

Rafters for the principal room are un-hewn poles, averaging 4 inches in diameter. These rafters bear upon a 1-inch plate which extends to the ends of the ceiling joists. Rafters over the porch and side room are 2x6s, circular sawn.

Exterior Siding and Trim

Except at the porch, the exterior walls are covered with a variety of materials, including asphalt-asbestos siding in a red-brick pattern, tarpaper, and 5-V crimp galvanized steel panels. The red-brick patterned asphalt siding appears to have covered the entire house at one time, and is fastened with steel wire roofing nails to rough horizontal sheathing. The sheathing is fastened with wire nails to the framing. The poor quality of materials and installation suggest that the rough sheathing boards replaced an earlier siding.

The exterior of the north wall of the principal room continues from the porch through the small southwest room. This wall is clad in vertical boards, 1 inch thick by 11 inches wide, fastened with small head cut nails. The butt joints between the boards are not covered with battens, but are left exposed. The partition separating the porch from the southwest room is of 1-inch thick vertical boards. The boards extend past the ceiling and are braced by 1-inch horizontal boards at middle and top.

Roof

The current roof is of 5-V crimp galvanized steel panels on spaced board sheathing. The original roof was likely of wood shingles or perhaps cruder shakes; however, the attic was not accessed, so nail evidence could not be confirmed.

Windows

One window opening is exposed on the north

side of the chimney (Figure 36). The opening is trimmed on the exterior with 1-inch boards fastened with cut nails. The sash has been removed. Symmetrically placed on the south side of the chimney, a second window opening of similar size has been covered with rough sheathing boards and asphalt siding. The frame on this window is better preserved and retains a 1-inch wood sash stop, indicating the original windows were single hung sash.

Similarly sized window openings can be seen in the west wall of the main room and the west wall of the small southwest room. Neither of the windows could be accessed from the interior and both are covered from the outside with 5-V crimp steel panels.

Doors

The three doors in the Tenant Cabin are board and batten type, 34 inches wide by 73 inches high. Wide, 1-inch thick vertical boards are held together by three chamfered 1-inch horizontal boards.



Figure 39 – Tenant Cabin. Detail of chamfered door batten.

Doors are hung on two five-knuckle, fixed-pin cast iron butt hinges. Door knobs and locks are missing, but one surviving keeper indicates that the locks were rim-mounted cast iron. Steel rosettes and escutcheons are mid or late-nineteenth century and are similar in character

to features found in the main house.

Interior Finishes

The walls of the large main room are sheathed in 1-inch thick vertical boards with 3/8-inch thick battens varying between 2-3/4 to 3-1/4 inches wide. The boards are trimmed at the ceiling joist line with a plain board. Ceiling joists are exposed, with no evidence of an earlier ceiling material. Doors and windows are trimmed in narrow, plain boards. The fireplace surround could not be accessed, but appears to be of plain boards and has a projecting mantel shelf with radiused ends.



Figure 40 – Tenant Cabin. Interior of hall, view to north.

Given the large size of the main room, it is very likely that the room was subdivided by a board partition into a traditional hall and parlor plan (Figure 35). Such a configuration also seems reasonable with regard to the documented occupancy of the house over the years. Refer to

drawing A-5, *Tenant Cabin Floor Plan*.

Large Outbuilding

Situated approximately 45 feet directly north of the house is a 1-1/2 story frame shed. The building appears to have been constructed around 1900. Measuring approximately 12'-10" by 14'-4", the shed is a single room with a storage loft above.



Figure 41 – Large Outbuilding. South elevation.

The building, supported on cinder block piers, is framed of sawn full-dimensioned lumber. Floor joists are 2x6s, studs are 4x4s, and rafters are 2x4s. All framing is fastened with wire nails. The exterior siding is of 1-inch thick, rough sawn, lapped boards, 5-inch exposure, fastened with wire nails. The south gable end wall has been covered with mineral surface asphalt roll roofing, while the west wall has been covered with 5-V crimp galvanized steel roof panels. The roof is 5-V crimp galvanized steel.



Figure 42 – Large Outbuilding. East elevation.

In the center of the south gable end wall is a 36-inch wide by 72-inch high board and batten door. Directly above is a similar door 42 inches in height which access the loft. Interior walls are exposed structure.



Figure 43 – Large Outbuilding. View of interior.

Small Outbuilding

Approximately 20 feet north of the Tenant Cabin is a shed-roof building approximately 9'-9" by 9'-6". This building is of later vintage than the small outbuilding, and appears to have been constructed in the 1920s or 1930s.



Figure 44 – Small Outbuilding. Southeast oblique.

The building, supported on cinder block piers, is framed of sawn mill-dimensioned lumber. Floor joists are 1-5/8" x 5-3/4"; wall studs and rafters are 1-5/8" x 3-3/4". All framing is fastened with wire nails.

The exterior siding is a mix of 1-inch thick rough sawn, lapped boards and of 1-inch thick waney-edged lapped siding of varying widths. Siding is fastened with wire nails. Portions of the south and west walls are covered with mineral surfaced asphalt roll roofing. The roof slope is approximately 1/2-inch per foot and is 5-V crimp galvanized steel.



Figure 45 – Small Outbuilding. View of interior.

In the center of the south wall is a 36-inch wide by 67-inch high board and batten door hung on

steel strap hinges. Interior walls are exposed structure.

Since no other evidence of an outhouse or bathhouse has been noted, it is conceivable that this building could have functioned as such. Once the interior is emptied, the building should be more closely examined.

Log Crib

Situated just west of the property line at the southwest corner of the site is a double-pen log crib with central wagon aisle. Although off property, this building is described due to its architectural significance and historic association with the Long Farmstead. The crib may have been constructed during the same late-1860s period as the Tenant Cabin.



Figure 46 – Log Crib. West elevation (composite).

Walls are constructed of hewn logs with dovetailed corners. Rough-sawn wood battens cover joints in the logs where the walls are exposed to weather, and are fastened to the logs using cut iron nails. The interior log walls are not battened. The gable ends are clad in horizontal lapped siding of rough sawn 1-inch boards fastened with cut iron nails. Except for the logs, all lumber appears to be circular sawn.



Figure 47 – Log Crib. Corner at southwest wall.

The corners of the cribs are supported by dry-stacked fieldstone piers. Roofing is 5-V crimp galvanized steel.

Barn

Situated just west of the property line at the center west portion of the site is a frame barn. The building is off property, but is mentioned due to its architectural significance and historic association with the Long Farmstead. The barn appears to have been constructed in the early 1900s. Due to overgrowth, the building could not be adequately assessed.



Figure 48 – Barn. North elevation.

Exterior walls are of 2x4 frame construction. Walls are clad either with horizontal lapped siding of 1-inch rough-sawn boards at gable ends, or spaced 1x4 slats at the side walls. Roofing is 5-V crimp galvanized steel.



Figure 49 – Barn. View of exterior wall under shed roof.

Part 2 – Recommended Treatment and Use

2.A Conditions Assessment and Recommendations

Site

The site has become very overgrown since last used for agricultural purposes. Approximately 80 percent of the property is covered with mixed, second-growth forest; the remainder is currently mowed field. In the past year, Rutherford County has cleared overgrowth from around the outbuildings and has kept the fields well mowed.

The colonial-era road traces have areas of substantial erosion, especially along the west end of the property. The 1855 road trace appears to be in good condition as it was used for automobile traffic up until the late 1930s. Except for a portion of the 1855 road paralleling Whitesides Road, all road traces are discernible; however, the traces have seen the intrusion of briars, poison ivy, and a variety of trees.

The stream along the eastern boundary appears to be relatively undisturbed. The stone bridge abutments are completely overgrown with vines and are barely visible except in winter.

Close to the front of the house are two red juniper trees, an old crape myrtle, a pecan, and a large box elder. The juniper trees encroach upon the house.

Long House

The 1870s Long House appears to have great potential for restoration or rehabilitation. With exception of the deteriorated front porch and

west chimney, the building overall appears to be in fair condition.

Structural Framing

With exception of the front porch, the wood framing in the roof, walls and floors was observed to be in generally good condition. Where exposed, the overall quality of workmanship in the framing systems appears to be good. There are a few areas where the exterior envelop has failed – most notably the roof and wall around the west chimney³² – with the possibility that the framing in those areas has deteriorated.

The front porch roof has all but completely collapsed, and will require complete removal pending replacement.³³ Detailed documentation of the existing porch will be necessary to replicate the feature, but should be done regardless for archival purposes.



Figure 50 - Long House. Southwest oblique showing structural collapse of roof at porch and porte cochere as of April 2013. Compare with conditions one year earlier in Figure 14.

The balloon frame method of construction has

one major disadvantage in that the lack of fire blocking in the framing allows for an unrestricted flow of air throughout the wall and floor cavities. This creates a pathway for fire to spread quickly throughout the structure. The lack of dead air space also contributes to poor thermal efficiency, even in an insulated cavity.

Recommendations

During development of final plans for the building, a structural engineer experienced with historic wood framing would be retained to fully investigate the structural systems, and provide design specifications as required. For a historic building, the NC Rehabilitation Code may be the preferred regulatory guide for minimizing alterations to the historic features and materials.

For public occupancy, repair and reinforcement of the first floor structure will be required to meet live load requirements. The Building Official may also require supplemental connectors at the wood sill to the brick foundation piers. Installation of supplemental connectors at the rafters to the plate may also be required.

Related to framing repairs is the installation of fire blocking within the wall and floor systems. The concept is to compartmentalize the wall cavity on each floor, preventing the passage of smoke and/or fire between floors. Similarly, the floor cavity must be compartmentalized where it intersects the wall framing.

Materials

Under the NC Rehab Code, repair and replacement of deteriorated framing members may usually be made in-kind, specifically, same wood species and same dimension as existing. This approach is recommended throughout.

Fire blocking can be accomplished by installing solid wood blocking within the cavity, or by

using any material allowed by the Code for that purpose. The use of fire caulking may be required at open joints and seams.

Masonry Foundation

With some exception, the brick foundation piers are generally in fair condition. Mortar is typically weathered, and some bricks are displaced. At least one of the piers has settled out of plumb. The piers are unreinforced, and the sill bears upon the pier without any substantial connection.



Figure 51 - Long House. Brick pier at northeast corner of east wing. Note erosion in mortar joints.



Figure 52 - Long House. Typical dry-stacked piers in crawl space under east wing.

Recommendations

In the crawlspace, random piers of dry-stacked stones or concrete blocks support girders mid-span. During development of final plans for the building, a structural engineer experienced with historic masonry should be retained to fully investigate the brick piers, and provide design specifications as required. As with framing, the NC Rehabilitation Code may be the preferred regulatory guide.

All mortar joints should be repointed with a low-compressive strength lime mortar to match the color of the existing. In addition to repair of the existing brick piers, the installation of supplemental piers in the crawl space may be required.

Materials

For historic hand-made brick of unknown compressive strength, the use of a Natural Hydraulic Lime (NHL) mortar is recommended.³⁴ Depending on the final strength desired, the lime is mixed to the manufacturers' recommended ratio with sand matched to the existing aggregate.

The use of Portland or masonry cement is not recommended. With a cement-lime ratio low enough to not damage the bricks, the mortar will fail. Conversely, a cement-lime ratio high enough to prevent mortar failure will give a compressive strength too high for the historic bricks, and the bricks may crack and spall.

Masonry Chimneys

Due to extreme exposure over the years, the brick chimneys are generally in poor condition. Although they are standing plumb, the substantial erosion of mortar joints throughout the stacks implies that the bricks are effectively dry-stacked and without bonding structure.

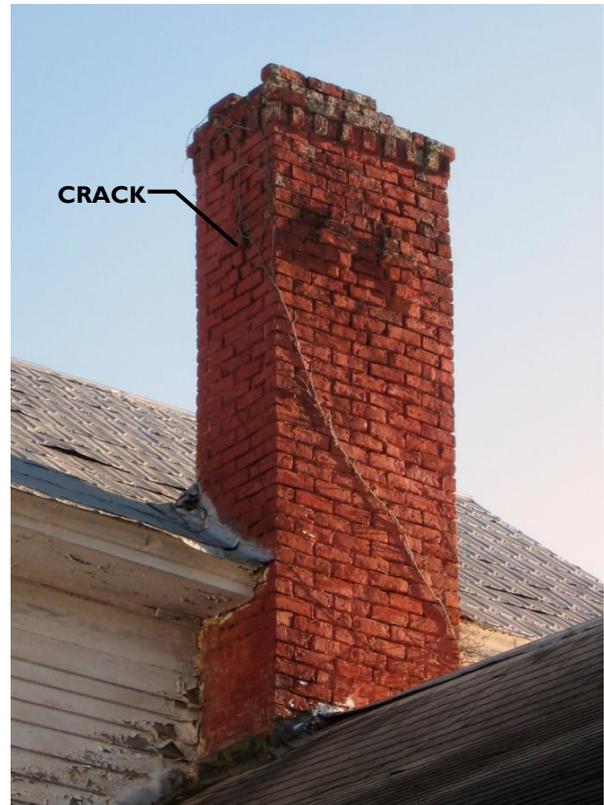


Figure 53 - Long House. Chimney at north wall of west wing. Note crack in east face and severe erosion of mortar joints. Deterioration of masonry and flashing has caused damage to wall framing, ceiling and wall paneling at SW Bedroom 202.

Recommendations

During development of final plans for the building, a structural engineer experienced with historic masonry should be retained to fully investigate the brick chimneys, and provide design specifications as required. Refer also to Stabilization Report in Appendix.³⁵

The west chimney (Figure 53) will need to be removed down below the roofline, and reconstructed based on field documentation and measurements. The east chimney (Figure 17) may not require removal, but could perhaps be repointed in place.

All bricks should be set in and/or mortar joints repointed with a low-compressive strength lime mortar to match the color of the existing. During repair of the chimneys, the installation

of new flashings to the roof will also be necessary. In addition, low-profile copings should be installed to close off flues.

Materials

For historic hand-made brick of unknown compressive strength, the use of a Natural Hydraulic Lime (NHL) mortar is recommended.³⁶ See recommendations under *Masonry Foundation*, preceding.

Siding and Trim

Overall, not including the front porch, the wood siding and trim are in good condition underneath thick, cracked layers of paint. Areas that have experienced the most damage include the soffit and cornice, owing to extreme exposure. Siding intersecting the roof of the one-story kitchen wing also shows some deterioration at the roof line.



Figure 54 – Soffit detail at northeast corner of Kitchen wing, showing typical condition of paint on siding and trim.

The majority of the remaining paint appears to be linseed oil or alkyd oil based. Although the paint has not been sampled and analyzed, it is assumed that the early surviving paint contains lead.

Recommendations

Missing sections of siding and trim should be replaced in-kind with wood of similar physical

properties. All dimensions and detailing should match the feature to be replaced. Damaged wood which is judged suitable for restoration should be repaired using traditional dutchman infill and/or epoxy consolidation and infill as applicable.

Once repaired, the substrate will require extensive preparation for a long-term paint finish. Existing paint coatings should be completely removed down to bare wood using a combination of scraping, infrared heat, and chemical stripping as applicable.

NOTE: Existing paint layers are assumed to contain lead. Removal and disposal of paint residue must be undertaken according to all applicable state and local regulations for local government owned facilities.

Prior to paint removal, an analysis of the historic paint chromochronology – documentation of paint layers – should be undertaken. Such a study could confirm the exterior color scheme for the Long House when first constructed in the 1870s – if other than white – and when substantial alterations, such as the front porch, were made.

Materials

The existing siding and trim appear to be yellow pine, but the use of available yellow pine lumber for replacement is not recommended due to inherent instability and poor paint adherence. Decay resistant wood species such as cedars should be considered for extremely exposed locations.

Paint finish should be a semi-gloss or equivalent, depending on the paint manufacturer. Even with total paint removal, an alkyd primer should be applied to old wood before application of a latex paint system.

Roof

The stamped galvanized steel shingles on the main roof appear to be in good condition overall. The aluminized coating is built up in thickness and is failing in places, although significant rusting was not observed in the shingles or ridge caps. The galvanized flashing at the chimneys appears to have failed.



Figure 55 – Detail of stamped metal shingles. Note limited failure of coating on shingle at center of photo.

The 3-tab asphalt shingle on the front porch has completely failed. Its deterioration is the primary reason for failure of the porch roof structure and floor structure.

Recommendations

Assuming an interpretive period for the house extending through the mid-1940s – the latest period of significance – the existing stamped metal shingle roof should be preserved and restored. The east face of the Kitchen wing roof would require replacement with metal shingles to match the size, detailing and pattern of the existing shingles.

The roof for the reconstructed wrap-around front porch could be a 3-tab asphalt shingle, although there is the possibility that the porch roof also had metal shingles when first built. Additional examination of the roof sheathing during demolition will be necessary.

Windows and Shutters

The original double-hung sash are in good condition overall, except for the glazing putty. In the NE Bedroom (105), the lower sash of the east window is missing its muntin bars. The lower sash in the south window, SW Parlor (102) is installed upside down. In the SE Bedroom (204), the top sash in the east window is installed upside down.



Figure 56 – Interior detail of window sash. Note thru-mortise connection at muntin to parting rail.

Modern aluminum frame storm windows have been installed on all window openings. All wood shutters have been removed, although many of the cast iron hinge pintles remain in place.

Recommendations

The surviving original windows should be preserved and restored. The later replacement windows in the Kitchen (104) should be removed, and replica windows installed to match the original size and configuration. Refer to drawing A.3- *First Floor Plan Reconstructed*. The broken sash in the NE Bedroom (105) should be repaired.

All window sashes will require complete removal of paint and removal of glazing putty. Existing glass should be labeled according to its location, and stored for reuse in the restored sashes.

- NOTE: Existing paint layers as well as glazing putty are assumed to contain lead. Removal and disposal of paint and putty residue must be undertaken according to all applicable state and local regulations for local government owned facilities.

Assuming that the shutters were still in place through the mid-1940s, it is recommended that new shutters, replicating what would have typically been used in the 1870s, be installed throughout. The use of replica hinges may be necessary, retaining the original hardware for archival purposes.

The installation of new storm windows is strongly recommended for energy conservation as well as for preservation and maintenance of the original windows. An appropriate style of window is a solid wood frame with interchangeable glass and screen panels – referred to as a “combination storm/screen sash.”³⁷ The appearance replicates that of a traditional wood screen frame, while the interchangeable panels allow for seasonal flexibility.

Materials

Paint finish should be a latex system, satin-gloss or semi-gloss, depending on the paint manufacturer. Even with total paint removal, an alkyd primer should be applied to old wood before application of a latex paint system. Traditional window glazing putty requires an alkyd primer prior to any latex paint system.

Exterior Doors

The double sash doors leading from the Front Porch to the Stair Hall are in good condition.

The original finish has been stripped. The top and bottom bolts are intact. The original lockset is missing and has been replaced with a modern mortise lock, although the mineral knob and decorative rosette appear to be of correct vintage. The back door to the Stair Hall is also in good condition, albeit with a cracked and weathered finish, and is missing only the original knobs.

The doors leading from the Back Porch to the Kitchen (103) and Dining Room (103) have been replaced with modern six-panel doors. To accommodate the replacements, the door frame and casing were reworked and the molded caps were chiseled off.



Figure 57 – Doorway leading from Back Porch to Dining Room. Door and casing are modern replacements, and molded cap has been chiseled back flush with the casing.

Recommendations

The modern replacement doors to the Kitchen (102) and Dining Room (103) should be replaced with replica four-panel doors to match the back door to the Stair Hall (101). The altered door frame and casing should be replaced to match the detailing of the back Stair Hall door, including reconstruction of the molded caps over the door head.

The interior of the front door should be refinished and decoratively painted to match the original grained finish of other doors.

Hardware

Original cast iron hardware should be preserved and restored where possible. Missing rim locks and/or keepers should be replaced with salvage locks of similar manufacture and vintage, if available. Steel or modern replacement knobs should be replaced with vintage porcelain or mineral knobs to match the originals. Weather stripping should be installed at heads, jambs and thresholds of all exterior doors.

Interior Doors

Overall, the interior doors are in good condition. Several of the doors have had their original grained finish stripped or painted over. Original cast iron rim locks and porcelain knobs are missing or have been replaced with modern hardware on several doors.

Recommendations

The original four-panel doors to the rooms as well as the two-panel closet doors should be preserved and restored. Since all passage doors are approximately 34 inches in width, the clear width of the door opening should meet accessibility requirements.

Doors with decorative graining that were later painted should be restored to the original grained finish, if feasible, or re-grained to match the original technique. Original graining should be appropriately cleaned and preserved where feasible. Consultation with a trained decorative painter is strongly recommended.

Hardware

As with the exterior doors, original cast iron hardware should be preserved and restored where possible, with missing hardware replaced in kind.

Interior Woodwork

Overall, the wall and ceiling sheathing throughout the house is in good condition. Deterioration of the painted finish on the ceilings, walls and trim is the main concern. The exception is in Room 202 where leaks around the chimney have damaged wall sheathing beyond repair, and in Room 102 below where a section of ceiling sheathing has collapsed under the hearth.



Figure 58 – North wall of SW Bedroom 202 showing severe water damage to wall sheathing – and possibly framing – at the chimney.

Recommendations

All wood wall sheathing, ceiling, and trim originally painted should be cleaned, prepared and repainted.

Decoratively grained woodwork, such as fireplace surrounds, should be appropriately cleaned and preserved where feasible. Consultation with a trained decorative painter is strongly recommended.

Flooring

Wood flooring is in fair condition throughout,

with the finish typically worn through. Some areas of flooring have been painted.

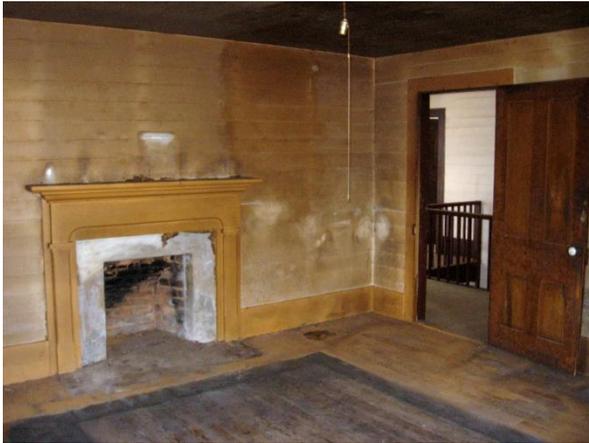


Figure 59 – NE Bedroom 203 showing a painted border on the flooring, delineating where a linoleum rug had been.

The Dining Room (103) and Kitchen (104) have linoleum installed over the wood flooring. The 9-inch square tiles in both rooms may contain asbestos.



Figure 60 – Linoleum tile flooring in Dining Room 103.

Recommendations

Flooring that has never been painted should be appropriately cleaned, and sealed with shellac prior to application of an appropriate varnish. Partially painted flooring in a room should be stripped and refinished along with the unpainted areas.

Given cupping of the floorboards in places, the use of drum sanders must be avoided to avoid damage. Selective use of belt and orbital sanders may be necessary.

Fireplaces

The fireboxes show typical deterioration in the mortar joints, and some spalling of brick.

Deterioration of the chimneys has dumped sand and brick dust on the firebox throats. In the SW Bedroom (202), leaking from the deteriorated chimney has caused the brick hearth to collapse through the ceiling below.



Figure 61 – Collapsed hearth in SW Bedroom 202 caused by failure of wood forms and framing due to leaks from chimney.

Recommendations

All fireplaces should be restored in appearance, but not for wood burning use; however, the use of gas logs or gas-fired coal grates could be considered. In addition to caps on the chimneys, the firebox throats should be insulated and closed off with steel plate.

In the Southwest Bedroom (202), the collapsed hearth should be restored, together with related repairs to damaged wood framing.

Plumbing System

The house does not appear to have ever had an indoor bathroom. The presence of an outhouse on site is assumed, but a location was not confirmed. The only plumbing presently in the house is for the kitchen sink, and appears to have been added in the 1940s or later.

Directly north of the kitchen is the well. The condition of the well and its potential usability was not confirmed.

Recommendations

The house should have a complete new plumbing supply and waste system installed. Refer to drawings *A.5-Proposed 1st Floor Plan* and *A.6-Proposed 2nd Floor Plan*. Proposed fixtures could include:

- Sink in Kitchen;
- New accessible unisex restroom with toilet and lavatory, 1st Floor.
- Optional: New full bath on 2nd Floor if use as site manager apartment considered.
- Outside hose bibs for maintenance.

The location and installation of a septic tank and drain field would require coordination with a historical archaeologist to avoid disturbance of potential archaeological resources.

Environmental System

The house never had central heat installed, and was originally heated by four fireplaces on the first floor, and three fireplaces on the second floor. The Kitchen appears to have had a wood cook stove with its own flue chimney. Presently, there is a cast iron coal-burning stove in the Dining Room, and a modern wood-fired heater in the Southwest Parlor.

All fireplaces and stoves are considered non-functional due to the deterioration of the fireboxes and chimneys.

Recommendations

A complete forced air HVAC system should be incorporated into the historic building. Given the extensive open site areas around the house, the system would ideally utilize ground source heat pumps to avoid the use of visible outdoor units and to lower operating costs. Such an installation would require coordination with a historical archaeologist to avoid disturbance of potential archaeological resources.

The arrangement of the floor plan along with the location of the porch attics appear to allow for the installation of two air handling units (AHU) with separate zoning for upstairs and downstairs. It appears that the first floor can readily be served by a unit in the attic over the Kitchen wing. The second floor can be served by a second unit in the main attic.

Electrical System

Sections of the original knob-and-tube wiring system survive, while portions have been rewired. Remarkably, many of the original interior lighting fixtures survive, although some of the brass lamp holders have been replaced.

Recommendations

Because the old knob-and-tube wiring has been spliced and tied into newer wiring, the present system is dangerous and a potential fire hazard. A complete new wiring system should be incorporated into the building, and the old system abandoned and removed. New electrical service will be required; amperage depending on the proposed loads. Overhead service would be appropriate, and could drop from the existing power pole east of the house.

Surviving original light fixtures should be rewired to meet UL requirements, using reproduction cloth-covered twisted wiring.³⁸ Reproduction light fixtures, where needed, should match originals as much as possible.³⁹

Fire Alarm and Security System

Recommendations

It is strongly recommended that a fire detection and alarm system be installed. A security system would also be highly recommended. Given the remote location of the site, the County should consider a monitored system.

Tenant Cabin

The proposed objective would be restoration of the cabin to its appearance in the late 1800s to early 1900s, or as otherwise determined by interpretive goals for the overall property.

Stone Piers

At least eight dry-stacked fieldstone piers support the 8-inch square hewn sills. As there is no mortar holding the stones together, only the weight of the structure keeps the stones in place. The piers appear to be stable, although there is no positive connection between them and the sill.



Figure 62 – Tenant Cabin. Dry-stacked fieldstone pier.

Recommendations

To preserve the historic integrity and appearance of the cabin, the stone piers should be preserved, or reconstructed in kind. In order to anchor the sill, a stainless steel pipe column and bracket assembly could be fastened behind each pier, and would bear on a separate reinforced footing.

Floor Framing

The un-hewn log floor joists have collapsed on the north side of the cabin due to overloading of the floor. The top sections of the logs that bear on the hewn sill have split away from the bottom of the joist, causing the joists to collapse along that wall. The condition of the joists at the south wall could not be determined; however, given the low clearance to grade there, it is assumed that the joist ends are deteriorated due to decay and/or insect damage.



Figure 63 – Tenant Cabin. Log joist split in half at the sill (at right). The joist beyond appears to have failed mid-span.

Along the north wall, the 8-inch square hewn sill appears to be in good condition. Where long exposed on the east wall, the sill has weathered and the ends show signs of decay and/or insect damage. The condition along the west wall is assumed to be fair. Along the south wall, the sill is assumed to have some decay and/or insect damage due to low clearance to grade.

Recommendations

Given their deteriorated condition, the log joists would require supplemental repairs, if not complete replacement. This work would require removal of the flooring to access the framing. Where possible, joists should be left in place and reinforced with adjacent framing. While the floor cavity is exposed, electric wiring and insulation would be installed.

Damaged areas of the hewn sill should be repaired with use of epoxy consolidant and/or dutchman repair. Very deteriorated sections may require replacement in-kind. The large cross section of the sill allows for some loss without compromising structural integrity.

Wall Framing

Where long exposed to weather on the east side, the 3x4-inch sawn studs show signs of decay at the bottom ends. Where protected, the wall studs appear to be in good condition, such as viewed from the porch attic.



Figure 64 – Tenant Cabin. Wall stud mortised into sill at east wall. Note insect damage at edge of flooring.

Recommendations

A thorough assessment of the wall framing will require the removal of the existing rough sheathing. With the wall framing exposed, close evaluation may reveal what the original siding material would have been. With the wall cavities open, electrical wiring, insulation and rain barrier would be installed.

The east wall, long exposed to weather, may require substantial reconstruction. Deteriorated

sections of wall studs should be repaired with epoxy consolidants where feasible. Dutchman repair should be used for partial replacement, and would allow for reconstruction of the mortise and tenon detail.

Roof Framing

The pole rafters over the main section of the cabin could not be accessed for evaluation. They are assumed to be in fair condition, although the size and spacing may be inadequate. The sawn rafters over the porch and Bedroom 102 appear to be in good condition.

Recommendations

The pole rafters are part of the historic fabric of the cabin and should be preserved. Rafters may require supplemental framing, and would be anchored to the plate as required.

Chimney

The fieldstone chimney does show remnants of a lime-sand mortar, similar to the mortar in the brick flue stack; all mortar is severely eroded. The flue stack has partially collapsed, leaving bricks scattered around the area. Otherwise, the chimney appears to be relatively plumb.

The firebox could not be accessed for evaluation, but is assumed to be in worse condition to that of the fireboxes in the house.

Recommendations

Bricks that have fallen from the chimney must be gathered, brushed clean, then stacked and covered on a pallet off the ground. The chimney flue stack should be reconstructed using the salvaged brick, with reproduction brick worked in as necessary. The chimney should have a coping of stainless steel, detailed in such a fashion that the coping is not visible.

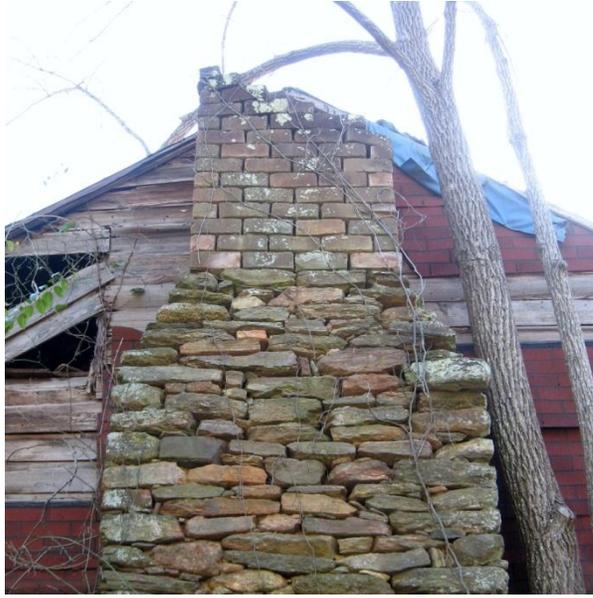


Figure 65 – Tenant Cabin. Stone chimney with brick flue.

For this stonework and for historic hand-made brick of unknown compressive strength, the use of a Natural Hydraulic Lime (NHL) mortar is recommended.⁴⁰ Depending on the final strength desired, the lime is mixed to the manufacturers’ recommended ratio with sand matched to the existing aggregate.

The use of Portland or masonry cement is not recommended. With a cement-lime ratio low enough to not damage the bricks, the mortar will fail. Conversely, a cement-lime ratio high enough to prevent mortar failure will give a compressive strength too high for the historic bricks, and the bricks may crack and spall.

The firebox and hearth should be restored in appearance, but not for wood burning use; however, the use of gas logs or gas-fired coal grates could be considered. In addition to caps on the chimneys, the firebox throats should be insulated and closed off with steel plate.

Exterior Siding and Trim

The existing rough sheathing, although not original, is in fair condition except where exposed to weather for a long period. However,

the asphalt siding is deteriorated throughout, and very likely contains asbestos. Other siding materials such as metal roofing have been haphazardly installed.

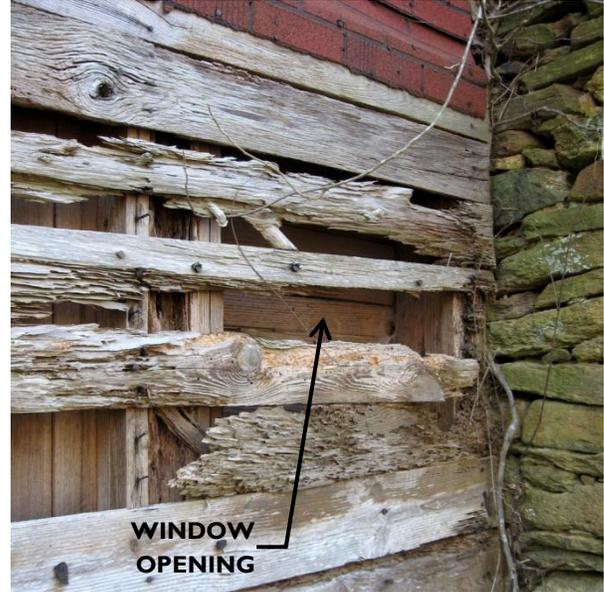


Figure 66 – Tenant House. Detail of rough sheathing at east wall. Note sheathing covers original window opening.

The vertical board sheathing on the porch wall does not have battens; the boards are butted tightly together. Over the years, shrinkage of the wood has allowed weather and insects into the wall cavity.



Figure 67 – Tenant House. Vertical board siding on porch. Note flush door casing at left, which is similar in size to the surviving casing on the window.

Recommendations

The exterior will require complete replacement of siding and trim. Determining the type of

siding originally covering the cabin would require the removal of the existing rough sheathing. Abatement of the asphalt siding will require testing followed by asbestos material abatement.

Given the use of vertical boards on the porch, the original siding may have been board and batten. Exterior casing at the four windows should match the casing at the door to the Hall.

Roof

The existing 5-V crimp galvanized steel roof is in poor condition. Portions of the roof have been covered with tarps, which have deteriorated.

Recommendations

The existing roof should be replaced. Assuming an early- to mid-twentieth century period of interpretation, a 5-V crimp galvanized steel roof would be appropriate.

Windows

Three of the four window openings have been covered over with rough sheathing and asphalt siding (Figure 66). No window sashes survive. The condition of the window frames that were covered for years is fair, while the one exposed window frame is deteriorated.

Recommendations

All window openings should be restored with single hung sash, as indicated by the surviving sash stops on the window frame to the south of the chimney. The proportion of the sash would suggest either a two-over-two or perhaps a four-over-four muntin pattern.

If the cabin is to be heated and cooled, the installation of new storm windows is strongly recommended for energy conservation. Similar to the house, an appropriate storm window

would be a solid wood frame with interchangeable glass and screen panels – referred to as a “combination storm/screen sash.”⁴¹ The appearance replicates that of a traditional wood screen frame, while the interchangeable panels allow for seasonal flexibility.

Doors

The board-and-batten door leading from the porch into the large hall is in good condition. The similar door on the north side shows significant weathering on its exterior face, and the bottom ends of the boards are decayed. The Door leading from the porch into the south room is split at the hinge side. Hardware is missing from all of the doors; however, stamped steel rosettes and escutcheons survive, along with ghost marks of other hardware.



Figure 68 – Tenant Cabin. Detail of front door showing late-1800s stamped steel rosette and escutcheon. The rim lock is missing.

Recommendations

All doors should be preserved and restored. The door to the south bedroom will require repairs to the hinge side. Vintage salvage or reproduction hardware should be matched to

ghost marks.

Weather stripping should be installed on heads, jambs and sills – especially critical on the unprotected north door. New thresholds will need to be installed.

Reconstruction of a dividing partition in the large hall will require a replica board-and-batten door to match the front door.

Interior Woodwork

What could be observed of the yellow pine board-and-batten wall paneling appears to be in good condition. The wood appears to have never been finished. The attic flooring is made of square-edged boards, and has many gaps open to the attic (Figure 40).

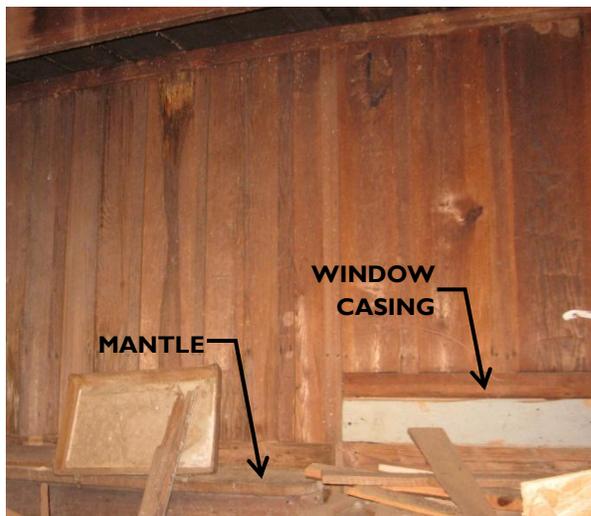


Figure 69 – Tenant House. Board-and-batten paneling on east wall of Hall.

The condition of the wood flooring could not be fully assessed. Due to the collapse of the floor joists, sections of the flooring may have suffered permanent deflection. Edges of the flooring along the exposed east wall show insect damage.

Recommendations

As discussed in a preceding section, *Floor*

Framing, all flooring will need to be removed for access to the floor framing. Floorboards should be numbered sequentially as to their location, salvaged and stored. Re-installation of the flooring could be over new sheathing.

Wall paneling and trim should be cleaned and preserved as is, with replacement in kind as required. If documented, a board partition, similar to the partition enclosing the south bedroom, would be constructed across the width of the Hall. Boards would be nailed to the face of the ceiling joist, and toe-nailed to the flooring. Refer to drawing *A.7-Tenant Cabin Floor Plan, Existing*.

The underside of the attic flooring should be cleaned. New sheathing should then be installed over top of the old boards to close off the attic. An attic scuttle was not noted, but would typically have been a removable section of attic flooring.

Environmental System

There does not appear to have ever been any central heating in the cabin.

Recommendations

If the cabin is to be used as a caretaker residence, a forced air heating and cooling system should be installed. A type of system to consider would be a ground-source heat pump, similar to the house. The air handling unit could be located in attic.

Plumbing System

There does not appear to have ever been any plumbing system in the cabin.

Recommendations

If the cabin is to be used only for interpretive purposes, then no plumbing would be required, except for perhaps a hose bib in the

yard. If the cabin is to be used as a caretaker residence, a new full bathroom and a new recessed kitchenette should be installed. Refer to drawing *A.8-Tenant Cabin Floor Plan, Proposed*.

Electrical System

There does not appear to have ever been any central heating, plumbing or electrical system in the cabin.

Recommendations

If the cabin is to be used only for interpretive purposes, then only a minimal electrical system would need to be installed. If the cabin is to be used as a caretaker residence, a new electrical system should be installed to meet requirements of the NC Electrical Code.

Large Outbuilding

The proposed objective would be restoration of this outbuilding to its appearance in the early 1900s, or as otherwise determined by interpretive goals for the overall property.

Foundation

The frame building is supported on cinder block piers at the corners and mid-span of the sills. The front, or south, end of the building is at grade, and this end appears to have settled to the point where the building tilts to the south. See Figure 42.

Recommendations

The masonry piers will need to be rebuilt on adequate footings, which will require that the building be jacked up. The front sill should be at least eight inches above grade.

Structural Framing

The condition of the floor framing could not be fully assessed; however, given the tremendous

load imposed by the firewood storage, it is assumed that the joists are permanently deflected, where not completely failed. At least two attic joists were observed to have split at mid-span. See Figure 43. The sills along the east, south and west sides are assumed to have permanent deflection and possibly decay.

Wall framing and roof framing appear to be in good condition. Some of the studs exposed along the east wall are weathered and may have some decay at the bottom ends.

Recommendations

To avoid further damage to the floor framing, all firewood and other stored material should be removed from the building as soon as possible. Damaged first floor joists should be replaced with pressure treated material. Attic floor joists should be replaced to match dimensions and saw marks of the existing.



Figure 70 – Large Outbuilding. Attic loaded with firewood.

Minor repairs are anticipated in the wall framing. No repairs are anticipated for the roof framing.

Exterior Siding and Trim

Only the siding on the east wall remains exposed (Figure 42). Here, the siding is extremely weathered, but usable. The other

walls are clad in asphalt roll roofing.

Recommendations

Existing original siding should be preserved and restored. Replacement siding should match the original in dimension. To prevent water from entering vertical joints, metal flashing would be slipped behind the joint, folded back over the top edge and lapped over the lower board.

Roof

The present 5-V crimp galvanized roof is in fair condition with some surface rusting. This is not the original roof. The original may have been a 3-V crimp pattern,⁴² very similar in appearance.

Recommendations

The existing roof could be repaired and painted, or replaced with a new 5-V crimp galvanized steel roof. Unfortunately, a 3-V crimp roof panel is no longer commercially available unless custom manufactured. However, the subtle difference in appearance to a modern 5-V crimp would not warrant such an investment.

Doors

Both board-and-batten doors are extremely weathered, but possibly serviceable for a storage building.

Recommendations

The existing doors should be preserved and restored if at all possible. Otherwise, replica doors should be made to match the board configuration and construction details. The wrought iron handle should be preserved and reused.



Figure 71 – Large Outbuilding. Detail of wrought iron door handle.

Small Outbuilding

Because the building is presently filled with firewood, an in-depth assessment could not be accomplished. Since no other evidence of an outhouse or bathhouse has been noted, it is conceivable that this building could have functioned as such. Once the interior is emptied, the building should be more closely examined. Refer to Figure 44 and Figure 45.

A portion of the north wall has collapsed, exposing the interior. The floor system in this area is also collapsing. Due to the extreme level of deterioration, removal of this outbuilding is recommended. As determined by interpretive and development goals for the overall property, the building could be reconstructed.

Log Crib

This building is not on the property; however, given the historical importance of the log crib, recommendations are made with regards to its stabilization as permitted by the owner. Refer to Figure 46 and Figure 47.

The east walls of the crib have collapsed, along with a section of the roof above. Continued exposure of the logs to the weather will lead to their deterioration, eventually causing collapse of the remainder of the building. Surrounding overgrowth constantly threatens the structure.

If at all possible, the County should work with the property owner to stabilize this important outbuilding. Initial stabilization would include shoring of the roof and walls, and enclosure of the exposed structure with an appropriate waterproof membrane. Overgrowth should be kept cut back from the structure to allow for adequate ventilation

Barn

This building is not on the property; however, given the historical importance of the barn, recommendations are made with regards to its stabilization as permitted by the owner. The building could not be completely accessed, and a condition assessment was not conducted. Surrounding overgrowth constantly threatens the structure. Refer to Figure 48, Figure 49.

If at all possible, the County should work with the property owner to stabilize this important outbuilding. Initial stabilization would include enclosure of any exposed structure with an appropriate waterproof membrane. Overgrowth should be kept cut back from the structure to allow for adequate ventilation.

2.B Recommendations for Development

Potential Uses

The difficulty in developing and interpreting the site is due to the disparate periods of its history. The site's Revolutionary War period is separated by almost ninety years from its post-Civil War period, which is then separated by over 50 years from the site's latest period of historical significance. This separation in the time line is compounded by the change in ownership in 1860. The property spans 90 years of Biggerstaff ownership followed by over 80 years of Long family ownership and intensive agricultural use of the property. There are two important stories to tell.

The foremost purpose for the site would be to interpret the events of October 1780, along with related events leading up to and following the trials and executions of the Loyalist soldiers. The north end of the property, with its colonial-era road traces and other archaeological features, will well serve this interpretive use.

A second promising use for the property, given the setting of the site and the integrity of the buildings and landscape, would be as a heritage education center, similar to what is being done with the Johnson Farm in Henderson County. Owned and operated by the county school system, the Johnson Farm is interpreted as a 1870s-era farmstead that evolved into a popular tourist destination in the 1920s. The facility has been incorporated into the public school curriculum.⁴³

Archaeologist Kenneth Robinson proposes that the Long Farmstead site would be an excellent location for the development of a public archaeology program. Artifacts and information recovered through carefully supervised archaeological excavation around

the house could be used to interpret the life ways of the Long family, who resided in the house for five generations.

According to Robinson, the farmstead property also has excellent potential as a place where early historic agricultural practices and farm life of the period from the 1860s to the 1940s can be interpreted for the public. The site would also be an excellent location for interpretation of the development of twentieth-century agriculture practices in the region. For example, the practice of agricultural terracing, so evident on the north end of the property, could be interpreted as part of an exhibit on soil conservation and agricultural sustainability.

These types of programs would allow students and educators to learn about the history of the Sunshine region, and about how archaeology can contribute to an understanding of the past.

In addition to history-related uses, there is also great potential for the development of a nature trail on the 17-acre property, incorporating areas along the creek, along the historic road traces, on the hill slopes and on the ridge tops.

Site Development

The development goal for the historic Biggerstaff-Long Site should be to balance the proposed use of the site with the preservation of the significant archaeological and historic landscape elements as described in *Part I / Developmental History*. Refer to drawing *S.2-Proposed Site Plan* for graphic representation of recommendations.

Historic Roadbeds

The historic road traces should be cleared of second growth trees and other vegetation in order to restore the sightlines along the roadbeds and allow for pedestrian traffic. Even minimal clearing would allow for experience

and interpretation of these historic features.

Colonial-era guidelines for two lane roads accommodating carriages and wagons specified the width of the road to be “one pole,” or 16-1/2 feet.⁴⁴ Where erosion has not substantially altered the early roadbeds, this standard appears to have been carried over for portions of the roads on the property, especially the 1855 road. It is more likely that the road widths in rural Rutherford County in 1780 averaged about 8 feet,⁴⁵ which accommodated the standard 56-inch to 60-inch wagon or carriage track plus adequate clearance to allow for passage of a horse and rider.

Most of the road traces should simply be cleared and mowed to either an 8-foot or 16-foot width or to a 5-foot minimum as determined by site conditions. Holes and uneven spots should be filled in for safety reasons. Severely eroded traces would require some roadbed restoration to create a level pathway a minimum of five feet in width. Any fill placed within an archaeological feature would need to be separated from the existing soil level by means of a porous, non-degradable membrane.

As funds or needs permit, accessible pathways could be constructed within sections of the road traces. Refer to section on *Pedestrian Accessibility*, following.

Pedestrian Accessibility

Pedestrian access throughout the site would be along the old road traces for the most part. Refer to drawing *S.2-Proposed Site Plan*. Where accessibility along the road traces is warranted, supplementary pathways could be installed within the roadbed with the realization that some portions of the old traces cannot be made accessible without substantial alteration or grading. Such alteration should be avoided to protect the historic feature.

For public facilities with historic designation or eligibility, certain exemptions for accessibility can be permitted, specifically where compliance would cause substantial harm to cultural, historic, or significant natural features or characteristics. For the Biggerstaff-Long site, such cultural features would include areas such as the archeological sites, or historic road traces, and possibly a burial place, if it exists. Significant natural features would include the stream, and any unique vegetation regarded as distinctive or important locally, regionally, or nationally. If the significant historic feature would be directly or indirectly harmed in the process of providing accessibility, an exemption from providing full accessibility could apply under the Historic Preservation Requirements of the Americans with Disabilities Act.⁴⁶

It is strongly recommended that any new accessible pathways be superimposed on the existing roadbed to avoid unnecessary excavation and possible disturbance of archaeological resources.

Materials

Accessible pedestrian pathways should be constructed of porous, natural materials compatible with the character of the site. Additional information on accessible trail design can be obtained through the National Trails Training Partnership.⁴⁷

Restroom Facilities

Public use of the 17-acre site will require the construction of accessible restroom facilities. Unfortunately, neither of the existing outbuildings is suitable for this use. In The large outbuilding the ceiling height is too low, and the overall dimensions are inadequate. The deteriorated condition of the small outbuilding precludes its consideration.

Initially, temporary facilities would need to be brought on site. As funds permit, a new outbuilding would be constructed. The minimum size for such a building would be approximately 14 feet by 20 feet. A possible location for a new restroom outbuilding is shown on drawing *A.2-Proposed Site Plan*. The location and construction of any new outbuilding should be coordinated with a historical archaeologist.

Driveway

To improve access to the property for public use, restoration of the early circular driveway shown in the 1930 aerial photograph is recommended. The proposed circular driveway would extend from the existing drive, loop one-way in front of the Long House, and then continue west, turning past the pecan trees, and merging back into the existing driveway. Refer to drawing *S.2-Proposed Site Plan*.

Although the earliest surviving driveway to the house appears to have been about 8 feet or less in width, consideration would be given to widening the entrance part of the drive to allow for two-way traffic. The one-way circular drive would remain single lane in width.

The location and layout of the restored circular drive would require coordination with an archaeologist to ensure that the necessary grade disturbance does not adversely affect potential archaeological resources.

Materials

The recommended material for the driveways is crushed stone, preferably limestone or other natural material that would not shift excessively under traffic. A border of flat, vertical stones could be set along the edges of the drive to contain the loose stone.

Parking

Public parking should be located away from the house and preservation area of the site. The area between Whitesides Road and the 1855 road trace appears to balance suitability and convenience. The parking area should be screened from the house.

Accessible parking spaces would need to be adjacent to the house, with an accessible pathway leading to the house. Locating accessible parking directly off the circular drive will allow passengers to be dropped off.

Materials

The recommended material for the general parking area would be the same as for the driveways. Accessible parking spaces could be paved with porous paving blocks or with a compacted surface similar to that used on accessible pathways. Either material would need to blend in with the driveway while allowing for a stable, accessible surface.

Landscaping

The immediate site around the Long House and outbuildings has several species of mature trees and other plantings. The identification and preservation of significant trees and plantings will be an important part of any interpretive project.

Drawing *S.2-Proposed Site Plan* indicates major trees and extent of forested areas. Drawing *A.1-First Floor Plan, Existing* illustrates recommendations for removal of intrusive trees and preservation of significant trees near the house. The two red junipers close to the front porch should be removed as they pose a threat to the building. In removing the west juniper, care should be taken to protect the very old crape myrtle – a characteristic planting of the late-nineteenth and early-twentieth century.