EXISTING CONDITION STUDY

BREWER - MESIER HOMESTEAD
WAPPINGERS FALLS, NY

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PRESERVATION / ARCHITECTURE

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I. INTRODUCTION

The goal of is this Existing Conditions Study is to consider options for enhance the use of the Brewer - Mesier Homestead as a public museum, and to identify the approaches and sequence of necessary structural and architectural restoration work identified as part of the Study. The Study has been divided into 2 phases, of which only Phase 1 has yet been funded. The Study has been undertaken by the Wappingers Historical Society, who now occupy the entire building which is owned by the Village of Wappingers.

Phase 1 provides basic documentation: existing condition drawings; assessment of architectural, structural, and building systems; guidance on recommendations for minimal improvements for visitor and building safety; and improved heating and cooling of the building. Phase 2 will address improvements for museum functions and approaches to undertaking critically-needed restoration. The specific scope of Phase 1 work, as amended, includes the following:

- Create Existing Condition Drawings
- Architectural Assessment
- Structural Assessment
- Mechanical/Electrical/Plumbing/Fire Protection Assessment
- Recommendations:
  - Minimal work (stabilization, minimal life safety improvements to permit visitation)
  - Building Restoration including new systems

Phase 1 is intended as the foundation for the future Phase 2, which will address enhanced museum functions and provide details on funding and phasing of future work. The specific scope of Phase 2 work would tentatively include the following:

- Review of current museum usage
- Recommendation: Enhanced museum functions
- Recommendations: Phasing Options
- Preliminary Opinion of Project Costs

The timing of this Existing Condition Study is fortuitous. The Village of Wappinger Falls has recently relocated offices and stored materials from the Homestead. Clearing of the spaces, in particular the c.1741 section of the building that has long been used as storage and a shop area facility for the village, has fully uncovered the extraordinarily intact interior of this earliest section of the building. Minimal heat and electrical systems had been added to the building, although a large furnace (now abandoned) and ductwork remains. Although some finishes (ex., sheetrock and panel materials over wainscot) have been added, many original and early finishes exist beneath.

As part of optimizing the museum function of protecting the collections and expanding the visitor's experience, a focus on the earliest portion of the building provides new opportunities for the building and site, including its recognition and interpretation of a building with high statewide and national significance. This exploration would be part of the future Phase 2 study, including the development of a 10-year plan and identification of the necessary expertise related to specific restoration efforts. Phase 1 provides basic technical assessments that will serve as the foundation for Phase 2, as well as tools for future fundraising and interpretative planning.

The Study has been undertaken by Marilyn Kaplan of Preservation Architecture. Sub consultants to Preservation Architecture include Crawford & Associates Engineering (C&A) for assessment of the mechanical, electrical, plumbing and fire protection systems (Christopher Knox and Andrew Burka visited the site on July 19, 2017) and Proper & O'Leary for assessment of the structural conditions (Dan Proper visited the site on September 15, 2017).

A. SUMMARY OF CRITICAL NEEDS

Through the course of this assessment, and the removal of stored materials from the oldest area of the building (Area A, c.1741), a reconsideration of the Wappinger Historical Society's (WHS) use and protection of the building is recommended. The newly-discovered significance of this section of the building, simultaneous with the WHS' expansion into the entire building for public display and administrative purposes, warrants a full Historic Structure Report that will result in the conceptual framework for overall (and likely phased) building improvements.

Simultaneously, basic maintenance and removals are recommended, as follows: See Section V of this report for further detail.

1. Maintenance.
    a. Roofs and Gutters. Focus on protecting existing roofs and interior finishes. Begin 4x/year maintenance program for patching roofs and cleaning gutters.

2. Removals/Salvage
    a. Remove non-historic interior finishes from Area A, c.1741 building area.

    b. Remove all non-essential, museum-related materials from basement.

    c. Remove all deteriorated (salvaged) wood from basement: retain only labeled samples (post extermination).

    d. Retain sound historic shutters, doors and other parts of the building that have been removed. Include in the extermination process (see below).

    e. Exterminate basement.

3. Interim Heating
    a. Continue exploration of mechanical (heating) repairs to see if furnace #2 can be used to provide minimal heat and protect building from freezing. If not possible, undertake temporary repairs to provide heat until system replacement is ready to proceed. (*note: has been addressed*).

4. Historic Structure Report.

    a. Undertake an Historic Structure Report as a guide to planning for future changes. This will likely include:

        i. Documentation of original conditions and building alterations:
            1. Historic paint analysis
            2. Further research of local records (photographic records, Sanborn and other maps, deeds)
            3. Physical investigation: room-by-room analysis of existing materials, moldings, etc.

        ii. Museum Planning and Design.
            1. Exhibit, collection, and interpretive goals
            2. Space planning and building alterations for optimal exhibits, storage, visitor flow and experience, administration
            3. Concept Design (drawings not suitable for construction)
                - Architectural
                - Structural
                - Building Systems (including temperature/humidity control for collections): Mechanical, Electrical, Plumbing, Fire Protection, Security
                - Interpretive Materials

II. BACKGROUND

For purposes of this study, the following terms apply to various building sections:

Area 'A' c.1741. North, earliest 1 ½ story section.
Area 'B' c.1750. Hyphen between A and C/D
Area 'C' c.1750. South, 2-story section without basement
Area 'D' c.1750. North, 2-story section with basement
Area 'E' c.1850. South porch

The earliest part of the Homestead, Area 'A,' was built by the Brewers soon after establishing the first flour mill in Wappinger Falls. Although the specifics of transfer to the Mesier family are unknown, the Mesiers were a prominent New York City family with ties to the mid-Hudson Valley and may have purchased the house as early as 1777.

Area 'A' is a 1 and ½ story structure with a footprint of approximately 1740 sf, constructed with a stone foundation, no basement, and a combination of stone and wood construction for above grade walls and roof. It appears that in c.1750, a 2-story addition, Areas 'C' and 'D', with approximately 2175 sf on each floor, and the small "hyphen" Area 'B' with an approximate footprint of 170 sf, were added, all of similar construction. Area 'D' alone has a full basement, although it is yet is unknown if this was original or created through a later excavation. The south porch, Area 'E', is understood to have been constructed c.1850, at which time additional 19th c. decorative detailing was added to the existing exterior elevations.

A now-demolished shed at the north side, shown in the 1937 drawings created by the U.S. Department of the Interior, Historic American Buildings Survey, may have been an early summer kitchen. The area of this shed was explored as part of the 2006 and 2010 archeological site investigations: flat, square-ish fieldstones were uncovered, as well as a sink drain and possibly a preponderance of summer season food waste. A portion of the shed is shown in Margaret De M. Brown's 1920's photograph, as is a second, smaller addition east of the hyphen. Archeological investigations also located a brick cap of a well, which possibly had been subsequently converted to a cistern, to the east of the "hyphen."

Ownership remained in the Mesier family until 1892 when the building and five acres were acquired by the Village for parkland use. The building housed the Village's Water and Police Departments, and underwent various upgrades to architectural, structural, and mechanical, electrical, and plumbing systems. In c.1970 the Wappingers Historical Society (WHS) was granted permission to use and present the second floor. By 2016, all Village offices had been relocated and WHS assumed control of the entire building for display of the building and its artifacts, and to serve the administrative functions of the WHS.

Table 1: Building Chronology

c.1741	Construction of original (north), Area 'A'
c. 1750	Construction of larger, south building and "hyphen" connecting to original structure, Areas 'C', 'D', and 'B'
c. 1850	Addition of Area 'E' south porch and exterior decorative elements; extent of interior alterations unknown
1892	Property sold to the Village for use as a village park; well served as water source for the Village
1914	Village Water Department founded; housed at east room of Homestead
1940s	Village Police Department moves into west room
xx	Police Department relocated: WHS given use of 2, large 1st fl rooms
1967	WHS founded
c.1970	WHS granted custodianship of 2nd floor for exhibits
1984	Homestead listed in the National Register Historic Places (part of historic district)
1999	Roof restoration project, funded by NYS Office of Parks Recreation and Historic Preservation
2001	'Architectural Survey of the Mesier Homestead,' The Pilon Group.
2001	(confirm) Structural improvements at basement, Area 'D'.
2007	WHS redecorating of interior for celebration of 40th anniversary
2009	Siding replacement at north elevation (Area A) and east elevation (Areas B and C; unspecified interior wall repairs
2006, 2009	Research and Fieldwork: Phase 3 Archeology (Hartgen Archeological Associates)
2009	Drainage improvements: appear to have included new dry wells, and subgrade drainage at north and west sides of building. Design: J. Paul Vosburgh, P.C.
2014	Structural reinforcement at north door, Area A
2016	Remaining Village functions (Public Works) relocated from north, c.1741 section)

III. ARCHITECTURAL ASSESSMENT

Area 'A' c.1741. North, earliest 1 ½-story section.
Area 'B' c.1750. Hyphen between A and C/D
Area 'C' c.1750. South, 2-story section without basement
Area 'D' c.1750. North, 2-story section with basement
Area 'E' c.1850. South porch

Table 2: Building Structure

	Area 'A'	Area 'B'	Area 'C'	Area 'D'	Area 'E'
Foundation	Mortared stone; stone chimney backs at E and W. Evidence of many previous repairs	Mortared stone, minimally visible at exterior	Mortared stone; evidence of many previous repairs (north elev.)	Mortared stone, minimally visible at exterior	Wood piers
First Floor, Floor Structure	Concealed: assumed wood joists/beams directly on grade	Concealed: assumed wood joists/beams directly on grade	Concealed: assumed wood joists/beams directly on grade. Small opening in floor of Room 105 permits viewing of previous framing repairs	9 ¼" H x 8 ½" W wood beams, varying centers. 2001 work included addition of concrete footings and wood columns/beams, sistering of some with 2x10s.	Concealed
Second Floor, Floor Structure	Concealed	Na	Concealed	7 ½" H x 4 5/8" W beams (3'6"–4'0" on center	na
Roof Structure	4"H x 3 ¾" W rafters, 3'3" – 3'9" o.c. Top plate: 5 ¼"H x 4 ½"W	5"H x 3"W pitched wood rafters, varying sized beams	Concealed	Concealed	5 ¼" x 4"W wood beams (3'6" – 4'0" o.c.)
Exterior Walls	Wood frame with stone masonry (fireplace) at east and west. May be brick nogging at multiple locations.	Wood frame	Wood frame	Wood frame	na

Table 3: Interior Spaces

PL/GDW: Plaster or Gypsum Dry Wall (Sheetrock). Further removals/investigation to confirm location of each material
Mech: Mechanical
Ptd: Painted

Building Area/ Room No.	Name	Dimen-sions	Ceiling Ht	Walls[1]	Ceiling	Floor[2]	Lighting	Addtl	Condition
A/101	East	14'9" x 10'10"	6'4" to PL/GDW	Plaster: 2'5" high, ptd beaded wainscot	Plaster	10" wide wood boards, unpainted		wood mantle and built ins at E wall, brick hearth	poor
A/102	West	14'6" x 21'7"	7'0" (wood)	PL/GDW; S, E, W: 2'5" high wood horiz. wainscot	Plaster; Above ceiling: wood boards w/ exposed beams	2 ½" wide wood boards (N-S), ptd	exposed bulb	E end: chimneys and bake oven SW corner: stair to 2nd fl	poor
B/103	Kitchen	12'8" x 9'6" + mech alcove	7'4"	PL/GDW	PL/GDW	3 ¼" wide wood boards (N-S), ptd	fluorescent	exposed ducts	Fair-poor
B/104	Toilet 1	4'6" x 3'6"	7'9"	PL/GDW	PL/GDW	12" vinyl tile	ceiling pendant	sink, toilet, exposed ducts	fair
C/105	Office	11'4" x 17'11"	7'1"	N, S, W: PL/GDW E: 11" ptd, beaded vertical wall planks	plaster, 4" ptd exposed beams	14" wide wood boards (E-W), varnished	ceiling pendant	Access to crawlspace in floor	good
C/106N	Entry Hall (Rear) Hall	20'4" x 10'0"	8'4"	PL/GDW, 3'0", S, E, W: 2" wide wood paneling	Plaster	N & S: 3" wide wood boards (N-S), varnished. (contiguous with 106S)	ceiling pendant		good
106S	Entry Hall (Front)	11'7" x 10'0"	7'3"	N: plaster, 2'11" high, 2" wide ptd beaded wainscot E and W: 11" wide ptd beaded wood wall & wainscot panels w/chair rail	S: wood boards w/exposed beams	3" wide wood boards (N-S), varnished. (contiguous with 106N)	track		good
C/108	Gift shop	11'5" x 11'0" + 2'11' x 6'8"	7'2"	N and W: 12" wide ptd clapbd & 11" wide ptd vertical boards S: 11" wide ptd beaded horiz. boards	ptd wood boards with 4" beams	E and W: 9" wide wood boards ( ), ptd	fluorescent		good

[1] Most exterior wall structure concealed: assumed stone masonry with plaster at sections C and D; wood post and beam at sections A and B.

[2] Earliest floors appear to be 5/4 thickness, tongue and groove wood planks, wide board of varying width.

Building Area/ Room No.	Name	Dimen-sions	Ceiling Ht	Walls[1]	Ceiling	Floor[2]	Lighting	Addtl	Condition
				E: 11" wide ptd, beaded clapbd					
C/109	Hall	11'6" x 9'1" (incl. built-ins)	7'4"	ptd wood beaded beams (4)	PL/GDW N, S, E: 11" high ptd beaded wood boards	14" (early) wide wood floors (E-W), ptd	fluorescent	W wall: early cupboard	good, exposed ductwork
C/110	Toilet 2	5'3" x 3'8"	7'4"	ptd wood boards and unpainted beaded 4" beams	PL/GDW	14" (early) wide wood boards (E-W), ptd	exposed bulb	sink, toilet not ADA-compliant	fair
D/111	Parlor	19'8" x 17'5"	8'4"	N,S,E,W: Plaster; 2'11" high wood paneling, ptd	PL/GDW	2 ¼" wide wood boards (N-S), varnished	ceiling pendant	wood mantle with marble and tile, brick infill at W wall; arched opening to 105	good
D/112	Dining Room	10'10" x 17'7"	8'4"	N,S,E,W: PL/GDW; 3'1" high wood paneling, ptd	PL/GDW	2 ½" wide wood boards (N-S), varnished	ceiling pendant	E wall: wood mantle/fireplace (bricked in): earlier fireplace configuration behind	Good
D/113	Exhibit/ Meeting	19'10 x 14'10	8'5"	N,S,E,W: PL/GDW, 4'1" high ptd wainscot with picture rail	PL/GDW	2 ½" diagonal wood boards, stained	Ceiling pendant	W wall: wood mantle and built ins (early)	good
A/201	Loft	14'4" x 10'3"	6'2", sloped	N,S,E,W: PL/GDW,	Plaster	Wide wood boards (E-W)		Chimney at west wall	Poor
A/202	Loft-Hall	14'4" x	6'2", sloped	N,S,E,W: wood (exterior wall at N and S)	Exposed roof framing and sheathing	Wide wood boards (E-W)			Poor
A/203	Loft	14'4" x 13'6"	6'2", sloped	N,S,E,W: PL/GDW,	Plaster	Wide wood boards (E-W)		Large painted chimney at east wall	poor
C/204	Exhibit	11'5" x 10'9"	sloped	wood boards, pt	Wood boards, pt	Wide wood boards (E-W)		Floor level 23" below Area D	Fair; water damage at ceiling
C/205	Exhibit	11'5" x 11'3" (to west side dormer)	Sloped, dormer	Wood, ptd	Wood, ptd	Wide wood boards (E-W)		Floor level 23" below Area D	
C/206	Exhibit		Sloped, dormer	Wood, ptd	Wood, ptd	Wide wood boards (E-W)		Floor level 23" below Area D	

Building Area/ Room No.	Name	Dimen-sions	Ceiling Ht	Walls[1]	Ceiling	Floor[2]	Lighting	Addtl	Condition
C/207	Exhibit		Sloped	Wood board	Wood boards, pt	Wide wood boards (E-W)		East wall: orig, door at window location; framing & finish alterations at south wall; Floor level 23" below Area D	Fair
C/208	Storage		Sloped		Roof framing exposed	Wide wood boards (E-W)		Floor level 23" below Area D	
C/Stair 2	Hall/Stai r		Sloped	Wood board	Wood board	Wide wood boards (E-W)	track	South wall original exterior wall (framing visible)	fair
D/209	Office	20'0" x 17'6"	Flat, dormer	PL/GDW	PL/GDW	Wide wood boards (E-W)	Ceiling pendant (bare)	Indication flooring changes at east side	Fair
D/210	Exhibit	20'0" x 10'0"	Flat, dormer	PL/GDW	PL/GDW	Wide wood boards (E-W)		Exposed angled chimney on west wall	Fair
D/211	Exhibit	20'0" x 13'9"	Flat, dormer	PL/GDW	PL/GDW	Wide wood boards (E-W)		Early board cupboards on north wall	Fair
D/212	Office	20'0" x 21'7"	Flat, dormer	PL/GDW	PL/GDW	Wide wood boards (E-W)		Early paneled cupboards on west wall	Fair

Changes or discrepancies: 1937 HABS drawings vs current conditions:

1. Designation of rooms/function
2. Show Area A has containing Living Room and Bedroom
3. Changes to dormers: show D2 remove, no D1; note new dormers on both north and south elevations Areas C and D.
4. Removal of shed north of Area A
5. Double windows at west end of north elevation, Area A.
6. Proportion of windows at north elevation, Area A
7. Chimney A lacks metal cap
8. East elevation windows: E3 and E4 altered
9. E4 noted as location of old door
10. No basement access at east side of building
11. Room 207/208 shown as single storage area
12. Shutters many openings

Table 4: Exterior

Area 'A' c.1741. North, earliest 1 ½-story section.
Area 'B' c.1750. Hyphen between A and C/D
Area 'C' c.1750. South, 2-story section without basement
Area 'D' c.1750. North, 2-story section with basement
Area 'E' c.1850. South porch

Notes:

1. Roof Areas A, C,D, E. The wood shingle roofs, installed c.1999, have been minimally maintained and are in poor condition, in particular at the north elevation. Water entry through failed shingles will have a deleterious impact on interior collections and the building.

2. Building Structure. Area B. Evidence of rot and openings for animal entry exist at all elevations of Areas A and B. Repairs will include removal and replacement of lower courses of siding, foundation repairs, replacement of sections of wood sills and lower vertical framing. Damage is likely to also exist at the first floor, floor framing and flooring. Repairs of first floor framing and the west elevation chimney would likely be included as part of this effort.

	AREA A	AREA B	AREA C	AREA D	AREA E
Roofs	E-W Gable, wood shingle, installed 1999.	Low slope, EPDM membrane, installed 1999.	E-W Gable, wood shingle, installed 1999.		
Drainage	Hung Gutters (N&S); Downspouts to subgrade termination at NE, NW, SW corners.	Hung gutters (E & W): Downspout to subgrade termination at SE (2W drainage to Roof 1S).	Hung gutters (N &S); downspouts to subgrade termination at NE, SE, NW, SW.	See 'Area C'	Hung gutters (S, E, W: downspouts to subgrade termination at SE and SW.
Cornice/ Trim	Simple wood fascia and trim	Simple wood fascia and trim	Decorative wood trim added at E and W; and N and S dormers	See 'Area C'	Decorative detailing at porch, S, E W
Chimneys	2 (A and B), brick masonry. East chimney A has added metal cap	na	4 (C,D,E,F). Brick masonry with upper arch covered with plaster	See 'Area C'	**na**
Siding	Wide board clapboard , ptd	Wide board clapboard, ptd	Mix of wide and beaded wide board clapboard, ptd	See 'Area C'	**na**
Windows	Wood, 6/6, many original or early. Shutters	Wood, 6/6, original or early.	Wood, 6/6, multi lite, original or early.	Wood,6/6, multi lite, original or early.	**na**
Doors	Early door at north elevation.	Early door at east elevation.	Early door at north elevation	(2) 3 lite French doors at west elevation; (2) early panel doors at south elevation	**na**
Foundation	Stone with concrete parging many areas. Depth of stone unknown, no basement.	Stone with concrete parging many areas. Depth of stone unknown, no basement.	Stone with concrete parging many areas. Depth of stone unknown, crawlspace only.	**Stone with concrete parging. Full basement wall.**	**na**
Condition: General	Extremely poor: wood framing at roof, lower areas of wood walls. Moisture migration into floor common. Foundation and walls at south elevation particularly poor.	Fair-poor, although floor and lower wall areas suspect.	Fair; roof in poor condition.	Fair: roof in poor condition.	Good

V. BUILDING SYSTEMS

Area 'A'	c.1741.	North, earliest 1 ½-story section.
Area 'B'	c.1750.	Hyphen between A and C/D
Area 'C'	c.1750.	South, 2-story section without basement
Area 'D'	c.1750.	North, 2-story section with basement
Area 'E'	c.1850.	South porch

Existing building systems were evaluated relative to condition, size, capacity, age, usefulness, life span, etc. Preliminary recommendations are provided for the contemplated HVAC (heating, ventilation, air conditioning) and restroom/kitchenette upgrades.

In general, existing systems appear to be adequate in condition and size for continued use. Some issues should be addressed to ensure code compliance and/or to ensure proper maintenance for continued operation; others should be addressed to improve performance of existing equipment.

A. MECHANICAL

Existing Conditions

First Floor, Furnace #1. The first floor of Area A (Room 102), both spaces in Areas B (Rooms 103 104) and the east and northeast rooms of Areas C and D (Rooms 108, 109, 110, and 113) were heated by a single zone gas-fired furnace located in Room 102, controlled by a thermostat located in Room 113. The associated exposed ductwork runs overhead to serve the spaces with duct face and sidewall mounted grilles and registers. This furnace, possibly installed c.1970, appears to have been adequately sized to serve the aforementioned spaces; however, grille and register locations are not ideal. The furnace has exceeded its service life, is inefficient when compared to modern furnaces, and was not operational between 2016 and 2018. It is understood that temporary repairs have been implemented.

First Floor, Furnace #2. All other first floor spaces in Area C (105) and Area D (Rooms 106, 111, 112) are heated by another single zone gas-fired furnace located in Room 001. The associated thermostat is in Room 111. The associated exposed ductwork runs overhead in the basement to serve the above spaces with floor grilles and registers. A puncture in the supply trunk duct, uninsulated supply ducts, an open supply takeoff, improperly supported ducts, poorly sealed duct joints, and long takeoff ducts (serving Room 113) were observed in Room 001. Some rattling could be heard during fan operation. This furnace appears to be adequately sized to serve the aforementioned spaces. However, it has been reported that some spaces (Room 113 in particular) are noticeably colder than others during the heating season, likely due to the aforementioned duct issues. This furnace appears to have been installed circa 2003 and is in good condition; it is estimated that approximately 15 years remain in its service life.

Unheated Spaces. All second floor spaces and Room 101 are unheated. Some stand-alone electric heating units in Rooms 101 and 209 and transfer air grilles to heated spaces (between Rooms 112 and 211) were observed. These units are not ideal for uniform or well-controlled heating, but appear to be adequate to serve their intended use and are in condition fit for continued use.

Cooling. No central cooling equipment exists. Some stand-alone dehumidifiers for moisture management (Rooms 001 and 113) and window and stand-alone air conditioners for spot cooling (Rooms 105, 113, and 209) were observed. These units are not ideal for uniform or well-controlled moisture management or cooling, but appear to be sized adequately to serve their intended use and are in condition fit for continued use.

Ventilation. All spaces are primarily naturally ventilated with operable windows and doors. By current code, Rooms 001 and 102 are likely inadequately sized for indoor combustion air: however, no combustion air issues have been experienced given the existing loose construction.

B. ELECTRICAL

Existing Conditions

Building Service and Distribution. The overhead service appears to be 200A, 3Ø, 208/120V. The riser pole and tie-in to an exterior meter, 200A main disconnect, and main distribution panel (MDP) are located at the southwest corner of Area A adjacent to Room 201. The MDP appears to feed the building with a 125A breaker, a subpanel at the outdoor gazebo with a 60A breaker, and an outdoor circuit with a 20A breaker.

Two subpanels are located in Room 108. The first is a main circuit breaker (MCB) panel, which is not fitted with a MCB and appears to be fed directly from the MDP's 125A breaker. The second is a main lug only (MLO) panel which appears to be back fed through a 60A breaker from a 60A breaker in the first subpanel. Multiple conduits, raceways, junction boxes, and wiring serve the building. Conductors consist of a variety of NM and MC cable as well as conductors in metal conduit and plastic raceway, run overhead in the basement and surface mounted and/or concealed in wall/ceiling construction in other spaces. Some power distribution components appear to be modern, sized adequately to serve the use, and in condition fit for continued use: others are abandoned or unknown. Some junction boxes and wires were uncovered or exposed, some conductors and conduit appeared to be improperly supported, and some sections of NM cable were stapled loosely to existing finishes and unprotected in occupied spaces.

Lighting. The majority of lighting in the basement consists of ceiling mounted linear fluorescent fixtures with some incandescent fixtures. Most lighting on the first and second floors consists of a mix of ceiling mounted, pendant, wall sconces, wall mounted, track incandescent fixtures and fluorescent fixtures. All fixtures are aged and inefficient when compared to modern fixtures, but generally appear to be in condition sufficient for continued use. Some antiquated light switches were observed.

Exit and Emergency Lighting. Exit and emergency lighting generally appear absent throughout the building.

Fire Alarm/Security. A fire alarm/security system with smoke/heat, motion (occupancy), and door latch detection serves the building. The main panel(s) are located in Room 108. These components appear to be suitable for continued use, but exhibit some signs of aging. No CO detectors were observed in Rooms 001 and 102 adjacent to the furnaces.

Data/Communications. The main data/communications entrance(s) and panel(s) are located in Room 108.

C. PLUMBING

Existing Conditions

Water Supply. Potable water is provided by a municipal service entrance and water meter (remote read) at the northwest corner of Room 001. Also at this location is a cartridge water filter housing, which appears to be missing a cartridge or bypassed.

Domestic Hot Water. Hot water is provided by a 40-gallon electric water heater located in Room 103. Supply piping is primarily copper, run overhead in the basement and surface mounted on walls and ceilings on the first floor, and mostly uninsulated. Supply piping in the restrooms is likely prone to freezing in the winter due to its surface mounting to uninsulated exterior walls and inadequate space heating distribution in the spaces. The water heater is sized adequately for the served loads, appears to have been installed c.2003, and is in good condition; it is estimated that approximately 15 years remain in its service life.

Fixtures. All supply piping and appurtenances appear adequately sized and in condition sufficient for continued use. Plumbing fixtures appear aged, but in condition sufficient for continued use.

Drains and Vents. The main drain and vent stack is located in Room 104. It is assumed that this exits the building below grade from this location and is directed toward a municipal service connection to the west. (This was not confirmed since access to the space beneath the first floor was not available.) Drain and vent piping appears to be primarily cast iron with some plastic tie-ins, sized adequately, and in condition sufficient for continued use.

Gas Meter. The exterior gas meter and gas service entrance are located at the northeast corner of Area A adjacent to Room 102. Gas piping inside the building serves the two furnaces. Some inactive gas piping runs to previous appliance locations were observed to terminate with antiquated valves. The gas meter is sized adequately to serve the two existing furnaces. Gas piping appears to be steel, sized adequately, and in condition sufficient for continued use.

D. FIRE PROTECTION

No fire protection system exists in the building.

V. RECOMMENDATIONS

Many of the following recommendations expand upon those provided in the 2001 Pilon study, which provided general recommendations for the Village/WHS:

- Develop program for anticipated end use/occupancy
- Test and abate environmental hazards (asbestos, lead)
- Continue renovation of building exterior (including reinforcement of second floor structure)
- Develop plan to renovate building interior, including reinforcement of the second floor structure; installation of full fire and smoke detection systems, emergency lighting, and exit/directional signs; updated building systems, and increased building accessibility
- Develop long-term maintenance plan

It appears that Pilon's recommendations targeted the south, 2-story structure only (Areas C, D, E), and that basement structural improvements were undertaken following the drawings prepared by the firm.

A. STRATEGIC PLANNING

WHS has reached an important juncture in its capacity to manage and interpret the entire building, including the highly significant, newly "discovered" c.1741 building area. Although implementation of full building-wide improvements will likely take 10-20 years, a strategic plan will permit improvements to be undertaken in a methodical manner organized by building need, WHS programs and priorities for the building, and funding.

Among the first decisions to be reached are the approval of intended floor plan changes: proposed changes are intended to: incorporate into the building's presentation and interpretation the c.1741 Area A and c.1750 Area B, improve accessibility for those with limited mobility in order to comply with federal accessibility standards, and improve WHS functions within the building (administrative, archives, and programs).

Because of the critical structural conditions of Area A decisions related to the entire building (location of restroom and kitchen; intent for heating/cooling, etc.) must be made in the near future before other work can proceed.

A Strategic Plan will incorporate the findings of other efforts noted in this study, and include input from experts such as: collections conservator, historic architect, museum planner, and an expert in non-profit museum development and administration. From an architectural/engineering and collections perspective, the Strategic Plan will likely include:

- Phasing of restoration work necessary to stabilize and protect the building
- Development of a visitor interpretive plan and strategy for the collection and the historic building
- Approaches to protect the most significant and vulnerable artifacts within the collection

B. HISTORIC RESEARCH AND DESIGNATION: PROJECT FUNDING

Recent work by WHS representatives, the research included in the archeological investigations, and the accessibility to the c.1741 Area A provide the opportunity to correct and expand the 1984 nomination to the National Register of Historic Places, since limited research on the building and site were then included in the nomination.

Further documentation from primary resources of the history and significance of the building, in concert with physical evidence extant in the building, may permit the historic designation to be upgraded to a National Historic Landmark, the highest designation available from the U.S. Department of the Interior. This will create no further controls on the building, but enhance possibilities for external funding. Options for this should be reviewed with NYS Office of Parks, Recreation and Historic Preservation staff.

The following may be useful sources for funding and preservation and museum planning:

- **Collections and Building Assessment.** *Collections Assessment for Preservation Program*, Institute of Museum and Library Services. Provides funds for assessment of a museum's collections and building.

- **Building History.** *Historic Structure Report, Preserve New York* (Preservation League of New York State). [Historic Structures Reports are documents addressing the history of the building and site, meeting state and federal standards for comprehensiveness of the evaluation. The HSR may include a Finishes Assessment of all interior and exterior paints and coatings, an aid to documenting building history and changes over time (note: this assessment can also be undertaken as an independent effort].

- **Planning, Construction.** *NYS Historic Preservation Grant* under the Environmental Protection Fund (Consolidated Funding Application/NYS Regional Economic Development Council Competition)

C. BUILDING IMPROVEMENTS: IMMEDIATE WORK

It is recommended that the following high-priority issues be addressed as soon as possible. Items 1-4 address code and safety requirements and conditions causing, or which could lead to, operation and maintenance issues. All items should be addressed according to all applicable code(s).

1. Heating. To permit continued use of the building, it is understood that minimal improvements (for winter 2017-2018) were undertaken to the existing heating system. More permanent and comprehensive changes to the system should reflect the long term goals for the building, including, for ex., heat and air conditioning of first and second floors of Areas A and B, and second floor spaces in Area C and D.

a. The following work related to Furnace #2 (located Room 001) is recommended:

1. Repair puncture in supply trunk duct
2. Fit open supply takeoff with balancing damper and register
3. Repair any loose/rattling furnace and ductwork accessories
4. Properly support all ducts
5. Seal all duct joints
6. Balance duct system
7. Insulate all supply ductwork in Room 001

b. Since no heat was provided by Furnace #1 at the time of this study's inspections, the following options were recommended:

1. Modifying ductwork or adding a booster fan to existing ductwork from Furnace #2 to increase delivery of heat to Room 113/Museum Room.
2. Repair existing/currently non-operating Furnace # 1 to provide heat to Kitchen/Room 103 and Room 113/Museum Room; and, secondarily, Rooms 104, 108, 109, 110 if capacity exists.

2. Electrical. Retain knowledgeable electrician to visit the Homestead for inspection and minor repairs of existing systems, including but not limited to the following:

a. Install covers for uncovered/exposed junction boxes/wires
b. Properly support all wiring/conduit
c. Fasten securely to finishes, protect with raceway, or conceal exposed sections of NM cable in occupied spaces
d. Install CO detectors in Rooms 001 and 102
e. Verify required locations of exit/emergency lighting and install new fixtures as needed
f. Verify proper operation of all fire alarm/security system components and install new components as needed
g. Inspect antiquated light switches for proper operation and replace as necessary

3. Plumbing

a. Install insulation and/or pipe heat trace cable to protect restroom supply plumbing.
b. Replace antiquated gas valves at previous appliance locations with caps.

4. Basement (Rooms 001/002). Prepare basement to permit improvements to heating system, monitoring of north wall, exterminating, and other maintenance items.

a. Clean basement of stored materials that are not part of the Museum collection. Organize retained materials to south wall; relocate materials to exterior shed.
b. Remove salvaged wood that has possible infestation. Dispose of wood sections and other items; retain small sections for archives in sealed plastic bags; note location/date of removal.
c. Retain exterminator to inspect and determine proper treatment for maintenance and to eliminate possible infestation.

5. Area A (c.1741) Removals. To permit full evaluation of concealed conditions, remove later finish materials (ex., sheetrock) and ceilings at first and second floor.

a. All original/early materials (plaster): retain small, labeled section in sealed plastic bags for archives and to guide future restoration: note location/date of removal.

6. Roofing and Gutters

a. Clean existing gutters. Adjust for proper pitch, where required.
b. Provide temporary patching if any roof leaks are noted.

7. Building Structure

a. Shore Area A at south wall (adjacent to stairs) to halt ongoing deterioration.
b. Provide roof tarp and temporary drainage swales to minimize ongoing damage.
c. Continue removal of later finishes (sheetrock) throughout space interior.
c. Begin process of relocation of kitchen from Area B.

D. BUILDING IMPROVEMENTS: LONG TERM

Area 'A' c.1741. North, earliest 1 ½-story section.
Area 'B' c.1750. Hyphen between A and C/D
Area 'C' c.1750. South, 2-story section without basement
Area 'D' c.1750. North, 2-story section with basement
Area 'E' c.1850. South porch

The following broad categories for future building improvements are intended for further refinement in Phase 2 of the Existing Condition Study.

1. Roofing

A. Areas A, C, D, E. Install new roofs all areas. Include exploration of options for wood shingles and alternate materials. Anticipate project to include flashing repairs/replacement and, for Area A, structural repairs/reinforcement of the roof system.

Note: Areas C, D can be undertaken independent of other roof areas.

B. Area B. Replace low slope roofing this area. Requirements for future plumbing or venting relative to restroom and kitchen facilities (which would penetrate the roof) should be determined prior to the roofing installment.

2. Building Structure

A. Areas A, B. Critical structural needs from the foundation to the roof should be undertaken prior to any other improvements in these areas of the building. Work should be planned and overseen by an architect and engineer with specific historic preservation expertise.

Lower Wall Sections/Foundation/Floors

1. Repairs to existing foundation; completion of sub-grade drainage around building.
2. Removal of siding/trim as required to access lower wall areas.
3. Replacement of lower wood sills and vertical framing members as required. At select areas (example south wall), wall repairs will extend further vertically.
4. Repair/reinforcement of first floor and second floor flooring structures and finishes.

Upper Walls/Roof

1. Repair/reinforcement of upper framing members including top wall plate.
2. Repair/reinforcement of roof framing members.
3. Installation of new roof sheathing and roofing.
4. Related masonry repairs at fireplaces and chimneys.

3. Interior Finishes

A. Develop a plan for all interior spaces, incorporating WHS goals for individual spaces, interpretation and collections, and upgrades to interior building systems. No critical needs for interior spaces, beyond what is noted herein, have been identified.

4. Heating/Cooling

A. (old) Furnace #1 (serving Area A, NE corner of Area C)
Design/install a new heating/cooling system that is less visually and physically obtrusive and, if possible, eliminates providing heat to Area C. Design and selection of systems to be compatible with approved floorplan modifications.

B. (existing) Furnace #2 (serving most of Area C, Area D)
Design/install a new heating/cooling system that provides conditioned air to all first and second floor spaces of the building. Design and selection of systems to be compatible with approved floorplan modifications.

5. Electrical

A. Electrical System. Future work on the building to include inspection and upgrades of all components of the electrical system to ensure building safety.

B. Lighting. Lighting fixtures should be introduced that are more energy efficient and optimize the presentation of exhibits and collections. Exterior lighting should be reconsidered to increase night time visibility of the Homestead.

C. Fire Alarm/Detection; Emergency Lighting. Upgrades using current, nonobtrusive technology to be considered and incorporated into other future building upgrades.

6. Plumbing

A. Kitchen. New kitchen facilities to be added and selected location.

B. Restroom. New accessible restroom facilities to be added at selected location.

PHOTOGRAPHS

Photo 1. Undated map (at Homestead).

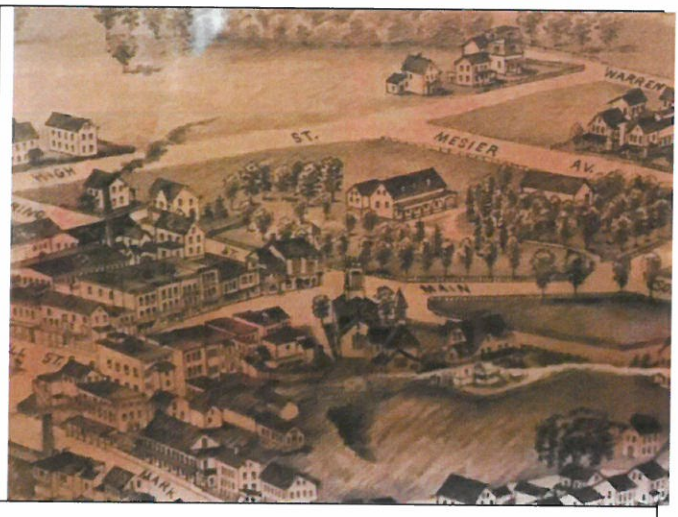

Photo 2. 1889 print (at Homestead).

Photo 3. West and south elevations, 1906 (at Homestead).

Photo 4. West and south elevations, c.1882, (at Homestead).

Photo 5. East elevation, c.1910, (at Homestead).

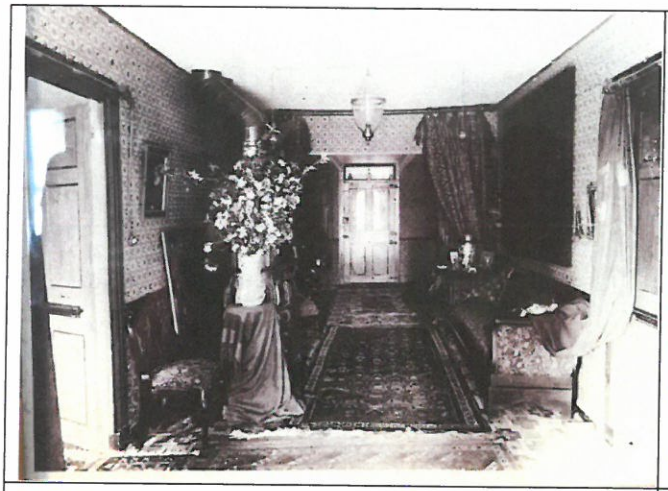

Photo 6. Room 106N, looking north, c.1880s, (at Homestead).

Photo 7. Room 106N, looking north, 2017.

Photo 8. Room 113, looking northeast, c.1880s, (at Homestead).

Photo 9. Room 113, looking northeast, 2017.

Photo 10. Room 112, looking west, c.1880s, (at Homestead).

Photo 11. Room 112, looking west, 2017.

Photo 12. Room 112, looking northeast, c.1880s, (at Homestead).

Photo 13. Room 112, looking northeast, 2017.

Photo 14. South and west elevations.

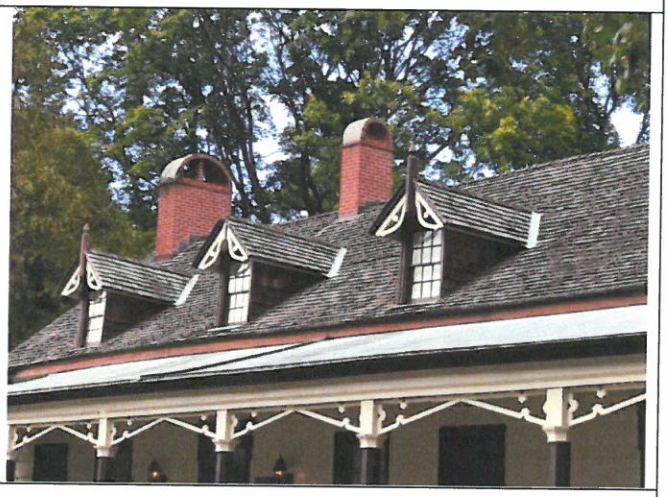

Photo 15. Dormers D6, D5, D4; Chimneys D2 and D1.

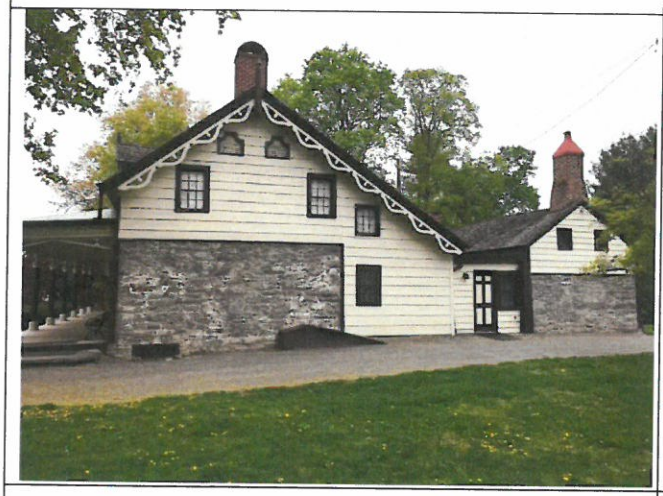

Photo 16. East elevation.

Photo 17. West elevation.

Photo 18. West elevation and porch (Area E).

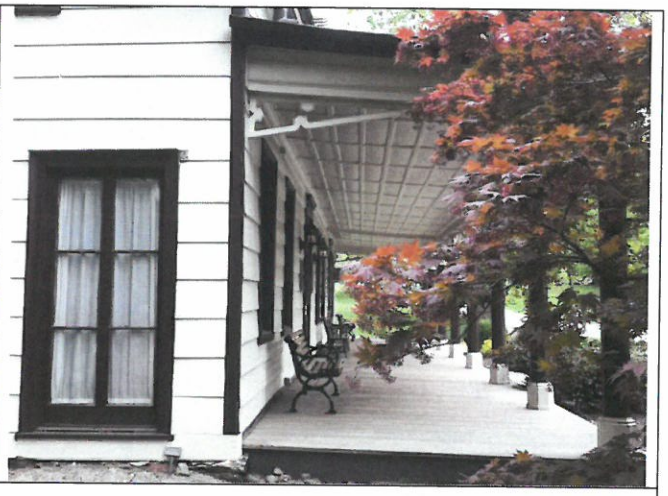

Photo 19. Porch looking east.

Photo 20. Area A, north and west elevations.

Photo 21. Area A, east and north elevations.

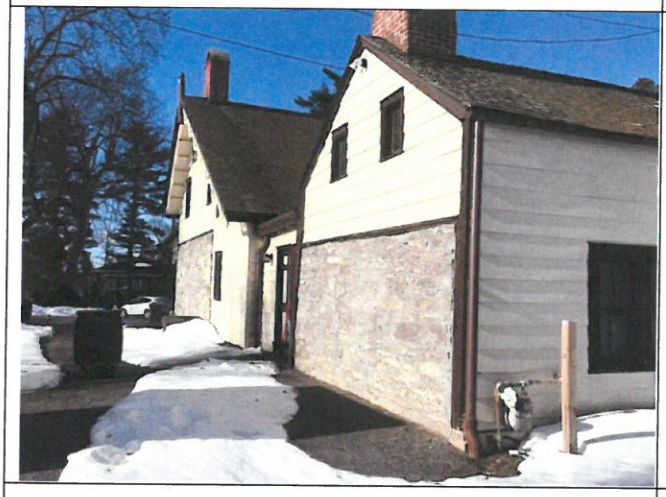

Photo 22. East elevation, from left: Areas D, C, B and A.

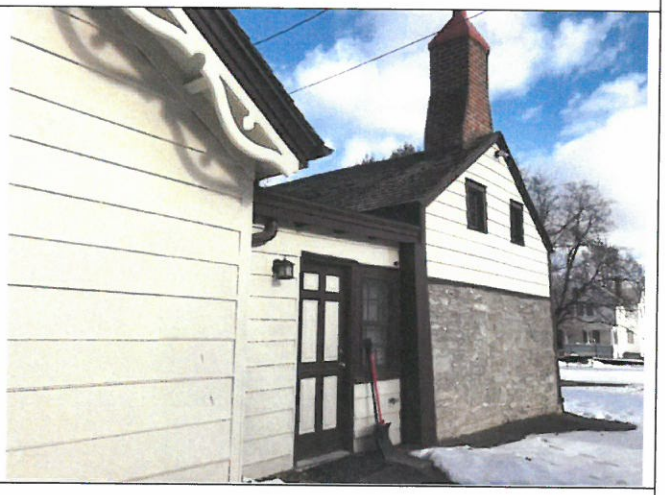

Photo 23. East elevation, from left: Areas C, B, A.

Photo 24. Area A, north elevation; Area B connector at right. Extreme drainage issues these sections of building.

Photo 25. Area A on left, Area B connector ahead, Area C on right. Extensive drainage issues have caused foundation and sill damage.

Photo 26. Area C and D roof, wood shingles (north elevation).

Photo 27. Area B, connector roof.

Photo 28. Area D, Chimney F and Dormer D6, roof.

Photo 29. Area A, Chimney A.

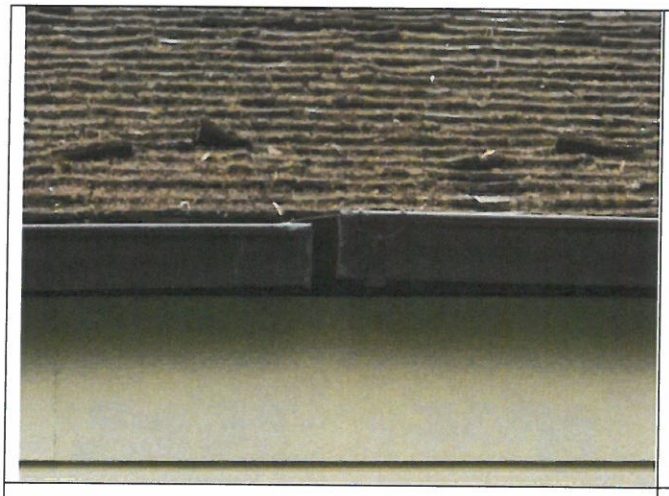

Photo 30. Area A, wood shingle deterioration, gutters.

Photo 31. Area B, roof drainage.

Photo 32. Area A, northwest corner stone foundation deterioration, typical.

Photo 33. Area A, deteriorated foundation parging, typical.

Photo 34. Area A, northwest corner, siding deterioration, typical.

Photo 35. Siding and trim condition, typical.

Photo 36. Area A, windows, south elevation.

Photo 37. Area A, window, typical condition, windows ands sills.

Photo 38. Area A, shutter and early hardware at window opening, south elevation.

Photo 39. Area A, shutter hardware, detail.

Photo 40. Area D, hall and entrance doors S7 and S10, south elevation.

Photo 41. Area D, hall door N6, north elevation .

Photo 42. Area B, entrance door E7, east elevation.

Photo 43. Area A, entrance door N11, north elevation.

Photo 44. Area A, Room 102, looking west.

Photo 45. Area A, Room 102, looking east.

Photo 46. Area A, wood framing and trim above ceiling, Room 102.

Photo 47. Area A, extreme deterioration (open to exterior) at south wall at base of stair, south elevation.

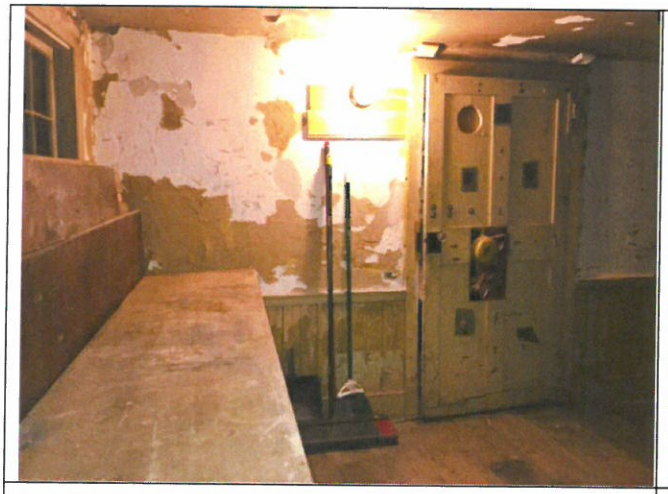

Photo 48. Area A, Room 101, looking east. Original/early wainscot, plaster, door.

Photo 49. Area A, Room 101, looking south, window opening converted from original door.

Photo 50. Area A, Room 101, west mantle/fireplace.

Photo 51. Area A, Room 102, original door with modifications.

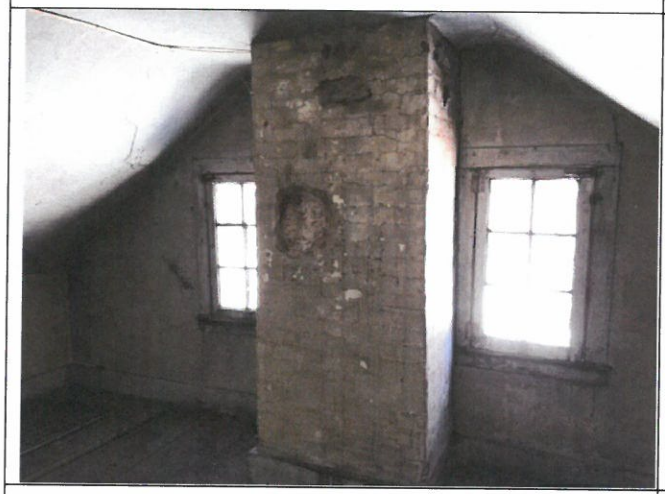

Photo 52. Area A, Room 201, looking west.

Photo 53. Area A, Room 201, looking north.

Photo 54. Area A, Room 202, looking north.

Photo 55. Area A, Room 202, condition of roof and wall framing, typical.

Photo 56. Area A, Room 203, modified chimney, looking east.

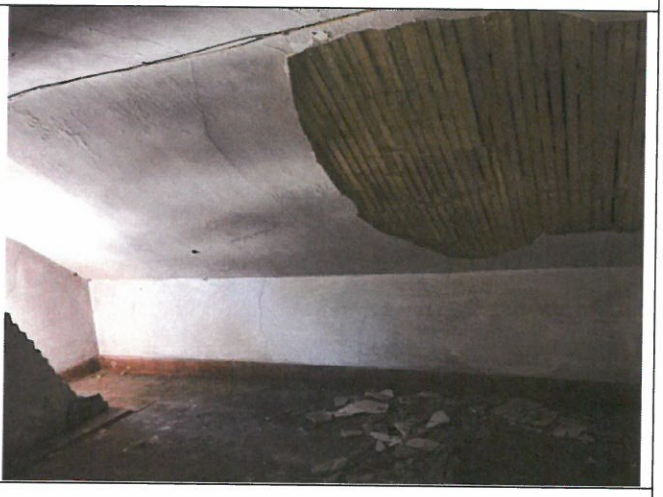

Photo 57. Area A, Room 203, looking south.

Photo 58. Area B, Room 103, looking northeast.

Photo 59. Area B, Room 103, looking west.

Photo 60. Area D, Room 001, looking east.

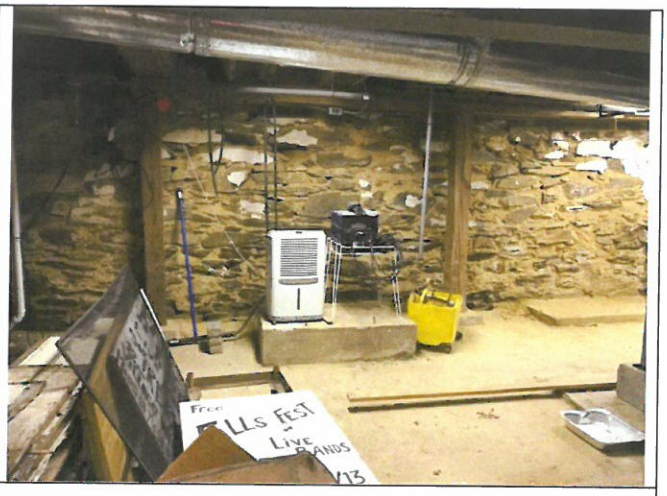

Photo 61. Area D, Room 001, looking north.

Photo 62. Area D, Room 001, Chimney B west face.

Photo 63. Area D, Room 001, Chimney B east face.

Photo 64. Area D, Room 001, Chimney C east face.

Photo 65. Area D, Room 002, loose and spalling stone at Stair 2.

Photo 66. Area D, Room 001, southwest corner, evidence of infestation and deterioration, likely due to stored wood materials.

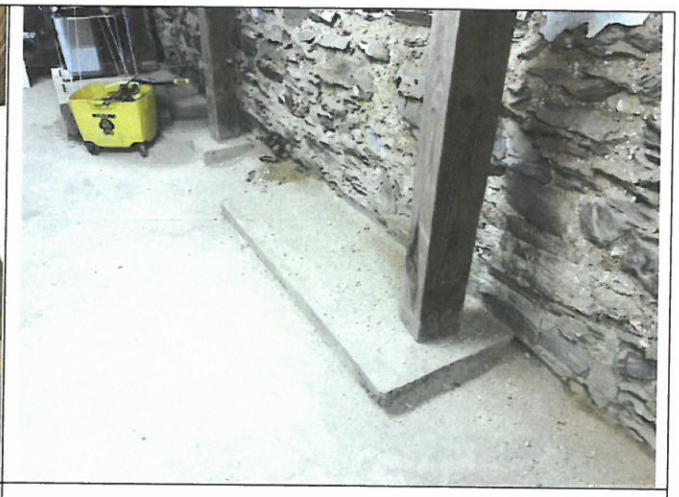

Photo 67. Area D, Room 001, north wall new posts and concrete slab.

Photo 68. Area D, Room 002, Looking east.

Photo 69. Area D, Room 002, south wall.

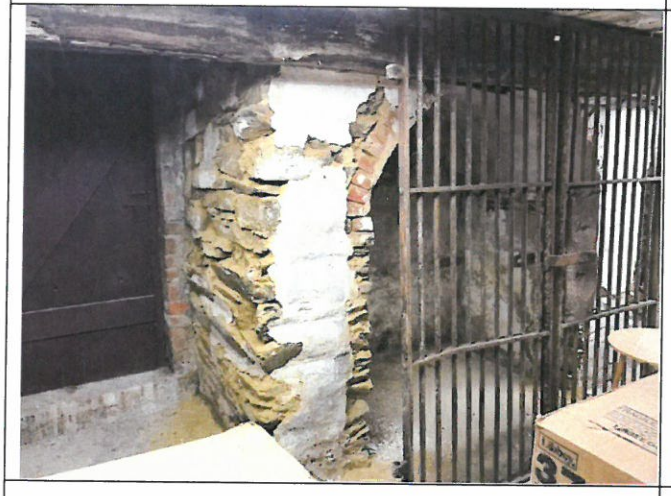

Photo 70. Area D, Room 002, Chimney A west face.

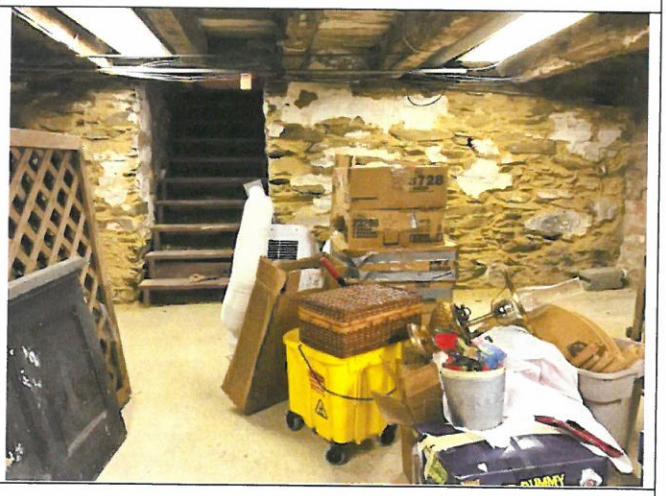

Photo 71. Area D, Room 002, nofth wall to Stair 2.

Photo 72. Area C, Room 105, looking east.

Photo 73. Area C, Room 105, looking southwest.

Photo 74. Area C, Room 105, opening in floor to crawlspace.

Photo 75. Area C, Room 105, view of replaced wood framing on stone wall in crawlspace, north wall.

Photo 76. Area C, looking north to Room 106N.

Photo 77. Area D, looking south to Room 106S.

Photo 78. Area C, Room 108, looking west

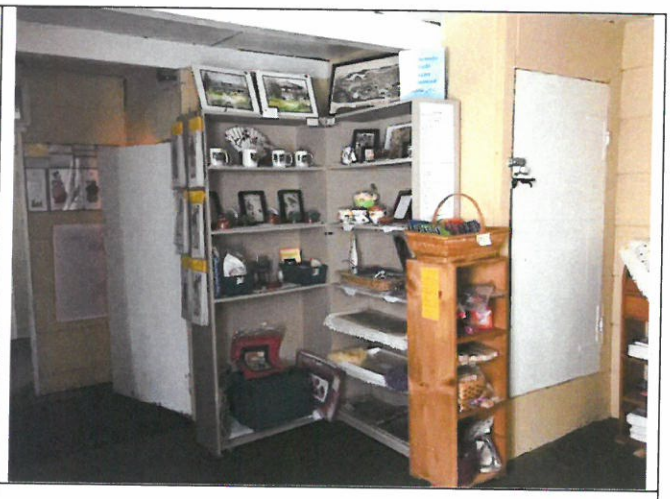

Photo 79. Area C, Room 108, looking southeast.

Photo 80. Area C, Room 109, looking north.

Photo 81. Area C, Room 109, looking south.

Phot o 82. Area C, Stair 2, looking east.

Photo 83. Area C, Stair 3, looking south.

Photo 84. Area D, Room 111, looking north.

Photo 85. Area D, Room 111, looking south.

Photo 86. Area D, Room 111, looking west.

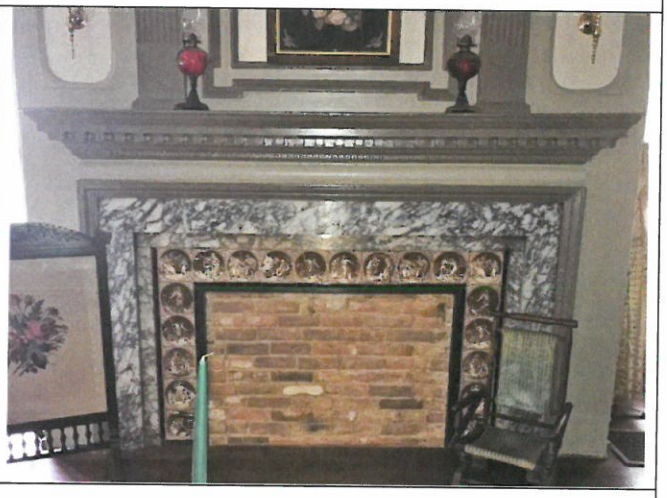

Photo 87. Area D, Room 111, fireplace detail.

Photo 88. Area D, Room 112, looking northeast.

Photo 89. Area D, Room 112, looking northwest.

Photo 90. Area D, Room 112, fireplace detail.

Photo 91. Area D, Room 112, view into fireplace (original construciton visible).

Photo 92. Area D, Room 113, looking south.

Photo 93. Area D, Room 113, looking north.

Photo 94. Area C, Room 204, looking east.

Photo 95. Area C, Room 204, looking west.

Photo 96. Area C, Room 205, looking west.

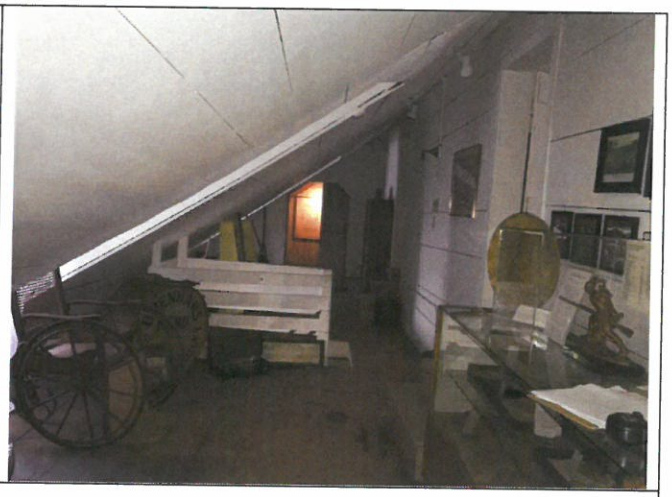

Photo 97. Area C, Room 206, looking east.

Photo 98. Area C, Room 206, south wall.

Photo 99. Area C, Room 206, ceiling looking east..

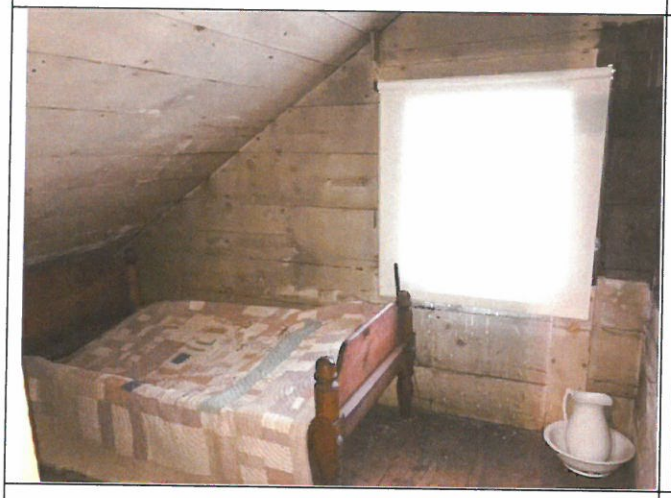

Photo 100. Area C, Room 207, looking east.

Photo 101. Area C, Room 207, looking south.

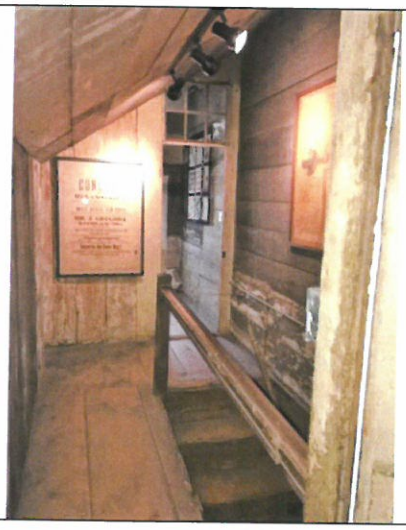

Photo 102. Area C, Stair 2, looking east.

Photo 103. Area C, Stair 2, looking west.

Photo 104. Area C, Stair 2, looking southeast.

Photo 105. Area C, Stair 2, looking south. Original exterior framing and finishes visible.

Photo 106. Area D, Room 209, looking southwest.

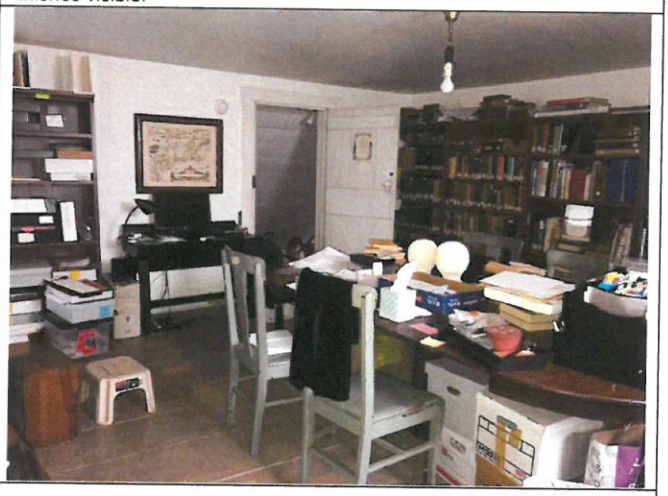

Photo 107. Area D, Room 209, looking southeast.

Photo 108. Area C, Room 210, looking southwest.

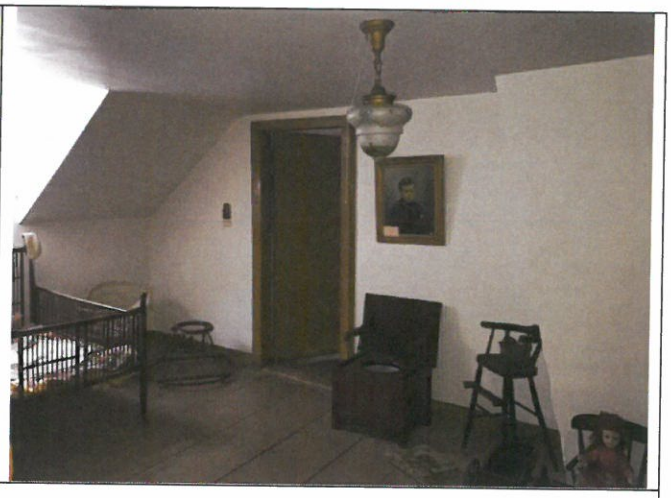

Photo 109. Area C, Room 210, looking north.

Photo 110. Area C, Room 210, looking west.

Photo 111. Area C, Room 210, looking west.

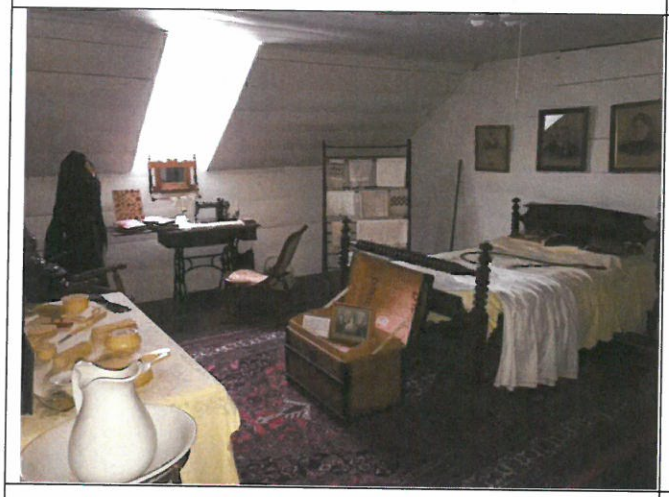

Photo 112. Area D, Room 211, looking southwest.

Photo 113. Area D, Room 211, looking north.

Photo 114. Area D, Room 211, looking west.

Photo 115. Area D, Room 211, looking north.

Photo 116. Area D, Room 212, looking southeast.

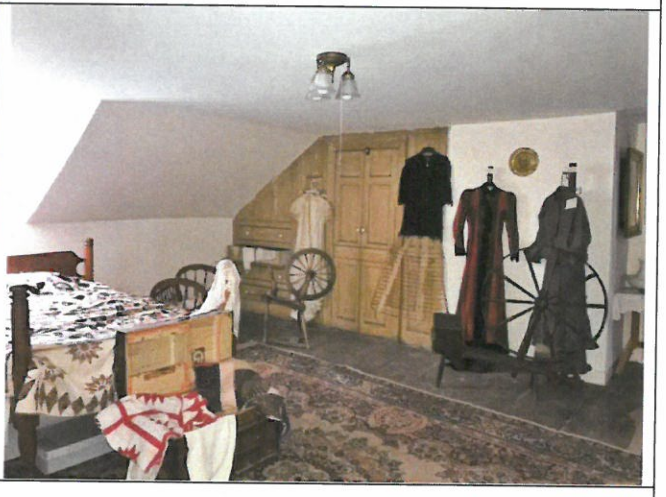

Photo 117. Area D, Room 212, looking southwest.