

# HISTORIC STRUCTURE REPORT

## THE WRIGHT TAVERN 1747 CONCORD, MASSACHUSETTS



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## INTRODUCTION

The Wright Tavern has been an iconic part of Concord's village center at least since April 19, 1775. This National Historic Landmark is listed on the National Register of Historic Places and is in the American Mile Historic District of the Town of Concord. The building has seen many uses and survived many cycles of deterioration and repair. Its steward since 1886 has been the First Parish in Concord, and specifically, after 1909, the Trustees of Parish Donations.

In 2011, with the urgent need for substantial repairs to the Tavern, including replacing the roof and restoring windows, the Trustees approached Concord's Community Preservation Committee about funding, and submitted an application in September, 2012. The committee requested that a historic structure report (HSR) be completed to provide a sound basis for these measures and any future planning for the building. Concord's 2013 Annual Town Meeting approved the Committee's funding recommendation, providing some assistance for the effort.

Groundroot Preservation Group LLC (GPG) was selected in a competitive process to produce some essential components of an HSR. The following sections comprise these elements. GPG is also providing specifications for repairs and recommendations for annual maintenance.

GPG presents this material as a major step toward a complete HSR that will enable crucial work to be undertaken before irreversible damage to the building occurs. Temporal and financial limitations and the necessity of getting some projects under way, precluded the most fully realized version of an HSR. We hope that this will be a dynamic process, and the report will be augmented with additional research and documentation of the building, including measured drawings, in the near future.

## EXECUTIVE SUMMARY

When British troops seeking rebel arms marched into Concord in April, 1775, their commanders refreshed themselves in a roadside tavern. Built twenty-eight years earlier, it was known then and ever since by the name of the tavern keeper who rented it for his operation, Amos Wright. Artist Amos Doolittle helped immortalize the structure by placing it centrally in his engraving depicting the British troops in town.

Operated as a hostelry, bakery, restaurant, and residence at different times, the tavern underwent episodes of expansion and renovation as it changed hands over the decades. Its owners gave it to the First Parish in Concord in the 1880s. The Parish has generated income by renting it to others. Since the mid twentieth century, the building has housed retail stores, professional offices, and religious educational programs. While not presented as such, it remains an historic site of interest to Concord's visitors.

Unlike many historic structures allowed to lapse into obsolescence, decline and collapse, The Wright Tavern has been kept up through a nearly continuous effort to put it to viable use. This has also meant considerable loss of original fabric as it was renovated and adapted. It still retains

important eighteenth- and nineteenth-century materials that continue to define its historic character. Awareness of these features and current standards for their treatment should be in the forefront of all planning for the building.

The structure's mechanical systems require updating, especially the electrical system. It incorporates outmoded and potentially dangerous wiring that should be disconnected and mostly removed.

Improvements to HVAC and plumbing over time will make the building function better and support its preservation.

The Wright Tavern needs a new roof covering urgently. Structural issues pertaining to deteriorated and separated main framing elements on the second floor require careful monitoring and careful repair over the course of a year. Historic windows and some portions of the exterior cladding and trim need repair in the short term. Some areas of plaster failure on the interior can be conserved easily and relatively inexpensively if tended to soon.

Going forward, an informed, thoughtful effort to preserve these materials will allow the building to continue as a practical resource as well as a vessel of our common heritage. Incorporating preservation standards and appropriate expertise in the ongoing care of the tavern will add to the many ways it can serve the community and its visitors.

## SECTION I. HISTORY

### BACKGROUND AND CONTEXT

#### Methodology

The following history was compiled as one element of a historic structure report on The Wright Tavern at the behest of the Trustees of Donations of the First Parish in Concord, the building's owner. The emphasis of this phase of the report is the building's condition and future conservation, so we focus here on the story of its construction, use, and modification.

Under the agreement defining the scope of the report, this history was drawn from material in the files of the First Parish in Concord (FPC) and the Special Collections of the Concord Free Public Library (CPFL). It was necessary to rely on the research of past authors for general historical information, rather than to conduct extensive primary research. The authors used public records available on Ancestry.com for information about owners and occupants of the building.

#### Summary

The Wright Tavern is a mid-eighteenth-century building noted for its role in events leading up to and including the battles of Lexington and Concord. It began as a private home and hostelry. By the end of the eighteenth century, it was a bakery and a home. From the second quarter of the nineteenth century until the mid twentieth

century, it functioned again as a minor hostelry. Given to the First Parish in Concord in the 1880s, it has been a church property since then. More recently, various small businesses have rented space in the tavern for retail shops and offices, and the church has used it for community activities, as well as office space.

While retaining its essential character on the exterior, the interior of the building has been modified often over time. The building as a whole has been through many cycles of deterioration and renovation. Frequent turnover of owners and renters has resulted in much loss of original material on the interior, its immediate utility having been of primary concern.

The approach of the Bicentennial of the Revolution occasioned the first systematic efforts to study and preserve The Wright Tavern. Architectural historians, archaeologists, engineers, and architects examined and reported or made recommendations on different aspects in the mid 1970s. Additional studies were done in 1989 and 1995. None of the studies or planning efforts has been all-inclusive, and upkeep of the building has tended to be more practical in nature than preservation-oriented.

The current study is an effort to establish a comprehensive grasp of the structure and apply up-to-date preservation standards to planning for its future care. The

information herein should inform crucial decisions about its deployment and the policies that will guide its treatment.

### **Building History**

The Committee of the Town of Concord sold land near the milldam in the center of the village to Ephraim Jones, “trader” (or merchant) in June, 1747. By August, a frame for his house stood on the land. We do not know whether he built it as a tavern per se, or employed what started as a residence for that purpose later, which was common. Jones was listed as an innkeeper when he sold it in 1751 to Thomas Munroe, another innkeeper in town.<sup>1</sup> Munroe mortgaged the property six years later to four men, who sold it upon his death in 1766 to Daniel Taylor. He owned it until December, 1775, when he sold it to Samuel Swan of Charlestown.

Amos Wright, whose name is associated with the building, was never its owner. Rather, he likely rented some or all of it for the operation of a tavern. A 1901 presentation by George Tolman to the Concord Antiquarian Society credited one of Wright’s descendants with linking him to

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<sup>1</sup> A title chain for the property was compiled by John Cole of Ipswich, Massachusetts for his 1989 report to the First Parish in Concord (FPC) *Analysis of Wright Tavern: History and Architecture*. That chain and other material he gathered informs this history. The report is in FPC files.

the tavern. Lemuel Shattucks referred to the building as “Wright’s Tavern, now Deacon Jarvis’s” in his 1835 *History of the Town of Concord*, giving more credence to its local association with Amos Wright. Wright was the tavern keeper when British troops marched into town April 19, 1775, and, according to tradition, two of their officers stopped in for refreshment.

Taverns in eighteenth-century New England served many purposes. They typically had bars, or taprooms, where beverages and food were served. These were often important gathering places for doing business, sharing news, organizing for political purposes, and socializing. Militia musters often centered around the local tavern. Public auctions were held there. Town officials might meet in a tavern room, and trials were held there before there were town halls and courthouses erected for such purposes. Taverns also served travelers with meals and sleeping accommodations.

For roughly a forty-year period, 1747 to 1787, the building served as a home and a tavern, most often operated by renters. It gained fame among the dozens of similar establishments in the region because of the Tavern’s role in the history of the American colonies’ battle for independence.

The building’s use as a tavern ended for a time in the early federal period. The “Deacon Jarvis” mentioned by Shattucks was Francis Jarvis, who bought the building in 1793 with fellow baker Thomas Safford.

One account says that Jarvis began renting the bakery in 1790.<sup>2</sup> In his 1989 study of the building, John Cole noted a beam with Jarvis's name and the date 1787 written on it in the attic, indicating that he may have rented the building before buying it. The bakers and their families likely lived in the house as well as operating their business out of it. In 1795 Jarvis bought out Safford.

Many colorful stories have circulated about The Wright Tavern. Some embroider the facts of the British officers' visit. At least one deals with its later story. A card in the Parish materials held by the Concord Free Public Library states: "...in the early part of the nineteenth century, the men of the First Parish Church bought the Tavern so that the ladies of the church could run a tea room for working men, thus reducing their intake of alcoholic beverages. Alas, it was a dismal failure, but the church still owns this beautiful old building."<sup>3</sup> There is no evidence in the title chain for such a purchase; the Parish did not acquire the building until the last quarter of the nineteenth century.

Returning to the verifiable, an unattributed, single-page history of the tavern states that Francis Jarvis left the building and the baking business and moved to "the Buttrick

<sup>2</sup> Unnamed history.

<sup>3</sup> Special Collections, Concord Free Public Library(CFPL), First Parish in Concord collection, Box 20, Folder 29: *Wright Tavern*, a card labeled "#5c" conveys this story.

Farm" in 1831, after which tenants occupied the tavern. One was "Captain Stacy", a printer. A search on Ancestry.com found no Stacys in Concord in 1830, but a John Stacy on the 1840 census, in whose home two people were engaged in manufacture and trade.

Francis Jarvis conveyed the tavern to Stephen Jarvis for a dollar in 1839. Stephen was 44 at the time He was born in Massachusetts in 1795, perhaps Francis' son. He lived in New Orleans, where he was a merchant at the time he gained ownership of the tavern. He appears on the 1850 federal census there, so he was another absentee owner who rented the building to others, for what purpose we do not know.



**Figure 1: Earliest image of The Wright Tavern, c. 1850s, a daguerreotype. Courtesy of the Concord Free Public Library (CFPL).**



census for Concord living in the same household as his parents. He and his father Francis are both listed as hair oil manufacturers. They may have been renters from Smith and Prescott or Staples.

Daniel H. Wood, then of Brooklyn, New York, sold the property to Lucy L. Brown and George F. Brown in 1871. Lucy was probably George's mother. They moved into the building. George is listed in the 1870 census and in his 1874 marriage record as a stable keeper, suggesting that, again, the outbuildings were the generator of income, rather than an inn.

The Browns' ownership did not last long. A poster in the Special Collections of the Concord Free Public Library advertises "the Old Wright Tavern" for auction sale by R. Vose, Jr. and Company, May 6, 1875 the owners Mrs. Lucy L. Brown and George F. Brown. The property includes "Mansion house containing 22 rooms, a large stable, and carriage house". While its historical value is acknowledged in an invitation to attendees to "view the spot where 'Maj. Gen'l Pitcairn' uttered that memorable sentence on the morning of April 19<sup>th</sup>, 1775", other qualities are promoted. The corner lot, close to railroad depots, is touted as very valuable for a block of stores, or any manufacturing or mechanical purpose. "No better site for a boot or shoe factory could be found in the village." Written in pencil at the bottom of the poster is: "sold to Sam'l Staples \$7,300".



Figure 3: Auction poster. Courtesy CFPL.

Cole's title chain indicates a deed from the Browns to George M. Brooks in May, 1875. Brooks was an attorney in Concord. His motive for purchasing the tavern is not known, but he sold it seven years later to Ebenezer R. Hoar and Reuben N. Rice.

Rice and Hoar may have purchased the tavern to arrest its deterioration.<sup>4</sup> A short biography of Rice states that he "...expended much money in fitting up the old Wright Tavern and its surroundings,

<sup>4</sup> "Eric Smith Recollections Wednesday, July 19, 2000" in FPC files.

and gave the use of his share of it to the experiment of a People's Club, which lasted but a year or two, and by his will left his whole interest in it to the First Parish."<sup>5</sup> In fact, Rice and Hoar willed the building to the Parish in 1882.

Despite the apparent difficulty previous owners had had making enough to keep the building up, Rice and Hoar thought the Parish could manage that and more. In 1885, following Rice's death, Hoar gave his right to the Parish, first paying the taxes for that year. He stipulated that income from the tavern be used to pay down any debt incurred by the Parish, and that a vote by the Parish agreeing to this be recorded.<sup>6</sup>

The tavern was producing income, presumably from rent, though we do not have information on the initial renters. The Parish's annual report for 1888 reported that tavern income had paid the outstanding debt, and notes some plumbing and carpentry repairs, which became routine. There was also a statement that the Parish must decide what to do with the tavern.<sup>7</sup>

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<sup>5</sup> *Memoirs of the Social Circle of Concord*, Third Series, p. 151. This volume is in Special Collections CFPL.

<sup>6</sup> Annual Report of the Standing Committee for the year ending April 1, 1886.

<sup>7</sup> Annual Report of the Officers and Committees of the First Parish in Concord for the year ending April 1, 1888, page 3.

The Parish formed a group to manage The Wright Tavern and other historic buildings that had been donated to it. In 1909 the group was made up of Harvey Wheeler, Prescott Keyes, and Henry F. Smith, Jr.

## USES UNDER FIRST PARISH IN CONCORD

At least by the mid-1890s, The Wright Tavern had resumed its historic function as an inn. It would continue as some mix of lodging and restaurant until the 1950s. Parish records in the collections of the Concord Free Public Library and the Parish's annual reports give us the names of renters and occasional details. Public records retrievable via Ancestry.com tell us a little more about many renters.

William E. Rand of Cambridge, was renting the tavern for \$300 a year in 1894, and \$328.50 in 1895.<sup>8</sup> He surrendered his tenancy in 1899, according to the Parish annual report. A membership record for William Edward Rand in the local Corinthian Lodge of the Masons in Concord lists his occupation as hotel keeper. He was succeeded by Miss Nellie F. Tarleton, listed in the 1900 federal census as the 27-year-old daughter of a hotel keeper.

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<sup>8</sup> Box 18, Folder 1, "Real Estate", Parish Records in Special Collections, CFPL.

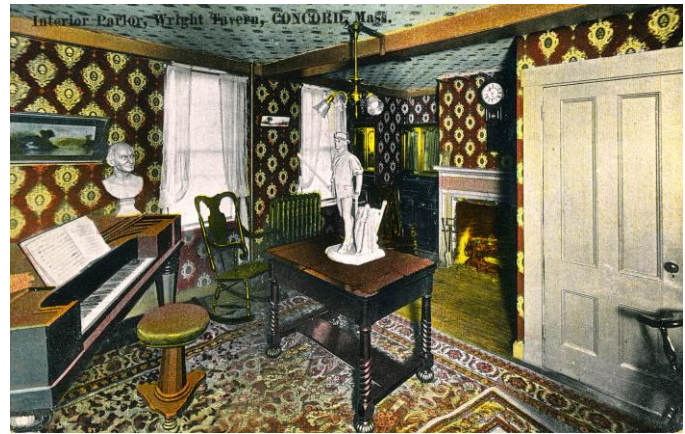
The 1910 Parish report noted that Charles C. Welman, “a competent hotel man” had replaced Mr. Busch, about whom nothing has been found, as the tenant. The 1910 federal census showed Charles C. Willman, 63, hotel keeper and wife Louisa. In their household were a clerk, two cooks, and a livery driver.

From at least 1918 until 1925, Henry Grieme rented the tavern.<sup>9</sup> Rent was \$20 a month at first, and rose as high as \$65. The federal census showed that Henry Grieme was 45 years old in 1920, had emigrated from Germany in 1882, and was working as manager, with his wife Teresa as cook in a hotel.



**Figure 4: Postcard, first quarter of the twentieth century, showing the tap room. Special Collections, Concord Free Public Library.**

<sup>9</sup> Bound manuscript volume *Trustees of Parish Donations* (1910-1961, with the bulk of information dating 1910-1945), Box 13 (unfolded), Pp. 34-72, Special Collections CFPL.



**Figure 5: Postcard, first quarter of the twentieth century, showing a parlor. Courtesy CPFL.**

According to the recollections of Eric Smith, Reverend MacDonald, who had been pastor for 30 years, passed away suddenly in 1925, leaving his wife without an income. A group of parishioners and friends formed Wright Tavern Incorporated to lease the building and install her as the innkeeper.<sup>10</sup> The corporation’s Agreement for Association was filed with the Massachusetts Department of Corporations and Taxation on 10 December, 1925.<sup>11</sup> Also surviving are undated forms on which various people pledged to pay amounts varying from \$200 to \$1,000 to support the nonprofit entity.

The Parish’s annual report for 1926 noted that Wright Tavern Incorporated was making extensive repairs and improvements to the property. As is usual

<sup>10</sup> Smith, Pp. 12-13.

<sup>11</sup> Uncatalogued collections (file folder with “Wright Tavern” in red ink on the tab), CFPL Special Collections.

for the reports, these changes are not specified, but one was the addition of a dining room on the south façade.<sup>12</sup>

The current study did not locate any records of the corporation, only evidence that rent was paid to the Parish during its management. Wright Tavern Incorporated terminated its lease and was dissolved in 1936.<sup>13</sup>

F.W. Tucker paid rent for the Tavern in 1939. There was a Frank Tucker, resident of Arlington, shown as a restaurant owner in the 1940 federal census, perhaps this man. The next tenant revealed by the present research is Trumbull Taverns, Inc., a firm that ran a number of such places, led by Franklin H. Trumbull. We do not know when that lease began, but it ended in 1944 when the Parish took action through its attorney to terminate it due to Mr. Trumbull's having stepped down as president.

Parish reports do not specify tenants for the remainder of the 1940s. During the Fifties, little is noted except in 1958, when the tavern had been vacant for a year. This seems to have marked a transition, the end of its use as a restaurant or lodging. Shortly thereafter, women of the Trinitarian Congregational Church of Concord began

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<sup>12</sup> Smith; and Parish Annual Report 1926, page 17.

<sup>13</sup> Uncatalogued Parish material, CFPL Special Collections; and FPC Annual Report 1936.

renting the first floor of the tavern and operating the Tri-Con Gift Shop. Theodore Jensen rented a small room in the basement as a one-man real estate office.<sup>14</sup> It changed hands after a little more than a year. The Tri-Con ladies sublet part of the kitchen to Milldam Associates, a realty firm, in 1963. In 1964, Walden Clinic, later the Walden Guidance Association, rented space on the second floor. The basement office was Mrs. Chester Lerner's studio for several years before the Chamber of Commerce moved in.

In 1961, United States Senator Leverett Saltonstall from Massachusetts telegrammed to inform the Parish that that the Secretary of the Interior had declared The Wright Tavern "an historic site of exceptional value in commemorating and illustrating the history of the United States...and therefore eligible for National Historic Landmark status".<sup>15</sup>

The combination of retail and offices continued for many years. During the 1970s, Shaker Workshop, which sold furniture, operated on the second floor, starting with a single room and expanding to most of the others. Shaker Workshop moved out in 1975. Abigail's Attic, a "swap

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<sup>14</sup> Many details of renters are found in currently uncatalogued Parish documents in Special Collections at the CFPL Thanks to staff for making these available.

<sup>15</sup> A copy of the telegram is in Box 18, Folder 1, of the Parish materials in Special Collections CFPL.

shop”, and Super Stitch, which sold yarn, also occupied second-floor spaces at different times.<sup>16</sup>

As the Bicentennial of the American Revolution began, difficulties with the management of the tavern led to a reevaluation of its status. Consultant F.A. Demers was engaged in December, 1974, to analyze the rent needed to sustain the building. Rents seem to have been hiked subsequently. In 1975, John Cole of Shaker Workshops announced his plan to leave the second floor in favor of another tenant, who did not plan to rent as much space. Surviving letters and memos of Parish leaders express concerns over losing money on the building. Various options were considered: a fundraising effort for rehabilitation; turning it over to one shop, such as the Tri-Con for much more rent; making it a town welcome center; and turning it into a historical site and tavern museum.

While no new course was set for the structure, its condition became the subject of focused efforts. This Concord Bicentennial Committee approached the Parish about assisting in fixing the building up. The Parish veered from its custom of responding to maintenance issues as they arose and began trying to understand the building and plan for its upkeep. They hired a series of experts to evaluate it.

- In December, 1973, an architect from Marion, Massachusetts,

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<sup>16</sup> Smith.

Andrew Hepburn, submitted a letter assessing the tavern’s condition and recommending work.

- A letter dated 20 April, 1974 from Orville W. Carroll reported on his examination of the basement and deck framing. Carroll wrote or co-wrote a number of historic structures reports on buildings from the mid 1960s into the twenty-first century, and taught at the University of Oregon.
- An unsigned “Historical Brief” described drainage-related problems over the years on the southwest and “front” walls.
- A copy of a letter dated 6 May, 1974 (unsigned) to F.A. Demers, 36 Bancroft Road, Andover, Massachusetts accepted his proposal for “gathering environmental data to assess the rate and causes of deterioration of The Wright Tavern and to develop a preservation program...” with recommendations for repairs.<sup>17</sup> (Mr. Demers report was not located in the current study.)

The Parish annual report for 1975 states on page 17 that “...a start has been made in accordance with the recommendations of our consulting expert on a program which will continue over some time to protect this structure so that its historic flavor may be preserved for future generations”.

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<sup>17</sup> Special Collections, CFPL, uncatalogued collections contain these letters.

Over the next several years, Parish annual reports and records now in the collection of the Concord Free Public Library show that Demers led a comprehensive overhaul of the tavern grounds and structure. The plan has not emerged, but its elements are indicated by various documents. The specifics of work done, to the extent they were discovered, are presented in the following section on changes to the building. A landscape plan was developed and approved by the Concord Historical Commission. A perimeter drain and drywell system was planned in 1977 to keep roof drainage from seeping into the basement, and archaeological testing arranged through Brown University. (Again, no report was found.) Funding was obtained from the state to replace wiring. Specifications and reports also show repointing of chimneys and installation of fire and intrusion detection systems.

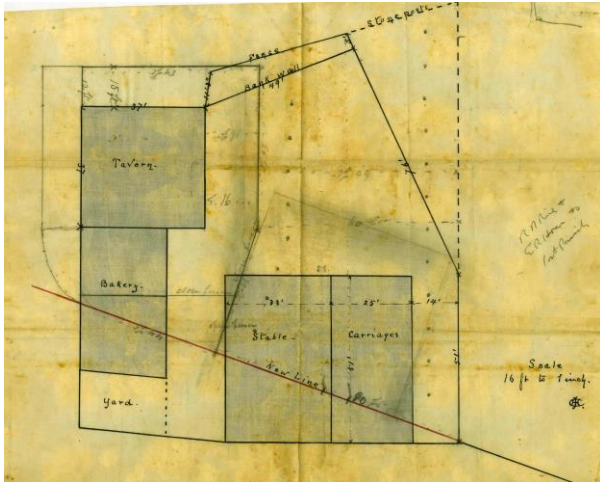
A decade later, the building condition was a concern again. In 1984, Boston Building Consultants, recommended by the Society for the Preservation of New England Antiquities (now Historic New England), inspected the tavern and recommended measures to shore up the floors. In 1989, John Cole of Ipswich presented a report "Analysis of Wright Tavern History and Architecture", an overview of the building's story and a general forensic examination. That same year, Bayard Underwood, AIA, was engaged to provide a complete set of plans for the building, taking note of all the historic features.

In 1992, the Tri-Con Gift Shop closed. The following year, the Chamber moved up to the porch, "China Room", and "old Bar Room". A gift and antique shop named "Treasures" rented other first-floor rooms. Nashawtuc Architects moved into the former dining room and a small adjacent conference room. The Parish began using several rooms as meeting space and offices. The Treasures shop did not last long. Within a few years, the building took on its current mix of uses: church meeting space and rental by small entities, with the architects being the major tenant.

### **Changes to the Structure**

The Wright Tavern has been subject to myriad alterations and repairs over its 266 years of existence. Most are undocumented, or sketchily noted in records. Forensic examination of the structure reveals at least as much information as written history.

While Hoar and Rice owned it in the early 1880s, the Town of Concord widened Main Street, and in doing so, carved off a portion of the northwest end of the lot. This occasioned the tearing down of the stable and carriage barn south of the house, and the western half of the ell. A lot plan shows the change (See Figure 6).



**Figure 6. Lot plan showing new property line established by widening of Main Street. Courtesy CFPL.**

Parish annual reports faithfully listed income and expenses for the tavern. The latter typically include plumbing, carpentry, painting, and the occasional replacement of glass or gutter work. Every few years they vary from these to note something unusual.

In 1891, the report gives the results of an inspection of the building: “the timbers under the old floor were found to be in good condition, but the underpinning of loose stones had fallen apart and caused the floor to settle in places, making it very uneven and unsafe.”<sup>18</sup> During those early years of the Parish’s ownership, Ebenezer Hoar continued his interest in the building, lending the Parish \$300 in 1892 for its repair, perhaps of the loose underpinning.<sup>19</sup>

<sup>18</sup> Annual Report of the First Parish in Concord, 1891 Pp. 2-3.

<sup>19</sup> Special Collections, CFPL, Box 18, Folder 1: *Real estate*

The ceiling in “the office” was reported in bad condition, and the floor timbers loosened in 1910. The timbers had been “strengthened” and the new ceiling constructed as a result, according to the annual report.

The roof was re-shingled in 1917-18 according to the annual reports.

A dining room, now called “the sun porch”, was added in 1926.

The tavern was painted white with green blinds (the contemporary term for what we now call shutters) in 1927.

Repairs and renovations were reported in 1939-40 and 1946.

In 1950, “considerable rehabilitation was done, and a new roof put on.

Extensive termite and beetle damage was reported as being addressed in 1959-60.

The second floor was made suitable for renting in 1964, the year the Walden Clinic went in.

Loose clapboards were replaced and the tavern painted red in 1968.

In 1975 the tavern was painted in anticipation of the Bicentennial.

Between 1976 and 1978, wiring was replaced; fire and burglar alarms were installed; chimneys were repointed; and a subsurface drainage system was installed connecting to the town surface drains on

the northeast and southeast sides of the building.

Aluminum storm windows were added to the sun porch/ dining room in 1979.

The exterior was repainted in 1982.

Following a study by Boston Building Consultants in 1985, first floor joists and one beam supporting the second floor were reinforced over the next year. Asbestos insulation discovered on heating pipes in the process was removed. A new oil-fired burner was installed in 1986.

The exterior was repainted in 1988, then stained in 1991.

Two chimneys on the western side of the tavern were rebuilt in 1995, and the porch roof replaced and insulated. (The only side of the house with two chimneys is more southerly.)

The second floor was renovated to accommodate the move by the architects there in 1997. The following year, first-floor rooms were renovated for use as classrooms.

In June 2006 a radio fire alarm was installed and the tavern system linked to the meeting house via underground conduit.

## BIBLIOGRAPHY

The scope of this report called for research in records of the First Parish in Concord, some of which are in the Parish's hands, and much of which have been donated to the Special Collections of the Concord Free Public Library. The authors are indebted to staff members of both organizations for their generous assistance.

### **At First Parish in Concord:**

Cole, John, *Analysis of Wright Tavern: History and Architecture*. Cole presented this report to the First Parish in Concord in 1989. Photocopies are in Parish files and Parish records in the Concord Free Public Library. No original copy with original prints of Cole's photographs was located for this report.

*Eric Smith Recollections Wednesday, July 19, 2000,.*

The annual reports of the First Parish in Concord, 1882 to 2012.

The authors saw several photocopies of a single page on The Wright Tavern from a published history no one could identify. It may have been from Alfred Sereno Hudson's *The History of Concord, Massachusetts Volume I: Colonial Concord*, Concord, 1904, Erudite Press.

### **At Concord Free Public Library: Special Collections**

First Parish in Concord Collection. This material is partially catalogued. Where there are not yet catalogue numbers, the authors described the folder titles and colors. Of particular use among the cataloged material were:

- Box 13
- Box 18, Folder 1, "Real Estate"
- Box 20, Folder 29: Bound manuscript volume *Trustees of Parish Donations 1910-1961*, with the bulk of information dating 1910-1945

*Memoirs of the Social Circle of Concord, Third Series.*

## SECTION II. PHYSICAL DESCRIPTION, ANALYSIS, AND CONDITION ASSESSMENT

### INTRODUCTION

Steven Mallory of Groundroot Preservation Group LLC (GPG) examined The Wright Tavern in October and November, 2013, for physical evidence of its evolution and its condition. The following chapter presents his findings.

Mallory reviewed articles on the building's history and a 1989 study by John Cole before conducting a non-invasive examination of the exterior and all interior spaces.

In general, GPG strongly recommends that no further alterations be made to the remaining original materials in The Wright Tavern. The building probably survived to the degree it has because of the many practical uses to which it has been put. That said, those uses have entailed considerable adaptation, and the inevitable destruction of irreplaceable historic building fabric. As related to us by the Tavern's stewards, a driving purpose behind the current study is to reveal and emphasize historic character. While recognizing that the building needs to remain dynamic, we believe removal or change to original elements that are known to be in their original locations should be avoided if at all possible. In instances where such elements must be disturbed in any way, we recommend that an architectural conservator be engaged to minimize

damage and to document any evidence of the building's history that may be revealed.

### DOOLITTLE ENGRAVING

Amos Doolittle's 1775 engraving showing British troops in Concord features The Wright Tavern prominently. Researchers have used it as a source of information on the early appearance of the building. While the general form of the tavern is recognizable in the image, many details seem to be in conflict with the observable physical evidence. The image shows a shed-roofed vestibule on the east side and a gabled, perhaps pedimented, one on the north. It shows shed-roofed bump-outs on the east and north elevations at the corner, and a large, square window on the east elevation. Both of these bump-outs are associated with Room 101. There is no corroborating physical evidence for them in the building. The engraving also shows two dormers on the north elevation that no longer exist, and a roof balustrade of some kind. The main chimney is shown centrally placed on the roof, which is definitely inaccurate.

The ell on the west side of the building is shown in its earliest form, including the roof with lower pitch than today, the original chimney stack, and simple fenestration (three bays). These features pre-date what appear to be federal-era, late eighteenth-century or early nineteenth-

century fenestration changes as depicted in the 1860s photograph. That photograph indicates that the ell had been lengthened to the west by the early nineteenth century. (See Figure 33.)

There are many aspects of the building for which we do not have much evidence, such as the original appearance of the south wall. Though the south elevation is not visible in the engraving, the view of the east elevation shows a stable very close or attached to the back wall, suggesting that there may have been little fenestration here originally, and much of the current fenestration on the south elevation is the result of changes made when this side of the building underwent renovations in the early nineteenth century.

## **CURRENT OBSERVATIONS: EXTERIOR**

### **EAST ELEVATION**

#### **DRAINAGE**

There are copper gutters on the eaves of the east elevation with three downspouts consisting mostly of galvanized steel, but with some copper. The galvanized portions show surface rust. All three connect below grade to a pipe that appears to be gray plastic with some metal components. This

pipe probably drains into some sort of dry well system.<sup>20</sup>



**Figure 7: Annotated excerpt from Doolittle engraving**

<sup>20</sup> Hardik Raval, Public Works Engineer for the Town of Concord, stated in a telephone conversation with the author that roof drainage from buildings in town did not generally go into town sewers, and that a self-contained system on the site was more likely. The Parish annual report for 1978, page 18, mentions connection of a subsurface drainage system to the town's "surface water drainage". Documents in the uncatalogued Parish materials at the Concord Free Public Library include a plan for subsurface drainpipes leading to drywells in the later 1970s. No clear documentation of their installation emerged. The 1991 Parish annual report mentions rehabilitation of a drywell to address moisture problems, suggesting that a system had been installed.

The grade is slightly downhill toward the building from the nearby driveway and Church parking lot, which will cause some drainage in that direction. There are, however, no signs of adverse effects on exterior elements. The granite front step tips slightly away from building, resulting in good drainage. However, we observed decay toward the mid-span of the east sill that is the result of water penetration from negative drainage in the past. The area has been filled with insulating spray foam. There does not appear to be active decay. This stopgap repair should be removed, the damaged area more closely inspected, and then a repair done using a wood graft and/or an epoxy resin procedure.



**Figure 8: Detail of east foundation wall showing spray-foam repair**

## FOUNDATION

The foundation consists of fieldstone painted red. Very little is exposed above grade. Vegetation encroaches along the foundation, potentially trapping moisture and blocking the drying effect of sunlight.



**Figure 9: East elevation looking south, showing encroaching vegetation.**

There are no notable exterior stone problems.

There is one cellar window located on the southern section of the foundation. Bricks comprising the window well have begun to deteriorate. A twentieth-century, fixed, two-pane metal casement remains in place. The window frame components show signs of deterioration, though we did not observe evidence of water infiltration into the building through the window.

## SIDING AND TRIMS

The clapboard siding on the building retains many areas of intact eighteenth-century material, but with some recent replacements to lower courses and the north corner. The north corner board is an original element, but the bottom portion has been replaced. This corner board is deflected, and the heads of some forged nails used to fasten it are protruding. The corner board needs to be carefully re-secured and the gap between the siding and corner board closed.



**Figure 10: Northeast corner board showing deflection and protruding nails.**

There is significant paint build-up on the siding and the corner board, representing many years of accumulation. The paint is failing in many places, allowing water to penetrate, resulting in some cracked clapboards.

## WINDOWS

The window caps on this elevation, wooden with ovolo crowns, are predominantly original. There is extensive wear, cracking and weather checking on the caps. The two windows on the southern side having loosening and missing crown returns. Each window is fitted with an aluminum storm and screen fixture. The frames all have many layers of paint over weather-checked wood.



**Figure 11: Detail of first-floor window on east elevation showing typical paint failure and deflected woodworking joints.**

The upper windows on the southern side have original bullnose and cove sills, similar in design to the main cornice. All remaining windows have a narrower, squared sill but are through-mortised, suggesting that they are early replacements.

The window frames should undergo consolidation and remain in service. This will involve careful paint removal, followed by epoxy impregnation to solidify the softened wood and filling of cracks. This is discussed more fully in the Project Specifications section of this document.

## SASHES

The collection of window sashes consists of many generations of material. The majority of sashes date from the eighteenth century, including many first-generation examples, interspersed with some historic replacements from the late eighteenth and early nineteenth centuries and later in-kind replacements from the mid twentieth century.

The exteriors of the sashes are in sound condition with only superficial paint and glazing repair needed. On their interior sides, many exhibit decay in the lower joints from years of water seepage between the lower sashes and the windowsills. There is one broken pane, the upper left corner of the first-floor window to the south of the door. (See general recommendations for windows.)

The collection of window sashes should be considered important, primary character-defining features. They should be repaired or restored as needed, rather than replaced. Recommendations for removal, repair and reinstallation are discussed in the Project Specifications section.

## SHUTTERS

The other shutters on this elevation were probably added to the building in the early nineteenth century. They are all badly deteriorated. While salvageable, they would be prohibitively expensive to restore. We recommend they be removed and stored until a decision is made whether to restore them or have reproductions made. The two shutters on the lower south windows are recent, wooden commercial replacements fastened to the building with deck screws.



**Figure 12: Typical shutter and window conditions.**

## MAIN CORNICE

The cornice is somewhat obscured by the gutter, but it appears to consist of a large crown with a deep cavetto. It is original material. There is a repair to it in which spray foam was used, not an appropriate material.

## GUTTERS

Copper with copper leads, connecting to cast iron drain scuppers. The gutter straps are nailed under the top layer of asphalt roof.

## DOOR

The east front door and the surround are original, but the door has been re-sized twice with added strips of wood around all four edges. The door and surround consist of extensively weathered wood with many layers of paint. All are in generally good condition at this time. Failing, rusted galvanized flashing across the header is not deflecting water, as it should. There is an inappropriate repair with what looks like putty or tar at the bottom of the south pilaster. The wooden kick plate added below the threshold nosing extends past the sides of the threshold, creating an exposed joint at the top. Water draining from above can work its way behind it, causing potential sill decay.

The east entrance currently features a modern aluminum storm door that is

functioning properly and doing well at protecting the historic wooden door from the elements.

## DORMERS

The dormer components on the east elevation consist of original framing, sheathing and windows, but with faux consoles and eaves extensions installed in the twentieth century. The matchboard siding on the cheeks is original and in generally sound condition. However, the added faux consoles exhibit extensive rot at the bottoms. The consoles are very poorly designed, as the feet trap draining water and cause rot. The ledger boards along the intersection of the roof and the dormers were probably added to cover up rot. The north dormer exhibits rotted sheathing at the bottom from water trapped by the console.



**Figure 13: Northeast dormer showing water drainage, moisture trapped behind console foot, and wood rot.**

It is poorly flashed with sheet metal nailed along the sheathing and the roof. The added eave overhangs are in sound condition with no signs of deterioration beyond superficial paint failure.

The dormers on the east facade, particularly the northern one, show signs of downward deflection and possible structural problems, indicated by buckling of plaster on the interior walls. The southern dormer on the east elevation has a similar problem, but not as severe. The structural elements of the dormers should be thoroughly inspected during dormer-related repairs made as part of roof replacement. (See Figure 46.)

The drainage problem caused by the console feet needs to be corrected. This can be handled in one of two ways: The added console and roof trim features can be removed from the dormers and returned to their original appearance, or the consoles, which can be regarded as a historic change, can be modified to promote proper drainage. This is discussed in greater detail in the Project Specification section.

## ROOF

The roof covering is in the last year of its expected lifespan. It appears to be two or perhaps three layers of asphalt over an

initial layer of wooden shingles. Many curled, broken shingles can be seen and pieces of asphalt from failed shingles can be found on the ground.

The curb, or the horizontal trim piece separating the upper and lower slopes of the roof, is made of wood. It does not appear to be original, instead being a twentieth-century replacement. It does not appear to ever have been painted and is badly weathered and deflected. This detail should be replaced using high-quality wood as a part of a greater roof replacement project.



**Figure 14: Typical roof conditions.**

Replacement of the roof should be considered a first priority. Whether the decision is made to install a historic wooden shingle roof or replace the current asphalt roof, as is currently planned, replacement will include stripping off all previous layers of asphalt and wood

coverings. A roof replacement project will include extensive repair and replacement of associated elements including some dormer components and the roof curb.

## **SOUTH SUN PORCH**

The foundation consists of mortared round fieldstone. There is minor cracking at the south corner. The wooden trims show widespread paint failure. Two of the windows in the east elevation of the sun porch are fitted with single-pane aluminum storm windows. These have successfully protected the windows from the elements, as can be seen by the intact paint and glazing components. However, the three windows not covered by storms have extensive paint and glazing failure.

The roof consists of EPDM rubber membrane that, while performing well, has reached the end of its manufacturer-recommended lifespan (twenty years). Replacement of this membrane in-kind should be included in a greater re-roofing project for the building.

The vegetation, specifically rhododendron, grows too close to the building, which is trapping moisture, blocking sunlight and airflow, and contributing to deterioration of the three unprotected windows.

## **NORTH ELEVATION**

### **DRAINAGE**

There are copper gutters on the eaves of the east elevation with three downspouts consisting mostly of galvanized steel, but with some copper. The galvanized portions show surface rust. All three connect below grade to a pipe that appears to be gray plastic with some metal components. This pipe probably drains into a dry well.

In general, the grade slopes away from the building on this elevation, creating positive drainage. There is seasonal vegetation growing against the foundation, which can trap moisture, block drying sunlight, and cause damage. This vegetation should be removed and all vegetation taller than mown lawn be kept a minimum of two to three feet from the building.

### **FOUNDATION**

The foundation consists of brick, probably a replacement of the original dating from construction of the west addition. The red paint on the stones is peeling. We recommend allowing it to peel off over time, exposing the masonry beneath. A painted foundation is not an historic treatment. Further, paint on masonry inhibits moisture passing through the mortar, as it should. It also obscures underlying conditions of mortar and brick. There is some sagging and mortar loss at the west corner of the addition. The mortar

should be repointed in this location, following recommendations made in the Project Specification section of this document.

There are two brick window wells in the foundation, one near the west corner of the main structure and one in the addition, each with a two-pane, fixed metal window. Bricks are deflected in both wells. The brick masonry here should be repaired as part of a greater project including minor masonry repairs in several other areas around the building.

## EXTERIOR FINISH

There are many surviving eighteenth-century clapboards at the second-floor level. At the first-floor level, the clapboards are replacements. While a few exhibit skived joints and are fastened with cut nails suggesting nineteenth-century replacement, most exhibit butt joints and wire-drawn nails, indicating more recent replacement. Many clapboards are cracked, and one has loosened and detached from the building at the east foot of the pediment.

We recommend that any cracked clapboards be removed and replaced in-kind with workmanship matching abutting materials. If abutting siding exhibits skived joints, these should be matched with the repair materials. If abutting material is butt-joined, this should be matched.

## DOOR

The front door, including the surround and transom window, are original, eighteenth-century materials. The details and workmanship of the pilasters and the construction of the door itself directly relate to the door on the east entrance, indicating they were likely made at the same time.

We suspect that the entrance composition, including the door, the pediment-topped surround, and the transom, were originally part of a projecting vestibule depicted in the Doolittle engraving. (See Figure 1.) The siding currently surrounding this entrance, installed with cut nails but with historic, skived joints, suggests that the vestibule was removed and the original decorative woodwork attached directly to the house in the early nineteenth century.

Much like the east entrance, the door is protected from the elements by a modern aluminum storm door. The surrounding woodwork exhibits thick accumulations of paint, and some areas show cracking and weather checking. The galvanized metal flashing along the pediment roof is deteriorated and not performing adequately.



**Figure 15: Detail north elevation.**

As a part of a comprehensive program of repairs and restoration to exterior doors and windows, this entrance should undergo extensive paint removal, epoxy repairs to cracked wood, and proper re-flashing of the pediment roof.

## WINDOWS

All the windows on this elevation appear to be eighteenth-century materials, some mid-eighteenth-century originals and others late-eighteenth-century replacements. All of the second-floor windows exhibit bullnose and cove sills similar in design to the main cornice, which indicates they are first-generation materials. All first-floor windows have narrower, squared sills and are late eighteenth-century replacements. The two six-over-six windows on the west addition to the building were installed during mid-nineteenth century renovations to the ell and exhibit Greek revival, molded

architraves. All of the windows are fitted with aluminum storms.

The first-floor window caps on the main portion of the building exhibit extensive weathering and surface cracking. The frames show many layers of paint over weather-checked wood. These elements warrant careful repair as a part of comprehensive exterior door and window restoration.

## SASHES

Virtually all of the sashes on the north elevation are historic materials; some dating to the time of original construction and others from repairs and renovations completed in the late eighteenth and mid nineteenth centuries. In general, the windows are in remarkably sound condition for their age, but exhibit widespread but minor wood decay and failure of paint and glazing. These windows are highly salvageable and can be restored as discussed in the Project Specifications section of this document.

## SHUTTERS

All of the shutters on the north elevation are historic materials rather than modern replacements and all are badly deteriorated. We recommend removal and storage of these features.

## **MAIN CORNICE**

The gutter conceals most of the main cornice, but it appears to be a large ovolo crown with deep cavetto below. It is original, first-generation material. For the most part the crown is in sound condition. There is an area toward the center of the main building elevation, near the center second-floor window and close to a gutter downspout that has decayed. The rotted area has been filled with spray foam. This rot is related to a potentially serious problem on the interior, where the joint of the front plate and tie beam at the east end of the second-floor north hall has rotted and spread apart. This indicates that drainage from the gutter, downspout or roof is being directed into the building, causing decay to the exterior cornice, structural framing and interior woodwork. The gutter should be inspected for proper pitch and soundness of soldered joints, and the downspout should be free of clogs. When the roof is replaced in the future, adequate overhang of the shingles should be established so the roof drains past the exterior woodwork and into the gutter.

## **GUTTERS**

The gutter is copper with copper leads connecting to what appears to be drain scuppers. Gutter straps are nailed under the top layer of asphalt roof shingles except on the addition, where straps are nailed over the shingles.

## **ROOF**

The roof covering on this elevation, as elsewhere, is fully deteriorated. The curb exhibits similar conditions to that on the east elevation. This element should be replaced with high-quality materials as part of future roof replacement. (See Figure 13.)

## **WEST ELEVATION**

### **ELL ADDITION**

### **DRAINAGE**

The site slopes south and west away from the building toward the southwest, creating an overall positive surface drainage.

The gutter assembly on the west elevation of the main house where it connects to the south elevation of the ell shows chronic leakage and overflow. In the winter this situation generates severe icicle buildup that affects the windows associated with rooms 103 and 203.



**Figure 16: Gutter assembly – west elevation.**  
(See also Figure 27.)

This is most likely due to the gutters not being properly pitched. The pitch of the gutters should be corrected and all solder joints inspected for soundness.

Administrators might consider installing electric heat coils in this gutter system to promote melting and drainage in winter months.

## FOUNDATION

The foundation underpinning the ell and the main house is composed of brick and is likely a nineteenth-century replacement of earlier conditions. There are some pointing issues at the north corner, where there is minor loss of mortar and some downward deflection of brick. It does not appear that there is a structural problem. Rather, there is evidence of gradual settling over time. The bricks should be properly repointed

and perhaps stainless steel stitching rods inserted into the joints to add stability.

## SIDING AND TRIMS

The siding on the west elevation of the ell is original to the nineteenth century. While there is much paint failure, the clapboards are in fairly sound condition with only a few cracked clapboards that warrant replacement.

The exterior trims on each portion of the elevation are comprised of both historic and later replacement materials. The eaves, corner boards and window trims on the west elevation of the ell are original to the renovation of the ell in the mid nineteenth century, though the decorative cap moldings are now missing from the window architraves.

## WINDOWS

All of the windows in the west elevation of the ell are original, nineteenth-century material. They show minor paint and glazing failure, but are otherwise sound. The shutters are also nineteenth-century, except for those on the upper, south window, which are replacements. All show some paint failure but in good condition. There is a single nine-over-six cellar window with a poured concrete well in the foundation. It is fitted with an aluminum

storm window. The window is in good condition with only minor paint and glazing failure.

## **SHUTTERS**

The church can decide whether the shutters on the ell may be retained as original elements from the time of the ell's renovation, or whether they should be removed with the shutters on the main, older portion of the house.

## **ELL CELLAR ENTRY**

The cellar entry is a small, flat-roofed structure. It has a rolled asphalt roof covering with a metal drip edge. There are two fixed six-pane window sashes. Each is fitted with single-pane storms and is in good condition.

## **EAVES**

There are raking eaves with boxed outriggers. Other than deterioration of the thickly layered paint, there are no significant issues with them.

## **GUTTERS**

Roof drainage for the west elevation of the ell consists of one downspout at the north corner. This empties into a below-grade drain line. The gutter system appears to be performing correctly at this location.

## **MAIN HOUSE**

### **DORMERS**

The dormers are original features from the eighteenth century but with later modifications. The cheeks are sided with clatter clapboards rather than the original treatment with sheathing boards. Several clapboards are deflected or detached. The added faux consoles exhibit extensive rot at the bottoms. The same situation as the dormers on the east elevation, the console feet trap drainage and promote decay. (See Figure 13.)

### **SIDING/ TRIM**

The west elevation of the main house retains much original eighteenth-century siding. One detached clapboard is apparent. The skive joints on this siding are a bit tattered due to their western exposure. However, the material exhibits overall sound conditions.

The west elevation of the main house retains its original cornice work. It appears that the window trims have been recently replaced. Though minor paint failure was observed, the woodwork appears to be in sound, stable condition.

### **WINDOWS**

The windows retain historic sashes in the first floor window, but have recent, in-kind, replacement sashes at second-floor level.

However, the frames are recent: plain, unmolded boards on the first floor, similar to those in addition. The second-floor windows have thick-stock frames, recent replacements that mimic the mortise-and-tenon frames.

Both windows in the roof dormers are recent replacements, neither of which replicate historic conditions. The southern window consists of a fixed, single twelve-pane sash and the north dormer contains a single, fixed, nine-pane sash. Both of these should be restored with functioning six-over-six pane sliding sash so they can be opened to create cross-ventilation in summer months.

There is a six-pane window to the left of the historic Main Street entrance door leading to what is now the basement (but probably was the bake shop), finished with plain board trim. It is fitted with an exterior wood-framed screen. The window is in good condition with no outstanding preservation issues.

## ROOF

The asphalt shingles are fully deteriorated on this elevation, as elsewhere. The roof on the flat cellar entry, comprised of rubber membrane, is performing well but is more than twenty years old and has thus surpassed the manufacturer's recommended lifespan. This roof should be replaced as part of a future, complete re-roofing project.

As with the other roof curb boards, the curbing on this elevation is a later replacement that is fully deteriorated and should be replaced.

## FOUNDATION AND FOUNDATION DETAILS

The foundation here is brick, most likely a nineteenth-century replacement of earlier conditions.<sup>21</sup> It is currently painted red. No noteworthy problems were evident. The walk-in cellar under the sun porch features a concrete block foundation painted red. An irregular flagstone walkway extends to the door. The door is constructed from vertical, narrow wainscot boards. It is wicking moisture up from the ground at the bottom and has begun to decay. Extensive moss growth indicates chronically high moisture, no doubt partly the result of an overgrown yew that is badly encroaching against building. The bottom edge of the door is partially buried in gravel, promoting water retention. A visible tide line of muddy film on the door and foundation indicates chronic splash-back and wet conditions in this location.

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<sup>21</sup> Annual Report of the First Parish in Concord, 1891, Pp. 2-3: "the timbers under the old floor were found to be in good condition, but the underpinning of loose stones had fallen apart and caused the floor to settle in places, making it very uneven and unsafe."

## SUN PORCH

There is a bank of five outward-opening casement windows, all of which are protected by single-pane, aluminum storm units. There are two paired storms for the outer window bays and one single unit in the middle. There is minor paint failure but no significant decay in the windows despite moisture build-up caused by the encroaching yew tree.



**Figure 17: Two views of the west elevation showing encroachment of the yew tree and the effects of trapped moisture.**

**Left: Sun porch basement entrance showing splash-back tideline, moss growth and decay in the door from lack of sunlight and drainage. The bottom of the door is partially buried in gravel.**

**Right: View from the south looking north, showing close proximity of the yew tree.**

## DRAINAGE

Copper gutters on this elevation drain into one downspout located at the south corner of the main building. The gutter elements are mostly galvanized, with some copper components. The galvanized components exhibit surface rust. However, the gutter system at this location seems to be performing properly.

The approach to the main cellar entrance presents a significant drainage concern. The brick steps descend about two feet below grade, flanked by brick retaining walls. A modern metal handrail associated with the steps exhibits peeling paint, which seems to be caused by poor adhesion of the paint with the metal, rather than a drainage-related issue. There is a cast-iron drain located at the center of the landing. Moss growth in this area suggests

periodic moisture. The rare eighteenth-century door leading to the cellar exhibits rot in its lower right corner. This door should be very carefully treated and preserved. (The Trustees of Donations had requested funding for this that had not been approved at the time of this writing.)

All of these problems indicate that the drain at the landing is either not performing properly due to a clog, or cannot adequately handle the volume of water that drains into this area. We recommend that the drain first be inspected for possible

defects, and if problems persist, the brick pavement should be removed and replaced



**Figure 18: View of the historic Main Street bake shop entrance on the west elevation showing recessed entry, drainage problem, and rare eighteenth-century door.**

## **SOUTH ELEVATION**

### **FOUNDATION**

The foundation components on the building visible from outside include the painted concrete block foundation supporting the stairwell addition to the ell, the painted brick foundation supporting the eastern portion of the ell where it abuts the main building, and the mortared round stone foundation for the sun porch.

The concrete block foundation beneath the ell stairwell is in good condition. The two cellar windows consisting of fixed, two-pane metal units fitted with screens in the foundation are in good condition.

with a permeable surface such as gravel.

A portion of the brick foundation supporting the south elevation of the ell addition is covered by the later concrete block foundation to the stairwell, which also partly blocks an earlier window to the cellar. All this material is painted red. The block portion is sound, but some lower courses of brick show past mortar loss, now painted over. This area should be repointed as part of greater masonry repairs to the foundation.

For the majority of the south elevation, including the south lawn in front of the sun porch, grade slopes away to the southwest, providing adequate drainage. The lack of vegetation allows drying sunlight and free airflow.

The exception to the positive drainage is the slope along the brick walkway running along the stairwell addition, discussed earlier.

### **SIDING**

There are several courses of early, perhaps eighteenth- or early nineteenth-century clapboards at the second floor level of the main structure, but most seem later than the earliest material on the building. Most are in sound condition with little damage. The paint is also sound with only minor deterioration.

The south elevation of the ell retains nineteenth-century clapboards on portions of the wall that survive unaltered from the time of the ell's renovation. They consist of butt-joined material and appear to be in sound condition.

The clapboards on the exterior stairwell and wall dormer, both features of the ell, are twentieth-century, butt-joined material. They are in sound condition.

## WINDOWS

The sashes at the second floor level of the main house are recent, in-kind replacements. The frames have been replaced as well and are composed of thick, unmolded boards, meant to mimic loosely the earliest frames. The windows are in good condition with no outstanding issues.

The sun porch has two bays of five outward-swinging casement windows. All are covered with aluminum storms. They show minor paint and glazing failure, but nothing significant.

There is a single six-pane window in the exterior stair well with plain trim and fitted with storm. It is in good condition.

The ell has one fixed, nine-pane window abutting the stairwell addition, which occupies a nineteenth-century opening. The entire earlier architrave is still in place but the lower portion was filled in with clapboards when the current window was installed.

The wall dormer in the second floor of the addition has an eight-over-eight window with plain trim. It is fitted with an aluminum storm window. It is in good condition.

There is a nine-over-six window in the south wall of the ell foundation, partially covered up by the stairwell foundation. The grade being at the level of the sill results in splash-back and dirt accumulation. Also, weeds are growing right next to the sill. The sashes appear to be nineteenth century or earlier, and may have been recycled during a renovation episode. The trims are plain boards. The paint, red like the rest of the foundation, is in good condition here.

There are two foundation windows on the south elevation of the sun porch. The wooden sills and frames are composed of fairly thin stock. The six-pane sashes are fitted with screens. They show some paint and glazing failure, but nothing more serious.

## GUTTERS

There is a copper gutter along the eave of the main house, feeding into drains at the east and west corners. The gutter is fastened by metal straps inserted below the roof shingles.

## DOORS

The only doors on this elevation are in the twentieth-century stair enclosure. The one

accessing the bottom of the stairs looks like a re-used nineteenth-century door. It has plain board trims and a modern aluminum storm door. At the bottom of the stairs is a pair of bead-board doors set in a plain plank jamb with no trim. Both doors are in good condition, with no outstanding issues.

## ROOF

Consistent with the rest of the asphalt shingle roof, this area is fully deteriorated. A large, recent patch around the west chimney in different asphalt shingles is a temporary repair probably installed in concert with recent chimney work, and is showing signs of failure.

The curb, like the other three elevations, is composed of later material that is badly weathered. It should be replaced when the roof covering is replaced.

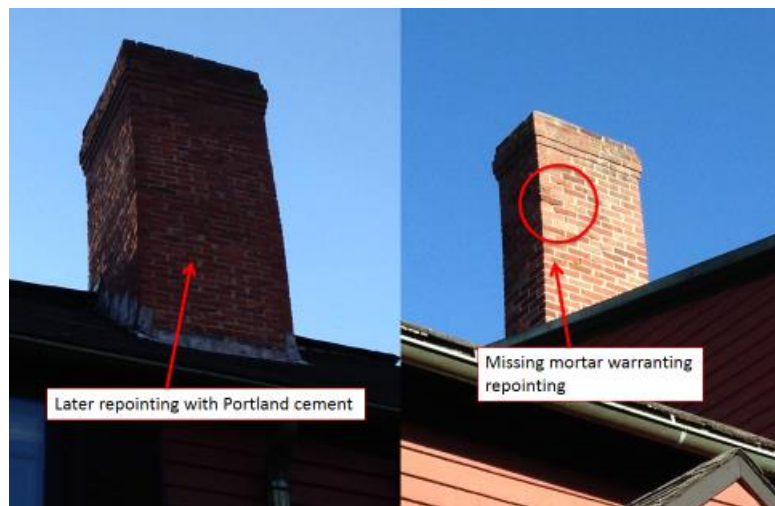
The roof material on the sun porch consists of EPDM rubber membrane installed over twenty years ago, and is currently beyond its recommended life expectancy. It should be replaced with new membrane.

## CHIMNEYS

The chimney on the main structure probably contains original bricks and generally retains the original design. It has been badly repointed in the past with whitish mortar that looks very hard. This

may contribute to its deterioration over time, as moisture migrates through the brick, instead of the mortar, as intended, and causes it to spall. The chimney has a settled, uneven appearance and is step-flashed in lead. The chimney and flashing are in sound condition, but the Church should anticipate taking down the main chimney below the roof line and re-laying it in soft, historically sympathetic mortar within the next twenty years.

The chimney on the addition is also somewhat deflected and badly repointed with a hard, whitish mortar. Some of bricks may be replacements of the originals. This chimney may need some minor repointing in the short term, but may require removal and reconstruction above the roof line within the next twenty years.



**Figure 19: View of main and ell chimneys. Left: Main chimney showing irregular lines from settling, and later repairs. Right: Ell chimney showing mortar loss that requires repointing.**

The south chimneys date from the early nineteenth century. Recently they were completely rebuilt above the roof line with restoration bricks from the Morin Company in Danville, Maine and a whitish, hard-looking mortar. They are flashed with lead. They are currently performing well, as the restoration bricks may be hard enough to be compatible with the mortar.

## **FIRST FLOOR**

### **INTERIOR CONDITIONS**

The following spaces are broken into sections and numbered, correlating to the plan drawings found in Appendix A. We begin at what is now the entrance on the east façade, with the network of passageways through the building numbered 100a through 100f.

#### **100A EAST ENTRANCE HALL**

This space extends from the east entrance door westward to the main stair hall on the north and a primary structural post on the south.

This is a largely unaltered space from the eighteenth century. Doors to rooms 101 and 102 are original and in their original configuration. The trims and the four-panel doors are original. They are caked with many layers of paint, with many dents and dings, but are in sound condition. In some dents and dings faux graining is visible, which appears to be mid-nineteenth-

century in character. The door knobs and deadbolt locks are modern additions. The flooring looks to be an early twentieth-century addition over an earlier floor. It appears that the doorway to Room 106 is part of the original plan. The exterior trims (facing 100a) are twentieth-century, but the door itself is an original nineteenth-century feature and a small portion of an original ovolo-molded architrave survives within the west portion of the jamb. There are ghost marks of earlier HL-type hinges on the east edge of the door, but today it swings on early twentieth-century cast hinges.

The major change to this space is that the ceiling was lowered by about four inches, probably in the early twentieth century. This was done to the adjoining Room 100 and also Room 106, probably all at the same time.

### **MATERIALS**

The exterior door on the east end is eighteenth-century material, frame and panel on the exterior and sheathed with beaded boards on the inside face. Strips of wood have been added to the top, bottom and both sides of the door, perhaps due to wear and tear or minor changes in the size of the door opening over time. The door retains original penny-head strap hinges. Washers have been added on the pintles to counteract continued wearing down of the hinges and pintles from use. The door-pull on the inside face is a Norfolk-style latch added in the early nineteenth century. The

hand-forged iron latch on the exterior may be original eighteenth-century material. The forged iron keeper on the jamb may be an original component of the latch assembly. The latch bar and staple have been replaced with new, poor-quality components. The footprint showing the location of the original latch bar is visible on the back of the door. The sliding bolt and lock are also recent, inexpensive additions. The door threshold looks recently replaced. It does not fit the opening in the flooring left by the previous threshold, so there are gaps on either side of the inside exposure of the threshold. The earlier threshold had sill horns or returns that filled the gaps at the bottom of the inside trim. Gaps on either side of the threshold between the edge of the flooring and the door trims should be filled in with wood grafts.



**Figure 20: South end of east door threshold showing a gap that needs to be filled in.**

Swinging into Room 101 is an original four-panel door on period HL hinges that appear to have been salvaged from elsewhere. The door was widened with strips of wood on all four sides to adapt it to this opening, but the original trims are undisturbed. So while the door is original, eighteenth-century fabric, it is not clear whether it belongs in this particular spot.

The door to Room 102 is original material in its original spot. The HL hinges are original. The door was not re-sized except having been trimmed at the bottom to accommodate changes in floor and threshold heights. It is working properly and in stable condition. This door is an important original detail and should be spared alteration in any future changes to the building.

The flooring is narrow-width, painted hardwood installed over an earlier, perhaps original floor, as the current floor is one thickness higher than original flooring in Room 101. It is in sound, stable condition.

All of the flooring in the passageways (100a-f) is of the same era and type. It squeaks in many places when walked on, but this is an aesthetic issue only.

Some of the original framing scheme is visible in this space. The east door post, tie beam and prick post are visible along the south wall, all of which retain original ovolo-molded casings. These are important original features that should be retained unchanged.

Plaster on the walls appears to be old, and possibly original or very early material. The many coats of paint on it prevent further analysis. It is applied over wood lath, as evidenced by waviness that reflects the pattern of lath behind it. Each wall has a long history of repair.

There are two areas of concern in the wall plaster in this space. An area of buckling and detachment is located in the north wall near the east entrance. This may have been caused over time by people entering the building, perhaps with heavy or large delivery packages, bumping against the wall. There is also a pronounced buckle from settling toward the bottom of the south wall, above the baseboard, between the doors to 102 and 106. Animal hair binder is visible in a crack, so the wall plaster here may be early. This buckle and crack should be stabilized with acrylic consolidant injections by an architectural conservator or someone who has been trained in this work.



**Figure 21: Two views of the east entrance hall looking west. Left: North wall near entrance. Right: South wall between doors to rooms 102 and 105. Red circles show the area of plaster to be consolidated.**

Other walls have minor hairline cracks, mostly horizontal and following the lines of the lath. These are not significant enough to worry about. The ceiling finish is later than the walls, a flatter, gypsum plaster installed when the ceiling was lowered. It is also caked with crusty paint and has many stable hairline cracks. It is in generally stable condition. As a rule of thumb for the remaining plaster throughout the building, any area requiring repair or planned for removal should first be inspected by an architectural conservator to determine its true age and document it. Any area that requires removal should be inspected during the process. Pieces of ample size for future study should be labeled and preserved in the building files. Any removal of plaster should include inspection and recording of underlying conditions, hidden features, or physical evidence of previous conditions. An important, long-term concern with this space and others in the house pertains to the thick paint build-up and possible future lead abatement. Abatement crews could compromise or destroy important evidence on this woodwork if specific recommendations are not followed.

## 100B MAIN STAIR HALL

This space has been greatly altered with twentieth-century changes, except for the stairwell itself. Its original eighteenth-century layout and relationship with 100c and 100d cannot be determined at this level of investigation. The stairwell is in its original eighteenth-century state, except

for replacement of stair treads in the early twentieth century. There are thick coats of paint on balusters, the stringer, risers, and treads. The newel posts and handrails have been stripped to bare wood with traces of an early red paint.

There is extensive wear on the newel posts and handrail. All staircase components except the treads appear to be original, including the closed stringer and under-stair wooden wainscoting and associated moldings. Some of the woodwork shows slight disengagement, the result of flexing in the staircase over time from use. Thickly accumulated paint prevents re-securing the woodwork elements together tightly. These elements should be monitored for further deflection. The beaded corner board on the east approach to the stairwell is original.

There is a ceiling plane change between 100a and 100b, marked by an original ovolo-molded ledger board. This ledger board is probably the western face of that was originally a wooden casing for a ceiling girt. The bottom and eastern faces were covered when the ceiling to 100a was lowered in the early twentieth century. The doorway to Room 104 is in its original position, and there is original wooden wainscoting around the doorway (side jambs and header), but the trims and door itself are twentieth-century replacements.

The flooring is the same as in 100a: narrow, painted hardwood over a layer of earlier flooring.

The stairwell plaster is early. It is very wavy and deflected, with many repairs and much accumulated paint. It appears sound and stable. The ceiling plaster, which may be later, like the ceiling in 100a, also has a great deal of paint accumulation. A bulge near the east corner of stairwell has been repaired and seems stable.

The original features here that should be protected and spared further change are the staircase itself, the stairwell plaster, the west wall wainscoting around the door to Room 104, and the post-and-girt casings on original framing members.

### **100c SOUTH HALLWAY**

This space has been dramatically altered in twentieth-century renovations. The only surviving eighteenth-century features are the ovolo-molded girt casings on the north and east walls. The south girt casing is a replacement. The ceiling appears to retain old plaster with thick paint buildup. It is old, but probably not eighteenth-century.

The flooring is narrow, painted hardwood probably dating to the early twentieth century. The walls are all modern drywall. The post in the southeast corner has also been covered with drywall; the original casing is missing.

All other woodwork, including the doors, their casings, and the baseboards are recent additions, consisting of dimensional lumber and commercially available stock moldings loosely imitating historic profiles.

Apparently the large section of eighteenth-century, fielded paneling now stored in the basement was removed from the east wall of this space during a recent renovation. This feature may hold important clues about the changes to this space over time. If it did come from this area, it may have been left in place when rooms 102 and 103 underwent significant changes in the early nineteenth century, and may signal that the east wall of this space was a partition between rooms 102 and 103 in their original forms. This feature may also help determine whether there originally was a chimney between rooms 102 and 103, if it can be determined that the paneling was configured around a fireplace opening.



**Figure 22: View of south hallway looking south. The fielded paneling stored in the basement may originally have been located on the east wall of 100c.**

We recommend that the remaining original details remain undisturbed (i.e. the girt casings along the ceiling on the north, east and south walls) in any future work on this space, and that re-mounting the section of

paneling in the basement on this wall as a display artifact be considered. This would protect it against damage or loss and would be an interesting re-use of an original feature near its original location but in a modern context.

## 100D WEST HALLWAY

This space has also undergone significant change over time, and retains very few original features. The girt casings on the north and west walls at ceiling level are undisturbed early details. The wooden dado on the north wall is a confusing feature; the bullnose chair rail molding at the top looks like early material in an original context, but the dado boards below it were salvaged and re-used from elsewhere in the building. They retain ghost marks in the form of paint outlines in a shelving pattern that suggests their earlier use in some sort of cupboard or closet. We believe that all of the dado elements are eighteenth-century features removed from the ell and re-worked into their current context in the early twentieth century.

All of the remaining woodwork - the door to 100e and its trims, and the baseboards - are modern, dimensional lumber, stock items. The profiles match those in 100c, suggesting the work was done at the same time.

The plaster above the dado on the north wall is old but not original, perhaps early twentieth-century. It is flatter, smoother and more brittle than the earliest, lime-

based plasters in the building. There is a pronounced vertical crack running from the chair rail to the ceiling toward the east end of the wall. This is cosmetic in nature and can be easily repaired with modern, water-soluble, gypsum-based drywall taping compound.

The ceiling also consists of old plaster. It is not original, being a comparatively brittle gypsum-based material. A long history of repairs is evident. There is a pronounced crack and sag running along the south side of the ceiling close to the south wall, which when palpated appears sound. The ceiling exhibits many filled or repaired cracks; none seems active or threatening collapse. These should be monitored during an annual building inspection. If they continue to worsen, the plaster should be conserved with acrylic injections.

The flooring is early twentieth-century, narrow-width hardwood installed over an earlier floor. At the west end, approaching the doorway to 100e, there is an upward-sloping poured cement ramp of sorts to ease a plane change between 100d and 100e. Putting cement over wooden flooring or framing is never a good idea, as it adds unnecessary weight, cannot flex with the wooden elements, and eventually cracks and breaks apart due to its brittle nature. Also, because it sticks to whatever it is installed over, it is largely irreversible and not easily removed if abutting materials require repairs. This feature should be removed and replaced with a wooden incline.

## **100E BACK HALLWAY**

This space is part of the west ell, and occupies an area dating to the eighteenth century that was present during the Revolution and was later used as a bakery. Renovations to this area have removed most historic features. The south wall retains some roughly finished or patched plaster toward the east end, and below the window on the south wall. The fixed, nine-pane window retains older trim boards on the top and west sides (with thick paint buildup), but the sash is a modern, in-kind replacement. The floor is covered with commercial-grade carpeting, and all of the remaining woodwork is late twentieth-century stock, consisting of plain, unmolded dimensional lumber door trims and baseboards, and commercially made, wooden, four-panel doors. The north and west walls and ceiling are modern drywall. No evidence of any previous conditions is visible.

## **100F REAR STAIRWELL**

Added in the twentieth century, this enclosed exterior stair well is not a contributing historic feature. However, its detail and use of material (exterior wooden clapboards, wooden sash windows) are sympathetic to the aesthetic of the building. Any future changes to this space should be similarly considerate of the scale, proportions and use of materials.

## Room 101

This is the most intact eighteenth-century space in the building, with woodwork, flooring and fenestration in a largely unaltered state. The fireplace wall is particularly important, retaining its original Georgian paneling, featuring dog-eared over-mantel and bolection moldings. An original pewter cupboard survives in the southwest corner, and though missing its door, retains its original shelving. The shelving has grooves to prevent plates from slipping.

The entrance door in the south wall is original and in its original position, but the current HL hinges appear to be salvaged from elsewhere. The door has been re-sized to fit the opening with wooden strips added to all four sides. The brass doorknob and deadbolt lock are recent installations, but the sliding bolt may date to the early twentieth century.

The window units are eighteenth-century, including sashes that date stylistically to the 1770s or thereabouts. The plain, unmolded window architraves and splayed jamb liners also appear to be original features held in place with hand-forged, T-headed finishing nails.

This room, which in all respects features the best woodwork in the building and was probably the most formal or public room, exhibits more complex baseboards than other rooms. They consist of a wide, plain plinth board with an additional, ogee-

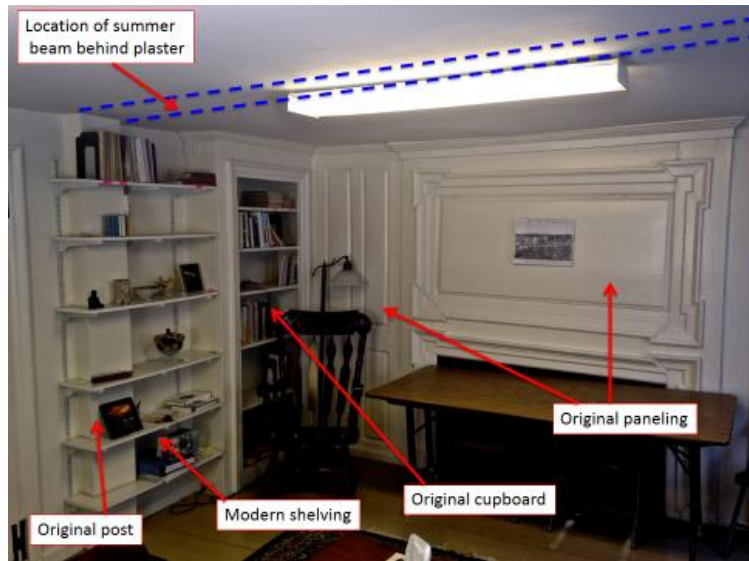
molded shadow board. The flooring in this room is also original, consisting of wide, random-width white pine planks running from north to south secured with hand-forged nails.

Some changes have taken place in this room over time. Questions remain about the north and east walls and whether this space featured single-story shed-roofed extensions, as depicted in the Doolittle engraving. There is no evidence of them visible in the building fabric. All of the exterior siding in the area exhibits hand-forged nails, indicating that it was installed before c. 1810, so if such a feature once existed it was gone by then. On the interior, the post at the center of the north wall and in the northeast corner has beaded casings, rather than the ovolo casings found elsewhere throughout the first floor, which could suggest that they are later replacements installed before 1810, and signal a possible change of use in this room before that date.

The ceiling in this room was altered in the early twentieth century, possibly in conjunction with neighboring 100a. This may be where a steel beam was installed in the early twentieth century. Possible structural problems may have necessitated installation of such a beam, requiring that the ceiling be lowered. This covered the original summer beam and girts, which is why they are no longer visible in the space.

The ceiling plaster is not original; a hard gypsum material, it dates to the early twentieth century. The post at the center of the south wall exhibits a plain wooden casing with no decorative moldings, and the surface of the boards feels hand-planed. Also, the soffit and cornice above the fireplace have been adjusted to follow the slope of the ceiling. All of this suggests that this room underwent a significant repair to the ceiling in the early twentieth century, which involved dropping the ceiling to a point about four or five inches lower than it was originally. This concealed the summer beam and girts. The fireplace wall crown moldings were moved down so they would remain in view, and were adjusted to the slope of the ceiling.

Prior to the major renovation of the meeting house, ministers' offices were moved into the Wright Tavern. A closet was installed in the east end of the south wall. It utilizes commercially available, wooden, bi-fold doors and custom moldings that loosely relate to original trim elements in the building. Also, a system of bookshelves was added to the west of the south door, consisting of vertical metal tracks with adjustable brackets to support melamine shelves.



**Figure 23: View of Room 101 outlining original details and later changes.**

Today the room is in generally sound, stable condition. The noteworthy things to watch involve the floor and fireplace. This floor is very uneven, having a significant crown toward the center and a dramatic downward slope toward the fireplace. Likewise, the hearth and fire floor slope inward or to the west, dropping by as much as six inches from front to back. This indicates major settling in the chimney footing that probably occurred before the early twentieth century, and may be the reason the chimney base was stabilized with steel chains and concrete in the 1920s.<sup>22</sup>

<sup>22</sup> Document in file folder titled "Eric Smith Recollections"; dated Wednesday, July 19, 2000, the document begins: "Eric Smith, Sylvia Klinck, and Esther Almgren met to record Eric's recollections of the buildings on church green." On page 13, Mr. Smith



**Figure 24: View of Room 101 floor and hearth showing deflection related to prior settling.**

The original hearth and fire floor bricks survive, but have been mortared in place, whereas they would originally have been dry-laid. As the chimney settled over time, the face of the firebox pulled away from the paneling, creating a gap of about 1 1/2 inches. This was filled with wooden strips, probably at the time the rest of the repairs were completed in this space. It appears that the settling of the chimney stack over time pulled the floor framing downward toward the hearth and caused the subsequent crown toward the center of the room. While the chimney and floor appear to be stable, these items should be carefully watched for signs of further deflection.

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relates the chimney's having been wrapped in chains and enclosed in a box of concrete c. 1926.

## Room 102

This room is part of the original 1747 plan, and retains first-generation features as well as significant changes from the early nineteenth century. The interior finishes of the east wall and the north wall remain largely unchanged. The mitered bottom corners on the window trims are an unusual original feature and probably show how all of the first windows in the building were trimmed. The windows retain their original plain, unmolded interior trims. Original, plain, unmolded baseboard survives here, as well. The sashes in the southern window are historic, but not original. The upper sash is probably from the 1770s, the lower one an early nineteenth-century replacement. Sashes in the northern window are machine-made, twentieth-century replacements. The north wall retains an original door in its original location, with molded trims and plain, unmolded baseboard. Other original details include the ovolo-molded casings of the summer beam, post, and girt. The door to the closet east of the fireplace is eighteenth-century material, but re-used in this place, probably in the twentieth century, as indicated by the plain, dimensional lumber trims around the door. Strangely, whereas many other original doors were re-sized with strips of wood, it was the closet door jambs that received additional strips of wood to adjust the opening here, but the work appears to be of the same timeframe as the work on other doors.

The north and east walls retain a great deal of old, perhaps original plaster. The ceiling exhibits widespread cracks, separation from lath, and sagging. The northern half of the ceiling is the most precarious, with many active cracks and pronounced sagging, signaling loss of key with the lath substrate. When palpated, many areas move under the hand. This material is in danger of collapse and should be repaired using acrylic injections to reattach the material to the lath. This is the most sensitive as well as the most inexpensive approach to treating this ceiling.



**Figure 25: Ceiling, room 102, showing extensive cracking and detachment from lath.**

The north wall also retains original plaster, which is also very lumpy and shows a long history of repairs. The lower area of the wall to the west of the door was recently repaired with what appears to be a drywall infill joined to surrounding plaster with fiberglass mesh and taping compound. The plaster on this wall is stable.

The plaster on the east, exterior wall also appears to be old material with many

repairs. There are repaired cracks and some deflection and outward bulging on the northern section of wall, but the material feels stable when pushed on and does not require intervention.

The south, fireplace wall exhibits a variety of materials. The closet to the east of the fireplace, added in the early-to-mid twentieth century, incorporates a relocated eighteenth-century door. The section of wall surrounding the door and spanning the west side of the fireplace to the outside wall consists of painted wooden boards. The section of wall above the fireplace mantel is old and perhaps original plaster, showing water staining, soluble salts, and blistering paint. These are signs of water infiltration from the chimney stack. It is unclear if this is a former problem solved when the chimney was recently reconstructed, or if it is an active problem. The paint on the plaster chimney breast should be gently sanded away and the soluble salts neutralized. The area should be repainted, starting with a shellac-based stain-blocking primer and monitored. If the stains and salts begin to reappear within one or two years, there is either active water infiltration or a more serious problem resulting from the very hard modern bricks used in the chimney reconstruction above the roof line. It may be forcing moisture and soluble salts to move through the softer bricks in the original portions of the chimney.



**Figure 26: View of the fireplace wall in Room 102 showing the location of paint and plaster damage from chimney-related water infiltration.**

The short section of wall stretching from the west side of the chimney mass to the west wall of the room is comprised of short pieces of an early form of composite board installed over an unknown substrate. The door trims and baseboards are early twentieth-century, machine-run moldings, but the door is an early nineteenth-century, six-panel example. It is retrofitted on the inside with a thin piece of insulating composite board screwed to the door itself.

The west wall of the room is finished in old drywall, the joints of which have cracked over time. This is a cosmetic issue only. The joints can be repaired easily with a new

layer of tape and gypsum compound. The baseboards on the west wall are plain, dimensional lumber stock installed in the twentieth century.

The flooring in this room consists of early twentieth-century, narrow-width, painted hardwood installed over an earlier generation of flooring. Though squeaky, it exhibits no conservation problems.

The fireplace, including firebox, hearth and mantel, are historic materials dating to an early nineteenth-century renovation. They survive in surprisingly unaltered condition, including the dry-laid hearth tiles that have never been re-set in mortar. This fireplace is an important historic feature that should remain unaltered in future changes to the space.

## Room 103

This space retains many early features, including first-generation as well as early nineteenth-century details. The casings on the summer beam and the west girt are original. The casing on the east girt was matched in-kind in a more recent renovation. The ceiling retains old, perhaps original, plaster. The portion west of the summer beam looks to be older, and is rough. It shows many repairs but is sound. The area east of the summer beam is newer but rough from many generations of paint. There are no significant sags in the ceiling. The west wall retains important features. The dado may be a first generation detail (dadoes higher than the window sills are

generally pre-Revolutionary), and a section may have been re-used on the west side of the chimney when the chimney stack was added in the early nineteenth century. The windows are important in this room. The northern one has both original sashes, some of the earliest in the house. They are very wide, with ovolo-molded muntins. The flat-stock trims are also original. The southern window has slightly later sashes and narrower muntins more typical of the time around the Revolution. The flat-stock trims on this window are a bit wider than that of the northern window, and with comparatively less paint buildup, they look to be mid-to-late twentieth-century. The fireplace is largely undisturbed. The mantel and chimney breast woodwork are original, but the pair of cupboard doors on the chimney breast are twentieth-century replacements. A strange molding repair to the band molding on the chimney breast in the upper, west corner looks like a section of antique molding salvaged from elsewhere was used to fill in a missing or damaged area. The firebox is original and in excellent shape, except for minor, old damage to the bottom courses of bricks on the fire back, the product of many years of fires. This is not a significant concern. The hearth was replaced with poured cement or concrete in the early twentieth century, but the fire floor retains old original dry laid brick.

Modern drywall covers the east, north and south walls. The west wall appears to be twentieth-century gypsum plaster. There is

a bulge near the top, left-hand side of northern window, and some hairline cracking, but the plaster is generally stable presenting no concerns.

On the west wall where the summer beam meets the girt above the northern window, there is extensive, localized paint failure that clearly indicates moisture damage. This appears to be the result of defective drainage where the south elevation of the ell connects to the main house. The area was dry at the time of this study indicating, that it may have been from a gutter-related problem since fixed, or that it is seasonal, possibly related to ice dams. We recommend sealing the stains with a shellac-based primer and repainting. Observing this area over the course of one year will reveal whether there is an active water problem.



**Figure 27: View of west wall, Room 103, showing localized paint and woodwork damage related to water infiltration from above. See also Figure 16.**

The floor in this space is comprised of narrow, painted boards installed in the early twentieth century that may be Douglas fir. Apart from minor squeaks, the floor is in stable condition.

The closet to the east of the fireplace on the south wall was added in the most recent renovations. It is finished in drywall, with flat stock trim of dimensional lumber around a commercial wooden, four-panel door. The workmanship and materials match those in 100e, suggesting they were done at the same time.

## ROOM 104 THE TAP ROOM

This space is architecturally very intact from the eighteenth century. The flooring, fireplace paneling, and dados are all original, but all the paint has been stripped to bare wood. Both sets of window sashes are much later than others in building, and the very narrow muntins look like federal-era replacements. The plain, narrow window with splayed jamb liners are original.

The flooring is original random-width pine running north-south as in Room 101. Fastened with forged nails, the boards have thick coatings of paint. There is a big, angled patch in the northwest corner in front of the cupboard. There is a notable crown in the floor in front of the fireplace, and then the hearth and fire floor tip dramatically downhill eastward toward the fireback. The same problem is apparent in Room 101. The chimney sank, pulling the

floor downward and causing upward deflection toward the center of the room.



**Figure 28: View of the fireplace hearth, Room 104, looking north, showing floor and hearth deflection.**

The patch in the floor aligns to an extent with a notch in the chair rail cap on the north wall. There is a similar notch about twelve inches to the south of the cupboard on the west wall. Perhaps this was the site of a taproom bar cage. The current cupboard is an added feature from the eighteenth century, but was not there when the building was first constructed. The dado boards run behind it and they retain very important paint history. The cupboard is mostly unaltered, except that the upper pair of doors has replacement panels made up from old boards. Inside, the original shelves are there with original shelf supports held on by forged nails.

The ceiling has been lowered east of the summer beam, perhaps to conceal plumbing lines for the rooms above. The ceiling is composed of drywall. It was poorly installed, with cracks at every joint.

The walls are old plaster. There is evidence of much repair, but it is stable on the east and south walls. A major buckle of plaster in the north wall on the right side of the west window was poorly repaired with drywall patching compound. It is very hard and stable, but is severely detached from the lath. This area is stable for the current use of the space, but in any future restoration, the drywall compound should be removed and the plaster properly reattached to the lath with acrylic adhesive. The dado boards below the span between the windows are also very warped and deflected. The warping is permanent damage resulting from water, but it may be possible to re-secure them to the framing. This evidence points to an old water problem inside the wall that does not appear active today.

A visible plane change in the ceiling aligns with the front, centrally placed post, and thus conceals the north-south summer beam. The casing on the post is plain, without molding, similar to that of the south wall in Room 101. Important paint history survives on the west face of the casing because it was spared large-scale paint removal done on the rest of the woodwork.

The door to 100a is actually a federal-era, four-panel example with the panels facing into Room 104. The two upper panels have been taken out and replaced with glazing. The workmanship matches the door between rooms 102 and 108, though this has four, rather than six, panels. The

woodwork around this door also shows important change. At the time of first construction, this was all open into the stairwell (100b), as evidenced by the angled wainscot board that follows the line of the upper run of stairs. It was filled in later with another board and a door frame molding that does not match the original door moldings in the room.



**Figure 29: West wall of Room 104 showing alterations to woodwork to enclose what had originally been an open passage to 100b.**

There were other important changes in the southwest corner of this room over time. There is evidence of in-fills in the dados on the west and south walls, and corresponding wall patches with drywall on both walls above. A patch in the west wall and in-fill in the dado suggest that a door once communicated with Room 108.

There is also evidence of a door that communicated with 100d formerly in the south wall. It is not possible to tell if these were original conditions or later alterations.

There is minor damage to the plaster and drywall on the south wall from the arm of a desk chair. It can be repaired with a gypsum-based joint compound.

### **ROOM 105 LAVATORY**

This lavatory occupies a space that has undergone many changes. Today, the only original details visible are the ovolo-molded girt casing on the south wall, a related post casing in the southwest corner, and an original nine-over-nine window in the south wall that once looked outside, but now communicates with Room 108. The sashes in this window appear to date to a second generation of work done in perhaps the 1770s. This time frame is arrived at by stylistic comparison to earlier and later sashes elsewhere in the building. The glass panes have been painted from the inside for privacy. The interior trims to this window consist of flat, unmolded dimensional stock that appears to be a recent installation.

The walls are finished in a twentieth-century gypsum or cement plaster that is very hard and brittle. Many areas of finish coat plaster have fallen away and since been painted over, resulting in an generally rough, irregular surface. However, the walls are sound and stable, and currently in no

need of treatment. The southern portion of the ceiling is comprised of similar hard gypsum plaster that also exhibits repairs and loss of finish coat. It is also sound and stable. The ceiling plane has been lowered by about eight inches from its original height, presumably to allow installation of utilities. The northern portion of the ceiling steps down further, apparently to create a larger utility chase such as a furnace duct, or room for drain traps, and is finished in modern drywall that is in sound condition.

The floor consists of a poured concrete tray that extends up the walls by about two inches. It is finished with thick industrial enamel. While in sound condition, this floor is ultimately a bad idea. As mentioned earlier, concrete poured over wooden framing adds unnecessary weight and is comparatively rigid, resulting inevitably in cracking. It is also irreversible in that it sticks to, and therefore damages, any original materials below it. Eventually, this floor should be removed and replaced with tile or a one-piece linoleum floor.

### **ROOM 106 LAVATORY**

Like Room 105, this space is now a lavatory, and occupies an area that has undergone many changes. Few first-generation materials remain visible today, and it appears that the two rooms took their present form in an early twentieth-century renovation, perhaps as utility areas when the building was being run as an inn. A small, two-over-two, wooden-sash window located on the south wall once

communicated with a now abandoned space between rooms 105 and 106. This feature may relate to an early twentieth-century dumbwaiter once located in Room 202 and removed in recent renovations. The material, being machine-run rather than handmade, suggests it was installed in the first quarter of the twentieth century.

The ceiling is an unknown material, either early twentieth-century gypsum plaster or gypsum board, covered in many coats of paint and having a rough, scaly surface. This ceiling appears to have been lowered from its original height perhaps at the same time as those in 100a and 101. These changes may have been made within one construction episode in the early twentieth century.

The only visible eighteenth-century details are the ovolo-molded post casing in the northwest corner and the inside face of the four-panel door that communicates with 100a. The fact that the post was covered with molded casings indicates that it was exposed to view within a finished space at the time of initial construction. Though the door is eighteenth-century material, it may not be in its original location. However, a portion of an ovolo-molded door casing can be seen on the 100a side of the door, nailed to the side of the post. If this is an undisturbed original detail, it may be a clue that a door occupied this space originally. The interior trims are a mix of materials, including flat-stock jambs but a beaded header. These could be elements salvaged from elsewhere and cobbled together here.

The walls are finished in a twentieth-century gypsum board that is very hard and brittle, and many of the joints between the boards, as well as the fastening hardware, have become visible. However, the walls are sound and stable and currently in no need of treatment. The southern portion of the ceiling consists of similar hard gypsum plaster that also exhibits repairs and loss of finish coat. It is also sound and stable. The northern portion of the ceiling steps down, presumably to create a utilities chase, and is finished in modern drywall that is in sound condition.

Like Room 105, the floor here consists of a poured concrete tray that extends up the walls by about two inches. It is finished with thick industrial enamel. While in sound condition, this floor should eventually be removed and replaced with tile or a one-piece linoleum floor.

## **107 FRONT ENTRANCE HALL – LEXINGTON ROAD ENTRANCE**

This space retains many early features, including the front door and associated hardware: strap hinges, latch components and a great early nineteenth century box lock with key. This door may have swung from the opposite side of the jamb (from the east side rather than current west) at one point; Dutchmen in-fills from an earlier latch position are apparent on the other side. More of the original front girt is exposed in this space, further evidence that the ceiling in neighboring Room 101 has been lowered. The tall, narrow cupboard on

the south wall was added in the federal era. Today it conceals copper water lines running to the second floor.

There are remains of feather-edged wainscoting on the south wall. It is not clear whether this originally went floor-to-ceiling and was cut off at some point, or was moved here from elsewhere, but it is original material. A large return for forced hot air heat was cut into the wainscoting.

The east and west walls are original, wooden wainscot partitions that are part of the fireplace walls to rooms 101 and 104.

The front wall has old plaster on either side of the door. The trim boards are plain and narrow with no moldings. The baseboards are also plain and unmolded, like original examples found throughout the house, except in Room 101.

The four-light transom is original and has wide muntins similar to the southern window in the east wall of Room 202. These are among the oldest window sashes in the house.

Original floorboards run north to south. There is a large, in-kind patch in front of the door, an early twentieth-century repair.



**Figure 30: Room 107 architectural details.**  
**Left: North wall showing original details.**  
**Right: South wall showing original details and later alterations.**

## ROOM 108 SUN PORCH/DINING ROOM

Added in 1926, this room first served as a dining room. It remains largely intact from that time, including stained knotty pine, floor-to-ceiling wainscoting on all four walls and the faux-coffered ceiling. The ceiling consists of four-by-eight-foot sheets of thin plywood, with the joints covered by strips of dimensional lumber forming panels, and then trimmed with thin, machine-run ogee moldings. Four large, compound casement windows consisting of five nine-over-nine units based on those of the main house illuminate the space, one each on the east and west walls, and two on the south wall. The sashes are joined by pairs of hinges rather than divided by

vertical mullions and originally functioned as outward-opening casements. They do not function today, being covered on the outside by large aluminum-framed storm windows. On the inside they are trimmed with simple mitered boards set flush with the surrounding wainscoting. They have bullnose-molded sills.

The only changes made to this space are the addition of commercial grade, wall-to-wall carpeting on the floor, and the recent replacement of the center door (leading from 101c) with a modern, commercial, wooden four-panel door, and the addition or replacement of the closet door at the west end of the north wall with similar materials. Also, eight strips of fluorescent lights have been installed on the ceiling.

The only eighteenth-century feature visible in this room is the nine-over-nine window in the north wall, which was originally an exterior window on the south elevation of the building before Room 108 was added. This window appears to be a second generation of frame design in the building, perhaps installed c. 1770 in concert with several new sets of sashes. It has a simpler, square sill nosing rather than the bullnose-and-cove profile of the earliest windowsills. However, in other respects it matches the original work, being a thick mortise-and-tenon frame with ovolo-molded sash stops. This window, which exhibits thick paint buildup, has been protected from the elements since the 1920s and therefore may retain more evidence of early paint history than the others of its age that were exposed longer to the elements. The

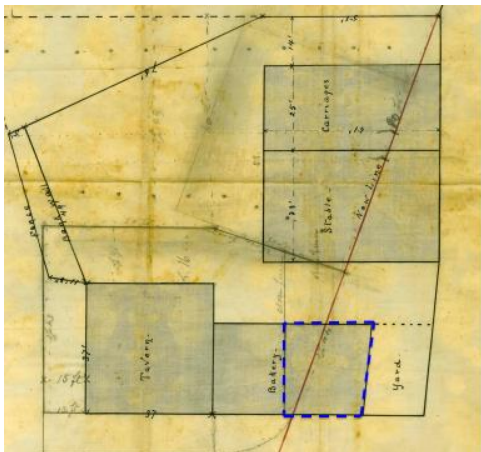
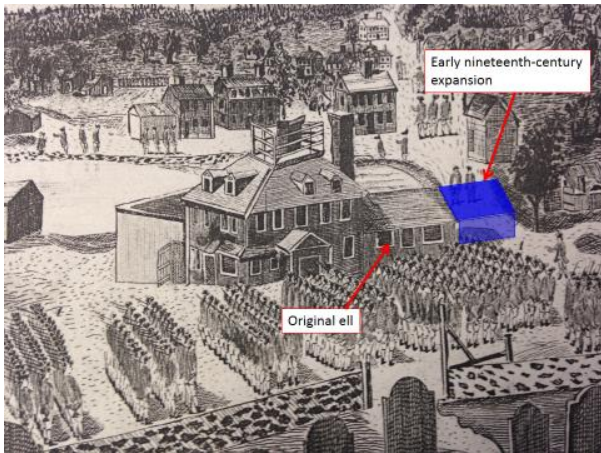
header, consisting of a thick cap and ovolo crown, is a twentieth-century copy of original exterior details, and fairly faithful in design. The closet door at the west end of the north wall and the central door leading to 100c exhibit a similar detail, suggesting they were trimmed at the same time the window cap was installed. The door header at the east end of this wall is slightly different, having the same heavy cap but a commercially available bed molding to approximate the ovolo on the window and other two doors.

The door at the east end of the north wall is an early nineteenth-century, six-panel design that might date to the c. 1810 renovations to the building. The paint has been stripped away to expose the bare wood in an effort to match the knotty pine wainscoting on the walls. It has an added strip at the bottom to fit the door to the current opening. This door is related to several others in the building that date to an early nineteenth-century renovation episode. Other examples can be found in the west wall of the basement communicating between spaces below rooms 103 and 108, and also in several rooms on the third floor.

## Room 109

This eighteenth-century space occupies an area within the west, one-story ell. While some previously believed that the ell was entirely replaced in the mid nineteenth century, this is actually the original ell, extended to the west in the early nineteenth century, then reduced in size in

the late nineteenth century to conform to a re-sizing of the lot.



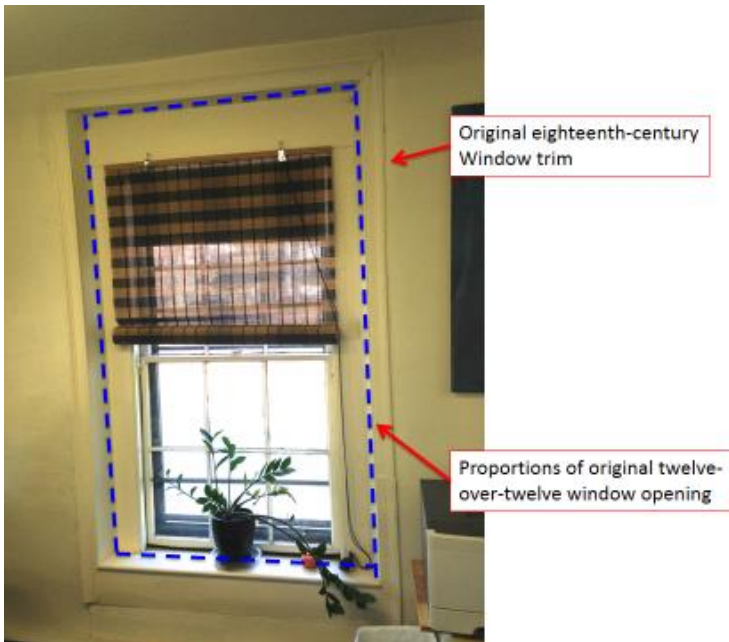
**Figures 31-33: Three images of the building from the north showing original ell, its intermediate appearance from c. 1815-1860, and its current appearance.**

The room retains several original details, including the large summer beam running from north to south with a beaded casing similar to the post casings in Room 100, suggesting that they were installed at the same time.



**Figure 34: Room 109 showing original north-south summer beam with intact casing.**

The two front windows (north wall) retain their original ogee-molded trims, and their size indicates that the first-generation windows were much larger than the current sashes, which when installed, involved reducing the openings from the inside.



**Figure 35: Window on north wall of Room 109 showing eighteenth-century trim with opening reduced inside for later sashes.**

There is no visible evidence of this change from the outside. There are horizontal boards below the west window, extending from the sill to the floor. The east window may have had a similar detail but it is now covered with drywall. According to the earliest known photo of this elevation, an exterior door was once located to the east of the eastern window on the north wall. This was removed in the nineteenth century.

There is an exposed girt along the west wall ceiling, indicating that when the ell was reduced in size, contractors chose a major structural framing bent, probably the west end wall of the original ell, as the cutoff point. The windows in the west wall are entirely nineteenth-century in style, and

obviously do not occupy earlier openings. They have plain, wide, flat-stock trims with no moldings, plain bullnose sills, and narrow window stools below. Their trims are currently flush with the plaster; this may not have been an original condition.

There is an infill in the ceiling plaster and in the wooden girt casing on the west wall indicating the location of a former east-west wall partition. The narrow opening in the girt casing suggests this was a wooden wainscot wall consisting merely of vertical wooden boards, rather than being a framed wall.



**Figure 36: Room 109, intersection of the west wall girt and post showing evidence of an earlier wainscot wall partition.**

We believe the reused boards now forming the dado on the north wall of 101d were salvaged from this area. The ceiling plaster and repair suggest that the material was removed from 107 and installed in 101d contemporaneously.

Today, two columns added in the twentieth century support the main summer beam. The southernmost column may occupy the original location of a post, as suggested by a space in the original beam casings. The ceiling plaster is early twentieth-century. There are many painted-over repairs and cracks, but no imminent concerns with its condition. The north wall looks like twentieth-century plaster, and perhaps some repairs with drywall, particularly between windows and below the eastern window. The west wall looks like nineteenth century plaster and is in good shape, except that broken key has caused a horizontal buckle and a crack between the windows just above the sill line. This should be reattached with an acrylic injection before it gets worse.

The floor plan was altered in the southeast corner of room, where walls were built to form a closet in the north wall of 100e, and storage shelves in 107. The east and south walls are drywall dating to the most recent renovation, but the east wall retains an old baseboard with heavy paint build-up. Its age is not clear. The north and west wall baseboards are completely covered by radiant baseboard heat. Another open closet was built at the west end of the south wall.

The flooring plane is uneven, or wavy, suggesting old joists or older flooring below, now covered with new, commercial, wall-to-wall carpeting.

## **SECOND FLOOR**

### **INTERIOR CONDITIONS**

Spaces 200 a through c refer to the network of passageways leading through the second floor of the building from east to west. They are broken into these sections and correlated to the measured drawings for ease of reference.

#### **200A SECOND-FLOOR EAST HALL**

This space extends from the window above the east entrance door westward to a modern partition and door about three feet to the east of the second-floor stairs.

This space generally retains its original footprint, but has been altered extensively in recent years. The north and south partitions are in their original positions and retain areas of old plaster and woodwork. Some of the woodwork in this space features the earliest profiles found in the building and thus provides important clues about how other areas in the building may have originally been finished, as is discussed further below.

This space may have remained essentially intact until very recently, when a second door opening was cut through the western

side of the south partition, leading to Room 202. A similar door opening was installed more or less across from it in the northern partition, leading to Room 201. Measured drawings done by Nashawtuc Architects in the early 2000s indicate that a door was located more or less in the location of the current door, and marked "Door to be permanently closed." Instead, it appears that the door opening was actually enlarged to its current form. Also, a small, four-pane vinyl window unit was added to the west of the door for borrowed light. The space was further changed by the addition of a partition and door about three feet to the east of the second-floor staircase, which divided the space off from the main second-floor stair hall.

## MATERIALS

The space retains several original details, though many modern materials have been introduced. The window at the east end retains its original ovolo-molded jambs and sill. These details seem to be the way the second-floor windows were finished at first. The sashes appear to be old, from the late eighteenth or early nineteenth century, but replacements of the originals, since their muntins are slightly narrower than those in the earliest examples in the building. The south wall retains an original four-panel door in its original position toward the east end. It is framed by a Queen Anne-style, very early ogee molding that appears to be original, and is the earliest form of door casing molding found in the building.

The ovolo-molded casings on the exposed girts are all original materials. Sections of original, plain, unmolded baseboards survive on the east, south and north walls. The plaster on the east wall appears to contain original or old areas, albeit with many repairs. The plaster on the north and south walls looks like recent gypsum plaster installed over wood lath and rough-troweled to blend with surrounding historic materials. There is an area of early plaster above the original door in the south partition wall. The ceiling is old plaster, possibly original, with thick accumulations of paint. Plaster on the walls and the ceiling shows minor cracking that is cosmetic in nature, not requiring treatment.

The casings to the new door openings in the north and south walls are made from dimensional lumber finished with ovolo moldings intended to relate to the original post and girt casings.

Modern commercial carpeting covers the floor and conceals the underlying conditions. Waviness in the surface suggests that old flooring survives underneath the carpeting.

The woodwork, old and new, is in sound, stable condition. The original elements exhibit thick, crusty paint buildup, and some films surely contain lead. Extreme care should be taken to protect the moldings and prevent damage in the event of any future lead abatement project.

The interiors of the window sashes are in very good condition, though the wood shows evidence of thick paint buildup in some areas, and minor wood loss from condensation and ultraviolet light damage over time, cosmetic issues only.

## 200B STAIR HALL

The second-floor stair hall, this space retains historical materials from the eighteenth and early nineteenth centuries, as well as more recent changes. This space was originally part of 200a, and remained so until fairly recently.

It appears that the stairs leading to the third floor are not original to 1747, but were added around 1815 in concert with many other changes made at that time. The space seems to have remained largely intact until fairly recently, when the partition was added, separating it from 200a, and a large glass door and sidelight were added on the south wall directly opposite the upper landing of the stairs. This feature was probably installed in an original door opening enlarged to accommodate the new unit.

The history of Room 206 is unknown, but is probably shared with Room 106 below, which is also a bathroom. It is likely that a door was located in this spot originally. There is evidence that the door to the room below is original (one section of early casing survives); typically in the eighteenth century, the second floor followed the plan for the first floor.

## MATERIALS

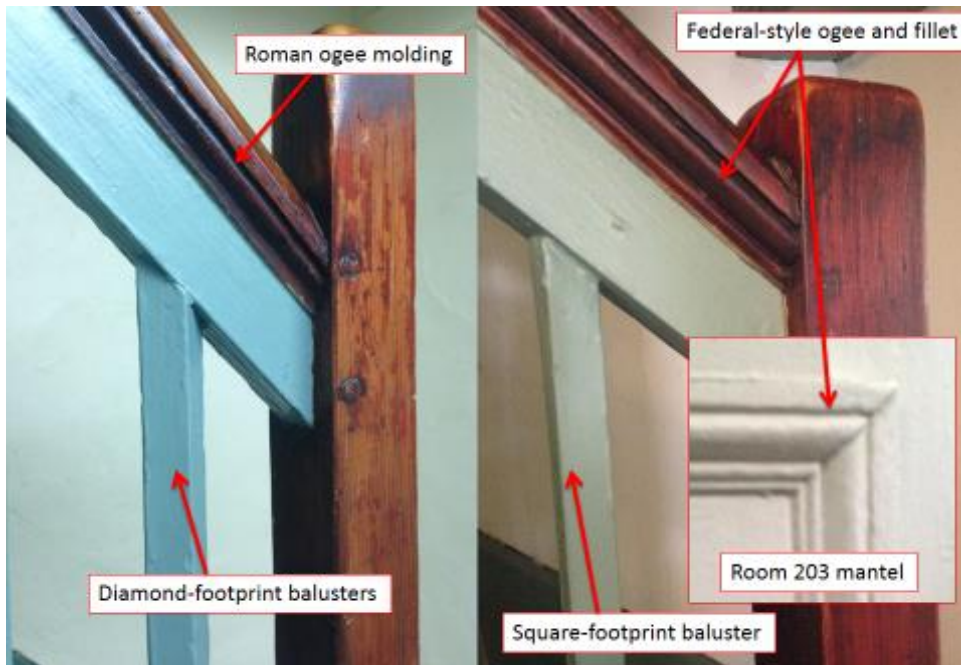
The original stairs appear to have terminated with the upper newel post to the lower staircase. A simple railing consisting of three boards probably enclosed the stairwell at second-floor level. Their footprints can still be seen in the vertical interior corner casing at the eastern foot of the third-floor stairs. The molding forming this corner, into which the three-board railing was inserted, has a very early Queen Anne profile, the same as the original door casing in 200a.

The staircase leading from 200a to the third floor was added in the early nineteenth century. The workmanship of the new portion closely matches the original stairs below, but with some variations. The balusters are set in a square, rather than a diamond-shaped, footprint on the stringers. The stretch of railing between the two second-floor newel posts may not have featured any balusters originally. The current balusters here are modern additions installed with wire nails, and there is little evidence of earlier balusters. Also, the stringer features a thin, federal-style ogee molding rather than the thick ovolo present on the original section of stairs below.

The handrail, while also similar to the earlier material, exhibits a federal-style ovolo with fillet that relates to moldings on the mantels added to the two new chimneys at this time (as seen in rooms 102, 202, 103 and 203). The earlier portion

of the stairs exhibits a Georgian-style ovolo. A three-board railing is present at the third-floor level enclosing the third-floor stairwell, which may have been based on a now-missing feature that once enclosed the stairwell at second floor level, the evidence of which survives in the form of slots cut in the second-floor newel post and the corner molding at the east side of the stair well.

The door frame leading to Room 200 is an eighteenth-century feature. The plain, beaded casing is installed with forged nails, and there are the imprints of H-type hinges on the side of 200c. It exhibits trims of simple, beaded stock that does not match the early Queen Anne-style moldings found elsewhere on the second floor. The plain nature of the trim shows paring down of detail for the western rooms.



**Figure 37: Comparison of 100b and 200b stair moldings, and mantel in Room 203. Left: Original, first floor staircase in 100b. Right: Third-floor staircase in 200b.**

We cannot discern how the third floor was accessed from 1747 to about 1815. Perhaps a second stairwell was originally located in the south end of the building, associated with a chimney stack that was taken down in the early nineteenth century. There may have been a simple ladder accessing the attic prior to 1815, and all evidence of it lost in later renovations.

The wall surfaces and ceiling retain old plaster. The ceiling plaster could be original, and is very rough with evidence of many repairs. The substrate is not discernible. The wall plaster on the east wall of the third-floor stair well is probably original to 1747. The inner stringer to the added staircase was installed over it, so must predate it. It is a very thin lime plaster installed over wooden lath.

It is very soft and fragile in many areas. While not officially detached from the lath or in danger of collapse, it warrants careful protection. The north wall of the stairwell is mortar parging over the chimney brick. This hard, brittle material seems to be more modern than the nearby plaster.

The remaining wall plaster, including small areas on the east, west, and south walls, appears to be later. It is harder and more brittle than that on the walls but not a modern gypsum plaster per se. It may be

nineteenth-century material. The surfaces are rough with many repairs, but are in generally sound condition with no repair concerns.

All of the girt and post casings in this space are original 1747 materials, featuring ovolo-molded edges typical for the entire building.

Modern commercial carpeting covers flooring that is early and perhaps original. There is a later patch near the newel post that is fastened with one visible mature cut nail.

## **200c WEST HALL**

The western portion of the central passage at the second-floor level, this space has undergone many changes over time. It appears to have been originally part of Room 204, the northwest bedchamber. In the late nineteenth century, a partition was constructed to create a passage to the ell. A door was installed in the new partition (the north wall of the current space), providing access to Room 204. The summer beam to Room 204 passes through the added wall, connecting to an east-west girt that marks the original west wall and establishes the original proportions of the northwest chamber.

It is unclear if a door originally communicated between rooms 203 and 204 in their earliest forms. It appears that the door to Room 205 (the small kitchenette) was installed in perhaps the

early twentieth century, creating what was at that time probably a hall closet.

Still later, perhaps in the most recent round of renovations, a partition and glazed door were added at about the midpoint of this hall. The door casing consists of modern, manufactured wooden elements.

## **MATERIALS**

Some original materials survive in this space despite later changes. The casing to the south girt and summer beam are original and exhibit the ubiquitous ovolo moldings. The casing to the door leading to 200b is eighteenth-century material: plain, unmolded boards with mitered corners. The footprints of forged H-type hinges can be seen on the southern jamb.

The door casing leading to Room 204 has a Greek revival quality to it. It consists of wide, plain, unmolded boards that are hand-planed. The top board forms a heavy lintel in the Greek revival taste.

The casing to the door to Room 205 consists of narrow, plain, machine-planed boards, probably from the early twentieth century.

The walls and ceiling consist of plaster. The ceiling and the east wall above the door to 200b may be the oldest plaster. The north and south walls appear to be a modern gypsum plaster, installed at the time the new door dividing the space was added, and rough-troweled to blend in with the

older material in the building. All areas of the plaster, old and new, exhibit minor hairline cracks and evidence of small cosmetic repairs. It is in sound condition.

The floor is currently covered with modern commercial carpeting obscuring underlying conditions. We were unable to determine the age of any flooring below the carpeting.

## 200D ELL HALL

The passage leading to the rear ell, this space appears to have taken shape in the late nineteenth century. Accessed by two steps up from 200c, it was probably created or finished to permit access to the second floor of the ell around the same time the ell was reduced in size. Perhaps an earlier stair leading to the second floor of the ell was eliminated when the ell was cut down.

This space seems to retain its overall configuration from the time it was finished: an L-shaped hallway leading to two small rooms created on the second floor of the ell. Subsequent changes include addition of a lavatory (Room 210) on the south side of the space, which included raising a portion of the roof, creating the shed dormer as seen on the exterior, south elevation of the ell, to create adequate headroom. Most recently the floor was covered with modern commercial carpeting, concealing the underlying flooring.

## MATERIALS

This space retains a wide variety of materials, the earliest of which date to the mid-to-late nineteenth century. The door at the west end leading to the rear ell chamber is stylistically the earliest, mid-nineteenth-century in character, with four raised panels. It was later cut down with a dog-eared corner to conform to the roofline. Perhaps it dates to a configuration of the ell c. 1820-40, which we otherwise know nothing about. The trims associated with this door are plain boards: modern, dimensional lumber. The door to Room 209, the north ell garret chamber, appears to be slightly later, c. 1870 or so. It has four recessed flat panels and frame moldings. There are no decorative trims to this door, only the exposed edges of the board casings. The baseboards are modern, plain dimensional lumber boards installed over the older wall plaster.

The door leading to the modern lavatory Room 210 is a modern, manufactured, wooden, four-panel example and its associated trim components are all plain, made from dimensional lumber.

The walls are comprised of old plaster that appears to be late nineteenth-century work. It exhibits a somewhat rough surface and a history of minor repairs but is in sound condition. There are three pronounced cracks on the north wall above the door to Room 209. They are stable and require only cosmetic repair with

something like a modern gypsum taping compound.

The ceiling consists of twentieth-century drywall. It sags significantly and there is evidence of water staining along its joints with the west and north walls in the northwest corner. This is probably related to a past leak associated with the ell chimney and does not appear to be active. However, this ceiling should be removed and replaced with a new, sound piece of drywall.

## Room 201

Originally the northeast chamber, this space retains its original proportions and many historic materials. However, it underwent significant changes in the early 2000s to accommodate the second-floor tenant, Nashawtuc Architects. Most significantly, on the south wall, a partition shared with 200a, a door was removed, the opening enlarged, and a vinyl interior window installed toward the west end.

The casings on the windows are all original. The windows have ovolo- molded jambs like those in 200a. The east window sash has narrow muntins, the latest profile among the surviving historic windows in the house. The three earliest sashes, likely dating the 1747 construction, are in windows in the north wall: the two in the east window and the upper one in the western window. The lower unit in the western window is more characteristic of the 1770s.

The casing of the door to the front hall is original. In-fills are visible from H-type hinges. The molding profiles in this room are the same as Room 101. There is a late nineteenth- or early twentieth-century keeper to a cast iron lock on the jamb, but the door itself is missing.

There is old plaster on the north, east, and west walls. The plaster on the east and north walls may be nineteenth- or early twentieth-century gypsum, but the fireplace (west) wall looks like eighteenth-century material. There is evidence of many repairs but no visible, noteworthy problems currently. The ceiling is old plaster, perhaps original. The paint is scaly and there are many hairline cracks, but no signs of danger. There are several brown drip stains from a roof leak. This must post-date the early 2000s when the modern reproduction peg rail was installed along the summer beam, because there are several drip stains on that, too.

The fireplace retains its original bolection molding, with the same profiles as the door casing. The fire back looks like original masonry, but the jambs look like they were re-laid in the early twentieth century. The hearth is covered with plywood, and so is inaccessible.

The south wall is older plaster to the east of the door to 200a, but modern drywall to the west of the door. The age of the plaster cannot be determined conclusively through observation, but it looks to be late nineteenth-century.

The plain, unmolded baseboards all the way around the room are original material.

Modern commercial carpeting covers the floor, preventing examination of the flooring beneath it.

## Room 202

Originally the southwest chamber, this space retains features from 1747, c. 1815, and recent, drastic changes made to accommodate the architects' offices. A wall originally divided this space from Room 203, but it was removed in the early 2000s. Its former location is marked by the north-south girt toward the west end of the space. Details from 1747 include ovolo-molded girt casings and window trims on the east wall and window trims consisting of narrow, beaded back-band with ogee caps. The southeast window has the earliest type of sashes, with wide muntins. There are federal-era, narrow-muntin sashes in the northeastern window.

The fireplace on the south wall, which is in the federal style, dates to the c. 1815 renovations and retains its original pilaster-and-frieze mantel. The firebox is enclosed and inaccessible for study.

The wall originally dividing rooms 202 and 203 was removed during this time and an additional casing over the summer beam was installed, consisting of thin plywood and quarter-round moldings meant to

imitate the ovolo-molded casings on the original girts.

The south wall exhibits three very new pairs of wooden sashes. They are true divided lights and closely resemble the historic federal-era sashes in the building. They are trimmed with plain, unmolded dimensional-lumber stock, probably installed recently when the sashes were replaced.

A utility chase was added between the two easternmost windows on the south wall, and the original post casing re-cased with materials similar to the summer beam.

The baseboards are original 1747, flat, unmolded ones similar to those elsewhere on the second floor.

Modern commercial carpeting covers the floor. The floor's irregular, wavy surface suggests older flooring below that is inaccessible for further inspection.

The east wall retains historic plaster, as does the chimney breast on the south wall and the section of wall to the east of it. All remaining wall surfaces are modern drywall, as is the ceiling.

There was apparently a dumbwaiter toward the center of the room, which was removed during this episode. It may have backed up to the current lavatory (Room 206). Perhaps this feature had something to do with the interior two-over-two window on the south wall of the lavatory in Room

106 below. No evidence of this feature survives today on the second floor. The architects believe it to have been late nineteenth-century material.

The west side of the girt that bisects the current reception area, which divided rooms 202 and 203 in their earlier forms, has an infill in the casing, suggesting the location of a wall partition that may have run east to west at one time. There is insufficient visible data to suggest whether this was an original or later feature.

The wall and woodwork finishes in the reception area at the west end of Room 202 are modern drywall and dimensional lumber, with the exceptions of the girt casings on the west and north ends, and the post casing in the northeast corner.

## Room 203

This space has been drastically altered since 1747. It may have retained at least its 1815 countenance until the 2000s, when it was reconfigured to accommodate Nashawtuc Architects. The partition shared with Room 202 was moved about 6 feet to the west, just to the east of the summer beam. New partitions were constructed to form the reception area for the architects' offices, and a new north-south partition was installed just to the east of the summer beam to create the current version of Room 203.

Room 203 retains a few 1747 features: the southwest corner post and girt casings,

summer beam casings, and plain narrow baseboards on the west and south walls. The plaster on the west wall may be original. The c. 1815 fireplace and chimney breast are intact and unaltered, including a brick Rumford-style firebox, the dry-laid brick hearth, the mantel, and the chimney closet. The moldings associated with the mantel and door frame for the chimney closet are identical to those on the 1815 portion of the stairs (leading to the 3<sup>rd</sup> floor): a federal-type ovolo with astragal. However, the door to the chimney closet was re-used from the 1747 era material. It consists of three fielded panels in a configuration similar to the section of original paneling now stored in the basement and purportedly removed from the east wall of 100c, originally part of Room 103.

The ceiling in 203 consists of old, perhaps original plaster. The west wall may be 1747 plaster. On the south wall, the plaster for the chimney breast may be from 1815, with possibly earlier material west of it. The east and north walls are modern drywall. Both windows in the space, including the south and west walls, feature modern, very recent wooden sashes identical to those in Room 202, with equally new plain, unmolded wooden trims made from dimensional stock.

There are two pressing concerns with this space. Inside the chimney closet to Room 203, there is evidence of extensive, long-term leaking in the upper, southwest corner. This is clearly from a chimney-

related problem, which may have been solved when this chimney was recently reconstructed. However, the joint between the summer beam and the south girt has spread open, and the entire south wall has moved outward by as much as one inch at this location due to decay in the joint between the girt and the summer beam.



**Figure 38: Intersection of the summer beam with the south girt, seen from inside the chimney closet in Room 203.**

There was a design flaw here when the 1815 chimney was constructed abutting the joint, leading to problems when the chimney inevitably leaked. The casing to the summer beam is stained, has paint failure, and is badly warped from long-term exposure to moisture. This is a potentially serious structural issue because it involves decay at an important, primary structural joint in the timber frame. “Tell-tale” measuring devices should be attached to the gap in the beam casing and to the crack

between the east wall and the rear wall of the chimney closet to monitor for potential movement over the course of a full year. If the separation continues to increase, this joint will require significant intervention and reinforcement.

Also, an area of seriously deflected ceiling plaster is located to the west of the chimney breast. This may be the result of past water leaks. This area should be injected with acrylic adhesive to avoid imminent collapse.



**Figure 39: Area of detached plaster to the west of the chimney breast in Room 203.**

## Room 204

Room 204 retains its essential eighteenth-century character toward the northern portion of the space. Woodwork, plaster and other architectural details, discussed further below, remain in place. The southern portion of the room was reduced in size, though, perhaps in the third or fourth quarter of the nineteenth century, with the addition of a partition forming

200c, the passage connecting 200b, 205 and 200d.

Original elements from the eighteenth century include the casings, with ovolo-molded edges, on the summer beam, the post and the girt. There is an interesting construction detail; the summer beam does not connect to the north girt above the post on the north wall to form a typical English tie joint. Instead, it mortises into the front girt about six inches to the east of the front post. This girt marks the location of the original south wall to Room 204. It is unclear whether a door originally communicated between rooms 203 and 204.

This room exhibits pared-down detail compared to the adjacent Room 201. The fireplace is framed by an ovolo-molded architrave, a simplification of the fireplace woodwork in Room 201, which includes a stepped molding with ogee cap. The door leading to the north front hall, or Room 207, and its associated frame are original, exhibiting a plain, unmolded wooden architrave with mitered corners, identical in character to the western face of the door trim in 200c leading to 200b. The four-panel door dates to the eighteenth century and matches others in the building presumed to date to 1747.

The firebox and hearth were covered at the time of this study and were thus inaccessible for study.

The two windows on the north or front wall retain many original details. The window trims consist of simple, ovolo-molded jamb liners with ovolo-molded headers and sills. The pair of sashes in the western window are of the earliest, 1747, wide-muntin type, as is the upper sash to the eastern window. The lower sash is probably from the next generation, around 1770. The east and north walls retain flat, unmolded baseboards that are original features, and similar to first-generation baseboards found throughout the second floor of the building.

The south wall, constructed in the late nineteenth century, exhibits a four-panel door with flat panels and panel frame moldings similar in character to the door leading from the north wall of 200d to Room 208, indicating that all of these modifications were probably made at the time the ell was reduced in size and substantially reworked at its second-floor level. The plaster appears to date to the nineteenth century and is in stable condition.

The east wall retains old, perhaps original, plaster. There is a pronounced buckle near the northern corner of the fireplace molding, caused by settling over time. This should be consolidated with an acrylic adhesive and drawn back to the substrate before collapse of the area ensues. A large crack is visible in the plaster above the south corner to the door at the north end of the wall. Having been filled with many

generations of paint, the crack appears stable and is only of cosmetic concern.

The north wall appears to retain old, if not eighteenth-century, plaster. It is in generally stable condition with evidence of minor repairs over time.

The west wall is covered in Masonite panels that serve as a bulletin board. The underlying conditions are unknown. It is also unknown whether a window was ever located on the west wall of this space. If there were, it would have been removed c. 1770 when the ell was added to the west elevation of the building.

The ceiling in the room retains old, perhaps original plaster. It exhibits many cracks, thick accumulations of paint, and evidence of repairs. The repairs are generally stable and require only cosmetic repair with a gypsum filler or taping compound. However, there is a significant sag in the plaster surrounding the ceiling vent toward the north end of the room. The plaster has detached from the lath, requiring additional screws to hold the vent in place. Paint has flaked away in some areas because of the plaster deflection. This area should be consolidated with an acrylic plaster adhesive to stabilize the area before it collapses.

The floor is covered with the same commercial carpeting that blankets the entire second floor of the building. Underlying conditions are unknown, but

here again, waviness to the floor suggests old, wide planks are present underneath.

## **ROOM 205 KITCHENETTE**

This space was probably built as a hall closet in concert with work completed in the early twentieth century. Today it has been retrofitted with kitchenette features. Space was taken from the northern end of Room 203 to create this room. Today the only visible eighteenth-century features are the girt and post casings in the northwest corner, originally visible in the northwestern corner of Room 203.

There is a small pass-through window, now closed off, that once led to Room 210. It is probably an early twentieth-century feature.

The ceiling is early twentieth-century gypsum board with many years of crusty paint build-up. The walls are all modern drywall. The flat, undecorated baseboards and door trims date to the late twentieth century. The floor consists of one-piece linoleum or vinyl. A short step up from 200c suggests this was installed over earlier layers of flooring.

## **ROOM 206 LAVATORY**

Room 206 is a modern lavatory. This space occupies an area that was probably the northeast corner of Room 202 in its original configuration. Similar to the history of rooms 105 and 106, this space was probably created in the late nineteenth

or early twentieth century and may have related to a dumbwaiter feature that is now missing. The walls and ceiling are modern drywall in excellent condition. The floor is a one-piece vinyl or linoleum. Underlying conditions are unknown. All of the woodwork, including the door, consist of modern commercial items.

## **ROOM 207 NORTH FRONT HALL PASSAGE**

The front hall passage on the north side of the building, this space remains essentially unaltered from the time of construction, with only the addition of wooden bookshelves on the south wall. The north wall exhibits original girt and plate casings and original ovolo-molded window jambs that match those in 200a, 201, and 204. Both sashes in this space are first-generation material. The trims to the doors leading to rooms 201 and 204 exhibit beaded and jack-mitered flat trims and are the same in character as the eastern-facing side of the door communicating between 200b and 200c, indicating all of this work was done at the same time, in the first generation of the building's history. The frame to the door leading to Room 201 exhibits an additional ogee cap molding on the top and southern sides that appears to be original work. It is unclear whether the door frame leading to Room 204 originally had a similar detail.

The two small shelves on the north wall, and brackets for other, now missing shelves

elsewhere, are later features dating to the twentieth century.

The east, west and north walls retain strips of narrow boards embedded in the plaster. These probably had wooden pegs or nails attached to them originally for hanging things.

The wall and ceiling plaster throughout the space appears to be old or original and shows a long history of repairs. There are several pronounced cracks above the door leading to Room 204, but they are stable and require cosmetic repair only.

The floor is covered with commercial carpeting. Underlying conditions were not accessible for study.

A potentially serious condition was noted in this space, where the tie beam connects to the front girt on the north wall. Here, evidence of long-term water infiltration has caused serious decay and separation in the joint.



**Figure 40: Front girt plate and girt intersection showing a spread-open joint and wood decay related to water infiltration.**

This important structural joint should be monitored for continued spreading with the installation of fixed measuring devices (tell-tales) and watched for a full year. The gutter and roof situation should be inspected more closely outside to ensure that water isn't actively back-draining into this area. The area of concern on the inside coincides with the location of a gutter downspout and a soldered seam in the gutter. There are drip stains on the exterior crown molding between these two details. This suggests that the gutter may have a defect such as a leaky seam, or that the downspout is clogged and not working properly. This situation should be investigated and any defects in gutter joints, downspout or gutter pitch corrected and maintained.

This appears to be a long-term problem. A piece of federal-era cove-and-astragal molding was installed along the joint between the front plate and the ceiling plaster to cover a gap that had opened up in the past. It is unclear whether this molding was installed in the federal period or it was salvaged from elsewhere in the building and installed here later. If this joint continues to move or spread open over time, structural reinforcement will be necessary. This problem is similar in nature to the tie beam joint in the chimney closet in

Room 203.

## Room 208

This space was created in the late nineteenth century, when the ell was reduced in size and renovated. Access was provided to the second floor by a new hallway (200c) leading into the ell garret via a new doorway. As mentioned earlier, the ell garret was probably not accessible from the main house before c. 1880, most likely having had its own staircase located in the part of the ell that was removed in the 1880s. It is also unclear if the ell garret was finished off at all before the 1880s renovation.

Room 208 was created when partitions were installed in the ell in the 1880s to create three rooms. The first was later divided into what are now rooms 207 and 200d, and the remaining two are rooms 208 and 209.

The door leading into the space is related in design and date to the door leading to Room 204 from 200c, suggesting a common date of construction. However, the door leading to Room 208 exhibits only the exposed edges to the door jamb boards, and is not further finished with trims of any kind.

The interior of the space was renovated in recent times with modern drywall walls and ceiling so the space could be used as storage. There are currently no visible historic features. The floor is covered with commercial carpeting. Underlying conditions are unknown.

## **Room 209**

The west ell garret chamber, this space took shape in the late nineteenth century, most likely in concert with removal of the western half of the ell. Partitions were installed to create three rooms in the ell garret, of which 209 is the largest, and the only one that originally had windows. The two windows on the west wall are large, six-over-six examples with slender, Greek Revival-style muntins. They are finished on the inside with plain, undecorated wooden board trims that appear to be original. The doorway leading to 200d contains a mid-nineteenth-century door perhaps recycled from elsewhere in the building and cut off at an angle to conform to the sloping ceiling. It features relatively recent, plain wooden trims. The baseboards circumscribing the rooms are original to the late nineteenth-century renovation of

the space and consist of wide, plain boards with thick paint build-up.

The board-and-batten door in the south wall, leading to a closet under the eaves, dates to the late nineteenth-century renovations. It is constructed of beaded, tongue-and-groove boards reinforced with horizontal battens installed with mature cut nails. It retains its original flat, plain trim boards. The simple cross-garnet hinges may be original features, as no prior evidence of hinges was noted.

All four walls and the ceiling retain original, late-nineteenth-century plaster with thick paint buildup. There is evidence of minor cracking throughout, cosmetic in nature and requiring only simple repair. In some areas the paint build-up has become too thick to perform correctly and is beginning to crack and detach. The rough surface of all wall and ceiling surfaces suggests this has been an ongoing problem. Proper mitigation of this problem would require complete paint removal to bare substrate and starting over with high-performance paints. Alternatively, failing areas can be scraped away and patched with fresh paint on an as-needed basis.



**Figure 41: Paint failure in Room 209 related to poor adhesion over underlying calcimine.**

The floor is covered with commercial carpeting. A view of the flooring in the knee wall closet in the south wall suggests that the wide, random-width pine plank flooring in this space passes beneath and is intact below the commercial carpeting in the main space. It is fastened with mature cut nails and exhibits traces of yellow ocher paint.

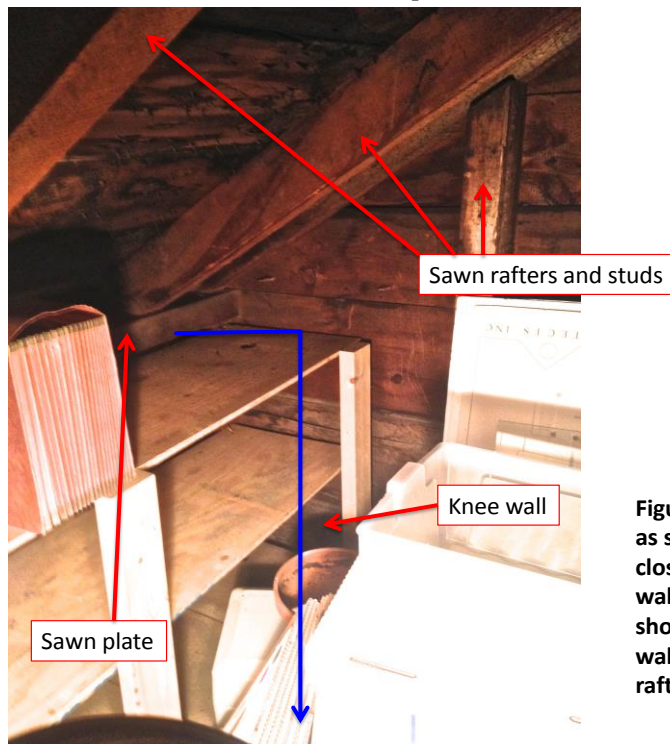
## **ROOM 210 LAVATORY**

Room 210 is a modern lavatory. This space occupies the southeast corner of the second floor of the ell. It was created by adding a partition separating it from 200d, and raising a portion of the south slope of the ell roof to create headroom. This space exhibits no historic features. The walls and ceiling are modern drywall in excellent condition. The floor is a one-piece vinyl or linoleum. Underlying conditions are unknown. All of the woodwork, including the door, consists of modern, recent machine-run, factory items.

## NOTES ON THE HISTORY OF THE ELL

The ell is depicted in the earliest photographs of the building, as well as the Doolittle engraving from 1776. These depict a structure much longer than it currently is, with a lower roof line and an interior chimney. Past scholars have thought that this ell was entirely removed in the 1880s and replaced with the current, smaller ell. However, our study revealed a different sequence. The current first-floor rooms of the ell (including 100f, 108 and 109) retain original eighteenth-century features, indicating that a substantial amount of the eighteenth-century ell survives. Comparison of the Doolittle engraving with surviving physical evidence and information in pre-1880 photographs indicates the ell as depicted in 1776 was the same length as the existing ell, and was probably nearly doubled in length as part of the c. 1815 renovations to the building. Then, later in the nineteenth century, only the western, or newer, half of the ell was demolished, including the portion with the chimney, reducing the ell to its original footprint. The earlier, presumably stone foundation above grade was replaced with brick.

The knee wall closet in the south wall provides important information about the construction history of the ell. When the western half of the ell was removed in the 1880s, the original roof framing was removed as well. It was replaced with a roofline slightly higher than the original, which included construction of a knee wall added on top of the eighteenth-century plate, raising the eave line by about 32". It was framed with sash-sawn pine studs and plate. A system of common rafters made from sash-sawn pine were installed on roughly 24" centers, their feet nailed to the plate with mature cut nails. The exterior was sheathed with horizontal pine boards.



**Figure 42:** Ell framing, as seen from the closet in the south wall of Room 209 showing added knee wall and replacement rafters.

## THIRD FLOOR

The third floor may not have been finished off as living space until the early nineteenth century, when the current stairs ascending from 200b were built. It is currently used as storage space.

### 300A

The chimney parging and the plaster on the east wall are old. The coping and nosing on the north and west walls suggest an open stairwell that opened into a large space that was later divided into 300b and 305 with a wall added in the early twentieth century, constructed of modern dimensional framing lumber and finished with drywall. A continuous dado passes behind the later partition and doorframe on the south walls of these rooms, showing they were once a single space.



**Figure 43: Continuous dado on south wall of 300a, passing behind a later wall partition, showing that 300b and 305 were originally a single space.**

### 300B

This space was originally part of an open stairwell. A three-board railing is still in place behind a recent plywood wall. The door has red basecoat paint and grained finish. It was relocated to this spot from elsewhere. The floor was originally fastened with rose-head nails. Sometime in the twentieth century, it was pulled up and refastened with big, wire-drawn nails.

The attic scuttle looks like it was finished off in the early nineteenth century. The ledger boards are secured with cut nails. The western ledger board has an earlier bead and generally looks older than the other(s). Perhaps these are repairs done in the early nineteenth century to an earlier feature. The plaster ceiling and the west wall consist of nineteenth century gypsum material. The south wall is finished with much older plaster installed over accordion lath.

### 300c

This hallway was created in the early twentieth century when a larger room also including Room 302 was divided into three spaces. The north plaster wall and the baseboard are early nineteenth-century; they pass behind the door frame added at the east end. The door in that frame is an early-nineteenth-century, four-panel example with raised panels and plain stiles and rails.

The ceiling plaster has two pronounced bulges, showing detachment from the lath and threatening imminent collapse. It requires reattachment with injected acrylic adhesive.



**Figure 44: Failing ceiling plaster in 300c requires stabilization.**

## ROOM 301

This has been a separate chamber since at least the early nineteenth century. The first finishes date from approximately 1815. Accordion lath secured with cut nails underlies the plaster throughout. The door trim has the same molding profiles as the dado board on the common south wall in 300b and 305. The door is a raised, four-panel example with plain stiles and rails, and is hung on early forged hinges with a mix of cut and forged nails. The hinges were salvaged from elsewhere. The floor was face-nailed with T-head, forged nails. The six-over-six sashes in the dormer windows are very early, perhaps first-generation. No other dormer sashes are

this early. The purlin post has its original, hand-planed casing.

There is no evidence of any dormer on the north roof slope, so the two dormers pictured in Amos Doolittle’s 1775 engraving may be inaccurate. The roof framing has been augmented with sister rafters, many additional purlins, all late nineteenth- or early twentieth-century work. Many roof boards have been replaced with machine-planed stock, perhaps at the turn of the twentieth century.

There is major plaster failure on the dormer cheeks, the west wall, the north ceiling and slope, and the knee wall. These require stabilization with acrylic adhesive.



**Figure 45: Ceiling plaster in Room 301 exhibits extensive collapse.**



**Figure 46: Surviving areas warrant immediate consolidation. Bulging plaster in dormer cheeks signals structural settling.**

## Room 302

The space now encompassing 302, 300c, and 303 were all one large room when finished for the first time in the early nineteenth century. Partitions were installed to divide them in the early twentieth century. They were all built with modern two-by-four studs. The purlin post has original, hand-planed casings.

The flooring consists of wide planks installed with T-head, forged nails. Accordion lath with mature cut nails underlies plaster in the room.

Window sashes in the dormer are federal-era, showing the narrowest muntin profile in the house. The plain, unmolded baseboard circumscribing the room is original.

There is paint failure throughout the room. Lath and plaster have detached on the ceiling slope next to the south dormer cheek. The lath reattachment needs to be reattached with nails or screws, and the plaster secured to it with acrylic adhesive. The plaster is otherwise sound.

## Room 303

This room was added in the early twentieth century as a bathroom. Remains of the tank and pipe from an early gravity water closet survive on the east wall.



**Figure 47: The east wall of Room 303 retains elements of an early twentieth-century water closet.**

Framing and wall finishes were installed over the existing early nineteenth-century wall. The new walls were finished in a hard, brittle drywall. There are two areas of

concern in the ceiling plaster. The original, early nineteenth-century plaster was installed over accordion lath with cut nails. One area has collapsed and the material missing. Surrounding material should be stabilized with acrylic adhesive to curtail further collapse. Another area near the northeast corner is sagging badly and requires injection with acrylic adhesive to reattach it before it collapses.

The flooring is original, eighteenth-century boards secured with T-head nails. Holes have been cut through it for mechanical systems.

## Room 304

This space was finished in the early nineteenth century. It has eighteenth-century flooring with forged T-head nails. The ogee-molded baseboard relates to the inner stringer of the c. 1815 staircase. The plaster is original. It is basically in sound condition, except for one area where there is a significant bulge to the north of the purlin post, related to a long-term roof leak. It is in imminent danger of collapse. Decay in the original purlin post casing indicates that this leak has a long history.



**Figure 48: The ceiling and purlin post in Room 304 exhibit a pronounced sag related to past water leaks. The wood and plaster in this area are in danger of collapse.**

The ledger board on the ceiling should be gently pushed back into position with wooden levers from the floor, and re-secured with stainless steel trim screws; and the plaster should be reattached with acrylic adhesive. The dormer has a fixed, single twelve-pane sash that is modern and inappropriate. The door is a four-panel example like others on the third floor. It is hung on cast-iron, three-knuckle hinges rather than salvaged earlier hinges.

## Room 305

There was originally a single, open space that included the current 300a and 300b. The wall partition was built to create an enclosed stairwell in the early twentieth century. The walls are framed with modern, rough-sawn two-by-fours and finished in drywall. This work was probably done at the same time Room 302 was created. A dado with a molded chair rail cap and

baseboard passes along the south wall of 300b and 305, behind the added partition. There are remains of a similar dado on the north side of chimney. The low knee wall consists of a single wooden dado board on the west and north walls, but without a chair rail cap. It is fastened with hand-forged nails and has a nice, early whitewash finish. There is important early whitewash on the north face of the chimney that probably pre-dates the c. 1815 renovations to the third floor.

The remaining plaster on the south, west, and north walls and the ceiling is from the early nineteenth century and was installed over accordion lath with cut nails. There is major failure of the plaster on the slope and knee wall of the west wall to the south of the dormer. This also may have been deliberately cut away to install mechanical systems. There is a crude partial repair with drywall. An area of collapse in the flat portion of the ceiling was repaired crudely with a drywall patch.

Visible roof framing includes almost no original elements except for a few, presumably early, vertical sheathing boards. These were overlaid in the twentieth century with horizontal, machine-planed sheathing. A principal rafter was replaced with a crude laminated rafter made from dimensional lumber in the mid twentieth century. The purlins, including the south dormer rafter, are turn-of-the-twentieth-century, mill-sawn wood.

The plaster on the dormer cheek was replaced with machine-planed horizontal boards installed with wire drawn nails in the twentieth century.

Both the added east wall of 305 and the added wall forming 300c/303 have board-and-batten doors made from machine-run, v-groove wainscoting. It is early-to-mid twentieth-century in character, and identical in both places, suggesting it was all done at the same time.

The purlin post casing is original, early nineteenth-century. It consists of plain, hand-planed boards like all the rest.

Note: the plain, unmolded trims with jack-mitered joints seen leading out of 300b to 301, 300c (originally 302) and 304 are all the same, indicating that all of the main rooms were finished in one construction episode.

## **UPPER ATTIC**

It appears that from 1747 until about 1815, the third floor and upper attic were open as a huge, unfinished space. In the early nineteenth century, a ceiling was created by installing long, relatively thin planks that spanned the purlin plates. The wall partitions were made from thick planks widely spaced and nailed to the thin ceiling joists. The ceiling was then fitted with accordion lath attached with cut nails and plastered.

There is an inconsistency in the purlin layout on the lower slope of the south roof, possibly suggesting an opening for a second, original chimney that would have been removed in the 1815 construction.

There is much original framing, including the purlin plates, sash-sawn plank joists, and hewn rafters for the upper hip radiating from the top of the king post. There have been many repairs. The original west purlin plate is rotted through and cracked across the grain. It was reinforced with a sister timber attached to it with large lag bolts in the early twentieth century. A second post was added next to the original southwest purlin post to add support to the purlin plate. The northwest joints between the purlin plates and the purlin posts have been reinforced with steel brackets installed with lag bolts. There is a recent repair to the roof framing with modern dimensional lumber and new horizontal sheathing directly above the access scuttle. The entire front (north) purlin plate was replaced in the twentieth century with a laminated beam. The northeast purlin post is also reinforced with a sister post and steel brackets.



**Figure 49: View of upper (unfinished) attic showing construction details.**

## **BASEMENT**

The basement of the building today is a complex space reflecting changes from the eighteenth through the twentieth century's. Nearly all of the original framing is intact, though there were alterations at the south end of the main building when two chimney stacks were added around 1815. It appears that a second original interior chimney was removed at this time between rooms 102 and 103, but the basement framing here is covered by wall and ceiling surfaces added in the twentieth century.

## **FRAMING**

The current ell deck framing is probably eighteenth-century, and represents about half of the original footprint of the ell. Whatever it was, the framing was for the now-missing western half was lost in the 1880s, when the western half of the ell was removed.

The basement seems to have remained largely in its original state until the early twentieth century. Then, many joists were reinforced with additional timbers, and several basement rooms were partitioned off from the main space. In the northeast corner, a room was constructed with concrete materials. The west wall of this room supports the main carrying timber below Room 101. Another masonry partition was built along the west carrying timber below Room 102, and a wood-framed east-west partition put up abutting it, thus creating a room below Room 103. This had been a kitchen room with the addition of a cooking fireplace with bake oven around 1810 below the chimney added here, but no evidence is visible to indicate how this space may have been originally separated from the main cellar space. Also, a small room was added at the north end of the main cellar space below Room 109. The east wall consists of a brick bearing wall that may be the original west wall to the main building foundation, exposed on the outside before the construction of the ell later in the eighteenth century. To create this small room in the early twentieth century, south and west partitions were made from dimensional lumber.

The basement below the main building, including first-floor deck framing, indicates several things. First, as noted above, there is some evidence in the frame of a second chimney, positioned south of the current main stack, which fed rooms 102/ 202 and 103/203. Visible allowances in carrying

timbers suggest it was slightly narrower than the main stack. Originally, the building featured a large open cellar that seems to have had two large footings for chimney stacks. The cellar was square in shape, conforming to the first-generation building above.

After initial construction, perhaps around 1770, the one-story ell was added on the west end of the building. It appears that a cellar was dug below this as well, and the west wall of the original foundation cut through to permit access. The ell was extended again probably around 1815 but all evidence of this expansion other than its depiction in a nineteenth-century photograph has been lost. Then in the 1880s, when the lot size was adjusted, the western half of the ell was removed and the ell reduced to its current footprint. The foundation on the north and west walls was also reduced, and capped with brick.

The first-floor decking consists of hewn main carrying timbers and mill-sawn joists. It all appears to be white pine. Currently, most of it at the eastern half of the building has whitewash and white paint coverings.

The layout of the deck frame consists of a main carrying timber spanning the entire east-west axis of the main house at the center. Summer beams support the mid-spans of all four of the main floor rooms, but only in the cases of rooms 102 and 104 are they more or less centered on the rooms above. In Room 101 the summer is offset, being only about 3 feet from the

chimney girt, with short joists at the west end and long joists at the east. This carrying timber is causing the current crown in the floor in Room 101, being supported by the wall forming a small room in the northeast corner of the basement. This indicates the building has settled appreciably since then. This beam has been encased in thick boards to reinforce it, probably in the early twentieth century. All of the joists have been reinforced with sister joists on both sides. Under Room 101 these are dimensional two-by-fours and are painted white like the rest of the framing, this work perhaps done in the early twentieth century.

The summer beam is centered below Room 202, and the framing layout here suggests the original size of Room 102 above; originally this space was larger than it is today. All of these joists have been supported with modern, dimensional-lumber sisters. These are newer than below 101, being modern two-by-eights and probably dating to the mid twentieth century.

It appears that the main hewn timber positioned above the current early twentieth-century masonry wall running north-south below Room 102 is the original 1747 chimney girt to a second main chimney taken down in the c. 1810 renovations. At the south end of the cellar area below Room 102, the joist closest to the foundation was cut away to permit installation of the base to the current south chimney around 1810. However, a lavatory

installed in the early twentieth century blocks much information from view. The framing below 100b, the main stair hall, exhibits a major, hewn carrying timber running north-south that was cut off to facilitate installation of the basement stairs. Many factors suggest this was an original treatment. The basement door leading from Room 104 is original, and the opening in the floor decking is as well. We do not know what supported the cut off beam before the current steel lolly column, probably a wooden post.

The framing below Room 103 is almost completely concealed from view today. There are two main carrying timbers covered by beaded casings made from salvaged antique lumber. They appear to cover original hewn main timbers. The easternmost may be the west chimney girt to the original second chimney. The westernmost is the summer, or mid-span carrying timber to Room 103 in its original form.

The framing below Room 104 is largely undisturbed from the time of construction, exhibiting sawn joists and hewn main carrying timber, is all original but the joists have been supported by additional sister joists in the twentieth century.

The basement below Room 109, or the ell, retains many original features. This may be the eighteenth century frame that was reduced in footprint with the removal of its western half in the 1880s. The deck framing consists of a main summer beam running

from north to south under the center of the building, with log sleeper joists extending outward from east to west. Each of the joists has been reinforced with sister timbers on either side in the twentieth century.

There are several architectural fragments from the eighteenth century in the basement that warrant care. Some are attached to the building, others not. All relate to early features of the building above.

1. Exterior door on the west elevation below Room 103: This elaborately paneled door appears to date to the earliest construction, and has been relocated here from somewhere else in the building. We believe it may have come from the north or east elevation, and was moved here around 1815. (See Figure 11.)
2. Door below 100b and 103: This door is paneled on the front and sheathed on the back, and is similar to the exterior door on the east elevation. It has been enlarged and repaired, but it was originally an exterior door somewhere in the original building. Its design suggests 1770s rather than 1740s.
3. There is a paneled door leading to a storage area below Room 109. It is currently installed upside down, and has marks from HL hinges. This door came from somewhere in the main house and retains a long paint history.
4. There is a partial wall of fielded paneling in the basement below Room 109 along the south wall. This fragment may have come from 100c, and may be a portion of fireplace wall paneling from the 1747 version of either Room 102 or 103. The backs of the panels exhibit soot staining toward the top, suggesting their close proximity to a fireplace.
5. There is a built-in bench on the east side of the fireplace below Room 103. It is made from 1747-era dado boards and chair rail. Its paint history may determine where the boards came from in the building.
6. There is a cupboard in the southwest corner of the basement, below Room 103, that contains a fielded panel door and other old boards that were clearly removed from somewhere in the building and re-worked into their current configuration. These elements should be preserved in any future renovations.
7. On the east wall of the room below Room 103 there is a small cupboard made from a paneled door and other salvaged boards. Given the molding profiles, it is unclear how they relate to the building above.
8. There is a 6-panel door at the west end of the room below Room 103, communicating with the basement room below Room 109. It is similar in character to the door in the north wall of Room 108 communicating with Room 102. This may be a survivor from a little-known period

in the building's history in the early nineteenth century.

## MASONRY

The foundation is described further in the "Foundation and Foundation Details" section above. Viewed from within, the masonry of the main cellar consists of rubble stone outer bearing walls mostly capped with brick above grade. Brick inner walls appear to add support to the first floor deck and divide the basement into several rooms. The southeast chimney is supported on brick piers and the southwest chimney contains a basement fireplace with a bake oven. The north, or main chimney exhibits a poured concrete stabilizing structure around the original mass. We believe the encapsulated original mass is of brick.

While the interior masonry is in generally sound condition, several areas of localized deterioration were found. All of it is moisture-related, and can be slowed down by reducing moisture levels in the basement. This can be accomplished by increasing ventilation (making the cellar windows operable and fitting them with screens and or fans in the summer months), or installing a dehumidification system.

The interior brick walls are in predominantly stable condition. Located below the west wall of Room 102 and the west wall of Room 104, these features may have been added in concert with the

construction of the two south chimney stacks around 1815.

The wall below Room 104 is in sound, stable condition. However, the wall below Room 102 exhibits extensive rising damp toward the bottom, south end. The mortar and many bricks have deteriorated due to the migration of soluble salts that cause the masonry to fail in a process known as spalling. This situation does not appear to be a structural problem at this point. Rising damp is not a curable or reversible condition.

Other evidence of unacceptably high moisture is evident in the basement room below Room 103. Here, late twentieth-century drywall finishes exhibit failure due to absorption of water from the ground. This material should be removed. Chronically damp drywall generally promotes growth of hazardous molds.



**Figure 50: Failing drywall in the basement below Room 103, the result of high moisture levels, promotes mold growth.**

## NORTH CHIMNEY BASE

The north chimney base, which supports the main center chimney, has settled over time. This may have taken place before the 1930s, resulting in the installation of poured concrete in the basement to stabilize the mass. The fireplace hearths in rooms 101 and 104 exhibit dramatic downward/inward deflection suggesting movement in the past. Also, a crack in the brick masonry visible on the south face of the mass as seen from the stairs leading from Room 104 to the basement, suggests movement. We suggest monitoring it with “tell-tales” for a year to determine if this is dormant or active.



**Figure 51: Settling crack in main chimney mass masonry as seen from the basement stairwell leading from Room 104.**

We observed spalling and delamination of concrete at the base of the main chimney. This can be seen predominantly along the

east and west sides and near the corners. This does not appear to be an active problem, nor does it appear to be the result of settling. Rather, it seems to be superficial, nonstructural and the result of moisture wicking up from the ground. It may be a sign of developing rising damp in the concrete, as suggested by a clear horizontal tide line above which paint on the concrete is still intact. This line indicates the level to which permanent moisture has risen. This situation should be monitored with measuring devices to determine if the problem is active.



**Figure 52: concrete delamination at the base of the main chimney suggests possible beginnings of rising damp.**

## SOUTHWEST CHIMNEY AND FIREPLACE

The southwest chimney exhibits a cooking fireplace with bake oven in the basement. This feature may be related to use of the building as a bakery in the early nineteenth

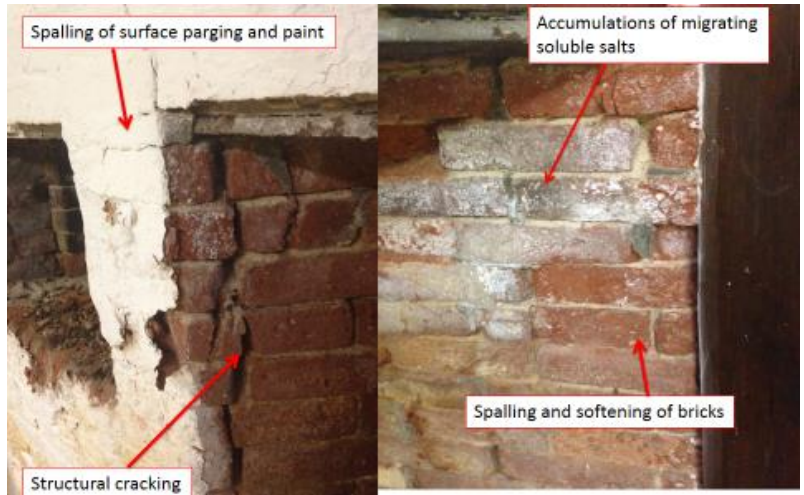
century. This fireplace exhibits extensive evidence of rising damp. Evidence of flue deterioration is most likely related to conditions prior to recent reconstruction of the chimney stack above the roof line.

The firebox exhibits spalled bricks, softened by moisture wicking up from the ground, and possibly related to drainage issues from the nearby exterior door in the west wall. The whitish residue created by soluble salts migrating through the bricks further suggests this. Monitoring of the gutters and drain near the west basement entrance and increased ventilation will help mitigate worsening of this problem.

Structural cracking in the firebox, particularly toward the forward edge of the west jamb, suggests settling issues and perhaps failure of bricks softened by rising damp conditions. This situation should be monitored with measuring devices for evidence of future movement.



**Figure 53: Accumulations of mortar, brick and creosote debris in the bake oven suggest interior flue deterioration.**



**Figure 54: Left: Structural cracking suggests loss of compressive strength in the bricks. Right: Spalling, softened bricks and the appearance of soluble salts in the firebox suggest possible rising damp concerns.**

The bake oven associated with the fireplace exhibited extensive mortar dust and brick and creosote accumulations at the time of this study. This is related to past interior deterioration of the flue. It appears that this problem was mitigated with recent reconstruction of the chimney above the roofline. However, we recommend cleaning out all debris in the bake oven and monitoring this situation. Any further accumulations of debris will signal a possible chronic problem.

## ASBESTOS ABATEMENT

The cold storage room under Room 101 exhibits interior and exterior asbestos insulation panels. While not the most hazardous form of asbestos, being in the form of rigid panels rather than friable fiber, they should eventually be removed from the building. This should only be undertaken by a licensed asbestos abatement contractor.



**Figure 55: The small cold storage room below Room 101 is encased in asbestos panels that require abatement.**

## Section III. MECHANICAL INSPECTION

### SUMMARY

The Wright Tavern is a historic property of national significance located within the historic common of the town of Concord, Massachusetts. While the structure has undergone numerous modifications and expansions over its more than 260-year history, the core of the building is a 1747 timber framed building of tremendous importance both for its associative and contextual connection to the American Revolution. The mechanical systems within the building stretch throughout the twentieth century. The observations and recommendations in this report are itemized by system, (Electrical, Plumbing, etc.). Generally speaking, the observations and recommendations per system begin on the exterior, and then move through the building from the basement up to the attic. All directions given in the mechanical report place the reader just outside the front of the building, with Lexington Street at their back.

The observations and recommendations made here are preceded by a Priority Timeline. The timeline is broken down into *Immediate* (should be addressed within the next 90 days), *Short Term* (within the next 12 months) and *Long Term* (within the next 24-36 months). The fully itemized observations and recommendations are indexed in the timeline by their assigned number.

### Immediate:

- Active knob-and-tube distribution wiring. See items 13, 14, 25 and 31 under Electrical.
- Bare-Ended and/or Abandoned Wiring, (both active and non-active). See item 29 under Electrical.
- Grounded receptacle on ungrounded wiring. See item 34 under Electrical.
- Insufficient ground fault protecting in distribution wiring. See item 45 under Electrical.
- Unconventional electrical configuration or wiring. See items 19, 22, 24, 38 and 43 under Electrical.
- Main breaker missing. See item 40 under Electrical.
- Overcrowding and/or double-tapping. See items 18, 20, 21 and 41.
- Inappropriate venting configuration. See item 49 under Heating.
- Potential for water leaks in the building. See items 60, 63, 64 and 66 under Plumbing.

### Short Term:

- Failed insulation on air conditioning condenser units. See item 6 under Air Conditioning.
- Damage and deterioration to air conditioning condenser unit. See item 7 under Air Conditioning.

- Improper installation of electrical device. See items 9, 10, 26 and 36 under Electrical.
- Missing or inappropriate hardware. See items 16, 17 and 42.
- Junction box improperly installed or defective. See items 27, 28, 30, 35, 37, 44 under Electrical.
- Nonresponsive outlet. See item 12 under Electrical.
- Rusted components. See item 50 under Heating.

### **Long Term:**

- Anticipated life span for ductless system. See item 8 under Air Conditioning.
- Loose outlet. See item 32 under Electrical.
- Panels not labeled. See items 15, 23 and 39 under Electrical.
- Unprotected wiring. See item 33 under Electrical.
- Lack of proper heat supply. See item 56 under Heating.
- Fully depreciated water heater. See item 62 under Plumbing.
- Loose fixture. See items 65 and 67 under Plumbing.
- Inappropriate venting configuration. See item 68 under Plumbing.

## **OBSERVATIONS AND RECOMMENDATIONS**

### **Air Conditioning:**

1. Due to extremely low outdoor temperatures at the time of this report we were unable to test the functionality of any of the air conditioning systems in the building. It is not recommended to activate air conditioning systems in cold weather as the compressors for the systems, located in the condenser units on the outside of the building, are designed and manufactured to process gases. In cold weather these gases turn to liquid. Forcing a liquid through the compressor can severely damage the unit.
2. There are a variety of split systems in the building (both duct and ductless) that provide living spaces on the first and second floor of the building with conditioned air during warmer months. There is no air conditioning provided to the third floor of the building.
3. There are two traditional split-systems that provide conditioned air to the second floor living spaces through conventional duct work. These systems consist of the two forced-air handlers located on the third floor and their corresponding condensers on the left side exterior of the building. The condensers are both manufactured by York. The

rear condenser (Model #: TCGD18S21S1HA Serial #: W0N7536974MM) works in unison with the air-handler at the rear of the third floor. This condenser is a three-ton system and was manufactured in 2007. The date of manufacture and tonnage capacity for the unit closest to the road was not available (no data plate was observed on the unit) but this condenser appears to be older than the one to the rear. This front condenser functions with the air-handler at the front of the third floor. Both units are governed by the two digital thermostats located at the front and rear of the second floor.

4. In addition to these traditional split systems, there are two ductless split-systems installed in the building, (1<sup>st</sup>: 2 and 5). These systems provide limited and targeted conditioned air to two rooms on the first floor: (1) the rear function room (Manufactured by Sanyo in 2002. Model #: KS1822; Serial #: 0107324); and the far-right side office (Manufactured by Sanyo in 2006. Model #: KS1211W; Serial #: 0144362). These are wall-mounted, independent systems that do not employ duct work. Thermostatic controls for these units are through remote controls fastened to the wall-mounted units. (Note: serial and model numbers for

three of the four condenser units - both the ductless condensers and the front condenser on the left side of the building - were unavailable because their data plates have been painted over.)

5. The condenser for the first floor, rear function room is located on the left elevation of the exterior, between the two condensers for the third floor air-handlers. The condenser for the first floor, far-right office space is located on the right side of the rear elevation of the exterior.
6. The insulation sleeve for all four of the condenser units on the exterior of the dwelling are in a state of failure and no longer performing the function for which they were intended (Ext: 14, 20, 23 and 25). This will result in decreased efficiencies for the systems as well as shorten their anticipated life expectancy. These insulation sleeves need to be replaced and maintained to good condition, (they should be replaced every three years at minimum).
7. There is a relatively substantial amount of damage to the cooling fins on the York condenser unit nearest the street on the left side of the building (Ext: 26 and 27). This condenser services the front air-handler on the third floor. The fins

are damaged on both the front and rear sides of the unit. This damage has a significant impact on the device's ability to function properly and needs to be repaired or replaced. While the coil for the condenser could possibly be replaced, this typically represents an expense that nears the cost of replacing the entire condenser unit. A qualified contractor should be consulted.

8. The typical life expectancy for ductless, split-system air condition units is generally around 15 years when properly maintained. While the system on the far right side of the first floor is only seven years old, the system in the rear function room on the first floor is nearing 12 years of service. Repairs and/or replacement should be anticipated for this unit in the relatively near future.

### **Electrical:**

9. There is an exterior light fixture mounted at the far-right side entryway on the rear elevation. This fixture is not properly secured to the dwelling, leaving live wires exposed to the elements. This fixture needs to be firmly secured, (Ext: 12).
10. There is an exterior light fixture mounted on the right side elevation of the first floor, rear addition that is not properly secured to the dwelling. This fixture needs to be firmly secured, (Ext: 16).
11. Electrical service is provided to the building from underground, at the rear, right corner of the basement and is grounded to the incoming copper water line.
12. The exterior outlet on the front elevation of the building did not respond to testing. This device should be further evaluated and repaired by a licensed electrician, (Ext: 11).
13. There is knob-and-tube distribution wiring throughout the basement of the Wright Tavern. Much of this wiring is carrying active current. This represents a substantial increase for the potential of electric short or shock and is a discernible fire hazard for the building (Basement: 14 and 21).
14. There is an open splice in the knob-and-tube distribution wiring on the left side of the basement, near the discontinued stair to the first floor. There is evidence of overheating in some of this wiring and there have also been amateurish repairs to the wires in this area. As stated elsewhere in this report, the knob-and-tube wiring in the building is severely outdated and in some areas in a state of failure, creating a serious risk in the building's

- electrical system for short, shock, and/or fire. The distribution system needs to be comprehensively evaluated by a licensed electrician, (Bas: 31).
15. The sub panel on the left side of the basement is not properly labeled. Electrical panels within a building should be properly labeled for both increased occupant safety and so that future work on the electrical systems can be correctly informed. This panel needs to be properly labeled, (Bas: 32).
  16. The cover plate for the left side sub panel in the basement is attached with inappropriate hardware. Sharp-pointed, sheet metal screws are currently employed. These fasteners can pierce a wire inside the panel. They should be exchanged with blunt-ended panel screws.
  17. The cover plate for the main distribution panel on the rear wall of the basement is missing several mounting screws. This cover needs to be fully secured.
  18. The main distribution panel in the basement is overcrowded. In addition, the breakers employed in the main panel are very early breakers, indicating that the panel and materials are relatively old (30-40+ years). Given that the panel is overcrowded and the materials are relatively dated, it may be advisable to install a new main panel when work on the distribution wiring gets underway. Consider and discuss with a licensed electrician, (Bas 36).
  19. There is at least one spliced union in the main distribution panel in the basement. This needs to be repaired by a licensed electrician, (Bas: 37).
  20. There is at least one example of a double-tapped breaker in the building's main distribution panel in the basement. In fact, even one of the main, incoming lines for the panel has been double-tapped, (Bas: 39). Circuit breakers are intended to protect one branch of electrical service. Double taps, or placing two branches of service under the screw of one breaker, creates a hazardous condition – increasing the likelihood of faulty connections and possible electrical shorts or fire hazards. As mentioned above, the main panel is already crowded, with no available space for addition breakers. A larger, updated panel may be necessary to correct this defect in the building's electrical system, (Bas: 38).
  21. There is at least one example of double-tapping in the sub panel next to the main panel in the basement. Circuit breakers are intended to protect one branch of electrical

- service. Double taps, or placing two branches of service under the screw of one breaker, creates a hazardous condition – increasing the likelihood of faulty connections and possible electrical shorts or fire hazards. As mentioned above, the main panel is already crowded, with no available space for addition breakers. A larger, updated panel may be necessary to correct this defect in the building's electrical system, (Bas: 42).
22. The ground and neutral wires in the sub panel next to the main distribution panel in the basement are not mounted under separate bars. Typically, grounds and neutrals should only come together in the main panel of any electrical system. All other panels, (sub panels) downstream of the main should have their grounds and neutrals separated. This needs to be further evaluated by a licensed electrician, (Bas: 43).
23. The sub panel next to the main distribution panel in the basement is not properly labeled. Electrical panels within a building should be properly labeled for both increased occupant safety and so that future work on the electrical systems can be correctly informed. This panel needs to be properly labeled.
24. There are numerous loose connections in the branch wiring where they connect with the breakers in the sub panel next to the main distribution panel in the basement. These connections need to be clean and firm. There is the potential for overheating at these weak points of contact, (for example see, Bas: 46).
25. There is a rather large junction box in the rear, middle room of the basement, on the right side. This junction box appears to fuse together older and newer distribution wiring that service various portions of the building. There are numerous wires within the box that have been apparently cut and abandoned. This approach still leaves vast amounts of knob-and-tube active throughout the building's electrical distribution system. In light of this observation and the hazards already discussed within the electrical system's main and various sub panels, it is recommended that the entire electrical system in the building be thoroughly evaluated by a licensed electrician. Repairs and improvements may be extensive in terms of scope and cost. (Bas: 12).
26. There is a light fixture mounted to the ceiling in the basement, near the boiler, that is not properly secured, hanging from its distribution wiring.

- This is a shock and fire hazard in the building and needs to be repaired, (Bas: 10).
27. There is a junction box mounted to the ceiling in the basement, just above the boiler, that is missing its cover plate, leaving live wires exposed. This device needs to be properly protected.
  28. There are two junction boxes on the left side of the basement, in the center bay, that are missing their protective cover plate, leaving live wires exposed. These devices need to be properly protected, (Bas: 18 and 19).
  29. There is a cut and abandoned wire at the front of the basement, on the left side of the center chimney. This wire was live at the time of inspection. This is an active shock hazard in the building and should be placed in a junction box or properly removed by a licensed electrician, (Bas: 24).
  30. There is a ceiling mounted junction box on the left side of the basement, near the center chimney, that has a knockout missing, leaving live wires exposed. This device needs to be properly protected, (Bas: 25).
  31. There is an active, two-prong, ungrounded receptacle on the left side wall of the rear, middle room in the basement, (Bas: 15). Most likely this device is powered by knob-and-tube distribution wiring. As mentioned elsewhere, the knob-and-tube wiring as well as the associative two-prong receptacle are seriously outdated electrical components and represent an increased risk for short/shock or fire hazards in the building. The distribution wiring and receptacles should be replaced.
  32. There is a floor-mounted outlet along the rear wall of the first floor function room. This device is not properly secured to the floor. The device needs to be firmly secured, (1<sup>st</sup>: 6). (Note: once electrical repairs and improvements begin in the building, it would be advisable to relocate this receptacle or mount it flush with the floor surface. The current design creates an unnecessary trip hazard in this room.)
  33. There is a run of exposed and unprotected distribution wire in the front bathroom on the first floor. This wiring is just inside the doorway, at the floor. This distribution wiring is exposed to potential mechanical damage and should be properly protected, (1<sup>st</sup>: 8).
  34. There is a three-prong receptacle in the front hallway of the first floor,

- just near the stairwell that is not properly grounded, (1<sup>st</sup>: 11). More than likely this three-prong receptacle is connected to an ungrounded distribution line, (knob-and-tube). This arrangement creates a false sense of security for those using the receptacle as it appears grounded but is, in fact, not. It also represents a latent short, shock and/or fire hazard. This needs to be repaired.
35. There is a small junction box on the outside wall of the right side room on the rear hallway of the first floor. The exposed wires in this junction box are live. This represents a life/safety issue in the building. This device needs to be properly protected by a secured cover plate, (1<sup>st</sup>: 4).
36. The ceiling-mounted light fixture in the third floor, right side room is not properly secured, leaving live wires exposed. This device needs to be properly installed, (3<sup>rd</sup>: 1).
37. There is a junction box resting on the floor decking at the front of the center chimney on the third floor. This device needs to be properly installed and secured to the building, (3<sup>rd</sup>: 2).
38. The light fixture in the front, left room on the third floor is not properly wired. Currently the ceiling-mounted light is powered through an older, outdated light-fixture outlet nearby. This older, light-fixture outlet is not grounded and an adapter has been used to connect the grounded light fixture with the ungrounded light-fixture outlet. This is a dangerous configuration and may represent a potential fire hazard in the building.
39. The sub panel in the center of the third floor is not properly labeled. Electrical panels within a building should be properly labeled for both increased occupant safety and so that future work on the electrical systems can be correctly informed. This panel needs to be properly labeled.
40. There are a total 25-30 breakers in the sub panel on the third floor. Typically, good electrical practice requires the installation of a main breaker in a sub panel that would require more than six-throws-of-the-hand to terminate service. This panel far exceeds that limit. Currently, the only way to deactivate the branches in this sub panel would be to throw each breaker or to throw the main breaker for the building, which is three floors below, in the basement. Lack of a main breaker in the third floor is an unnecessary risk to both the building and its occupants. Consider

and discuss with a licensed electrician, (3<sup>rd</sup>: 8).

41. There is one double tapped breaker in the sub panel on the third floor. Circuit breakers are intended to protect one branch of electrical service. Double taps, or placing two branches of service under the screw of one breaker, creates a hazardous condition – increasing the likelihood of faulty connections and possible electrical shorts or fire hazards. This third floor sub panel should be further evaluated by a licensed electrician and repaired, (3<sup>rd</sup>: 10).
42. There are missing mounting screws for the third floor sub panel cover plate. These need to be installed to secure the cover panel.
43. The bottom, right breaker in the third floor sub panel appears to be over fused. This breaker is 20-amps. The wire it is protecting appears to be a 14 AWG, (American Wire Gauge). 14 gauge wire should be protected by a maximum of a 15-amp breaker. In the current configuration, In the event of an electrical irregularity in this branch of service, the 20-amp breaker is rated too high to detect it. The breaker would not trip, leaving the electrical regularity uninterrupted and active. This may represent a potential fire hazard in the building

and should be further evaluated by a licensed electrician, (3<sup>rd</sup>: 9).

44. There is a junction box resting on the attic floor decking, (Attic: 1). Junction boxes must be permanently attached and secured to avoid the potential for short or shock hazards. This needs to be repaired.
45. The Wright Tavern, in its current configuration, is under protected with regards to Ground Fault Circuit Interruption. It is generally recommended that GFCI-protected receptacles be installed in any areas that have a greater likelihood of exposure to moisture, (bathrooms, kitchens, basements, crawlspaces, attics and exterior receptacles). While the bathroom outlets in the building are properly protected, there is no GFCI-protection on the exterior outlets, and very limited protection on the basement fixtures. These improvements should be incorporated when other repairs within the building's distribution system are undertaken. Note: Installation of these outlets will only be effective once the outdated, ungrounded distribution wiring has also been replaced.

#### **Heating:**

46. Heat is provided throughout The Wright Tavern through two different distribution sources: (1)

dedicated steam radiators are located throughout the various living spaces on the first floor of the building; (2) two forced hot-air systems utilize contemporary ductwork running through the third floor to supply heat throughout the second floor living spaces. The air handlers for these systems are located in the front and rear rooms on the left side of the attic floor. Both of these distribution sources (radiators throughout the first floor and air handlers on the third floor) are fed by an oil-fired hydronic boiler, which is located in the basement of the building.

47. The boiler, located in the basement, is manufactured by Weil-McClain. This manufacturer typically utilizes a CP number wherein the date of manufacture is encoded. This CP number was not found on the boiler so the date of manufacture could not be captured. The boiler is oil-fired.
48. The boiler is equipped with six zone valves: one zone in the basement, three zones on the first, and two zones on the second floor offices. Each of these zones is controlled by thermostats, both digital and analog dials, (see below for details).
49. The boiler is vented by a galvanized steel connector that is attached to the masonry chimney. There are several vulnerable areas in the mastic material used to seal the union between this steel pipe and the masonry chimney. These vulnerable areas may allow the possibility for combustion gases to enter the basement and living spaces within the building. This should be further evaluated and repaired if necessary.
50. There is a decent amount of surface rusting on a number of the zone valves directly above the boiler in the basement, particularly the Zone 5 valve. These valves need to be further evaluated by a qualified contractor; repairs will be necessary, (Bas: 48).
51. There are two oil tanks located in the front, middle of the basement, (Bas: 4).
52. There is a small, secondary heater located on the rear wall of the right side hallway on the first floor. This kick space, fan coiler heater is connected through copper piping with the hydronic heating associated with the boiler in the basement, (1<sup>st</sup>: 1). The unit is manufactured by Turbonics, (Model # TOESTER; Serial #:43902) and tested to be in functional condition, with supply temperatures of 140+ degrees.
53. There are six thermostatic controls for heat in The Wright Tavern, four are analog dial instruments and two

are digital. Dial thermostats are located in the: (1) rear, middle room of the basement; (2) first floor, rear, left room; (3) first floor, rear room; (4) first floor, front, right side room. The two digital thermostats (5 and 6), are located at the left side front and rear of the second floor. These digital thermostats govern the forced hot-air systems supplying the second floor.

54. Testing revealed an approximate 85-degree temperature differential (150/65 degrees) at first floor hydronic heat supplies (radiators). This indicates good performance from this system.
55. Testing revealed an approximate 70-degree temperature differential (135/65 degrees) at the second floor forced hot air supplies, (furnaces). This indicates good performance from these systems.
56. There does not appear to be a dedicated heat source (neither radiators nor forced hot-air supplies) for either of the second floor bathrooms. It is generally considered a requirement of good building practice to provide a dedicated heat source to all living areas in a building. Improvement of this configuration should be considered and discussed with a qualified contractor.
57. The front air handler on the third floor is manufactured by First Co., (Model #: 30MBX-3HW; Serial #: 007 FC819625431612).
58. The rear air handler on the third floor is also manufactured by First Co., (Model #: 18MBX-3HW; Serial #: 006 FC811658394346). The date of manufacture could not be determined for either of the First Co air handlers.

**Plumbing:**

59. The incoming water line, which is copper, is located on the right side of the basement, (Basement: 2).
60. The main drain lines in the building can be found toward the left side of the basement. These lines are constructed of cast iron. There is a fair amount of surface rust on these drain lines. Cast iron piping typically rusts from the inside out. Cast iron drain lines generally have a life expectancy of around 70-80 years. Given the age of these lines – most likely original to the first generation of functional plumbing in the building, (early twentieth century), they are likely approaching the end of their useful and anticipated life. It may be prudent to replace these cast iron lines prior to failure. Consider and discuss with a qualified plumber, (Bas: 16 and 17).

61. The water heater for the building is located on the left side of the basement. It is powered by electricity. The 15-gallon heater was manufactured by A.O.Smith in 1997 and is 16 years old (Model #: ELJF15910; Serial #: MB97-0017482-S44), (Bas: 27).
62. The electric water heater in the basement is most likely nearing full depreciation. Typical life expectancy for water heaters is approximately 12 years; this device is 16 years old. In addition, there is visual evidence of rusting around the bottom of the tank. Replacement of the water heater should be anticipated in the relatively immediate future, (Bas: 29)
63. The tank for the toilet in the front bathroom on the first floor is not securely fastened to the base of the toilet. While no active leak was noted at the time of this report, this condition can damage the gaskets for these mountings and lead to a water leak. This fixture needs to be tightened properly.
64. Both vanity sinks on the first floor bathrooms as well as the right side bathroom sink are serviced by a galvanized steel drain lines. There are visible areas of rusting and corrosion on the first floor, front bathroom vanity sink (1<sup>st</sup>: 9) as well as the second floor, right side sink, (2<sup>nd</sup>: 1) and the drain line in the first floor, rear bathroom is slow to drain, (1<sup>st</sup>: 12). While no active leaks were noted at any of these fixtures at the time of this report, galvanized steel piping typically rusts from the inside out. Early signs of potential failure are slow-draining fixtures and/or exterior rusting or corrosion on pipe fittings. Given the general age of the fixtures in these bathrooms, the lines may be nearing the end of their useful life. The drain lines should be further evaluated by a qualified plumber and, if necessary, repaired or replaced.
65. The vanity sink in the rear bathroom on the first floor is not properly secured to the wall surface. This fixture needs to be firmly secured to prevent possible injury, (1<sup>st</sup>: 14).
66. The left side bathroom sink on the second floor is serviced by a copper P-trap in its drain line configuration. While no active leak was noted at the time of inspection, both dried moisture stains and a shallow catch pan indicate the likelihood of leakage issues with this fixture in the past. This drain line should be monitored and may need to be repaired, (2<sup>nd</sup>: 2).
67. The faucet fixture for the left side bathroom sink on the second floor is

slightly loose. This needs to be properly secured, (2<sup>nd</sup>: 3).

68. It appears that none of the four bathrooms within the building are properly vented to the exterior. Vent ducts, which simply terminate into the living space, were noted at the rear of the third floor area. Generally, good building practices require mechanical ventilation in all interior bathroom areas and that

this ventilation be properly vented to the exterior of the building. This configuration needs to be improved, (3<sup>rd</sup>: 3).

## SECTION IV: RECORD PHOTOGRAPHS

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# THE WRIGHT TAVERN RECORD PHOTOGRAPHS

## EXTERIOR



**Ext: 1 East elevation**



**Ext: 2 North elevation**



**Ext: 3 North elevation**



**Ext: 4 North elevation**



**Ext: 5 North and west elevations**



**Ext: 6 West elevation**



**Ext: 9 South and east elevations**



**Ext: 7 West and south elevations**



**Ext: 8 South elevation**



**Ext: 10 Sign on north facade**



Ext: 11 North elevation



Ext: 14 South wall



Ext: 12 Southwest corner of ell



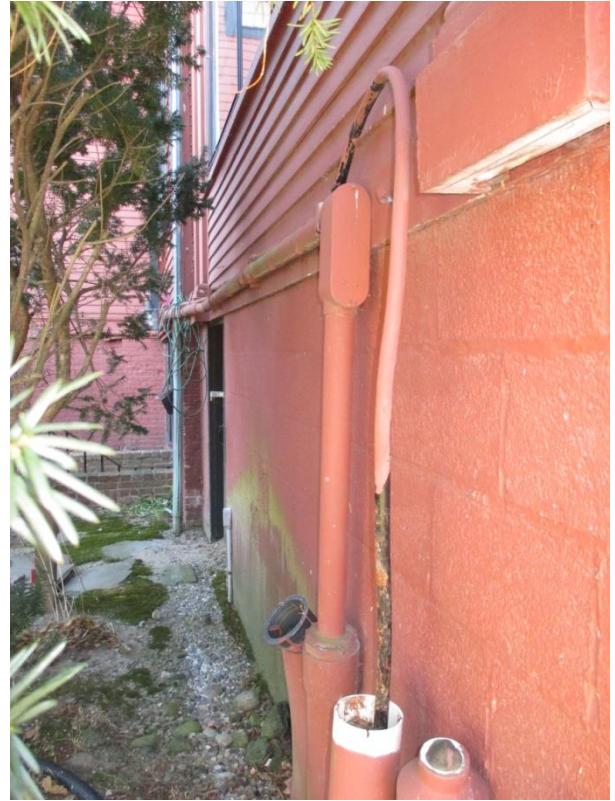
Ext: 15 South wall



Ext: 13 South wall



**Ext: 16 West elevation of sun porch**



**Ext: 18 West elevation of sun porch**



**Ext: 17 West elevation of sun porch**



**Ext: 19 East elevation**



Ext: 20 East elevation



Ext: 23 East elevation



Ext: 21 East elevation



Ext: 24 East elevation



Ext: 22 East elevation



Ext: 25 East elevation



**Ext: 26 East elevation**



**Ext: 27 East elevation**



**Ext: 28 East elevation**

# THE WRIGHT TAVERN RECORD PHOTOGRAPHS

## INTERIOR – 1<sup>ST</sup> FLOOR (15 PHOTOGRAPHS)



1<sup>st</sup>: 1 Heating unit Room 100



1<sup>st</sup>: 2 Air conditioner Room 109



1<sup>st</sup>: 3 North wall Room 104



1<sup>st</sup>: 4 West wall Room 103



1<sup>st</sup>: 5 North wall Room 108



1<sup>st</sup>: 8 Room 106



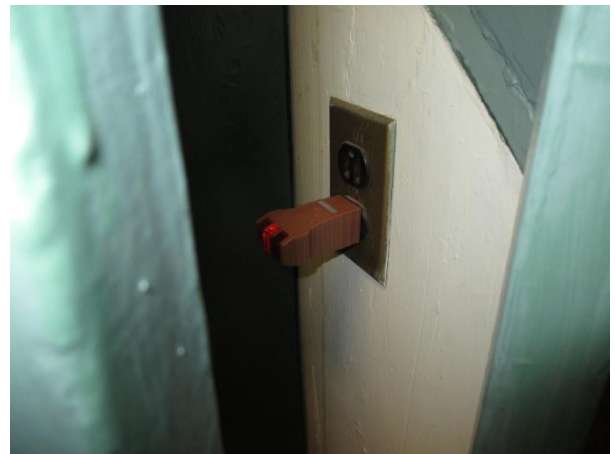
1<sup>st</sup>: 6 South wall Room 108



1<sup>st</sup>: 9 Room 106



1<sup>st</sup>: 7 Room 105



1<sup>st</sup>: 10 100b



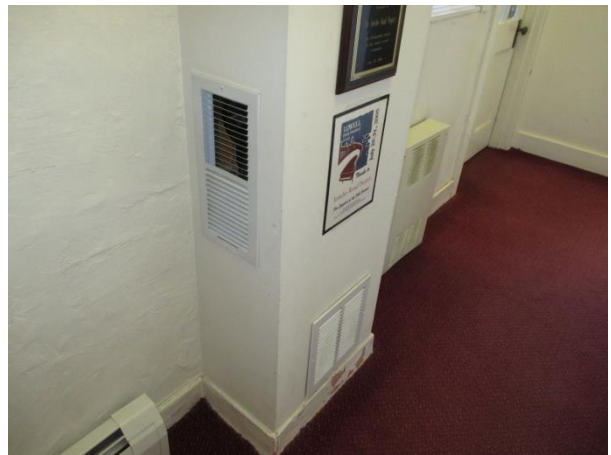
1<sup>st</sup>: 11 100b



1<sup>st</sup>: 14 Room 105



1<sup>st</sup>: 12 Room 105



1<sup>st</sup>: 15 100e



1<sup>st</sup>: 13 Room 105

**THE WRIGHT TAVERN  
RECORD PHOTOGRAPHS**

**INTERIOR – 2<sup>ND</sup> FLOOR  
(3 PHOTOGRAPHS)**



**2<sup>nd</sup>: 1 Room 207**



**2<sup>nd</sup>: 3 Room 206**



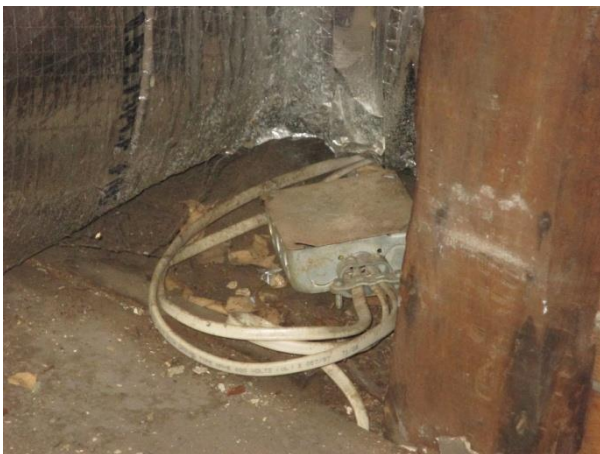
**2<sup>nd</sup>: 2 Room 206**

# THE WRIGHT TAVERN RECORD PHOTOGRAPHS

## INTERIOR – 3<sup>RD</sup> FLOOR (11 PHOTOGRAPHS)



3<sup>rd</sup>: 1 West room



3<sup>rd</sup>: 2 Floor of south room.



3<sup>rd</sup>: 3 Northeast room



3<sup>rd</sup>: 4 Southwest room



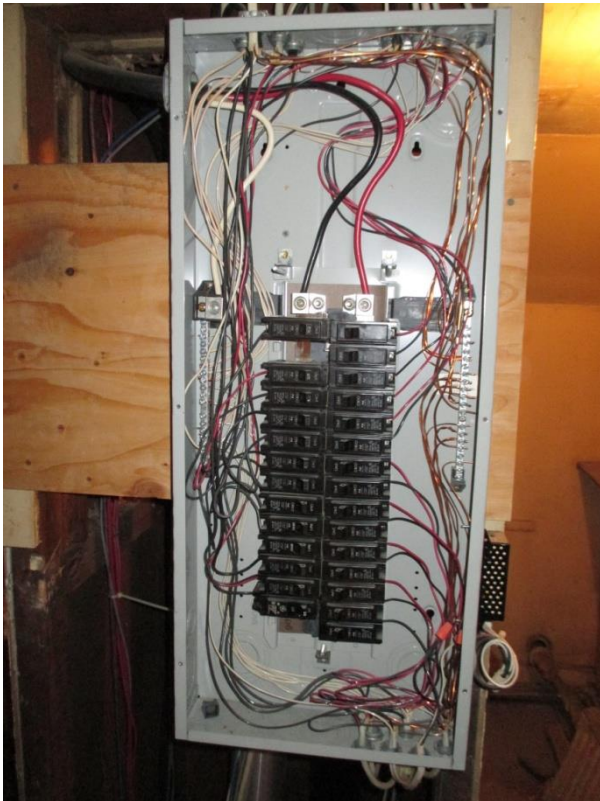
3<sup>rd</sup>: 5 Northeast room



3rd: 6 Detail of southeast air handler



3rd: 8 South room



3rd: 7 South room



3rd: 9 South room



3rd: 10 South room



**3<sup>rd</sup>: 11 South room**

**THE WRIGHT TAVERN  
RECORD PHOTOGRAPHS**

**INTERIOR – ATTIC  
(2 PHOTOGRAPHS)**



**Attic: 1 Unsecured wiring west side.**



**Attic: 2**

# THE WRIGHT TAVERN RECORD PHOTOGRAPHS

## INTERIOR – BASEMENT (49 PHOTOGRAPHS)



**BAS: 1** Water line and ground wire, west wall.



**BAS: 2** West wall



**BAS: 3** West wall



**BAS: 4** Oil tanks on north wall



**BAS: 5** Boiler in center of basement



**BAS: 6 Rusted valve above the boiler.**



**BAS: 8 Boiler vent**



**BAS: 7 Boiler vent**



**BAS: 9 Center basement ceiling**



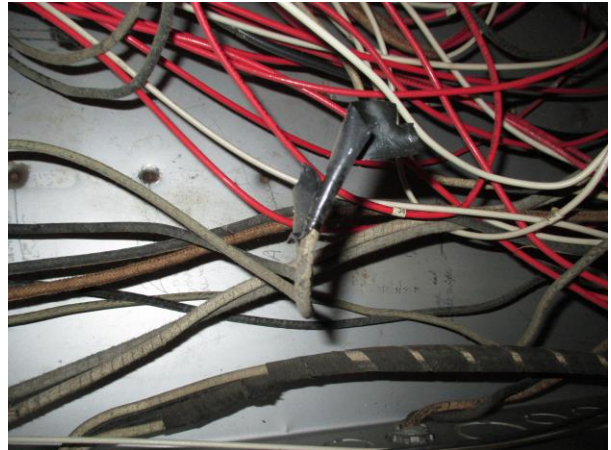
**BAS: 10 Center basement ceiling**



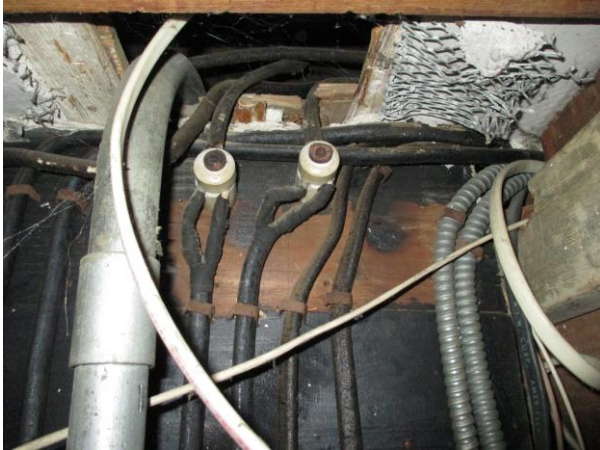
**BAS: 12 South room**



**BAS: 11 Junction box in south room.**



**BAS: 13 South Room**



**BAS: 14 Knob and tube wiring south room**



**BAS: 17 East center**



**BAS: 15 South Room**



**BAS: 18 Center bay, east side.**



**BAS: 16 Rusted cast iron drain line east center**



**BAS: 19 Center bay, east side**



**BAS: 22 Center bay, east side**



**BAS: 20 Center bay, east side**



**BAS: 21 Center bay, east side**



**BAS: 23 Center bay, east side**



**BAS: 24 Center bay, east side**



**BAS: 25 Center bay, east side**



**BAS: 26 Center bay, east side**



**BAS: 27 Center bay, east side**



**BAS: 28 Center bay, east side**



BAS: 29



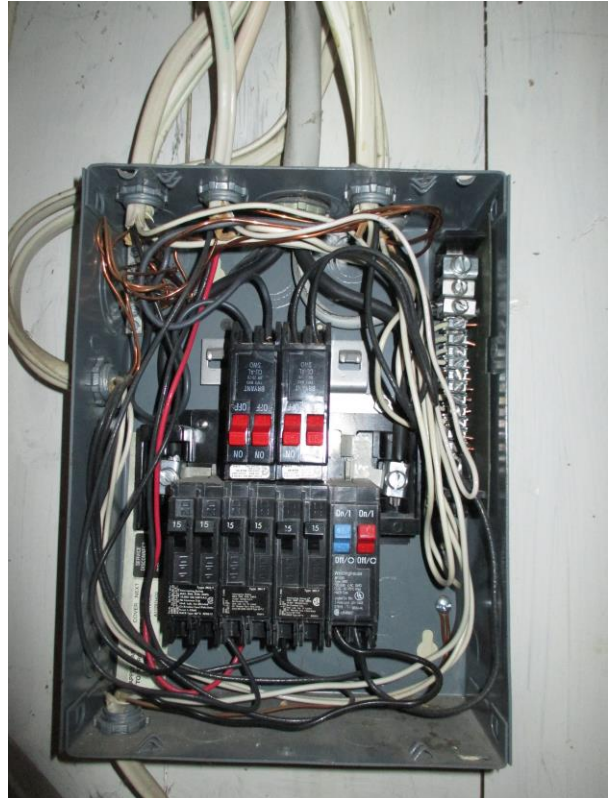
BAS: 32



BAS: 30



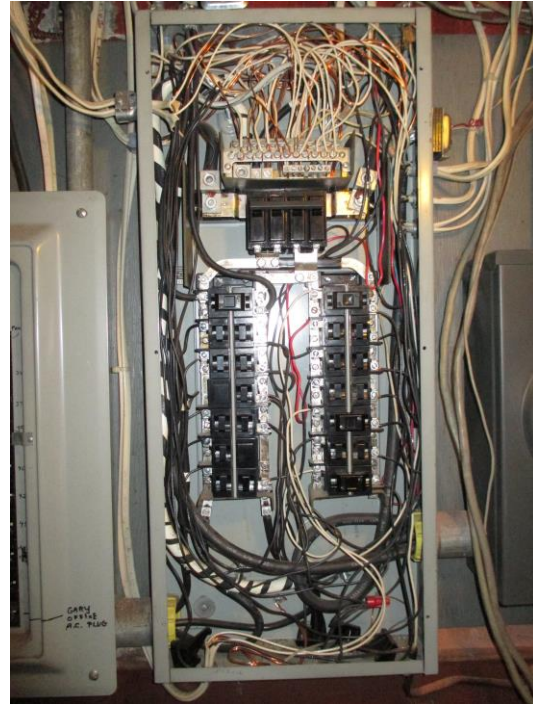
BAS: 31



BAS: 33



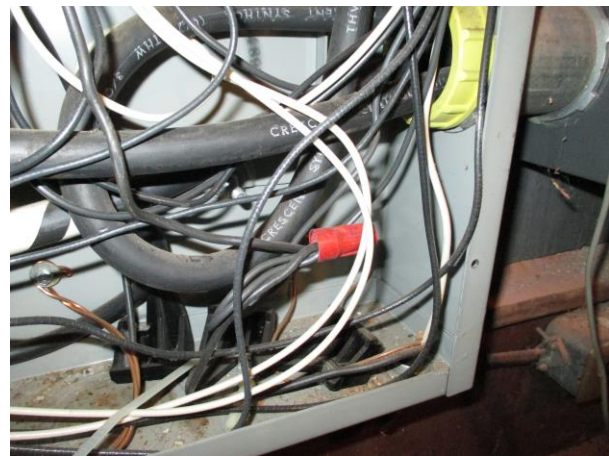
**BAS: 34**



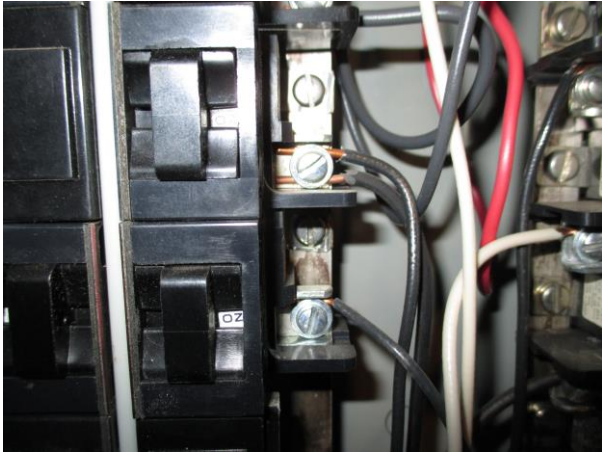
**BAS: 36**



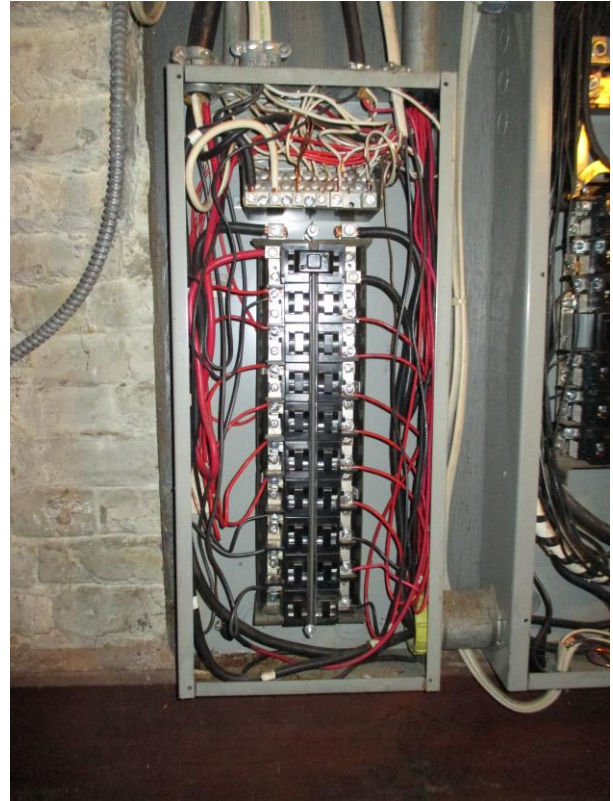
**BAS: 35**



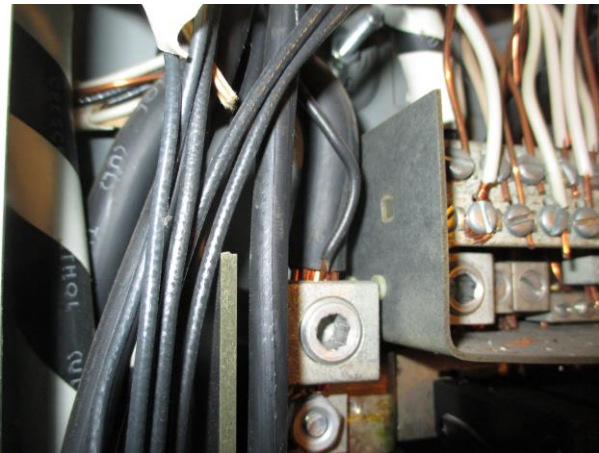
**BAS: 37**



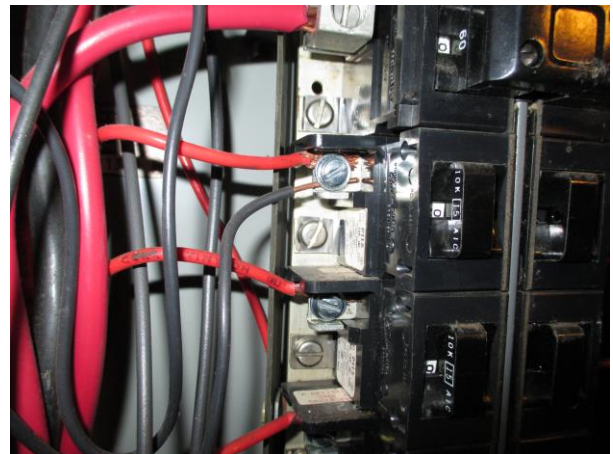
**BAS: 38**



**BAS: 41**



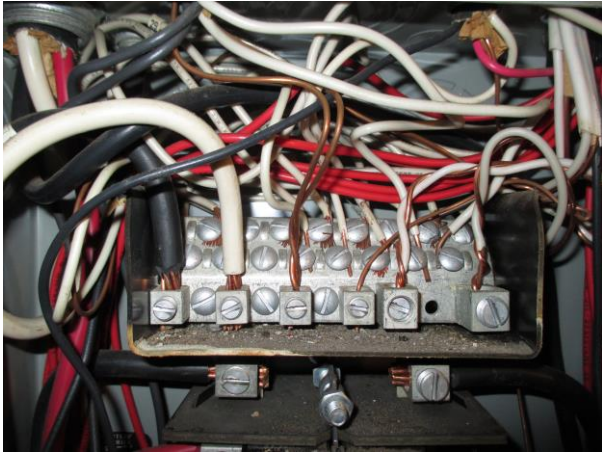
**BAS: 39**



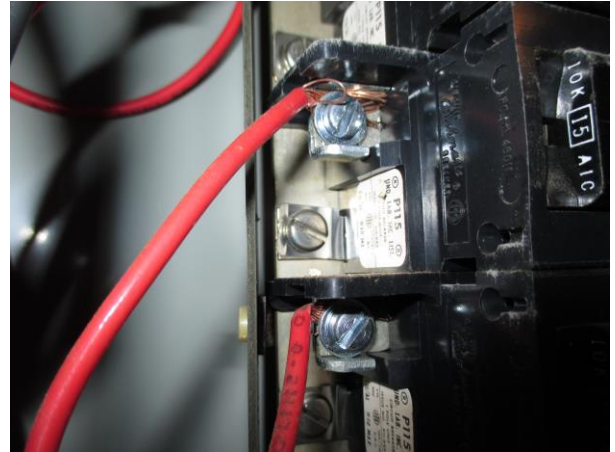
**BAS: 42**



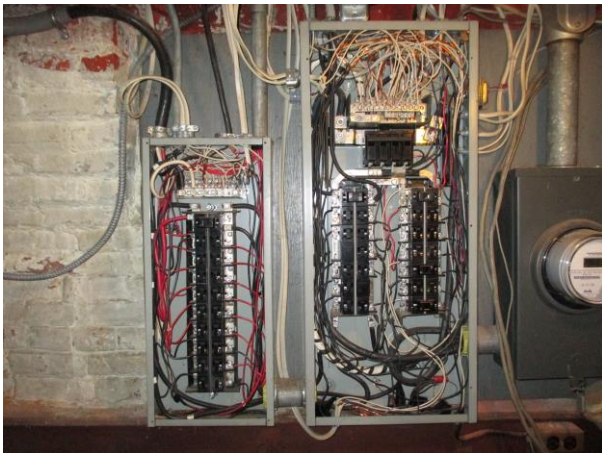
**BAS: 40**



**BAS: 43**



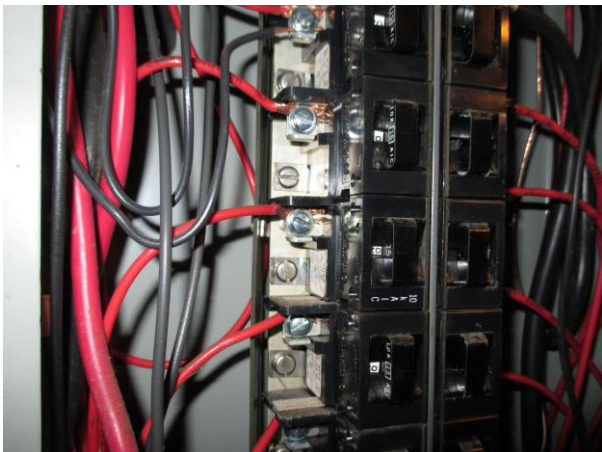
**BAS: 46**



**BAS: 44**



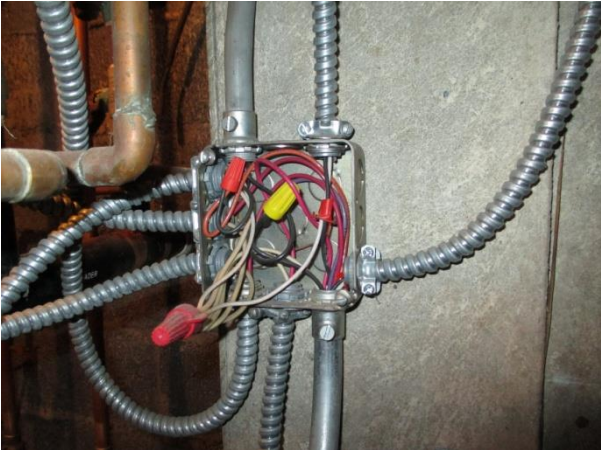
**BAS: 47**



**BAS: 45**



**BAS: 48**



**BAS: 49**

## SECTION V: PRESERVATION OBJECTIVES AND REQUIREMENTS

### INTRODUCTION

The Wright Tavern is a good example of sustainability through practical use of a historic structure. Its survival to the present is largely the result of its owners finding ways to generate income from it. This has resulted in adaptations and changes over time, some of which have had an adverse impact on historic materials. The Trustees of Parish Donations of First Parish in Concord recognizes the need for a preservation strategy to guide its ongoing treatment. While the building needs to remain dynamic, future repairs, modifications and restoration should focus on preservation and protection of all surviving historic materials; in-kind replacement of any elements deemed beyond repair; and adherence to current, accepted historic preservation and conservation practices and procedures in all projects. This includes written and photographic documentation of existing conditions and procedures for repair. Photographing conditions or structural details exposed during a project that would otherwise remain hidden will further our understanding of the building's history.

The spectrum of projects we have identified below includes specifications that follow

the overarching philosophy of the Secretary of the Interior's Standards and Guidelines for the treatment of historic structures. Each set of project specifications utilizes current, accepted practices and procedures for the treatment of historic architectural materials.

## SPECIFICATIONS FOR REPAIR AND CONSERVATION

The following specifications address all issues described in the Priority Projects: Restoration and Conservation section of this report.

These specifications are tailored precisely for conditions and building features of The Wright Tavern. They are the intellectual property of the First Parish in Concord and Groundroot Preservation Group LLC and may not be copied.

### 1. Electrical System

We are not qualified to provide complete specifications for the electrical system. These should be generated in concert with a licensed electrical engineer. However, the following guidelines apply:

1.1. Remove all abandoned wiring and associated hardware. Leave in place only functioning wiring. **Except:** Leave in place one section of discontinued knob and tube wiring to be preserved as part of the historical record in the building.

1.2 When installing new wiring, use only existing openings in plaster, flooring and woodwork. Make no new holes in existing material unless critical and with pre-approval by project administrators.

### 2. Roof Replacement

2.1. Protection: the site, building and surrounding landscape will be protected

from falling debris and nails by use of canvas or plastic tarps placed on the ground. Windows and doors will be likewise protected to the extent possible with plywood panels or tarps.

### 2.2 Removals

2.2.1 Removal of existing roof shingles shall be done with extreme care, using bare hands (no shovels and the like). Nails will be removed using flat-shank pry bars to minimize damage to historic roof boards.

2.2.2 Removal of failed curb boards (horizontal strips of wood positioned between the upper and lower slopes of the main roof) will be done only using flat-shank pry bars and “cat’s paw”-type nail extracting tools.

2.2.3 During roof covering removal, all flashing associated with all chimneys will be carefully preserved. It will be evaluated for soundness and replaced during new roof installation as necessary, and as per discussion with project administrators.

2.2.4 Removal of roofing and flashing under the dormer consoles will be done with extreme care so as to not break or damage the consoles. Project administrators may consider

carefully removing the consoles at this time, either to modify the existing design to better promote proper drainage, or to return the dormers to their earlier appearance.

2.2.5 Removal of decayed dormer cheek siding and sheathing will be done only using flat-shank pry bars and “Cat’s paw”-type nail extractors to minimize damage to the wood and substrate.

### 3. Substrate and Structure: Inspection and Repairs

3.1. After removal of existing shingles, all areas of the existing roof sheathing and visible structure will be examined by an architectural conservator.

3.2. Any areas of sheathing identified as unsound will be replaced in-kind, using rough sawn white pine plank matching the thickness and average widths of the historic material. Only areas of failed material (defined as ‘that which is sufficiently cracked, decayed or otherwise damaged to prevent proper overlayment and fastening of new shingles’) will be replaced. In instances where only a portion of a sheathing board is defective, only the bad area will be cut out to the nearest sound structural member, such as a rafter or purlin.

3.3. The only cutting tool permitted for use on defective areas of sheathing is a

reciprocating plunge-cutting saw such as a Fein® saw or the equivalent. Extreme care will be taken by workmen to avoid cutting past the thickness of the sheathing and into the framing.

3.4. All new replacement sheathing boards will be installed with rosin-coated box nails, nailed by hand only. No pneumatic nail guns are permitted. The length of the nail will be determined by the thickness of the sheathing plus a maximum of two inches of penetration into the framing. Alternate fasteners: As an alternative to rosin-coated box nails, stainless steel trim screws are permitted.

3.5. Any underlying structure found to be decayed or defective will be identified by workmen, then inspected by an architectural conservator and project administrators. As a rule of thumb, defective original members must be reinforced in place rather than replaced (using sister timbers and/or steel as necessary).

3.6. Only failed structural members identified as not original or historic shall be removed for replacement. Any failed members should be replaced in-kind, matching wood species and dimensions of the original material.

### 4. Underlayment

4.1. Regardless of whether project administrators opt for a wooden or an asphalt roof, certain areas of the roof

shall be protected with Ice and Water Shield® membrane, applied directly to roof sheathing. **The roof sheathing will not be completely covered with Ice and Water Shield®. Only the hips, ridges and eaves as described below.**

4.1.1. For all eaves, including the upper and lower slopes of the double-hipped main roof and the ell gabled roof, Ice and Water Shield® will be applied no less than 48" up the roof slope from the eaves line..

4.1.2. All hips and ridges will be covered with Ice and Water Shield®, extending 18" on either side of the hip or ridge line.

4.1.3. All Ice and Water Shield® will be properly adhered to the top edges of the crown moldings and rake boards. This may mean scraping off any accumulations of debris and cleaning the top edges by wiping with lacquer thinner.

4.1.4. The Ice and Water Shield® must be trimmed neatly with top, forward edges of the crown moldings so as to not be visible from the ground.

## 5. Flashing

5.1. All new or replacement step flashing and counter flashing associated with the chimneys will be in rolled lead.

5.2. All replacement step and counter flashing associated with the joint of the ell roof to the main house will be in copper or lead. This decision will be made onsite in consultation among an architectural conservator and project administrators.

5.3. Metal drip edges or reglets will only be installed if the main roof covering is asphalt, and in areas where EPDM rubber membrane is used (such as the upper slope of the main roof and the sun porch roof). These will be painted black with a weather-resistant paint so they blend in with the trim.

5.4. In areas where reglets are used, they will be installed directly over trim, and the ice and water shield adhered on top of them, being neatly trimmed off at the forward edge so as not to be visible from the ground.

## 6. Asphalt

In the event that asphalt is chosen for the main house and ell, the following guidelines apply:

6.1. All repairs and preparation of roof boards and structure discussed in Section 3 will be applied.

6.2. All underlayment specifications discussed in Section 4 above apply.

6.3. All flashing and reglet requirements discussed in Section 5 above apply.

6.4. Asphalt roofing will be applied with a double starter course at the eaves.

6.5. Care will be taken to make sure that the self-adhesive backing to the first starter course will be properly adhered to the ice and water shield and reglets, creating a strong, waterproof seam along eaves and rakes.

6.6. Shingles will be installed according to manufacturer's recommendations regarding exposure, nailing, and weather conditions during installation.

6.7. All materials will be hand-nailed. No pneumatic tools are permitted.

6.8. All ridges and hip ridges will be finished with coursed cap shingles.

## 7. Wooden Shingle Roof

In the event that project administrators choose a wooden roof for the main house and ell, the following specifications apply:

7.1. All repairs and preparation of roof boards and structure discussed in Section 3 will be applied.

7.2. All underlayment specifications discussed in Section 4 above apply.

7.3. All flashing and reglet requirements discussed in Section V above apply.

7.4. Wooden roofing will only be applied to the lower slopes of the main house and the ell roof. The upper slope of the main house hipped roof and the flat roof to the sun porch will be finished with EPDM rubber membrane.

7.5 Premium-grade Alaskan yellow cedar shingles are recommended, with the alternate of premium-grade western red cedar.

<http://www.cedarbureau.org/frequently-asked-questions/product/grading-and-manufacturing.asp>.

7.6. We recommend the following specifications for the shingles and installation:

7.6.1. Only 100% heartwood is acceptable.

7.6.2. Shingles should always be 18" long and between 5/8" and 3/4" thick (this is a personal preference issue) at the butt and 1/8" at the tail (they shouldn't run down to zero at the tail- a little thickness there keeps them off the substrate a little so they aren't completely touching the sheathing.)

7.6.3. There should be no more than 12 growth rings per inch.

7.6.4. No shingle will be wider than 6". This will mean any shingle coming from the factory 7" or wider

must be ripped in half.

7.6.5. There will be 6" exposure to the weather. For shingles 18" in length, this creates a critically important double headlap.

7.6.6. The eaves must feature a triple starter course. The shingles for the first starter course are measured at 12" long and cut measuring from the tail (or thin end) of 18" shingle stock. This makes the bottom starter look a bit thinner and less clunky, and allows the upper courses to lie flat. If the first starter course shingles are measured from the butt (thick) end and cut from the butt end, the second and third starter courses will kick out and not lie flat because the tail of the first course will be too thick.

7.6.7. Singles should overhang eaves by 1 1/2" and 1" along the rakes.

7.6.8. Only stainless steel nails are permitted.

7.6.9 No more than two nails per shingle.

7.6.10 Spacings between shingles should be never more than 3/8" or less than 1/4".

7.6.11. If the roof is to be painted or stained, the shingles need to be pre-treated with lacquer thinner or the paint will not adhere properly. After

installation, merely lightly spraying on lacquer thinner with a pump sprayer and letting it evaporate (this happens within minutes) will cut the resin on the surface of the wood sufficiently and allow paints to stick very well.

7.7. All ridges (hip ridges and the ell roof ridge) will be finished with ridge boards.

7.7.1. Ridge boards will be made from 100% clear heartwood vertical grain Alaskan yellow cedar or western red cedar, matching whichever wood is chosen for the shingles.

7.7.2. The boards will be 1" thick by 6" wide stock.

7.7.3. Where lengths of more than 16 feet are required, the stock will be created by making scarf joints using 45-degree, end-grain miter cuts to join the lengths of wood. **In no circumstances will finger-jointed wood be permitted.** The scarf joints will be staggered at least 48" apart on adjoining pieces of wood to minimize visual impact. Any scarf joints will be oriented pointing downward for hip ridges, and pointing away from the prevailing wind for horizontal ridges.

7.7.4. The ridge boards will be assembled and installed using stainless steel nails or trim screws.

7.7.5. The ridge board assemblies will be installed with the linear joints between boards facing away from the prevailing wind to the extent possible.

## 8. Rubber Membrane

Whether project administrators choose wood or asphalt for the visible areas of roof, the flat roof above the sun porch and the upper slope of the main, double-hipped roof should be finished with rubber membrane. These areas are not normally visible to the public and their low pitches warrant better protection and less maintenance than asphalt or wood.

As an alternative to the current EPDM on the sun porch roof, (ethylene propylene diene monomer [M-class] rubber) membrane, we suggest a single-ply system with heat-weldable seams, such as thermoplastic polyolefin (TPO), polyvinyl chloride (PVC), ketone ethylene ester (KEE), chlorinated polyethylene (CPE), chlorosulfonated polyethylene (Hypalon® or CSPE), and polyisobutylene (PIB). These systems offer greater stability and less tendency than EPDM to “creep” or expand and contract significantly with changes in heat.

8.1. All repairs and preparation of roof boards and structure discussed in Section 3 will be applied.

8.2. All underlayment specifications discussed in Section 4 above apply.

8.3. All flashing and reglet requirements discussed in Section 5 above apply.

8.4. This material must be installed according to manufacturer’s specifications.

## 9. Roof-Related Woodwork

Several woodwork components must be addressed in concert with the replacement of the roof. On a case-by-case basis, these include removal, replacement in kind, and design modification.

9.1. Dormer Cheeks: the exterior cladding on the four roof dormers consists of flush matchboards on the east dormers and clapboard siding on the west dormers. All of these materials show some degree of decay. Stop-gap repairs have been made in the past with added strips of wood to divert water.

9.1.1. We recommend that the lowest courses of matchboard or clapboard be removed and repaired as part of the roof replacement. Several of the matchboards, clapboards and some associated trims show signs of decay. These should be replaced in-kind using the following directive:

9.1.1.1. All replacement matchboards and trims will be fabricated using 100% heartwood white pine.

9.1.1.2. Thicknesses, widths, and any historic joinery and molding profiles (beads, tongue-and-groove joints, etc.) should be accurately reproduced.

9.1.1.3. Prior to installation all new elements should be thoroughly back-primed with a high-quality alkyd primer.

9.1.1.4. The matchboard should be properly back-flashed and over-flashed with rolled lead. The over-flashing should pass over the top of the shingles by 6”.

9.1.1.5. Clapboards should be replaced in-kind using joinery and exposure matching surrounding intact material.

9.1.1.6. A gap of 1” should be allowed between the bottom plane of the lowest course of matchboards or clapboards and the top surface of the roof.

9.1.1.6. Replacement matchboards and clapboards will be installed using nail type discussed below in Section 12.2.5.

## 9.2. Dormer Consoles

The decorative consoles on the dormers show evidence of decay at their bottom ends. These features, added in the twentieth century, have an inherent design flaw: the

bottom ends are mounted on top of the roof and create a natural trap for water draining down the slope of the roof, which collects behind them. We recommend either removing these elements and replacing them with simpler, eighteenth-century-style trims, or modifying the design to allow water to pass beneath them. The latter would involve cutting about 1” off the bottoms of the consoles so they ride above the plane of the roof. This would require anchoring them from behind to the dormer cheeks using metal rods. The end grain of the wood would have to be thoroughly sealed with a good alkyd primer and paint.

## 9.3 Curb Boards

The curb boards, which circumscribe the joint between the upper and lower hips of the main roof, are not original elements. They exhibit extensive weathering and decay and should be replaced as part of the re-roofing project.

9.3.1. Removal of existing materials will be done by hand with extreme care using only flat-shank pry bars and “Cat’s paw”-type nail extractors.

9.3.2. All underlying sheathing will be inspected and any defective areas replaced in-kind (See Sections 2 and 3).

9.3.3. All replacement boards will be fabricated using 100% heartwood white pine.

9.3.4. Thicknesses, widths, and any historic joinery and molding profiles (beads, etc.) should be accurately reproduced.

9.3.5. We recommend fabricating each curb board using single-length material. **No finger-jointed material is permitted.** In the event that single-length material is unavailable, proper lengths will be fabricated using 45-degree scarf joints pointing away from the prevailing wind. End grain to scarf joints will be primed with a high-quality alkyd primer prior to installation. Any scarf joints will be a minimum of 48" from any end or corner of the building to minimize visual impact.

9.3.6. Prior to installation all new elements should be thoroughly back-primed with a high-quality alkyd primer.

9.3.7. Fastening the curb boards will follow procedures discussed in Section 12.2.5.

9.3.8. The curb boards should be properly back-flashed with rolled lead. The over-flashing should pass under the bottom edge of the curb boards, then over the top of the shingles by 6".

#### 9.4. Roof Fan "Mushroom" Unit

The southern slope of the main house roof retains a mushroom-type vent, a vestigial feature from a time when a commercial kitchen was located in the building. This feature should be removed. Roof sheathing should be patched in-kind and the opening covered with the now roofing material. (See Sections 2 and 3).

9.5. Existing Penetrations: all existing penetrations, including any roof vents and chimneys, will be properly flashed.

9.5.1. Chimneys will be flashed with rolled lead step and counter flashing. Existing materials will be retained and reused to the extent possible.

9.5.2. In the event that flashing requires replacement, existing channels in chimney masonry will be reused. Following removal of old and insertion of new flashing, the associated mortar joints will be repointed with a soft lime mortar that includes sand, lime, and no more than one part WHITE Portland cement.

9.5.3. All vents shall be properly flashed with new rubber scuppers and surrounded by 24" x 24" of Ice and Water Shield® installed beneath the shingles.

## 10. Roof Drainage and Gutters

The existing gutters will likely require removal during roof replacement because many of the fasteners are interwoven with the current roof covering. These elements are in sound condition and warrant retention and reinstallation after replacement of the roof.

10.1. The gutters should be reinstalled with copper hangers mounted to the crown moldings rather than passing beneath or on top of the roof shingles.

10.2. Extreme care should be taken upon installation to pitch the gutters properly to promote active drainage to the nearest downspout.

## 11. Exterior Architectural Details

Many exterior architectural details warrant careful repairs and selective replacement.

Notably:

- the main crown moldings on the east and north elevations require removal of spray-foam repairs;
- window crowns on the east and north elevation require minor repairs;
- a loose corner board at the northeast corner of the main house needs reattachment;
- an important early exterior door leading to the basement on the west elevation requires conservation;
- the exterior door on the east elevation and the main entrance

door on the north elevation require flashing replacement.

### 11.1. Exterior Crown Moldings

In concert with temporary removal of the gutters, the crown moldings should be inspected and repaired. We recommend isolated repairs rather than large-scale replacement.

11.1.1. All spray foam fills should be carefully scraped out with a sharp chisel.

11.1.2. All friable wood fibers should be cut back to sound material with a sharp chisel.

Treat all exposed wood fibers with a thorough application of Abatron Liquid wood®. Allow to cure following manufacturer's recommendations. This product will consolidate the wood and serve as a bonding agent for the next step.

11.1.3. Fill damaged areas with an elastomeric, exterior-grade, two-part wood epoxy such as PC Woody Wood Epoxy Paste®. After cured, shape the epoxy using sharp chisels, SureForm planes, and sandpaper until the profile of the existing crown is matched exactly.

11.1.4. Avoid cutting out and replacing sections with new material unless any given area of damage extends beyond two linear feet.

11.1.5. In the event that damage is discovered that extends further than two linear feet, cut out damaged areas, making 45-degree miter or scarf cuts, the direction of the cuts pointing away from the prevailing wind.

11.1.6. Match profile of existing molding exactly with replacement material.

11.1.7. All new wood must be 100% heartwood white pine.

11.1.8 All new wood must be thoroughly back-primed with a high quality alkyd primer before installation.

11.1.9. Pre-treat the end grain exposures in existing crown cuts and end grain of new sections with Abatron Liquid Wood® prior to installation of repair and allow to cure according to manufacturer's specifications.

11.1.10 Install replacement sections with stainless steel trim screws. Set heads 1/16" below the surface and cover heads with exterior-grade wood filler such as Elmer's Exterior Grade Wood Filler ®. Sand flush.

## 11.2 Window Crown Repairs

Some of the first-floor window crowns exhibit loose or missing moldings that require careful repair.

11.2.1. Reattach any small, loose molding returns (these are the short sections of bed moldings beneath the window crowns that wrap the corners) with a good exterior-grade wood glue such as Titebond II Weatherproof Glue®. *Do not add extra nails or screws, as these are likely to crack the moldings.*

11.2.2. For missing bed molding returns, match profile of existing molding exactly with replacement material.

11.2.3. All new wood must be 100% heartwood white pine.

11.2.4. All new wood must be thoroughly back-primed with a high quality alkyd primer prior to installation.

11.2.5. Pre-treat the end grain exposures in existing crown cuts and end grain of new sections with Abatron Liquid Wood® prior to installation of repair and allow to cure as per manufacturer's specifications.

11.2.6. Install replacement sections with stainless steel trim screws. Set heads 1/16" below the surface and cover heads with exterior-grade

wood filler such as Elmer's Exterior Grade Wood Filler ®. Sand flush.

### 11.3. Weather-Related Surface Checking and Cracking

Many exterior trim elements, including window crowns, window trims, and the east and north exterior door trims exhibit extensive surface checking or cracking caused by past exposure of the wood to the weather after the paint had failed. These should be treated with consolidant and epoxy filler to prevent further damage.

11.3.1. Remove all paint from damaged elements using an eco-friendly, poultice-type paint remover such as InStrip® by EacoChem. [www.eacochem.com](http://www.eacochem.com). Neutralize and allow to dry as per manufacturer's specifications.

11.3.2. Treat all surfaces with Abatron Liquid Wood ®, allowing the material to penetrate all cracks thoroughly.

11.3.3. Allow to cure as per manufacturer's recommendations. This product will consolidate the wood and serve as a bonding agent for the next step.

11.3.4. Fill damaged areas with an elastomeric, exterior-grade, two-part wood epoxy such as PC Woody Wood Epoxy Paste®. This material should be worked into the cracks with a flexible steel putty knife and the

excess scraped away immediately to minimize residue on the surface. Allow to cure as per manufacturer's specifications.

11.3.5. Gently sand the surface with 80, 100 and 150-grit sandpaper in succession.

11.3.6. Prime with a high-quality exterior-grade alkyd primer.

### 11.4. Loose Corner Board

The northeast corner board has become detached toward the bottom and should be re-engaged and secured.

11.4.1. Remove any obstructions such as biological debris and paint flakes from the gap behind the corner board.

11.4.2. Place a piece of scrap lumber such as a short (24") length of 2x4" framing lumber against the deflected area. This will protect the original wood from damaging hammer blows.

11.4.3. Using a hammer or mallet, drive against the scrap piece to re-engage the corner board.

11.4.4. Re-set the original nails, using a hammer and nail punch to reengage them with the substrate.

11.4.5. If the corner board still feels loose, reinforce with a minimum number of **finish-grade** stainless

steel trim screws. Set the heads 1/16" below the surface and cover the heads with an exterior-grade wood filler such as Elmer's Exterior Grade Wood Filler ®.

#### 11.5. West Exterior Door

Due to the high level of importance of this feature and its relatively low usage, we recommend minimal treatment to stabilize it and halt further deterioration. We do not recommend that this element be restored or extensively repaired as such.

11.5.1. Remove the door from its opening and transport it to a dry, protected area. In its place install a temporary door or plywood covering for security.

11.5.2. Allow the door to dry out until all moisture readings are well below 14% and preferably as close to 7% as possible.

11.5.3. Remove only loose, flaking paint, particularly along the bottom portion of the door, including the bottom rail and stiles.

11.5.4. Using dental picks, remove all filler material from the cracks in the exterior panels.

11.5.5. Carefully clean all dirt and debris out of exposed wood grain at the bottom of the door using a dry, clean, soft-bristle, brass wire brush.

11.5.6. Saturate all exposed end grain and wood surfaces at the bottom of the door with Abatron Liquid Wood®, until the wood appears to stop absorbing the material.

11.5.7. Allow to cure as per manufacturer's recommendations.

11.5.8. Using a fine nylon-bristle artists' brush, work Abatron Liquid Wood® into all cracks in the exterior panels. Wipe off excess.

11.5.9. Fill all areas of missing wood (such as at the lower, north corner of the door) and all cracks with PC Woody Wood Epoxy Paste®. *It may take several applications of this material to build up the bottom north corner of the door sufficiently to re-shape to original grounds.* After the appropriate cure time, reshape/sculpt to reconstruct missing shapes and edges using sharp chisels, cabinet scrapers and sandpaper.

#### 11.6. Siding and Flashing

Replacement of flashing above the east and north doors should be done in concert with clapboard repairs.

## 12. Clapboard Siding

No areas on the building require large-scale clapboard replacement. Only in-kind replacements of individual clapboards are warranted. A clapboard shall be determined **defective** if it a) is through-cracked, allowing moisture penetration, or b) exhibits decay resulting in loss of dimension and preventing adequate fastening to the substrate.

### 12.1. Removal

All original, historic clapboards that require removal in order to install flashing, but are intended for reinstallation should be removed with the utmost care. Because many are original and exhibit skived or feathered joints, extraction must be done using specific techniques to avert damage to surrounding material.

12.1.1. Only thin, sharp pry bars exhibiting flat shanks 1/8" or less in thickness are permitted. A 9 1/2" flat pry bar made by Hyde Tool Company is ideal, and the tapered end can be further sharpened or thinned on a bench grinder.

12.1.2. Clapboards must be pried from underneath and behind directly adjacent to fastening nails. A thin piece of wood such as an extra clapboard shall be used behind the pry bar as a sacrificial surface to pry against. Avoid prying directly against neighboring clapboards.

12.1.3. Nails will be carefully worked loose until the heads protrude. They can then be safely extracted with less risk of cracking or splitting the clapboards.

12.1.4. Each original clapboard removed to be reinstalled must be numbered and photographed so it can be properly returned to its original location.

### 12.2. Replacement

12.2.1. Original/existing clapboards will be reinstalled in their original positions, using nails reinstalled in their original holes. No additional nails should be used. If original nails are deteriorated or broken they should be replaced with reproduction nails as described below.

12.2.2. Where new clapboards are required, these will consist of only 100% heartwood white pine vertical grain material. This can be obtained from the Ward Clapboard Mill, with locations in Vermont and Maine. <http://www.wardclapboard.com/about.html>

12.2.3. Existing joinery will be matched in the new replacement material. In areas where the new material must abut original eighteenth-century siding, the

historic skived joints will be reproduced. This shall be done by hand with a drawknife rather than a chop saw. In areas where butt joints appear in the existing siding, butt joints are permitted for the replacement material.

12.2.4. Prior to installation, each piece of new siding will be primed on all three sides with a high-quality alkyd primer.

12.2.5. The nailing pattern for replacement siding will replicate the nailing pattern of surrounding material in regard to spacing and frequency of nails. Replacement nails will consist of reproduction, cut steel nails available from the Tremont Nail Factory in Wareham, Massachusetts. [http://secure.tremontnail.com/cgi-bin/tremontnail/items?id=BV7CezYK&mv\\_arg=26&mv\\_pc=10](http://secure.tremontnail.com/cgi-bin/tremontnail/items?id=BV7CezYK&mv_arg=26&mv_pc=10). We recommend "Fire Door Clinch", at 2 ½" length.

12.2.6. Prior to installation, each nail will be dipped in Penetrol ® to seal the metal against corrosion, and allowed to dry.

12.2.7 Each nail hole will be pre-drilled prior to driving the nails in order to prevent splitting the clapboards. We recommend using a tapered counter-sinking bit of appropriate length and diameter.

### 13. Flashing

The metal flashing above the east and north doors on the main house should be replaced. This should be done in concert with clapboard replacement.

13.1. Use 12"-wide rolled lead flashing only.

13.2. Lap the forward edge of the flashing ¾" over the leading edges of the header moldings. Press the lead firmly against the moldings so it conforms to the shape of the moldings.

13.3. The flashing should extend at least 6" upward on the vertical face of the sheathing above the door moldings, and 6" past the moldings on either side.

13.4. When reinstalled, the clapboards should not directly abut the flashed moldings. A ½" space between the clapboard butts and the flashing is recommended.

13.5. The butt ends of the clapboards should be thoroughly primed with a high-quality alkyd primer before installation.

### 14. Plaster Stabilization

Several minor areas of plaster in the occupied spaces in the building, and some major areas on the third floor, require stabilization. We recommend using acrylic injections to consolidate and reattach the plaster to the lath. Holes are drilled, a surficant and adhesive injected, and then

temporary hardware installed to draw the plaster back to the lath. When the acrylic has set, the hardware is removed. The holes can be filled cosmetically and virtually disappear.

This method is preferable to using permanent hardware such as steel plaster buttons and screws because it eliminates hard contact points that promote further cracking, and allows the plaster to remain flexible and move with the building.

We recommend that the attic plaster be consolidated and stabilized, but that cosmetic repairs or patching not be undertaken unless plans are made to develop the third floor further.

In the occupied spaces we recommend cosmetic finishing of repairs.

14.1. Use an aqueous acrylic emulsion adhesive system. Big Wally's Plaster Magic ®, despite its folksy name, is a highly effective and user-friendly method, and is regularly used by architectural conservators.  
[www.plastermagic.com](http://www.plastermagic.com)

14.2. Install the product as per manufacturer's specifications regarding procedures, setting times and environmental conditions.

14.3. For areas requiring cosmetic finish, fill holes and hairline cracks with a water-soluble gypsum-based setting

joint compound such as Durabond D-90®. Carefully sand to a flush finish.

## 15. Window Sash Restoration

All of the historic window sashes require restoration. While many are sound and warrant only minor repairs, glazing and paint, others require more significant woodworking repairs. We recommend a conservative approach meant to return each sash to sound, stable condition while being minimally invasive to historic material.

### 15.1. Removal

15.1.1. Remove each pair of sashes to be restored. Do not attempt to restore them in place. This must be done with extreme care to minimize flexing which can break historic glass. Some sashes, particularly lower ones, may have compromised structural integrity due to decay in the bottom rails and lower joints.

15.1.2. Removal of sashes will require breaking paint joints on the exterior where they meet the jambs. This should first be attempted by scraping the paint with a sharp paint scraper, taking care not to scratch or gouge the wood. If this is ineffective, an eco-friendly paint stripper such as EcoChem Instrip® can be applied to loosen the paint films.

15.1.3. Restoration work must be completed in a dry, preferably heated space.

## 15.2. Paint and Glazing Removal

15.2.1. Workers should beware of possible lead paint and should follow national and state environmental regulations, including any certifications, pursuant to handling lead paint.

15.2.2. We do not recommend full-scale paint or glass removal. Only paint and glazing that has failed, is associated with specific areas to be repaired, or needs to be removed in order to clean up the edges of the sashes so they can be made operable, shall be removed.

15.2.3. All glazing to be removed that does not break away freely with light touch shall be first softened with either an environmentally friendly chemical stripper such as EacoChem InStrip®, or use of applied heat. The latter can take the form of a heat gun set on low, taking extreme care not to raise surface temperatures to their smoke point, or so that glass may crack.

## 15.3. Woodworking Repairs

Some elements such as bottom sash rails, may require replacement due to decay. The bottom ends of the vertical stiles where the bottom rails attach with mortise-and-tenon joints may exhibit decay. Regardless of condition, these joints should be

preserved and reconstructed with epoxy.

15.3.1. Any areas of broken, damaged or degraded exterior muntin reveals shall be replaced to promote adequate bedding and glazing.

15.3.2. All mortise-and-tenon joints that exhibit some play or looseness but with no visible wood decay will be left as-is. In no circumstances will these joints be reinforced with glue or epoxy. In these instances the restored glazing will provide sufficient rigidity. We recommend that the joinery be allowed to function as intended, allowing seasonal movement and requisite flexibility. Gluing such joints will have long-term adverse effects by not allowing the joinery to perform as designed, and will make future disassembly for repairs difficult. Only in instances where joints are missing or so badly degraded that they require epoxy reconstruction shall they become fixed, immovable points because of the extreme technical difficulty in creating or maintaining articulated mortise-and-tenon joints with epoxy.

15.3.3. All mortise-and-tenon joints shall be preserved and repaired.

15.3.4. Replacement sash frame and muntin components shall be fabricated from 100% heartwood

white pine. Dimensions and all molding details and joinery shall exactly match surrounding original work.

15.3.5. Elements that require replacement and are joined to a deteriorated joint in a member that is otherwise sound will be replicated in kind and the joint consolidated and repaired with epoxy. *Example: If a lower sash rail is too decayed to keep and connects to a sash stile that exhibits decay in the mortise joint, the new lower rail will be fabricated with a proper tenon and the mortise into which it inserts will be consolidated and reconstructed with epoxy.*

15.3.6. All deteriorated areas of wood that must be retained because they involve joints with other members must be consolidated.

15.3.6.1. All friable wood fibers will be removed.

15.3.6.2. The wood will be consolidated with Abatron Liquid wood®. This material will be applied until the wood cannot absorb any more.

15.3.6.3. Any new replacement members connecting to repair areas will be carefully clamped into place at this point.

15.3.6.4. After the appropriate cure time for the Abatron, the joint will be reconstructed using PC Woody Epoxy Wood Paste®. This may require several applications to build up adequate thicknesses for re-shaping the joints.

15.3.6.5. After the appropriate cure time, the repairs should be finished flush to grounds, replicating original dimensions, planes, and any decorative details. This should be done using sharp chisels, SureForm planes, and sandpaper.

15.3.6.6. Areas of wood that are too decayed for consolidation, or which are missing within an otherwise sound element, can be cut away and replaced with a Dutchmen repair or graft.

*Example: If the bottom portion of a stile is completely decayed away and/or the mortise joint has no integrity, the decay can be cut out to bright, clean, sound wood and a new piece of wood grafted in.*

15.3.6.7. The replacement material should be 100% heartwood white pine.

15.3.6.8. The joint between new and old wood should be glued with exterior-grade glue, such as Titebond II Weatherproof Glue®.

15.3.6.9. The graft should be finished to blend seamlessly with the original material in regard to thickness, planes and dimensions, and replication of any molding details.

15.3.6.10 Areas of exterior muntin reveals that have lost dimension or sufficient integrity to support glazing shall be removed and replaced.

15.3.6.11. Defective muntin reveals shall be carefully chiseled back flush with the main body of the muntin, or to sound, clean wood.

15.3.6.12. The replacement material should be 100% heartwood white pine.

15.3.6.13. The joint between new and old wood should be glued with an exterior- grade glue such as Titebond II Weatherproof Glue ®.

15.3.6.14. The replaced muntin reveals should match the thickness and depth of the existing original material.

#### 15.4 Glazing and Painting

After all woodwork repairs are completed, the sashes should be properly glazed and painted. We

recommend Sarco Multi-Glaze Type M® linseed oil-based glazing putty. <http://www.smithrestorationsash.com/glazingputty.html>

15.4.1. Prior to glazing, the sashes should be primed on all sides with a high-quality alkyd primer.

15.4.2. All panes removed because of breakage or to facilitate repairs shall be re-bedded in a layer of glazing compound.

15.4.3. All reinstalled panes shall be fixed with non-corrosive metal glazing points (zinc or stainless steel), two points per side.

15.4.4. The glazing putty shall be installed in a neat, workmanlike manner with clean, straight lines and no residue left behind.

15.4.5. The glazing shall be allowed to cure for a minimum of two weeks prior to application of primer and paint.

15.4.6. The glazing should be primed with a high-quality alkyd primer. The primer shall overlap onto the glass by 1/16".

15.4.7. The sashes should be painted with two coats of top-quality exterior acrylic enamel prior to installation. This should be allowed to cure for two weeks prior to installation to ensure the paint films do not weld to

the jambs and render the windows inoperable.

15.4.8. The edges of the sashes should remain unpainted, except for the bottom edge of the bottom rails and the top edge of the lower sash top rail. The side edges of the lower sashes should be polished with fine steel wool (0 to 00 grit) to reduce friction. No waxes should be applied because of their tendency to become sticky in hot weather.

## 16. Exterior Paint

Following repairs to siding, exterior trims and windows, the exterior of the building should be repainted. This can be done one façade per year in the following order: east, north, west, south.

16.1. We recommend using primer and paint rather than stain for the following reasons: modern latex and oil exterior stains are now little more than thinned-down paint and have a record of poor performance, particularly over rough, uneven surfaces or surfaces with areas of prior paint buildup; and they have a poor record of colorfastness. Red, yellow and black are particularly prone to fading.

16.2. For exterior paint we recommend the use of alkyd (oil-based) primer, followed by two coats of exterior-grade acrylic enamel. Gloss should be used on trim, window sashes and doors, and satin for the main body of the building.

Despite current EPA regulations prohibiting their sale in many states, these regulations do not restrict the use of such products. Alkyd paints can be shipped from Fine Paints of Europe (see below), and more economical grades such as Sherwin Williams can be picked up locally in retail stores in Vermont.

16.3. We recommend the following options: Fine Paints of Europe <http://www.finepaintsofeurope.com>. Their alkyd primer can be tinted to 100% of the color of the finish coats. Use Hollandlac Brilliant® for trim, and Hollandlac Satin® for the siding. A lower-cost alternative is Sherwin Williams' A100® Alkyd Primer, followed by top coats of Sherwin Williams' Duration® exterior enamel. Gloss for trim, and Satin for clapboards.

16.4. For exterior preparation and painting, follow these instructions:

16.4.1 All exterior painting projects must comply with federal (EPA) and state regulations regarding the handling of lead paint.

16.4.2. All exterior combination storm windows and doors will be removed prior to preparation and painting.

16.4.3. All siding, window and door frames, and exterior trim should be thoroughly scraped to bare wood using only sharp, clean paint

scrapers. Scraper blades should be maintained with sharp edges at all times.

16.4.4. Extreme care will be taken with all moldings and curved surfaces to inflict no damage to the profiles or surfaces of the wood. Use shaped scrapers that appropriate the profiles of moldings.

16.4.5. Effort will be made to remove all paint. Areas of thick build up are generally the first to peel after the application of new paint because of inherent surface tension issues caused by varying thicknesses and elasticity of paint films. Paint buildup will only be retained where removal may result in damage to underlying wood surfaces.

16.4.6. All surfaces will be carefully sanded to minimize rough transitions between bare wood and any leftover paint accumulations and create an overall smooth substrate for new paint.

16.4.7. Prior to installation of paint, all bare wood will be treated first with a mixture consisting of 30% boiled linseed oil and 70% pure gum spirits of turpentine. This will be applied liberally until it soaks evenly into the wood. This will be allowed to dry for at least 48 hours prior to the application of primer and paint.

16.4.8. Apply paint and primer with explicit attention to manufacturers' recommendations regarding procedure and environmental conditions.

16.4.9. Application:

16.4.9.1 **Paint should not be applied with any type of sprayer.** All coats will be brushed.

16.4.9.2. For expediency, areas can be applied with a heavy-knap roller, and then immediately back-brushed.

16.4.9.3. Back-brushing should exhibit neat, long, parallel strokes.

16.4.9.4. Primer and paint will be worked deeply into all crevices, joints and cracks by hand with the brush.

16.4.10 Appropriate cure times will be followed as per manufacturers' recommendations.

16.4.10.1. Exterior paint will be allowed to cure for a minimum of 21 days prior to reinstallation of storm windows and doors. This will prevent possible welding of the new paint surfaces to the metal storms.

## 17. Exterior Masonry Pointing

Areas of the exterior brick masonry require minor repointing. This is limited to the brick foundation at the west end of the north elevation, including the corner; the north corner and west elevation of the ell; and the south elevation of the ell.

17.1. All areas exhibiting cracks, separations and missing mortar shall be raked out **by hand** using a masons' cold chisel. No power tools, including pneumatic chisels and rotary grinders, are permitted.

17.2. All joints shall be raked out to a minimum depth of one inch.

17.3. Areas within wall expanses and not associated with the corners of the building can be filled with new, soft lime mortar. We recommend a mixture containing clean, washed sand, masons' lime, and no more than two parts **WHITE** Portland cement. No gray Portland cement is permitted.

17.4. Mortar will be mixed to a fairly dry consistency, with only enough water that it can form and hold together in a ball when squeezed in the hands. No additional slump is permitted.

17.5. All areas of brickwork to be repointed will be thoroughly wetted with a pump sprayer prior to installation of new mortar.

17.6. New mortar will be installed in a neat and workmanlike manner using a trowel and pointing key with minimum excess.

17.7. Any excess mortar will be left in place and untouched for a minimum of 20 minutes, or until it has just begun to set. It can then be removed by scraping with a masons' trowel without risk of smearing or staining the brick.

17.8. The joints will be struck with a surface joint profile, reveal or any decorative tooling that matches the surrounding existing material.

17.9. While the new mortar is still soft, the joint between the new and abutting old mortar will be compressed and blended together with a wet finger to ensure a tight bond.

17.10. Areas of cracking or mortar loss associated with a corner of the foundation, particularly in instances of stair-step type cracking, shall be reinforced with stitching rods. These will be fabricated from ¼"-thick stainless steel threaded rod.

17.10.1. Areas of mortar will be removed on either side of vertical or stair-step cracks to permit installation of stitching rods.

17.10.2. The stitching rods will be inserted into the horizontal joints at each affected course and will span

the joint a minimum of 6" on either side of a given vertical crack.

17.10.3. The stitching rods will be inserted a minimum of one inch from the exterior surface, being embedded in wet mortar.

17.10.4. The stitching rods will be buried behind new pointing mortar. Techniques described above in items 17.3 through 17.9 apply.

17.11. After a minimum of 24 hours' cure time, the repairs can be washed with a weak solution of muriatic acid (less than 10%) and neutralized with liberal application of clean water.

## 18. Calcimine Paint Abatement

Room 209 exhibits widespread paint failure on plaster surfaces due to underlying calcimine paint and poor adhesion of subsequent coats. The only way to mitigate this problem fully is complete removal of the calcimine paint.

18.1. All project personnel must comply with federal and state EPA regulations for the handling of lead paint pursuant to interior lead paint abatement.

18.2. Use an eco-friendly paint remover such as Citristrip® [www.citristrip.com](http://www.citristrip.com) or EacoChem Instrip®. Either of these

products will successfully remove all layers of accumulated paint on the plaster.

18.3. After paint removal using chemical stripper, neutralize all surfaces as per manufacturers' recommendations.

18.4. To fully remove calcimine paint, use a solution of acetic acid (household-strength white vinegar), approximately one part vinegar to four parts warm water. This should be applied liberally with an automotive sponge and the surface scrubbed and rinsed until all milky residue has been removed.

18.5. Neutralize the surface by rinsing and scrubbing with a sponge and warm, clean water.

18.6. Allow all surfaces to dry thoroughly, at least 24 hours.

18.7. Prime all surfaces with a shellac-based stain-sealing primer such as Zinsser® or Kilz®.

18.8. Apply the interior latex paint of choice.

18.9. All paint should be rolled on and then back-brushed in neat, parallel strokes.

## SUMMARY RECOMMENDATIONS

### Recommendations for the Exterior

Please refer to the Project Specifications section for details about each repair.

1. Replace roof. Address gutters, flashing issues, and dormer structures as part of the project.
2. Remove or modify console feet on dormers.
3. Remove and store shutters (except on north elevation of ell) pending a decision to reproduce or restore.

#### **East Elevation**

4. Remove spray foam in sill and repair with wood graft and/or epoxy resin.
5. Secure north corner board and close the gap between it and the siding.
6. Prepare and paint clapboards.
7. Consolidate window frames.
8. Repair window sashes.
9. Remove spray foam from main cornice and repair.

#### 10. Door

- a. Replace flashing across door header.
- b. Remove putty or tar and repair base of south pilaster.
- c. Replace wooden kick plate with one no wider than the threshold.

#### **South Elevation**

11. Repoint lower courses of brick, where mortar loss has been painted over.

#### **South Elevation- Sun Porch**

12. Paint trim.
13. Reglaze and paint windows.
14. Prune or move rhododendron and any other vegetation to at least 2 feet from foundation.
15. Repoint mortar on west corner of foundation.
16. Repair brick masonry in window wells.
17. Replace cracked clapboards in-kind.

## 18. Door and surround:

- a. Remove paint, repair wood with epoxy, and repaint.
- b. Replace flashing on pediment roof.

## 19. Windows:

- a. Repair weather-checking in windows with epoxy and repaint.
- b. Repair rot and replace glazing and paint in sashes.

20. Remove spray foam from main cornice and repair.

**West Elevation**

21. Significant problem of roof drainage should be addressed as part of comprehensive repairs to gutters noted above under "Roof".

22. Repoint bricks in ell foundation with stitching rods inserted.

23. Replace cracked clapboards and repaint siding on ell.

24. Touch up glazing and paint on windows.

25. Reattach clapboard on main house.

26. Restore working sash to dormer windows to provide cross-ventilation.

27. Remove yew near walk-in cellar.

28. Remove gravel at bottom of door.

29. Treat and preserve historic door in cellar entrance in sun porch.

30. Inspect and clear drain in sun porch cellar entrance; possibly replace brick with gravel to promote drainage.

31. Move rhododendron away from building.

32. Repoint north corner of foundation.

**North Elevation**

33. Remove seasonal vegetation from foundation.

34. Allow paint to peel on foundation.

35. Repoint mortar in foundation.

36. Repair/replace cracked and loose clapboards at east foot of door pediment.

37. Repair/replace shutters on ell.

## **Recommendations for the Interior**

Please refer to the Project Specifications section for details about each repair.

### **General**

1. Change as little as possible to retain surviving historic material, hence the character of the building.
2. Any disturbance of historic material, whether accidental damage, repair, or removal, should be monitored by an architectural conservator. In most cases, repairs should be done by the conservator, or according to specifications he/she provides. This includes lead abatement that may be required by law under some circumstances.

### **First Floor**

#### **100a**

3. Fill gaps on the sides of the threshold between flooring and trims with wood grafts.
4. Stabilize buckle and crack in south wall plaster with acrylic injection.

#### **100b**

5. Monitor woodwork on staircase for deflection, and repair if necessary.

#### **100d**

6. Remove cement by door and replace with a wooden ramp.

#### **101**

7. Monitor chimney, hearth, and floor for further movement.

#### **102**

8. Re-attach ceiling plaster to lath with acrylic injections.
9. Sand stained, blistered area above mantel, neutralize soluble salts, and paint with stain-blocking shellac, followed by finish paint. Monitor for further water infiltration.

10. Apply new tape and joint compound to repair cracks between drywall sheets. (Does not require an architectural conservator.)

#### **103**

11. Seal stains on west wall with shellac primer and repaint. Observe for active water penetration.

#### **104**

12. Re-attach plaster on north wall, east wall, and ceiling if use of room is to change.

**105**

13. Remove concrete on floor and replace with linoleum.

**106**

14. Remove concrete floor and replace with tile or linoleum.

**109**

15. Re-attach plaster to lath on the west wall, between the windows above the sill line, using acrylic injection.

**Second Floor****200d**

16. Replace drywall in ceiling.

**203**

17. Install “tell-tales” and monitor gaps between the summer beam and the south girt and the crack between the east wall and the rear wall of the chimney closet for one year. If continuing separation is shown, reinforcement of the structural timbers will be necessary.

18. Reattach deflected ceiling plaster west of the chimney breast with acrylic injections.

**204**

19. Consolidate buckled plaster in northern corner of east wall with acrylic adhesive.

20. Consolidate ceiling with acrylic adhesive.

**206**

21. Monitor separation of tie beam and front girt on north wall with “tell-tales” for one year. Investigate gutter opposite on exterior for cause of leak. Structural reinforcement may become necessary.

**209**

22. Remove ceiling paint and start fresh, or patch-paint as needed.

**300c**

23. Reattach ceiling plaster with injection of acrylic adhesive.

**301**

24. Stabilize plaster on dormer cheeks, west wall, north ceiling and slope, and knee wall with acrylic adhesive.

**302**

25. Re-nail lath and secure detached ceiling plaster with acrylic adhesive.

## 304

26. Secure ledger board on the ceiling with stainless steel trim screws.

27. Reattach plaster north of purlin post with acrylic adhesive.

### **Basement**

28. Restore windows to operable condition and install screens and/or fans to increase ventilation in warm weather, reducing moisture.

29. Remove failed drywall in the space below Room 103 to help prevent mold growth.

30. Monitor crack in north chimney mass for one year with “tell-tales”.

31. Monitor tide line in north chimney base to determine whether rising damp is continuing.

32. Monitor structural cracking southwest chimney firebox with measuring devices to determine whether active.

33. Clean debris from firebox of southwest chimney, probably from previous condition, so further flue deterioration will be evident if more material accumulates.

34. Have licensed contractor remove asbestos panels from cold storage room under Room 101.

## MAINTENANCE CYCLE

The following section outlines maintenance measures that will do much to curb deterioration, prolong the life and performance of building materials, and lower repair costs in the future. These include items to be addressed annually, seasonally, and on a monthly basis.

Parish staff can perform most of the recommended measures. Monitoring some conditions and systems, such as roof snow load, ice dams, and structural cracks; and maintenance of furnace and air conditioning equipment should be done by appropriately qualified professionals.

### Maintenance Log

We suggest that a spreadsheet maintenance log be created that includes all items noted in this report that will be kept current, documenting observations over time for all of the items listed below. This will help to identify patterns in building performance, and anticipate needs for planning purposes. The log should note the condition of various elements, describe any treatments performed, and tally their costs.

### Building Treatment Records

In addition to the maintenance log, staff should keep files containing all documents pertaining to care of the building, rather than donating them to the library in the future, including plans, budgets, proposals,

contracts, and invoices. These should become part of the permanent files of the Parish, readily available to future staff and researchers.

### Maintenance Measures

#### Annual

All seasons, in episodes of heavy, wind-driven precipitation:

- Observe gutters to insure proper functioning. Look for water spilling over or leaking from gutters. Adjust or clean gutters accordingly.
- Inspect cellar for signs of leaks and look for point of entry, correcting drain or downspout clogs as necessary.

#### Fall:

- Check gutters after all leaves are off nearby trees but before snow; check for secure attachment and proper pitch.
- Clean gutters and flush downspouts to ensure proper working order.
- Remove accumulated leaves and plant debris from building perimeter, cellar entries, and cellar window wells. Kill and remove biological growth as necessary.
- With the assistance of a systems technician, inspect and service furnaces. Clean all associated vents and flues.
- Inspect storm windows and doors and make repairs to ensure all are in proper working order and shut tightly.

### **Winter:**

- Inspect exterior monthly for ice dams or other ice build-up; take photographs to inform mitigation measures in warmer weather.
- In instances of heavy snowfall, rake snow from eaves and flat roof areas to minimize potential ice dam buildup.
- Monitor the southwest corner of the building (exterior wall of rooms 103/203) for chronic icicle formation. Remove icicle as necessary.
- *The above two items should be performed by a roofing specialist to ensure no damage to roof, siding, woodwork or glazing.*
- Plan any construction projects for the warmer months.

### **Spring:**

- Check gutters for secure attachment and proper pitch
- Clean gutters, flush downspouts to ensure proper working order.
- Clean debris from all cellar windows. Kill any biological growth with a fungus-killing agent that is friendly to building materials.
- Inspect windows for cracked panes, condition of glazing
- Inspect roof membranes for tears, blisters, etc.
- Check vegetation growing near foundation and cut back to leave at least 24"
- Sweep leaves and other plant debris and dirt away from doorsills
- Rake leaves and soil away from foundation or any contact with wooden elements.

- Check clapboards for cracks, separation, protruding nails. Gently reset nails as needed.
- Inspect paint films for signs of blistering, chipping
- Inspect masonry for mortar soundness, brick spalling
- Inspect flashings around chimneys and other roof piercings for separation or other damage
- Schedule any contractors for planned construction projects for summer and fall to ensure timely completion.

### **Summer:**

- Carry out any repairs noted in spring inspection pursuant to glazing and paint touchups and woodwork in good weather.
- Inspect walls, ceilings, and fireplaces for stains, damp wall finishes, or flaking paint and document with photographs. This is particularly important in rooms 103, 201, 203, where there is already evidence of past leaks.
- Inspect cellar entries and windows monthly for accumulation of debris and condition of doors and remove as necessary.

## APPENDICES: PLAN DRAWINGS

### SUMMARY AND METHODOLOGY

The measured drawings here are provided by Nashawtuc Architects, tenants in the building at the time of this report. Their purpose is to serve as a reference for room numbers as they appear in the text of this report. They do not constitute complete record documentation of the building.

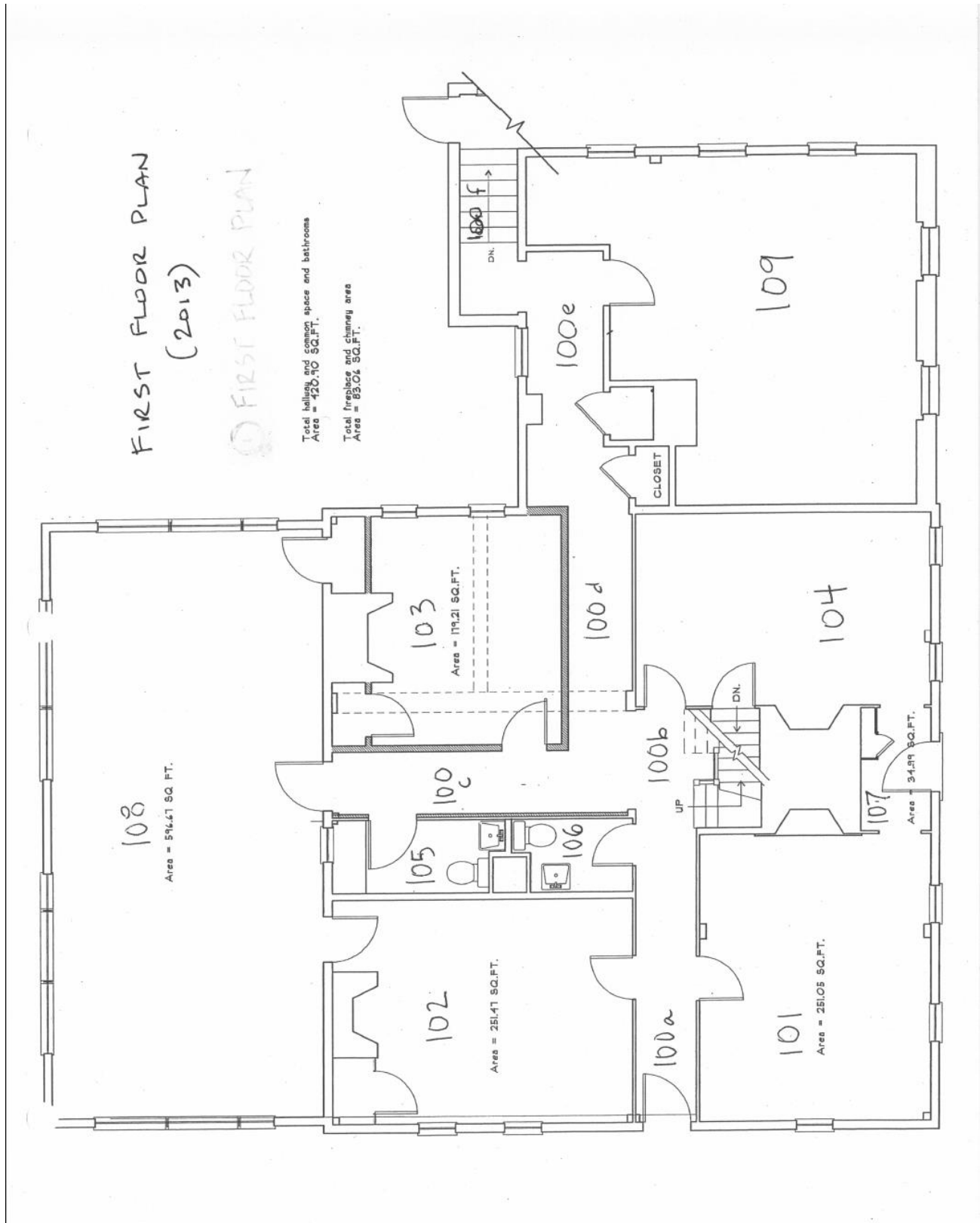
Timing issues precluded the plans for the basement and the third floor (attic) being fully integrated with the report text. Where these spaces are addressed in the text, we refer to a space either directly above or below for orientation; for example, “the area of the basement directly below Room 102.” Room numbers given for the third-floor spaces, 300 through 306, generally correlate with spaces below. For example, Room 301 on the third floor is positioned directly above Room 201 on the second floor and Room 101 on the first.

Measured drawings of The Wright Tavern were produced in 1933 as part of the Historic American Building Survey (HABS MA-553). Copies may be obtained from the Library of Congress, and would be a valuable appendix to this report. Bayard Underwood’s 1989 drawings might also be appended, though they do not fulfill HABS standards.

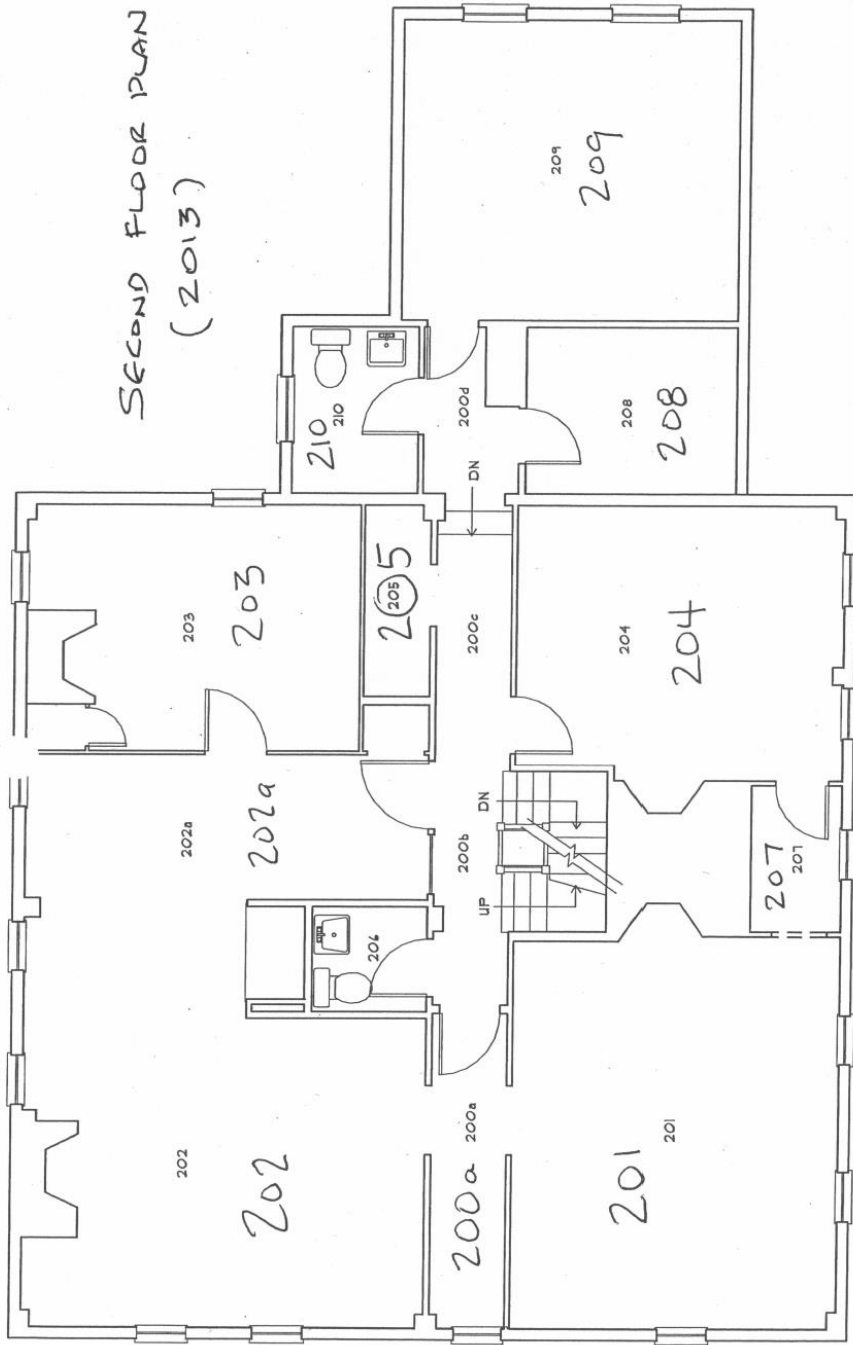
A complete and accurate set of up-to-date measured drawings, including plans for all

levels, exterior elevations, a site plan, and key architectural features are an important component of a Historic Structure Report. We recommend that building stewards add them to this report in the near future.

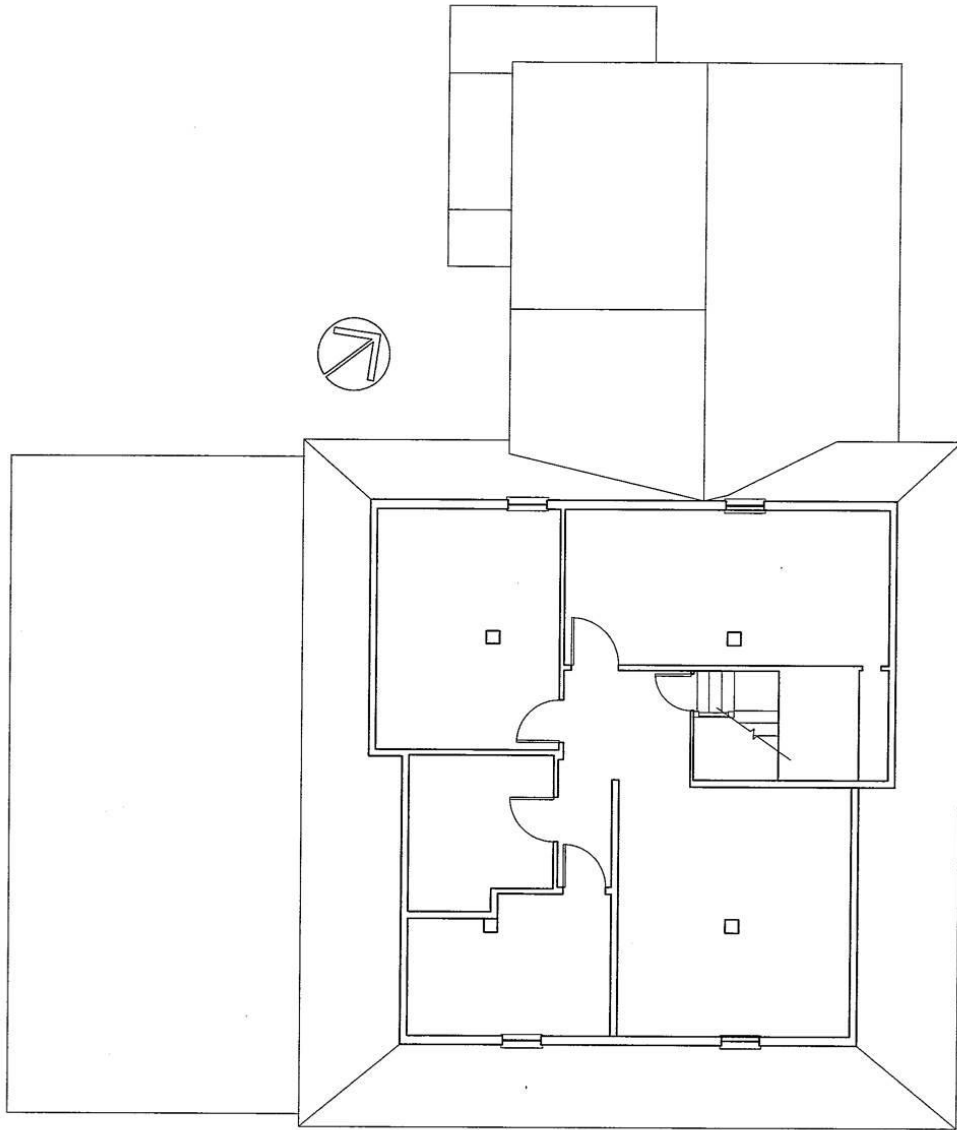
APPENDIX A: 2013 AND 2014 PLAN DRAWINGS



SECOND FLOOR PLAN  
(2013)

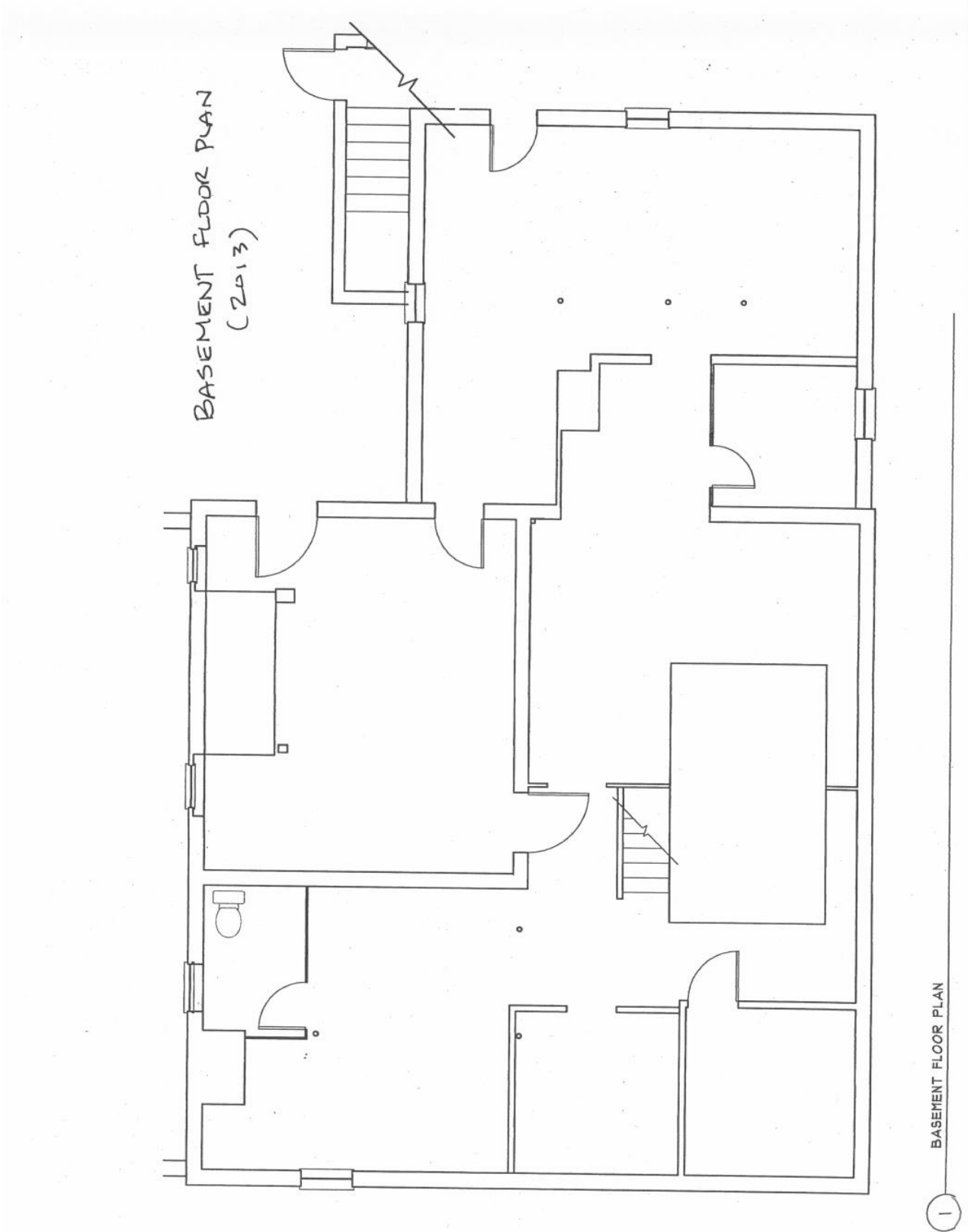


1 SECOND FLOOR PLAN



THE WRIGHT TAVERN  
DRAWN BY NASHAUTC ARCHITECTS  
3/26/2014

① ATTIC PLAN



## APPENDIX B: 1989 PLAN DRAWINGS

These elevations and plans from 1989 are presented as supplemental material.

