

Preliminary Consultation
MONTGOMERY COUNTY HISTORIC PRESERVATION COMMISSION
STAFF REPORT

Address:	25321 Frederick Road, Clarksburg	Meeting Date:	2/25/2026
Resource:	Master Plan Site #10/57 David Zeigler House	Report Date:	2/18/2026
Applicant:	Montgomery Parks (Catherine Stratton Treadway, Agent)	Public Notice:	2/11/2026
Review:	Preliminary Consultation	Staff:	Laura DiPasquale
Proposal:	Stabilization of frame main block, and demolition and reconstruction of log building section with fenestration modifications and dormer construction		

STAFF RECOMMENDATION

Staff recommends the applicant make any revisions recommended by the HPC and return for a HAWP.

ARCHITECTURAL DESCRIPTION

SIGNIFICANCE: Individually Listed Master Plan Site #10/57, *David Zeigler House, aka Zeigler Log House*

STYLE: Greek Revival

DATE: 1823; 1850s; 1930s

The 1990 *Amendment to the Approved and Adopted Master Plan for Historic Preservation in Montgomery County, Maryland re: Previously Recommended Sites* describes the property as follows:

The Zeigler House is a two-story frame and log house (now covered with asbestos shingles), which is generally Victorian in character and features a five-bay façade and one-story front porch with round columns and ornate brackets. A concrete block dairy barn and a frame bank barn are located on the site.

The Zeigler House is important as a largely intact mid-19th century Victorian farm which retains its early frame barn and later dairy barn in their original relationship.

The Zeigler house was associated with a 300-acre farm owned by David Zeigler, who was also a miller. His family was involved in a variety of businesses in the area during the 19th century.

The environmental setting is 11.96 acres, to include the house, frame barn, and dairy barn... The property is within Little Bennett Regional Park.

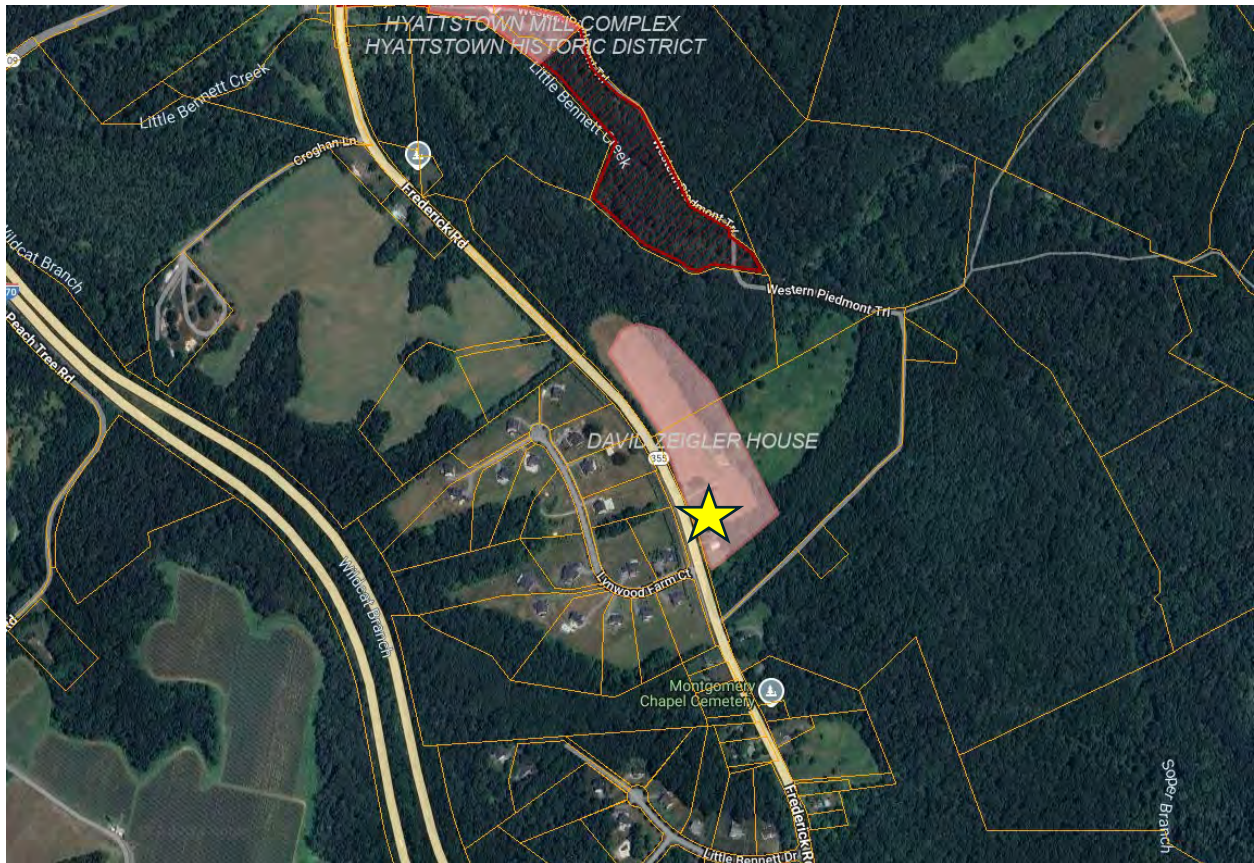


Figure 1: The David Zeigler House at 25321 Frederick Road, Clarksburg (shaded in pink and shown with a yellow star) is located southeast of Hyattstown.



Figure 2: Front elevation of 25321 Frederick Road, Clarksburg (Historic Preservation Office, 2025).

PROPOSAL

The applicant proposes to demolish the log portion of the house and reconstruct it to its current appearance with some modifications, including modified windowsill heights, removal of non-historic chimneys, and construction of a large, shed dormer centered on the rear roof slope. The applicant also proposes to stabilize the main frame block of the house and to replace existing windows and roofing.

APPLICABLE GUIDELINES

In accordance with section 1.5 of the Historic Preservation Commission Rules, Guidelines, and Procedures (Regulation No. 27-97) (“Regulations”), in developing its decision when reviewing a Historic Area Work Permit application for an undertaking at a Master Plan site the Commission uses section 24A-8 of the Montgomery County Code (“Chapter 24A”), the *Secretary of the Interior’s Standards and Guidelines for Rehabilitation* (“Standards”), and pertinent guidance in applicable master plans. [Note: where guidance in an applicable master plan is inconsistent with the Standards, the master plan guidance shall take precedence (section 1.5(b) of the Regulations).] The pertinent information in these documents, incorporated in their entirety by reference herein, is outlined below.

Montgomery County Code Chapter 24A-8

- (a) The commission shall instruct the director to deny a permit if it finds, based on the evidence and information presented to or before the commission that the alteration for which the permit is sought would be inappropriate, inconsistent with, or detrimental to the preservation, enhancement, or ultimate protection of the historic site or historic resource within an historic district, and to the purposes of this chapter.
- (b) The commission shall instruct the director to issue a permit, or issue a permit subject to such conditions as are found to be necessary to ensure conformity with the purposes and requirements of this chapter, if it finds that:
 - (1) The proposal will not substantially alter the exterior features of an historic site or historic resource within an historic district; or
 - (2) The proposal is compatible in character and nature with the historical, archeological, architectural or cultural features of the historic site or the historic district in which an historic resource is located and would not be detrimental thereto or to the achievement of the purposes of this chapter.
 - (3) The proposal would enhance or aid in the protection, preservation and public or private utilization of the historic site or historic resource located within an historic district in a manner compatible with the historical, archeological, architectural or cultural value of the historic site or historic district in which an historic resource is located; or
 - (4) The proposal is necessary in order that unsafe conditions or health hazards be remedied; or
 - (5) The proposal is necessary in order that the owner of the subject property not be deprived of reasonable use of the property or suffer undue hardship; or
 - (6) In balancing the interests of the public in preserving the historic site or historic resource located within an historic district, with the interests of the public from the use and benefit of the alternative proposal, the general public welfare is better served by granting the permit.
- (c) It is not the intent of this chapter to limit new construction, alteration or repairs to any 1 period or architectural style.

Secretary of the Interior’s Standards for Rehabilitation

The Secretary of the Interior defines rehabilitation as “the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features, which convey its historical, cultural, or architectural values.” Because the property is a Master Plan Site, the Commission’s focus in reviewing the proposal should be the *Secretary of the Interior’s Standards for Rehabilitation*. The applicable *Standards* are as follows:

- 2. The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.

5. Distinctive materials, features, finishes and construction techniques or examples of craftsmanship that characterize a property will be preserved.
6. Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.
9. New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work shall be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportions, and massing to protect the integrity of the property and its environment.
10. New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

STAFF DISCUSSION

Demolition of Existing Log Structure

The Zeigler house includes a c. 1850s two-story Greek Revival frame main block, which was appended to an earlier one-and-a-half-story log structure, dated through dendrochronology to 1823, and which now appears as a lean-to rear addition to the mid-19th century house. At the time of designation on the Master Plan in 1990, the Zeigler House was covered in asbestos siding. In 2010, the Parks Department submitted a HAWP to remove the asbestos siding and restore the underlying wood siding.¹ The date of that underlying wood siding is unknown, but many log houses in this area were constructed with siding, while others were left unclad after construction. Per Preservation Brief 26, *The Preservation and Repair of Historic Log Buildings*, many of these unclad structures were later sided to express new financial status, or when a new addition was constructed in order to offer some consistency.² As with most log houses, the cladding for the Zeigler House offers weatherproofing and aesthetic continuity with the later addition.

M-NCPPC has owned the property since 1967 and used it for various purposes including residential and office use until the early 2000s, when it became vacant. While looking to rehabilitate the property, Parks undertook a series of structural investigations, the first in 2023 and then a second in 2025, which identified a number of structural deficiencies to the house from the roof to the foundation, including the significant deterioration of the original log walls, which are clad on the outside with wood lap siding. While implementing some of the treatments recommended in the 2023 report, the applicants removed the interior finishes from the log portion of the house and discovered additional deterioration. The reports find that the roof and floor framing have become deformed over time by insensitive interventions such as the insertion of modern plumbing. The 2025 structural survey found that the log walls – which do not tie into the frame main block – are no longer structurally sound and are not able to be load-bearing.

¹ HAWP 10/57-10A for siding removal, garage reconstruction, signage installation, and other alterations, December 15, 2010:

https://mcatlas.org/tiles6/06_HistoricPreservation_PhotoArchives/HAWP/HAWP_Archive/UNKNOWN_DAVID%20ZEIGLER%20HOUSE_25321%20FREDERICK%20ROAD_UNKNOWN.PDF

² Bruce D. Bomberger, Preservation Briefs 26, *The Preservation and Preservation of Historic Log Buildings*: <https://www.nps.gov/orgs/1739/upload/preservation-brief-26-log-buildings.pdf>

In order to make the building structurally sound and suitable for reuse and habitation, the applicants propose to demolish the log portion of the house and rebuild it to approximately its current exterior appearance, but using standard framing rather than log framing, and with some modifications.

Based on the structural reports as well as a visit to the site, staff finds that at least a significant portion of the log walls are beyond repair, and that their removal is necessary in order to remedy an unsafe condition, per Chapter 24A-8(b)(4). Per *Standard 6*, where the severity of deterioration requires replacement of a distinctive feature, the new feature should match the old in design, color, texture, and where possible, materials.

If the HPC agrees with the staff's assessment that the deterioration of the logs is such that replacement is necessary, the question becomes whether the log walls should be replaced in-kind with new logs, or, whether the applicant may remove the logs and replace them with another type of framing. The guiding legislation in Chapter 24-8(A) outlines the HPC's role in review of exterior alterations; however, staff finds the distinction between interior and exterior features is somewhat of a fine line. Are the stacked walls and daubing of a log house essential to its exterior, or is the scope of the exterior, and by extent the HPC's purview, confined only to its cladding? Can the Ziegler House effectively express its architectural significance as a log cabin without logs? Is the existence of the log structure central to maintaining the status of this building as an historic site, which was known at the time of designation as the "Zeigler Log House," but which has not, since the time of designation, expressed the log nature of the structure from the public view?

Construction of Modified Addition

If the HPC approves of the demolition of the log structure, the next question becomes the appropriateness of the proposed modified reconstruction. As submitted, the applicants propose to construct a new addition with the same overall footprint and envelope, but some modifications.

On the southeast side elevation, the new addition would raise the sill of the first-floor window and install a 6-over-6 window instead of a 2-over-2 window. Staff notes that the existing 2-over-2 window would likely have been a later alteration, as larger glazing was more expensive and smaller paned windows were typically used in log structures. Along this elevation, the applicants also propose to eliminate the existing chimney, which staff finds is also a later addition to the structure.

On the northwest side elevation, the applicants also propose to eliminate the non-original chimney, and to eliminate siding infill on the rear porch.

On the rear elevation, the applicants propose to reconstruct the existing roofline, but with a central 12-ft 7-inch wide shed roof dormer. The dormer would have a standing-seam metal roof, while the reconstructed roof slope would be clad in asphalt shingles.

Staff finds that the exterior appearance of the proposed reconstruction would be substantiated by documentary and physical evidence, per *Standard 6*. Staff also finds that the changes would not substantially alter the exterior features of the historic resource, per Chapter 24A-8(b)(1) and that the proposed design modifications are compatible with the historic resource, per Chapter 24A-8(b)(2).



Figure 3: Existing southeast elevation (left) and interior view of the vent pipe and first-floor 2-over-2 window (right).

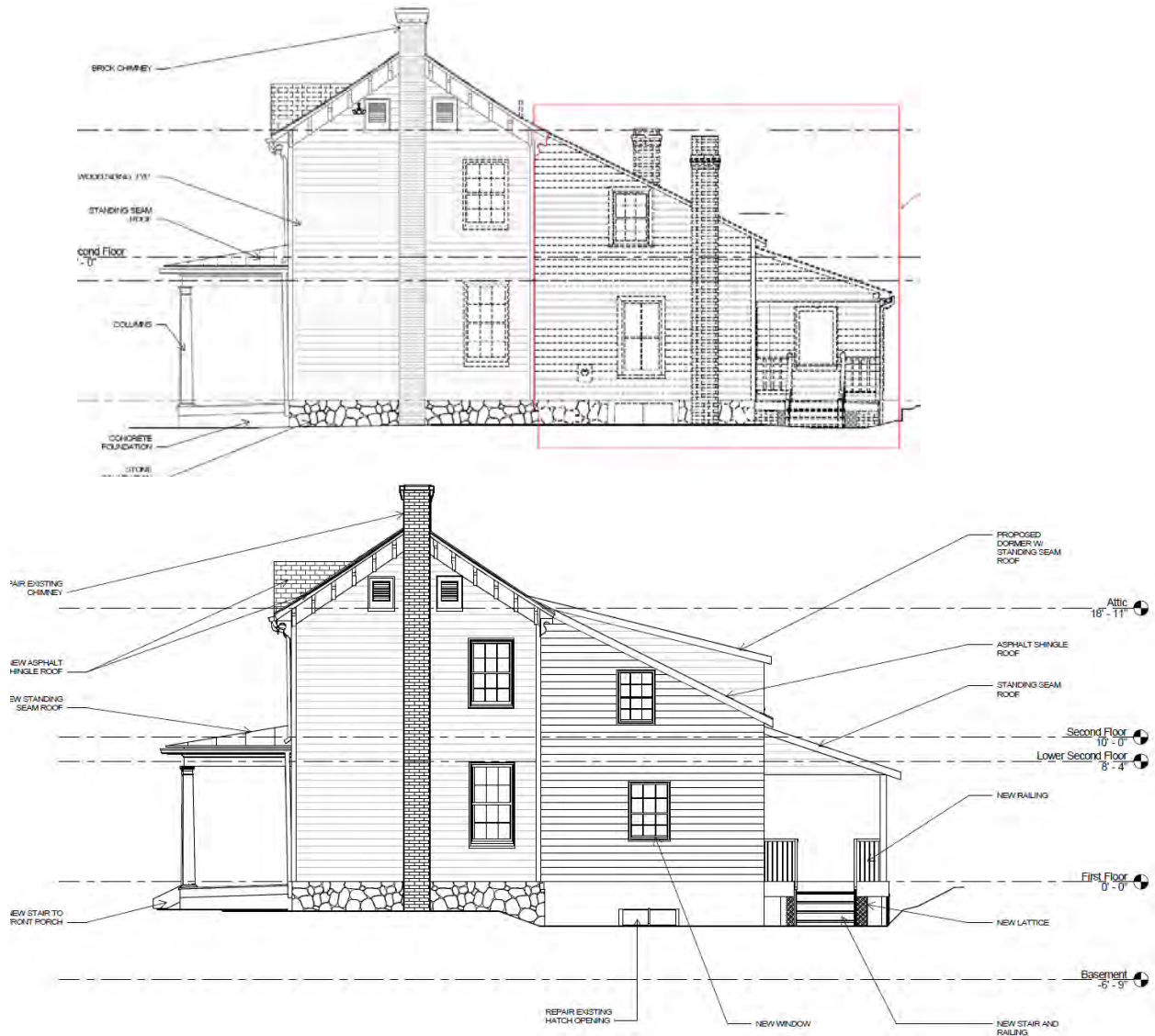


Figure 4: Existing/demo southeast elevation drawing (above) and proposed elevation drawing (below).



Figure 5: Existing northwest elevation.

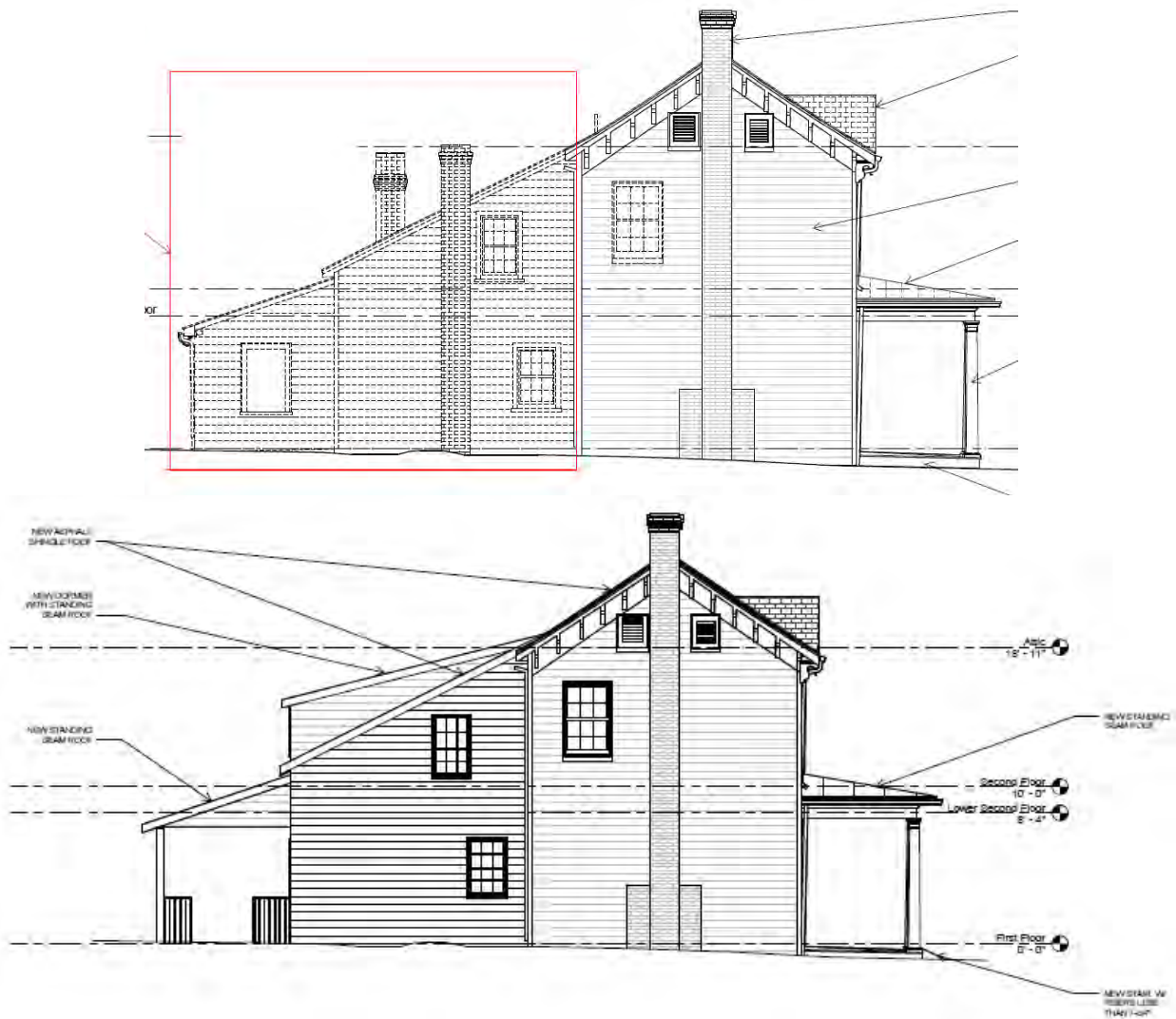


Figure 6: Existing/demo northwest elevation drawing (above) and proposed elevation drawing (below).



Figure 7: Existing rear elevation photographs.

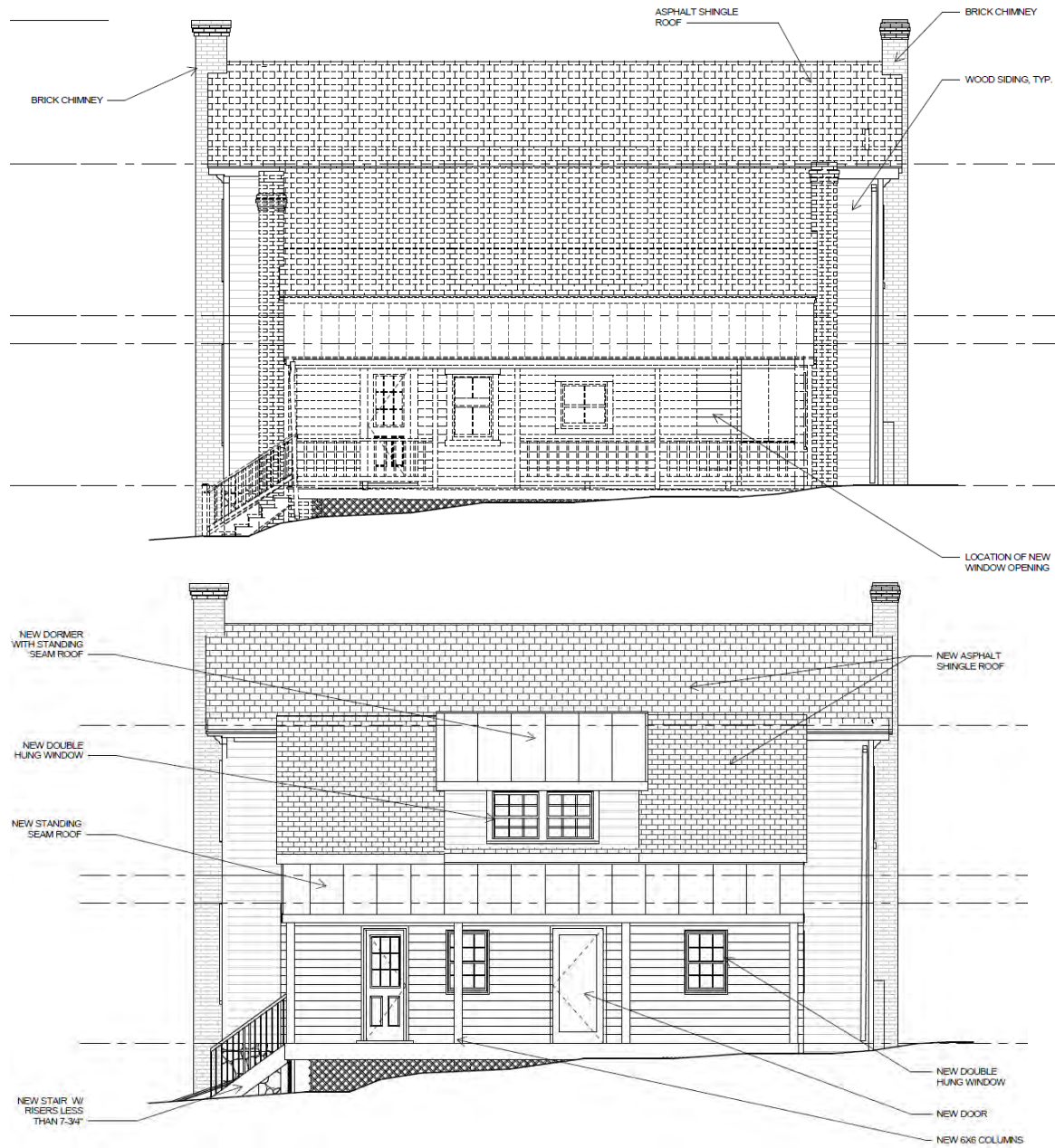


Figure 8: Existing/demo rear elevation drawing (above) and proposed elevation drawing (below).

Frame Main Block Alterations

In addition to the primary questions about the log structure, the applicants have included window and roofing replacement on the main block of the house. Staff finds that the replacement of the existing 3-tab roofing with new 3-tab or architectural shingles would be appropriate, and that the applicants should submit a final roofing specification for a HAWP review. Staff also seeks additional information on the proposed window replacement, which can likewise be submitted for the HAWP review.

STAFF RECOMMENDATION

Staff recommends that the applicant make any revisions based upon the HPC's comments and return with an Historic Area Work Permit application.

Staff Requested HPC Feedback

- Appropriateness of the proposed demolition of the log portion of the building.
- Appropriateness of replacement of the log walls with standard framing.
- Appropriateness of the proposed addition/modified reconstruction.

Staff recommends the following additional items be submitted with the HAWP application:

- Window shop drawings for any replacement windows.
- Materials specifications.



1. M-NCPPC historic photo of Ziegler House, circa 1976.



2. 2025 Rear view concept sketch of proposed Zeigler House



3. Zeigler House site view - Clarksburg, MD.

PROJECT NARRATIVE

The historic Ziegler House at 25321 Frederick Road, Clarksburg, is designated in Montgomery County's Master Plan for Historic Preservation. The house is a two-story frame building with a five-bay facade and a full-width porch on the front and back. The frame section, dating to circa 1850, was attached to an earlier log structure, dated through dendrochronology to 1823, that now serves as a lean-to rear addition to the mid-19th century house. This earlier dwelling was one-and-a-half stories, with two equally-sized rooms on the first floor. The foundations are irregular field stone with stone piers. At some point concrete and lumber reinforcements were installed to address structural issues created by foundation and framing failure. The exterior of the entire house, including the earlier structure, is clad with wood siding.

M-NCPPC owns the house, which has been vacant since the early 2000's. The proposed project seeks to rehabilitate the property, by addressing significant structural and materials degradation, and return the property for use as a single-family residence.

There are a number of significant structural deficiencies to the house from the roof to the foundation, including the significant deterioration of the original log walls due to termites and worms. The log timbers are brittle and fragile, leaving some areas open to the outside. The roof and floor framing have become deformed over time due to insensitive interventions such as the insertion of modern plumbing (WEI Survey December 28, 2023 attached).

An updated structural survey was completed on June 3, 2025 at the beginning of this project. Due to the significant level of deterioration of the rear of the house (the log structure) and the patchwork of previous repairs, which were either insufficient to begin with or are now failing, it is, unfortunately, necessary to replace the entire rear of the house with a modern foundation, new floors, roof, and wall structures. This includes the log wall part of the house as well as the existing back porch (TEC structural report with photos attached, June 3, 2025).

The rear portion of the house will be rebuilt with the same footprint as the existing structure, although the existing chimneys on the rear of the house will not be rebuilt. For the most part, door and window openings will be kept in the same locations and with the same sizes as exist today in the current rear house. The location of changes to openings are shown on the drawings. A survey of the existing windows shows that most sashes and mechanisms are failing and that the windows appear to be from different generations (Window survey attached). The proposal is to replace all windows in the front and back of the house with new 6/6 SDL double-hung wood windows. The wood siding on the front of the house would be repaired and the siding on the rear of the house will be new, likely a fiber-cement siding product in the same size and orientation as the existing siding.

In addition to rebuilding the rear of the house, there are a few changes being proposed to make the structure work better as a modern single-family home. A shed dormer is proposed on the lower rear roof to provide code-compliant head-height and sunlight necessary to provide occupiable space for a bedroom at the rear of the house. Stairs are proposed to be added off of the front porch, for access.

*Text updated 02/03/2026

Zeigler House

25321 Frederick Road
Clarksburg, MD

Rehabilitation and Improvements

HAWP Submission Historic Presentation

Project Narrative

Stamp and Signature	
Project number	
Date	25 February 2026
Designed by	
Drawn by	
Checked by	
Scale	

A - 1



1. Front Elevation, 2025. Windows and roofing would be replaced and stairs would be added off the front porch.



2. Right Side Elevation, 2025. Windows would be replaced in the front of the house. The rear portion of the house, including the back porch and the hatch access to basement, would be built new, with 6/6 windows and modern siding. The kitchen window sill in the rear will be raised slightly. The rear chimney would not be rebuilt.



3. Rear Elevation, 2025. The rear of the house and porch would be completely rebuilt, but without the chimneys and the porch side wing wall. A shed dormer is proposed for the second floor to allow light and the required headroom for the master bedroom. Other openings on the first floor will be adjusted. (See other photos and drawings.)



4. Left Side Elevation, 2025. Windows would be replaced in the front of the house and the siding repaired. The rear portion of the house, including the back porch, would be built new with 6/6 windows and modern siding. The rear chimney and the wing wall on the back porch would not be rebuilt.

Zeigler House

25321 Frederick Road
Clarksburg, MD

Rehabilitation
and
Improvements

HAWP
Submission
Historic
Presentation

Existing
Elevations

Stamp and Signature

Project number

Date 25 February, 2026

Designed by

Drawn by

Checked by

Scale

A - 2

Zeigler Log House

25321 Frederick Road
Clarksburg, MD

Rehabilitation
and
Improvements

HAWP
Submission
Historic
Presentation

Rear
Elevation
Openings

Stamp and Signature	
Project number	
Date	21, October 2025
Designed by	
Drawn by	
Checked by	
Scale	

A - 3

Sheet Number Of



1. Rear elevation showing roof sagging and current window and door openings. This portion of the house and porch will be completely rebuilt except for the rear chimneys and porch wing wall. Window and door openings will be slightly modified to accommodate the new floor plan, see photos 3 & 4 below.



2. Existing casework and wing wall will not be rebuilt.



3. Rear elevation view from the back porch showing existing window and door openings.



4. Interior view of previous door openings.



1. Basement Mechanical Space showing multiple layers of temporary supports and failing floor joists (photo by TEC, June 2025).



2. Deteriorated log walls failing to provide support for the floor above (photo by TEC, June 2025).



3. Primary roof beam rests unsupported on the window trim. Deteriorated log walls under the window and roof (photo by TEC, June 2025).



4. Failing log walls entirely ineffective in supporting the roof structure (photo by TEC, June 2025).

Zeigler House

25321 Frederick Road
Clarksburg, MD

Rehabilitation
and
Improvements

HAWP
Submission
Historic
Presentation

Structural
Deficiencies

Stamp and Signature

Project number

Date 25 February, 2026

Designed by

Drawn by

Checked by

Scale

A - 4

Zeigler House

Rehabilitation and Improvements

25321 Frederick Road - Clarksburg, MD

Submission Number	Date



3D Rear View

DRAWING INDEX

Sheet Number	Sheet Name
CS.00	Cover Sheet
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A1.2	Existing Second and Attic Floor Plan
A1.3	Existing Roof Plan
A2.1	Existing Sections
A3.1	Existing Exterior Elevations South and West
A3.2	Existing Exterior Elevations North and East
A4.1	Proposed Basement and First Floor Plan
A4.2	Proposed Second and Attic Floor Plan
A4.3	Proposed Roof Plan
A5.1	Proposed Sections
A6.1	Proposed Exterior Elevations South and West
A6.2	Proposed Exterior Elevations North and East

Zeigler House

25321 Frederick Road
Clarksburg, MD

Rehabilitation and Improvements

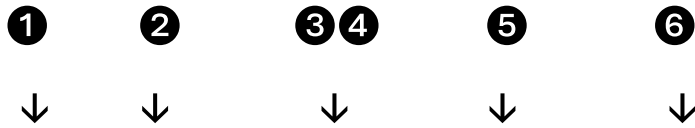
Cover Sheet

Stamp and Signature	
Project number	...
Date	25 February, 2026
Designed by	MB
Drawn by	HC
Checked by	MA
Scale	

CS.00

Sheet Number Of

West Elevation Window Key:



First Floor:

- W1_1
- W1_2
- W1_3
- W1_4

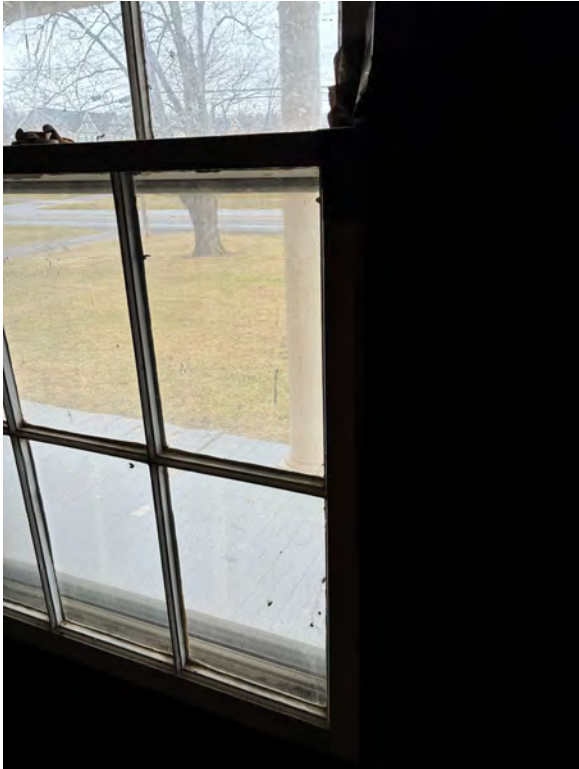
Second Floor:

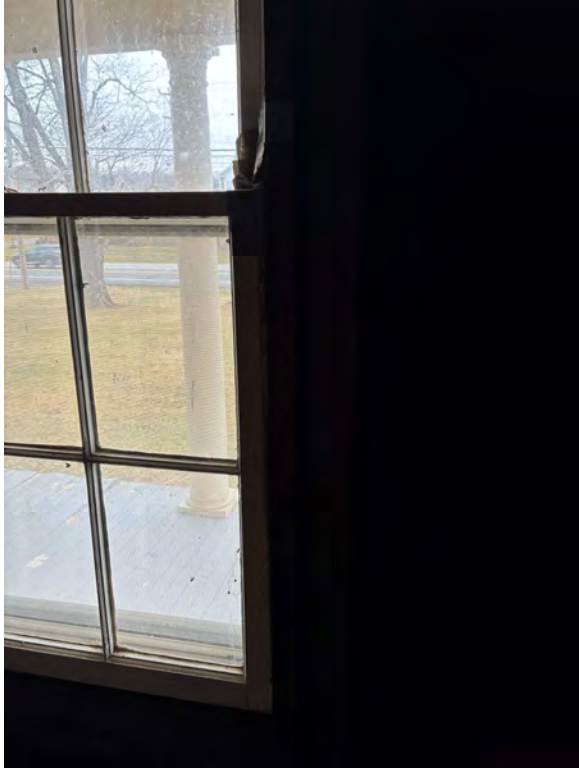
- W2_1 W2_4
- W2_2 W2_5
- W2_3 W2_6

West Elevation First Floor Window W1_1



West Elevation First Floor Window W1_2







West Elevation First Floor Window W1_3

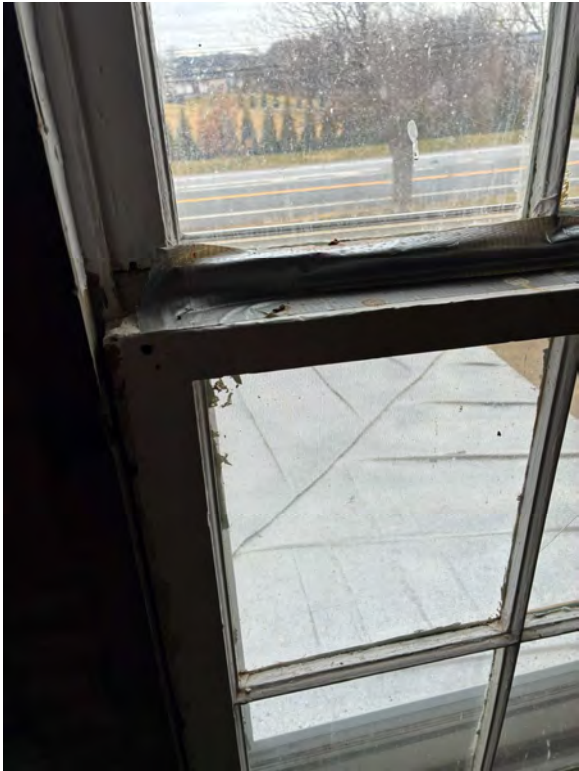
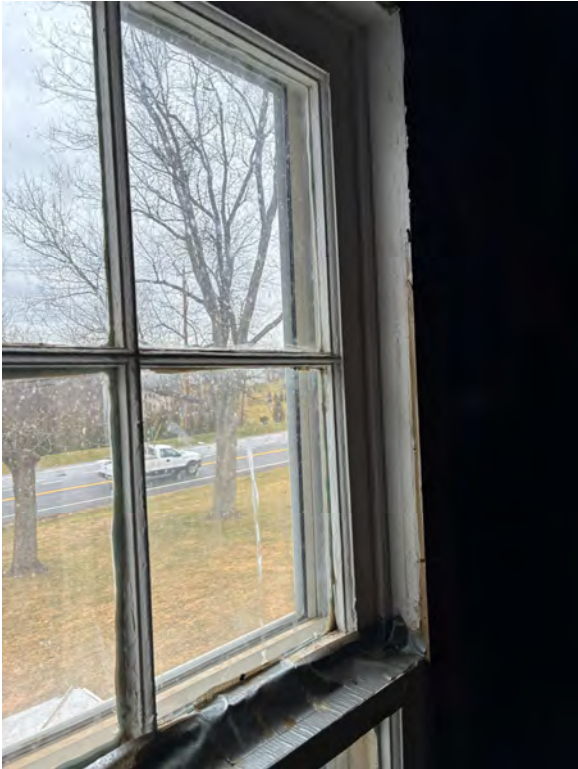


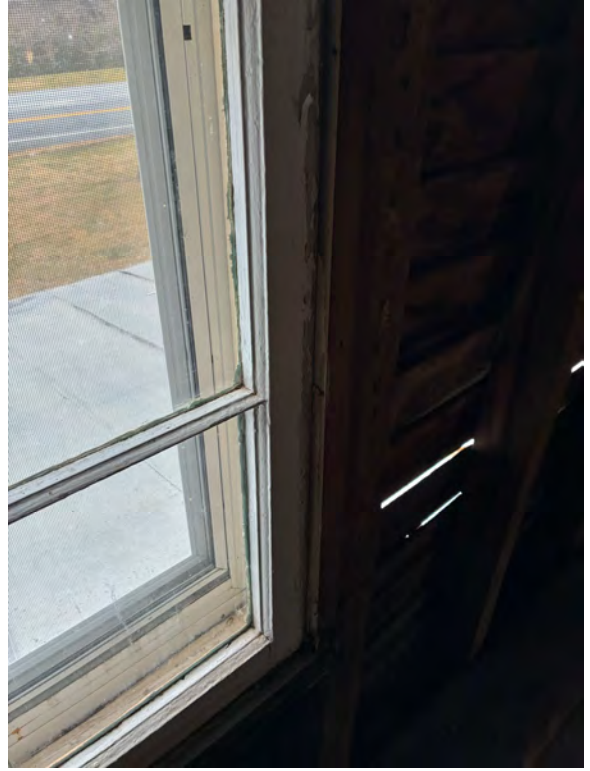
West Elevation First Floor Window W1_4





West Elevation 2nd Floor Window W2_1:





West Elevation 2nd Floor Window W2_2:



West Elevation 2nd Floor Windows W2_3 and W2_4:





West Elevation 2nd Floor Windows W2_6





South Elevation Window Key:

1

2



1

2

First Floor:

S1_1

S1_2

Second Floor:

S2_1

S2_2

South Elevation First Floor Window S1_1:





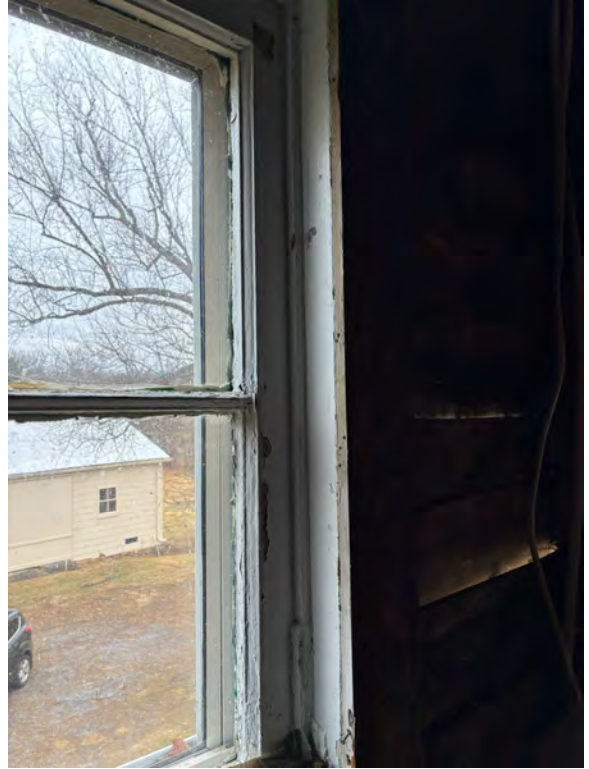
South Elevation First Floor Window S1_2:





South Elevation 2nd Floor Window S2_1:





South Elevation 2nd Floor Window S2_2:



East Elevation Window Key:



↑

1

↑

2

First Floor:

E1_1

E1_2

East Elevation First Floor Window E1_1:





East Elevation First Floor Window E1_2:



North Elevation Window Key:

①

②



↑ Not a window - no sash



①

First Floor:

N1_1

(Note: there is no sash in window opening in porch at rear/left of image.)

Second Floor:

N2_1

N2-2 (bottom sash is missing)

North Elevation First Floor Window N1_1:





North Elevation 2nd Floor Window N2_1:



North Elevation 2nd Floor Window N2_2:





ZEIGLER LOG HOUSE



INCLUDING RECOMMENDATIONS FOR PRESERVATION, REPAIR, AND ADAPTIVE REUSE

SUBMITTED TO THE MONTGOMERY COUNTY DIVISION OF THE
MARYLAND-NATIONAL CAPITAL PARKS AND PLANNING COMMISSION

DECEMBER, 2023

**WORCESTER
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Executive Summary

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II: Engineer's Report

III: Recommendations and ROM Pricing

Appendix A: Drawings

Appendix B: Chinking Material Analysis

Executive Summary

The survey and recommendations were based on observations made on the property and widely available source material during the fall of 2023. Full-scale material analyses and historic research were not undertaken as part of this project. No elevated platforms such as lifts or scaffold were used; access was through ladders only. Limited finish penetrations were undertaken for exploratory purposes, but no doubt there will be significantly more information obtained during future phases of work.

Recommendations, and the anticipated costs associated with them, are broken up into three phases. Preservation includes the immediate steps to take in order to prevent the loss of further material, and selective demolition that will inform the next phase. Repair includes treatments for historic material. Adaptive reuse is still amorphous at this stage, and it is not for us to decide how the building should be used; we have included some examples of how other structures are used within the Little Bennett Regional Park.

Pricing in Part III is in the form of Rough Order of Magnitude (ROM) and should not be construed as a bid or proposal for the work. We highly recommend a more thorough study of the structure during the recommended selective demolition and repair phases while additional materials and spaces are exposed. Due to rising material, fuel, and labor costs, as well as the inevitable hidden conditions, prices can be expected to increase by at least 10% per year from the time of this writing.

All photos in this report were taken by Worcester Eisenbrandt, Inc., unless otherwise noted.



SURVEY

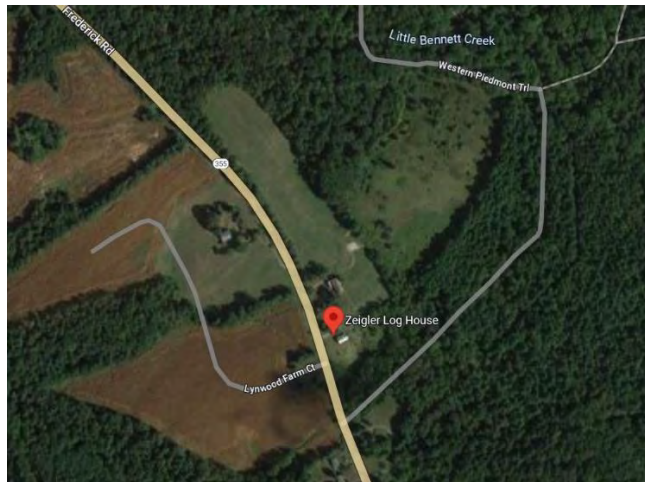
Location: 25321 Frederick Road, Clarksburg, MD. The house sits on Frederick Road (MD Rte 355) approximately halfway between Frederick and Gaithersburg. It is on the western edge of Little Bennett Regional Park between downtown Clarksburg and Hyattstown.

Present Owner: Montgomery County Parks

Present Use: Vacant

Previous Uses: Permanent residence, offices, temporary residence/rental

Significance: David Zeigler (1817-1879) ran a farm, mill, and various other businesses along Little Bennett Creek in the mid-19th century.



Part I: Historical Information

A. Physical History

- a. Dendrology dates the log cabin section to 1823m according to the Oxford Tree-Ring Laboratory. Front rooms, second floor, and attic added circa 1850.¹
- b. Architect: Unknown
- c. Significant Dates
 - i. 1823 Elisha Hyatt, owner of property when cabin was built.
 - ii. 1854 Property transferred to Eleanor Ann Hyatt Zeigler (1815-1840),² wife of David Zeigler and descendant of the founder of Hyattstown.³
 - iii. 1966 Land acquired by the state for Little Bennett Regional Park.⁴
- d. Builders and Suppliers: Unknown
- e. Original Plans and Construction (structural evidence only)
The original part of the house is framed in whole or halved round logs with branches removed, but with bark still attached. Walls are constructed from squared timbers with some bark remnants at corners. The remainder of the house is a balloon frame constructed prior to the use of dimensional lumber. Remnants of the original lath are still attached at walls and ceilings, but that has been largely replaced by plaster board.
- f. Alterations and Additions

A few decades after the cabin was built, a two-story house was added in front of the cabin, incorporating the original space as part of the first and second floors.



B. Historical Context

The Zeigler Log House is an integral part of the park's interpretation of local 19th century industrial development through surviving buildings and alterations to the landscape. According to MNCPPC, "In addition to an abundance of native plants and animals, this park features 14 historical sites and points of interest [...] which preserve the memories of rural life in Montgomery County through the 18th, 19th, and 20th centuries."⁵

¹ Oxford Tree-Ring Library. www.dendrology.com/bennett.html. November 2, 2023.

² Ibid.

³ Montgomeryparks.org/parks-and-trails/little-bennett-regional-park/historic-sites/. November 2, 2023.

⁴ Park Development Division, Montgomery County Department of Parks. *Facility Plan Report: Little Bennett Regional Park Day Use Area*. October, 2011. Page 20.

⁵ Montgomeryparks.org/parks-and-trails/little-bennett-regional-park/historic-sites/. November 2, 2023.

Part II: Architectural Information

A. General Statement

- a. Architectural Character: The house was built on what was the main road between Frederick, MD, and Washington, DC from the mid-18th to the mid-20th century. The original log house is a two-room plan at the back of the structure, with an attic space under a shed roof that slopes to the back. The cabin is obscured from the street view by the I-house addition, which has a 2.5 story façade and a full-width front porch, with mainly Greek Revival details, and a few Italianate and Queen Anne touches.
- b. Condition of the Fabric
 - i. The overall condition is consistent with a structure that has been out of use for some time. Exterior finishes are in good condition, but showing wear. Previous interventions were not always sensitively introduced (such as the modern bathroom and plumbing) and have overloaded the structure, so deflection in floor joists and shifting in the framing has damaged the plaster board. Roof framing has become deformed over time, leaving large valleys over the cabin attic.
 - ii. Some previous structural concerns have been addressed with shoring in the cabin first floor and basement. See engineer's report in Part II for additional structural assessment.
 - iii. Timbers used in the cabin include sapwood and bark, which have made them vulnerable to insect attack. Termite tunnels and wormholes are evident throughout the cabin as well as in the framing and flooring of the I-house. This material in particular has been severely damaged; timbers are brittle and fragile, leaving some areas open to the outside.

B. Description of Exterior:

- a. Overall Dimensions

The cabin structure is approximately 15x31' in plan; the I-house is butted up against the west wall and is 17.5x39' in plan. These dimensions do not include porches, chimneys, and other exterior attachments. The house is approximately 60' from the road. See measured drawings in Appendix A for additional dimensions.
- b. Foundations

Original foundations are constructed from irregular field stone, likely found on the property. There are currently some concrete and lumber reinforcements in the basement and first floor. See the ETC report in Part II for additional structural descriptions.
- c. Wall Construction

The cabin structure consists of timbers that are narrowed at the ends and overlapped at the corners and cross wall (traditional log cabin construction). The cabin attic framing is similar to the basement. Framing for the I-house is made up of sawn lumber, but prior to the convention of dimensional lumber (where a nominal 2x4 is actually 1.5x3.5" after they are planed and milled smooth). See the ETC report in Part II for additional structural descriptions.

d. Porches

- i. The full-width front porch is supported by Tuscan columns over parged and painted concrete piers. The piers are currently obscured by lattice which covers the crawl space under the porch floor. It is likely, but hard to tell from the exterior, that they may have originally been stone piers like the rest of the foundation.
- ii. The full-width back porch is enclosed on the north and supported by square posts on the east. The railing is likewise made of square members, including the balusters. On either side of the south stairs, the floor plate is supported by brick knee walls, while the bulk of the porch is supported by brick piers. Both porches are covered by standing seam metal roofs.



e. Chimneys

There are four brick chimneys, two each on the north and the south. The western chimneys are associated with the fireplace in room 1A, and a fireplace that was removed in 1C where the wall and baseboard show some unevenness.

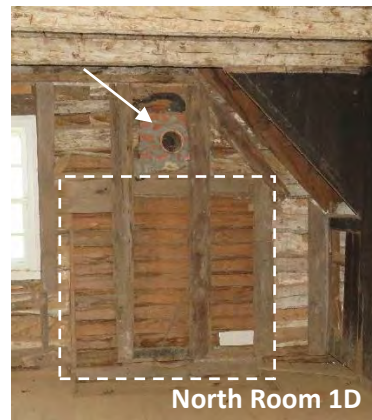
There are two chimneys on the exterior of the cabin as well. One is located on the north where a gap in the timbers suggest a fireplace, and a round pipe that suggests the previous location of a wood or coal stove. The southern chimney is outside an area with a stovepipe opening; the timbers are damaged but continuous here which suggest there was never a fireplace at this location.



North Room 1A



South Room 1C



North Room 1D



South Room 1E

f. Openings

i. Doors

The 4-panel wood front door is topped by a six-light transom and flanked by three-pane sidelights with an inset panel at the bottom.

The back door is certainly a modern replacement, with a foursquare inset window and a paneled base.

The basement door is a typical bulkhead door at the south of the cabin section, bipartite metal with padlocked handles, and a wood frame inset on a brick structure.

Front, back, and bulkhead doors



ii. Windows

I-house windows are six-over-six double hung wood sash.

Sides of cabin are smaller six-over-six (attic windows are probably a later addition), one is 2 over 2. Back of cabin is 2 over 2 in different sizes.

g. Roof

i. Shape, covering

The I-house roof is side gabled and moderately pitched, covered in asphalt shingles. The cabin shed roof is at a slightly shallower angle, attached to the back wall of the second story just under the I-house roof, and covered in the same shingles. The metal roof of the back porch is again slightly shallower, and attached to the cabin wall just under its roof line, and covered in unpainted standing seam metal.

ii. Cornice

Just below the I-house roof is a flat entablature decorated with spindled undulating brackets, which hints at Italianate influences, but the bulk of the house fits stylistically within Greek Revival. Spindle details are missing from many brackets. This detail does not continue onto the cabin section.

iii. Pediment

Facing the road, the I-house roof is broken by a moderately sloped, cross-gabled pediment. The entablature and brackets continue across the top of the pediment; the interior and sloped base are covered in fish-scale shingles, hinting at a later Queen Anne influence. It is possible that these decorative features were later improvements.



C. Description of the Interior:

a. Floor Plans (see Appendix A for drawings)

- i. Basement: Accessed from the bulkhead entrance, the full-height basement is only under the south end of the cabin section, which houses the bulk of the mechanical equipment. There appears to be a crawlspace under the northern cabin, but it is inaccessible. The crawlspace under the I-house can be accessed through an opening in the stone wall between the two house sections. See Appendix B for more information on basement structure.
- ii. First Floor: The cabin has one cross wall, which splits it into two roughly equal sized square rooms. Each room had a staircase to the second floor in the northeast corner; the south room stair has been removed and the northern stair is blocked.

The I-house section has two almost square rooms at the north and south, split by a center entrance hall and staircase. The north room (1A on the plans in Appendix A) has a painted brick fireplace on the north wall, which is surrounded by built-in shelving.

- iii. Second Floor: The second floor plan generally follows the first floor plan with few exceptions. The attic of the cabin is accessed from a landing at the back wall of the I-house staircase. It has been divided into two square spaces as well. Access to the stair in 2B has been obscured by finishes. In 2A, the rail and descent is still accessible.

The I-house second floor is split from the cabin, a few stairs up from the landing. The southern room is finished as a bedroom, with a closet in the northeast corner. The northern side of the hall is divided into a small front room with a small closet in the southeast corner, and a bathroom with a shower.

- iv. Attic: The I-house attic is unfinished and undivided, and primarily includes insulation and air handling ducts.

b. Stairways

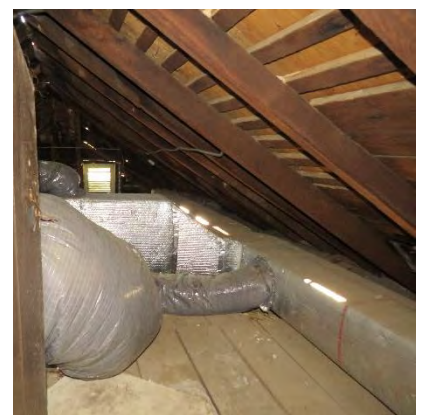
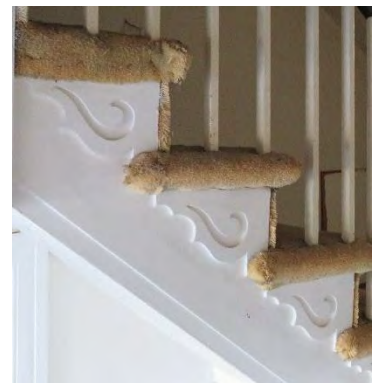
One stairway in the cabin has been removed and is reinforced with shoring, but ghost marks on the wall suggests it was roughly in the same configuration as the one in the north room. Most of the stairs from the attic run along the north wall, turning at a kite winder in the northeast corner, and descending the remaining steps along the east to the floor. The door at the base of the winder is mechanically shut, but stairs are still accessible from upstairs. Stylistically, it is hard to tell if there are original or Zeigler-contemporary elements here, but wear on the stair treads imply that at least some of them are of the period of interpretation.

The central stair in the I-house opens several feet from the front door, stops at a full landing to access the cabin attic from the west, then continues up four stairs on the north to reach the second floor of the I-house level with the second floor hall. To reach the attic, the stairs continue on the south hall wall to a second full landing, and then four more stairs to the I-house attic.

- c. Flooring: Most of the flooring is tongue and groove wood flooring, in various sizes and finishes. Some rooms are carpeted. Inventory is as follows, referencing room numbers in the drawings in Appendix A:
- i. Cabin section (all flooring is laid north-south):
 - Basement: The floor is partially covered in gravel, but soil from the west crawlspace is encroaching on that side.
 - 1D and E: planked, not T&G, between 7 and 10 inches wide, unfinished
 - 2A: 2.5-inch wood floor, clear coat, possibly stained, subfloor matches first floor
 - 2B: carpeted, but presumed to have same floor as 2A underneath
 - ii. I-house section:
 - 1A: 2.25-inch wood floor, east-west
 - 1B: random-width wood floor, east-west, painted
 - 1C: 3.25-inch wood floor, east-west
 - 3A: carpet
 - 3B: random-width wood floor, north-south, painted
 - 3C: 7-inch wood floorboards, north-south, clear coat, possibly stained, showing insect damage in the southeast corner primarily, but in isolated areas throughout
 - 3E: linoleum adhesive tile, 1 ft squares
 - Attic: Subfloor only
 - Stairs: I-house stairs are finished with the same paint as the hall; the last few stairs to the upper attic are carpeted.
- d. Wall and Ceiling Finish
- i. The cabin interior finish consists of timbers, between 8 and 10 inches in diameter, planed on the interior and exterior, but still round at the tops and bottoms. Gaps between the timbers are filled with stone and chinked with a very traditional mixture of lime and red clay (see Part III and Appendix 3 for additional information on the chinking.).
 - ii. Most of the I-house is currently finished in plaster board, which has replaced or covered plaster on lath.
- e. Openings
- i. Doors
 - The openings in the I-house first floor are framed with casing, but do not have doors. The openings between the cabin and I-house are framed, but are in varying conditions. One door is cased and square with a door still attached. Another has remnants of framing and signs of the load not being carried adequately at the top. The others are somewhere in between. The engineer's report in Part II addresses this in detail. One of the doors is of a rustic construction, but it is unclear if this is original to the cabin or salvaged. There appear to be additional openings to the exterior on the east cabin wall that have been covered with wood siding on the exterior. Upstairs openings have primarily 4-panel wood doors. The door between

the cabin attic spaces is more of a farmhouse construction with vertical boards held together by crosspieces. The door to the I-house attic is similar.

- ii. Windows: There are no additional windows between interior spaces.
- f. Decorative Features
 - i. Door and window casing: Throughout the I-house, doors and windows (including the aprons) are cased with wide flat molding with a center trench approximately 1/2 inch wide. The casing upstairs is mitered and the top corners, and side pieces butt against the sill or floor. On the first level, all casing has corner blocks at the top and plinths at the sill/floor.
 - ii. Crown and base molding: Downstairs, the baseboard is topped with a transitional molding piece that echoes the structure of the door plinths, and shoe molding at the bottom edge. Upstairs, all base molding is flat, and varies in height. There is some crown molding downstairs, but it is unclear whether some of it is salvaged from the Zeigler occupation.
 - iii. Stairs: The front hall staircase is highlighted by stair brackets with s-shaped cutouts and scalloped edges.
- g. Mechanical Equipment
 - i. Heating: A combination of hot water and electric radiators are found in the I-house. Currently, there is no climate control in the cabin.
 - ii. Electrical: There are working light fixtures in the front hall on multiple floors. An alarm is functional in the house, but may not be sounding remotely. Electric baseboards are still installed on the I-house second floor, but it is unknown if they work.
 - iii. Plumbing: Hot water pipes and boiler are still extant, but the water supply is not functional. Toilet and sink are nonfunctional.



D. Description of the Site:

- a. General Setting: The area immediately around the house slopes to the south, which should figure into the park's drainage plans for the house and the barns to manage storm water at the foundations.
- b. Landscaping, Enclosures: The house sits near the southwest edge of a cleared field, which is fenced on the eastern side. There is access to a second field to the northeast. The combined area of fields are edged on all sides by a row of trees (at the road) or wooded natural landscape, preserving the view of the property from outside the park.
- c. Outbuildings: Two large rectangular barns to the north and south of the house. (These structures are not covered in detail for this report.).





ENGINEER'S REPORT

Engineering and Technical Consultants, Inc.
7165 Columbia Gateway Drive, Suite B; Columbia, Maryland 21046
t410.312.4761 f410.312.0482

November 10, 2023

Worcester Eisenbrandt, Inc.
2100 Gable Avenue
Baltimore MD 21230

ATTENTION: Ms. Amy Hollis, Conservator/Project Manager

SUBJECT: Report for Professional Engineering and Consulting Services
Structural Evaluation
Zeigler Log House
25321 Frederick Road
Clarksburg, Maryland 20871
ETC Project: M3-4977

Dear Ms. Hollis:

Engineering and Technical Consultants, Inc. (ETC) respectfully submits this report of our professional engineering services for the above referenced project. Our services were performed in accordance with our written proposal (PM3-8675) dated September 20, 2023. This report includes a summary of our scope of services, and, for each of the components inspected, discussions of our findings, comments, and recommendations. In addition, we have provided photographs to help describe and document certain items discussed in this report.

SCOPE OF SERVICES

Our findings are based on visual inspections of the property conducted by representatives of our staff on October 23 and 25, 2023. Our scope of services included the items listed below.

- We reviewed the Survey Drawings dated August 2, 2023 and prepared by Worcester Eisenbrandt, Inc.
- We performed a visual survey of the physically and visually accessible interior and exterior (from ground level) to observe the exposed structural building components.
- We directed your staff to remove portions of the interior finishes in several locations to expose the concealed conditions (e.g., wall/roof framing) for inspection.

Our services were confined to visual inspections of the structural components only and limited intrusive sampling. Consequently, some opinions expressed in this report are based on assumptions regarding such matters as concealed details, condition of internal components, etc. Additionally, this report contains general descriptions of the building structure, evaluation, and recommendations of the conditions observed by ETC. It should be in no way inferred that every aspect of the building has been reviewed.

Professional Relationships That Endure...Over 40 Years!

Water Intrusion ♦ Roofing ♦ Structural ♦ Architectural ♦ Pavement ♦ Warranty/Reserve Studies ♦ Mechanical

FINDINGS AND COMMENTS

We understand the residence consists of the original log house structure which was constructed in 1823 by the Zeigler family. An additional structure was added to the front of (and over) the original log house sometime after 1854. Please refer to attached Photographs 1 and 2 for typical exterior views of the building. This part of the report is divided into four (4) sections: Crawlspace Observations, Log House Interior Observations, Addition Interior Observations, and Roof Framing Observations.

Crawlspace Observations

We were able to access the areas below Room 1E of the original log house, as well as the majority of the areas beneath Rooms 1A, 1B, and 1C of the addition. We were not able to access the area beneath Room 1D of the original log house (no access), as well as the most northern portion of Room 1A and the most southern portion of 1C (limited crawlspace height).

1. The first floor framing supporting the original log house structure consists of logs ranging in diameter between eight (8) inches and twelve (12) inches. The logs, which were cut in half with the horizontal surface facing upward, span from front-to-back (east-to-west) and bear on the building foundation walls. In general, the logs were in poor condition as they exhibited signs of termite damage and were soft when probed (see Photographs 3 and 4).

Apparent supplemental framing was recently added to support the original logs. Wood 4x4s were installed horizontally beneath (and parallel to) each log and bear on a network of double-2x12 beams, 4x4 posts, and 18-inch diameter footings (see Photograph 5). Additionally, wood 2x8s were installed between (and parallel to) the logs which also bear on the aforementioned double-2x12 beams (also see Photograph 5). The supplemental framing appears to be in good condition.

2. The foundation beneath the footprint of the original log house consisted of a stacked stone wall along the west end (see Photograph 6), and what appeared to be newer concrete walls (or parged masonry/stone walls) along the north, east, and south ends. The foundation walls generally appeared to be in good condition.
3. The first floor framing supporting Room 1C of the addition consists of logs similar to the logs supporting the log house (see Photograph 7) which span from front-to-back. The logs were in fair condition exhibiting many checks, but were harder than the logs beneath the log house when probed.

The first floor framing supporting Rooms 1A and 1B consisted of 4x6 timbers (see Photograph 8) spanning from side-to-side (north-to-south). The timbers were in fair condition also exhibiting many checks and splits.

4. The foundation beneath the footprint of the addition consisted of stacked stone walls along the perimeter, as well as three (3) stacked stone piers within the footprint of the crawlspace. The majority of the walls were not able to be inspected due to limited crawlspace heights. However, the stone piers were inspected and found to be in poor condition and deteriorated (see Photograph 9). The poor condition of the stone piers appears to have resulted in vertical displacement of the timber floor joists supporting Rooms 1A and 1B of the addition.

Log House Interior Observations

The following discussion includes observations made within the interior of Rooms 1D and 1E located on the first floor of the log house structure.

1. The log house walls consist of logs oriented horizontally and stacked vertically, with stone infill (see Photograph 10). The logs along the exterior walls were in poor condition and the logs along the interior walls were in fair condition. The logs along the base of all of the walls exhibited the most severe signs of termite damage and in many instances had dislodged from the walls (see Photographs 10 and 11).
2. The rough openings for many of the doorways were not level or square (see Photograph 12). It appears that the logs above the doors are not adequately transferring loads around the rough openings.
3. Deteriorated wood wall/floor framing was observed at the north exterior wall of Room 1D (see Photograph 13). Daylight was visible at this location.
4. A large bow existed in the floor in Room 1D (see Photograph 14). The area below this floor was inaccessible for inspection of the framing.
5. The joists supporting the 2nd floor above consisted of 4x6 timbers spanning front-to-back and bearing on the log walls (see Photograph 15). The joists had generally deflected at midspan indicating the members could be overloaded. Additionally, the joists appear to slope towards the rear exterior wall which could be related to observed deterioration of the wall (i.e., the wall supporting the joists has deteriorated causing the joists to drop).
6. In Room 1E, temporary wood shoring had been installed (see Photograph 16).

Addition Interior Observations

The following discussion includes observations made within the interiors of Rooms 1A-1C, as well as all of the upper level rooms. Please note that the vast majority of structural elements in these rooms were concealed behind interior finishes. This discussion excludes comments on the roof framing.

1. The interior wall/ceiling finishes were in poor condition throughout the rooms exhibiting many cracks (see Photograph 17). Portions of the interior finishes were removed as part of our inspections, and no major structural deficiencies were observed at the sample locations.
2. The floor joists supporting the upper levels were inconsistently sized with the widths ranging from four (4) inches wide to as narrow as one (1) inch wide (see Photograph 18). The majority of the joists observed in Room 1A (no ceiling installed) deflected at midspan indicating that the members could be overloaded.
3. In one of our sample locations, the floor joists were notched at the bearing end (see Photograph 19) which reduces the capacity of the member.
4. The floor in Rooms 1A and 3A featured the most significant deflection/sagging.

Roof Framing Observations

The following discussion includes observations from the exterior of the structure, from the interior of the attic, and from intrusive sampling locations in Room 2B.

1. From ground level of the building exterior, we noted several large depressions in the main roof (see Photograph 20) over Rooms 2A and 2B.
2. Portions of the ceiling were removed in Room 2B to allow for inspection of the concealed conditions (see Photograph 21). The roof structure appears to consist of plywood sheathing (likely not original) supported primarily by four (4) inch deep rafters which span front-to-back between load-bearing walls.
3. The wood framing in the sampled areas was in very poor condition with evidence of long-term water damage and termite damage present (see Photograph 22). In one location, we observed daylight through the roof sheathing (see Photograph 23).
4. A wood beam exists at approximately mid-span of the rafters and spans side-to-side, but it is unclear to what extent the beam is supporting the rafters since the rafters are supported at both ends. However, the connection between the wood beam and rafter at the south end of the beam had failed (see Photograph 24).
5. Within the attic space (over the addition), the framing was exposed and generally in fair condition, with localized areas in poor condition and requiring remediation (see Photograph 25).

RECOMMENDATIONS

Based on our findings, as well as our past experience with similar buildings, we recommend that the following corrective actions be taken. The list below includes recommendations for remedial work focused on reducing the continued loss of the structure.

1. The entire structure (both original log house and addition) should be inspected by a qualified professional and treated for termites (and/or other insects). This would likely include removal of all (or most) of the interior wall and ceiling finishes. This would also likely include removal and replacement of most of the exterior wood cladding around the log house to allow for inspection of the concealed sides of the log walls.
2. The original framing (e.g., logs and timbers) located within the crawlspace below Rooms 1A-1C should be supplemented with new framing. This work would entail installing a framework of new joists (parallel to existing), beams, posts, and footings. The deteriorated stacked stone piers should be rebuilt using salvaged stones and new mortar/grout.
3. The recently installed supplemental framing within the crawlspace below Room 1E should be periodically monitored and repaired as needed.
4. The crawlspace (if present) below Room 1D should be accessed (e.g., hole cut through floor) to allow for inspection of the framing and determination of the cause(s) of the large bow in the flooring.

5. Consideration should be given to limiting the effects of moist/humid air within the crawlspace by installing a continuous vapor barrier over the exposed dirt, as well as installing vents throughout the perimeter foundation walls to promote ventilation.
6. Deteriorated portions of the log walls in the log house should be replaced, in kind if possible. The voids between the logs should be filled solid with new chinking material to increase the rigidity of the walls.
7. The deteriorated wall/floor framing observed at the north exterior wall of Room 1D should be repaired.
8. Access to the upper levels (except for periodic inspections/repairs) should be restricted.
9. Localized repairs should be performed to the roof framing within the attic space.
10. The entire roof structure above Rooms 2A and 2B should be removed and replaced in it's entirety, including replacement of the roof framing.

In addition to the items listed above, the list below includes recommendations for remedial work focused on making the structure habitable.

1. To allow access to the upper level rooms, the floor framing supporting the 2nd level floors should be supplemented with sistered joists and/or installing intermediate beams to reduce the spans. Additionally, all notched joists should be strengthened (e.g., with steel plates).
2. The floor framing should be repaired so that the temporary shoring in Room 1E can be removed.
3. In rooms with excessive sagging (e.g., Rooms 1A and 3A), consideration should be given to installing a floor leveling overlay material to limit trip hazards.
4. The rough openings of the doorways in the log house should be widened, and new solid frames should be installed. The frames should be capable of transferring loads around the rough openings. As an example, pre-fabricated metal frames could be installed.

CLOSING COMMENTS

Although our evaluation was confined to visual examination of exposed surfaces of the building and limited intrusive sampling, we believe it was sufficient for us to form a reasonable judgment of the existing general conditions. In addition, our findings regarding specific defects do not include locations of all similar conditions throughout the property. We have performed our services using that degree of skill and care ordinarily exercised under similar conditions by reputable members of our profession practicing in the same or similar locality. No other warranty, expressed or implied, is made or intended.

Due to the general nature of our scope of services, no responsibility can be assumed for latent defects that may appear in the future, for items that were not examined, or for differing opinions of others. In addition, we cannot warrant or guarantee the structure or its components. This report is not intended to be used to obtain bids, estimates, or pricing of any kind from contractors for needed repairs.

We appreciate this opportunity to be of service. If any questions arise regarding the information in this report, please feel free to contact us.

Very truly yours,

ENGINEERING AND TECHNICAL
CONSULTANTS, INC.



Luke C. Valentine, P.E.
Senior Registered Engineer

ATTACHMENTS: Photographs (13 pages, 25 photographs)



Photograph 1 – View of front and side building elevation.



Photograph 2 – View of rear and side building elevation.



Photograph 3 – Typical original log house first floor framing (logs).



Photograph 4 – Typical poor condition of original log house first floor framing (logs).



Photograph 5 – Typical supplemental framing beneath original log house.



Photograph 6 – Typical stacked stone foundation wall.



Photograph 7 – Typical log supporting first floor of Room 1C of addition.



Photograph 8 – Typical timbers supporting first floor of Rooms 1A and 1B of addition.



Photograph 9 – Typical deteriorated stone pier below addition.



Photograph 10 – Typical view of log walls within log house interior.



Photograph 11 – Typical poor condition of log walls within log house interior.



Photograph 12 – Typical rough openings are not square.



Photograph 13 – Deteriorated wood wall/floor framing at north end of Room 1D.



Photograph 14 – Large bow in floor in Room 1D.



Photograph 15 – Typical timbers supporting 2nd floor above log house.



Photograph 16 – Temporary shoring installed in Room 1E.



Photograph 17 – Typical cracks in interior wall/ceiling finishes.



Photograph 18 - The floor joists supporting the upper levels were inconsistently sized with the widths ranging from four (4) inches wide to as narrow as one (1) inch wide.



Photograph 19 – Typical notched floor joist.



Photograph 20 – Typical sag in roof.



Photograph 21 – Intrusive sample locations in Room 2A.



Photograph 22 – Typical severely deteriorated wood roof framing.



Photograph 23 – Typical severely deteriorated wood roof framing and daylight present.



Photograph 24 – Failed connection between rafter and intermediate beam.



Photograph 25 – Typical severely deteriorated wood roof framing observed in attic space.



RECOMMENDATIONS

Phases of Work

Our recommendations are broken into three main phases. The goal of Phase I is to preserve the historic fabric in the house and prevent any further loss. Phase II consists of treatments that should be undertaken to treat or repair historic fabric sensitively, so that the building is ready for interpretation and/or adaptive reuse. The inescapable truth of preservation is that to survive and receive maintenance, a building must be regularly occupied. So for Phase III we have made a list of potential uses for the building, all with pros and cons. However, the decision for adaptive reuse needs to be made by Montgomery County Parks. Pricing for options that require design or are currently undefined are not priced in this report.

Construction Professionals

We have occasionally made specific recommendations for architects, engineers, and contractors to be involved. When engaging the services of any of these construction professionals, please make sure they have significant experience working sensitively with historic properties, and possibly vernacular houses and timber framing.

Design development and issuing construction documents are typically 5% of construction costs.

Construction management (inspections, meetings, punch lists, supervision of work, providing repair details during construction, approving pay applications) is typically 15% of construction costs.

Careful Demolition and Possible Replacement

There are many recommendations for removal of materials from the building. As a general rule, materials that are original to the building or contemporary with the Zeigler occupation should be salvaged and reinstalled in their original configuration as much as possible. Exceptions would be anything that is so damaged that it can no longer support itself, even in a decorative capacity, or if it is subject to rot and risks damage to other materials in the house. In that case, if it will be hidden from view, like framing or subfloor, it can be replaced with a modern substitute (but to keep planes consistent, studs and joists would have to be cut down from a larger board). Materials that are part of repairs or renovations during the park's ownership can be replaced in kind, or with a modern facsimile (e.g., the mid-century plaster board can be replaced with drywall).

The Importance of Documentation

Before work starts, however, the best thing that MNCPPC can do in the short term is to start regular documentation of the structure, including overall views of each side of the house, and each wall of every room/space of the interior that can be safely accessed. We have provided our photo documentation digitally, in addition to this report, as a start. But regular photography can be an excellent and inexpensive way to document and track seasonal or yearly trends, and provide a way to look back to find sources of damage that were easy to miss when they were small. It is also a good way to get eyes on the building a couple times per year, especially until it can be occupied.

PHASE I: PRESERVE HISTORIC FABRIC

Envelope Integrity

Envelope integrity can be boiled down into two purposes: keep water out and keep animals and insects out. These are the two main enemies of unoccupied historic properties, because they can be invisible during short visits and occasional inspections. While they do eventually leave behind evidence of their presence, damage can proceed unnoticed for quite some time and get identified only when the problem is significant and expensive to repair.

Roof and Gutters

A new roof is the highest priority construction project. Shingles are worn and there is significant displacement in the rafters on the back of the house. Several rafters require replacement, and while they are uncovered we would recommend having an engineer look at the roof framing to advise on the structure in the attic spaces. As noted in the ETC report, the cabin attic framing portion is almost certainly in need of full replacement.

As part of the roofing project, the roof drainage should be evaluated. While the gutters appear to be large enough, the downspouts tend to terminate very close to the foundation, including on the uphill side. Ideally, the water should be directed beyond the porches on the north side, so the water doesn't drain into the crawlspace or the basement. This can be achieved with matching downspout sections along the ground, or corrugated pipe added to the bottom. Splash blocks on the downhill side can ensure the water is directed away from the foundation. A dry foundation and basement help make the environment less favorable for subterranean insects and rot as well.

\$15,000-50,000

Walls and Siding

It is extremely important that gaps in the walls prevent animals from entering the building. The south wall of the cabin currently seems to be the main point of entry, partly because of the deterioration of the now-interior timbers. Some type of barrier should be installed here, preferably without fastening to the timbers themselves, which are fragile in this location. Once the interior timber restoration is complete and the space is fully enclosed, these repairs can be removed.

\$5,000 for temporary seals

Insect Abatement

Several insect baits were observed around the perimeter of the building, indicating that there is an ongoing contract for termite abatement, and this is excellent. It is also important, if not already arranged, to have the baits inspected multiple times per year to monitor any activity and refill. The second main sources of damage to the wood in the building is from termites and other insects. Unfortunately, most wood damaging insects, like termites or powder post beetles, won't be active until the spring, so the level of activity in the building was difficult to ascertain, but we did not see any current activity at the surface. However, we highly recommend a spring inspection to look for additional damage, or evidence of activity, like frass on the surface of the wood or in a row along the floor under the joists.

Chimneys

The four chimneys should be inspected for soundness, especially since some of the bricks at the top have become dislodged. Those bricks should be reset, and the entire assemblies repointed with mortar that is sympathetic to the bricks in the structure. They appear to be manufactured brick, rather than handmade, so it should be safe to use a Type N mortar (1 part lime, 1 part Portland cement Type I, and 3 parts washed masonry sand). It may be tempting to seal up the chimneys to keep weather out, but it would be better to cap them in a building of this age. Sealing chimneys in a building that was meant to breathe can start new unintended moisture problems. \$6,500-8,500

Structural Integrity

For this section, we are following the recommendations in Part II of this report, outlined by ETC on pages 4 and 5:

1. Additional cost of examining the insect damage under the wood siding.
 - \$20,000 to remove the siding
 - \$20,000 to investigate and report
 - \$25,000 to replace siding (includes new material)
2. Basement/crawlspace shoring and framing. \$100,000 - \$150,000¹
3. Northeast crawlspace access and inspection. \$10,000
4. Vapor barrier and ventilation. \$15,000
5. Log wall repair (addressed in Phase II).
6. North wall framing. \$10,000
7. Restrict access to attic spaces.
8. Roof framing in I-house attic (addressed above in “Roof and Gutters”).
9. Replace roof framing in cabin attic (addressed above in “Roof and Gutters”).
10. Reinforce cabin openings \$30,000

Selective Demolition

High Priority

Carpet: All carpet should be removed. It can hold moisture and odors, and can become moldy. It can also obscure critically damaged surfaces. Extreme caution – and proper PPE – should be used while removing the carpet; there are animal droppings evident throughout the house. \$3500

Mechanical: Remove any unused/nonfunctional pipes, wiring, fuel tanks, and mechanical appliances and related fasteners on the interior or exterior of the building. Specifically because limiting the amount of water in historic buildings is always a priority, we recommend removing the boiler and associated radiator pipes. The radiators themselves can

¹ The crawlspace under the north half of the cabin was inaccessible, which would necessitate lifting up part of the floor to access the framing below. Doing this sensitively enough to be able to reuse the boards is difficult and slow.

stay in the house to add to the historic appearance, but there are currently more efficient and less intrusive ways to heat the interior.

The structural integrity of the joists have been compromised, both by the weight imposed on them and the locations of the plumbing and electrical penetrations. Unfortunately, many of the pipes installed for the bathroom fixtures have drilled through the top and bottom thirds of the joists. While it may seem counter-intuitive, the best place to drill through is the middle third. All the tension and compression are absorbed by the top and bottom thirds (the reason an I-beam has most of the material at the top and bottom). \$8500

Finishes: High priority finishes to remove include all ceiling and wall finishes in 2B, as well as ceiling finishes in 2A, to facilitate roof stabilization and reinforcement. \$2500

Medium Priority

Finishes: Damaged finishes throughout the house that are not historic should be removed. These include plaster board that has cracked or fallen apart because of structural issues, anything that is growing mold, or anything that has been critically damaged by fire or insects. \$3000

Low Priority

Broadly, anything not contemporary with the Zeigler family occupation can be removed. These items include the bookcases on the first floor, and other closets and cabinets added since the 60s. Things that are sound or undamaged can wait until Phases II or III.

PHASE II: REPAIR HISTORIC FABRIC

Cabin Timbers

Any remaining wood can be treated with borates to repel insects. This treatment can slightly change the surface appearance, but if the timbers are to be left exposed and unpainted, it should not cause any adverse conditions. One application should be effective for 20-30 years. \$1250-1750 interior

Some of the timbers may need to be replaced due to extensive damage. It is possible to use consolidants for wood that is porous, but timbers that are almost hollow from insect occupation are extremely difficult to save. There are two different philosophies of replacing historically important material. One is to use exactly the same materials and processes to seamlessly fill in the gaps. In that case, we recommend stamping or otherwise permanently identifying these timbers on a hidden surface so that they can be identified if documentation is unavailable. The second approach is to make it completely obvious what is original and what is replacement by using a material that is obviously not original, but will not cause damage to the existing fabric. For example, another species of wood that is naturally easily distinguishable, possibly stained or painted another color, or even as different as a polyurethane foam “mannequin” timber. As long as the substitute material can withstand the forces placed on it, and not place extra stress on the remaining materials.

To reproduce the existing chinking material, a significant amount of the open space should be first be filled with field stone like the other areas. WEI recommends a mixture of 10% mason's lime, 90% red clay soil from the Zeigler property to replicate the existing chinking (by weight). With the amount of fine clay in the mix, the lime isn't truly able to be a hardened binder like it would in a mortar. But it can make the clay product smoother and easier to apply, longer lasting in the wall, and more resistant to insect attack because of the high pH. The original mixture includes animal hair as reinforcement. Commonly, this was horse or cattle hair; now goat hair is more commercially available but quite expensive. We would suggest some type of fiber to prolong the life of the material. If there is a desire to distinguish original from repair, nylon fibers are now commonly used in concrete, and would be a suitable alternative that would be unobtrusive to the casual observer. \$30,000

Flooring, Framing

To make the structure habitable, some reinforcement of the second floor will be necessary, including replacing some of the deflected joists under the bathroom. Wood is fairly flexible in one direction, but forcing it back to its original position tends to break the wood fibers, making it unsuitable for structural support. \$25,000

Other additional framing in the cabin ceiling will be required to remove the shoring in room 1E at the location of the previous staircase. \$7500

While they are exposed, any framing members and subfloor boards to be re-covered should be treated with borates to repel insects. Any flooring that won't get painted, stained, or clear-coated would be a candidate for this treatment as well. \$1500/1000 SF

The noticeable termite damage in the flooring upstairs is fairly cosmetic in nature, and as long as the activity is stopped, there shouldn't be reason to replace it. The existing tunnels can be patched with wood putty. \$2,500

Climate Control

Before finalizing plans for climate control, it may be helpful to determine what the ultimate purpose of the building will be. Some systems can be highly intrusive, and it would be best to be surgical about the installation.

We would suggest to convert to electric heat as much as possible, potentially using ceramic wall radiators that don't take up very much room. The unused chimneys can be repurposed as chases or intakes to avoid cutting through the walls and ceilings for duct work. Many historic properties have used small-duct high-velocity HVAC systems that fit within the house's framing and reduces the need for large wall/floor openings and bulky sheet metal ductwork.

Bathroom

While it is possible to keep the bathroom where it is, it will take a significant amount of framing to strengthen the floor enough to make the second floor strong enough to carry the load of bathroom fixtures and the live loads associated (water, traffic, plumbing, etc.). It may be easier to provide a powder room on the back porch, which will be more accessible, and can be climate controlled from the cabin side. The existing opening in the timber wall can be repurposed for an interior access door. We would recommend a tankless water heater for the sink to limit water storage within the building.

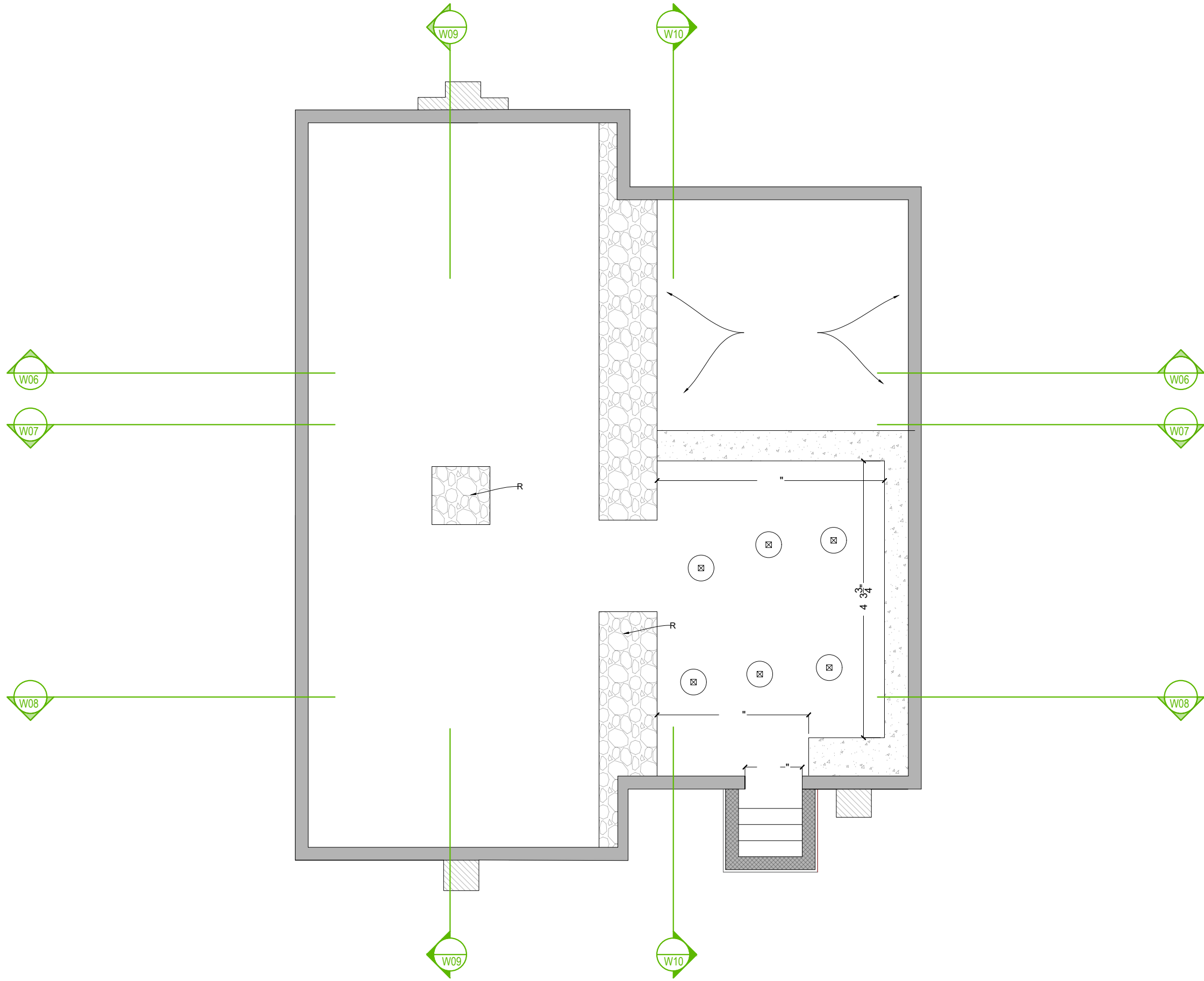
PHASE III: ADAPTIVE REUSE

Potential Uses for the Building

Offices

Temporary Residential

Informational/Interpretation

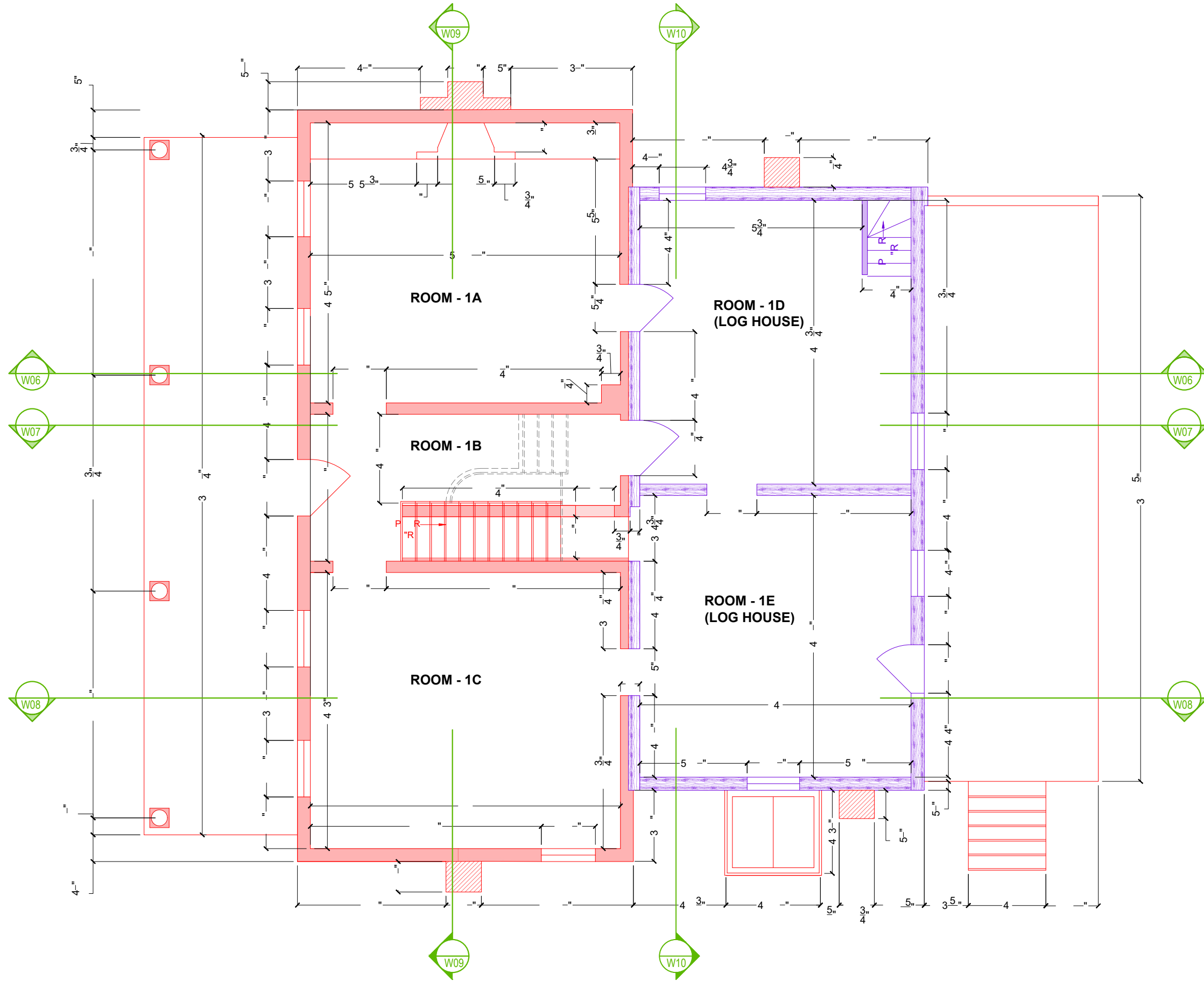


JOB #	1813	DATE:	08/02/23
REV	△	REV	△
REV	△	REV	△
DESIGNED BY:	RTC		

OWNER:	MARYLAND NATIONAL CAPITAL PARK
PROJECT:	25321 FREDERICK ROAD
DESCRIPTION:	ZEIGLER HOUSE SURVEY - DRAWINGS

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W01



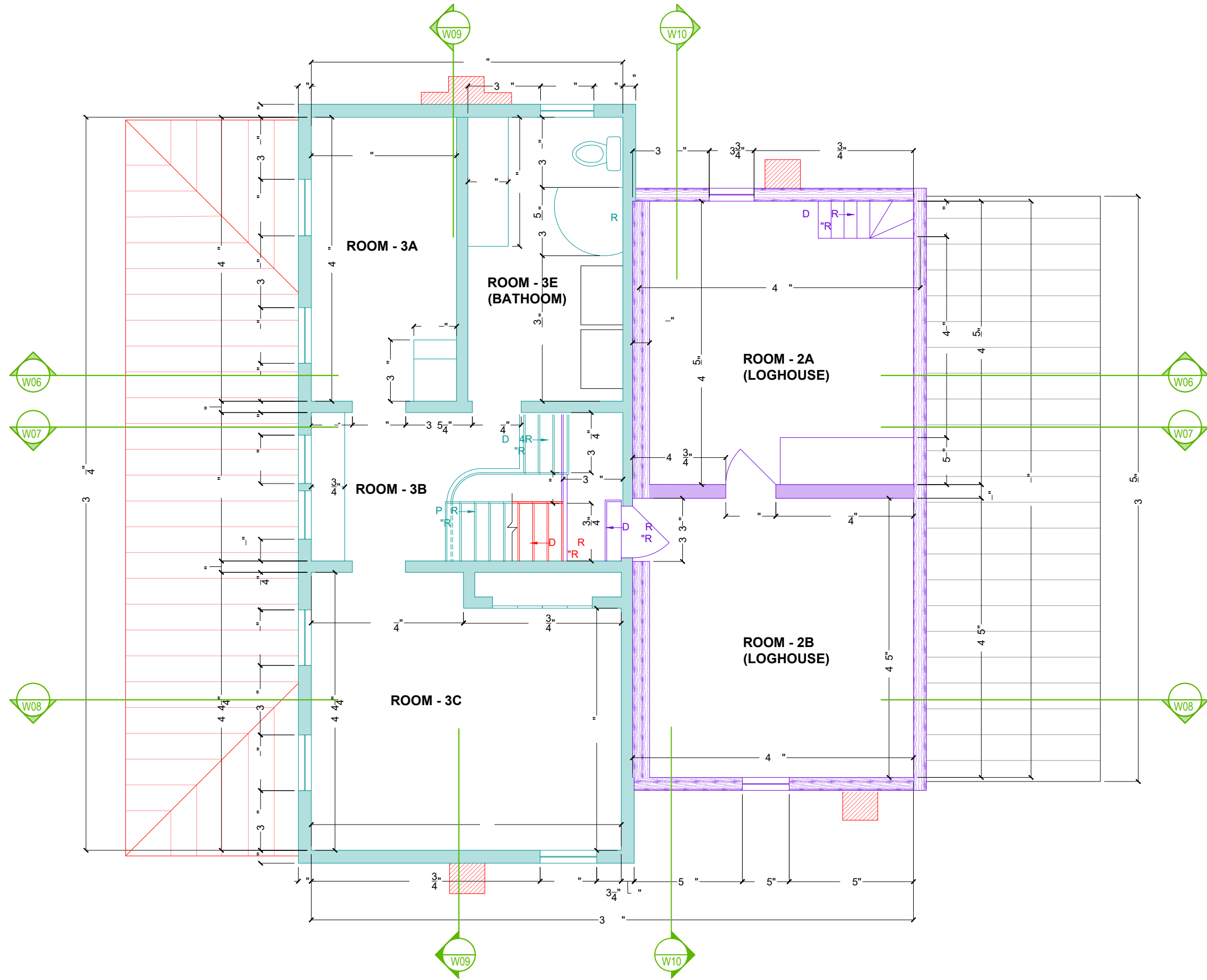
ZEIGLER HOUSE - FIRST FLOOR PLAN
SCALE: 3/16" = 1'-0"

JOB #	1813	DATE:	08/02/23
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REV	Δ	REV	Δ
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W02

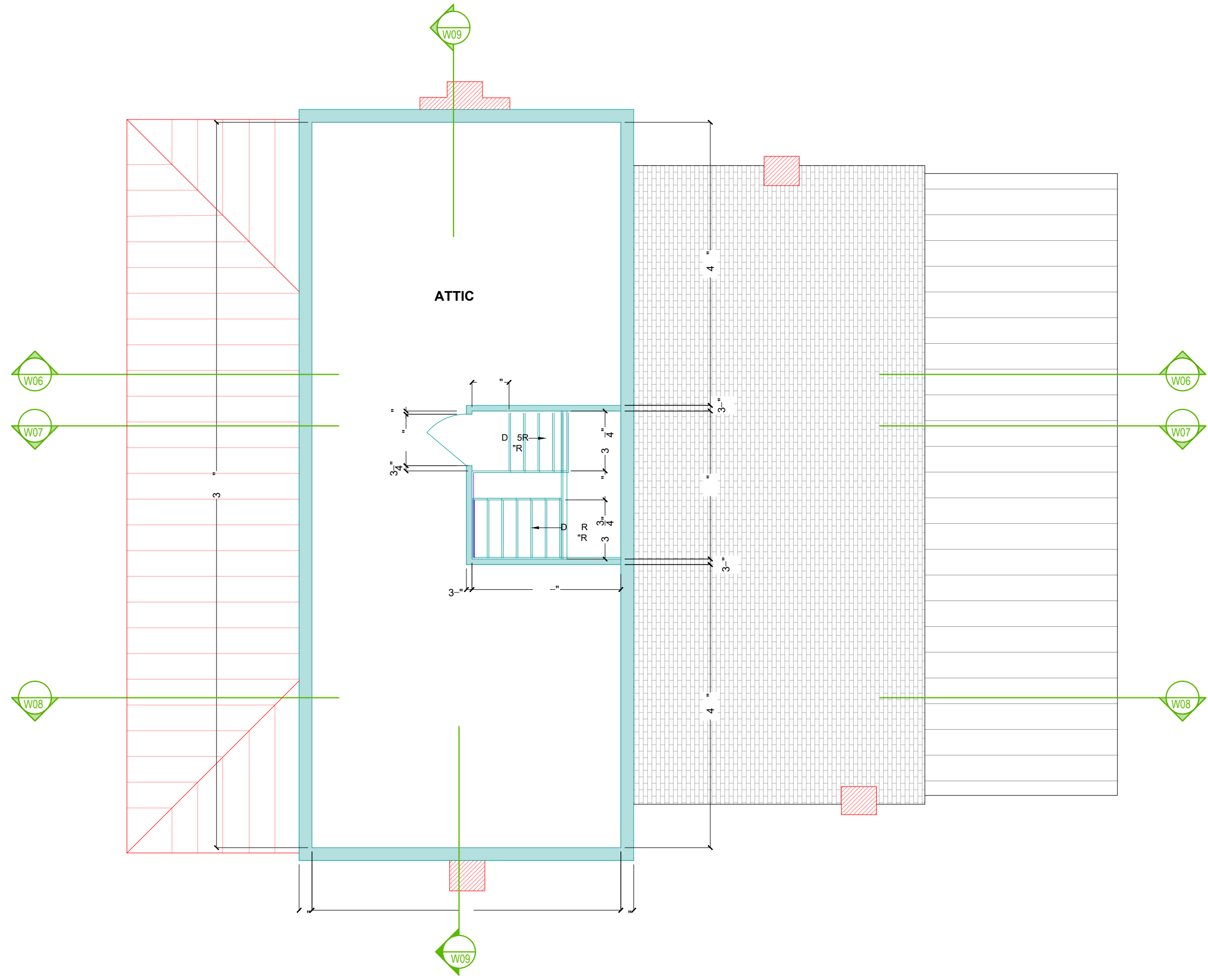


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W03

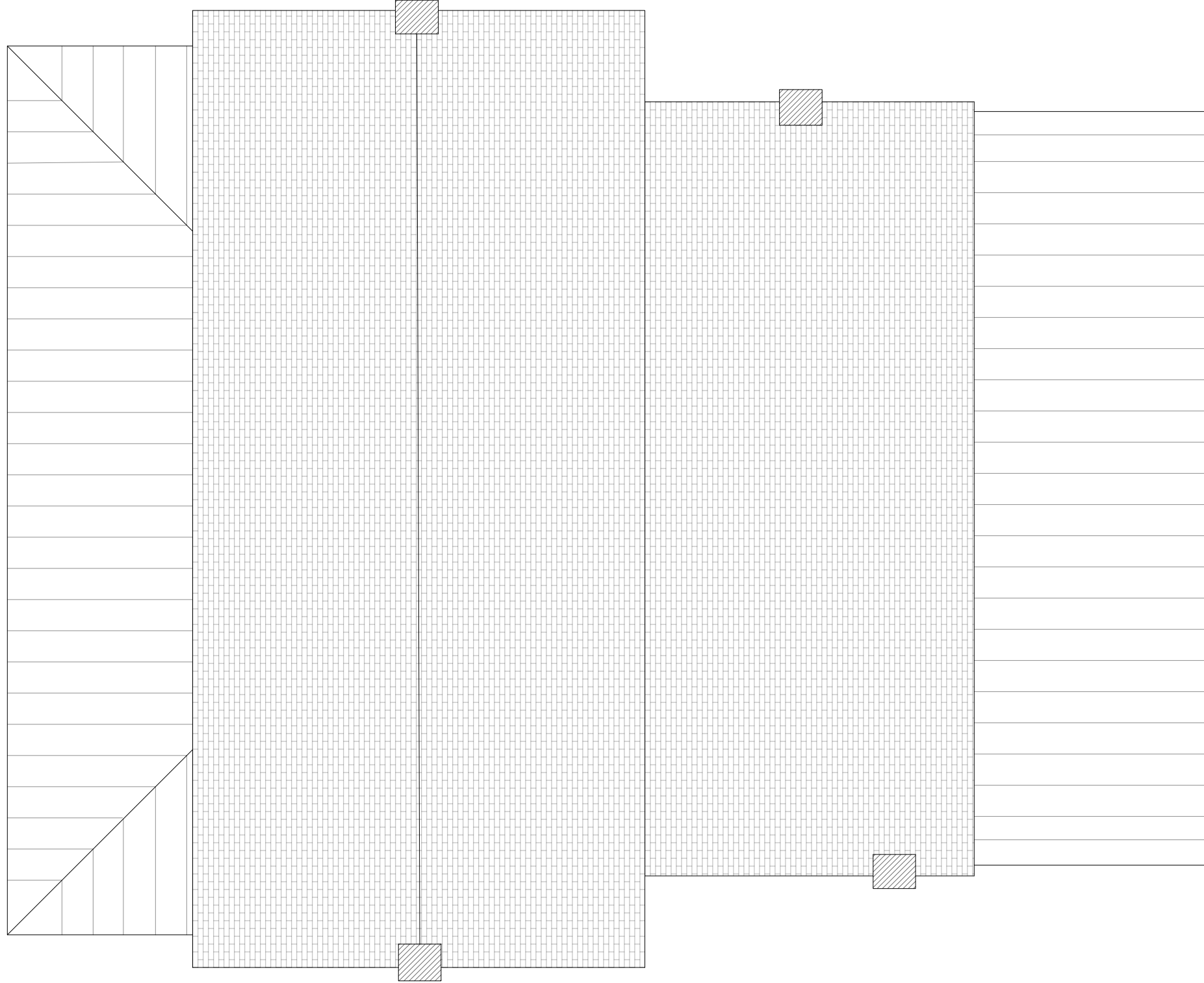


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REV	△	REV	△
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W04



5 ZEIGLER HOUSE - ATTIC FLOOR PLAN
SCALE: 3/16" = 1'-0"

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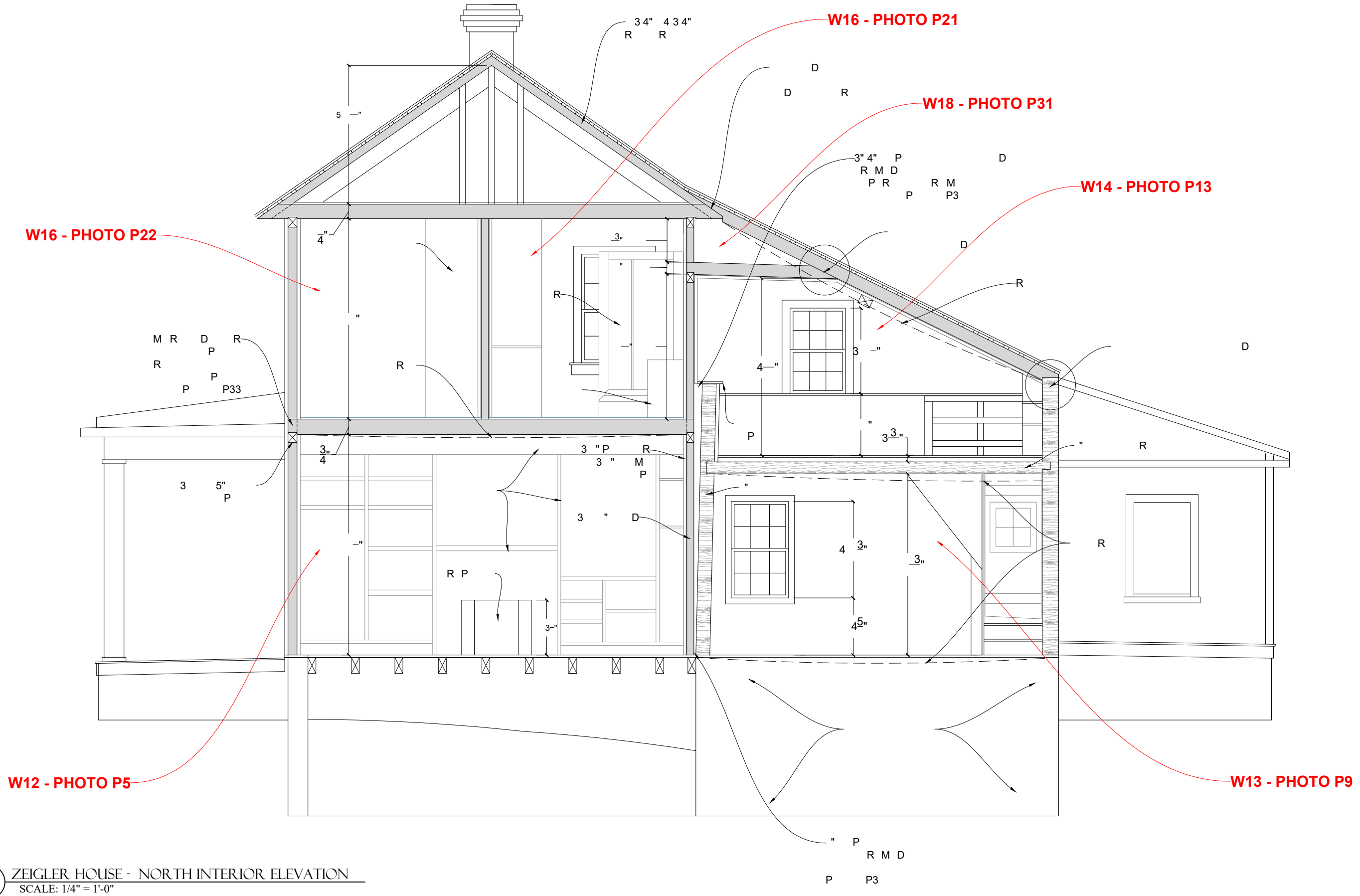
W05

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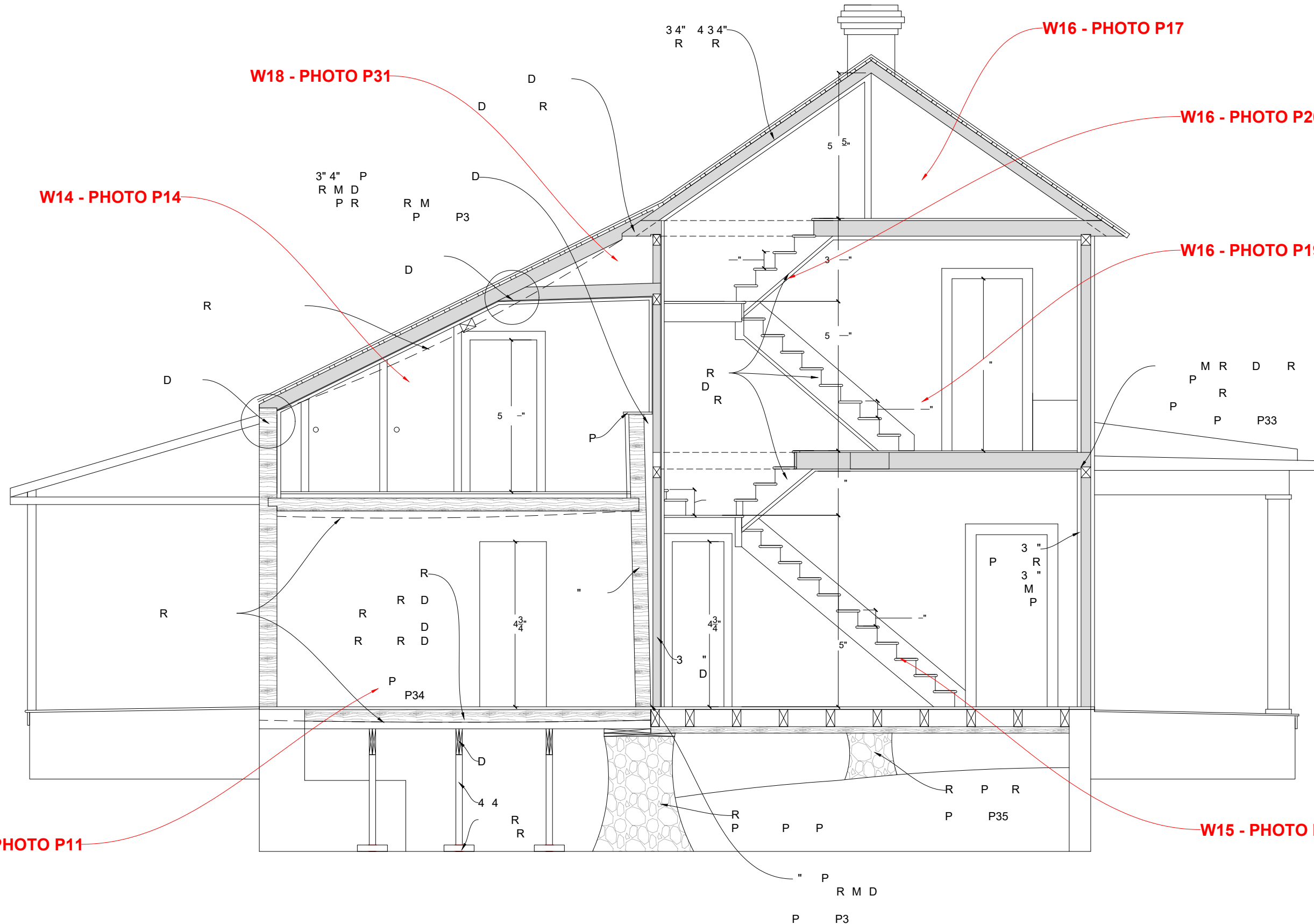
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W06



ZEIGLER HOUSE - NORTH INTERIOR ELEVATION
 SCALE: 1/4" = 1'-0"



W13 - PHOTO P11

W14 - PHOTO P14

W18 - PHOTO P31

W16 - PHOTO P17

W16 - PHOTO P20

W16 - PHOTO P19

W15 - PHOTO P17

JOB #	1813	DATE:	08/02/23
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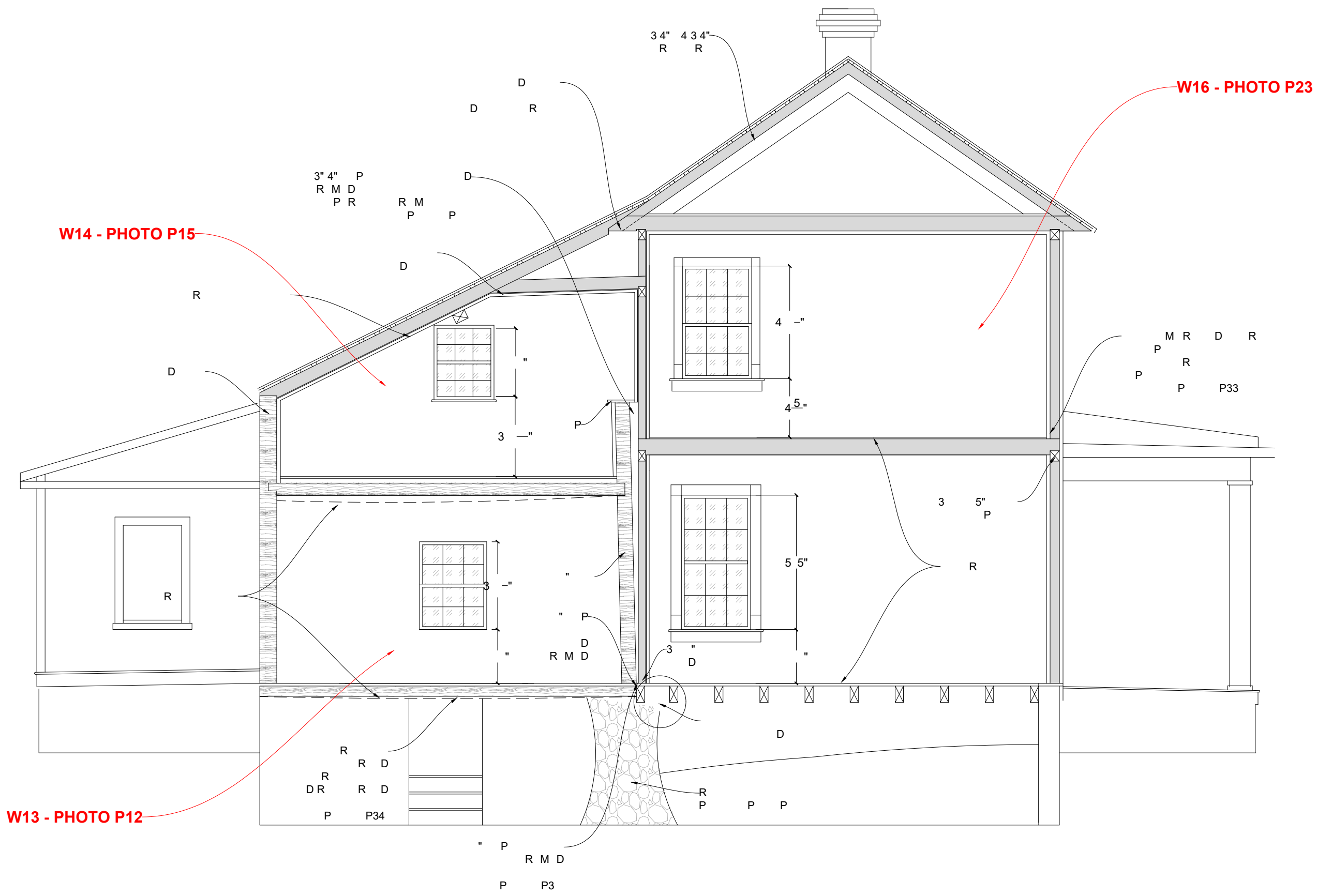
W07

JOB #	1813	DATE:	08/02/23
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REV	△	REV	△
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W08



ZEIGLER HOUSE - SOUTH INTERIOR ELEVATION
 SCALE: 1/4" = 1'-0"

W16 - PHOTO P24

W12 - PHOTO P7



ZEIGLER HOUSE - WEST INTERIOR ELEVATION
 SCALE: 1/4" = 1'-0"

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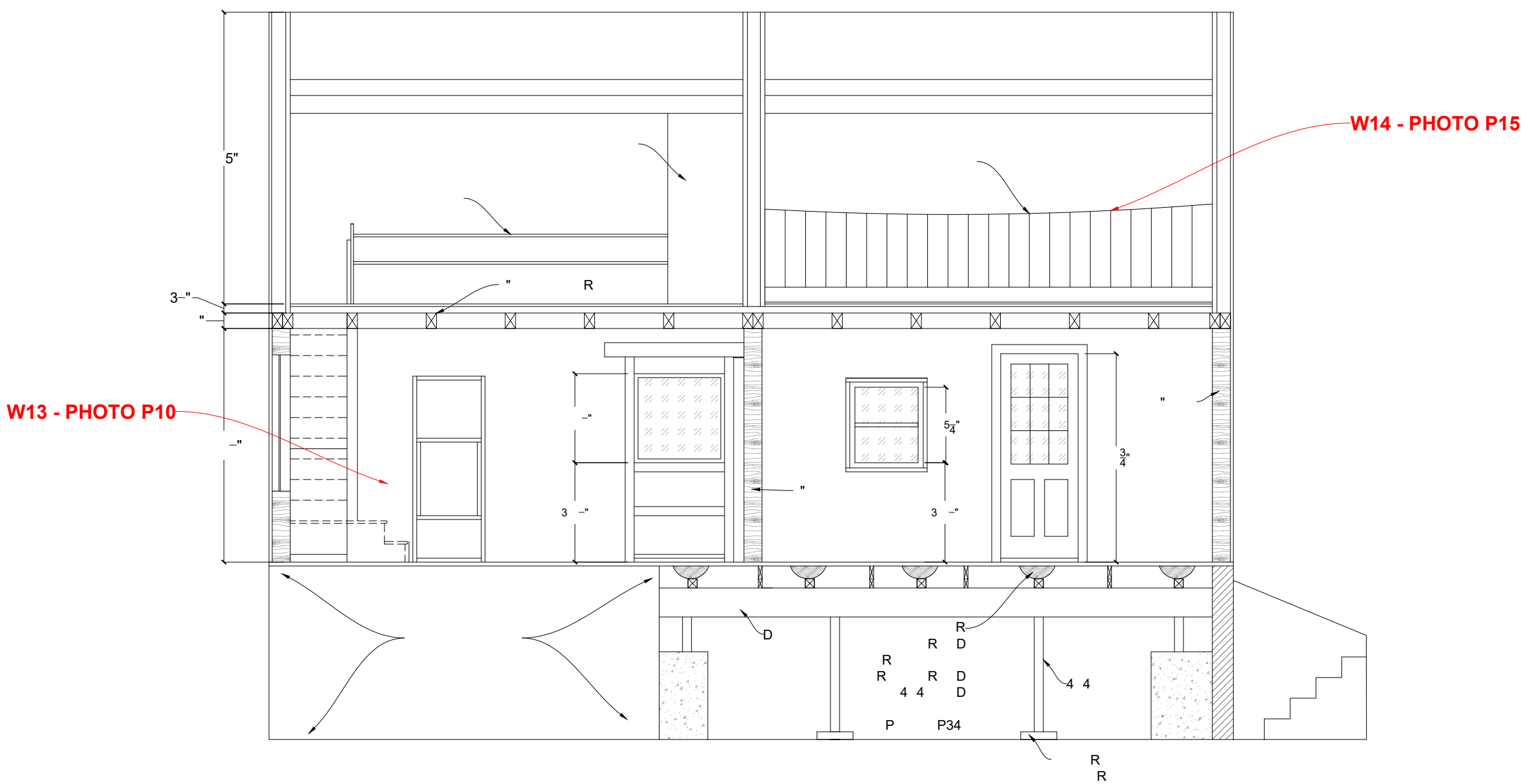
W09

JOB #	1813	DATE:	08/02/23
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REV	△		
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W10



ZEIGLER HOUSE - EAST INTERIOR ELEVATION
 SCALE: 3/8" = 1'-0"



P ZEIGLER HOUSE - FRONT EXTERIOR ELEVATION



P ZEIGLER HOUSE - REAR EXTERIOR ELEVATION



P3 ZEIGLER HOUSE - EAST SIDE EXTERIOR ELEVATION



P4 ZEIGLER HOUSE - WEST SIDE EXTERIOR ELEVATION

JOB #	1813	DATE:	08/02/23
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REV	Δ	REV	Δ
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W11



P5 ROOM 1A - PAGE W06 VIEW



P ROOM 1A - CEILING



P ROOM 1A - PAGE W09 VIEW



P ROOM 1A - REAR VIEW

JOB #	1813	DATE:	08/02/23
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REV	Δ	REV	Δ
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W12



P ROOM ID - W06 VIEW



P ROOM ID - W07 VIEW



P ROOM ID - W10 VIEW



P ROOM ID - W08 VIEW

JOB #	1813	DATE:	08/02/23
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REV	Δ	REV	Δ
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W13



P 3 ROOM 2A - W06 VIEW



P 4 ROOM 2A - W07 VIEW



P 5 ROOM 2B - W11 VIEW



P ROOM 2B

JOB #	1813	DATE:	08/02/23
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REV	Δ	REV	Δ
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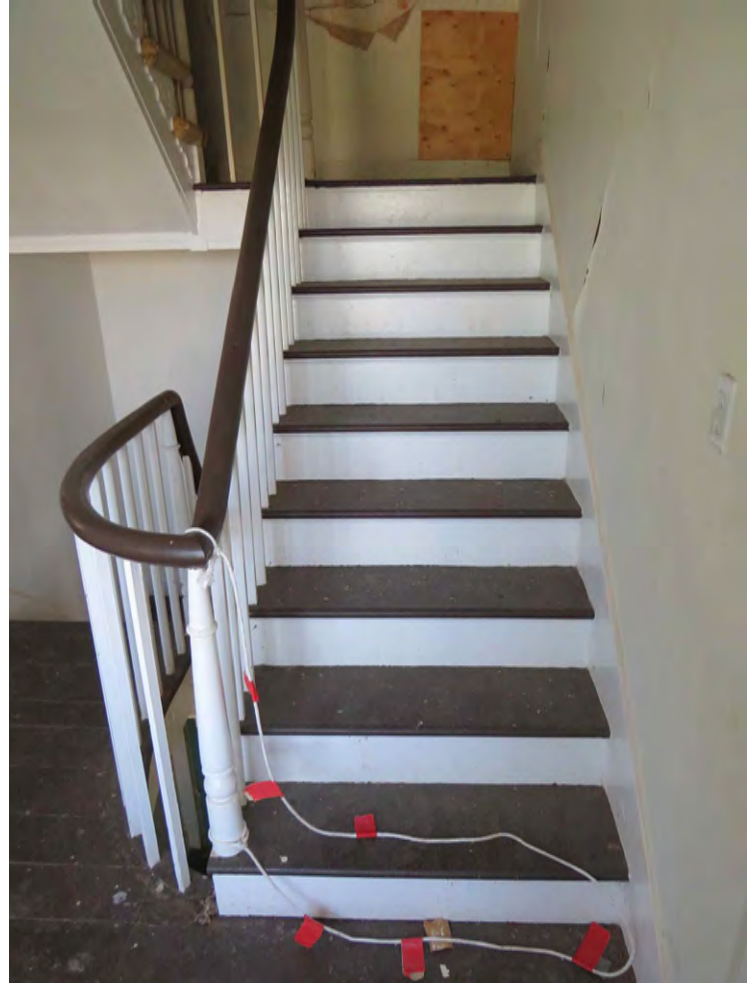
W14



P ROOM 1B - STAIRS - FLIGHT 1



P ROOM 2B - STAIR VIEW



P ROOM 3B - STAIRS - FLIGHT 2



P ROOM 3B - STAIRS - FLIGHT 3

JOB #	1813	DATE:	08/02/23
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W15



P ROOM 3E - W06 VIEW



P ROOM 3A - W06 VIEW



P 3 ROOM 3C - W08 VIEW



P 4 ROOM 3C - W09 VIEW

JOB #	1813	DATE:	08/02/23
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W16



P 5 BASEMENT - EAST VIEW



P BASEMENT - ROCK WALL VIEW 1



P BASEMENT - ROCK WALL VIEW 2



P BASEMENT - W10 VIEW

JOB #	1813	DATE:	08/02/23
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W17



P ATTIC - W09 VIEW



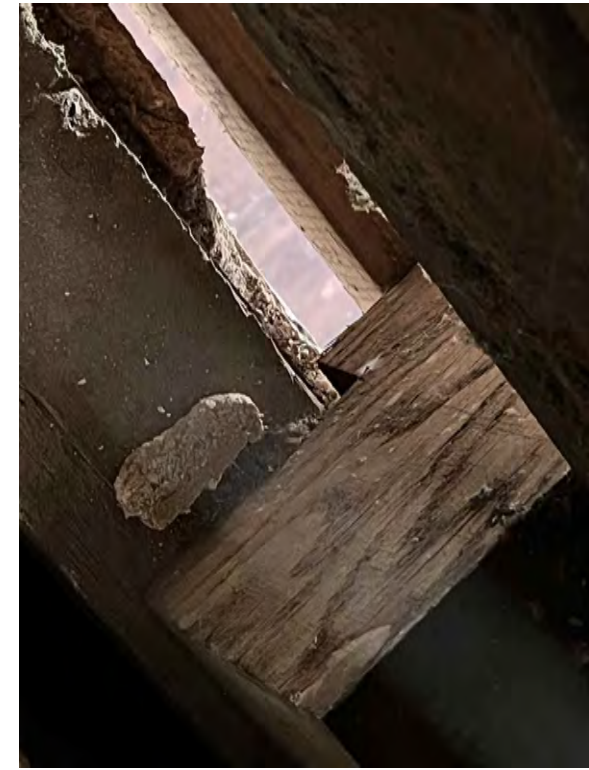
P3 ATTIC - W07 VIEW



P3 LOG CABIN ATTIC - W07 VIEW



P3 LOG CABIN / I-HOUSE SEPARATION



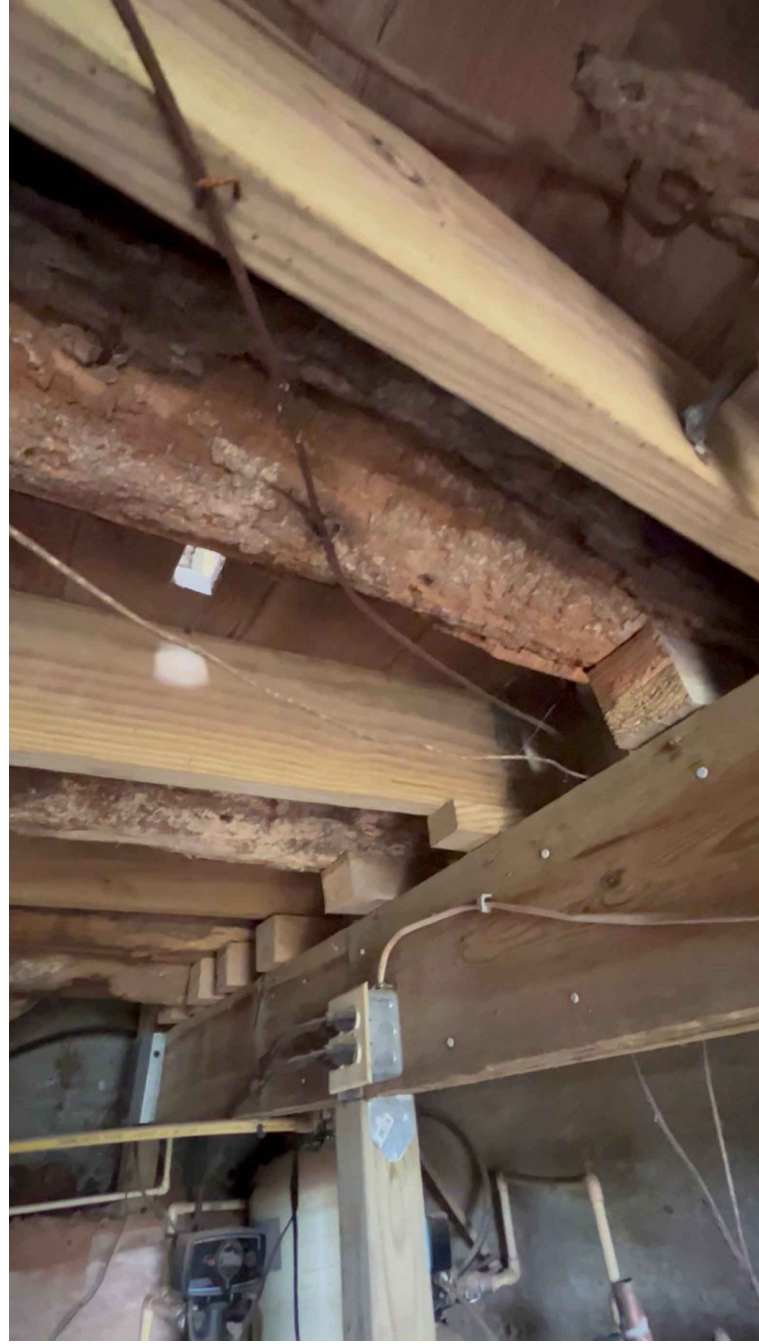
P33 TYP JOIST - WALL PLATE

JOB #	1813	DATE:	08/02/23
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REV	Δ	REV	Δ
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W18



P34 LOG FLOOR BEAMS TURNED ON SIDE



P35 ROCK PILLAR

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W19

OWNER: MARYLAND NATIONAL CAPITAL PARK
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DESCRIPTION: ZEIGLER HOUSE SURVEY - DRAWINGS

JOB #	1813	DATE:	08/02/23
REV	△		
REV	△		
REV	△		
DESIGNED BY: RTC			

WORCESTER EISENBRANDT INC.

Mortar Analysis

Job Number	1835
Site	Zeigler Log House
Sample Number	1

Sampled by:	Amy Hollis	Analysis by	Amy Hollis
Sample Date:	11/6/2023	Analysis Date	11/10/2023

Sample Description

Type/Location	chinking room 1E
Surface Appearance	powdery, red, some sand
Layering	painted in some places, white then grey
Color	chalky red/brown
Hardness	very soft, easily crushed, but solid in most places
Texture	mostly fine with some sandy aggregate
Weight	23g



Components

Fines	Color: red iron oxide	Weight	negl.	% Total weight	< 1%
	Organic matter	some small twigs and seed cases			
	Composition	red clay			
Acid Soluble Fraction	Filtrate Color: Light red/yellow	Weight	2g	% Total weight	9%
	Description of Reaction:	Instant, large frothy bubbles, high foam			
	Composition:	lime			
Aggregate	Color: red clay with quartz	Weight	21g	% Total weight	91%
	Sieve Analysis	Screen #	% On or above	% Passing	
		8	4.76	95.24	
		16	23.80	76.20	
		30	42.86	57.32	
		50	66.67	33.33	
		100	80.95	19.05	
		200	85.71	14.29	
pan	100.00	0			

Assessment

Existing Mortar Type: The chinking is primarily red clay soil from the property (without topsoil or loam), mixed with some lime for strength.

Sand Description: Aggregate is crushed/weathered field stone, similar to the stones found on the Zeigler property and in the house foundation wall. This is most likely what is inherent in the nearby soil, not a commercial product.

The assessment is a description of the mortar sample, as found. It is not necessarily a recommendation for replacement. Installation of new mortar must take into consideration the physical properties of the masonry units and the maintenance program of the site, as well as the historic appearance. Products in current industry use may be quite different from historic building materials. Therefore the appropriate replacement may be significantly different than the existing sample.