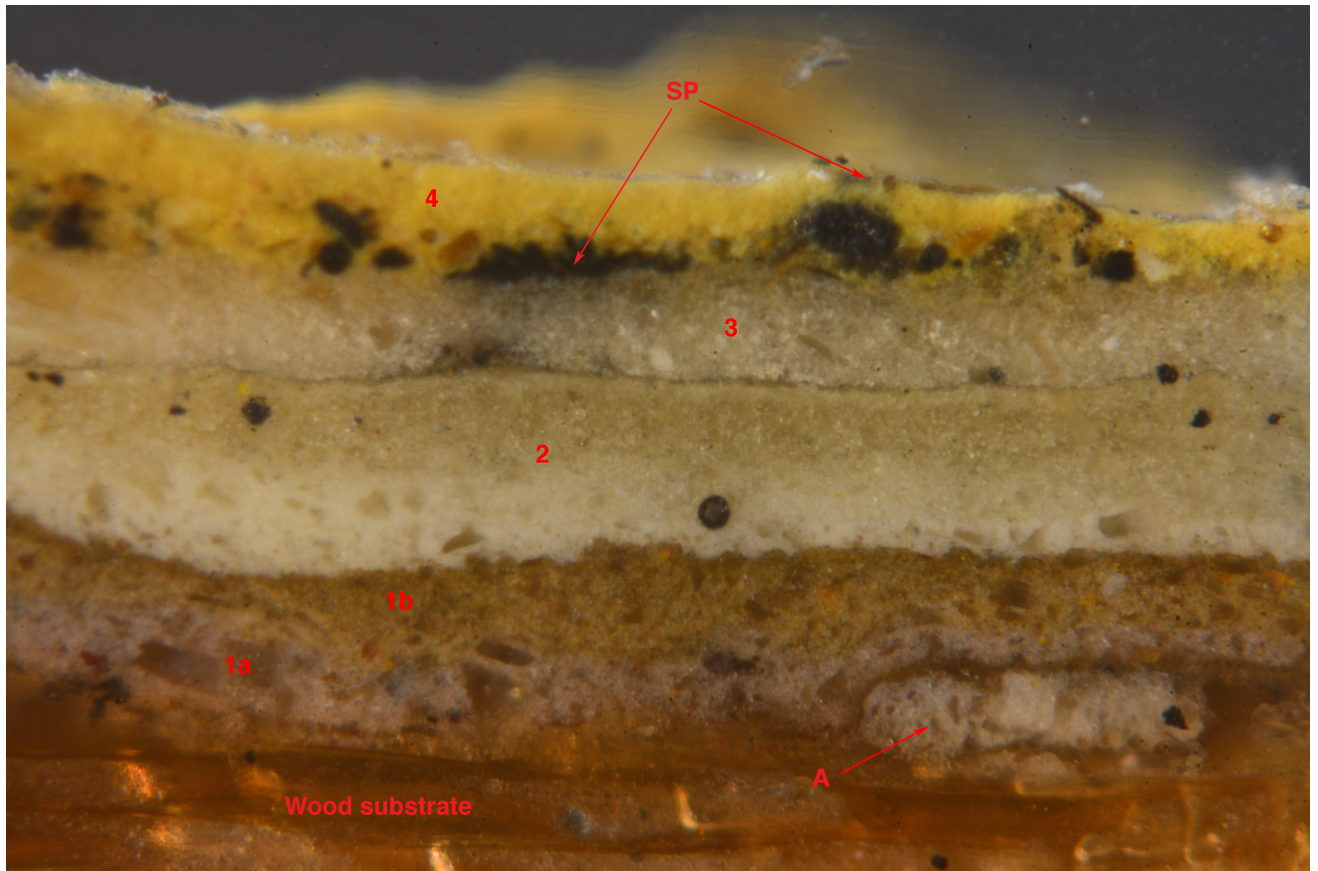
Photomicrograph: Unmounted sample, Olympus SZ-1145 microscope, with Nikon D7100 digital camera body Lexar Media 1GB flash card Dolan Jenner Fiber optics illuminator, daylight filtering



Note: The view of the sample is looking down onto the finish surface. The wood substrate has been exposed in one area and so indicated. Note that the first finish is a moderate brown [1] that presents as somewhat darker than anticipated when compared to the cross-section of the same finish. This appears to be due to the relative pigment particle size of the different pigments used. The second finish is a moderate gray, prepared with a cool lamp black, creating a bluish gray: the last finish on the surface, it would have been exposed at the time of the sale of the schoolhouse in 1914.

Sample Exterior 3: Project North elevation: Board from original Board Siding, sample from location 3 on Illustration 2, including the post ca. 1914 yellow finish:

Photomicrograph: Mounted sample, Olympus BMAX-50 polarized light microscope/ 10x objective, (100x total microscopic magnification) with Nikon D7100 digital camera body Lexar Media 1GB flash card Dolan Jenner Fiber optics illuminator, daylight filtering.



Note: The sample has been mounted in polymer resin, cut and polished to 8000 micron grit polishing cloth for additional examination. The wood substrate is clearly seen at the base of the sample and is indicated. Note that there are remnants of an earlier white finish [A] suggesting that the board may have been reused. The first paint finish [1] is indicated: this sample appears to be much closer to the actual paint color. The color is a moderate grayish brown. The first finish would date to ca. 1899. The second finish is light gray prepared with a bluish lamp black pigment in a non-lead based white base, dating to before ca. 1914. Here, the first layer appears to be white, with a discolored, light gray as the finish. There is an additional light gray layer, which may be a “touch up” maintenance coating. The last finish, [4 in this sequence] is the yellow enamel seen in Illustration 2: North elevation, looking above the porch ceiling.

Paint Sequence for Exterior Board and Batten Siding:

Period 1899-1914

First finish: ca. 1899

1. Moderate grayish brown:

Special Standard Fort Frederick School Brown 6046-M iron oxides, lithopone F-1

-surface particulate-

2. Light grey Benjamin Moore 1613

lithopone, lamp black F-2

Later finishes:

3. Yellow ochre enamel ca. 1914 post school use

Note: All samples collected from the board and batten siding on the North and the South Elevations showed the sequence of finishes as indicated above.

Sample Exterior 4: South Elevation Board of Board and Batten Siding

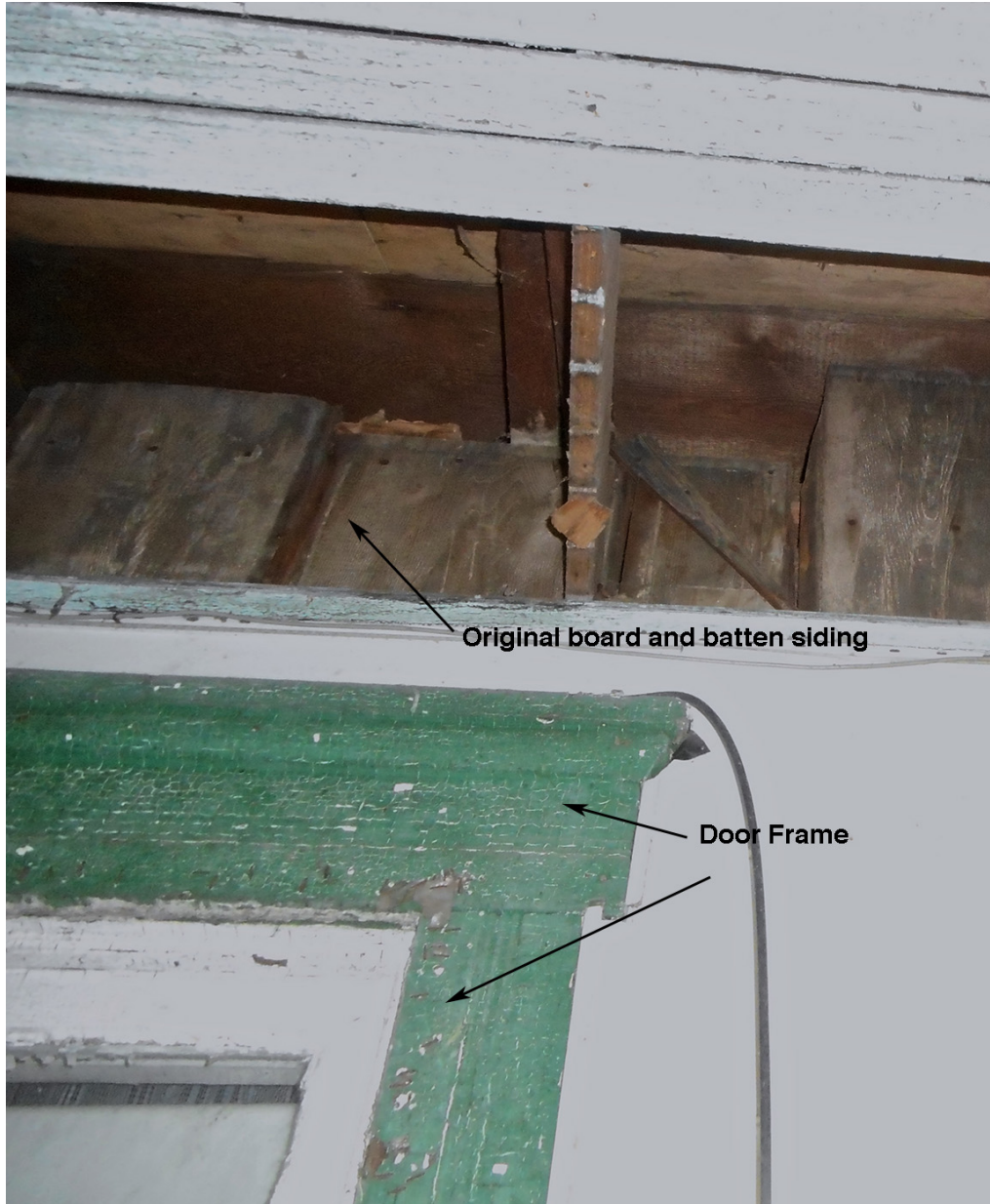
Sample Exterior 5: South Elevation Batten of Board and Batten Siding

Site photograph: South Elevation post 1914 asbestos siding and later changes.



Note: The entire surface of the board and batten siding of the south elevation was covered with the asbestos siding, in a brick pattern [A]. Later, the ceiling of the south porch was dropped [B] that also reduced the height of the window, including a new frame [C].

North Elevation: Door frame



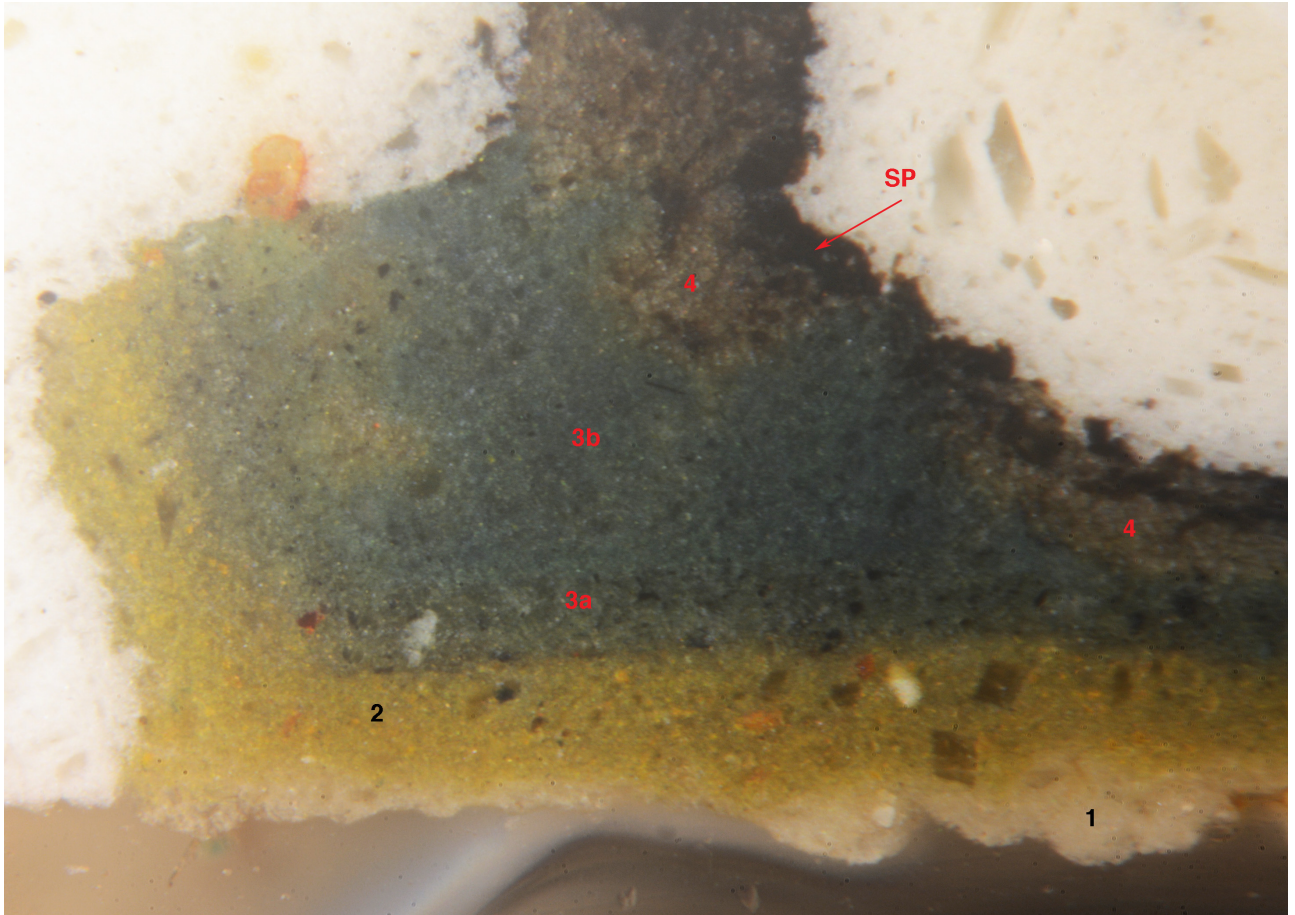
Note: The door frame of the North Door may have been re-used from the East elevation and thus would have been the original door frame. The door itself is clearly from the post-school period, and the door frame may have been re-configured when moved to the north elevation. The paint layering **is not conclusive**. The first finish, the light gray would have been a standard color at the time.

The subsequent green finishes do not match the colors used on the window frames, but this may have been a deliberate choice. The fourth finish, the dark grey also appears on the interior. Other factors, beyond paint should be used to determine if the door frame could be a re-used element from the 1899 construction. The Fort Frederick Colored School (Hornbaker Property) of 2018

indicates that the Door frame is from the ca. 1914 period: this may be conclusive, however, the door frame was included in this study. The door itself is definitely from the 1914 period.

Sample Exterior 6: North Door, Door Frame

Photomicrograph: Mounted sample, Olympus BMAX-50 polarized light microscope/ 10x objective, (100x total microscopic magnification) with Nikon D7100 digital camera body Lexar Media 1GB flash card Dolan Jenner Fiber optics illuminator, daylight filtering.

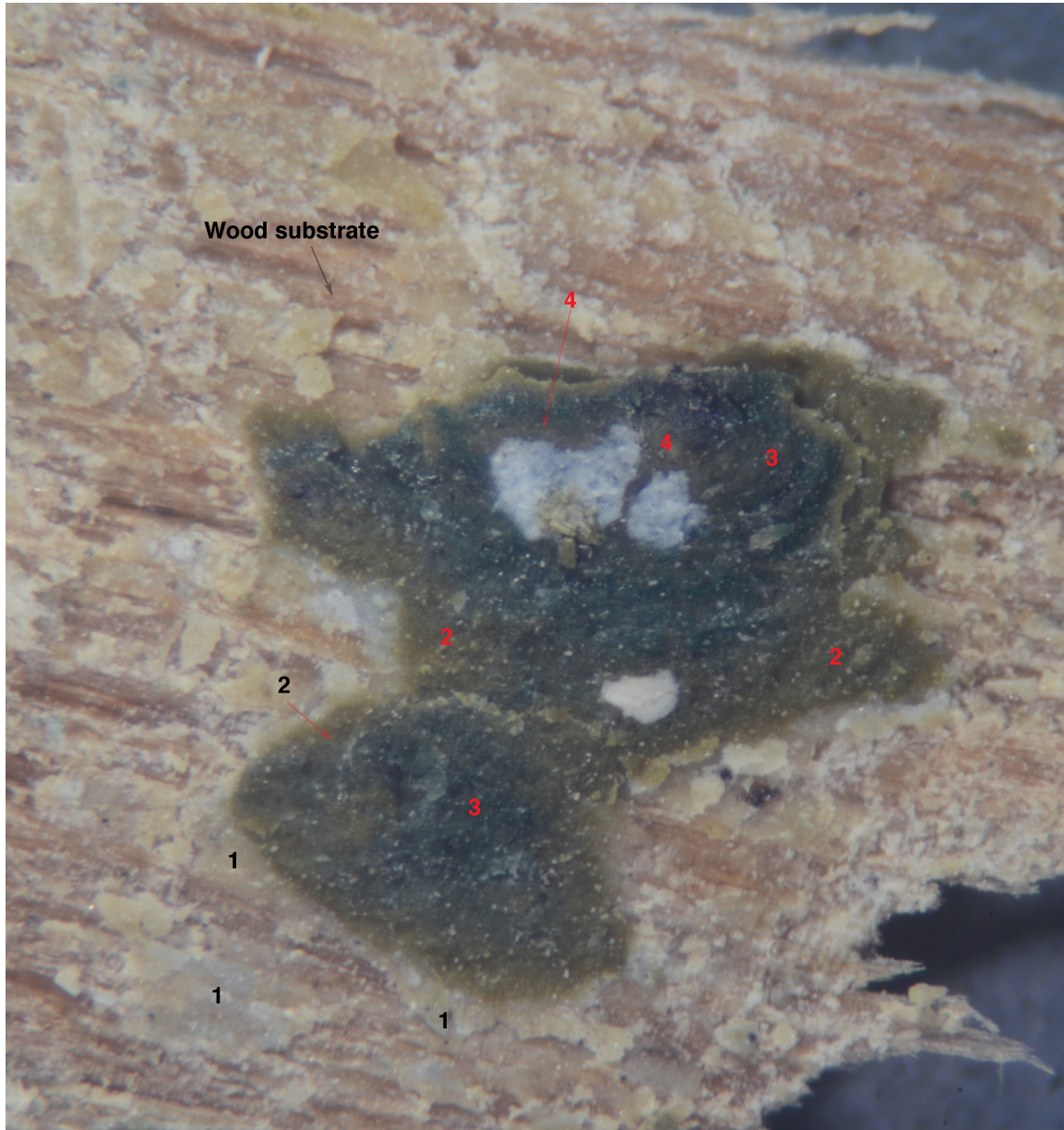


Note: The sample has been mounted in polymer resin, cut and polished to 8000 micron grit polishing cloth for additional examination. **Note: most if these paint layers are discolored, and do not present correctly in cross section.** The first layer [1] is a worn layer of the first finish, and is discolored; the color was actually a light gray. The second layer [2] is the second finish, a moderate yellowish green [appears much lighter and yellowish]. The third finish [3] would date to the sale of the school house and thus post dates the original use. The dark gray, [4] appears to be the same dark gray that is seen on the interior.

Refer to the next page for the unmounted sample that shows this surface to much better advantage.

Sample Exterior 6: North Door, Door Frame

Photomicrograph: Unmounted sample, Olympus SZ-1145 microscope, with Nikon D7100 digital camera body Lexar Media 1GB flash card Dolan Jenner Fiber optics illuminator, daylight filtering



Note: The view of the sample is looking down onto the finish surface. The wood substrate is clearly seen. The first finish is very discolored, with only a few locations retaining the light gray original color [1]. The second finish is the moderate yellowish green “moss green” that is better rendered in this unmounted sample. Finishes 1 and 2 cover the period when the building was a school house. The third finish dates to the ca. 1914 changes. The dark gray [4] also appears to relate to the dark gray on the interior.

Paint Sequence for Exterior North Door Frame

Possible early period: 1899-1914

First finish: ca. 1899

1. Light grey Benjamin Moore 1613 lithopone, lamp black F-1
2. Moderate yellowish green Special Standard SW-2851
chromium oxide green, chrome yellow F-2
3. Dark chromium oxide green ca. 1914 post school use F-3
4. Dark gray F-4

Later finishes

Window Frames and Sash, South Elevation: Window W 4 and W 5

These two windows are original ca. 1899 elements and were not moved at the time of the conversion of the schoolhouse into a residence in 1914. During the schoolhouse period, 1899-1914 the window frames and window sash were painted different and highly contrasting colors, achieved by essentially reversing the color locations: the sash which was a grayish white was painted brown for the second finish.

Window Frames:



Note: The window W 4, seen above has been protected for decades by the south porch. Note also the burying of the window frame under later wall board and framing.

Examination of Samples:

Window Casing: W 4, W 5: Original Window Frame

Photomicrograph: Mounted sample, Olympus BMAX-50 polarized light microscope/ 20x objective, (200x total microscopic magnification) with Nikon D7100 digital camera body Lexar Media 1GB flash card Dolan Jenner Fiber optics illuminator, daylight filtering.



Note: The sample has been mounted in polymer resin, cut and polished to 8000 micron grit polishing cloth for additional examination. The wood substrate is seen at the base of the sample and is indicated. The brown finish [1] is clearly seen: this paint shows much lighter in cross section than it actually is. The lighter appearance may be due to the lower quality of the paint material. Indeed, there is a later application of varnish [1b] which was applied in order to extend the usable life of the paint. The second finish is the light gray [2].

Paint Sequence for Window Frames, Casings:

Period 1899-1914

First finish: ca. 1899

1. Moderate brown: Benjamin Moore 1245 iron oxides, lithopone F-1

Later application of clear varnish

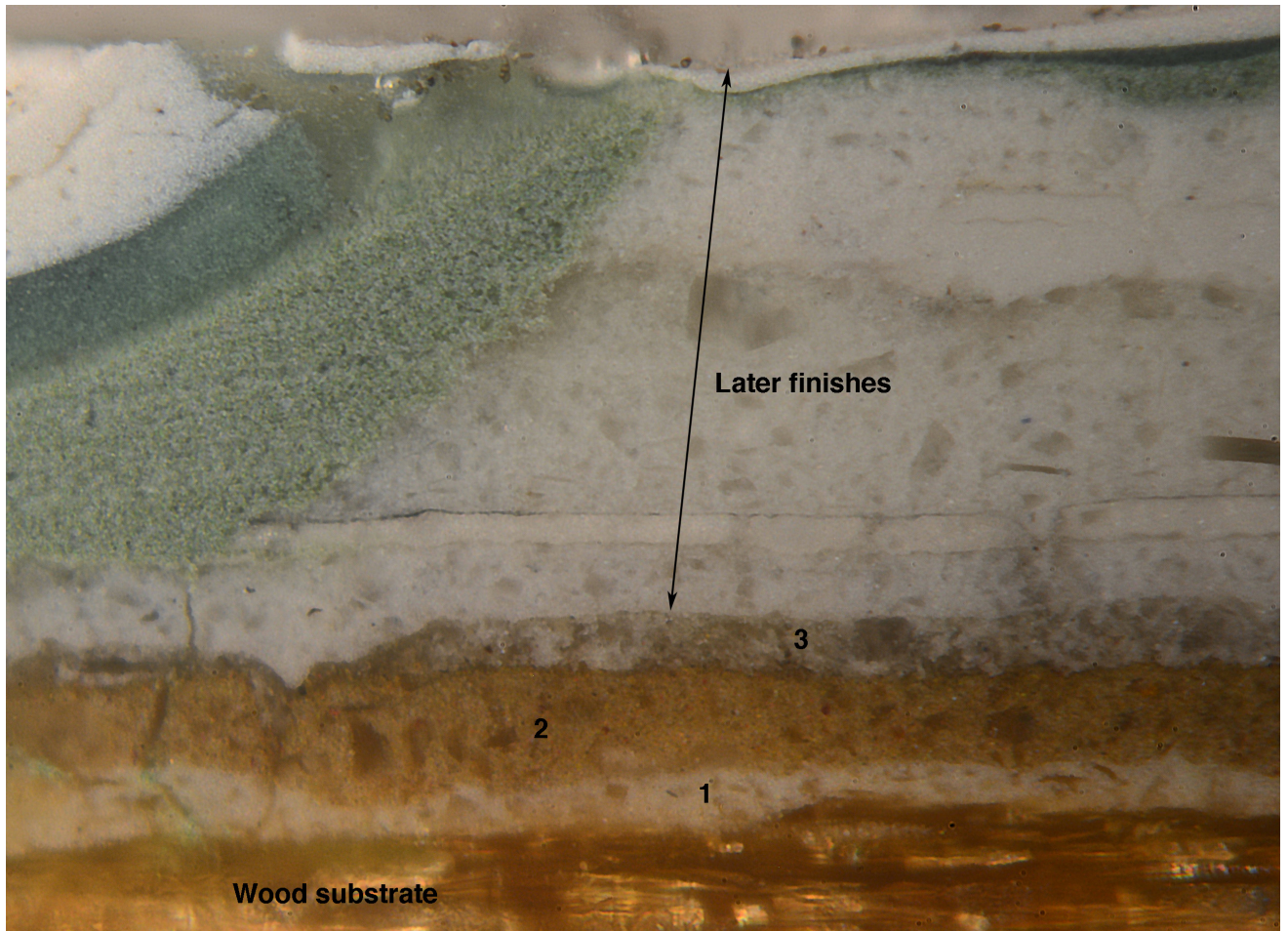
-surface particulate-

2. Light grey Benjamin Moore 1613 lithopone, lamp black F-2

Later finishes: post 1914

Window Casing: W 4, W 5: Original Window Sash

Photomicrograph: Mounted sample, Olympus BMAX-50 polarized light microscope/ 10x objective, (100x total microscopic magnification) with Nikon D7100 digital camera body Lexar Media 1GB flash card Dolan Jenner Fiber optics illuminator, daylight filtering.



Note: The sample has been mounted in polymer resin, cut and polished to 8000 micron grit polishing cloth for additional examination. The wood substrate is seen at the base of the sample and is indicated. The first finish is a grayish white finish [1] which contrasts with the brown of the window frame. The second finish [2] is a moderate brown, which also appears lighter in the cross section. The third finish is a moderate gray, which would date to ca. 1914. A series of later finishes are also visible.

Note that the first finish appears pinkish- this is due to staining for the first finish by the thinners/medium of the second finish.

Paint Sequence for Window Sash:

Period 1899-1914

First finish: ca. 1899

1. Grayish white Benjamin Moore 2108-60 lithopone base F-1
2. Moderate brown: Benjamin Moore 1245 iron oxides, lithopone F-2
-surface particulate-
3. Light grey post school use, ca. 1914

Later finishes: post 1914

The School House Period: Ca. 1899-1914

Finish Schedule: First Finish period: construction 1899

1. Exterior Board and Batten Siding:

Moderate grayish brown: Special Standard Fort Frederick School Brown

Gloss level: Satin gloss

2. Window Frames/ Casings:

Moderate brown: Benjamin Moore 1245 ["Sequoia"]

Gloss level: Satin gloss

3. Window Sash:

Grayish white: Benjamin Moore 2108-60 ["Abalone"]

Gloss level: Satin gloss

4. North Door Frame: pending determination of original date

Light grey Benjamin Moore 1613 ["Silent Night"]

Gloss level: Satin gloss

Note: All restored trim moldings may be painted the color of the Window frame:

Moderate brown Benjamin Moore 1245

If the North Door Frame is determined to be of a later date, then the reconstructed door frame [and the door] should be painted the Window frame color: Moderate brown Benjamin Moore 1245

The School House Period: Ca. 1899-1914

Finish Schedule: Second Finish period: before 1914

1. Exterior Board and Batten Siding:

Light grey Benjamin Moore 1613 ["Silent Night"]

Gloss level: Satin gloss

2. Window Frames/ Casings:

Light grey Benjamin Moore 1613 ["Silent Night"]

Gloss level: Satin gloss

3. Window Sash:

Moderate brown: Benjamin Moore 1245 ["Sequoia"]

Gloss level: Satin gloss

4. North Door Frame: pending determination of original date

Moderate yellowish green Special Standard SW-2851

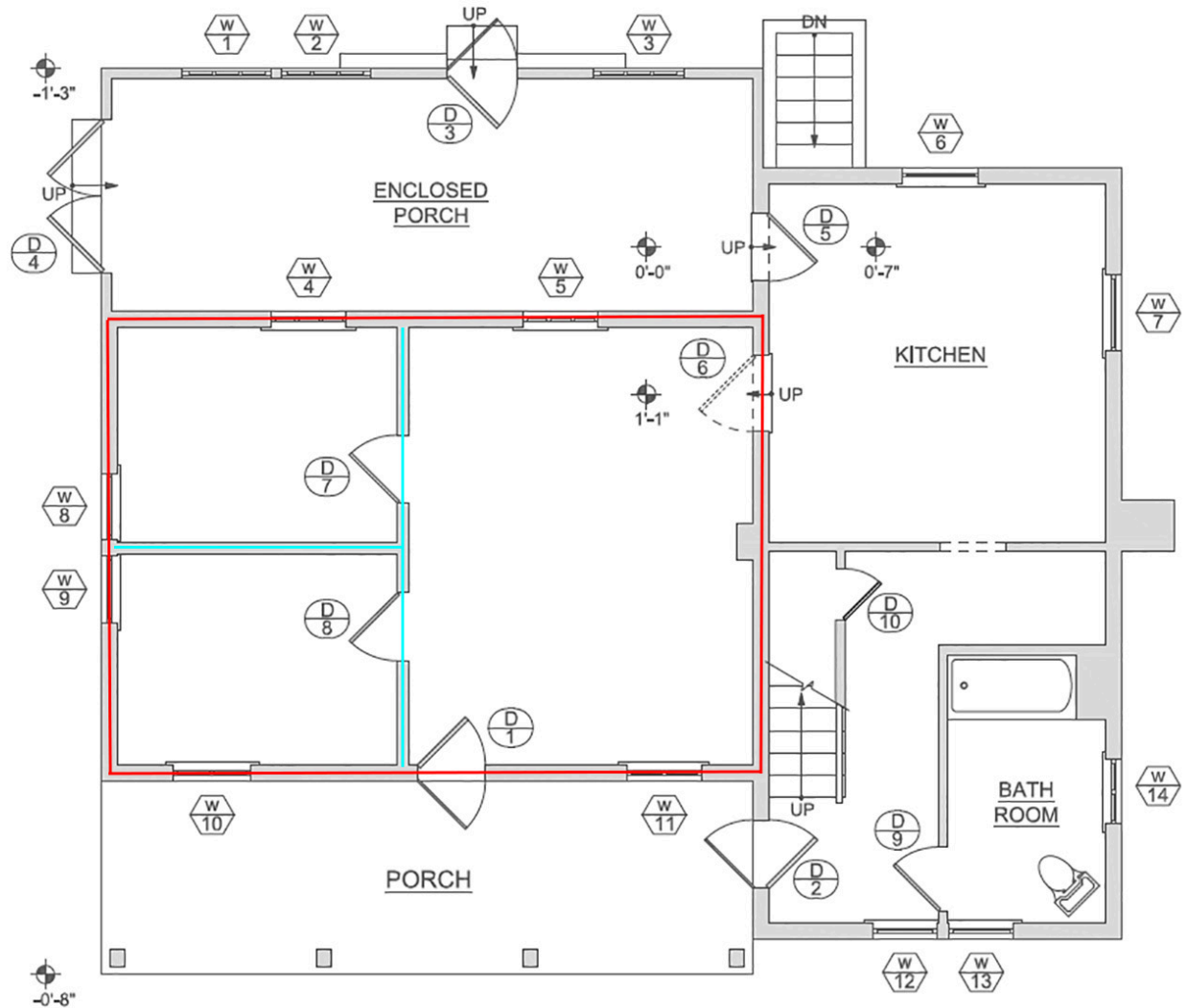
Gloss level: Satin gloss

Note: For the second finish period, all of the restored trim moldings may be painted the color of the Window frame: Light grey Benjamin Moore 1613 ["Silent Night"]

If the North Door Frame is determined to be of a later date, then the reconstructed door frame [and the door] should be painted the second finish color: Window frame color: Light grey Benjamin Moore 1613 ["Silent Night"]

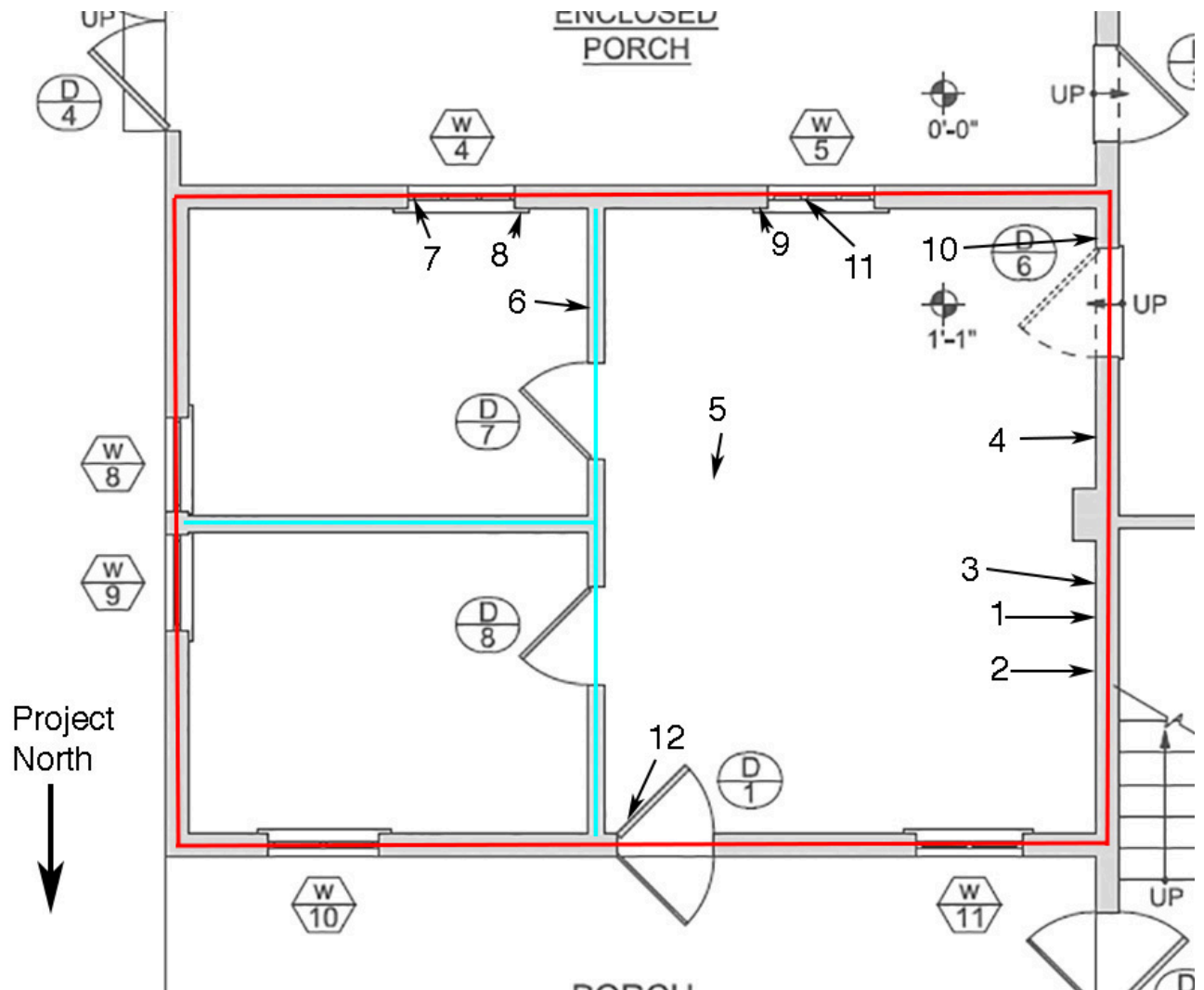
The Interior, Schoolroom:

The original school building has been enlarged at the time that it was converted into a house, ca. 1914. The original schoolroom is seen below, outlined in red.



The subdivision of the room was accomplished with the introduction of the walls shown in light blue. The project west wall retained much original building fabric. Both woodwork and plaster appears to survive relatively intact.

Original Schoolroom, with sample locations indicated:



Interior: View of the west wall of the School house

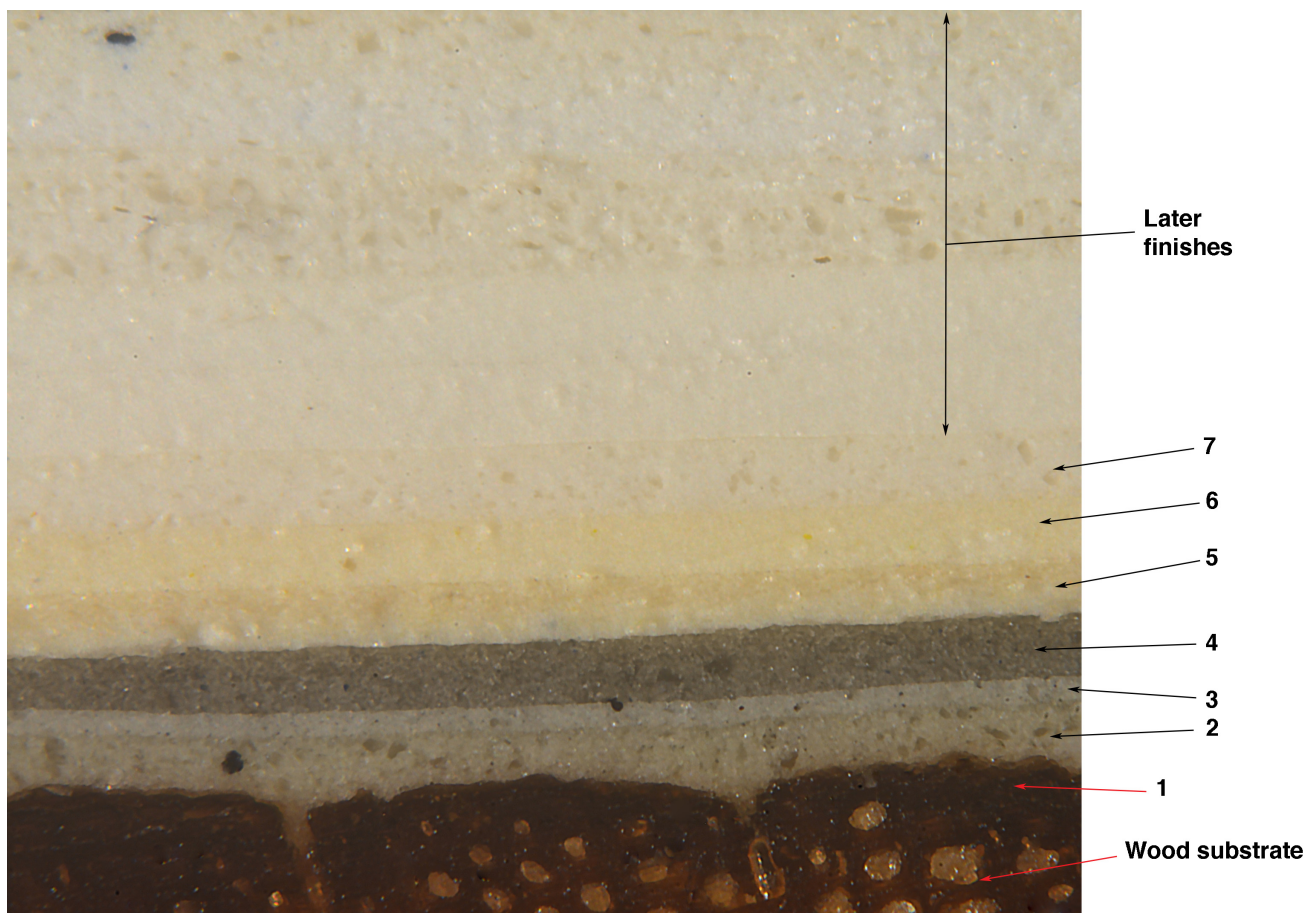


Note: The west wall is on the left in this view. The windows of the adjacent north wall have been moved at the time of the conversion of the school into a house. The wainscot of the west wall is original.

Examination of the Samples:

Sample Interior 1: West Wall, Wainscot vertical board

Photomicrograph: Mounted sample, Olympus BMAX-50 polarized light microscope/ 10x objective, (100x total microscopic magnification) with Nikon D7100 digital camera body Lexar Media 1GB flash card Dolan Jenner Fiber optics illuminator, daylight filtering.



Note: The sample has been mounted in polymer resin, cut and polished to 8000 micron grit polishing cloth for additional examination. The wood substrate is seen at the base of the sample. The first finish, the original finish [1] is a dark shellac: this appears to be a red shellac, probably a common garnet shellac. Note that it was exposed for a considerable period of time before being overcoated: the shellac had cracked ["alligatored"] and no doubt the second finish [2, a light greenish gray] is post 1914, when the building was no longer used as a school. This is confirmed by comparison with the added door frame to the added kitchen, seen below.

Note: The same paint layering was observed on:

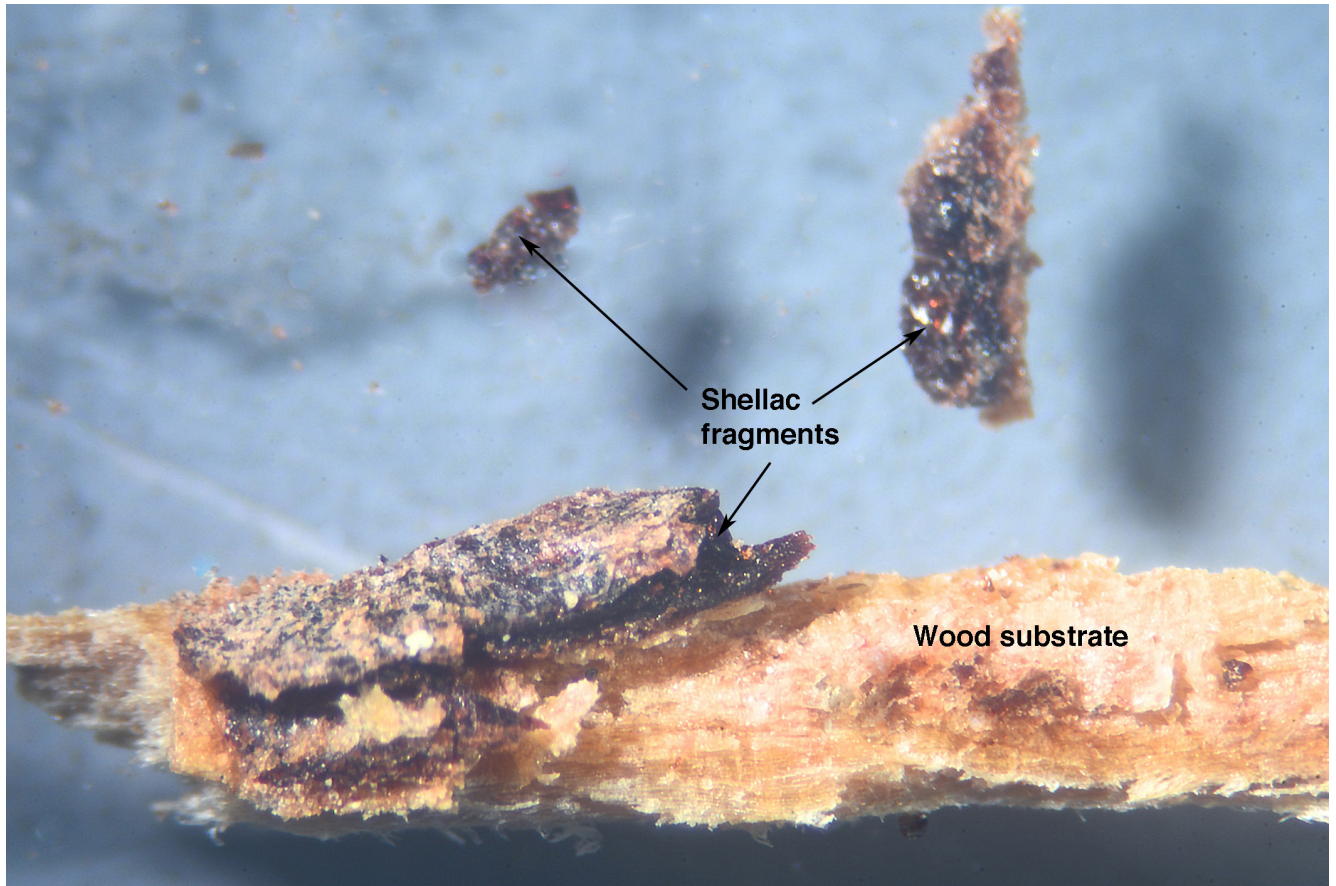
Sample Interior 2: West Wall, Wainscot Chair rail, apron

Sample Interior 8: South Wall, Window frame

Sample Interior 9: South Wall, Window, stool

Sample Interior 3: West Wall, Wainscot Chair rail: Cap

Photomicrograph: Unmounted sample, Olympus SZ-1145 microscope, with Nikon D7100 digital camera body Lexar Media 1GB flash card Dolan Jenner Fiber optics illuminator, daylight filtering



Note: The view of the sample is looking toward the side, capturing the wood substrate as well as the surviving coating. The fragment of wood substrate is clearly seen. Note the accumulated layers of shellac, somewhat thicker than seen on the general surface, since this was a hairline crack in the wood that filled with the shellac coating when it was applied. This is the only surviving evidence of the original shellac finish on the cap of the chair rail, since it appears that all of the surfaces were scraped and sanded smooth, removing the original shellac finish. Refer to Note below.

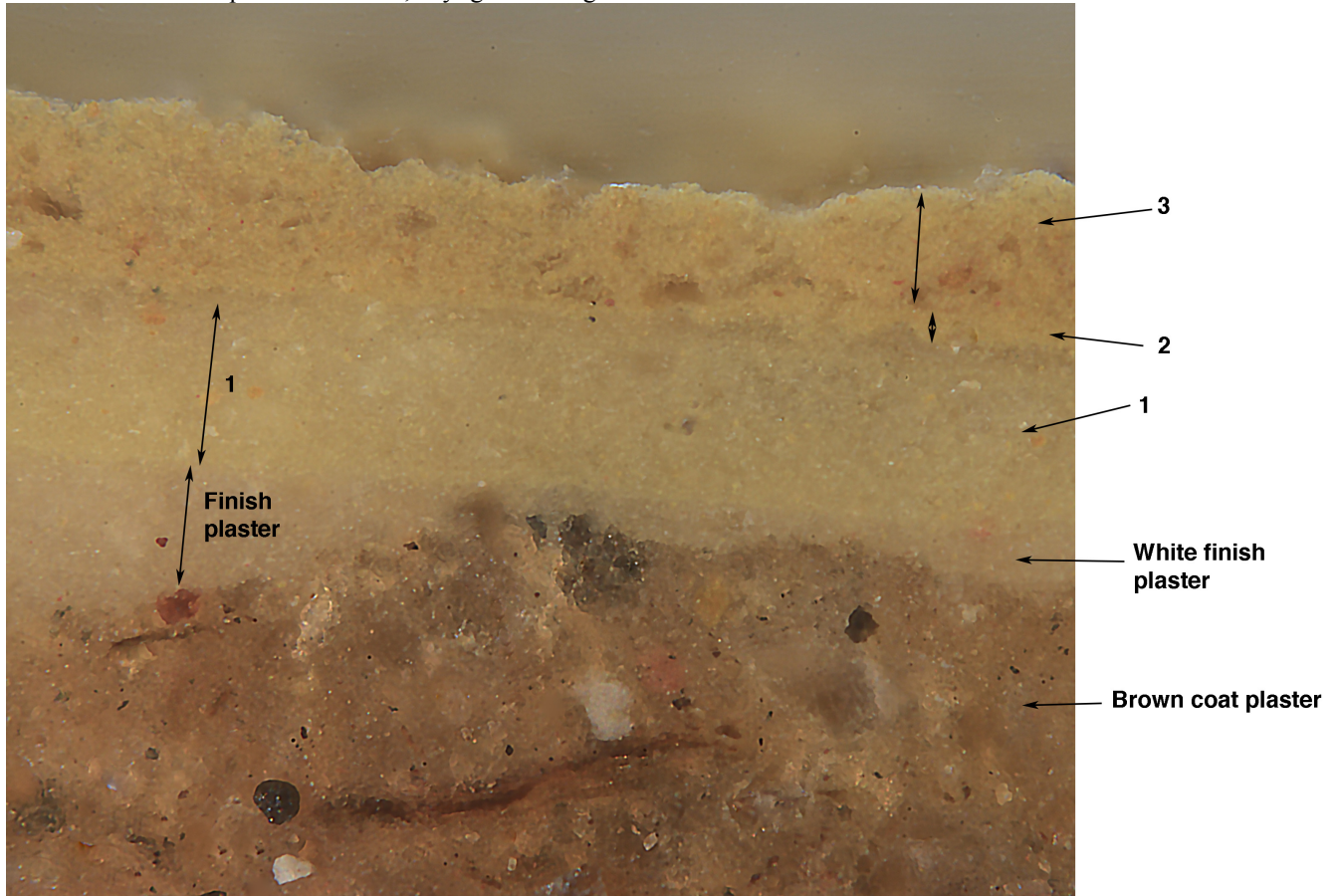
Note regarding the original finish of the chair rail cap



The sample of the chair rail cap included a thin crack in the wood that had been there since construction. The crack filled with the dark reddish shellac. The wainscot vertical boards and the apron clearly show the survival of the original shellac finish. The chair rail cap, however, appears to have been sanded smooth of all of the shellac finish, excepting only that which filled the crack in the wood. This is unusual in the extreme, however, all of the other finishes date to the post-addition period. While extremely odd, the surviving physical evidence supports that the chair rail cap would also have been finished with the same garnet red shellac.

Sample Interior 4: West wall Plaster field above chair rail

Photomicrograph: Mounted sample, Olympus BMAX-50 polarized light microscope/ 10x objective, (100x total microscopic magnification) with Nikon D7100 digital camera body Lexar Media 1GB flash card Dolan Jenner Fiber optics illuminator, daylight filtering.

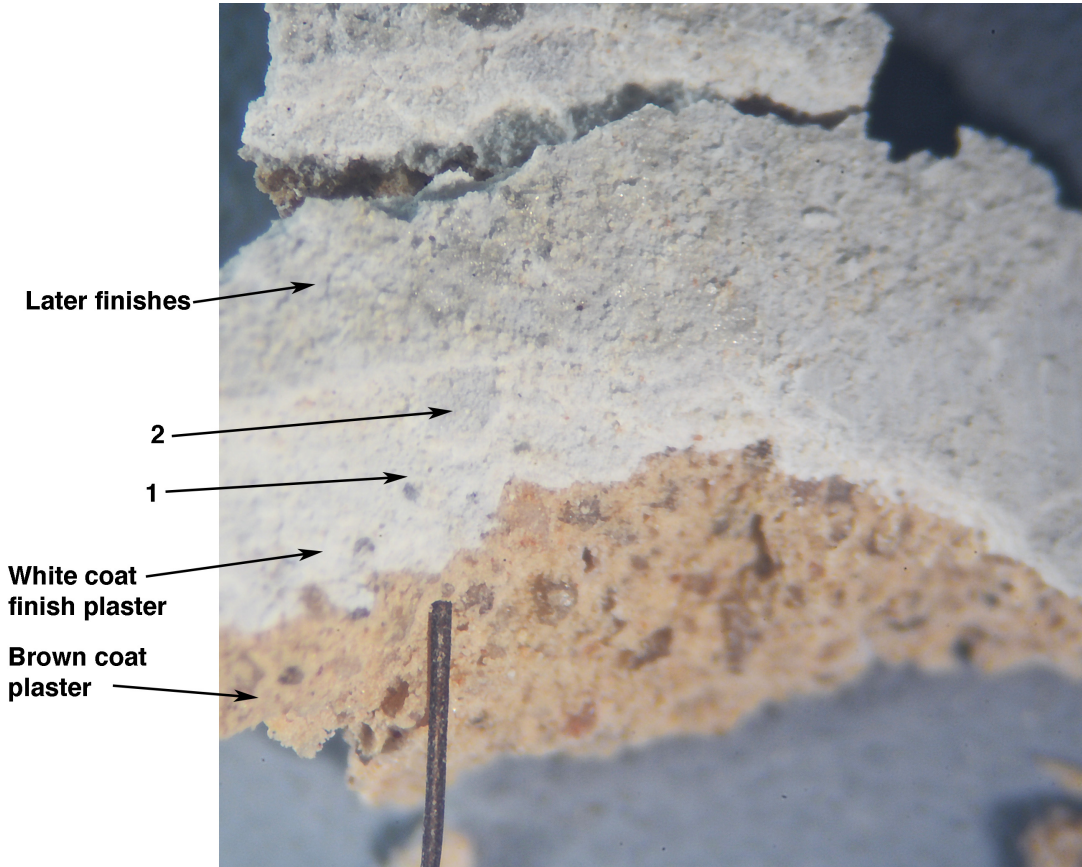


Note: The sample has been mounted in polymer resin, cut and polished to 8000 micron grit polishing cloth for additional examination. The brown [scratch] coat is clearly seen, and there is a very thin white finish plaster layer, also noted. The first paint coating is a light yellow ochre finish, built up of two layers that have effectively merged together [1]. This is the period of historical interest. These colors appear lighter in cross section.

The yellow ochre finishes [2 and 3] appear on the subdividing wall [South east room, West wall, south of Door D-7 and thus date to ca. 1914.

Sample Interior 5: Ceiling Plaster

Photomicrograph: Unmounted sample, Olympus SZ-1145 microscope, with Nikon D7100 digital camera body Lexar Media 1GB flash card Dolan Jenner Fiber optics illuminator, daylight filtering

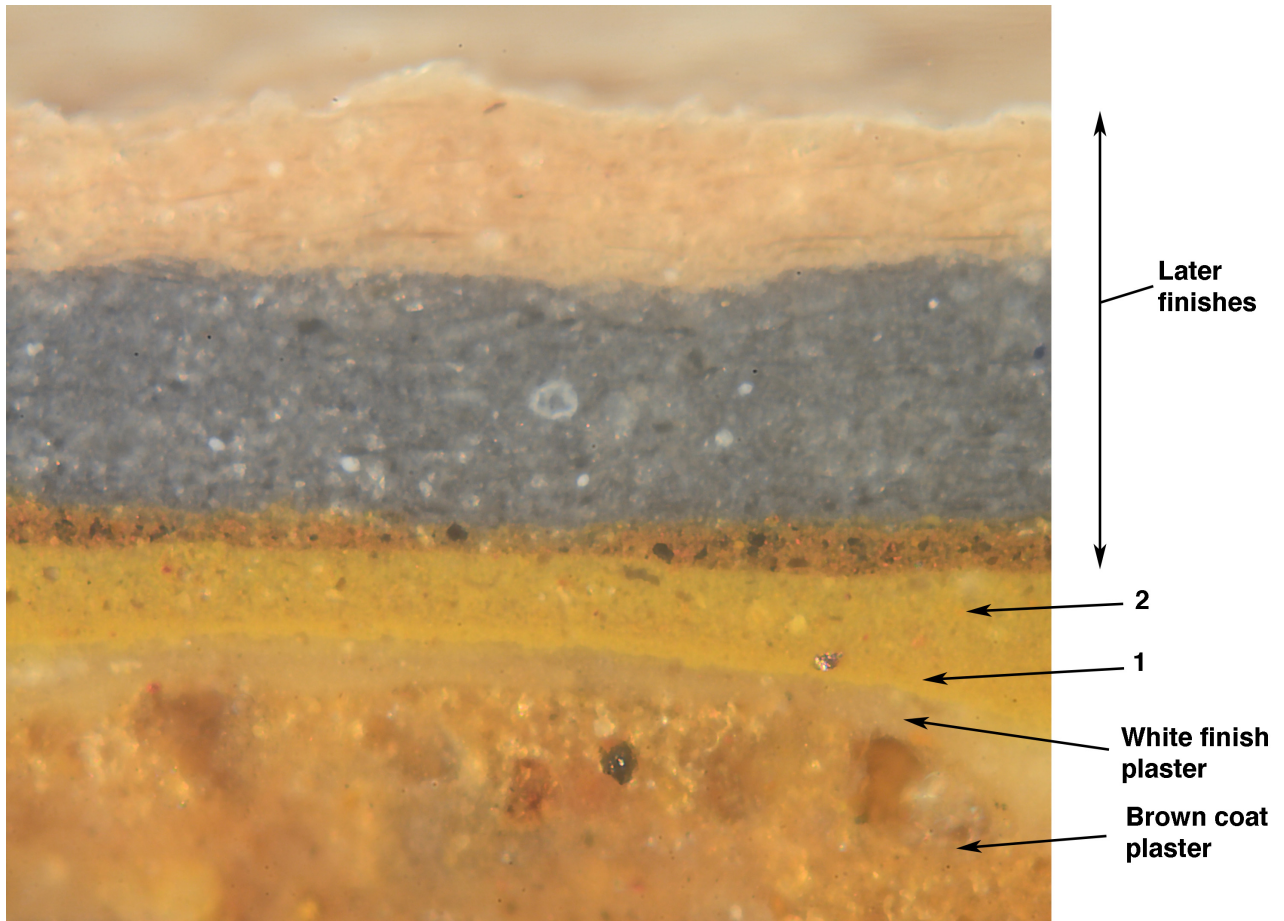


Note: The view of the sample is looking down onto the cross section. The brown coat [scratch coat] is clearly seen. Note that it supports a very thin white finish coat of plaster that is little more than a white wash. The white lime was a relatively expensive building material. There are two white wash layers on the surface of the ceiling plaster [1,2] that are the same lime coating in color. Both layers 1 and 2 may predate the sale of the building in 1914.

The ceiling was papered over, probably in 1914 as part of the conversion of the building into a residence.

Sample Interior 6: West Wall, Plaster south of Door D 7, added wall, 1914

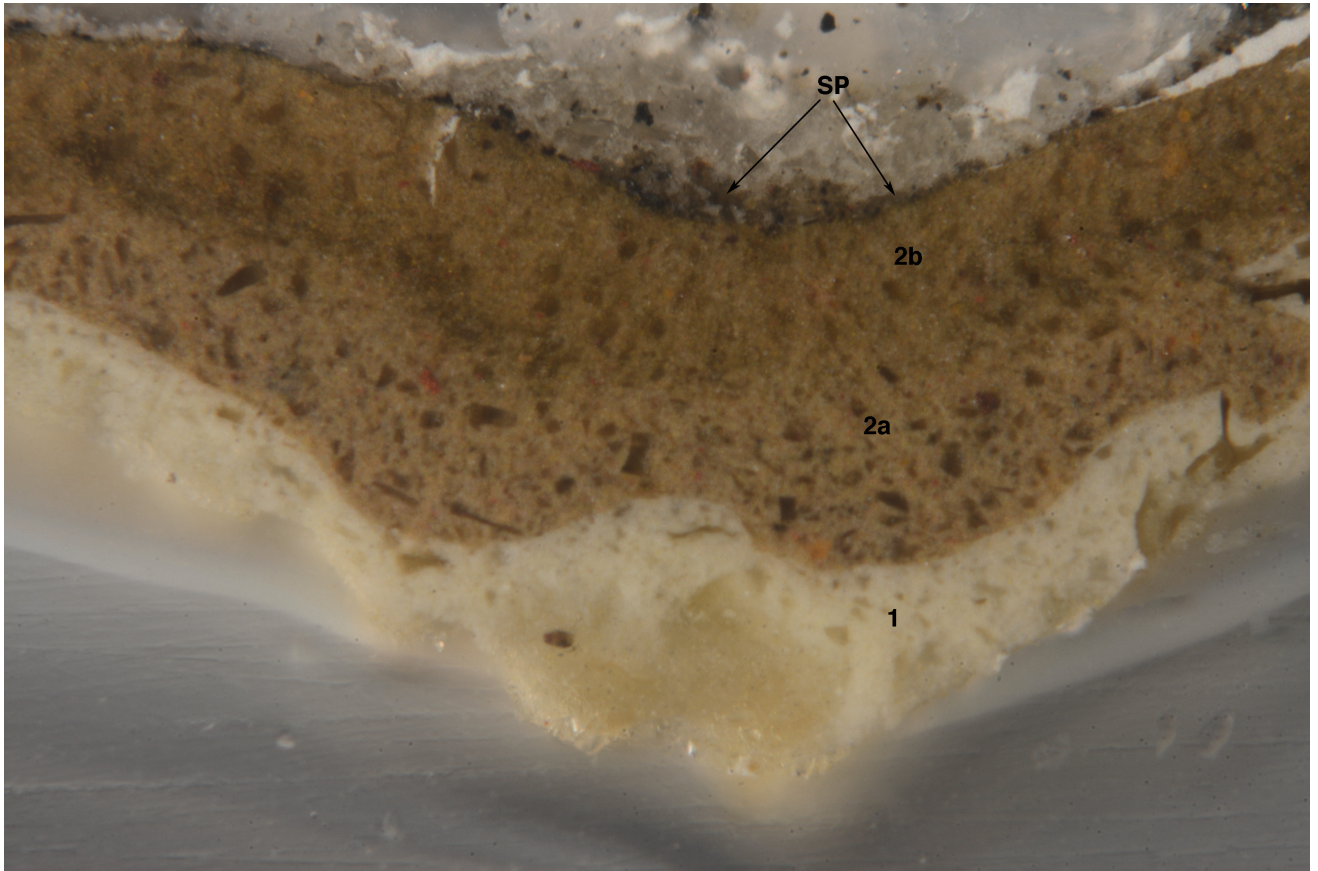
Photomicrograph: Mounted sample, Olympus BMAX-50 polarized light microscope/ 10x objective, (100x total microscopic magnification) with Nikon D7100 digital camera body Lexar Media 1GB flash card Dolan Jenner Fiber optics illuminator, daylight filtering.



Note: The sample has been mounted in polymer resin, cut and polished to 8000 micron grit polishing cloth for additional examination. The brown [scratch] coat is clearly seen, and there is a very thin white finish plaster layer, also noted. The first paint coating is the first yellow ochre distemper finish [1], there is a second application of the same color, which appears to represent a second finish period [2]. The later finishes are also seen.

Sample Interior 7: South Wall, Window W 4: original window sash

Photomicrograph: Mounted sample, Olympus BMAX-50 polarized light microscope/ 10x objective, (100x total microscopic magnification) with Nikon D7100 digital camera body Lexar Media 1GB flash card Dolan Jenner Fiber optics illuminator, daylight filtering.



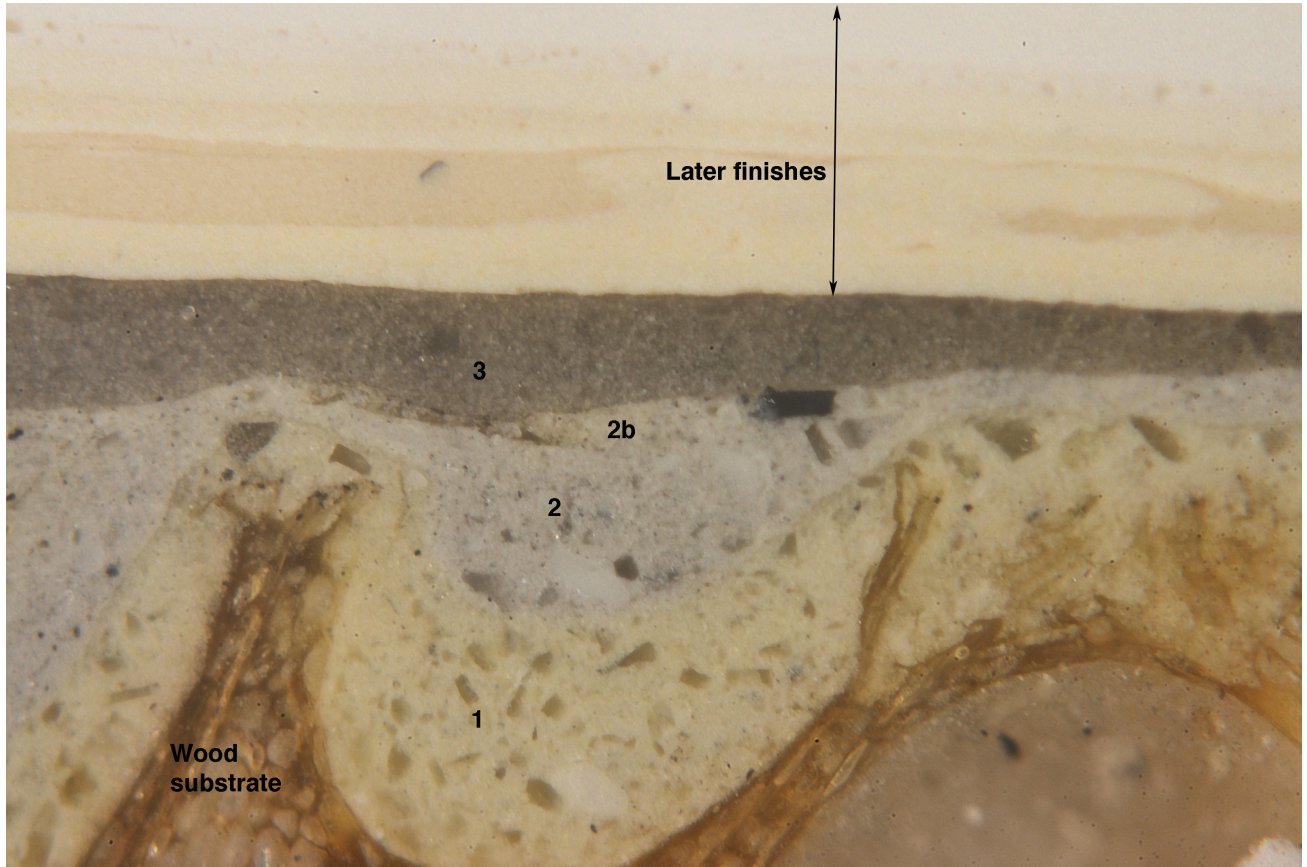
Note: The sample has been mounted in polymer resin, cut and polished to 8000 micron grit polishing cloth for additional examination. The paint layers have delaminated from the wood substrate. The first finish is the grayish white finish seen on the exterior as well [1]. This is followed by the moderate brown second finish [2a, 2b]. Note the very heavy surface particulate on the surface of the brown finish coat, 2b. This finish was exposed for a long period of time probably after ca. 1914.

Note: The same paint layering was observed on the following sample:

Sample Interior 11: South Wall, Window W 5: original window sash

Sample Interior 10: Door frame to Addition, ca. 1914

Photomicrograph: Mounted sample, Olympus BMAX-50 polarized light microscope/ 10x objective, (100x total microscopic magnification) with Nikon D7100 digital camera body Lexar Media 1GB flash card Dolan Jenner Fiber optics illuminator, daylight filtering.



Note: The sample has been mounted in polymer resin, cut and polished to 8000 micron grit polishing cloth for additional examination. The wood substrate presents an aged appearance prior to being painted: note how the fiber structure and the lack of the softer fibers has resulted in deep furrows on the surface of the wood. The first finish is a pale greenish-gray non-lead finish. This appears to date to ca. 1914, the time when the west addition was added to the original school room. The second finish [2, 2b] is the light gray that is commonly seen on the later woodwork. The dark gray layer [3] also appears on the Exterior Door Frame [as layer 4 in that case]. The later white finishes are also indicated.

Note: The same paint layering was observed on the following samples:

Sample Interior 12: North Door to exterior, ca. 1914

Finish schedule: 1899-1914 Interior**Recommendation for restoration finishes of the Interior Schoolroom****Woodwork:**

All of the woodwork was finished with a red [common garnet] shellac. This finish was retained during the entire period 1899-1914. This should be replicated with similar materials.

Additional note regarding the West wall chair rail cap:

The West wall chair rail cap is undoubtedly original: it is inserted under the upper wall plaster. The other chair rail caps in the room are later in date. The discovery of the red garnet shellac in the crack in the wood, but not elsewhere on this element is very odd. The physical evidence indicates that the chair rail cap was carefully sanded, removing all of the shellac finish: only that caught in the crack survived. While this is possible, it must be pointed out that does not conform with the rest of the woodwork, where there was no attempt to sand off the shellac finish.

Nonetheless, based on the other woodwork, and the survival of the shellac in the crack of the wood, the recommended finish for the chair rail cap is the same red garnet shellac as for the other woodwork.

Wall plaster:

The upper walls were painted a light yellow ochre color.

Light yellow ochre: Benjamin Moore 192 [“Key West Ivory”]

Gloss level: Flat

Ceiling plaster:

White: Benjamin Moore OC-65 [“Chantilly Lace”]

Gloss level: Flat

Color standards: CIE Lab coordinates, Hunter Lab

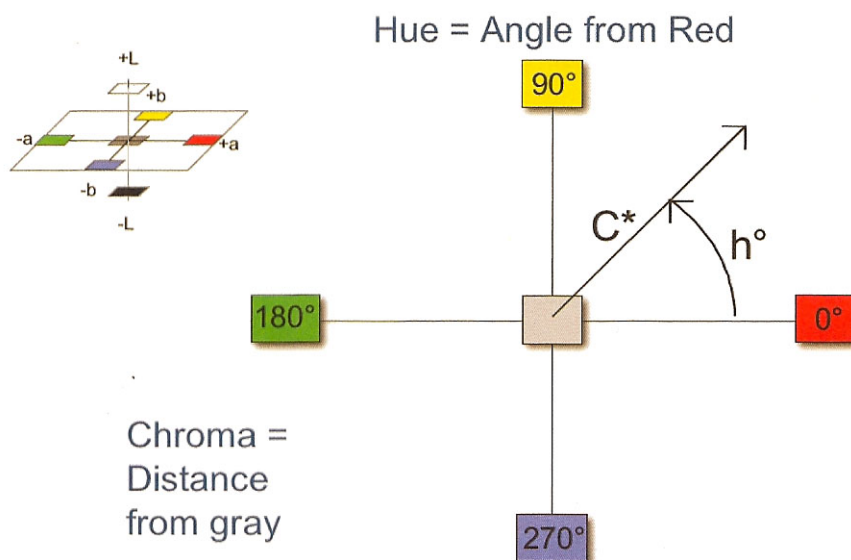
CIE is the abbreviation for the *Commission Internationale de l'Eclairage* the French title for the International Commission on Illumination, which devised the CIE Lab system in 1931. It is devoted to standardization in illumination and related areas that include color.

The spectrophotometer registers color standards into a system of measuring color devised in 1931 known as CIE Lab (pronounced See-lab). CIE Lab is a uniform (opponent color scale) *color space* in which colors are located within a three-dimensional rectangular coordinate system. The three dimensions are Lightness (L^*), redness/greenness (a^*) and yellowness/blueness (b^*). CIE Lab is part of current CIE recommendations.

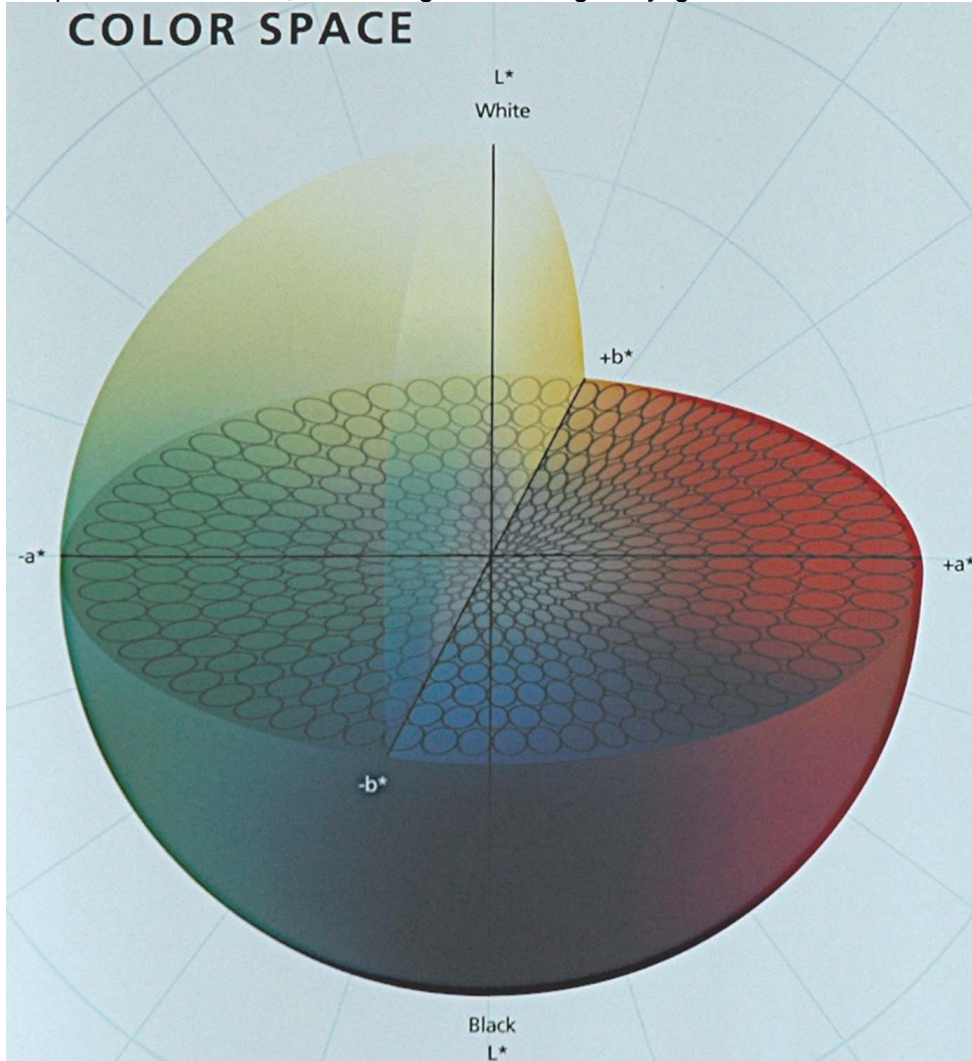
Using the spectrophotometer makes it possible to give any and all colors reference points for future reference.

In addition to the CIE Lab coordinates, the Hunter Lab numbers are also provided. These are based on developments undertaken by Richard Sewall Hunter (1909-1991) who developed a different means of identifying color. The Hunter color space was an effort to regularize the color space: the L axis represents lightness/darkness, with absolute white at 100 and absolute black at 0. Note the drawing below that shows the means of locating any color within the Hunter color space.

On the $L^* a^* b^*$ color model, where a^* and b^* are zero (point where the axes cross), the color is gray. Gray is without chroma (i.e.: saturation of color) and has undefined hue. Moving out from gray in any direction, the color increases in chromatic strength. Hue becomes defined by the angle of departure, as noted below, from a^+ that is set at 0 degrees. The distance moving out from the L axis is C^* ; the angle of departure is h degrees.



All of the Spectrophotometric readings are done with the X-Rite SP-62 Sphere Spectrophotometer, Designated observer 2 degrees, Illuminant C. Illuminant C is a mathematical representation of filtered tungsten halogen (daylight). The color temperature is 6770K, simulating CIE average daylight.



The Munsell Color System remains one of the most recognized systems of color notation. Each color standard is provided with a Munsell Color Conversion Number as well as the CIE Lab and the Hunter Lab designations. Using the Munsell Color designation, the Munsell Company can reproduce color standards.

Sources of Color Standards:

Benjamin Moore and Company: www.benjaminmoore.com

Munsell Color System: <http://munsell.com>

Note: Two color standards were prepared specifically for this report in the lab. Two color standards are included in the report. One should always remain with the report.

Color Standards: Exterior

First Finish period: construction 1899

Exterior Board and Batten Siding:

Moderate grayish brown: Special Standard Fort Frederick School Brown 6046-M

Gloss level: Satin gloss

CIE Lab coordinates

Designated observer 2 degrees

Illuminant C

L* = 55.46 a* = 5.34 b* = 6.13

Hunter Lab:

L* = 55.46 C* = 9.77 h degrees = 56.90

Munsell Conversion Number: 4.17YR5.38/1.75

Color Standards: Exterior

First Finish period: construction 1899

Window Frames/ Casings: [and all restored trim]

Moderate brown: Benjamin Moore 1245 ["Sequoia"]

Gloss level: Satin gloss

CIE Lab coordinates

Designated observer 2 degrees

Illuminant C

L* = 49.08 a* = 9.52 b* = 6.85

Hunter Lab:

L* = 49.08 C* = 11.72 h degrees = 35.73

Munsell Conversion Number: 8.50R4.76/2.37

Color Standards: Exterior

First Finish period: construction 1899

Window Sash:

Grayish white: Benjamin Moore 2108-60 ["Abalone"]

Gloss level: Satin gloss

CIE Lab coordinates

Designated observer 2 degrees

Illuminant C

$L^* = 83.38$ $a^* = 0.26$ $b^* = 4.33$

Hunter Lab:

$L^* = 83.38$ $C^* = 4.34$ $h \text{ degrees} = 86.62$

Munsell Conversion Number: 0.96Y8.21/0.61

Color Standards: Exterior

Second Finish period: before 1914

Exterior Board and Batten Siding, Window Frames/ Casings, all restored trim

Light grey Benjamin Moore 1613 ["Silent Night"]

Gloss level: Satin gloss

CIE Lab coordinates

Designated observer 2 degrees

Illuminant C

L* = 73.16 a* = -0.26 b* = -2.13

Hunter Lab:

L* = 73.16 C* = 2.15 h degrees = 263.14

Munsell Conversion Number: 3.65PB7.16/0.67

Color Standards: Exterior

Second Finish period: before 1914

North Door Frame: pending determination of original date

Moderate yellowish green Special Standard SW-2851

Gloss level: Satin gloss

CIE Lab coordinates

Designated observer 2 degrees

Illuminant C

L* = 46.04 a* = -3.94 b* = 9.27

Hunter Lab:

L* = 46.04 C* = 10.08 h degrees = 113.04

Munsell Conversion Number: 1.76GY4.46/1.40

**Color Standards: Interior
1899-1914**

Wall Plaster

Light yellow ochre: Benjamin Moore 192 ["Key West Ivory"]

Gloss level: Flat

CIE Lab coordinates

Designated observer 2 degrees

Illuminant C

$L^* = 86.07$ $a^* = 1.32$ $b^* = 22.57$

Hunter Lab:

$L^* = 86.07$ $C^* = 22.60$ $h \text{ degrees} = 86.65$

Munsell Conversion Number: 1.24Y8.49/3.21

**Color Standards: Interior
1899-1914**

Ceiling plaster:

White: Benjamin Moore OC-65 ["Chantilly Lace"]

Gloss level: Flat

CIE Lab coordinates

Designated observer 2 degrees

Illuminant C

L* = 96.46 a* = -0.74 b* = 2.00

Hunter Lab:

L* = 96.46 C* = 2.14 h degrees = 110.35

Munsell Conversion Number: 0.88GY9.55/0.22

Special Standard: Second copy

Color Standards: Exterior

First Finish period: construction 1899

Exterior Board and Batten Siding:

Moderate grayish brown: Special Standard Fort Frederick School Brown 6046-M

Gloss level: Satin gloss

CIE Lab coordinates

Designated observer 2 degrees

Illuminant C

L* = 55.46 a* = 5.34 b* = 6.13

Hunter Lab:

L* = 55.46 C* = 9.77 h degrees = 56.90

Munsell Conversion Number: 4.17YR5.38/1.75

Special Standard: Second copy

Color Standards: Exterior

Second Finish period: before 1914

North Door Frame: pending determination of original date

Moderate yellowish green Special Standard SW-2851

Gloss level: Satin gloss

CIE Lab coordinates

Designated observer 2 degrees

Illuminant C

L* = 46.04 a* = -3.94 b* = 9.27

Hunter Lab:

L* = 46.04 C* = 10.08 h degrees = 113.04

Munsell Conversion Number: 1.76GY4.46/1.40