RDG PLANNING ● DESIGN

Existing Conditions Report
and Treatment Recommendations
Abbie Gardner Sharp Cabin Historic Site

74 Monument Drive
Arnolds Park, IA 51331

RDG Project Number: 3004.995.00

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Executive Summary

This report documents the existing conditions at the Abie Gardner Sharp Historic Site located at Arnolds Park, Iowa. The log cabin, serving as the centerpiece to the site, was constructed in 1856. Long term weathering now necessitates repairs to the cabin. The site also includes a visitor center Museum (1962), stone Monument (1894), and other monuments and grave markers.

This report is independent of a concurrent Interpretive Master Plan. Results and implementation of the Master Plan will likely affect the use of the buildings, monuments, and site features included in this report.

Unfortunately, historic log cabins, at the time of construction, were generally considered by the builders as temporary shelter, and so the building materials and techniques did not take a long-term approach. This presents a unique challenge in preserving such materials and structures for future generations.

Recommendations of this report include:

- Sensitive repairs to the historic Cabin.
- Replacement of the Museum with a new building in support of the Master Plan.
- Selective repairs and cleaning of the Monuments.
- Repair work would be conducted in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties. (36 CFR Part 68)

History

Note: this portion is not intended to be a comprehensive history of the site or the structures, but simply to provide general context for the remainder of the report.

The cabin is listed on the National Register of Historic Places (1973) as the Spirit Lake Massacre Log Cabin or Gardner Log Cabin. Note that nominations during this era were typically brief and concise.

The period of significance was listed as March 8, 1857. The Museum (1961-1962) and Memorial Monument (1894-1895) are also mentioned. Since these were constructed after the date of significance, they would generally be considered as "non-contributing structures" to the site, based on this nomination.

The nomination notes that "all traces of Mrs. Sharp's Museum have been removed…" and notes that the cabin was recently to 1857 appearance. Had the site been nominated today, with the Sharp Museum construction intact, the period of significance would likely have included the time used as the museum (1891-1921) with alterations by Sharp retaining acquired historic significance; and included the Memorial Monument and Gravesite as contributing structures.

The nomination states that the cabin was constructed in July 1856 by early settler Rowland Gardner. His daughter, Abagail Gardner Sharp purchased the cabin in 1891 and operated it as a museum until 1921. The site was acquired by or sold to the State of Iowa (Iowa Conservation Commission) in 1941-1942. The State Historic Society took control of the site in 1959. The nomination states that sometime after 1959 that a "protective over-hang roof of pole-type construction (had) been placed over the cabin…"

The Iowa Department of Cultural Affairs (DCA) website includes some brief history of the cabin as well. This information states that the cabin was operated by Abbie as one of Iowa's first tourist attractions (1891-1921) displaying Native American artifacts within the log cabin. By 1891, the cabin had been enlarged to include a second story. Abbie reportedly added a framework and lattice to "hide the cabin from view by non-paying visitors."

Existing conditions and conjectural drawings, plans and elevations, were developed in 1973. (Drawings on file at SHSI.) Some of these show the protective structure and lattice possibly built at the time of the Sharp Museum (as seen in period photographs), and later removed around this time, apparently.

The nomination also mentions "a basement which is now sealed."

Photos on file at the SHSI (State Historical Society of Iowa) record archaeological investigations in 1974. By this time, the cabin appears to have been restored to 1857 appearance. The scope of the below grade investigations appear to be concentrated to within a couple of yards around the exterior perimeter of the cabin. Some photos indicate a possible exterior entry to a basement at the south end of the west elevation.

A set of "as built" drawings (May 31, 1975) was also developed, following restoration of the cabin. These architectural drawings were developed by Wagner, Marquart, Wetherell Architects (Des Moines, Iowa). These drawings identify "new" logs incorporated into the exterior walls, as well as "1864" logs which were "reused" from the "1864 changes." It is assumed that unmarked logs date from 1856 construction. The split cedar shakes likely date from the 1973 restoration.

Additional archaeological work was conducted in 2006 during electrical service on site for the cabin and museum.

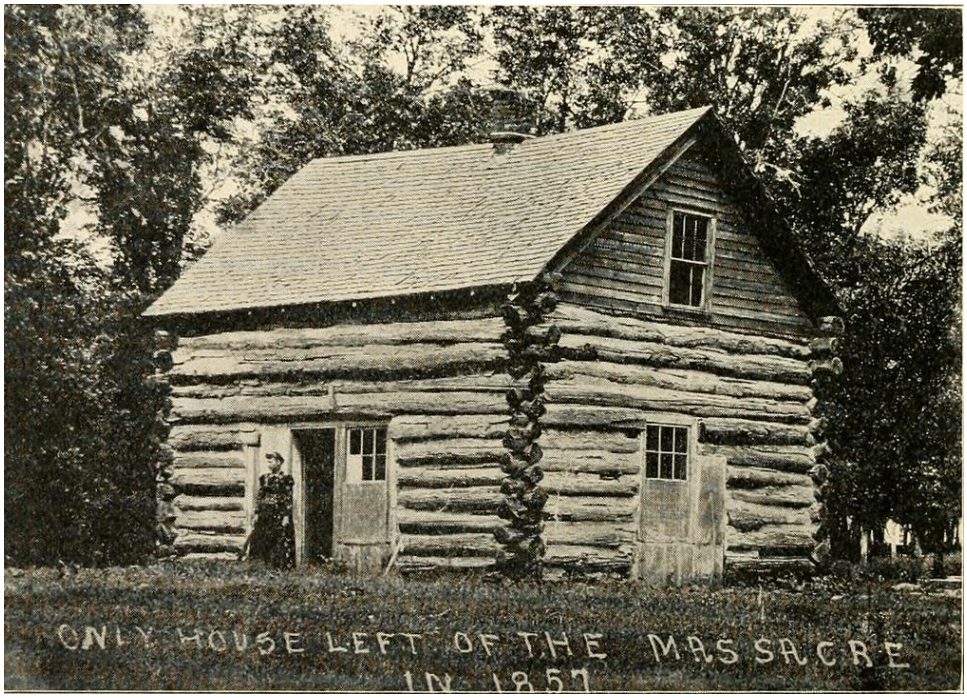

Figure 1 – undated image of the cabin

Figure 2 – undated stereoscopic image of the cabin

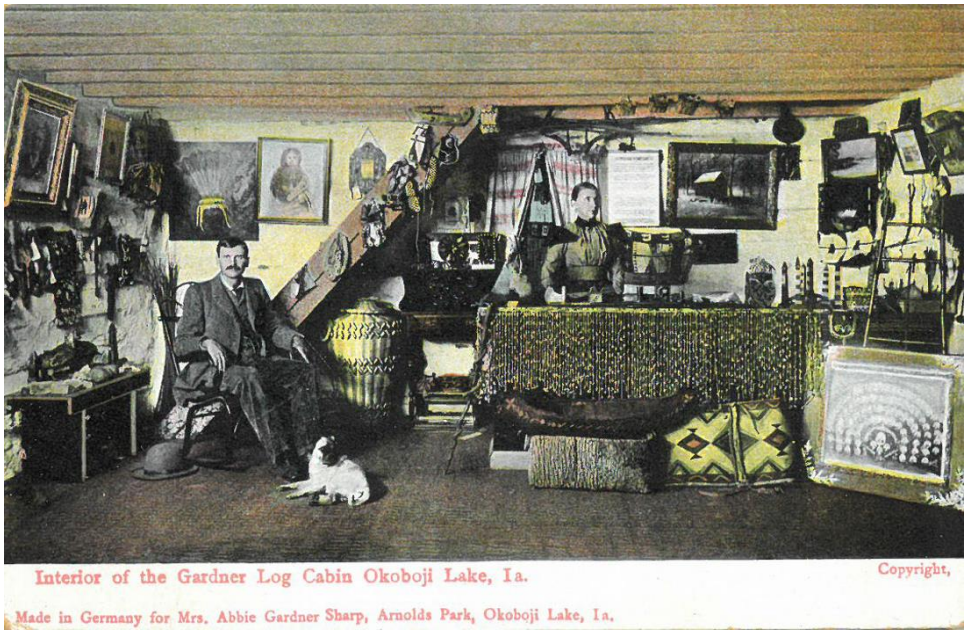

Figure 3 – undated colorized image postcard of the cabin interior operated as a museum

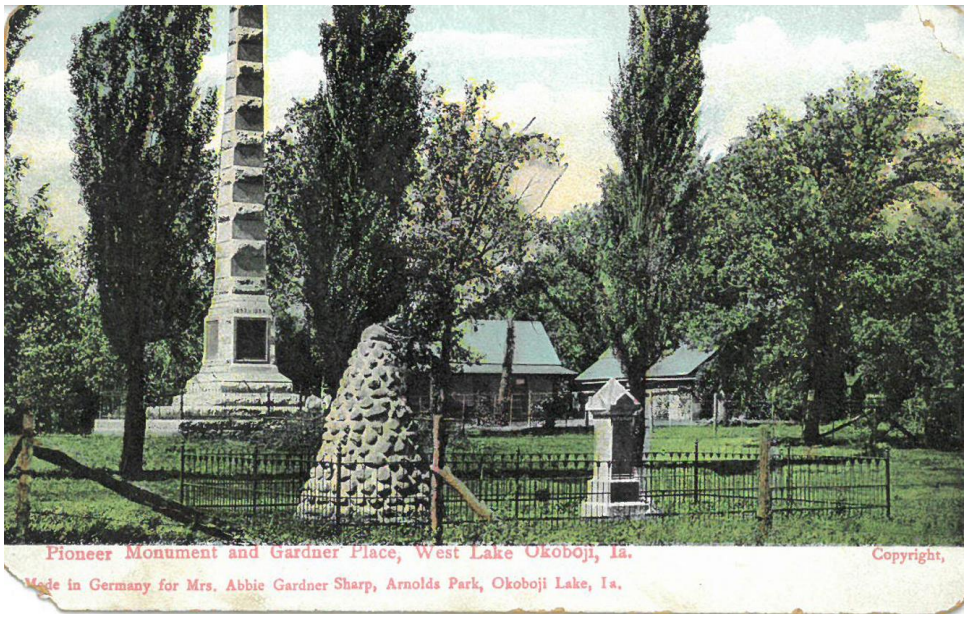

Figure 4 – undated colorized image postcard of the 1894 monument, cairn, and cabin

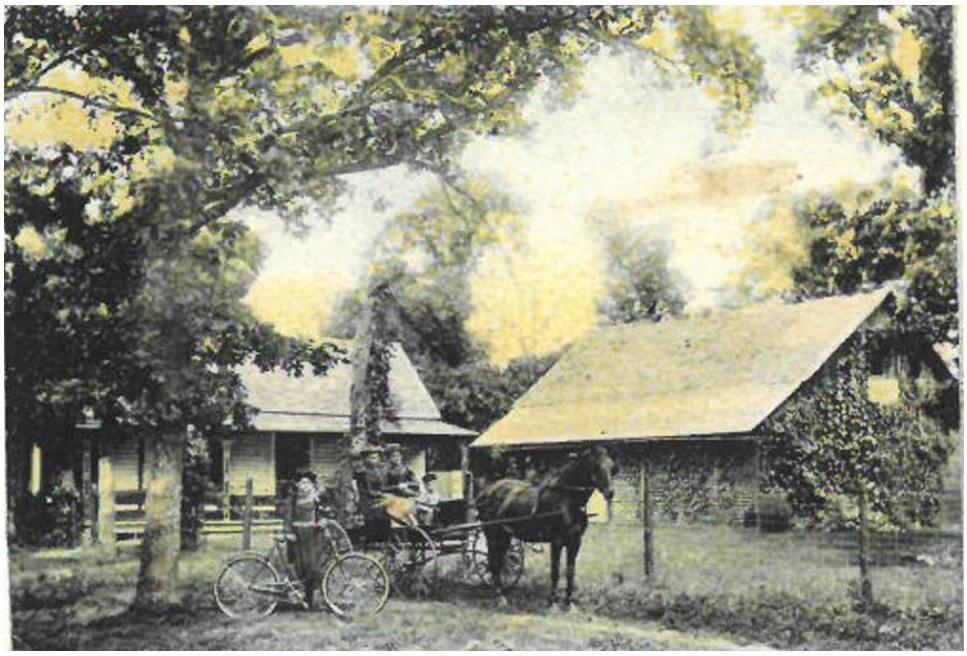

Figure 5 – undated colorized image postcard of the cabin

Figure 6 – undated image of the 1894 monument

Figure 7 – undated image showing lattice work obscuring the cabin to non-paying visitors

Figure 8 – archaeological excavations, 1974

Figure 9 – archaeological excavations, 1974

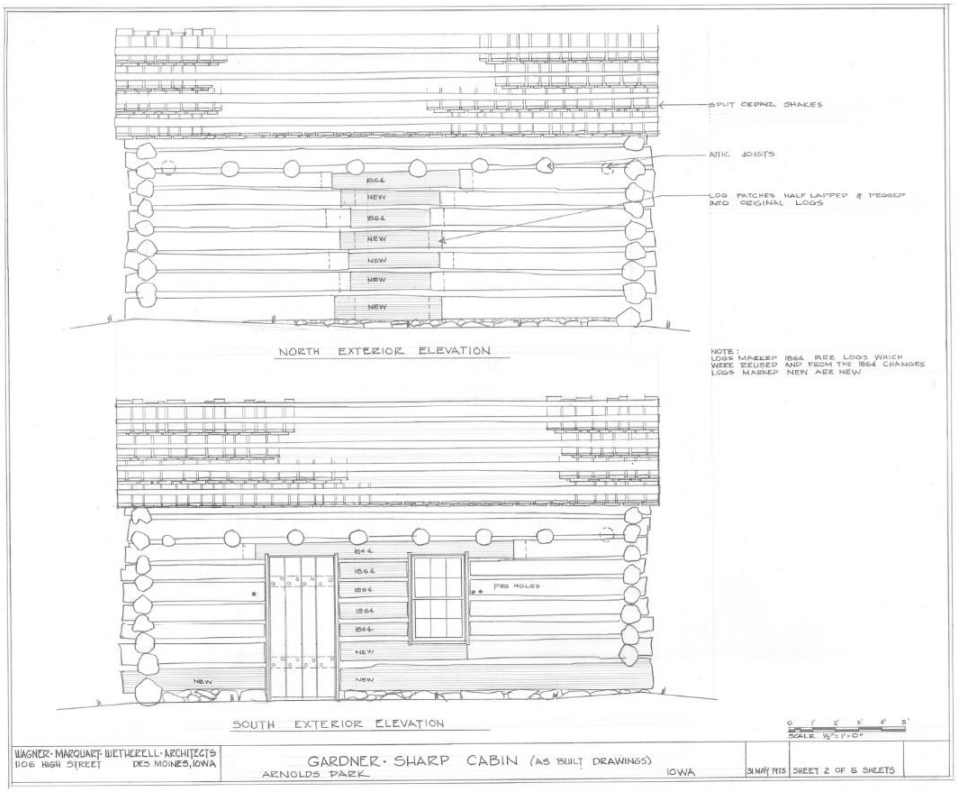

Figure 10 – as built drawings, 1975

Introduction

RDG Planning & Design was contracted by the Iowa Department of Cultural Affairs in the spring of 2022 to assess and make recommendations for prioritized repairs to the cabin, museum, and site features. An initial site visit was conducted on May 4, 2022 by Scotney Fenton, AIA, architect with RDG Planning & Design (Des Moines, IA).

The focus of the observations of the existing conditions and recommendations include:

- Repairs to the cabin, and methods of long-term preservation.
- Repairs to the museum, and consideration of retention or replacement of the existing building.
- Repairs to the monuments and site features.

A future Recommended Preservation and Restoration Action Plan for clarifying the next steps may include:

- Prioritized immediate repairs; for the production of bidding and construction documents.
- Long-term stabilization and other repairs.

Scope of services excludes excavation of structures for further observations.

Scope of services excludes the identification, testing, mitigation, encapsulation, abatement, or disposal of potential hazardous materials, including mold, lead, animal waste, and asbestos.

Note: a concurrent project, the Interpretive Master Plan, will:

- Develop a comprehensive interpretive master plan that will provide the vision for interpretation at the Abbie Gardner Sharp Cabin site, including self-guided and guided interpretation.
- Provide concepts for interpretation that are inclusive and accessible.
- Incorporate indigenous voices into the plan, in addition to DCA staff and stakeholder input.
- Establish cost opinions for the various elements of the plan.

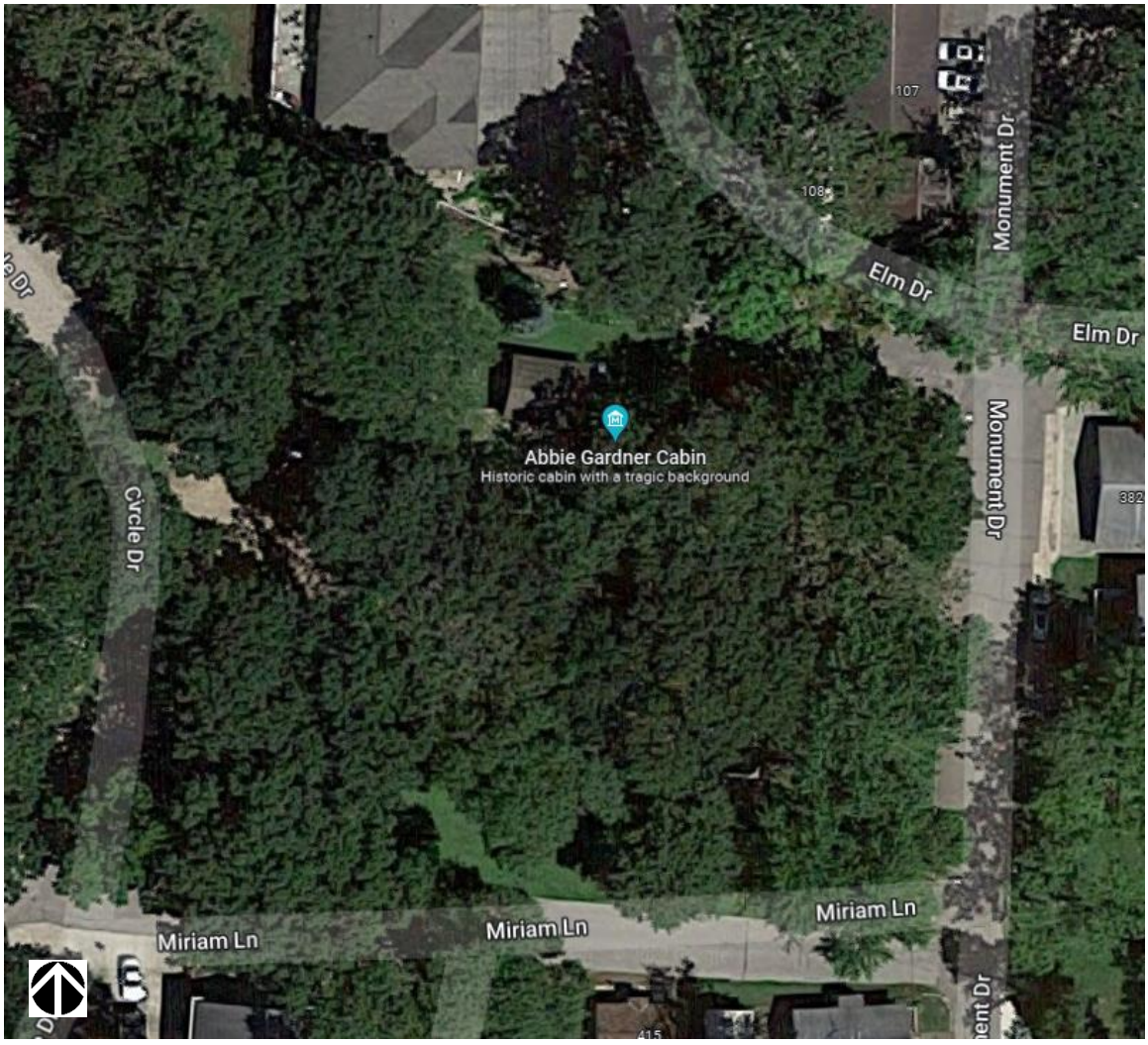

Figure 11 – aerial view of the site (source: Google Maps, 2022)

Figure 12 – museum building, 2022

Figure 13 – cabin, 2022

Figure 14 – monuments, 2022

Condition Assessment - Cabin

A. GENERAL

The log cabin was originally constructed in 1856. Significant repairs and partial reconstruction (included some logs, and the roof) was completed around 1974.

The building is rectangular in plan. The exterior dimensions are approximately 22 feet by 18 feet.

B. SITE

Pavement and routes:

Concrete steppingstones lead up to additional concrete pavers place outside the entrance door.

Adjacent grades:

Some grades slope gently away from the base of the exterior walls. The general perception is that the interior floor elevation is slightly lower than the exterior grades.

C. ROOF

Materials:

Existing wood shingles, double layer. Each shingle is approximately 24” to 36” in length; with 18” to 24” exposure. These likely date from the 1974 era restoration. There is some moss or other biological growth over much of the roof, but severe growth is located on the north half of the roof, which likely receives less sunshine than the south half. The shingles are in fair condition, although generally no leaks were reported.

Water management:

A v-shaped wood gutter is located along both the north and south roof lower edges. These may date to the 1974 era restoration. These are in poor condition. There are no downspouts; the water likely simply runs out the ends onto the ground. Gutters and other water management is needed, but challenging to provide if the 1856 cabin never had them to begin with.

Figure 15 – cabin roof

Figure 16 – cabin roof

D. WALLS - EXTERIOR

Materials:

Exposed wood logs with chinking in between. The 1975 as-built drawings identify some logs as “new” (1974 restoration), “1864” (1864 changes), “orig” (1856 construction) and no date (likely presumed 1856 construction). It’s not clear how the 1856 and 1864 materials were identified.

Logs. The logs are in generally fair condition, considering their age. Several show conditions of rot and worm holes. The south wall appears to be bowing out from the plane of the wall. Note: this report does not identify wood species and specific age of the logs.

RM

Chinking. Much of this material likely dates to 1974 restoration or later repairs. It appears to generally consist of dried mud and grass, with some pebble aggregate. Due to the very temporary nature of this material, this requires constant maintenance; much of what is in place today is likely repairs and has fallen out in many places. The chinking is typically about 3” wide, except at the south face, where it is about 6” wide.

Figure 17 – cabin west and south walls

Figure 18 – cabin east and north walls

Figure 19 – cabin chinking

Figure 20 – cabin logs

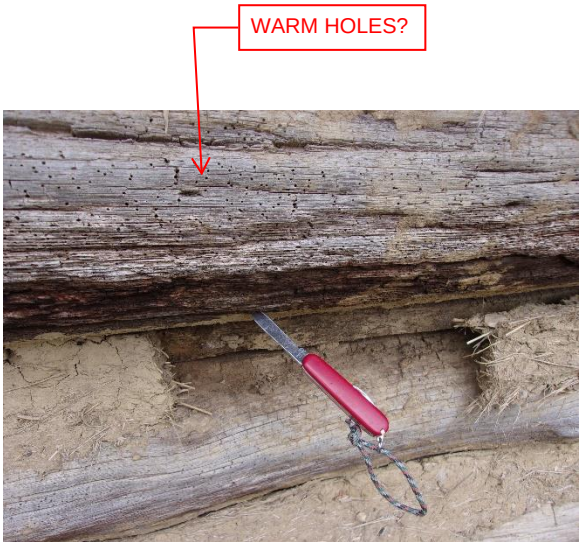

Figure 21 – cabin chinking

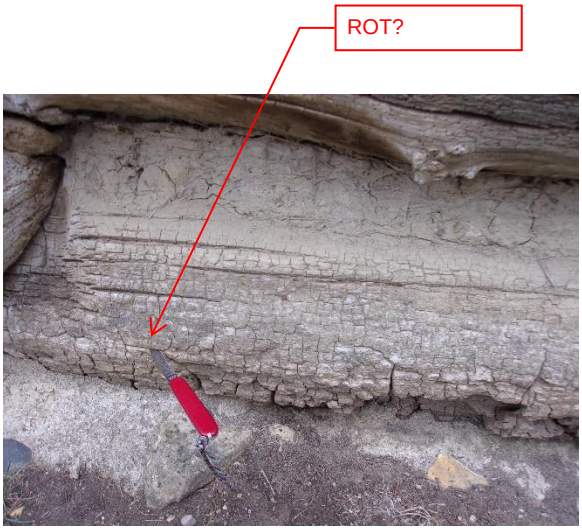

Figure 22 – cabin logs

E. FOOTINGS AND FOUNDATIONS

Exposed base of the wall is rock rubble and concrete. Some parts of the footing have a parge coat of cement.

There does not appear to be a basement, although photos from 1974 excavation appear to show a basement or cellar with an exterior entrance at the south end of the west wall.

F. WINDOWS

South wall has a simple 6 over 6 double wood window. Both sashes are fixed into place. This style of window appears in early photographs of the cabin, near this location, and in other locations. It's not known if this window dates to 1857, but was likely retained or reused from the existing windows in place during the 1974 restoration. The glazing putty is in poor condition, missing in locations. There is no window hardware, or counterweight for the sashes. The sashes and frame are unpainted.

RM

Is the window hardware missing?

West wall has a simple one pane opening, no sash. This appears to date to 1974 restoration. The nature of it suggests that this was provided so that people could look into the cabin when the interior was closed to visitors.

Figure 23 – cabin south window

Figure 24 – cabin entrance

G. DOORS - ENTRANCES

South wall has one wood plank door. The planks are about 2” thick; the opening is about 2’-8” wide and 5’-9” tall. This appears to date from the 1974 restoration.

H. CEILING - INTERIOR

The ceiling is made of exposed log joists at about 2’-6” on center, some with exposed bark; these date from the 1974 restoration. A layer of log planks, with exposed bark on the bottom, lies on top of the joists. The top half of the log planks, visible in the attic space, are generally flat and smooth. The planks are omitted at the west end to allow access to the attic space.

Figure 25 – cabin attic

Figure 26 – cabin attic

I. WALLS - INTERIOR

A wood partition made of painted 2x lumber separates the exhibit area from the visitor area. The wall is infilled with wire fabric at the bottom half of the wall. This visitor area is approximately 5’-9” x 11’-0”.

The interior face of the log walls is exposed. Several show wood-working tool marks. There are also several wood pegs and pegs holes in the walls.

Figure 27 – cabin interior

Figure 28 – cabin interior

J. FLOORS

The interior floor consists of concrete, with a very rough finish. This dates from the 1974 restoration. The effect was likely intended to simulate a dirt floor. This is in the exhibit area.

The exterior perimeter of the floor generally appeared damp or wet. The elevation of the interior floor appears to be at or slightly below the exterior grade.

Inside the door, there is a wood plank floor, in fair condition.

K. FIXTURES FURNISHINGS EQUIPMENT

The interior exhibit display is a collection of period furniture and tools. There is no climate control for the artifacts.

A small pot bellied stove is located in the exhibit area, with an simulated electric flame inside; fed from overhead in the ceiling by extension cord, down the stovepipe.

L. SYSTEMS

Electrical:

The room has one electrical outlet, southwest corner of the room near the ceiling. This serves the stove and one light fixture.

Security:

The log plank door has a door position switch at the top (door head). A motion detector is located in the southwest corner of the room near the ceiling.

Fire and Smoke Detection:

A standalone battery powered residential type smoke detector is located in the southwest corner of the room near the ceiling.

M. LIFE SAFETY AND BUILDING CODE COMPLIANCE

Generally, modern existing building codes allow continued use of spaces and components that have been maintained in conformance to the building codes in force at the time of construction, unless there is a significant danger to the occupants, or the space undergoes a significant change.

Because there is no proposed change in use, a complete code analysis was not conducted.

Use of this space as a museum would allow for only one exit to be provided. The height of the exit (at 5’-9”), however, is much too low to meet modern building code exit pathway requirements. There is also a change in elevation at the exit door threshold.

N. HANDICAPPED ACCESSIBILITY

Generally, modern existing building codes allow continued use of spaces and components that have been maintained in conformance to the accessibility codes in force at the time of construction, unless the space undergoes a significant level of change. The Americans with Disabilities Act, and the Design Guidelines, took effect in 1991, with an update in 2010. Modern building codes, however, also incorporate very similar accessibility requirements.

Because there is no proposed change in use, a complete accessibility analysis was not conducted.

The size of the door (2’-8” wide x 5’-9” tall) is much too short to allow handicapped access. There is also a change in elevation at the exit door threshold. The required clear width of 32” is almost provided.

Condition Assessment - Museum

A. GENERAL

The museum was originally constructed in 1961-1962.

The building is rectangular in plan. The exterior dimensions are approximately 25 feet by 37 feet.

B. SITE

Pavement and routes:

Concrete sidewalks lead to the entrance door.

Concrete stepping stones with aggregate finish lead from the concrete walk to the cabin.

Adjacent grades:

The grade slopes from the west down to the east, approximately 3 feet, exposing the foundation wall. The site continues to slope down to the east at the parking lot located behind the building.

Vegetation:

A tagged tree is located approximately 4’ behind (to the east) of the building foundation.

C. ROOF

Materials:

Existing asphalt shingle, architectural (laminated or dimensional shingles) style roofing. This is in fair to good condition, it appears to be likely 7 to 10 years old.

Water management:

A K-style aluminum gutter is located along both the west and east roof lower edges with 4” rectangular downspouts. These discharge to grade with splash blocks.

Other:

There is an abandoned power supply pole with a security light. (The existing power supply is underground.) There appears to be 2 vent stacks penetrating the roof.

The roof overhangs the exterior walls by about 2 feet. The slope appears to be 4:12 pitch.

Figure 14 – museum roof

Figure 14 – museum roof

D. WALLS - EXTERIOR

Materials:

Vertical wood sheathing siding, painted or stained, generally in fair condition. The planks are 8” wide but are likely part of 4’ wide sheets of siding. The wall is 8’ tall.

Figure 29 – museum south and east walls

Figure 30 – museum north and west walls

E. FOOTINGS AND FOUNDATIONS

Likely poured in place concrete perimeter footing and floor, likely slab on grade with frost depth footings. The exposed footing faces at the north, west, and south walls appears to have a painted or stained mortar or cementitious parge coat applied, swirl pattern. The parge coat was likely used to mask the surface left by the concrete formwork.

A thin horizontal crack appears along the concrete footing, about 8” below the siding. This is likely near the point where the concrete floor transitions to the concrete footing.

There does not appear to be a basement.

F. WINDOWS

There are only 2 windows. A single window on the east wall, and a double window on the west wall. These are hand crank operating casement windows, and appear to be metal clad wood windows, with insulating glass. They appear to be in fair condition and likely at the end of their useful life.

Figure 31 – window

Figure 32 – entrance doors

G. DOORS - ENTRANCES

Pair of aluminum storefront entrance doors, 3’-0” x 7’-0”, full glass, mortise lock on each, and overhead closers. One door swings in and one swings out. No panic hardware.

H. STRUCTURE - GENERAL

The walls and roof are likely dimensional lumber built, batt insulation inside the walls.

The interior consists generally of exhibit and orientation space. A small storage closet and a single user non-gender restroom is also present.

Figure 33 – museum interior

Figure 34 – museum interior

I. CEILING - INTERIOR

The ceiling is 2’x4’ lay in suspended acoustical ceiling tile system. There is likely a layer of batt insulation above the ceiling tiles.

J. WALLS - INTERIOR

Painted wood paneling.

K. FLOORS

A low pile carpet is provided generally throughout, in fair condition.

A 12”x12” vinyl composition tile is used in the restroom, in fair condition.

The subfloor is likely 4” think concrete slab on grade.

L. FIXTURES FURNISHINGS EQUIPMENT

There are exhibit display cases, as well as art and artifacts on display. Benches and video screen serve as tour orientation area.

M. SYSTEMS

Mechanical:

The suspended ceiling uses conditioned air diffusers and returns from the time of construction. A more recent heat exchanger is used (Fijitsu split type air conditioner), mechanical equipment located outside and inside, near the entrance door.

Some more research on site is needed to determine what mechanical systems from the time of construction are still used.

Controls:

Thermostat is provided in the exhibit room.

Electrical:

Several outlets and lighting fixtures are provided throughout the building. A 150-amp fuse type panel is located in the restroom, this likely dates from time of construction. This likely also serves the circuit to the cabin. The incoming electrical service was reported converted from overhead to underground in 2006.

Lighting:

The exhibit room suspended ceiling uses 2x4 fluorescent lights.

Plumbing:

The restroom includes water closet and lavatory.

The exterior has a mall mounted drinking fountain at the north end of the east wall.

Some more research on site is needed to determine location of water heater, if any.

Telecommunications:

Single phone is provided.

Security:

One of the entrance doors (outswing leaf) has a door position switch at the top (door head). A motion detector is in the room. An alarm control station is located on the wall near the reception desk.

Fire and Smoke Detection:

A centralized smoke alarm panel is supported by smoke detectors in the exhibit room.

N. LIFE SAFETY AND BUILDING CODE COMPLIANCE

Generally, modern existing building codes allow continued use of spaces and components that have been maintained in conformance to the building codes in force at the time of construction, unless there is a significant danger to the occupants, or the space undergoes a significant change.

Because there is no proposed change in use, a complete code analysis was not conducted.

If the number of occupants does not exceed 50 people, then only one exit is required. (2015 IBC 1006.2.1)

O. HANDICAPPED ACCESSIBILITY

Generally, modern existing building codes allow continued use of spaces and components that have been maintained in conformance to the accessibility codes in force at the time of construction, unless the space undergoes a significant level of change. The Americans with Disabilities Act, and the Design Guidelines, took effect in 1991, with an update in 2010. Modern building codes, however, also incorporate very similar accessibility requirements.

Because there is no proposed change in use, a complete accessibility analysis was not conducted.

A restroom is provided. The accessories include grab bars at the water closet. Furnishings and floor clearances do not appear to likely provide full compliance. The door is not likely accessible due to clear floor space and lack of lever door hardware.

The entrance threshold appears to be too tall for accessibility.

The flower pot outside impedes on the accessible entry area. The bike rack impedes on use of the exterior drinking fountain.

There is a designated handicapped parking space behind the building. The unmarked access aisle is gravel and likely exceeds accessible 2% slope. Still more research is needed to determine if the path from the parking space to the entrance is accessible; it appears to exceed 5% slope, however.

Condition Assessment – Monuments and Site

A. SITE

Vegetation:

Local grasses are typical, the lawn generally does not have full coverage of grass.

There are about a dozen and a half trees are located on the site. These are mostly deciduous (oak). Age and conditions were not determined.

Some trees have been significantly trimmed, or cut down leaving the stumps.

Parking:

About a half dozen parking spaces are located behind (west of) the museum, this is a gravel lot. One handicapped designated place is identified with signage. Additional signage directs visitors to off-site parking; this parking was not evaluated.

Figure 35 – museum exterior

Figure 36 – museum exterior

Pavement and routes:

Concrete sidewalks lead from the parking lot up to the museum entrance door.

Amenities or furnishings:

Bike rack is provided near the museum entrance door.

Picnic tables (3 or 4) are provided.

A couple of concrete benches are provided.

An electrical transformer, fire hydrant, and street signs are located.

A split rail type wood fence is provided, poor condition.

Tepee poles set up without covering.

B. MONUMENTS

Obelisk (1894):

The granite monument was constructed in 1894. It includes 4 bronze panels. Horizontal joints in the granite appear to be white lead. There is lichen on some of the stone. The granite could be cleaned, if desired.

The monument appears to be in good condition.

Some more research on site is needed to determine if drone footage could be collected for additional information.

A base is constructed of a limestone wall and painted steel railing. This is in fair to good condition with some stone spalling. Stone joints could be repointed, and metal could be repainted.

Figure 37 – obelisk

Figure 38 – mass grave

Figure 39 – obelisk joint detail

Figure 40 – obelisk railing and wall

Mass Grave site:

The painted steel railing is in fair to good shape. Parts of the railing have broken off over time. The design is very similar to the fence at the base of the obelisk, and likely date to the same time period. A more modern “in memory of” stone is located here.

D.A.R. monuments (1928):

Two quartzite boulders on concrete pads, with bronze plaques. These are in good condition.

Figure 41 – DAR monuments

Figure 42 – Family cemetery

Figure 43 – cairn detail

Figure 44 – stone detail

Gardner Family cemetery:

This is located across the street, off the southeast corner of the site.

A steel fence surrounds the collection of graves.

Three granite headstones.

One granite bench memorial.

One cairn constructed of rocks, with signage.

These are in good condition, with significant lichen in some locations, making the inscriptions hard to read.

The cairn appears to have high strength mortar with exposed aggregate. Some of the mortar is missing, near the base.

Regulatory Summary

A. AUTHORITY HAVING JURISDITION

The cabin and museum, along with the rest of the site, are owned by the State of Iowa, therefore would come under the jurisdiction of the State Building Code (Iowa Administrative Code, Chapter 301) recognized by the Department of Public Safety Administrative Code and enforced by the State Fire Marshal. The State Building Code has recognized the 2015 International Building Code and the 2015 International Existing Building Code, as amended by the Iowa Administrative Code.

Note that the 2015 International Existing Building Code references historic buildings as those listed on the NRHP. (2015 IEBC 202) Chapter 12 of this code addresses historic buildings. Handicapped accessibility requirements for historic buildings are also addressed. (2015 IEBC 1204)

B. LIFE SAFETY (BUILDING CODE)

Generally, building codes (International Building Code) allow for the retention of existing conditions in good repair, unless there are conditions present that affect the general safety and welfare of the occupants and the public, as deemed by the code official. (2015 IEBC 101.4.2)

C. HANDICAPPED ACCESSIBILITY

Generally, building codes (International Building Code) and federal design standards (Americans with Disabilities Act) allow for the retention of existing conditions, unless the existing facilities are altered. (2010 ADA SAD 101.2) Alterations of existing facilities, or parts of existing facilities, shall be made accessible, to the maximum extent feasible. (28 CFR §35.151) Significant alterations to an existing structural system may make the proposed accessible alterations technically infeasible. (2010 ADA SAD 106.5) Alterations to qualified historic buildings or facilities need only comply with accessibility requirements to the maximum extent feasible. (28 CFR §36.405; 2010 ADA SAD 202.5)

When planning alterations, accessible routes, spaces, and elements follow a hierarchy (28 CFR §35.151, §36.403):

1. Entrances.
2. Routes.
3. Restrooms.
4. Telephones and drinking fountains.
5. Other elements, including parking, storage, alarms.

Note that the codes and standards are intended to cover a variety of disabilities, including mobility and sight.

D. NATIONAL REGISTER OF HISTORIC PLACES

The cabin was listed on the National Register of Historic Places (NRHP) in 1973. The nomination was prepared by the State Historical Society of Iowa staff in 1972.

National Register nominations are considered under four categories of eligibility, as shown below. Properties must also retain integrity, meaning that they have not been significantly altered after the period of significance. (Title 36, Code of Federal Regulations, Section 60.4)

> *National Register criteria for evaluation. The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects*

that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

(a) That are associated with events that have made a significant contribution to the broad patterns of our history; or

(b) That are associated with the lives of significant persons in or past; or

(c) That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

(d) That have yielded or may be likely to yield, information important in history or prehistory.

Nominations from this time were often very concise (NPS Form 10-300, July 1969). The Period of Significance was simply listed as March 8, 1857 which was the date of the "massacre." Areas of Significance were listed as "Aboriginal, Historic" and "Literature". If the nomination was being prepared today, the period of significance would likely include the time Abbie Gardner operated the cabin as a museum (1891-1921) in addition to the time of construction and the "massacre" (1856-1857).

The nomination mentions the nearby museum (1961-1962) and the memorial monument (1891-1894, obelisk) but does not include them in the name or title of the nomination. If the nomination was being prepared today, these would be identified as non-contributing or contributing structures on the site, along with the graves and markers.

Listing on the National Register generally does not prohibit changes from later being made to a structure, depending on what funding source is being used, or authorities having jurisdiction under local laws or codes. Significant changes, however, could result in the structure being de-listed from the National Register.

Recommendations

A. BACKGROUND

The National Park Service has authored two Preservation Briefs to help consider appropriate recommendation approaches and techniques.

Preservation Brief #26, The Preservation and Repair of Historic Log Buildings (1991)

The intent of this Brief is to present a concise history and description of the diversity of American log buildings and to provide basic guidance regarding their preservation and maintenance.

Key points include:

1. Corners at the cabin are identified at “saddle” type notching, this is a characteristic feature of log construction.

2. Chinking and daubing (the fill used to seal the horizontal spaces between the logs) consisted of blocking (such as wood), followed by soft packing (such as moss, clay, or dried animal dung), covered by the daubing (outer wet-troweled layer of varying composition). Chinking, especially the daubing, is the least durable material of the cabin, requiring continual inspection and patching.

Historical Evaluation and Damage Assessment includes:

1. Foundation inspection.

2. Log inspection. Includes logs at the base of the wall (sill logs), drainage adjacent to the wall. Note condition of each log and attempt to identify existing problem sources. Include window and door sills. Probe soft areas and gently tap logs at regular intervals. Observe for insect damage.

3. Roof and gutter inspection.

Preservation Treatments include:

1. Water management, including gutters and foundation grades.

2. Clear vegetation and debris from foundation perimeter.

3. Log stabilization and repair, splicing and log replacement with new wood where appropriate. Epoxy consolidation and filer repair. New wood should match the original species and visual characteristics, hewn with tool marks to replicate the original.

4. Use of chemical wood preservatives, including pressure treating, are generally not recommended. Boiled linseed oil or borate solutions may be considered.

5. Loose stone foundations should be reset.

6. Log repair and replacement should be completed prior to chinking repairs.

7. Chinking repairs and daubing should match the historic daubing, if known and composition analyzed. Use of modern chinking products is discouraged. Loose chinking and daubing should be removed prior to repairs.

Preservation Brief #48, Preserving Grave Markers in Historic Cemeteries (2016)

This brief focuses on providing guidance for those responsible in preserving and protecting grave markers, describing materials, contributors to decay, assessing conditions, maintenance programs, and preservation treatments.

Key points include:

1. Grave markers categories include single-element, multiple-element, and structures. (Types and descriptions are further reviewed in National Register Bulletin 41 Guidelines for Evaluating and Registering Cemeteries and Burial Places.)

2. A variety of materials have been used for grave markers, fences, and gravesite enclosures. These materials include stone, brick, concrete, metal, and wood. Masonry materials include both natural materials and man-made materials. Natural stone masonry includes a variety of material type and finishing techniques, which must be considered during evaluation and recommendation development.

3. Grave markers are typically exposed to a range of weathering, and materials may have a different weathering rate. Some materials have a naturally occurring problem, or were constructed with incompatible materials, described by the term “inherent vice.”

4. Risk factors include naturally occurring deterioration and human activities. Natural risk factors include climate induced weathering process, water deterioration including freeze-thaw cycles, vegetation, and microorganisms such as algae and lichens. Human activities include vandalism, purposeful neglect, improper cleaning or damage repairs, and improper vegetation management such as adjacent lawn care techniques.

5. Pollution can also contribute to discoloration.

Maintenance of conditions guidance included in the Brief:

1. Maintain records on conditions and treatments of historic markers.

2. Seek advice from persons experienced with preserving historic markers when initiating a major maintenance or repair program.

3. Discourage visitor use of chalk, shaving cream, and other materials to highlight carvings and lettering.

4. Train grounds crews in methods to avoid damage to historic markers, including fl at grave markers which can be easily damaged by machinery, fertilizers and weed killers.

5. Remove graffiti as quickly as possible, using appropriate methods, so as not to encourage further marker disfiguration and vandalism.

6. Maintain ground cover around cemetery markers to avoid surrounding dirt from splashing back and staining grave markers.

7. Never use rotary grinders to resurface or “clean” historic markers.

8. Avoid the use of coatings on masonry without proper investigation.

9. Avoid high pressure water washing to clean historic markers.

10. Repair rather than replace damaged and deteriorated grave markers. For markers encased in cement, leave any repair work to trained conservators.

Evaluation and Damage Assessment included in the Brief:

1. What are the physical characteristics of the defects? Has deterioration obscured ornamental work or made the inscription difficult to read?

2. What is the extent of the affected area? Are all areas of the marker affected by deterioration or is there a pattern?

3. Do the conditions appear to be stable or getting worse?

4. Are the defects affecting other materials or impacting the safety of visitors?

5. Is deterioration contributing to loss or theft?

6. Is further investigation required?

Maintenance using appropriate treatments is essential to the long-term preservation of grave markers and other monuments. Some work may be conducted by trained volunteers or staff, but some work should be delegated to conservator specialists.

The Secretary of the Interior's Standards for Treatment of Historic Properties provide concepts and guidelines for maintaining, repairing, and replacing historic materials.

Cleaning is a common maintenance technique that must carefully consider the materials and methods. The approach should be grounded in the concepts of "first do no harm" and clean using the "gentlest means possible." Clean water is the primary ingredient for most cleaning. Chemicals may be necessary but must be carefully considered after identifying the material to be cleaned and the nature of the stains.

Constructed markers or monuments may require masonry repointing or resetting.

Property owners are responsible for providing visitors and volunteers a safe environment for viewing and maintaining the grave markers. Dangers to be mitigated include hot weather, lifting heavy objects, tripping and falling hazards, unstable markers, and dangerous insects and burrowing animals.

Protective treatments for certain materials, including metals, might be considered to mitigate future conservation and repair needs.

B. RECOMMENDATIONS: CABIN

The Cabin was generally found to be in stable condition. However, this does not mean that ongoing and immediate maintenance and repairs are not needed.

Recommendations assume the continued use of the cabin as an artifact, while also allowing the public to visit within.

Recommendations assume retaining the cabin at its existing, historic location. Relocation of the cabin could alter its context and qualification on the National Register of Historic Places. See additional comments on this in the Commentary below.

These observations and recommendations do not address any furnishings or historic artifacts within the building.

<u>General items:</u>

1. Confirm the conditions of each of the historic and replacement wood logs and other elements. Consider replacement of selected wood elements. Mitigate the "Ship of Theseus" condition. Consider repair and material consolidation of selected wood elements.

a. Repair deteriorated log ends supporting weight at the notch by removing decayed wood and installing new wood (dutchman repair) to match species and grain direction; or inject two-part epoxy compound, and complete the form of the notch with paste material.

b. Repair deteriorated log sections by removing decayed wood and installing new wood (dutchman repair) to match species and grain direction. Consider complete replacement of historic material (log failure) only when other satisfactory methods have been explored. Removal of historic material affects the historic integrity of the structure as a whole.

c. Remove failed daubing and chinking. Provide new materials to match period appropriate solutions. Recognize the temporary nature of this building material.

2. Consider removal and infill of west window if this opening is considered not to date to period of significance (1857).

3. Make repairs to existing window adjacent to the door.

4. Upgrade low-voltage system to including lighting, fire and smoke detection and alarms.

5. Establish methods to convey the message of the interior of the cabin for those visitors that do not have access through the existing door. These could include videos or multi-media, live camera feed, or virtual reality headset.

6. Eliminate existing handicapped accessibility barriers, such as the door entry threshold.

7. Consider how best to inform or educate the visitors on the non-original or non-period elements at the cabin, including replacement logs and roofing.

<u>Option A: keep cabin as-is, establishing and performing cyclical inspections and preventative maintenance.</u>

1. Make repairs to roof and water management systems. Replace wood shingle roof that is at the end of its life cycle. Include sheathing repairs and modern underlayment products not visible to the public, using methods and materials as appropriate to promote necessary air flow beneath the shingle roof.

   a. Remove non-functioning wood gutters and provide traditional (yet non-period appropriate) gutter and downspout system, such as galvanized half-round gutters; consider how best to educate the public on how this system is non-period.

   b. Consider vegetation management adjacent and over the roof that might be contributing to moss or mold growth on shingles.

   c. Consider repairs to roof rafter system and roof structure, as appropriate.

2. Mitigate water infiltration and promote good water management at the base of the exterior walls and cabin floor. This might include changes to the adjacent exterior grade and below grade water management systems.

3. Make repairs to the daubing and chinking between the logs. Recognize this is an ongoing maintenance item. Repairs might be incorporated into the visitor experience, or as an annual event.

4. Establish a comprehensive schedule of inspections and maintenance. Include record keeping so that changes over time can be monitored and compared.

<u>Option B: treat cabin as an individual artifact and construct climate-controlled environment around and above it.</u>

1. Consider constructing walls and roof, in conjunction with a larger on-site museum development. This would also include a new floor below the cabin. (Lincoln Cabin and Sequoyah Cabin examples shown.)

Option C: restore cabin to 1891-1921 period of acquired significance appearance.

1. Consider researching and recreating the roofing and siding. This did, in effect, help preserve the cabin, and might be a method to tell the story of how the site was used at that time.

Option D: provide external roofing system to serve as primary weather protection.

1. Consider providing stand-alone roof above the cabin. This could be supplemented with full or partial walls.

Commentary:

The State Historic Preservation Office (SHPO) was consulted regarding these options and their potential effect on the continued listing of the property on the NRHP.

Options B, C, and D as listed above will likely affect the eligibility for the Cabin to remain on the National Register of Historic Places (NRHP). Moving the Cabin, even vertically off its foundation, without following the NPS process, would result in delisting from the NRHP.

Changes to properties listed on the NRHP are governed by the Code of Federal Regulations (CFR) Title 36, Section 60.14. These changes include relocating properties (or structures) listed. This regulation states

that structures “should be moved only when there is no feasible alternative for preservation.” Proposals for moving the structure must be documented and submitted to the NPS prior to the move, discussing reasons for the move, the effect on the structure’s historic integrity, and the appropriateness of the new location, for approval by the NPS.

Careful consideration should be given, to weigh the benefits and restrictions of continued listing on the NRHP, balanced with the long-term preservation of the Cabin as an interpretive artifact, if appropriate.

Integrity and Setting

National Register Bulletin 15, “How to Apply the National Register Criteria for Evaluation” (National Park Service, 1995) addresses aspects of evaluating the integrity of a property. The NRHP nomination (1973) stated that the cabin “remains basically unaltered on its original site” and that the cabin “has remained intact and relatively well preserved.” The period of significance is identified as March 8, 1857.

Integrity if the ability of a property to convey its significance. There are seven aspects of integrity:

1. *Location*
2. *Design*
3. *Setting*
4. *Materials*
5. *Workmanship*
6. *Feeling*
7. *Association*

The setting is the physical environment of a historic property, referring to the character of the place in which the property played its historic role, reflecting the basic physical conditions under which a property was built and the functions it was intended to serve. Physical features include topographic features, vegetation, simple manmade features, and relationships between buildings and other features or open space.

The setting has been altered significantly since the period of significance. Alterations include the construction of the monuments, construction of the museum, and residential development adjacent to the site. If the Period of Significance was expanded to include 1891-1921 time period, then the setting, with the monuments and adjacent development included in the period, would likely demonstrate a higher level of integrity.

However, the question is if the setting affects the identify for which the property is significant. If the setting does not greatly affect the identity, then the integrity of the setting is less important than other aspects of integrity.

C. RECOMMENDATIONS: MUSEUM

The Museum building was generally found to be in fair, but dated, condition. Some investment could be made in to updating finishes and systems, as discussed below.

These observations and recommendations do not address any furnishings or historic artifacts within the building.

Option A: keep existing building for long term (20+ years).

1. Replace roofing, siding, trim, windows, and doors. Replace exterior and roofing insulation, where damaged.

2. Replace interior finishes, flooring finishes, light fixtures, suspended ceiling system.

3. Replace mechanical system to provide year-round temperature and humidity control. Consider micro-environments or off-site storage of selected artifacts, if appropriate.

4. Update electrical power and lighting systems.

5. Update restroom with new fixtures and finishes, handicapped compliance.

6. Pave on-site parking lot (or provide alternate on-site location), provide handicapped accessible parking space with signage, and accessible route from passenger loading zone (access aisle) up to the museum public entrance.

7. Consider building an addition if programming would benefit. Refer to the Interpretive Master Plan

Option B: keep existing building for short term (5 years) until a new building can be constructed.

1. Repair exterior trim and siding, where necessary. Prep and repaint exterior.

2. Consider replacing carpet and repainting interior walls.

3. Make repairs to existing mechanical and electrical systems, as necessary.

4. Consider off-site storage of selected artifacts, if appropriate.

Option C: demolish the existing building and construct a new Museum building immediately.

1. Consider a temporary visitors center on the site, or nearby, if the new building is constructed on the site of the existing building.

2. Refer to the Interpretive Master Plan for building and facilities recommendations related to the Museum, including artifact display and storage, visitor experience, and other amenities.

D. RECOMMENDATIONS: MONUMENTS

Summary:

1. Iron fences. Prep and paint. Consider recreating broken or missing elements. Repoint and repair stone bases where necessary.

2. Stone markers. Surface clean using appropriate techniques.

3. Obelisk. Repoint joints where necessary. Consider cleaning bronze panels, and maintaining with wax coatings.

E. RECOMMENDATIONS: SUMMARY BUDGETS

Scope		Budget	
demolish existign museum building (925 SF) construct new museum building (1850 SF)	[Museum Option C] Construction Budget	$	1,296,000.00
replace cabin wood shingle roof (396 SF) replace cabin daubing and chinking walls replace selected wood logs stabilization selected wood logs miscellaneous repairs	[Cabin Option A] Construction Budget	$	111,000.00
selective cleaning stone monuments selective repointing stone monuments repainting and repair metal fences	[Monuments] Construction Budget	$	51,000.00

Construction Budgets shown are provided for general planning purposes. A more developed and refined scope of work will permit the creation of more detailed budgets. Budgets do not include design fees, exhibit design, sitework, hazardous material remediation, archaeological investigations, or other special conditions. Actual construction costs may vary based on availability of materials and qualified labor.