Constitution Hall Park Architectural Notes

Harvie P. Jones
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ARCHITECTURAL NOTES

by Harvie P. Jones, F.A.I.A.

INTRODUCTION
Constitution Hall Park is a reconstruction of seven buildings (and their outbuildings)—16 structures in all—of the period 1805-1819 in downtown Huntsville, Alabama. The purpose of the Park is to commemorate the 1819 Constitutional Convention held on this site, at which Alabama entered the Union. There being only 50 such locations in the United States makes this site of state and national significance. The buildings are reconstructed as accurately as historical information, architectural research, present-day technology, and economics allow. By visiting these diverse types of early nineteenth century structures, the visitor will gain an insight to the times and events of 1819 that no amount of reading or lecturing can impart.

All of the reconstructed buildings existed on this site in 1819, and together they present a wide variety: cabinet-maker’s shop (Constitution Hall), two lawyer’s offices, library, newspaper office, sheriff’s office, residence, service rooms, carriage house, stables, and “necessary.” All of the structures—except the Sheriff Neal house and office and the Library—had a direct relationship to the Constitutional Convention.

The architecture of the buildings in Constitution Hall Park illustrates “vernacular” (that is, not high-style) examples of the Federal period, which is generally 1780 to the mid 1830s. The term “Federal period” means architecture of the early years of the American Federation. Federal period architecture is a neo-classical style which blends influences from the style of Robert Adam (Adamesque) with those of the Palladian-Georgian tradition. While the basic Palladian-Georgian building forms are retained in most early nineteenth century vernacular work, the Adamesque influence is evident in a new lightness and delicacy of details and decorative elements such as moldings, mantels, and stairs.

HISTORICAL RESEARCH
Much research on the Constitutional Convention and its site was done in the late 1960s by Sarah Huff Fisk, Dr. Frances Roberts and others of the Huntsville-Madison County Historical Society. This research established the size, plan shape, and location of the various structures and whether they were of brick or frame construction. In the mid 1970s, the discovery by James Record of an 1871 “bird’s-eye view” drawing of Huntsville confirmed the three-dimensional shapes of the buildings fronting Madison Street. These shapes had been deduced by the architects from research completed in 1970, and it was gratifying to find that the correct conclusions had been drawn.

The architects (Jones & Herrin,
A.I.A., Huntsville) spent several thousand hours between 1970 and 1981 researching and documenting Federal period buildings here and elsewhere. Dozens of Federal period buildings were visited, photographed, measured, and examined. The architects also collected and studied a library of several hundred books and articles on the Federal period for information about such details as hardware, timber framing joinery, sawing methods, and nail manufacture.

In 1980 the American Institute of Architects Alabama Council presented an award to the Constitution Hall Park project for the thoroughness of its research and accuracy of execution. The City of Huntsville presented a similar resolution the same year, and the Park won a third award in 1982 from the North Alabama Council of the A.I.A.

RECONSTRUCTION PHILOSOPHY

The objective adopted by the architects in the reconstruction was that a local historic source be used for every architectural detail. For example, while research indicated the size, location, shape and material of the Neal House, nothing is known of the details of its stair. Therefore the Neal House stair details have been carefully reproduced from the Federal period stair in the rear of the Mastin House at 516 Franklin Street. This same technique has been followed throughout, down to the smallest moldings or sash-muntin profiles, and even to the spacing and types of nails.

A second part of the philosophy for reconstruction was that the buildings be frankly presented as reconstructions—that there be no attempt to delude visitors into thinking these are genuine Federal period structures. Therefore no age or wear effects are included. All concealed work is modern. A sign at the entrance announces that the buildings are reconstructions.

Research on building placement has been followed with these exceptions dictated by site restrictions:

1. Whereas the 1861 map and the existing foundations show that the front of the Boardman and Neal buildings sat directly on the street right-of-way, this was not now practicable as the house steps would extend completely through the sidewalk (which did not exist in 1819). These two building groups have been moved about ten feet from the street right-of-way line. Excavations during construction uncovered the foundations of both of these buildings and confirmed the accuracy of the 1861 map. It is also likely that the Clay and Constitution Hall buildings sat directly on the street right-of-way.
2. The Clay building actually stood just north of the alley instead of just south of it, where it has been reconstructed. Inasmuch as the Clay building was very important to the Constitutional Convention, and the original site was not available, the building was shifted to the south edge of the alley.

3. Two other houses were on the site in 1819 (the foundations of one on Gates Avenue near the center of the block were uncovered.) These were not reconstructed due to economic limitations and because they were not known to be involved with the Constitutional Convention.

SITE FEATURES

Walks through the Park connect the various buildings, and of course, these walks would not have existed in 1819. Nor would the grass have been mowed since lawn mowers were not invented until the latter 1800s. The grass would have grown freely and tall in 1819, perhaps with a few areas sickle-cut to several inches height. The required handicapped ramps are frankly treated as modern intrusions and are built of plywood. The historic brick walks extend under these ramps.

The three types of picket fences used are based on late 1800s photographs of Federal period Huntsville houses and on extant examples at Federal period houses in Mooresville. It is not possible to definitely state that these fences are original to their Federal period houses. A mid-nineteenth century painting of Huntsville's Big Spring by William Frye shows split-rail fences of the type seen at the center of Constitution Hall Park. This painting also includes a board fence that appears to be similar to the one at the Park's north boundary.

The patterns used for the brick walks—herringbone and running halfbond—can still be seen in Huntsville's two historic districts.

The plant materials, as selected by landscape architect Harvilee Harbarger, are types found in 1819 Huntsville. In a few cases, hybrids, which have the same appearance as the native plants, have been used. Heavy foundation plantings—an invention of the 1920s—are not used.
EXTERIOR DETAILS

RESEARCH The plan, material and form of the Boardman group, Library and Neal group are known from the 1861 and 1871 maps and the Sanborn Fire Insurance Maps of the late 1800s. The plan shapes were confirmed by archaeological and foundation excavations. A description written by a member of a touring drama group (which presented plays, probably on the second floor of the Walker Allen Cabinet Shop) provided the main basis for the Constitution Hall building along with studies of similar nineteenth century structures in other areas. The form of the Clay building is based on old photographs of the Federal period Spottswood House and its similar neighbors on South Side Square.

BRICKWORK Most Federal period brick structures had Flemish bond brickwork in a high-quality brick on the front and common bond in a cheaper, irregular brick on the other faces. Thus the Library has Flemish bond with beaded or “grapevine” tooled mortar joints on the front and common bond with casually troweled joints on the side and rear. Some brick fronts of Federal period buildings have all running bond; that is, none of the bricks are turned endways (headers) to tie the face bricks to the inner bricks. The face brick ties consist of occasional courses of eight-inch square bricks which present a normalized face but which extend eight inches back into the inner bricks. The Clay building has this feature, with the usual common bond on the side and rear walls, which has an unattractive header-course about every seven courses. Brick walls of Federal period houses here almost all had pencilled (quarter inch wide white paint stripes) joints to accentuate and visually straighten the joints; this has not been done in Constitution Hall Park because the front of the only appropriate brick building, the Library, has beaded tooled mortar joints.

CLAPBOARDS In the early nineteenth century it was not thought to be important on most buildings that clapboards be evenly spaced or straight, as is amply proved by many extant examples. Therefore the clapboards on the Park buildings range from quite (but not exactly) regular on the Neal House, the most refined structure, to somewhat more irregular on the Boardman building, to sometimes quite irregular on the Constitution Hall building, which was an unpretentious commercial building that was thought so little of as to be demolished in 1821, two years after it housed the Constitutional Convention. The better buildings of the period used beaded clapboards, as does the Neal House.

FOUNDATIONS Federal period buildings in this area usually had chiseled limestone foundations which sometimes extended partly above the ground and then transitioned into brick. In some cases these foundation stones were very large—as much as 18 inches square and 13 feet long and weighing about 4,500 pounds. Apparently the cutting labor was more onerous than the hauling labor. The stones were usually roughly coursed, or random ashlar, and were infrequently precisely chiseled and coursed.
CHIMNEYS  A look at the various chimney-caps shows seven types present in Constitution Hall Park. A consistent Federal period chimney detail is the projection of two brick-courses at the chimney-shoulders, about one inch out from the chimney shaft sides. On the Federal period clapboarded buildings (Neal and Boardman), the chimneys typically stand against the outside face of the wall and stand free of the wall entirely at the portion above the chimney-shoulder. This is for fire protection since the brick flues were unlined and could develop holes where mortar joints deteriorated. A hole in the brick flue could allow flames from a chimney fire into the attic. Separating the flue from the gable wall would prevent this, and it results in an attractive appearance as well.

SHINGLES  Several wooden handmade shingles known to be of the Federal period have been salvaged from attics and studied. Researchers tell us, and observation confirms, that these shingles were made by splitting them off with an ell-handled knife called a “froe,” then smoothing them with a drawknife. The shingles thus are relatively thin, and the surface is fairly smooth, so that they closely resemble a modern sawn shingle in texture. For this reason, modern shingles have been used in Constitution Hall Park, since the only alternative would be to make them all by hand—an extremely costly option which was not available.

ROOF RIDGES  Old drawings and photographs show that ridges of wooden shingle roofs had a row of shingles that projected about four inches to help waterproof the ridge joint. This is unlike twentieth century practice where shingles do not project at the ridges but are overlapped along the ridge. Furthermore, these early ridges usually projected away from the prevailing wind, which here is from the west and south, following this sensible early nineteenth century practice.

EAVES  Most Federal period buildings had boxed roof eaves of some design, ranging from a simple flat soffit-board (Neal carriage house), to a simple box with a crown-mold under it (Library and Clay buildings), to a quite elaborate boxed cornice with a crown-mold on the eave and under the box (Neal, Boardman, and Constitution Hall). Some outbuilding eaves were unboxed with the rafter ends exposed. The south kitchen eaves at the Boardman building have this detail.

GABLES  Most Federal period gables had no projecting eaves. A fascia board with a beaded bottom edge ran up the rake (slope) of the roof, covering the top edge of the clapboard or brick wall. Frequently (but not always) this raking fascia was tapered to be narrowest at the peak of the roof.
Constitution Hall Park
HUNTSVILLE, MADISON COUNTY, ALABAMA

Boardman
Law Office "Alabama Republican" Huntsville Library
COLORS  The circa 1850 Frye painting of Huntsville tells us several valuable things since it includes color, fences, and utilitarian buildings of a type now rare. It shows us that service buildings were frequently unpainted clapboard, that vertical board siding was sometimes used on outbuildings (Post Office stable), and that white was a frequent clapboard color. Numerous Federal period clapboard structures here have been scraped to determine the original paint colors. All but two have had white clapboards, or actually a near-white since refined white pigment was not available until the latter part of the nineteenth century. Therefore most of the clapboard at Constitution Hall Park is near-white in color as is the trim.

OUTBUILDINGS  The Post Office stable is patterned after a building in the Frye painting. The details of the Neal carriage house are like those on the early 1800s waterworks building shown in both the Frye painting and an historic photograph, and also like a carriage-shed shown behind the waterworks building in the same two sources. The Neal necessary is a reproduction of the one formerly at the 1820s Bone-Wilbourn House, which, based on its details, was possibly original to that house. The pyramidal-roofed "tool house" behind the Boardman building is a type shown twice in a Civil War view of Adams Street published in Harper's.

WALL VENTS  Three types of local Federal period foundation and wall vents are used in Constitution Hall Park. The most common type consists of vertical wooden square bars twisted 45 degrees to the wall plane, set in a beaded wooden frame (Boardman, Library, and Neal House). A second type consists of small openings left in the brick foundation wall by omitting bricks (Clay building and Boardman service wing). The other type is like the wooden bar type first discussed, except the bars are horizontal (Neal dairy). Some clapboard buildings had no foundation vents, as is illustrated in Constitution Hall.

PORCHES  Note that none of the Constitution Hall Park structures has a front porch. Indeed, the steps proceed directly up to the front door without even a landing at the top. While some Federal period townhouses had original small roofed entry porches, the evidence is that many did not. Since both the Boardman and Neal buildings were originally built with their front walls directly on the street right-of-way line and the 1861 map showed no front porches, the correct conclusion is undoubtedly that these structures only had front steps. These entry steps were frequently wood but sometimes stone; both types are used at Constitution Hall Park. The wrought iron foot-scrapers at the Boardman, Neal and Library buildings would be a necessity with the muddy unpaved streets of 1819.

BOARD DOORS  Outbuilding doors are usually com-
posed of vertical boards scabbed together with two or three horizontal boards and clinched cut nails. The board doors on the Boardman building tool house and the root cellar behind the Library consist of two layers of opposing-diagonal planks nailed together with hundreds of nails set in a careful rectilinear pattern. There are many more nails than are structurally necessary, and it can only be deduced that they served a decorative purpose as well as a functional one.

WINDOWS The brick buildings at Constitution Hall Park have heavy wooden lintels spanning over the window and door openings, usually three bricks high (about eight inches) but sometimes only two. The window sills are of thick wood. No Federal period brick sills have been found. The lintels and sills were frequently heart red cedar for rot resistance, and most are as sound today as in 1819.

Nineteenth century commercial structures usually had solid shutters (that is, they had no bladed openings) for security (Constitution Hall, Clay, and Boardman law office). These shutters had heavy diagonal iron bars which were lapped over the closed shutters and pinned on the inside. The Neal and Boardman buildings have Venetian blinds, so termed in nineteenth century writings, which are bladed and are what are commonly called shutters today. Many of these blinds had adjustable blades on either the lower half or both halves, while some had only fixed blades. Vertical board shutters are used on the out-buildings.

Windows in Federal period clapboard buildings usually had very narrow exterior frames—simply the outer edge of the frame-board (about 1 1/8 to 2 inches thick) with the clapboards butted to it (Boardman House). Frequently these frames had rounded outer edges as is done on the Sheriff Neal office. Some Federal period clapboard buildings had wide beaded and backbanded frames on their outer sash faces; this detail is used on the Neal main residence.

The window sashes were single-sliding—that is, the top sash was fixed shut, and the bottom sash slid up and down. The movable bottom sash of a typical single-sliding up and down sash was frequently shorter than the top fixed sash (Boardman and Neal houses). Window panes were usually ten by twelve inches, but were sometimes eight by ten inches. Pane arrangements varied but the most common were 12/12, 9/9, 6/6, 12/8, and 9/6.

The glass in the Constitution Hall Park buildings is an accurate reproduction of the 1819 hand-blown cylinder glass which has ripples and bubbles as a result of its manufacturing process. This reproduction glass is made in France, with some panes in the Neal buildings coming from an 1880s hotel near Huntland, Tennessee.

INTERIOR DETAILS

FRAMING The exposed frame interiors of the utilitarian structures such as the stables are based on the framing methods of the numerous extant Federal period buildings in north Alabama. Framing members were typically spaced about (not exactly) two feet on center. By the late nineteenth century, 16 inches on center was the usual spacing as it is today, although now the members are much thinner being only about 1 1/2 inches thick. Connections between framing members were mortised, tenoned and pegged. At the roof ridge, the rafters typically met in a half-lap and were pegged, rather than being nailed to a ridge-board as in today’s practice. The
use of mortises and tenons necessitated prefabrication of the members on the ground, so the connections were given matching Roman numerals on the corresponding members for orderly erection. The Roman numerals were used because they are easily made with a chisel. These framing details involving the smaller framing members can be seen in the Constitution Hall Park outbuildings, which are all of a small size.

**WALL FINISHES** Several local Federal period buildings indicate that plaster was reserved for better rooms, and wide, thin planking covered the walls and ceilings of more austere spaces. Most larger nineteenth century commercial structures observed had planked interiors. Therefore in Constitution Hall Park, the utilitarian lean-to rooms, some service rooms, and some commercial spaces such as Constitution Hall have wide-planked ceilings and walls.

Note that plastered surfaces in the Constitution Hall Park buildings are not perfectly planar, but gently undulate to follow the imperfect brick walls or hand-split wooden laths on irregular studs. A visit to unrestored early nineteenth century structures will illustrate the prevalence of this characteristic. Buildings of the Federal period have a charming irregularity, which may or may not be deliberate, but the result is the same: they have none of the mechanical dryness typical of dimensionally perfect modern structures.

In the Federal period it was the practice to first install all the wooden trim in a room, such as baseboards, window and
door trim. After this, the plaster was applied to the handsplit white oak lath or, in the case of masonry buildings, directly onto the inner surface of the solid brick walls. Therefore the plaster laps onto the edges of the wooden trim so that the trim is slightly recessed into the plaster, giving the trim a more delicate, thin appearance.

MANTELS There were no known architects in Huntsville before about 1820, and the Constitution Hall Park buildings are therefore of vernacular Federal period design based on the builder's and owner's memories, skills and desires, supplemented by reference to architectural handbooks. The Adamesque mantels found in Constitution Hall Park undoubtedly are adaptations of designs found in many architectural handbooks widely available in the period, such as The American Builders' Companion first published in 1806 by the architect Asher Benjamin. These mantels are of widely varying design, from simple to elaborate. The most elaborate in the Park are found in the Neal House and the Boardman building, which probably was built as a house and later accommodated the Alabama Republican newspaper offices on its first floor. The more elaborate of these Adamesque mantels combine many small moldings and deep offsets for a light and graceful, yet flamboyant effect.

COLORS Many local mantels dating from the Federal period have been scraped to determine the original paint color. Almost all have been found to be glossy black, the gloss achieved with varnish either coated over the black paint or mixed into it. If this surprises, consider also that the interior paint colors found in Federal period houses are consistently deep and rich, such as burgundy, rose, turquoise, burnt orange, gold, and forest-green. Meek off-whites are the exception rather than the rule. Black mantels beautifully compliment these rich colors.

MOLDINGS Some area Federal period houses had wood-paneled wainscots, but most had only a wooden chair rail which was an extension of the window sill. The Neal and Boardman main rooms and the Library have these chair rails, but their service rooms do not. Nor do the Clay or Constitution Hall buildings have them. The most typical baseboard of the Federal period was a poplar board with a bead-mold along its top edge, scribed along its bottom edge to fit the irregularities of the wooden floor. No shoe mold was used, such as is common today. No instance of a Federal period house in the Tennessee Valley having original room cornices has been found by the writer; consequently, none have been employed in Constitution Hall Park.

DOORS The three patterns of Federal period doors commonly found are six-panel, four-panel, and board-and-batten. The paneled doors have either beveled-edge or flush beaded-edge panels on one face while the opposite face displays flat recessed panels. Usually (but not always) the beveled or beaded side was placed on the more prominently viewed side—facing the hall when closed and facing the room when opened against the wall.

The paneled doors were very thin, the interior doors being usually 1 1/8 inches thick. The exterior doors were sometimes
up to 1 1/4 inches thick, but still thinner than a modern interior door. Since rimlocks (box-locks screwed to the surface of the door) were used and the door thickness did not have to accommodate an internal mortised lock, there was no reason to make the doors thicker. Federal period board-and-batten doors were usually 1 1/8 inches thick and were used in utilitarian spaces. Most had smooth hand-planed faces, but some rough sash-sawn faces have been found.

The majority of the rimlocks found on Federal period buildings here were "Carpenter" brand (manufactured in England beginning about 1790 by Carpenter & Company) and featured very small and gracefully shaped brass knobs. The reproduction Carpenter locks in the Neal and Boardman buildings were made locally by Jim Batson, and the others were produced by Ball & Ball.

The idea of sanding and varnishing a wooden floor dates from the post-Civil War Victorian period. Most unrestored Federal period floors appear grayish—said to be a result of scrubblings with sand, bricks, lye and water—and this is the effect that has been used in the Constitution Hall Park buildings. Drawings and paintings from the Federal period of house interiors show that the wooden floors were usually covered in the better houses. The covering was usually wall-to-wall carpeting or straw matting made in yard wide strips sewn together and tacked around the edges of the room. The practice of using oriental rugs on floors is essentially a Victorian one and hence not

STAIRS
While Federal period houses of the vernacular type usually found in this area were very simple, they were often exuberantly elaborate in the design of their mantels and their stairs. Most Federal period stairs have decorative scrolls on the sides of their steps in patterns. The newels are most frequently miniature Tuscan columns capped by a square section to receive the rail and an oval-sectioned circular top. The balusters are typically rectangular and set two to a step.

FLOORS
Most Federal period wooden floors were a dense, hard, virgin growth pine, although poplar and ash floors were occasionally used. Wooden floor boards were about 1 1/8 inches thick, tongued and grooved, and usually five to six inches wide. Attic and utilitarian room flooring may be 12 to 16 inches wide. For the floors in the Neal and Boardman buildings, Library, and Sheriff's Office, very dense pine was obtained from a salvaged late nineteenth century mill building which closely approximates 1819 flooring. In the Constitution Hall and Clay buildings, modern "dense" pine had to be used; it is less than satisfactory. These last named commercial buildings have, appropriately, wide floor boards of generally 9 to 12 inches.
appropriate to the Federal period.

Kitchens and basement rooms frequently had brick floors laid directly on the earth in a sand-bed without mortar. The bricks were laid flat and jammed tightly together with sand swept into the joints. Bricks, measuring four by eight inches, were usually laid in a herringbone pattern turned forty-five degrees to the wall, although some brick floors consisted of eight-inch square bricks laid in a half-bond pattern.

CONCLUSION

A comprehensive report has been compiled listing the local historical source of each detail, molding, and paint color of each building and room in Constitution Hall Park. Great efforts have been exerted to make the buildings as accurate as possible. Some of the aspects of early nineteenth century architecture will surprise many visitors, such as the frequent use of rich, deep paint colors and the prevalence of black-painted mantels. However, these and other details are supported by the examination of numerous Federal period buildings of this area, and if we are surprised by some of the architectural and decorative practices of the early nineteenth century, then we have learned something new, and “learning” about the events and times of the 1819 Constitutional Convention is the purpose of Constitution Hall Park. It is hoped that a visit to the Park will be both a pleasurable and an educational event which will enable the visitor to better understand the present through a better understanding of the past.