



Save Our Heritage

Protecting the birthplace of the American Revolution,
the cradle of the American Environmental Movement,
and the home of the American Literary Renaissance.

Completion Report

Colonel James Barrett Farm

Prepared for

Minute Man National Historical Park / Barrett Farm
National Park Service, Northeast Regional Office

Submitted by

Save Our Heritage, Inc.
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Period of Restoration - From July 2005 to December 2012

Report Date – November 2016

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1 Project Narrative

1.1 Site Significance

The Colonel James Barrett Farm is a highly important historic 300-year-old 18th-century landmark of architectural and historical national significance, particularly for its prominent role and association with the opening events of the American Revolution. This site meets criteria A and C of the National Register of Historic Places and was registered in 1973. It remains relatively little changed from its early appearance as documented in early prints and photographs. Most of the home's interior fabric dates to the early, nearly 200 year Barrett-era ca. 1705 to 1905. Outbuildings came and went including a large barn, stable, corn barn, and attached woodshed with a three-seat privy in the northeast corner. Prior to its restoration, most exterior surfaces and some minor interior alterations dated to the McGrath period of occupancy from ca. 1905 to 2005, however many important original components remain in place - more in fact than in many other Freedom Trail Landmarks documented by historic structure reports.

Historically, the Col. James Barrett Farm is a highly significant historic site in the American Revolution as the home of Col. James Barrett, who used it as a principal depot and storage site for the weapons and munitions of the Massachusetts provisional government. These munitions and provisions for a future rebel army were the principal objective sought by the British troops on their foray to Concord. As the home of the commander of the Middlesex County Militia on April 19, 1775, the Barrett Farm property at 448 Barrett's Mill Road is significant not only for the events of April 19, 1775 but as the residence of one of Concord's leading citizens of the period. In addition to his premier role in the Concord fight, even at his advanced age of 65 years, Col. Barrett continued his work for the Revolutionary cause attending the Provincial Congress from 1768 to 1777.

Architecturally, many of the early finish components survive in the house including three 18th century stairs, interior wall sheathing and paneling in four principal rooms and several minor rooms, most doors with hand-wrought iron hardware, brick chimney, fireplaces and brick oven of the front, southeast traditional Muster Room dating to the period around the American Revolution. Some later features dating to the later early 19th century Barrett Period include the rear kitchen with its brick bake oven at the side, the second floor rear of the former saltbox, the southeast chamber "Rumford" type fireplace and a smoke chamber of comparable date in the attic. Framing of the roof includes its old front rafters spliced to meet the later rear rafters, some re-used from the original saltbox.

Early photos document altered features including the 18th-century "jut-by ell's 9-over-6 windows with molded caps, 6 over 3 third story windows, Georgian six-panel doorway and pediment, as well as the main house's Federal Period front doorway with its pilasters and entablature, and flanking early 19th century window sash in plank frames. Early interior finishes include original paint with cedar graining in the southeast chamber, marbled fireplace and surround in the West Chamber, mahogany painted front stair stringer and handrails. Several rooms have baseboards in imitation of mahogany painted across doors. Many early wall and ceiling finishes, including plaster and floors, remain in all but a few rooms.

Restoration of the house to its primary period of significance as it appeared during the Barrett family occupancy reflecting nationally important events that occurred during the Revolution makes it a fine educational asset to the state of Massachusetts and the nation. Exterior pedimented doorways and windows that had been replaced in the early 19th century and again in the early 20th century have been well-documented and authentically reproduced based upon evidence from original components. Preservation of the McGrath Period components through salvage allows potential future interpretive display illustrating the story of Concord's more recent farming history to be told as well. The 100-year occupancy by the McGrath family has significance to the history of farming in Concord and Massachusetts.

Despite the vicissitudes of almost 250 years of use, including the loss of its east ell and outbuildings, the Col. James Barrett House has preserved a remarkable wealth of historic material on the interior and remains a significant preserved and authentically restored landmark. The Barrett house with its stout walls has been restored to sound condition as a landmark of national significance and an educational monument to the nation's founding.

1.2 Site History

The history of the Barrett Farm site is inextricably intertwined with that of Barrett's Mills.

Barrett Farm is on the flood plain of the Assabet River with fertile soil that has been farmed since prehistoric times. The land was acquired by Barrett from Richard Temple who had purchased the property in 1654 from William Spencer. A founder of Concord, present at the purchase from the Indians ca. 1636, Spencer was granted "300 acres beyond Concord near the Alewife River" ca. 1650.

A sawmill existed on Spencer's Brook by 1678, or earlier. In 1688 Richard Temple deeded the place to his son Isaac, along with a 1/8 share in the saw-mill near his house. Humphrey Barrett (who lived in the village, near the North Bridge) acquired 40 acres from James Smedley near Temple's sawmill in 1684. In 1702, Humphrey Barrett left this and other land in the vicinity to his son Benjamin who went to live there. In 1728 Benjamin split his estate between sons Thomas (who received the mill) and James, who went on to become Col. James Barrett of Revolution fame. The estate also included a right in the sawmill that was integral with the history of the farm. Barrett's Mills are clearly shown at Spencer's Brook, along with a Barrett District School No. 5 at the corner of Strawberry Hill Road, on maps of Concord in the 1830s and later.

Barrett's Mills of the period of the Revolution (involved in manufacturing munitions, as well as grist and saw mills) remained in operation well into the 20th century, and its ruins are still visible on the north side of Barrett's Mill Road along Spencer's Brook. Peter Barrett, the Colonel's son who occupied the house from 1779 to 1808, also owned part of the James Chandler estate property including house, barn, cider mill and cider house that James Barrett and Thomas Barrett had bought together from Richard Temple in 1746. Chandler's home, that could have been Temple's earlier structure, was apparently demolished after his death from smallpox in 1792. He was buried in a plot in the woods at the rear of the Barrett Farm where his gravestone remains.

The Barrett Farm site history is broken down into ownership by four different Barretts, over a period of 200 years, and ownership by the McGrath family who has farmed it for the last 100 years. The chronology is as follows:

1.2.1 Benjamin Barrett Period c. 1705 to 1728

The original farm and house that is said to have been first erected by Benjamin Barrett ca. 1705 has been extensively altered, but enough components remain to get some idea of its original appearance. Possibly originally a half house, the east half of the main building has a chamfered summer beam on the first floor and chamfered girts on the second - both without decorative stops. Re-used chamfered posts with plain and decorative stops, along with planed joists with 1/8 inch chamfers in the old Kitchen, Muster Room and Chamber above (with original planed ceiling boards indicating they were meant to be exposed), likely date to the ca. 1705 Barrett house or even earlier. Intermingled with the chamfered beams are hewn girts with tooled, beaded edges. These details are typical of the first quarter of the 18th century.

1.2.2 Col. James Barrett Period c. 1768 to 1779

The over fifty-year time of occupancy by Col. Barrett and his immediate family from his inheritance of the property in 1728 until his death in 1779 would be the period of greatest significance for the property. Barrett's Mill that stood on the north side of Barrett's Mill Road on nearby Spencer Brook was the source of the family's prosperity. It was also a significant component of the community effort for the Revolutionary cause, a target of the British assault on April 19, 1775, and continued in operation until the hurricane of 1938. Its ruins are now adjacent to town conservation land, near "Barrett's Mill Conservation Area" beside 422 Barrett's Mill Road.

The farm of Col. Barrett as known from early documents consisted of the Mansion House, a barn within 40 feet of the house, a small 10-foot square Corn House near the head of the lane leading to the barn, and undoubtedly a privy. Also not mentioned, but in existence by 1808 was the East Ell - a "woodshed, etc. attached to the house" that probably included a chaise house for the "old chaise" in Peter Barrett's 1808 inventory. Benson Lossing in his *Field Book of the American Revolution*, reports he visited Col. Barrett's home in 1848 when it was occupied by the Colonel's grandson Prescott Barrett. According to Lossing, Prescott told him "The house was erected about eighty years ago by Colonel Barrett." The majority of features of the front portion of the main house and the westerly ell, as they now stand are generally consistent with that c. 1768 date of construction (or rebuilding) of the two story saltbox main house remodeled and/or rebuilt with its 2 1/2 story West Ell, giving credence to Lossing's date citing Prescott Barrett as his source. At the same time, Lossing visited the Colonel's grandson Major James Barrett, then living at 612 Barrett's Mill Road, who told him of his participation in events of April 19th, 1775

1.2.3 Peter and Prescott Barrett Period c. 1780 to 1860

In the early nineteenth to mid-nineteenth century, some improvements were made to the house including raising the building about a foot with cut granite underpinning. Six-over-six windows and a Federal Period doorway were installed in the main house, undoubtedly by the time of Lossing's 1848 visit. This renovation would have included the raising of the second-floor rear addition to both the main house and the East Ell, along with alterations to the kitchen fireplace and smoke chamber added in the attic. This changed the form of the house from its earlier ca. 1768 saltbox form to the current full two-story, two room deep house form.

Although not visible in the Lossing view, it is certain the now-vanished East Ell, with its dry-laid foundation of small fieldstones was added by that time as it is referred to in the 1808 division of Peter Barrett's estate. Mary Barrett's dower third of the estate was to include "The Mansion House and the wood house &c. adjoining the same appraised [sic] at twelve hundred dollars" along with "the southerly half of the barn to the northerly barn flower way with the lower part of the shed adjoining, except the horse stable therein appraised at one hundred and fifty dollars" and "the whole of the Corn Barn appraised at twenty five dollars" as well as "fourteen and a half acres of improved and woodland on and about which said Buildings stand."

Barrett Farm undoubtedly then had a Well room in the shed, along with the chaise house for the "old chaise and harness" listed in Peter Barrett's 1808 inventory, along with the wood shed and privy.

1.2.4 Late Barrett Period: c. 1861 to 1905

After the death of Prescott Barrett in 1861, the Barrett Farm was occupied by his son George Barrett, apparently with at least one of his sisters, Augusta Haywood Barrett or Martha Sherman Barrett. Prescott's 1862 inventory is very complete and lists not only all of the furnishings and equipment of the house and farm, but also all of the "creatures" or livestock.

According to the Prescott Barrett 1861 inventory, airtight stoves had been added to the parlor and front bedchambers. A "cooking stove" was surprisingly listed in the Sitting or Muster Room, not the kitchen. All four front rooms were carpeted and had earlier floor cloths and the Sitting Room was also papered with a border as seen in the ca. 1888 photo of the Muster Room published in Margaret Sidney's *Old Concord Her Highways and Byways* (1888 and 1892). It appears that one of Prescott's twin daughters was in the house the day Margaret Sidney (AKA Harriet Lothrop) interviewed the Barretts about the April 19th, 1775 events for her books. Lothrop's fascination with the family stories of Col. Barrett's granddaughter Meliscent Barrett's cartridge making at the time of the North Bridge encounter in 1775, led her to write *The Little Maid of Concord Town* (1898) and to found the National Society of Children of the American Revolution (NSCAR) in addition to the Concord Chapter of the DAR.

Based both upon their appearance as seen in old photos taken before their destruction ca. 1977, the L-shaped barns to the west of the house, with their remnants of hand hewn beams, appear to have been constructed by the mid-nineteenth century. The high foundation of heavy large drill-quarried granite block is also characteristic of the early-to-mid 1800s. Some hand-hewn mortise-and-tenon fragments observed in the ruins indicate that parts of the earlier eighteenth century barn may have been incorporated within the later barn structures.

1.2.5 McGrath Period c. 1905 to 2005

All the living Barrett heirs would likely have had to sign off on the title to the property for its sale to the McGraths in 1905. During the hundred year McGrath family occupancy, modifications occurred primarily to the exterior fabric, with other changes to interior finishes and trim, as well as utilitarian features such as heating, electric lighting and plumbing, as well as kitchen and bathroom fixtures and appliances.

1.2.6 Save Our Heritage (SOH) Period - 2003 to 2012

A non-profit organization, Save Our Heritage, Inc. (SOH) was approached in 2003 by MMNHP and the Town of Concord to see if it could acquire the Barrett Farm in a timely fashion so it could be saved from possible development. SOH purchased the land in back of the house in December 2003 and the house itself in August 2005. Michael McGrath, who resided in the house until November 2005, had a new house built for him as part of the sale agreement at the back of the property on one acre of land and is owned by him. Work on the house began in November 2005 to keep it from collapsing in case of heavy snow load or high winds. The first work performed was to stabilize the house structure. The North wall was found to have no sill remaining and most of the wall structure rotted. The sills and other joists and posts in the house were repaired or replaced with white oak or white pine that was hand hewn in the traditional method of the time. Exterior work continued with clapboard and

window replacement. Once the exterior was stable, the interior restoration was started. Plaster walls and ceilings were repaired and repainted. The flaking lead paint was removed and in-fill performed. Floors that were not original and worn out were replaced by wide pine and laid out to match the 1880s photographs where possible. The fireplaces were repaired and walls in the rear of the house rebuilt, again with wide pine.

During the restoration period, Save Our Heritage held a number of open houses each year. Patriot's Day weekend was a prime open house time along with one in June and a few in September. A celebration of Colonel Barrett's 300th birthday was held on July 31, 2010 with over 60 Barrett descendants and nearly 1,000 visitors attending. Many photos and documents showing the progress over the years were put on the website.

1.2.7 Minute Man National Historical Park Period (MMNHP)- 2012 -

The Minute Man National Historical Park, part of the National Park Service, acquired the property in September 2012. Save Our Heritage had 90 days to remove its property from the site and that was done by the December 7, 2012 deadline.

1.3 Project Overview and History

This project has been intended to preserve and restore the historic Colonel James Barrett's Farm house for future generations because of its significance in the Revolutionary War and its importance to the Minute Man National Historical Park. The intent has been to make the house reflect its appearance in 1775 as nearly as possible, without sacrificing any significant later Barrett alterations or other character-defining features. McGrath Period components removed in the course of work have been stored for later exhibit.

Both Colonel James Barrett and his house had a major role in the start of the American Revolutionary War. On April 19, 1775, the British marched to Concord to seize arms and supplies throughout the town including a major stockpile they believed was stored at the Barrett Farm house. Two of four companies of British Regulars crossed over the nearby North Bridge to search the Barrett Farm, leaving the other two companies to protect the bridge for their return. Fortunately, the townspeople had received advance warning of the raid and had moved and also hidden various arms and supplies around the Barrett's Farm, even burying cannons into the Barrett fields. While Mrs. Barrett was made to feed part of the British regiment at the Farm house, the balance of the regiment became engaged in the first battle of the American Revolution at the historic North Bridge, where the famous "shot heard round the world" occurred. Colonel Barrett, whose house was a prime target of the British raid, was commanding the colonial Minute Men in the historic battle. *Not only did this house have a central role in the Revolution, but it also was the home of one of the most important Americans involved in the first battle of the Revolution.*

This house was always envisioned to become part of the Minute Man National Historical Park but has been in private hands until now. Remarkably, very few improvements or modifications have been made to the house in the 230 years since the Revolution and it retains much of its original fireplaces, walls, floors, and woodwork, as well as fragments of original windows and doors, plaster and painted decoration uncovered in the course of the work.

In 2005, Barrett's Farm became available for purchase for the first time in 100 years. There was a small window of opportunity to acquire the house before it was potentially subdivided for development. Neither the Town of Concord nor the Minute Man National Historical Park had the ability to move quickly enough to acquire Barrett's Farm. It was at this time that the Park Service, the Town, and local community groups joined together to mobilize a plan to save this historic landmark.

The non-profit community group Save Our Heritage quickly arranged a set of loans and donations to finance the acquisition of the house. The intent of the project has been to stabilize, conserve, and restore the house to the point where it can be transferred to the National Park System and integrated into the Minute Man National Historical Park.

1.4 Research and Documentation

Reports and documentation are referenced in this completion report. Most, eventually all, documents will be delivered to the NPS and will be available on the SOH website.

Table 1 Where to Find Reports and Documentation

Report and Documentation	Reference Section
Historic Structures Report (HSR)	1.4.1
Archaeology	1.4.2
Drainage	1.4.7
Paint	1.4.3
NPS Boundary Study	1.4.4
NPS Environmental Report	1.4.5
Save America's Treasures Reports	1.4.6
Genealogy Research	1.4.8
Concord NRC Reports	1.9.6
Community Preservation Act (CPA) Grants	1.11.1

1.4.1 Historic Structures Report (HSR)

A Historic Structures Report (HSR) and revisions were prepared by Frederic C Detwiller of New England Landmarks.

Table 2 Historic Structures Report Revisions

Revision	Date
--	July 25, 2007
A	February 17, 2008
B	April 17, 2009

The report identifies significant surviving original components from the Col. Barrett Period, as well as subsequent changes during the 200-year occupancy by the later Barrett family. The HSR identifies preservation needs, recommendations, and the property's potential for restoration, as well as possibilities for reconstruction of missing components such as outbuildings, landscape features, etc. The intent is to provide an interpretive tool for the education of the Concord community and the American public. Also of importance is a record of discoveries made during the project, including historic fragments found in the course of emergency repairs to stabilize the structure.

Recommendations were made, based upon the evaluation of the structure, that reflect the condition, potential for restoration, and relative costs of restoration alternatives. These are in keeping with the Secretary of the Interior's Standards for the Treatment of Historic Properties. Further background histories of the Barrett Farm and Col. Barrett, including detailed accounts of the events of April 19, 1775, as well as several inventories of the property and the house dating from 1779 to 1861, are contained in the HSR Appendix.

1.4.2 Archaeology

1.4.2.1 Site Examination

The Fiske Center at the University of Massachusetts was engaged to perform archaeology studies around the house. These studies were required by the Save America's Treasures federal grant (Section 106). The studies were managed by the Massachusetts Historical Commission.

Report Reference:

Site Examination of the Col. James Barrett Farm Property, Concord, MA
Christa Beranek, PhD with contributions by Thomas P. Mailhot
September 2008

Report abstract:

“A site examination of the Col. James Barrett Farm in Concord, Massachusetts, in 2007, provided evidence for significant late 18th and early to mid-19th century landscaping activities around the standing house and discovered and tested a mid-19th century primary ceramic trash deposit. The property is historically significant because of Col. James Barrett’s association with the American Revolution, the well-preserved early 18th-century architecture, and the continuous history of the land as a family farm. The excavations demonstrated that the property is archaeologically important because of the abundant evidence for landscaping activities and the many areas of intact deposits. The 23 test pits and 11 excavation units around the historic house (core constructed ca. 1705) indicate that there are intact strata and deposits in the yards, although many of the areas adjacent to the foundation have been disturbed by more recent foundation repair. Buried cobble pavings survive north of the house, at its southeast corner, and in front (south) of the west ell as well as in the western part of the east ell. Many of these paving sit on top of artificially raised ground surfaces and a buried A horizon dating to the late 18th century almost a meter below the modern ground surface. The trash deposit was located behind the east ell; we identified at least 49 ceramic vessels from this deposit, most dating from the 1820s to the 1850s. The foundation of a former ell was mapped, but no additional outbuildings were discovered. The trash deposit and cobble pavings are associated with members of the Barrett family who owned the property until the early 20th century. There are also substantial early 20th-century sheet middens in the front yards associated with McGrath households who owned the property from 1905 to 2005.”

1.4.2.2 Site Examination Artifacts

A second report from the Fiske Center at the University of Massachusetts/Boston assessed the artifacts found during the excavation:

Report Reference:

University of Massachusetts, Boston
Scholar Works at UMass Boston
Graduate Masters Theses Doctoral Dissertations and Masters Theses 6-1-2011
http://scholarworks.umb.edu/masters_theses/34/

“Farmstead and Household Archaeology at the Barrett Farm, Concord, Massachusetts” (2011)
Thomas P. Mailhot, University of Massachusetts Boston
Email thomas.mailhot74@gmail.com

Report Abstract:

“Changes in the landscape across the Barrett farmstead in Concord, Massachusetts, are examined and related to changes in the household during the 1850s and 1860s. Although the Barrett family had a long and prosperous tradition of farming in Concord, this changed at the end of the 19th-century, as the farm was reduced in size and the operation reduced in scale. The majority of artifacts and data recovered from an excavation in 2007 by UMass Boston dealt with the 19th-century occupation of the farmstead. Changes in the household and across the farmstead in the 19th-century can be seen archaeologically through the formation of features, including a ceramic midden behind the collapsed east ell. Changes in the landscape are linked to specific households. The economic factors affecting the 19th-century households are examined. The archaeological evidence, supported by documents, help show how external pressures shaped the landscape of a New England farmstead.”

1.4.2.3 Remaining Artifacts

The archaeological digs did not find all of the artifacts. There are still significant amounts of artifacts between the stone walls (near the well) where the digging was originally done. Also, when preparing the foundation for the East Ell extension, heavy deposits of china were found and mostly left intact – remove the East Ell floor boards and cobblestone top to access these.



Figure 1 East Ell Foundation with Cobblestone

Figure 2 Artifacts from East Ell Foundation Trench

1.4.3 Paint Studies

Paint analysis was used to reveal the history of paint in the house. It let us determine the interior appearance in the 18th century. There were various steps used in the analysis and included, in-situ inspection, paint sampling, and various levels of analysis. With this information, paint stripping was done to the original layers. Designated small sections of walls, ceilings, and doors were held back to preserve the paint history in place and are covered by small bronze pieces. In-Situ Paint Analysis (the first step) assisted in deciding where to take paint samples from. On-site samples were then taken from many locations to do chemical and closer analysis.

The scope of work included conservation work in the following specialties:

In-fill – In-fill of plaster, paints, or wood. In-filling fills losses to original fabric. In-fill is not always accomplished with in-kind materials. In general terms, paints and finish materials are matched well enough that all architectural elements blend with surrounding original but also show detectable differences of surface quality, depth and/or color.

Consolidation – Injection of adhesives through small holes drilled along crack lines and in areas where plaster on walls and ceiling flex when pushed indicating that plaster keys are broken; thus plaster is no longer keyed to the lath. Injected adhesives fill and expand to form new keys that tie plaster back on to lath.

In-painting – Mixing of dry pigments on a palette with reversible acrylic binder in order to tonally match to surrounding original color. Objective of in-painting is to cover over only those areas that cause a visual disruption to a visitor's perception of the early finish as it appears currently.

Table 3 Paint Studies

Study Title	Vendor	Date	Description
Interior Finishes, In-Situ Investigation	Architectural Conservation Services	January 2010	The purpose of this investigation was to investigate the finishes of select interior areas of the Col. Barrett Farmhouse to determine, if possible, target (1775) finish systems and generic colors within the subject areas, and; determine similarities between early finishes in each area, and provide a suggested strategy for historic paint sampling.
Interior Finishes – On Site Sampling Documentation	Architectural Conservation Services	February 2010	Photographs of locations where sampling was done.
Finishes Investigation – First Floor	Architectural Conservation Services	August 2011	This report serves to record finishes of representative samples taken from select interior areas of the first floor of the Colonel Barrett Farmhouse. The purpose of this investigation was to assess and analyze extant finishes to determine target finish campaigns (c. 1775) for matching to the Munsell Color Notation System and closest commercial paint system.
Summary Finishes Investigation of Window Frame Fragment	Architectural Conservation Services	April 2010	Objective: Determine if any remnants of applied coatings were present on a fragment of a mortise and tenon window frame with integral ogee band molding. It was verbally conveyed this fragment had been found in the attic where it had been reused as a nailer, likely installed during a 1906 renovation. Fragments of wire nails were observed embedded in the fragment that were assumed to correlate to the 1906 date.
Summary Finishes Investigation of Door	Architectural Conservation Services	August 2011	Objective: Determine if applied coatings were present on a historic door located at the Concord Museum and, if so, compare to any coatings found on the window frame and/or elements within the Barrett Farm Entry – Room 102, as it was speculated the door under investigation might have been located in the front doorway.
Original Exterior Treatments	Building Conservation Associates, Inc. (BCA)	October 2012	A description of a study of house fragments and comparisons to other houses. (Brian Powell)
Paint Finishes	Bridget Byrne	December 2012	A detailed report on the interior finishes done in 2012. Includes each room, what pigments are used, and what the recipe mixes are.

1.4.4 MMNHP Boundary Study and Environmental Assessment

NPS performed a boundary study for the purpose of including Barrett Farm within the Park boundary. The report was issued in August 2007. Congress approved the addition of the Barrett Farm within the Park in (March) 2009.

Executive Summary

“This study considers expanding the boundary of Minute Man NHP. There are several significant properties outside the existing park boundary that are integral to the story of Minute Man NHP or are important to management of its current resources and that have been identified for possible inclusion in the park boundary. The boundary study evaluates inclusion of Colonel James Barrett’s Farm House, 448 Barrett’s Mill Road, Concord, MA, as well as abutting properties that once were part of the original farm. Colonel Barrett’s Farm was a hiding place for military stores hidden by the colonists that British troops were trying to seize in an action that precipitated the Revolutionary War. The study also examines inclusion of 37 North Great Road (Battle Road), which is a property contiguous to Minute Man NHP and the Battle Road, in Lincoln, MA (behind the historic Joshua Brooks House).”

“The boundary study presents two alternatives —1) Alternative 1: No Action; and 2) Alternative 2: Adjust the Boundary to Preserve Barrett’s Farm and the Area around the Joshua Brooks House. Alternative 2 meets criteria

for boundary expansions published in *National Park Service Management Policies 2006* (Section 3.5). This alternative would expand the park boundary and permit acquisition of Barrett’s Farm and other identified parcels as well as development of general agreements for landscape preservation with surrounding properties. This alternative also would permit development of a general agreement or possible acquisition for part or all of the parcel at 37 North Great Road, at Elm Brook and the Joshua Brooks House, in Lincoln, MA. This alternative would allow acquisition of private parcels by willing sellers.”

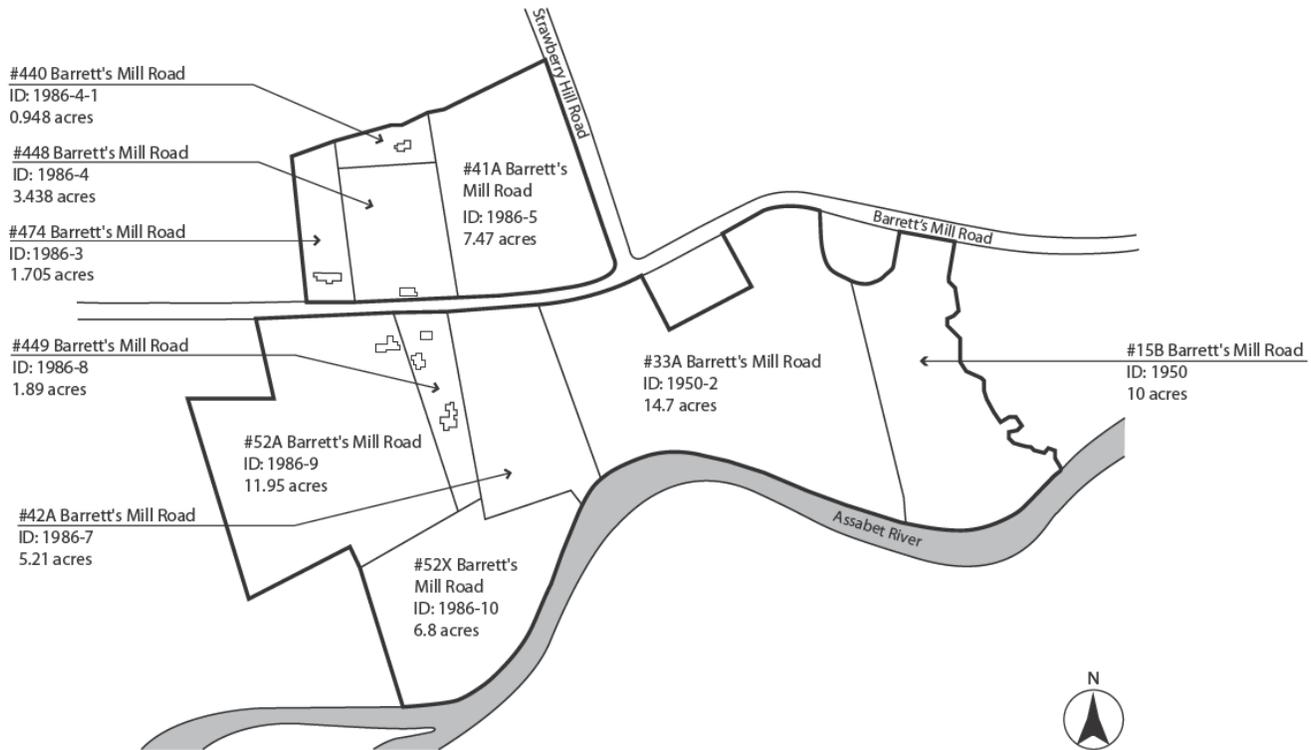


Figure 3 Boundary Study - Properties Map

1.4.5 National Park Service (NPS) Environmental Report

As part of the transfer of the Barrett Farm from SOH to NPS, an environmental report must be done. This report was prepared by Atlantic Environmental Technologies, Inc. as AET Project No. 6424.00 and dated June 9, 2012. The title is “Phase I, Environmental Site Assessment, Minute Man National Historical Park, Tract 06-102”. It contains the research on the environmental history of the property and surrounding properties. It includes SOH documentation on oil cleanup and asbestos abatement. The report includes many aerial photographs and GIS maps.

1.4.6 Save America’s Treasures (SAT) Report

SOH received a Save America’s Treasures grant (#25-06-ML-0508) administered by the National Park Service. The grant period was from June 1, 2007 through Dec 31, 2011. All special conditions were met, the grant successfully closed, and the granted funds expended. There were two interim and one final report submitted along with numerous photographs.

1.4.7 Drainage Reports

The drainage around the house was improved during summer 2012. A number of registered documents, hearings, and plans were submitted. They include:

Table 4 Drainage Reports

Document	Date	Reference	Content
Request for Determination of Applicability - 06-21	10/18/2006, (issued 11/3/2006)	Concord NRC	NRC determined that the ditch area along the barn road was not large enough to be considered a wet lands area. This did not include a small portion of the ditch connecting to the neighbor’s ditch.

Notice of Intent	3/9/2011	Concord NRC	Required information to install drainage pipes in an area subject to wetlands restrictions.
Letter	10/14/2011	Concord NRC	Response to NRC about the Invasive Species Control Program.
Groundwater Radius of Influence	4/12/2011	Concord NRC	Engineering input (Perley) that describes how far a drainage pipe drains the surrounding area.
Order of Conditions	8/8/2012	Registry of Deeds	Conditions imposed on SOH to meet the NRC wetlands requirements. Book 59710 Page 380.
Easement	8/30/2012	Registry of Deeds	Drainage easement on 449 Barrett's Mill Road benefiting Barrett Farm. Easement places responsibility on SOH, not NPS. Book B59889 Page 18 and Plan 2012/609.
Annual Reports	12/31/2012 - 2015	Concord NRC	Required annual status report as part of Orders of Conditions.
Certificate of Compliance	08/31/2015	Registry of Deeds	Required certificate. Book 65998 Page 456.

1.4.8 Genealogy Research

As part of the overall historic research, much work has been done on the Barrett family. A key source for the data was Charles Potter's *Genealogies: Old Families of Concord* book from 1887. Online research added much after that date and contact with family has added much more. The database (November 2016) has over 19,300 individuals in it. Many of the family have visited the house and are aware of their connections. Over 60 members attended the 300th birthday on July 31, 2010. Artifacts and handed-down stories survive. The first 10 generations of the family can be found on the website.

1.4.8.1 Benjamin Barrett Family

1 **Benjamin Barrett** b: 07 May 1681 in Concord, MA, d: 25 Oct 1728 in Concord, MA
 ... + Lydia Minott b: 12 Mar 1686/87 in Concord, MA, m: 03 Jan 1704/05 in Concord, MA, d: 14 Feb 1742/43 in Marlborough, MA
2 Benjamin Barrett b: 15 Nov 1705 in Concord, MA, d: 23 Oct 1738 in Concord, MA
 + Rebecca Jones b: 15 Apr 1710 in Concord, MA, m: Abt. 1730 in Concord, MA, d: 14 Apr 1802 in Ashby, MA
2 Thomas Barrett b: 02 Oct 1707 in Concord, MA, d: 20 Jun 1779 in Concord, MA
 + Mary Jones b: 23 Mar 1715 in Concord, MA, m: Abt. 1730 in Concord, MA, d: 30 Jan 1804 in Concord, MA
2 **James Barrett** b: 31 Jul 1710 in Concord, MA, d: 11 Apr 1779 in Concord, MA
 + Rebecca Hubbard b: 11 Jul 1717 in Concord, MA, m: 21 Dec 1732 in Concord, MA, d: 18 Oct 1806 in Concord, MA
2 Lydia Barrett b: 02 Aug 1712 in Concord, MA, d: 27 Jun 1802 in Lincoln, MA
 + Samuel Farrar b: 28 Sep 1708 in Concord, MA, m: 13 Jan 1731/32 in Concord, MA, d: 18 Apr 1783 in Lincoln, MA
2 Rebecca Barrett b: 29 Mar 1714 in Concord, MA, d: 08 Feb 1733 in Concord, MA
2 Timothy Barrett b: 02 Jan 1715 in Concord, MA, d: 04 Jan 1800 in Concord, MA
 + Dinah Brigham b: 05 Sep 1719 in Southboro, MA, m: 24 Jan 1750/51 in Southboro, MA, d: 1754
 + Anna Vaughn m: 27 Sep 1758 in Concord, MA, d: 1779
 + Rebecca Brown b: 1751 in Lincoln, MA, m: 25 Jun 1781 in Lincoln, MA; Intention
2 Mary Barrett b: 27 Dec 1717 in Concord, MA
2 Stephen Barrett b: 18 Apr 1720 in Concord, MA, d: 25 Apr 1793 in Paxton, MA
 + Elizabeth Hubbard b: 25 Sep 1720 in Concord, MA, m: 15 May 1750 in Rutland, MA, d: 12 May 1802 in Paris, NY

1.4.8.2 Col. James Barrett Family

1 **James Barrett** b: 31 Jul 1710 in Concord, MA, d: 11 Apr 1779 in Concord, MA
 ... + Rebecca Hubbard b: 11 Jul 1717 in Concord, MA, m: 21 Dec 1732 in Concord, MA, d: 18 Oct 1806 in Concord, MA
2 James Barrett b: 04 Jan 1734 in Concord, MA, d: 30 Oct 1799 in Concord, MA
 + Millicent Estabrook b: 25 Jul 1738 in Lexington, MA, m: 04 Jul 1758 in Lexington, MA, d: 01 Jun 1821 in Concord, MA
2 Nathan Barrett b: 30 Dec 1735 in Concord, MA, d: 22 Feb 1791 in Concord, MA
 + Meriam Hunt b: 16 May 1741 in Acton, MA, m: 22 May 1760 in Concord, MA, d: 18 Dec 1824 in Concord, MA
2 Lydia Barrett b: 08 Jun 1738 in Concord, MA, d: 24 Feb 1809 in Paris, NY
 + Josiah Melvin b: 14 Jun 1727 in Concord, MA, m: 03 Mar 1757 in Concord, MA, d: 23 Feb 1809 in Paris, NY
2 Rebecca Barrett b: 19 Nov 1741 in Concord, MA, d: 03 Mar 1775 in Concord, MA

..... + George Minott b: 23 Apr 1741 in Concord, MA, m: 17 Jan 1765 in Concord, MA; d: 13 Apr 1808 in Concord, MA
2 Ephraim Barrett b: 03 Mar 1744 in Concord, MA, d: 03 Mar 1771 in Concord, MA
2 Persis Barrett b: 25 Sep 1747 in Concord, MA, d: 05 Sep 1781 in Concord, MA
 + Jonas Potter b: 06 Feb 1740 in Concord, MA, m: 30 Dec 1766 in Concord, MA, d: 07 Mar 1821 in Concord, MA
2 Stephen Barrett b: 29 Jan 1750 in Concord, MA, d: 04 Feb 1824 in Concord, MA
 + Sarah Barrett b: 16 Feb 1754 in Concord, MA, m: 22 Jun 1775 in Concord, MA, d: 10 Jun 1788 in Concord, MA
 + Phebe Bridge b: 06 Jun 1756 in Lexington, MA, m: 11 Nov 1789 in Lexington, MA, d: 30 Jan 1845 in Concord, MA
2 Peter Barrett b: 16 Apr 1755 in Concord, MA, d: 11 Apr 1808 in Concord, MA
 + Mary Prescott b: 09 May 1760 in Salem, MA, m: 08 Jul 1779 in Concord, MA, d: 29 Jan 1846 in Concord, MA
2 Lucy Barrett b: 20 Jul 1761 in Concord, MA, d: 19 Dec 1787 in Barre, MA
 + Noah Barre Ripley b: 28 Aug 1749 in Hingham, MA, m: 08 Apr 1783 in Concord, MA, d: 06 Aug 1835 in Barre, MA

1.4.9 Barrett Family Artifacts

1.4.9.1 Muskets and Powder Horns



Figure 4 Col. Barrett Musket



Figure 5 Col. Barrett Powder Horn



Figure 6 Col. Barrett Powder Horn

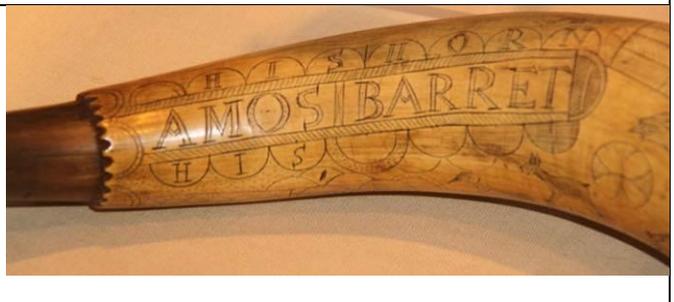


Figure 7 Amos Barrett Powder Horn

1.4.9.2 Desk

The Colonel Barrett desk has been located at the General Israel Putnam House, operated by the DAR, in Greenwich, CT. Notes in the desk state that it is a black cherry desk and it was made for Col. James Barrett by his Adjutant (Hosmer). The Tree had grown a few feet from North Bridge, Concord, MA.

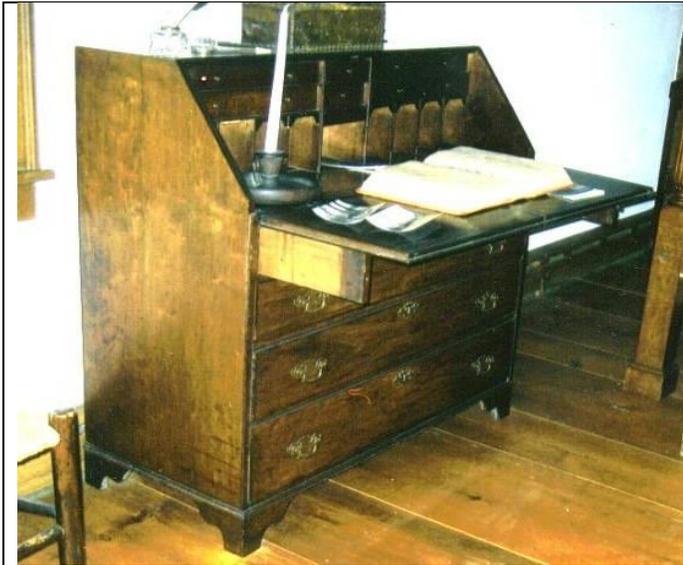


Figure 8 Col. Barrett Desk Corner View



Figure 9 Col. Barrett Desk Front View

1.4.9.3 Rebecca Barrett Wedding Dress

This textile segment is owned by descendant Rice Barrett Flanders Smith and an inscription on the back notes that it is from Rebecca Barrett's wedding dress (1732). Consultants state that it is made out of silk from Spital's Fields in London, taking many months to produce the textile.



Figure 10 Rebecca Barrett Wedding Dress



Figure 11 Rebecca Barrett Wedding Dress Closeup

1.4.10 Web Site

The Save Our Heritage website (<http://saveourheritage.com>) links to the Barrett Farm documentation that includes most of the documentation mentioned plus family genealogy, visitors, Barrett family visitors, lecture and event videos, and more detailed progress photographs.

1.5 Work Performed – By Façade and Room

The attached photo pages with captions illustrate each exterior façade of the Barrett Farm before, during and after Project Work. Photos of the interior also illustrate the sequence of work documenting existing conditions, showing interim phases, and final outcome of the Project Work. The interiors are shown on a room-by-room basis with details of relevant components as necessary. Also available for study on accompanying CDs are numerous other photos taken during the course of work of both the building itself and artifacts found in the restoration process. Historic photos are also included that were either included in the report, redundant to those reproduced in the report, or that add information on historic resources similar to the farm, house and/or its contents.

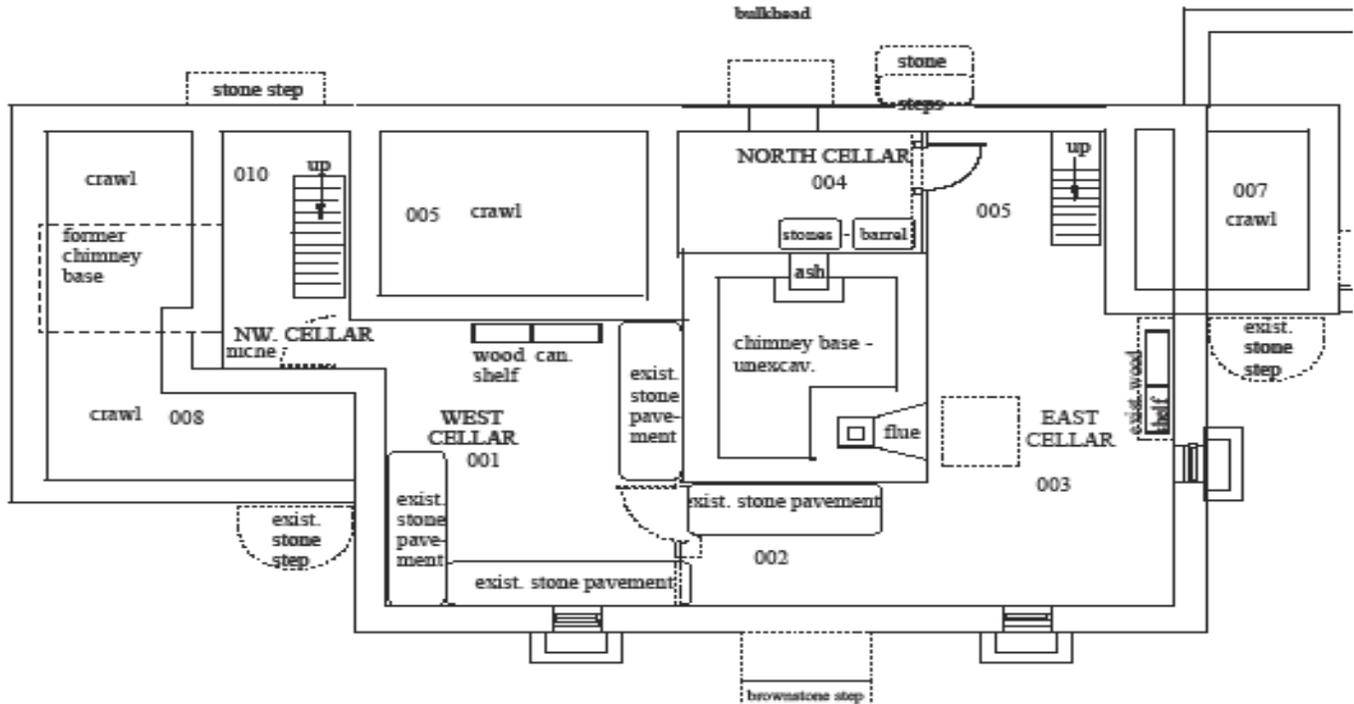


Figure 12 Basement Room Names and Numbers

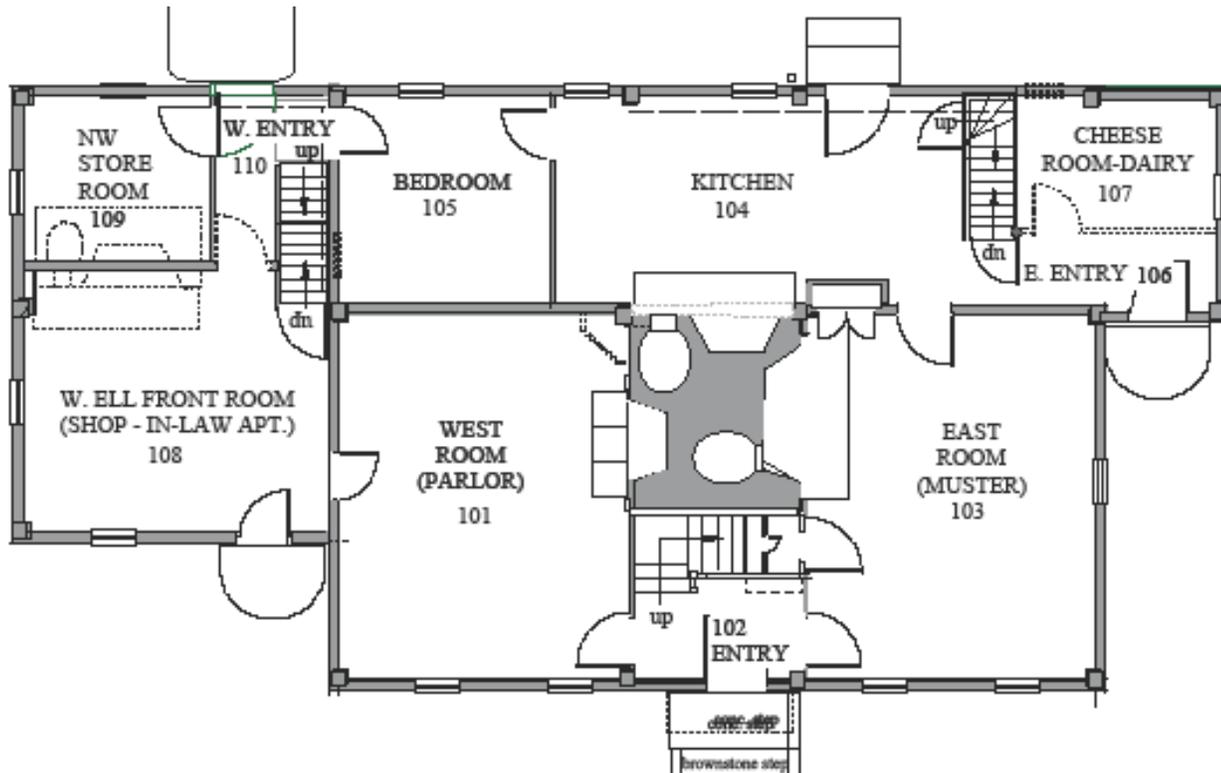


Figure 13 First Floor Room Names and Numbers

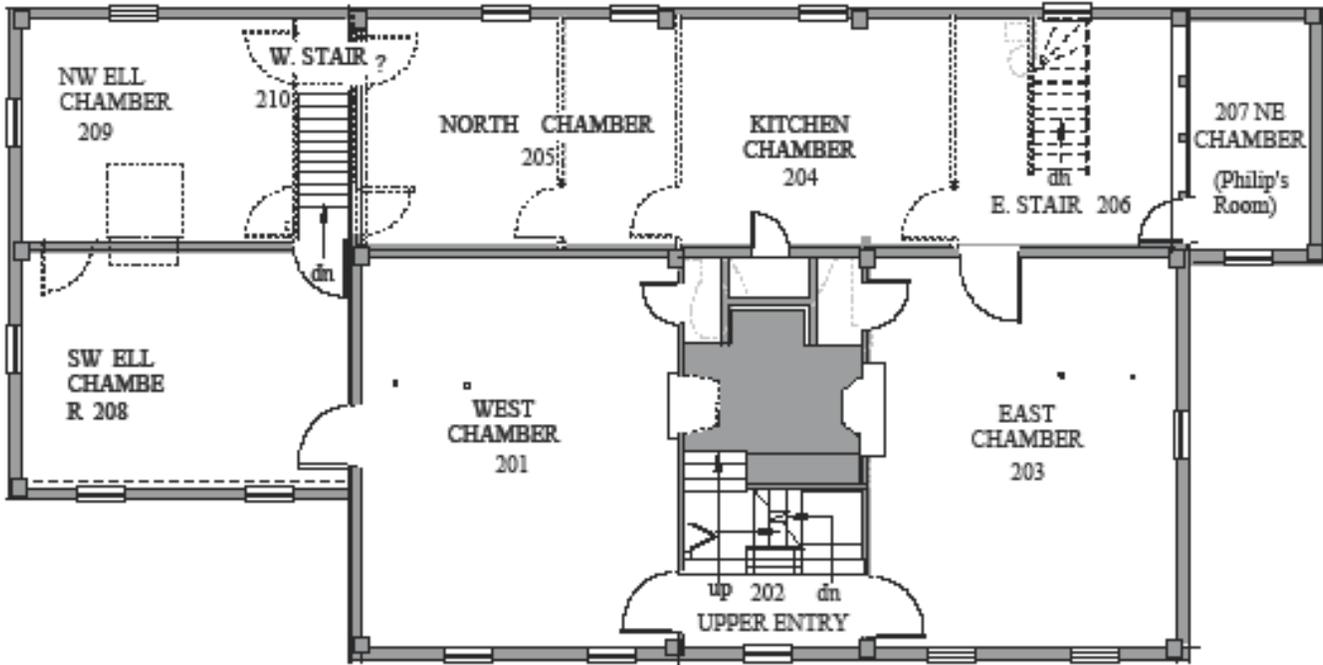


Figure 14 Second Floor Room Names and Numbers

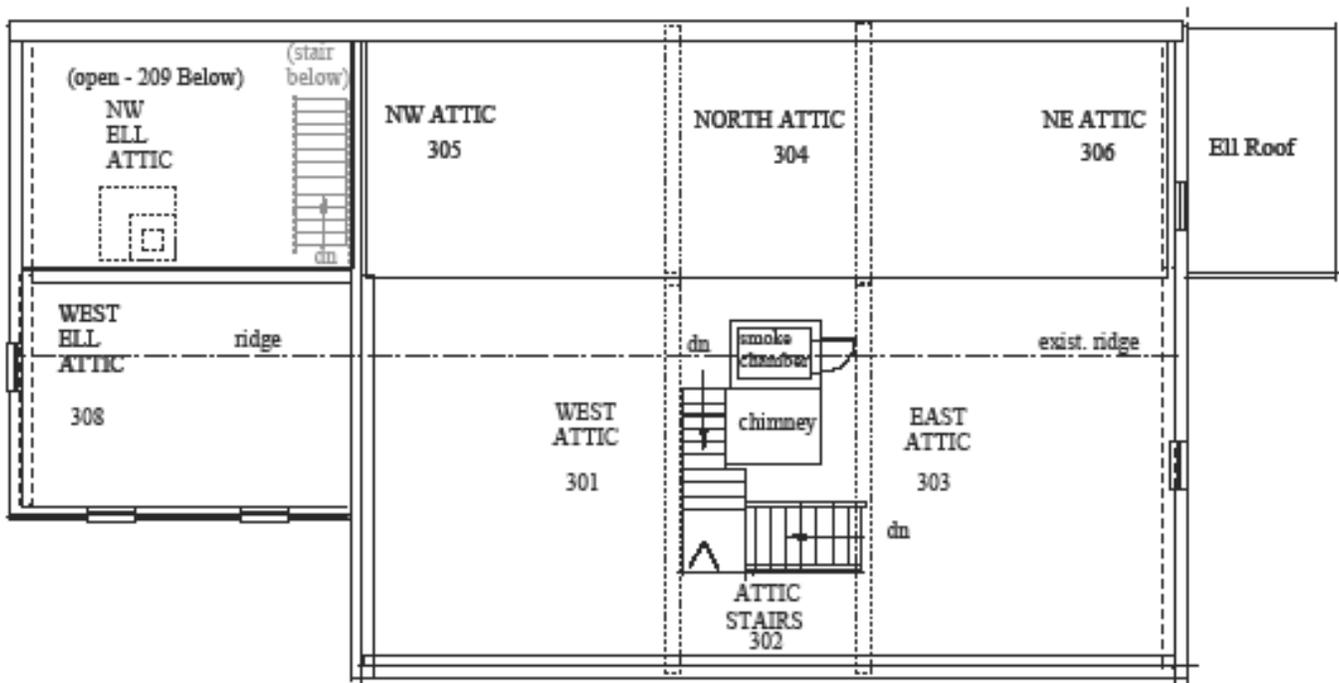
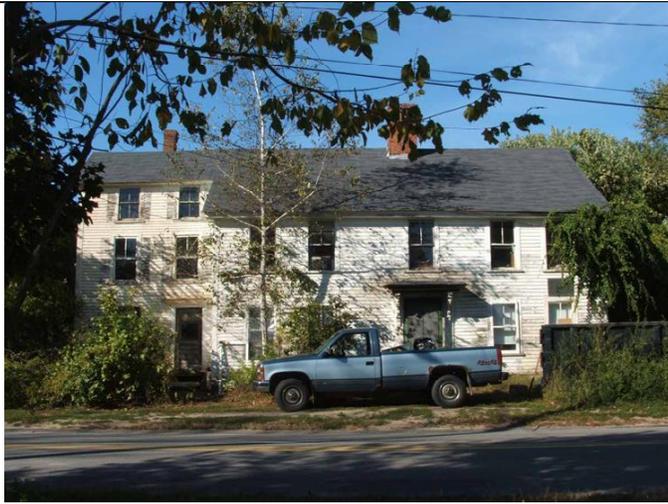


Figure 15 Attic Room Names and Numbers

Table 5 House Exterior - South Façade



Before Restoration

The exterior had 20th century doors and windows, clapboards and trim installed ca. 1911. The severely rotted exterior roof sheathing was covered with 20th century asphalt shingles. The house was overgrown with invasives including bittersweet that was growing through attic windows. Chimney tops had been rebuilt in the 20th century and were also deteriorated. All visible exterior finishes had been installed during the 20th century and were considered unsalvageable except for front door and brackets that have been saved for future study and/or exhibit.



During Restoration

The main house chimney, cracked and reduced in size, was rebuilt to its original size based upon framing evidence. The West Ell stove flue inscribed “built April 1911 was removed as unsafe. The asphalt shingle roof was stripped and rotted sheathing in the process of replacement with white pine 1 in. boards matching the originals. 20th century clapboards were removed and unsound sidewall sheathing and framing replaced where necessary 20th century windows were removed and fragments of molded 18th century plank window frames with shadows of former pediments found.



After Restoration

The south front was completed with clapboards and wrought nails matching the evidence of originals. The front doorways were reproduced based upon photographic and physical evidence with the front doorway matching interior details of the house based upon the original 18th century doorway of the Old Manse of 1770 at North Bridge. The window pediments were reproduced based upon originals remaining on the Beaton House at 108 Lexington Road. Original stone door steps were re-used including the front door step that had been moved to the rear.

Table 6 House Exterior - East Façade**Before Restoration**

The east end exterior had 20th century doors and windows, clapboards and trim installed ca. 1911. The 2nd floor rear of the former saltbox house had been added ca. 1810-1830. The partially rebuilt exterior sidewall sheathing was covered with late 20th century clapboards, door and window where the East Ell, altered in the 19th century, had been removed after its collapse ca.1977. All visible exterior finishes had been installed during the 20th century and were considered unsalvageable except for the ca. 1911 east entry door and cornice, found in the shed opposite, that have been saved for future study and exhibit. Cobble paving was found at East Entry area by archaeologists.

**During Restoration**

The former East Entry was rebuilt to its original size based upon foundation and framing evidence as well as the original east entry of the nearby James Barrett Jr. House at 612 Barrett's Mill Rd. Unsound sidewall sheathing and framing were replaced with white pine boards and oak framing matching the originals. 20th century clapboards were removed and replaced with clear heart pine skived clapboards matching originals on Benjamin Obdyke Home Slicker Plus Typar underlayment. Reproduction windows were based upon fragments of molded 18th century plank window frames and shadows of pediments.

**After Restoration**

The East end was completed with clapboards and wrought nails matching evidence of originals. The East Entry doorway was reproduced based upon an original 18th century door to the house found at the Medford Historical Society. Windows were based upon fragments and window pediments based upon originals remaining on the Beaton House on Lexington Rd. Reproduction glass was made in France, bulls-eyes over door in Sandwich, MA. Original stone door step was re-used. Cobbles at entry and pavement in the Dairy crawl area were preserved and re-laid during East Entry foundation rebuilding. Lead flashing was added to pediments and window caps.

Table 7 House Exterior - North Façade**Before Restoration**

The North, rear side of the house had 20th century doors, windows, clapboards and trim installed ca. 1911. The severely rotted exterior roof and sidewall sheathing was covered with 20th century asphalt shingles and clapboards from Fraser Mills in New Brunswick, NS. The house was overgrown with invasives, had severely rotted sills, and back wall with broken, rotted doors and windows. Chimney tops rebuilt in the 20th century\were also deteriorated. All visible exterior finishes had been installed during the 20th century and were considered unsalvageable except for sample components\ saved for study and/or exhibit.

**During Restoration**

The main house rear wall was hanging from the roof rafters and needed emergency shoring. Staging was set up to remove the asphalt shingle roof and rotted sheathing, replaced with white pine one inch boards matching originals. 20th century clapboards were removed and unsound sidewall sheathing and framing replaced where necessary. Tyvek was used as a temporary covering. 20th century windows were removed. Remnants of First Period framing, re-used in the building of the lean-to ca. 1768, were preserved and retained in situ or re-installed where found. White oak was used for the 18th c. one story lean-to and white pine for ca. 1810s 2nd floor addition.

**After Restoration**

The North, rear façade was completed with sheathing, clapboards and nails matching the evidence of originals. The two doorways were reproduced based upon photographic and physical evidence with doors reproduced based upon early photos and the original exterior kitchen door found in Medford. Window frames and sash were reproductions of fragments of originals remaining and a sash remaining at the James Barrett Jr. House at 612 Barrett's Mill Road. A large original stone door step was found at the west entry below the front door step that had been moved to the rear. Temporary wooden steps were installed.

Table 8 House Exterior - West Façade



Before Restoration

The exterior had all 20th century doors and windows, clapboards and trim installed ca. 1911. The deteriorated exterior roof sheathing was covered with 20th century asphalt shingles. The house was overgrown with invasives and volunteer sapling trees. The West Ell brick stove chimney, built in 1911, was unstable. All visible exterior finishes had been installed during the 20th century and were considered unsalvageable except for some door, window and trim components saved for future study and/or exhibit. All utility systems had failed or were obsolete and dangerous so temporary electrical and water services were installed to allow work to proceed.



During Restoration

The West Ell northwest and southwest corner post and sills were severely rotted and rebuilt with adjoining braces repaired to its original configuration based upon framing evidence. The west ell stove flue “Built April 1911” was removed as unsafe. The rotted roof and sidewall sheathing boards were repaired with white pine 1 in. boards matching the originals. 20th century clapboards were removed and replaced with authentic skived (end-lapped) heart pine clapboards matching originals. 20th century windows were removed and fragments of plain 18th century plank window frames seen in early photos were found re-used.



After Restoration

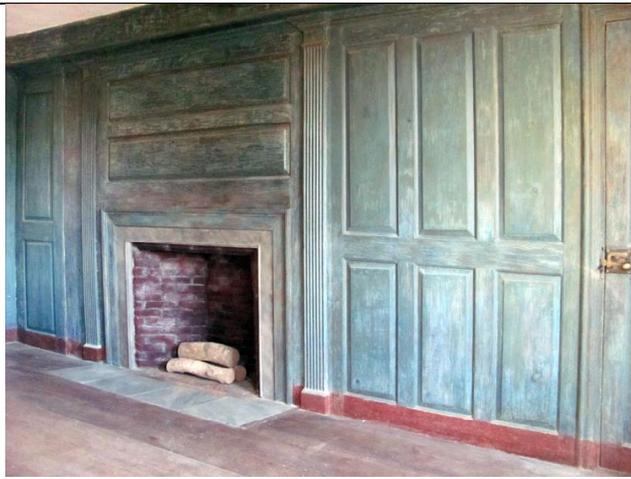
The West Ell west façade was completed with sheathing, clapboards and nails matching the evidence of originals. The doorway was reproduced based upon photographic and physical evidence based upon early photos and the original exterior kitchen door found in Medford. Window frames and sash were reproductions of fragments of originals remaining and a sash remaining at the James Barrett Jr. House at 612 Barrett’s Mill Road. The large original stone doorstep and cobble paving were preserved in place. The original large West Ell chimney, based upon internal framing evidence, was removed ca. 1911, but not reproduced due to budget considerations.

Table 9 House Interior - Room 101 Parlor**Before Restoration**

The parlor as found retained all its original woodwork dating to the 18th century. The pilaster and panels all probably date to Col. Barrett's rebuilding of ca. 1768. The fireplace architrave surround and panels to the left were added later in the 18th century, but possibly during the Colonel's lifetime. Evidence was found for a former corner cupboard similar if not identical with one from the Thomas Barrett House at Barrett's Mill, now in the Concord Museum. The accumulation of lead paint made it necessary to remove most of the overlying layers to meet safety and health codes.

**During Restoration**

The parlor interior had overlying lead paints removed revealing the original paint colors on various components of the room. The paint evidence showed that the fireplace surround and panels to the left were added later in the 18th century. The fireplace architrave surround had traces of original marbleizing applied in a manner similar to that in the West Chamber above, but simulating the real marble of the hearth in the fireplace rebuilt at that time. The panel to the left had a later light Federal green as its first coat of paint. Woodwork had mahogany color baseboards, first extended over doors, but not in the Federal Period.

**After Restoration**

The early paint color of the room, a blue-green, was preserved and conservators in-painted the areas that had been damaged to match the original. Baseboards also - retain the original mahogany color extending across the bottoms of the doors and corner posts. The later panel was painted to match the original to tie the room together until the original Barrett cupboard from the Concord Museum, or a reproduction, can be placed in the corner to reflect the ca.1775 appearance of the parlor. The red brick paint and marbleizing on the fireplace is restored to match the marble hearth that may date to the period of Col. Barrett.

Table 10 House Interior - Room 102 Front Entry

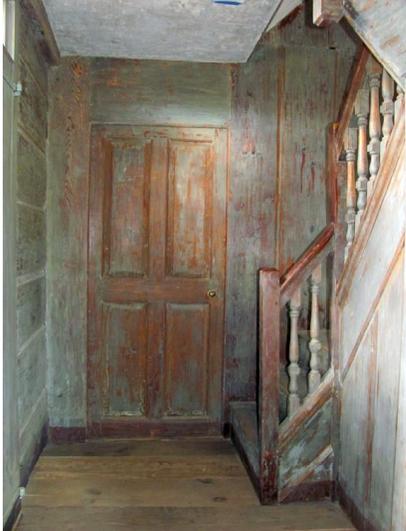
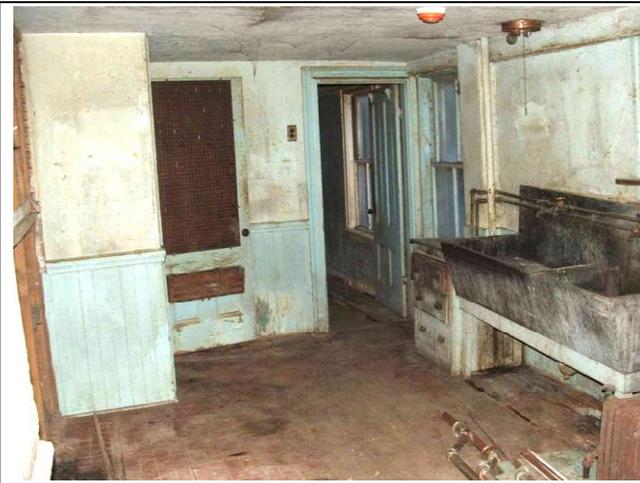
	<p>Before Restoration</p> <p>The front entry as found retained all original components: stair, board wall sheathing and plaster. The front door had been replaced in the ca. 1911 exterior renovation. The wide pine finish floor had been replaced with later narrow fir flooring and linoleum floor covering, however the original sub-floor remained. A large accumulation of lead paint had occurred over the years. Early ceiling plaster and chimney wall plaster remained intact. Ceramic wall hanging knobs were visible on the vertical board sheathing at each stair landing. Coat hooks had been applied in the 20th century.</p>
	<p>During Restoration</p> <p>The 18th century six-panel front door was restored with a reproduction based upon originals in the house and the West Entry doorway of the Old Manse, built ca. 1770 and matching other woodwork in the parlor, as well as the shadow of the former doorway on the house. The transom with bulls-eye glass was reproduced along with the doorway by the North Bennet Street School. The later paints were peeling, and lead paint needed to be removed for health and safety reasons. The 20th century fir finish floor and overlying linoleum was also removed. All original plaster and early paint remained.</p>
	<p>After Restoration</p> <p>The front entry as restored conserves its original color scheme of lead color gray with mahogany color paint on newel posts, hand railings and baseboards. All original woodwork was retained with early paint; conservators needed to do only minor patching and infill of missing paint areas. The finish floor was re-laid with wide pine matching the original. Early ceiling plaster and ceramic wall hanging knobs were retained undisturbed. Traces of a stair runner remaining in underlying paint layers were also preserved, and the mahogany-painted stair stringer retained and conserved. The new front door was painted to match historic color.</p>

Table 11 House Interior - Room 103 Muster Room

	<p>Before Restoration</p> <p>The Muster Room as found retained all its original woodwork dating to the 18th century. The doors and woodwork all probably pre-date Col. Barrett's rebuilding of the house ca. 1768. The china cupboard to the right of the fireplace, and shelves in the china closet to the left, were added later in the 18th century, but likely during the Colonel's lifetime. The plaster ceiling in place was 20th century, dating to the time of electric light installation, seen hanging from the summer beam. It replaced an earlier 18th century plaster ceiling undoubtedly added over planed and chamfered joists during Col. Barrett's lifetime. Flaking later lead paint required removal of most overlying paint layers to meet safety and health codes.</p>
	<p>During Restoration</p> <p>The Muster Room interior had overlying lead paints removed revealing the original paint colors on various components of the room. The paint evidence showed that the mantel shelf with cast iron brackets was added in the late 19th century. The fireplace was re-opened revealing the original brick oven at the rear. The right hand jamb of the fireplace had been rebuilt, probably in the ca. 1768 rebuilding when the kitchen fireplace was likely added. The over-door panel to the left has an 18th century trefoil motif cut out, believed to be a family symbol. The hearth was removed when the later narrow fir floor was added, probably ca. 1911. The deteriorated 20th century plaster was removed to open the early chamfered framing to view as it appeared in Col. Barrett's lifetime.</p>
	<p>After Restoration</p> <p>The early paint color of the Muster Room, a blue-green, was preserved and conservators in-painted the areas that had been damaged to match the original. Baseboards retain the original mahogany color extending across the bottoms of the doors and corner posts. The 18th c. china cupboard and shelves with plate grooves retain mahogany paint treated by conservators to reflect the early appearance of the Muster Room. The brown coat parging on the fireplace jambs and back was preserved as it was probably installed at the time of the rebuilding of the right jamb to accommodate the Kitchen fireplace dating to the time of Col. Barrett's rebuilding of the house ca. 1768. Original hardware was preserved or duplicated where missing.</p>

Table 12 House Interior - Room 104 Kitchen Fireplace

	<p>Before Restoration</p> <p>As found, the Kitchen had 20th century plaster on walls and ceilings with bead board dado. The severely rotted floor was covered with 20th century linoleum. The fireplace wall had been hidden behind a large bookcase until its removal revealed the battered cooking fireplace and brick bake oven that had been rebuilt in the early 19th century. Stove flues had been inserted in the brick flue and the remains of a mid-late 19th century boiler were found to the left of the fireplace opening. All visible finishes had been installed during the 20th century, including a kitchen closet in the Southwest corner added by the McGraths.</p>
	<p>During Restoration</p> <p>The Kitchen after removal of 20th century plaster on walls and ceilings and matched board wood dado revealed 18th century feather-edge board sheathing. The badly rotted floor was re-framed with oak joists similar to originals. The fireplace wall was found to have remnants of the 18th century fireplace jamb. It was decided to retain the evidence of the later fireplace in the hearth, along with the later Barrett period brick oven and ash pit that were in good condition. After structural reinforcement, the original 2nd floor frame and some post and beam casings remained with others reproduced and stained to match. Three batten doors were reproduced: to bedroom, cellar and 2nd floor stair.</p>
	<p>After Restoration</p> <p>The Kitchen after restoration of the fireplace and hearth by masons and woodwork of fireplace surround designed by the historical architect consultant and built by carpenters. Designs were based upon local prototypes of similar period including the Old Manse and the Golden Ball Tavern, as well as evidence at the house. Patched "Dutchmen" and all new wood of white pine were stained by paint conservation specialist to match the original finish. New England white pine post and beam casings and floorboards were installed and stained to match originals after structural repairs to the frame. All visible finishes, after completion of work, reflect the Barrett Period of the 18th and early 19th century.</p>

Table 13 House Interior - Room 104 Kitchen**Before Restoration**

As found, the Kitchen south partition and exterior wall had 20th century plaster on walls and ceilings with bead board dado. The severely rotted floor was covered with 20th century linoleum. The north exterior wall had a large, 20th century double soapstone sink, dating to the McGrath period renovations. This had to be removed for structural repairs to the floor and exterior wall that had previously been rebuilt in the 19th century and again in the early 20th century. A closet had been installed in the southwest corner of the kitchen along with all visible finishes that had been installed during the 20th century McGrath renovations that included plumbing and electrical.

**During Restoration**

The Kitchen after removal of 20th century flooring, wood dado, trim and plaster on walls and ceilings revealed rotten mostly 19th century replacement joists. These were so rotted they had to be replaced in kind by timber framers matching the original framing layout. On the West partition, removal of plaster revealed 18th century feather-edge board sheathing. The badly rotted floor was re-framed with oak joists overlaid by wide pine sub-floor and finish floors similar to originals. Some post and beam casings remained with others reproduced and stained to match. The 18th century batten doors were reproduced to match originals; one remained in poor condition, but was retained for exhibit.

**After Restoration**

The Kitchen after restoration of the floors, wall sheathing, post and beam casing and doors designed by the historical architect consultant and built by carpenters. Designs were based upon local prototypes of similar period including the Tavern, as well as one remaining at the house. White pine post and beam casings were installed and stained to match originals after structural repairs to the frame. Patched "Dutchmen" and all areas of new wood of white pine were stained by paint conservation specialists to match the original finish. The kitchen, after completion of work, reflects the Barrett Period of the 18th and early 19th century.

Table 14 House Interior - Room 105 Bedroom

	<p>Before Restoration</p> <p>The small north bedroom off the kitchen before restoration still retained its original plaster, door, and trim on the west wall dating to the 18th century. Evidence was found for a former window opening on the west wall under the West Ell stairs adjacent. The plaster covering the former west window of the main house, and the west door to the Ell stair were added in the 18th century. This was most likely done during Col. Barrett's renovation of the house ca. 1768, as the roof framing of the main house and West Ell appears to be continuous. The accumulation of lead paint made it necessary to remove most of the overlying peeling paint layers along with 20th century linoleum and a 20th c. electric light fixture added by McGraths.</p>
	<p>During Restoration</p> <p>The bedroom interior, as found, had been made into a pantry/kitchenette by the McGraths. The east wall had mid-20th century cabinets and wallpaper removed revealing the 20th c. plaster layer added over former 18th c. plaster evidence. The kitchen door to the left had been replaced in the early 20th century by a 4-panel door with a towel roller. The earlier window had been replaced in the 20th century, but the exterior wall, west and south interior walls and ceiling plaster was original. An early wrought iron hook or eye in the ceiling for hanging bed curtains or a lantern remained. All were temporarily supported with shoring during structural work for later conservation along with the original wide pine floor and painted boarder.</p>
	<p>After Restoration</p> <p>The original 4-panel door, hardware and trim were preserved. The early paint color of the room, a blue-gray, was preserved and conservators in-painted the areas that had been damaged to match the original. Baseboards were also retained with the original mahogany color extending across the bottoms of the doors and corner posts. The reproduction batten door to the kitchen was stained to reflect its early appearance. The two northernmost floorboards were worn too thin to be re-used but were salvaged and stored for study and exhibit. The early black painted border remains showing the shadow of a former floor cloth. Wall and ceiling plaster was painted with simulated whitewash to reflect the Barrett Period.</p>

Table 15 House Interior - Room 106 East Entry

	<p>Before Restoration</p> <p>The East Entry as found had been rebuilt in the mid-19th century and demolished after the collapse of the East Ell in 1977. The foundation, large granite doorstep and cobble paving date from the 18th century. The East Ell entry, based upon the comparable example at James Barrett Jr. house at 612 Barrett's Mill Road, probably had an entry separated by a partition that would have dated to Col. Barrett's rebuilding of ca. 1768. Plans were made to remove the 20th century infill wall with its McGrath Era door and window and reconstruct the East Entry. Plaster and a narrow bead-board wainscot covered the south wall of horizontal board sheathing in the remaining part of the entry and a later 4-panel door led to the cellar.</p>
	<p>During Restoration</p> <p>The East Entry interior had 20th century plaster and narrow board dado sheathing removed revealing the original unpainted pine feather-edge sheathing of the room with remnants of former coat hooks. The four-panel exterior door and east wall had been added after the shed and old east entry fell down in 1977. The ceiling had traces of early plaster lath fastened with wrought nails suggesting it had been finished about the time Col. Barrett rebuilt the house ca. 1768. The entry also retained evidence of the partition and over-door of the doorway into the cheese room or dairy that was also once plastered on the ceiling, but had original board sheathing remaining at the stair partition on the west. The stair partition facing the kitchen had been briefly removed for framing repairs.</p>
	<p>After Restoration</p> <p>The East Entry was rebuilt based upon fragments, 1977 photos of the collapsed east ell and sheds, as well as the similar framing and sheathing of the James Barrett Jr. east entry. Original 18th century pine sheathing of the room was preserved. Carpenters reproduced missing sheathing, conservators stained patched areas to match original. The missing finish floor was reproduced to match existing Barrett-era floors. The severely decayed batten door to the cellar (kept for exhibit) was reproduced and installed below the kitchen stair on original pintles. The entrance door was reproduced from the original at the Concord Museum. The former vertical board partition separating the entry from the dairy-cheese room remains to be restored.</p>

Table 16 House Interior - Room 107 Cheese Room - Dairy

	<p>Before Restoration</p> <p>The Cheese Room or Dairy as found had been rebuilt in the mid-19th century and demolished after the collapse of the East Ell in 1977. A three-foot section of the dairy remained and plans were made to remove the 20th century infill wall with ca. 1910s doors and windows and reconstruct the East Entry. Archaeologists performed a study that found the foundation, cobble paving and associated artifacts dating from the 18th to the mid-19th century. Photographic and physical evidence was found for a former jut-by with shed roof similar to one from the Thomas Barrett House at Barrett’s Mill. The East Ell entry, based upon the comparable example at James Barrett Jr. house at 612 Barrett’s Mill Road, likely had a dairy or cheese room that would have dated to Col. Barrett’s rebuilding of ca. 1768.</p>
	<p>During Restoration</p> <p>The Cheese Room or Dairy interior had later 20th century plaster removed revealing the original framing of the ceiling and wrought nails of a former 18th c. plaster ceiling. The original 18th century vertical board sheathing of the stair partition had plaster added later in the 19th or early 20th century. The board partition showed the remnants of the partition between the entry and the dairy, with shadows of H hinges and a piece of the over door board remained giving the 27-inch width of the door. The shadows of shelf cleats remained over the door and near the exterior wall. A rotted hole and shadow of a cleat bore witness to the previous existence of a wooden dry sink, a common feature of a dairy room.</p>
	<p>After Restoration</p> <p>The early vertical board stair partition was preserved and carpenters re-installed pine horizontal sheathing matching the entry wall and Dairy room of the James Barrett Jr. House at 612 Barrett’s Mill Road. Conservators stained the new wood and areas that had been damaged to match the original. The re-used base of the original NE corner post of the saltbox house had chamfers and stops that date it to the First Period. The post base, too weak to be re-installed, has been preserved for exhibit. The original post casing was repaired with missing beam casing elsewhere made to match the original. An authentic early dairy dry sink was found in Rowley, MA. The partition and shelving remain to be restored to reflect the 18th c. Barrett period appearance of the Cheese Room-Dairy.</p>

Table 17 House Interior - Room 108 West Ell Front Room

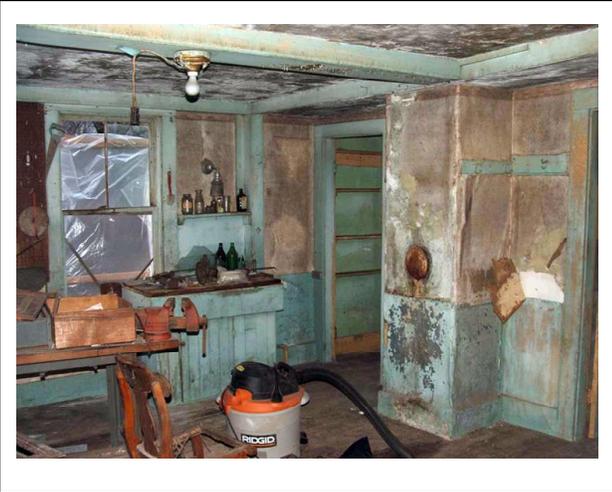
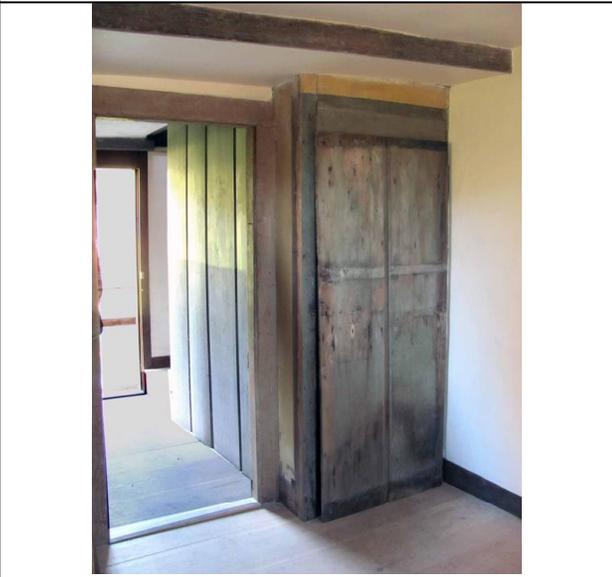
	<p>Before Restoration</p> <p>The West Ell Front Room (view NW) as found retained little original woodwork dating to the 18th century. The post and beam casings, the framing and almost all plaster, except the chimney wall, date to Col. Barrett's rebuilding addition of the West Ell ca. 1768. The former large (8-foot hearth) kitchen fireplace and associated paneling of the partition and chimney dating to Col. Barrett's lifetime were likely removed when the McGraths installed a stove flue inscribed upstairs "Built April, 1911." The dry sink and shelving were added around that time the house was renovated. The accumulation of peeling lead paint made it necessary to remove most of the overlying layers and electric wiring to meet modern code.</p>
	<p>During Restoration</p> <p>The West Ell front room retained original plaster on three walls that were repaired, conserved and patched around new windows installed to match originals. The 20th century dry sink, shelving and wiring were removed. Old post and beam casings were retained and restored where necessary due to the repairs required on the corner post. The original SW post casing was stored for study and/or exhibit. Overlying lead paints were removed revealing the original gray paint color on various early wooden components of the room, as well as mahogany color baseboards painted across the base of doors. Plaster had traces of whitewash below later 20th century paint layers. The narrow board floor of ca.1911 was replaced with wide pine to match original boards on repaired early joists.</p>
	<p>After Restoration</p> <p>Evidence was found for the original partition location and the position of the original cellar stair batten door, rebuilt with fragments of the original door found re-used as sub-floor in the back room. The early gray paint color of the room was preserved; conservators in-painted the new and repaired areas to match the original. Baseboards retain the original and restored mahogany color extending across the base of the doors and corner posts. New or patched woodwork was painted and plaster walls whitewashed to reflect as far as possible the appearance of the West Ell Front Room in the time of Col. Barrett. The large chimney, cooking fireplace and paneled chimney wall, similar to that in the West Ell of the James Barrett Jr. House at 612 Barrett's Mill Road, remains to be restored.</p>

Table 18 House Interior - Room 109 West Ell Back (NW) Store Room

	<p>Before Restoration</p> <p>The West Ell Back Store Room as found had lost all but the corner post casing from the 18th century. It did retain pantry shelves, counter top and flour cupboard dating to the ca. 1911 renovation by McGraths, but recalling its probable Barrett-era use as a pantry. The partition to which the shelves were attached was rebuilt in the ca. 1911 renovation in the same location as the vertical board partition of the Barrett Period. Ceiling and floor framing retained clear evidence of the original West Ell front room kitchen fireplace chimney location, with one joist chamfered to allow passage of the brick oven flue, probably built during the Colonel's lifetime.</p>
	<p>During Restoration</p> <p>The West Ell Back Store Room interior retained original framing of the 18th century one-story saltbox. Although deteriorated and replaced, the NW corner post and its casing were salvaged for re-use, study and/or exhibit. Evidence was found for a former board wainscot to window sill height on the west wall only. The original plaster remained on the north wall, despite the insertion of a large window there in the 20th century renovation. Framing and nailing evidence showed the ceiling had been originally plastered. Overlying lead paints were removed revealing the original paint colors on various components of the room. Woodwork was mostly unpainted until later in the McGrath renovation of 1911.</p>
	<p>After Restoration</p> <p>The board partition between the NW Store Room and the entry was rebuilt in its original location using salvaged sheathing boards from an 18th century house of comparable date and style. Later layers of paint and wallpaper on these boards were removed on the Store Room side. However, early red-brown paint or stain and grain painted finish on the entry side were retained as they nearly matched the early Barrett finish. A new batten door was constructed based upon other Barrett batten doors and stained by paint conservators to match the historic finish on boards remaining from the time of Col. Barrett. A new wide pine wood floor matching the others in the house was installed over reinforced original floor joists around the old chimney opening.</p>

Table 19 House Interior - Room 110 West Ell Back Entry/Stair Hall

	<p>Before Restoration</p> <p>The West Ell Entry/Stair Hall as found retained most original woodwork dating to the 18th century. The stair to the left was added over the earlier west window of the main house likely during Col. Barrett’s rebuilding of ca. 1768. The stair and vertical board partition adjacent, as well as the ceiling and wall plaster all probably date to the Colonel’s lifetime. Evidence was found for a former vertical board partition to the right, likely removed during the ca. 1911 McGrath remodeling when the four panel door to the front room was also installed. The late Barrett or early McGrath Period paint on the stair partition remained along with some “turkey carpet” floor cloth fragments re-used on the stair, probably salvaged from a front room.</p>
	<p>During Restoration</p> <p>The West Ell Entry/Stair Hall interior had a couple of layers of early 20th century composition floor coverings in checkerboard patterns, probably similar to earlier floor cloths, typical of the late 18th and early 19th centuries. The badly rotted, ca.1911 floor had to be rebuilt with original joists below sistered and a new wide pine sub-floor and finish floor to match original. The partition to the left had been rebuilt by McGraths from old floorboards. Other re-used fragments, including part of the batten door to the cellar, were found in the sub-floor. The exterior door was reproduced based upon the original in the Concord Museum, with one pintle of the original door, apparently replaced ca. 1911, preserved in place.</p>
	<p>After Restoration</p> <p>The original plaster ceiling and east stair wall were conserved, repaired and whitewashed to match the original. Woodwork, originally mostly unpainted, at first had only mahogany color baseboards, with the gray and buff colors added to the stair partition in the late Barrett Period. These old paint colors of the partition were preserved and conservators in-painted or stained the areas that had been repaired or replaced to match the original wood color tying the room together. The vertical board partition was restored using salvaged 18th c. boards already grain painted with a wood finish very similar to the original. The exterior and interior reproduction doors were stained, and mounted on wrought iron hardware to reflect the appearance of the entry in the time of Col. Barrett.</p>

Table 20 House Interior - Room 201 West Chamber

	<p>Before Restoration</p> <p>The West Chamber as found retained all its original woodwork dating to the 18th century. The pilaster, doors, fireplace bolection and trim all probably date to Col. Barrett’s rebuilding of ca. 1768. The fireplace bolection molding and two and four-panel doors with Queen Ann finial H hinges all date to the 18th century during the Colonel’s lifetime. The fireplace had been bricked up as early as the 1860s when front rooms were heated by stoves, according to Barrett inventories. The accumulation of lead paint made it necessary to remove most of the overlying layers to meet safety and health codes.</p>
	<p>During Restoration</p> <p>The West Chamber interior had overlying lead paints removed revealing the original paint colors on various components of the room. The painted border around the floor surrounded the 20th c. floor covering, beneath which was evidence of earlier smaller floor cloths. Evidence was found for original plaster parging in the deep firebox all probably predating the Revolution. The paint evidence showed that the fireplace surround and were marbled in the 18th century. The walls had traces of wallpaper dating as far back as the 1810s and these, along with others from the four front rooms are stored in files for future reference.</p>
	<p>After Restoration</p> <p>The early paint color of the West Chamber room, a gray-green, was preserved and conservators in-painted the areas that had been damaged to match the original. Cleaning of the paint from the floor, a gray border around a smaller, earlier former floor cloth, revealed old burn marks beneath in front of the fireplace. Baseboards, unlike the other principal rooms, did not have the mahogany color painted baseboards extending across the bottoms of the doors and corner posts. The marbleizing of the fireplace bolection molding and parging in the firebox has been carefully preserved as an important and rare survival of 18th century decoration to reflect the ca.1775 appearance of the room at the time of Col. Barrett.</p>

Table 21 House Interior - Room 202 Upper Entry

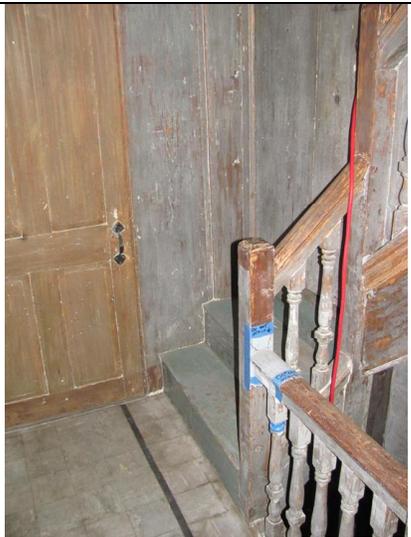
	<p>Before Restoration</p> <p>The Upper Entry as found retained all its original woodwork, stairs and railing dating to the 18th century. The horizontal board sheathing on the exterior wall and vertical board sheathing on the interior partitions all probably date to Col. Barrett’s rebuilding of ca. 1768 if not before. The closed string stairway with its turned balusters and heavy molded handrail mortised into the square newel posts are all typical of the early to mid-18th century. The accumulation of lead paint on all woodwork including the board sheathing, stairway railing, risers, treads and wide pine floors, made it necessary to remove most of the overlying layers to meet safety and health codes.</p>
	<p>During Restoration</p> <p>The Upper Entry interior had overlying lead paints removed revealing the original paint colors on various components of the room. The paint evidence showed that the lead-color gray woodwork had mahogany color baseboards that extended over the bases of doors and around corner posts. The stair railing had the hand rail and tops of the posts painted a mahogany color as well. Areas of original paint strata were left intact for later study. The 20th century composition floor covering remained in place over the original wide pine floor in order to protect it until paint conservation treatment was completed.</p>
	<p>After Restoration</p> <p>The early paint color of the Upper Entry, a lead color gray, was preserved and conservators in-painted the areas that had been damaged to match the original. Baseboards were also conserved and retain the original mahogany color extending along the stair stringers and chimney wall, and around landings, as well as across the bottoms of the doors and corner posts. The original hardware remained on the very early 18th century bi-fold door to the attic. Stair risers and treads preserve traces of a former narrow runner. The front wall was patched around the six-over-six window above the front doorway pediment, restored to reflect to the period of Col. Barrett ca.1775.</p>

Table 22 House Interior - Room 203 East Chamber

	<p>Before Restoration</p> <p>The East Chamber as found retained most of its original woodwork dating to the 18th century. The plaster, doors and trim all probably date to Col. Barrett's rebuilding of ca. 1768. The fireplace architrave surround probably a bolection molding similar to that of the West Chamber, was removed when the fireplace was rebuilt in the early 19th century. The present Rumford firebox with its wider hearth and red-painted plaster parging are all typical of the period ca. 1810s to 1830s when the Kitchen fireplace and oven were also rebuilt. The floor covering is a 20th century McGrath addition. The layers of lead paint were peeling and removal of later layers was required to meet code.</p>
	<p>During Restoration</p> <p>The East Chamber had overlying lead paints removed revealing the early paint colors on various components of the room. The evidence showed that the woodwork had been painted in imitation of cedar wood as one of its early treatments. The fireplace was painted a brick red along with the hearth. The panels to the right had a white color simulating plaster either side of the closet door that was cedar grained. Woodwork also had mahogany color baseboards that extended over the bases of doors. Early spring latch hardware on the rear door matched hardware in the other front rooms. The wallpaper was a 20th century reproduction. However, traces of ca. 1810s floral wallpaper were found and preserved.</p>
	<p>After Restoration</p> <p>The early cedar-grained paint decoration of the East Chamber was preserved and conservators in-painted the damaged areas to match the original. Baseboards were also in-painted but retain most of the original mahogany color extending across the bottoms of the doors and corner posts. The walls were painted with simulated whitewash, presumed to be the earliest finish according to paint study analysis. The paint on the fireplace surround is restored to match the hearth dating to after the time of Col. Barrett when it had the vertical board sheathing exposed. Now the room reflects its appearance as of the time of his grandson Prescott's occupancy ca. 1808 to 1862.</p>

Table 23 House Interior - Room 204 Kitchen Chamber

	<p>Before Restoration</p> <p>The Kitchen Chamber (over the kitchen) as found had a ca. 1810s addition of the second floor rear in an area that had originally been a low lean-to room of the former salt-box. However, it retained some of its woodwork, floor and finishes at the chimney wall dating to 18th century. The plaster, closet door and trim on the south wall all likely date to Col. Barrett’s rebuilding of ca. 1768. The location of the closet over the kitchen fireplace, along with its wrought iron H hinges and hasp for a padlock, suggest its possible use as a gun closet. A seam in the plaster above the door shows where the ceiling was raised when the second floor rear was added. Evidence was found for former partition locations under later floor cloths.</p>
	<p>During Restoration</p> <p>The Kitchen Chamber interior had overlying 20th century plaster removed for structural repairs revealing various re-used 18th century framing components in the rebuilt exterior wall. Framing evidence showed that window openings were originally the same scale as those of the front of the house built in the 18th century. Ceiling (attic floor) framing and wall plates of the original saltbox (below the window sill) and the later 19th century roof plate above were rotted beyond repair. However, original floorboards, re-used early 19th century posts, beams, and boards of the Federal Period were preserved and restored to their former locations. The 20th century partitions had to be removed in order to repair framing.</p>
	<p>After Restoration</p> <p>The early paint and plaster finishes, door and trim woodwork were preserved unchanged as they evolved over the years on the original surfaces. Baseboards also retain the early as well as later paint. Floors retain the later painted borders around former floor cloth locations reflecting the later partition layout. The original floorboards retain mortises for the studs of the initial board partitions and original door jambs remain adjacent to the chimney wall dating to the time of Col. Barrett. The only remaining feature to be restored on the chimney wall is the keeper and a padlock for the closet that probably held the muskets mentioned in the ca. 1808 inventory of Peter Barrett. Board partitions remain to be restored.</p>

Table 24 House Interior - Room 205 North Chamber

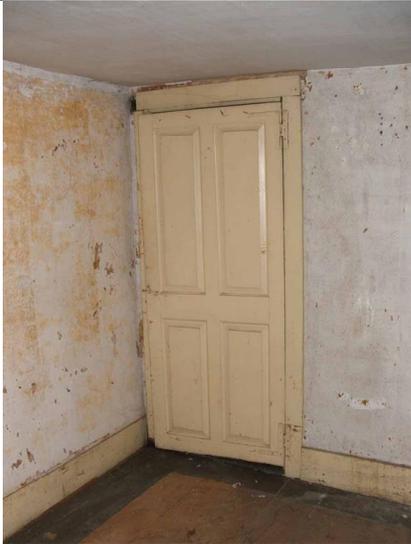
	<p>Before Restoration</p> <p>The North Chamber as found retained some original woodwork dating to the 18th century despite the removal of the saltbox roof and the ca.1810s addition raising of the second floor ceiling and roof. Although later 20th century plaster existed on the rebuilt north wall and partitions, original plaster remained on the south wall, along with an original 18th century door to the West Ell stair. The original 18th century door jamb remained attached to the south wall although the partition had been relocated. The 19th century plaster partitions, windows, and trim covering the 18th c. roof plate (below window sill level) remained, along with a straw carpet of probable 20th century original, although the 1862 Prescott Barrett Inventory listed one in the East Chamber.</p>
	<p>During Restoration</p> <p>The North Chamber interior had overlying 20th century plaster removed for structural repairs revealing re-used 18th century framing in the rebuilt exterior wall. Wall framing included a stud made from the rail of a rope bed dating to the 18th century. Ceiling (attic floor) framing and wall plates of the old saltbox (below the window sill) and the later 19th century roof plate above were rotted beyond repair. However, original floorboards, re-used early 18th century posts, beams, and studs were preserved and restored to their former locations. The 20th century partitions needed removal to repair framing. The 18th and 19th century components were preserved.</p>
	<p>After Restoration</p> <p>Early yellow ochre paint color on the 18th century plaster of the south wall was preserved untouched. Baseboards retain the early as well as later paint. Floors retain the later painted borders around former floor cloth locations reflecting the later partition layout when the North Chamber was enlarged in the 19th or early 20th century. The original floorboards retain mortises for the studs of the initial board partitions. Original door jambs remain adjacent to the chimney wall dating to the time of Col. Barrett. Remaining to be restored are board partitions of the ca.1810s addition. One re-used partition board preserved was stenciled with "P. Barrett Concord," probably Prescott.</p>

Table 25 House Interior - Room 206 East Stair

	<p>Before Restoration</p> <p>The East stair area as found retained little of its original woodwork dating to the 18th century. The sub-floor and framing in part dates to Col. Barrett’s rebuilding of ca. 1768. The floor at the East Chamber doorway retained a mortise for a door jamb from the former 18th century board partition in the same location as the later 20th century rebuilt partition. The door jamb still attached to the south wall has the shadows of former H hinges dating to the Colonel’s lifetime. The existing 20th century bathroom’s west partition with its two-panel door, plaster and paint, showed the shadows of the former sink added over the closed kitchen stair.</p>
	<p>During Restoration</p> <p>The East stair area’s interior had 20th century plaster at the location of the former bathroom tub removed to reveal the ca. 1970s sheathing and 2-by-4 studs added when the East Ell was removed ca. 1977. The original end lower girt was reproduced in its former location, along with the ca. 1810s studs for which mortises remained in the added upper girt. Wide board sheathing at the upper right would have been added when the old saltbox was raised to a full two stories ca. 1810, or possibly re-used later in 1977. The old plaster on the south wall, dating from the 18th to 20th centuries, was retained. Areas of sub-floor and finish floor were patched to match original.</p>
	<p>After Restoration</p> <p>The East Ell was rebuilt and the 20th century sheathing and studs removed to allow installation of the door to the East Ell Chamber as it would have appeared in the time of Col. Barrett. A salvaged two-panel door matches other 18th century doors in the house. The East Chamber restoration was important as it was probably the door to Philip’s Room. Philip was Col. Barrett’s servant until the Colonel’s death in 1779. The stair to the kitchen was re-opened, and was temporarily railed with a board railing pending further evaluation of sketchy evidence for its original and ca. 1810s treatment at this level. The area has been left unfinished as a study space.</p>

Table 26 House Interior - Room 207 NE Chamber (Philips' Room)

	<p>Before Restoration</p> <p>The East Entry Ell had been altered in the mid-19th century and removed in 1977. The side of the house had been rebuilt with new clapboards applied where the East Entry Ell had been. Invasives such as bittersweet had grown into the windows of the house. A bathroom had been installed against the exterior wall where the ell had formerly been. Fortunately, in 1977 photos had been taken (illustrated elsewhere) by the National Park Service's Orville Carroll and others that showed the remnants of the original East Entry Ell framing. These and comparative evidence at the James Barrett Jr. House at 612 Barrett's Mill Road, with the footprint of the ell here, provided the information needed to reconstruct the East Entry Ell.</p>
	<p>During Restoration</p> <p>The East Entry Ell frame was reconstructed by timber framers on the old foundation that had been rebuilt, with framing reproducing that still remaining at the James Barrett Jr. House at 612 Barrett's Mill Road. The shed-roofed ell was based also on the Thomas Barrett House, of which an 1862 watercolor showed a door at the second floor level leading into the former ell. The East Ell chamber, Room 207, was probably Philip (Col. Barrett's Servant)'s room and was near the top of the kitchen stair, as found in a 1770s slave's room still extant at the Judge Holten House in Danvers MA. The framing was then clad in wide pine sheathing and skived clapboards similar to those on the rest of the house.</p>
	<p>After Restoration</p> <p>The NE Chamber above the East Entry and Dairy-Cheese Room has been reconstructed based upon the precedents and prototypes cited above. A six-over-six window was reproduced with details matching the other 18th century reproductions in the house that were duplicated from fragments of the originals found re-used as blocking in the walls. The flared corner post duplicates that found in the James Barrett Jr. House, as well as others found here at Col. Barrett's. The room has rough sawn sheathing boards exposed as it was when first built. One 1977 NPS photo of the south wall shows at least one re-used stud with traces of plaster lath. Based upon the Danvers example this plaster could have dated to the time of Col. Barrett.</p>

Table 27 House Interior - Room 208 SW Ell Chamber

	<p>Before Restoration</p> <p>The SW Ell Chamber as found retained all its original plaster and woodwork dating to the 18th century except the windows and chimney wall (installed ca. 1911) that replaced the early fireplace and chimney partition of wood. The plaster and woodwork that remain on the other three walls all probably date to Col. Barrett’s rebuilding of ca. 1768. Evidence was found in the original wide pine floor behind the chimney partition for a former fireplace hearth from the 18th century, dating to the Colonel’s lifetime. The accumulation of lead paint made it necessary to remove most of the overlying layers to meet safety and health codes.</p>
	<p>During Restoration</p> <p>The SW Ell Chamber interior woodwork had peeling upper lead paints removed. Removal of ca. 1911 door jamb at the north chimney partition revealed ca. 1810s yellow ochre and blue floral stripe wallpaper and mortises in the floor indicating the original chimney partition was about one foot north of the ca. 1911 one. The paper was likely installed ca.1815. Some original paint remained exposed on window heads beneath the 1911 window trim as well. The woodwork had a blue-gray-green as its first coat of paint. The early paint color has been matched on the other components of the room. Woodwork had mahogany color baseboards, at first extended across doors, but not in the later Federal Period.</p>
	<p>After Restoration</p> <p>The early paint color of the SW Ell Chamber, a blue-gray-green, was preserved and conservators in-painted the areas that retained some later coats of paint to match the original. Baseboards were also repainted to match the original mahogany color extending across the bottoms of the doors and corner posts. The later green floor paint was removed to reflect the ca.1775 appearance of the chamber. The north partition door was replaced with reproduction trim and a salvaged 18th century door to reflect the period of occupancy by the Barrett family. The West end of the house served as the widow’s dower third of the property in the settlement of the estates of both Col. Barrett in 1779 and son James Jr.’s home nearby in 1799.</p>

Table 28 House Interior - Room 209 NW Ell Chamber

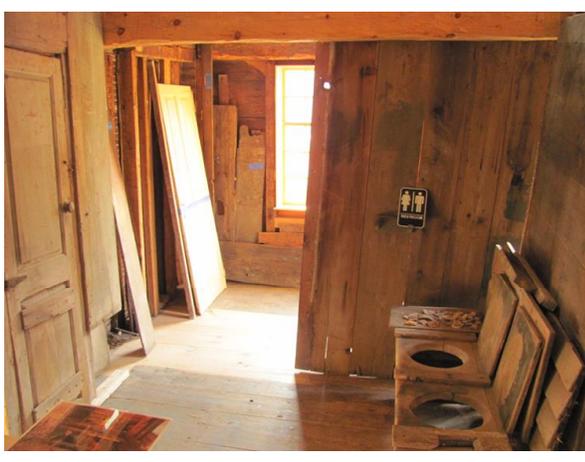
	<p>Before Restoration</p> <p>The NW Ell Chamber as found retained its floor and framing dating to the 18th century. The end wall after removal of 20th c. plaster revealed in the sheathing and framing the line of the former saltbox dating from ca. 1768. The floor retained the opening cut out for the original second floor chimney with its hearth and mortises in the floor for a door at each end of the former board south partition. The chimney with its fireplace opening into the front room would have resembled that still extant at the James Barrett Jr. House at 612 Barrett's Mill Road. The ca 1911 McGrath 4-over-4 window had remnants of the frame of an early small window opening in the same location.</p>
	<p>During Restoration</p> <p>The NW Ell Chamber interior had the plaster removed from the ca. 1911 partition revealing an inscription on the stove chimney parging that read "Built April 1911." The floor bore evidence of the board partition about one foot behind, north of the existing 1911 partition. The ca. 1911 stair door to the left covered a sample of the early blue and yellow ochre ca. 1815 floral stripe dating to the Mary Prescott (Mrs. Peter) Barrett Period when she occupied this west dower third of the house ca. 1808 to 1846. Her inventory of 1846 includes what are likely the contents of this portion of the house. Her son Prescott would have occupied the main part of the house with his family.</p>
	<p>After Restoration</p> <p>The original floor framing was retained and reinforced, since it was engineered originally only as eaves space under the saltbox roof. The 18th century wide pine floor was reinstalled in its original configuration. The unstable 1911 flue removed, and the old chimney opening temporarily covered to allow possible future restoration of the West Ell chimney dating to the time of Col. Barrett's rebuilding of ca. 1768. The unfinished space, that had lost its early wall and ceiling finishes in 1911, has been temporarily adapted as a display area for the original 3-hole privy and other items rescued from the McGrath wagon shed opposite where it had been moved by Patrick McGrath when the shed collapsed in 1977.</p>

Table 29 House Interior - Room 210 West Ell Stair

	<p>Before Restoration</p> <p>The West Ell Stair as found retained all its original woodwork and plaster dating to the 18th century. The entire stair, except the landing added at the bottom, including the vertical board partition, probably dates to Col. Barrett’s rebuilding of ca. 1768. The second floor had board partitions, one seen at the right in this photo, dating to the 19th century when the second floor rear was added. The partition at the left (west) was entirely rebuilt in the 1911 remodeling by the McGraths. The early paint on the first floor partition, possibly dating to the Barrett period, was retained. The stairs were covered with old floor cloth. Plaster on the east wall was deteriorated and board partition bug infested.</p>
	<p>During Restoration</p> <p>The re-used stair tread floor covering was cleaned to reveal a “Turkey” or oriental carpet pattern, likely dating to the Barrett period when it would have decorated a front room. The stair treads that had been weakened due to rusted nails and wear and tear, needed to be reinforced. The second floor was given a temporary handrail on the east side pending restoration of the ca. 1810s board partition that had replaced the old stud end wall of the main house. The 18th century east door from the NW Chamber of the main house to the stair had apparently been moved there in the 20th century. There may once have been another door at a stair landing near the north wall, as at the James Barrett, Jr. home.</p>
	<p>After Restoration</p> <p>The original West Ell Stair, feather edged sheathing, and plasters were all preserved to reflect the time of Col. Barrett. The early paint color of the stair, a gray-blue-green, was preserved untouched and conservators treated damaged areas to match the original. Plaster on the east wall was conserved and repaired where necessary using conservation techniques. The historic floor coverings were retained in place. Stair treads were reinforced with inconspicuous blocking from below. The bottom stair landing, that had been added and rebuilt in the 20th century, was replaced, but preserved with its re-used historic floor cloth for study and exhibit. The second floor board partitions and doors remain to be restored based upon evidence found to date.</p>

Table 30 House Interior - Room 001 to 002 Basement South, West

	<p>Before Restoration</p> <p>The West and South Basement as found (Area 001 View South) retained early but deteriorated framing at the sills. Brick infill backed cut granite underpinning added in the first quarter of the 19th century. However, the original rough dry-laid fieldstone foundation remained below. On the floor, the edge of a raised stone platform could be discerned under layers of silt outwash from the exterior walls. The framing of the first floor west remained. However, it had been rebuilt in the 19th to 20th century duplicating its 18th century appearance and configuration. Exterior windows had also been replaced in the 20th century and were beyond their useful life, although the openings were in their presumed original locations, in the cut stone underpinning.</p>
	<p>During Restoration</p> <p>The original framing (Area 001 View North) had to be repaired at the perimeter and the foundation re-pointed above grade. However, the old shelving for preserves dating from at least the early 20th century was retained in place along with early 20th century preserves of the McGrath family. The grade was lowered to the original level to allow proper drainage and additional headroom. The glacial cobbles used for keeping food storage barrels above water level were retained in place. On the floor above, floorboards that had buckled due to humidity rising from below were flattened and re-nailed. The area was re-graded to allow water to drain to a sump in the north cellar.</p>
	<p>After Restoration</p> <p>In the final restoration (Area 001 View West) early cobble food storage platforms that would originally have held food storage barrels for root vegetables such as potatoes and carrots or orchard products like apples, were excavated with archaeological oversight to reveal the original stonework. The earth floor was lowered for drainage and to expose the edge of the stone platforms as they would have appeared in the time of Col. Barrett. Brickwork was re-pointed as necessary around the window openings that received new reproduction wood windows with Spanish Cedar frames (for water resistance) and details typical of the period of Col. Barrett.</p>

Table 31 House Interior - Room 003 to 007 Basement North, East

	<p>Before Restoration</p> <p>The East and North Cellar as found (Area 003 View North) retained its original wood framing and sub-floor beneath the Muster Room. It had severe water infiltration and many later accretions such as electrical wiring and pipes with asbestos insulation. Some 20th century shelving held McGrath-era items that remained in place. The cellar stairs were decayed and moisture damaged to the point of near collapse. An old steam boiler sat on a concrete pad and water rose to a level of a couple of feet upon occasion. Despite all this the original framing was sound enough to retain with reinforcement in the east cellar, but it had to be replaced due to severe decay on the north (004).</p>
	<p>During Restoration</p> <p>The North cellar interior (004 View NE) had large stones by the chimney wall with one severely rotted 20th century barrel remaining in situ on the stone paving. The chimney base had a cast iron door on an ash cleanout for the kitchen fireplace that had to be removed in the course of rebuilding to support the first floor joists. The Northeast corner of the chimney base had to be rebuilt as did the area around the niche where the brick furnace flue extended through the Muster Room fireplace. There was evidence of a board partition at the corner of the chimney base extending to the North exterior wall. A 19th century batten door from the partition and a badly decayed 18th c. batten door and hardware, believed to be that from the kitchen stair, were found lying about.</p>
	<p>After Restoration</p> <p>The basement was cleaned out and the floor excavated to near its original level dating to the time of Col. Barrett. The wide board partition with its door was reproduced as near as possible to its original location (Area 004 View North) based upon gains found cut into the original rotted framing timbers; these were documented with drawings and photographs prior to their removal. Wrought iron strap hinges with drive pintles were used similar to those above based upon evidence of pintles found in the kitchen. The foundation was repaired as specified to be re-pointed to one foot below grade. A new cellar stair was constructed similar to the rotted one removed.</p>

Table 32 House Interior - Room 002 to 010 Basement South, West

	<p>Before Restoration</p> <p>The South and West basements as found (Areas 001-002 View West) as elsewhere, were filled with hazardous materials such as oily water, asbestos-insulated steam heating pipes, as well as festooned with outdated and unserviceable electrical equipment and wiring. The large accumulation of debris made it necessary to remove most of the contents to meet safety and health codes. Areas of framing under the front and West Ell stair (area 010) needed minor reinforcement. The original floor surface was buried under silt outwash from the old dry-laid foundation walls. Old features such as shelving and a cultivator of the McGrath era were not removed.</p>
	<p>During Restoration</p> <p>The West Ell had a crawl space under areas 007 and 008. This photo (Area 008 View South) shows original framing resting on a re-used framing component, an apparent post (foreground) with four elongated holes. This could also have been a fence or gate post, or alternatively, due to its slight upward curve at one end, an 18th century stone boat runner such as would have been used to haul stones, firewood, or other heavy items (such as ordnance). This component was left in place rather than removed for exhibit as it supported the rest of the first floor framing. The crawl space below exhibited the lime-mortared exterior of the original main house that had been initially pointed above grade and to a point below to deter rodents.</p>
	<p>After Restoration</p> <p>The cellar area (010 View West) of the West Ell retains its stone niche undisturbed, along with lime mortar infill that was done prior to the restoration. Most areas of the cellar were left undisturbed, except the perimeter walls above grade, and the northeast corner of the chimney base. The West Ell cellar stair, like that on the northeast leading to the kitchen, had to be rebuilt. However, these stairs were not original; they were badly decayed and insect infested and were photographed for documentation purposes. The only changes to this part of the cellar involved repair and replacement of the 1st floor wide pine boards above.</p>

Table 33 House Interior - Room 301 to 302 Attic West, South

	<p>Before Restoration</p> <p>The West Attic (Area 301 View East) as found retained most original framing and flooring dating to the 18th century. The front rafters had been doubled in length at the time of the addition of the second floor rear in the ca.1810s. At that time, the rear saltbox rafters had been raised up and several formed the rafters of the raised rear roof slope. The chimney top through the roof had been rebuilt in the 19th century down to the area where a brick smoke chamber had been added at the time the rear roof was raised. Later parging covers most of the brickwork of the chimney; however, it appeared to be original to the period of Col. Barrett from the top of the smoke chamber down.</p>
	<p>During Restoration</p> <p>The attic stair (Area 302 View SW) was entirely original including the two runs of steps to the east and west parts of the attic, needed in the original saltbox due to low headroom at the rear and the center chimney preventing access between the east and west attics. No carpentry was necessary on the stair; however, the unique bi-fold door, dating to the 18th century, was split. This needed to be glued, but the door was otherwise all original including its wrought iron hardware and painted surfaces. Necessary alarm and temporary electrical systems were installed at the front under the roof eaves.</p>
	<p>After Restoration</p> <p>The West Attic (Area 301 View East) had the upper portion of the chimney rebuilt to its appearance dating to the time of Col. Barrett. The roof retained most original framing except those components deemed by engineers too deteriorated to support required snow and wind loads. These components were replaced with materials and approximate sizes matching the originals. The original purlins that had to be removed were stored in the attic for study and future exhibit. The roof sheathing boards that had severely deteriorated or were insect infested were replaced in kind, and samples salvaged and stored for study. Sound sheathing was retained. The south-side floor required only minor patching for safety of visitors and artifact storage. A floor was added on the north-side for safety and to protect the ceiling below. The north-west floor area was left open to allow viewing the attic from below.</p>

Table 34 House Interior - Room 303 to 306 Attic East, North

	<p>Before Restoration</p> <p>The East Attic as found (Area 303 View East) retained all its original framing dating to the 18th century. The front rafters and purlins likely date to Col. Barrett's rebuilding of ca. 1768 if not before. The End wall sheathing in the original gable was mostly original, and that of the rear addition dated for the most part to the ca. 1810s. The original roofline of the old saltbox is visible in the end gable. The ca. 1810s window opening retained fragments of the original molded plank window frame at the top. The ca. 1910's McGrath era 6-over-6 sash had replaced the ca. 1810s 3-over-6 seen in early photos. The open window had bittersweet and other invasives creeping into the attic. Some front roof sheathing had been replaced earlier, probably in the 1970s.</p>
	<p>During Restoration</p> <p>The north rear portion (Areas 304-306, View NW) of the attic framing had been added in the ca. 1810s, but had deteriorated and been replaced by modern framing, likely in the 1970s. The joist pockets and some remaining joists and girts allowed exact reproduction of the missing and damaged pine framing and sheathing. Struts had been added in the ca. 1810s when the roof was raised at the rear to two stories, and missing or damaged struts were repaired and/or replaced as required to meet engineers' requirements for wind and code-allowed roof and floor loads. Floor joists were re-installed at old locations and wide pine floorboards matching original were then installed.</p>
	<p>After Restoration</p> <p>The East gable (Area 202 View East) retained all early sheathing dating to the time of Col. Barrett and the ca. 1810s rear addition. Original plank window frames and 3-over-6 sash were fabricated to exactly match the originals and re-installed with new pine sheathing to infill the areas cut out for larger later window openings. The original floor was left undisturbed but one board lifted to reveal the planed underside of the floorboards and the 18th century plaster ceiling of the 2nd floor below. Joists had also been planed and chamfered indicating the framing below was originally exposed in the ca. 1705 original home when Col. Barrett was born there in 1710.</p>

Table 35 House Interior - Room 307 to 308 Attic West Ell

	<p>Before Restoration</p> <p>The West Ell Attic interior (Area 308 View West) as found retained all its original framing, flooring, and most sheathing dating to the 18th century. However, much of the roof sheathing was severely deteriorated and was not capable of carrying snow or wind loads with inadequate nailing for any new roofing. Exterior windows had been changed ca. 1911 and the existing windows were too deteriorated to salvage. The attic floor was filled with McGrath era items that were for the most part removed by the former owners. What remained was cleaned out with the exception of some late Barrett and early McGrath papers that were placed in archival storage with artifacts.</p>
	<p>During Restoration</p> <p>The West Ell Attic interior (Area 308 View West) had most roof sheathing replaced to allow installation of a sound roof for long term preservation of the house. Samples of early roof sheathing were retained, one with an incised inscription “P Barrett” probably Peter Barrett, who inherited the house from Col. Barrett in 1779 and died in 1808, or his son Prescott who inherited the house at that time. The original end and front wall sheathing were preserved, along with the end wall framing preserving the form of the original saltbox rebuilt ca. 1768. The 20th century widows and frames were removed and replaced with reproductions based on originals.</p>
	<p>After Restoration</p> <p>The West Ell Attic’s northwest corner (Area 307 View NW) retained no trace of any attic level floor or framing. It was therefore left open with a wooden board railing built for safety of occupants. Most original rear rafters were retained, along with sound purlins. The unsound purlins and sheathing had to be replaced to meet wind and snow load requirements. The north eaves area adjacent was used for storage with the addition of movable wooden storage shelves. Large fragments of 18th and 19th century Barrett period fragments from the house deemed unusable in situ were labeled and stored here for future study and potential display.</p>

1.6 Work Performed – By Construction Type

The project scope consisted of the following work described in the drawings and specifications, for the complete exterior restoration of the Barrett Farm. Work included:

- coordination with framing contractors’ completion of Emergency Repair Phase repairs
- site preparation, selective demolition and cleanout, surface grading for drainage
- staging, scaffolding, shoring and protection
- restoration of the stone foundation and brick chimney masonry
- jacking and leveling of the structure
- rough carpentry sheathing, blocking, new and repair
- timber framing, new and repair
- wood shingle roofing, gutters, downspouts, new
- wood sheathing, clapboards, new

- finish carpentry, new custom millwork and conservation repair to historic components
- replacement of doors, windows and trim, new custom wood
- stripping and then in-filling lead paint in interior rooms. Rooms now show early paint layer
- replaced 20th c. worn wood floors with new wide pine flooring
- replacing deteriorated walls, primarily in the rear with new wide pine walls
- adding insulation where walls had been opened and permitted it
- clearing the site of invasives, restored lawn, and added a garden
- replacing the old, not operating, drainage system
- removing the knob and tube electrical system with a code-compliant system
- moving the power and phone lines from overhead to underground

The specifics of the project work in the following sections are detailed in the scope of work as well as in the final as-built drawings.

1.6.1 Structural Framing

Replacement of rotted, defective framing members are based upon a structural survey, measured drawings and specifications by Structures North. Hewn beams and band sawn studs and joists were used to match original in species, grade and appearance. The original mortise-and-tenon joinery was duplicated wherever it needed replacement due to deterioration. Inconspicuous reinforcement was provided where necessary as detailed in the scope of work. The work was performed using original means and methods – hand-hewn logs for sills, plates, and joists.



Figure 16 The West Ell NE Corner Post
Was found to be severely deteriorated and needed shoring for repair.



Figure 17 Kitchen Post Base
Extensive and careful labor and craftsmanship was required to preserve and repair the base



Figure 18 The Rear Sill
Was entirely decayed and had to be exactly reproduced of oak to match original.



Figure 19 SE Corner Post Brace
A post brace at the SE corner had to be spliced with a lapped joint,



Figure 20 The Southeast Post
After new piece was put in place.



Figure 21 First Period 17th century NE Post
Re-used by Col. Barrett in his ca. 1768 rebuilding.

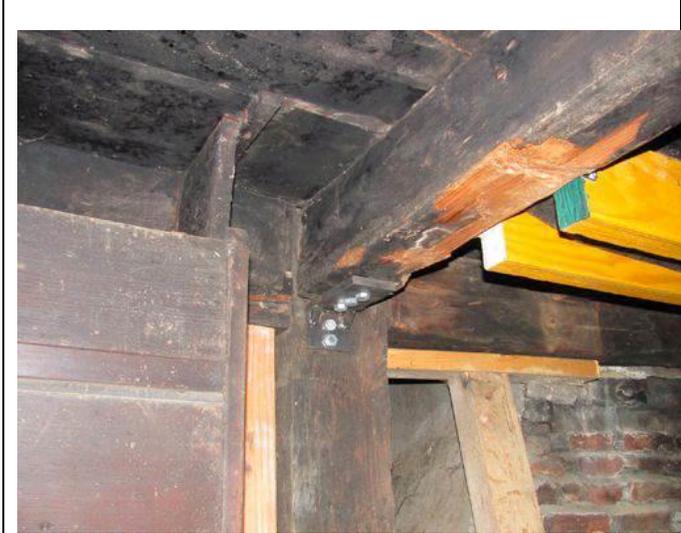


Figure 22 Kitchen Joists
Some inconspicuous steel and sistered joist reinforcement was installed under wood casing.

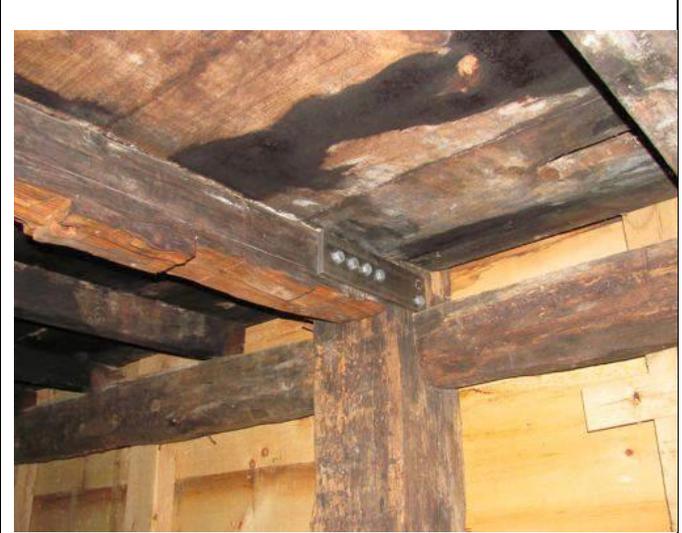


Figure 23 Kitchen Steel Reinforcement
Some necessary ties were installed in the kitchen, later covered by wood casing as it had been.

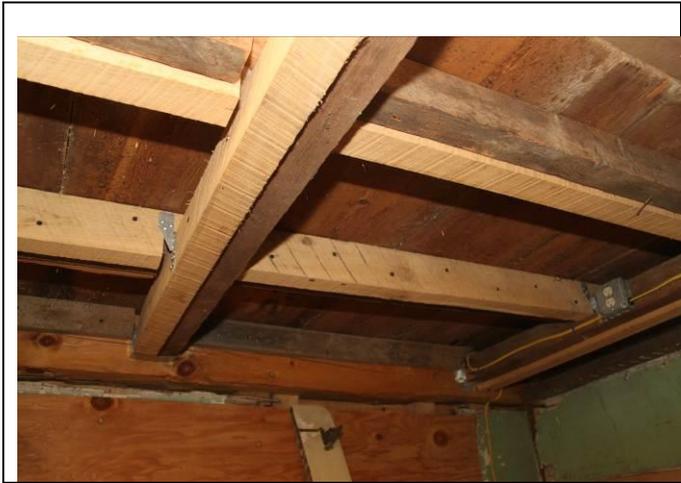


Figure 24 Sistered joists in the West Ell.

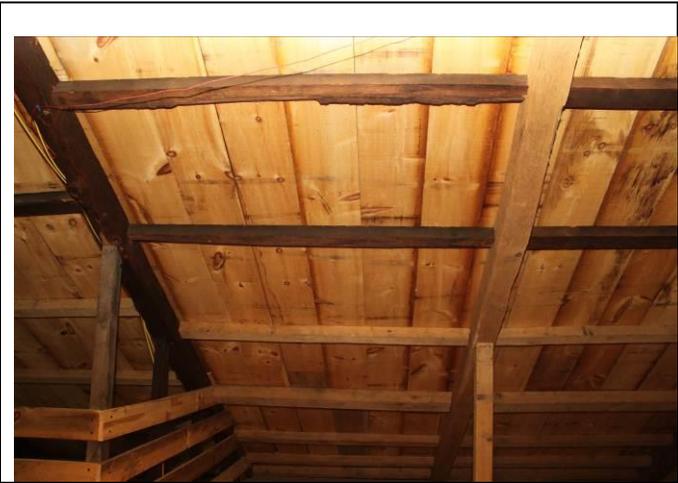


Figure 25 Original and new purlins in the attic.



Figure 26 Muster Room Wall Repairs Needed



Figure 27 Insulation Added When Possible

1.6.2 Exterior Siding

Sheathing of wide white pine boards was repaired and/or replaced in kind. Deteriorated 20th century clapboards were removed and replaced with new clear pine skived (end-lapped) clapboards to match the original. Rose head nail fasteners match originals in appearance. “Home Slicker” (Tyvar with breather) was used between the sheathing and clapboards to allow for moisture to escape.



Figure 28 Old and New Sheathing
Old sheathing was retained where still capable of holding nails.



Figure 29 Exterior Siding
South exterior showing a repair to the nogging (brick), the structure, Home Slicker, sheathing, and clapboards.

1.6.3 Walls

Exterior wall framing, posts, girts and studs were repaired or replaced in-kind to match the original. Oak sills and framing on the 18th century portions were repaired or replaced with white oak and the early 19th century second floor rear addition was repaired or replaced with white pine. Every effort was made to retain remnants of original structure including earlier materials re-used at an early date. These replacements and repairs were done using period methods and tools.

1.6.4 Roofing

Deteriorated 20th century asphalt shingle roofing was removed. Defective sheathing and framing of the roof were removed or repaired or replaced in-kind, as appropriate. Roof shingles were replaced with new No. 1 perfection blue label red cedar shingles. Shingle exposure was matched to historic photos and nailing evidence for the early roof. Lead flashing was used at the chimney penetration. Wood gutters lined with lead-coated copper were installed on the rear, north side of the main house, west and east ells. Cedar breather was installed between the roof sheathing and shingles to allow air circulation and heat removal through a concealed roof ridge vent.

1.6.5 Doorways

Severely deteriorated and historically inappropriate 20th century exterior doorways were salvaged and stored. New reproduction doorways were fabricated by North Bennet Street School of Boston and Arlington. The Front door is based upon the shadow of the original found on sheathing below later clapboards and trim. It duplicates the Old Manse West doorway of ca. 1770 that matched the silhouette as well as the details of the fluted pilasters and trim in the Barrett Parlor. The West Ell Doorway was reproduced to match the original seen in historic photos with transom bulls-eye panes similar to the originals at the Concord Museum. The rear and East Entry doorways were based upon the historic 1880s photo of the kitchen door as well as the door itself found at the Medford Historical Society and now at the Concord Museum.

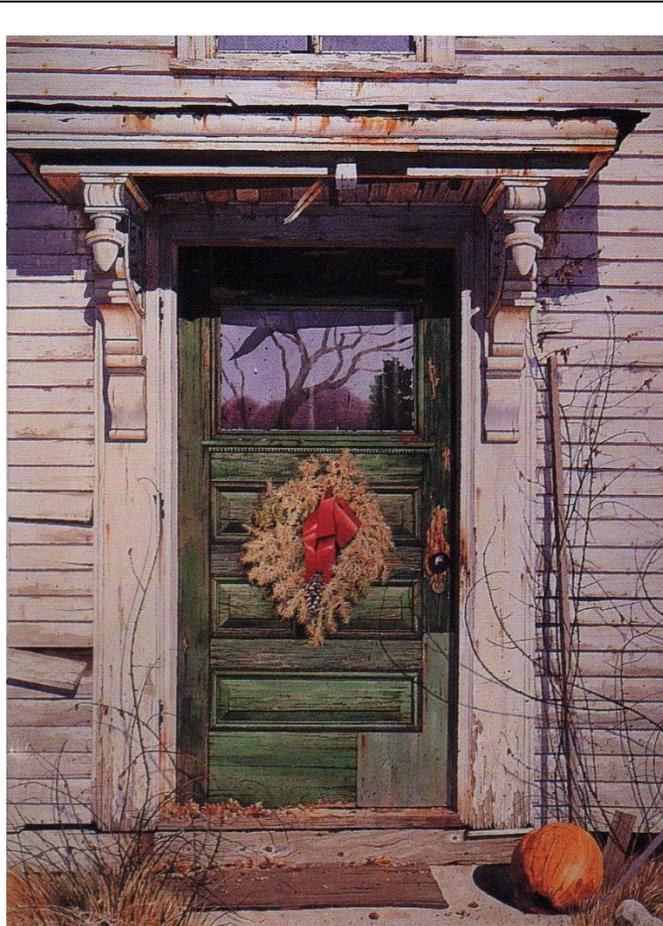


Figure 30 Front Door – Before Restoration

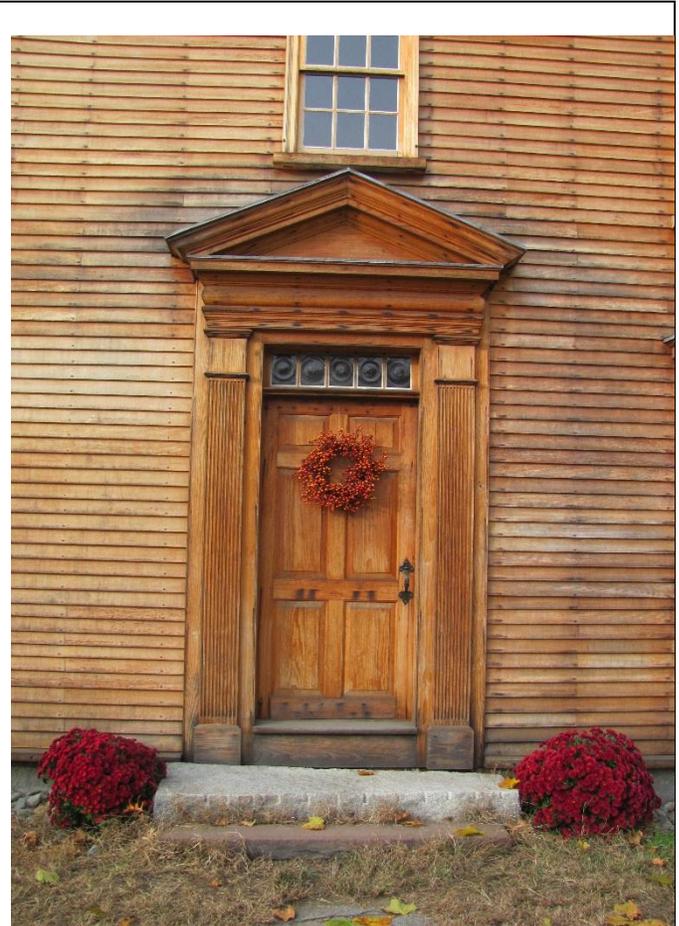


Figure 31 Front Door – After Restoration

1.6.6 Windows

Severely deteriorated and historically inappropriate 20th century exterior windows were removed and samples retained in storage. Historically accurate reproduction mortise-and-tenon plank window frames were reproduced by Paul Evans of Schnepel Woodworking in Providence, RI. The window frames exactly reproduced the fragments of the originals found re-used in the walls as blocking for the later window openings. The windows were fabricated from all heartwood pine. “Waterlox” was applied on the bottom rails. Schnepel provided a preservative for the window frames, trim, and clapboards, along with the following items:

1. All exterior woodwork was treated with a linseed oil, turpentine fungicide, and mildewicide preservative; window frames, trim, and clapboards were dipped in preservative prior to installation.
2. The Cellar Window Frames were fabricated of S.A. Cedar instead of Eastern White Pine.
3. The Cellar Windows were made to be hinged at the top (butts/ in-swinging) and there are no "Jamb Extensions" or "Stools" required.
4. Reproduction glass was manufactured by Saint-Just company in France: <<http://www.saint-just.com/gb>>. The company supplied restoration glass for Versailles, Windsor Castle, and the White House, so it appeared qualified for Col. Barrett’s. Google Saint-Just for a You Tube video illustrating part of the fabrication process.

Figure 32 shows that the lower sash on first floor windows are locked from lifting by a stick in the groove held in by a screw. Figure 33 shows that sticks are used to hold the sash in place and the sticks are held in place by magnets. This makes it much easier to maintain the windows.

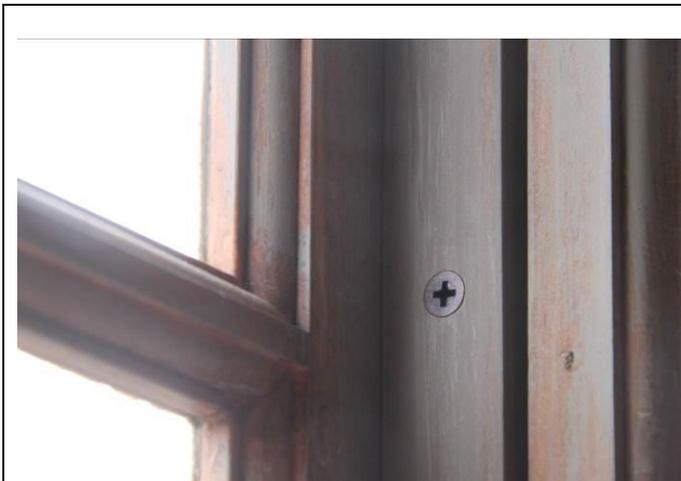


Figure 32 Window Lock

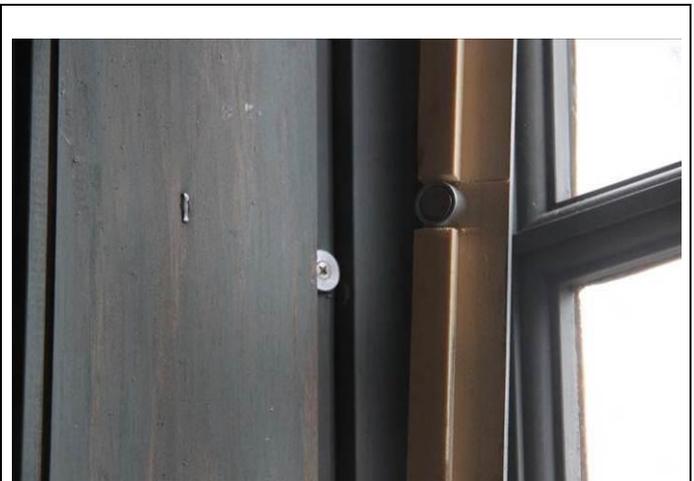


Figure 33 Window Sash Holders

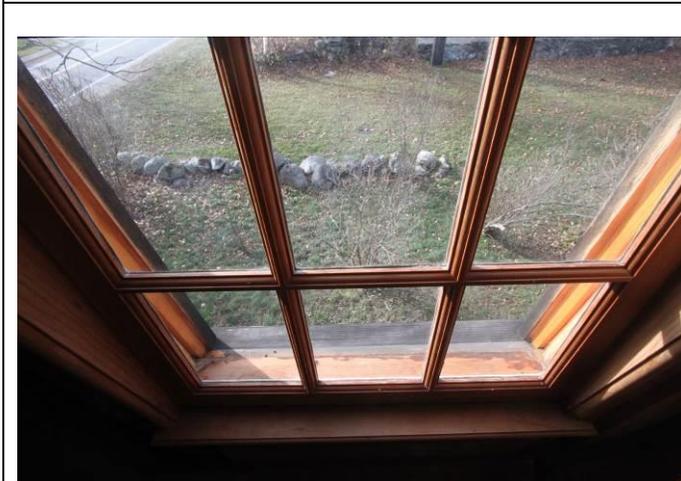


Figure 34 NW Window out of Groove

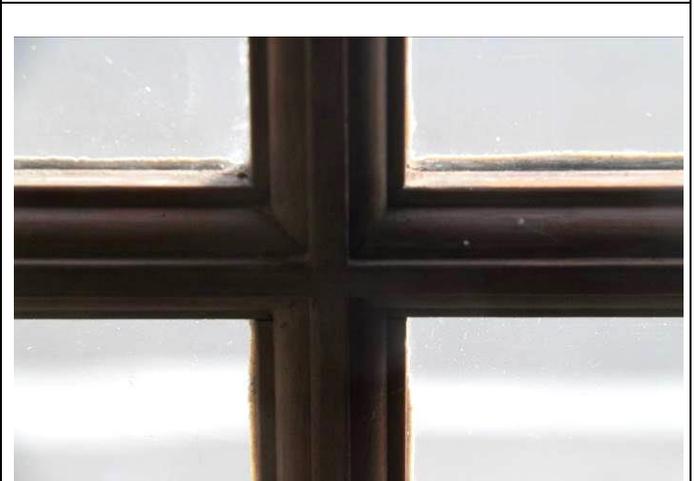


Figure 35 Window Sash Detail



Figure 36 Window Construction Sample



Figure 37 Parlor Windows

1.6.7 Plaster

All plaster from the 18th century was retained wherever possible. Both 20th century ceilings in the Kitchen and Muster Room were removed to reveal the planed and chamfered joists and the undersides of the finished floorboards of the ceiling above, originally intended to be exposed. In the Muster Room there remains evidence of a later 18th century plaster ceiling that had been removed when the 20th century ceiling had been installed. Everywhere else, original and later plaster surfaces were conserved and restored by Mike Fineran, plaster and paint conservator, with areas beside smaller restored windows in-filled to close up where larger, later windows had been.

The distemper/calimine paints were removed. The bulk of this work was done with a wallpaper steamer to soften the coating followed by hand scrapping. This was followed by a hot water wash. This was done on ceilings in the Parlor, Parlor Chamber, Muster Chamber, West Ell Parlor, West Ell Parlor Chamber, and Bedroom and also the walls of the Bedroom.

Big Wally’s plaster adhesive was used to reattach plaster to lath. This was done along the length of cracks by drilling 3/16th on either side of cracks every 3 – 4 inches along the length of the crack. This was then temporarily clamped to pull the lath to the plaster. After the adhesive had set the clamps were removed. The injection holes were filled with a setting type joint compound. A similar procedure was followed around the perimeter of areas of missing plaster.

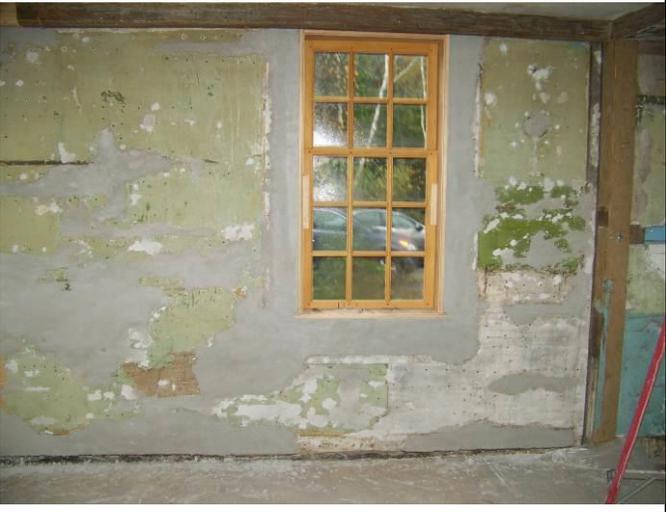
There were a few places where the plaster was intact but large sections were floating free of the lath. This was found in the Parlor Chamber on the east wall in the area south of the fireplace and the south and west walls of the West Ell Parlor. For these areas the adhesive was injected in a grid pattern every 4 to 6 inches throughout the area of hanging plaster.



Figure 38 Plaster – West Ell - South wall
After adhesive injection



Figure 39 Plaster - Rear West Ell - West wall
After adhesive injection

	
<p>Figure 40 Plaster – West Ell - South wall After plaster patching</p>	<p>Figure 41 Plaster - Rear West Ell - West wall After plaster patching</p>
	
<p>Figure 42 Injecting epoxy behind old lath To hold plaster</p>	<p>Figure 43 Straps hold plaster while epoxy dries</p>

On the north wall of the Parlor Chamber and the north wall of the front stairwell gouges were filled with a setting type joint compound.

There were areas of missing plaster where the larger Victorian windows had been removed to go back to the 18th century size windows. There were also various sized holes in plaster surfaces throughout the house. There were large sections of missing plaster on the south and west walls of the west ell parlor. The plaster was removed on the north wall of the West Ell Parlor, the south wall of the West Ell back room and the area below the window of the west wall of the West Ell back room. This last area was filled in with a horizontal wainscot. The other areas of missing plaster were redone with a three coat plaster system. The scratch and brown coats were done with a mix of 3-parts sand to 1-part lime and hemp used as a fiber. The finish coat was a mix of 1-part sand to 1-part lime. A setting type joint compound was used to even out transitions between patched and old plaster.

A finish coat of plaster was put on the Muster Room and Muster Chamber walls covering patches and old plaster. New lath and plaster were put up on the ceiling of the West Ell back room, the wall at the bottom of the back stairs and above the door in the back hall.

The plaster surfaces were primed with BIN, a pigmented shellac based primer. Finish coats were acrylic based paints.



Figure 44 Typical area around windows
With new lath inserted

Figure 45 Plastering over the new and old lath



Figure 46 Area around windows after patching



Figure 47 Wall with finish coat

1.6.8 Painted Finishes

Flaking and peeling interior lead paint layers were, with the consultation of the NPS, agreed upon to be removed from the underlying historic paint layers. Small patches in various locations retain the entire paint sequence as well as samples collected by both the NPS and John B. Vaughan of Architectural Conservation Services in Bristol, RI, for future study. The lead remediation team from Alpine Environmental developed appropriate procedures using infrared heat sources to remove the overlying paint to expose the original and/or early painted surfaces. Some decorative marbling of fireplace bolection surround, firebox plaster parging, and cedar graining of interior woodwork with mahogany grained mopboards was revealed. All historic paint surfaces were preserved as much as possible and conserved by Marylou Davis, conservator and a team of Smith College interns, completed in 2012 by Bridget Byrne, Wenda Kochanowski, and Catherine Lipscomb. This makes the Barrett Farm one of only a handful of historic 18th century buildings in the entire country that retain their original decorative paint on display. Details are discussed in the paint studies.

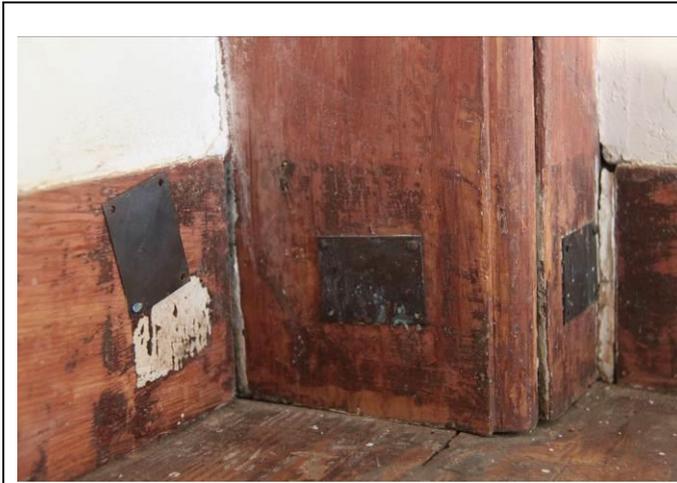


Figure 48 Bronze plates cover later paint layers



Figure 49 John Vaughn inspects paint layers



Figure 50 Sample paint chips documented



Figure 51 Removing later paint layers
Used low-temperature heat guns to soften paint

1.6.9 Floors

Original wide pine finish floors were retained in the Parlor and most of the second floor wherever they still existed. Damaged areas were patched and 20th century narrow fir floors in the Muster Room, Kitchen, Entry and West Ell first floor were all removed and replaced with new wide pine boards matching the originals. The original subfloors throughout were retained and attached as necessary except in the kitchen and East Ell where they had been removed in the 20th century.



Figure 52 Muster Room Floor



Figure 53 Kitchen Floor



Figure 54 East Ell Floor



Figure 55 West Ell Floor

1.6.10 New Construction

The East Entry, besides having been changed and enlarged into a connected woodshed, had been demolished after it collapsed in March of 1977. The original East Entry has been reproduced based upon historic photos of the structure taken at the time of its collapse, and comparison of historical and archaeological evidence of the former East Ell at the Thomas Barrett House (1862 watercolor) and the James Barrett Jr. House at 612 Barrett's Mill Road, found to be a near twin of Col. James Barrett's House. Photos taken in 1977 of both the Barrett Farm East Ell and Barn taken by Orville Carroll of the National Park Service showed details of construction of both of the collapsed structures.



Figure 56 East Ell – First Floor



Figure 57 East Ell – Second Floor

1.6.11 Masonry

The scope of work included repair of the existing foundation, the window wells, the areaway by the kitchen door, and the front steps. Also included was rebuilding of existing center chimney top above roof to match previous chimney top using salvaged brick from previous chimney and new brick to match.

1.6.11.1 Foundation

- Main House – North Wall: Repair/re-set/re-point loose, misaligned foundation stones to receive new sill; re-point open joints with approved lime-cement mortar mix to one foot below grade to deter moisture and pests as shown in the drawings.
- East Ell Entry - Repair, rebuild failed or hazardous areas of foundation and steps to receive new sill as shown in the drawings.
- West Ell Entry south and west end walls - Repair, re-point stone foundation walls, rebuild deteriorated areas to receive new sill as shown in the drawings.
- Clean all areas of masonry repairs to match existing surrounding areas.



Figure 58 Foundation Cleaning

The foundation was power washed above grade to remove loose sediment prior to repair and re-pointing to match the original.



Figure 59 Front Step Repair

The bricked up area behind the front step was repaired and re-pointed as done in the early 1800s when cut granite underpinning was installed.

1.6.11.2 Fireplaces

- a. The kitchen fireplace firebox was rebuilt to match the surviving remnant of the east jamb that also preserved the original lintel height and line of the back wall of the firebox. The smoke chamber of the fireplace had to be repaired and a new cast iron damper was installed to allow potential use of the fireplace. The early 1800s rebuilt brick oven and smoke chamber were preserved intact with minimal work done to them except to repair the interior oven flue.
- b. The hearth of the Muster Room was rebuilt using salvaged brick, some recovered from the brick used to fill the opening when it had been closed in 19th century. The hearth was laid in its original location with its woven brick pattern at the ends based upon a few remaining hearth bricks near the south jamb of the fireplace. The old brick oven at the rear was carefully re-opened and otherwise no work was done on the oven or jambs. The early brown coat parging (probably done to imitate brownstone) was probably added in the 1768 rebuilding, when it is believed the north jamb of the fireplace was rebuilt to accommodate the (then) new kitchen fireplace.



Figure 60 Kitchen Fireplace – Before Restoration

The firebox of the kitchen fireplace had been reduced in size in the early 1800s when the oven was re-built, then later severely damaged in 1970s renovations.

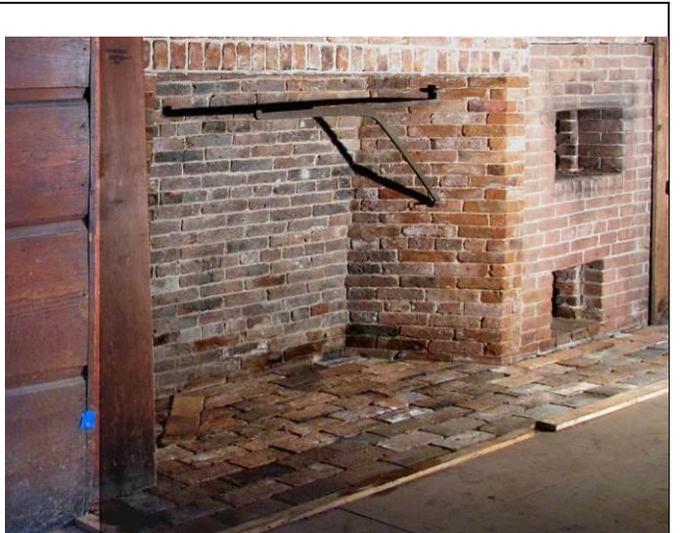


Figure 61 Kitchen Fireplace – After Restoration

Mason Richard Irons rebuilt the Kitchen fireplace to match evidence of the original 18th century firebox found behind a smaller early 1800s added one.



Figure 62 Kitchen Fireplace



Figure 63 Parlor Fireplace



Figure 64 Muster Chamber Fireplace



Figure 65 Parlor Chamber Fireplace



Figure 66 Muster Room Fireplace



Figure 67 Part of West Ell Chimney

1.6.11.3 Chimney

- a. The top of the main house chimney flue was rebuilt to match the original above the smoke chamber using brick salvaged from the existing chimney with new brick to match above the roofline. A lime-cement mix of 1-part cement :3-parts lime :9-parts sand was used.
- b. The unstable West Ell chimney, a stove flue added in 1911 (inscription found on 2nd floor reads “Built April 1911”). This chimney was removed since it was not original (1911) and was a safety problem. A chimney of the appropriate style could be rebuilt (plans from Detwiller).



Figure 68 Chimney Pre-Rebuild
 The main house chimney prior to restoration was cracked, unstable, and had to be removed to the roofline. It had been rebuilt smaller in the 19th century.



Figure 69 Rebuilt Chimney
 The chimney as rebuilt matched the dimensions of the early framed opening in the roof and was built with lime mix and brick matching originals.



Figure 70 Chimney Flues
 The original five flues of the main house chimney as found had undergone severe erosion and deterioration down to the roofline.



Figure 71 Chimney Flues Above Roof Line
 The flues were lined above the level of the smoke chamber in the attic and lead flashing was used at the intersection with the roof.

1.6.12 Hardware – Original and Reproduction

Much of the original hardware is still in place. Where reproductions have been used, it matched samples of the original hardware remaining in place. All reproduction strap hinges, H and HL hinges, Suffolk spade and bean cusp latch handles, etc. were exact reproductions - some by Hammersmith and some by Ball and Ball.

1.6.13 Structural Analysis

A complete structural analysis of existing conditions with framing plans and details was prepared by Structures North of Salem, MA. Existing and required load capacities were analyzed and resistance drill tests were performed on framing members. The house floors and roof were brought up to current code specifications – this is readily seen in the attic with replacement purlins where specified and the basement structural support for the muster room floor.

1.6.14 Utilities

1.6.14.1 Electrical

Exterior electrical wiring. The electrical feed for the house and potential barn structure starts at a pole on the south side of the road. The feed goes underground, crosses a driveway and then comes under the road and alongside the barn foundation to the post with the electrical meter. The feed then goes behind the house to the east of the basement window below the kitchen. The feed then goes into the dirt floor and over to the electrical panel in the basement. A feed then returns from the electrical panel to the meter box by the barn foundation for possible future use. The meter stand approach met the requirement that it be on the property, but avoided putting it on the house itself.

Interior electrical wiring. The electrical panel in the basement is rated for 230Vac, 200Amps, and space for 40 circuit breakers with 8 breakers installed. The circuits are:

Table 36 Electric Circuits

#	Rating (A)	Location	Allocation
1	20A GFI	Basement at panel	Sump pump #1
2	20A	2 nd floor muster chamber	Closet outlets
3	20A GFI	Basement at panel	Sump pump #2
4	15A GFI	Basement	Switched outlets and lights
6	15A	1 st floor utility	Outlet
8	15A	Attic stairs	Outlet
10	15A	1 st floor cheese room	Outlet
12	15A	2 nd floor rear	Wire mold under mid-plate



Figure 72 Electrical Meter Stand



Figure 73 Electrical Panel



Figure 74 East Ell Outlet – NW Corner



Figure 75 Muster Room Outlet – Cupboard



Figure 76 Muster Room Outlet - Closet



Figure 77 NW Utility Room Outlet



Figure 78 Second Floor North Room Outlets
An outlet strip is under the plate.

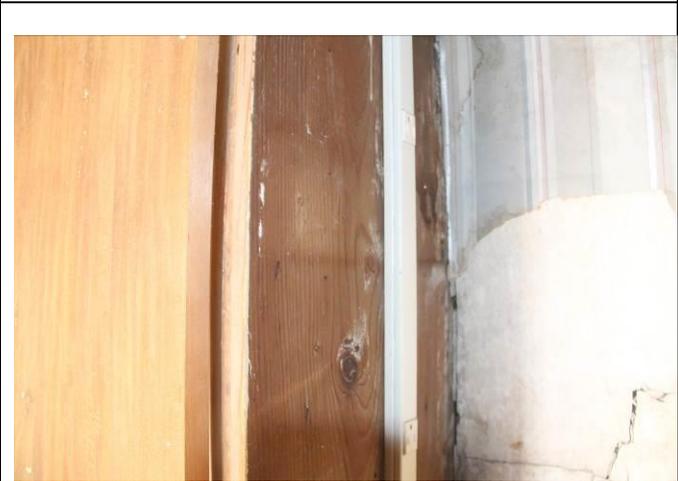


Figure 79 Muster Chamber Outlets – Closet



Figure 80 Attic Outlets
By South stairs.



Figure 81 Basement Light Switch – East Staircase



Figure 82 Electrical Panel and Outlets - Basement



Figure 83 Light Fixture – Basement under Muster



Figure 84 Outlets – Basement West Staircase



Figure 85 Basement Light Switch – West Staircase

1.6.14.2 Water and Plumbing

Water is fed to the house from the road to the basement area below the muster room. An outside shutoff is under the front lawn in-line with the inside meter. The outside shutoff is used to shut off the water on a seasonal basis since there is no heat in the house and, if the water-meter freezes, the meter disk ruptures and water flows into the basement. There is one PEX tubing line going from the meter to a spigot at the rear of the house by the basement window.



Figure 86 Water Meter – Basement
Disconnected during winter season



Figure 87 Water Spigot – North Side

1.6.14.3 Basement Drainage and Sump Pumps

There are two sump pipes and output lines originating in the basement below the electrical panel and piped to the manhole between the house and the barn foundation.



Figure 88 Sump Pumps and pipes in Basement



Figure 89 Sump Ditch
Shows pipe, gravel, and fabric during installation



Figure 90 Sump and Electrical Pipes
From house to manhole



Figure 91 March 2010 Back Yard Water
Water table flooding, not just surface water.

1.6.14.4 HVAC

There is no HVAC installed in the house. If ever installed, a distribution technique could be to flow through the chimneys and out of the fireplaces.

1.6.14.5 Septic System

There is no septic system for the house. Surveying was done to establish a location for a septic tank. One feasible site was to the east of the McGrath house requiring pumping up to a raised system. If the barn is rebuilt, a Clovis type system could be installed on the main floor with easy clean-out in the basement.

1.6.15 Security

Locks

The house has two slide bolts on four of the five doors. The door without slide bolts (northwest rear) has a keyed latch that is compatible with the park lock system. The basement windows have slide bolts. The first floor windows have hold-down sticks.

Alarm System

SOH used heat and smoke sensors for fire protection. The system was monitored through Lexington Alarm Systems. Conduit for running wires and mounting panels are available for NPS to install their own alarm and security systems. The alarm system connects to the phone system which has been switched from overhead to underground. The phone system has remained with Verizon due to the Park's GSA contract with that vendor.

1.7 Work Performed – Site

1.7.1 Clearing and Cleanup

All overgrowth of non-historic value was cleared from around the house and barn foundation in the work area. Invasives such as bittersweet had to be removed from attic windows where it had grown in the last 30 years. Multifloral rose was rampant in the back yard. Modern debris was also picked up and disposed of in order to clear the work area around the house and inside, including hazardous materials in the basement.



Figure 92 NW Side of House Oct 2005



Figure 93 Back Yard Oct 2005



Figure 94 Back Yard June 2006



Figure 95 Back Yard Jan 2007



Figure 96 Well at SE House Corner



Figure 97 Back Yard May 2009



Figure 98 Back Yard June 2009



Figure 99 New Garden July 2009



Figure 100 Back Yard November 2009



Figure 101 Rear of Barn November 2012

1.7.2 Barn

The Barrett Barn, as rebuilt in the 19th century, deteriorated and collapsed under the weight of the snow in the winter of 1976-77. The West Ell addition to the barn was rebuilt ca. 1911 by the McGraths. It is documented in a series of photos taken by Orville Carroll of the National Park Service in 1977. The original Barrett Barn in 1808 as documented in Peter Barrett's estate settlement, stood apparently near its present location, but within 40 feet of the house. It then also had an attached shed that had a stable on a lower level. The later barn's surviving fieldstone foundation, with its large cut stone underpinning, remains largely intact. Basic clearing of invasive vegetation has been done, but an archaeological survey and stabilization of the foundations remains to be done. An old photo of the Barrett District School No. 5 (original at the Concord Free Public Library) shows the pre-1806 school at the corner of Strawberry Hill Road. To the northwest of the school, in the middle of the Barrett field, is a ca. 18th century English barn that may be a portion of the original Barrett Barn relocated to the northeast of its earlier location that was reportedly within forty feet of the Col. Barrett Farm house.



Figure 102 Barn Photo 1968



Figure 103 Barn, House, and Woodshed, mid-1970s



Figure 104 Barn Foundation 2010

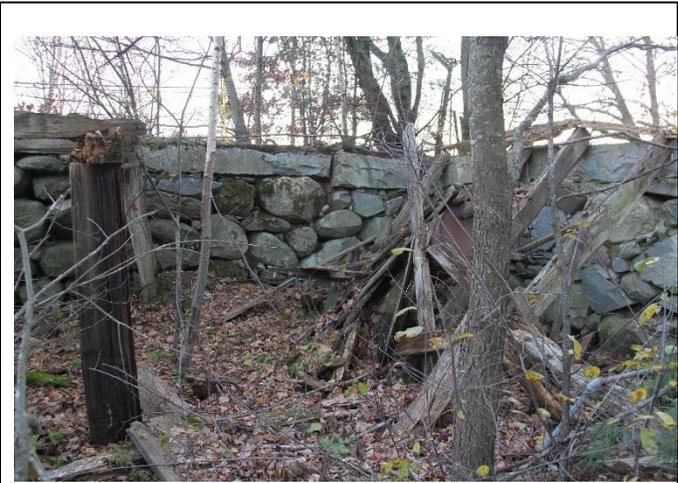


Figure 105 Barn Foundation 2010

1.7.3 Woodshed

The East Ell woodshed was extant in 1808 when Mary Barrett was bequeathed the “Mansion House and woodshed, &c. Attached.” Based upon inventories and comparable examples, the shed originally probably contained the east entry, cheese room/dairy, a well room, wood shed and chaise (one-horse shay) house, as well as a privy. It was probably originally of a shed-roofed form; however, the shed as seen in old photos had been rebuilt in its gable-roofed form by the mid-19th century. The East Ell, along with the entry, collapsed in the 1970’s, and only the foundation remains. Trees were removed and stumps ground down due to Dutch Elm disease. The woodshed foundation remains largely unchanged.



Figure 106 ca 1880s House and Woodshed

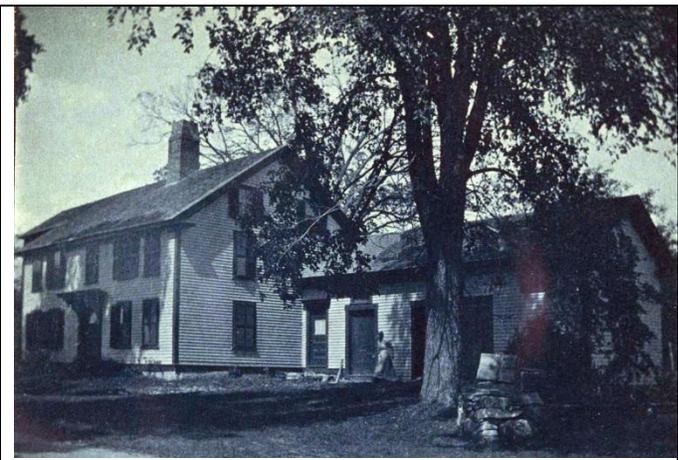


Figure 107 ca mid 1900s House and Woodshed



Figure 108 Woodshed Foundation – To House

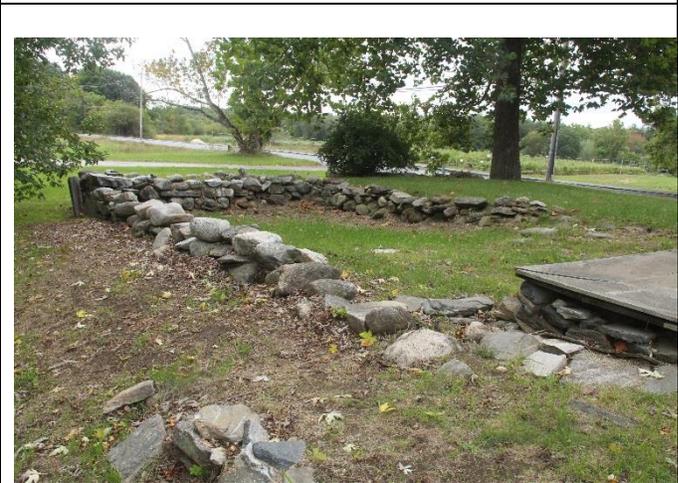


Figure 109 Woodshed Foundation – From House

1.7.4 Drainage

A new drainage system of pipes was installed in 2012 on the site of the previous drainage ditch shown in old photos. It was engineered along with the Town Engineering Department and with Natural Resources Commission approval. This drainage system is expected to mitigate the serious flooding of the property that occurred annually during the wet seasons. A sump pump now provides drainage for the house that was seriously and adversely affected by water infiltration over the years. The drainage work was done under Massachusetts DEP File # 137-1109. Drainage details are in the Drawings Completion Report.



Figure 110 Flood in Rear of House March 2008



Figure 111 Gravel in Front drains to West Lilacs



Figure 112 Drainage Ditch from Manhole to Street



Figure 113 Drainage in Rear of House



Figure 114 Drainage Ditch to Rear of Barn



Figure 115 Drainage toward Assabet River



Figure 116 Drain Outlet Ditch During Construction



Figure 117 Drain Outlet Ditch 2013

1.7.5 Utilities

Water and temporary electrical service was in place that provided utility power and necessary water to perform the project work. A new, engineered, basic utility system of underground electrical service, water, and sump pump waste pipes was installed by Patriot Electric in 2012.

1.7.6 Cesspool

The cesspool to the north of the kitchen, likely installed in the 1930s, was removed as part of the drainage upgrade. The cesspool outlet was found to be connected to the drainage ditch. The drainage ditch behind the house and the buried utilities were passed through the cesspool piping path so as to maximize the use of previously disturbed soil and minimize the impact on future archaeological digs.

1.7.7 Agricultural Usage

Farmland on the Barrett Farm, occupied and tilled by the Barretts for 200 years, continued to be farmed by the McGrath family until the death of Patrick McGrath in June 2012. Crops included fruits and vegetables that were sold by Patrick McGrath at a farm stand opposite the house. In addition to a garden started by Project Manager Jim Cunningham on the Barrett Farm property, field crops continue to be grown by the McGrath successors on leased adjacent public land protected by conservation restrictions. A blueberry field on the Barrett Farm property continues to be farmed.

1.7.8 McGrath Property

As part of the 2003 purchase agreement, SOH subdivided the property and deeded to Michael McGrath one acre of land at the north part of the overall property. SOH also built a house on that property. When that house becomes available for sale, the NPS has first rights of refusal at a price of \$200,000.

1.8 Site

The Barrett Farm site retains its integrity due to its continued agricultural use. The area around the house, barn and grounds remains little disturbed except for agricultural use of its upper foot or so of topsoil, utility trenches, and driveways. The site is well documented in early photos and as shown on the site plan, the area north of the house, between the house and field as far as the end of the barn foundation, was the garden in the time of the McGraths as documented in their old family photos.

1.8.1 Archaeology

Archaeological reports have been summarized elsewhere in this report (see Appendix). There is high archaeological potential at the site not only for Barrett Era artifacts, but also native artifacts since the area has been prime farmland for thousands of years. (See Concord Museum and Peabody Museum at Andover for Thoreau collection of archaeological artifacts picked up in the fields around Concord. For historic archaeology the archaeological potential is greatest in the area around the East Ell entry and Woodshed. A trash heap of mostly 19th century artifacts was found and documented by archaeologists. One highly significant find of 18th century origin was fragments of a Masonic punch bowl that,

according to Mary Beaudry at Boston University, is Chinese export predating 1780. The significance of this is that, although there is no record of Col. Barrett having been a Mason, his son James Jr. founded the Concord Lodge of Masons in 1797, not long before his death in 1799. Also found were some red-ware fragments of earthenware typically used in dairying that would have taken place near the well in the Dairy or Cheese Room in the East Entry. A wooden pump may have been used in the Barrett well, and three of these were found in the McGrath wagon shed that, according to Patrick McGrath, were moved there along with the privy from the East Ell when it collapsed in 1977. The privy in the northeast corner of the East Ell foundation has archaeological potential, as well as the foundation itself. Nearby in front, about two feet below grade (apparently raised in front of the Ell in the mid-19th century) was found an 18th century ox shoe that suggests more artifacts of the 18th century may be found at that level.

1.8.2 Stonewalls

Early photos show extensive stone walls along both sides of Barrett's Mill Rod, except not in the area on the north side in front of the house and barn. There was a deep drainage ditch with a stone-topped culvert west of the house and several openings for gateways to farm roads and pastures as seen in old photos. Historic photos show stone walls also extended north and south of the walls along the road. These stone walls were for the most part removed by McGraths, perhaps used as fill when the drainage ditch was buried and superseded by a subterranean pipe to the river in the early to mid-20th century. One section of stone wall remains to the west of the house that is seen in the 1848 Lossing view along with the old lilacs, ancient fruit and elm trees, all presumably dating to the time of Col. Barrett. These all form an important part of the 18th century landscape and merit restoration.

1.8.3 Cobble Paving

Cobble paving is visible at the southeast corner of the house in early photos. These and others were revealed by archaeological digs documented in archaeological reports by the University of Massachusetts (bound separately). The principal areas where the cobble paving was found were a) in front of the west entry b) below the east entry Cheese Room or Dairy (a typical feature) c) in front of the West Ell entry, and behind the West Ell and along the rear terrace of the house. A separate flagstone path to the front door was also uncovered in the course of work and remains exposed. These areas have all been preserved as much as possible in situ, and restored where disturbed in the course of rebuilding the East Ell Entry foundation.



Figure 118 Cobble in Front of West Ell



Figure 119 Cobble near East Door

1.9 Compliance

1.9.1 Secretary of Interior Standards

What follows is a general overview of what is restored and what is preserved/conserved as a part of the restoration project at Col. Barrett's Farm completed according to the Secretary of the Interior's Standards for the Restoration of Historic Properties:

Restored:

Exterior: All of the exterior roofing shingles, sidewall clapboards and trim, windows, doors and hardware are exact reproductions based upon incontrovertible evidence such as original fragments of window frames, and

original exterior door and bulls-eye transom lights (now at the Concord Museum), as well as early photographs, and comparable examples of similar date and origin. The rear stair landings of wood are typical utilitarian structures for practical access and are easily distinguishable from early work. The window well stones have been added to improve drainage and prevent water infiltration to basement window openings. The front door is a reproduction of the Old Manse West doorway that has details matching moldings in the parlor at Barrett Farm, as well as shadows on the front wall sheathing.

Interior: In the principal front rooms of the main house and ell, all interior window trim, except the soffits attached to the girts which in several cases are original, has been reproduced exactly based upon shadows of the interior trim remaining on the soffits. The hardware is all original except a few items reproduced to match evidence in each room, as detailed in the hardware schedule provided elsewhere. Three doors in the kitchen, one in the West Ell NW Chamber and one in the South chamber of the West Ell have been reproduced to match others found in the house. The over-mantel in the kitchen with its mantel shelf has been restored using evidence found at the site including fragments of what is believed to be the original chimney paneling, and comparable to other examples in the area at the Old Manse and the Golden Ball Tavern.

Preserved:

Exterior: All large stone doorsteps including those at the east, main house south, West Ell front and rear entries are all original, or Barrett period additions (front doorstep). The East Ell and Barn foundations have been preserved intact. The west stone wall has been preserved in situ.

Interior: All woodwork in the front principal rooms and entries on both levels has been preserved intact along with the earliest paint layer treatment on the 18th century woodwork. Samples of the entire paint stratification have been kept throughout the house, protected by small metal plates. On the rear north exterior wall, although largely re-built due to insect infested and rotted conditions, fragments of original and re-used historic framing components – studs, posts, and braces, have been re-installed in as close to their original locations as possible. Many unusable framing, molding and woodwork fragments have been preserved, labeled and stored in the attic.

1.9.2 Concord Historic Districts Commission

The Barrett Farm is within Concord's Barrett Farm historic district. This requires that any changes to the house or site that are visible from the public way need approval from the Historic District Commission (HDC).

Table 37 Historic Districts Commission Approvals

Date	Certificate of Appropriateness Topic
4/20/2005	Erect outside sign
9/1/2005	Remove West Ell chimney
12/21/2006	Sills and rear wall
9/6/2007	Building restoration
11/1/2007	Signage
1/8/2009	Changes to previously approved windows
6/18/2009	Mods to front door and window above
3/10/2010	Construction of East "Beverly" Ell
12/3/2010	Barn reconstruction (not done)

1.9.3 Concord Historic Commission

A preservation restriction easement was negotiated between SOH and the Concord Historic Commission. It is registered in Book 53517 Page 55. This easement was also required by the SAT grant and approved by MHC and the NPS. This easement ended when NPS purchased the Barrett property.

1.9.4 Concord Department of Public Works

The DPW department worked with SOH on the drainage project. SOH, with the financial help of a CPA grant, installed drainage from the Barrett farmhouse and back yard, across the road and down to an open ditch where it drains into the Assabet river. The Town of Concord added drainage for a section of Barrett's Mill road in 2016. NPS is now responsible for the maintenance on its property, but SOH retains responsibility for drainage across the road and to the Assabet.

1.9.5 Concord Building Department

The project building permit was first obtained under David Buccella's license and then extended under Justin McCarthy's license. The building permit (including electrical) was signed off in December 2012.

1.9.6 Concord Natural Resources Commission, Planning, and Zoning Board of Appeals

Table 38 Town of Concord Permits

Date	Board	Item
6/9/2004	Zoning Board of Appeals	Driveway
10/17/2011	Zoning Board of Appeals & Planning	Property subdivision
6/30/2004	Zoning Board of Appeals	Reduced frontage and lot size
3/9/2012	Natural Resources Commission	Drainage
4/12/2011	Natural Resources Commission	Groundwater radius

1.10 Restrictions

1.10.1 Deed

There are no restrictions on NPS in the property deed.

1.10.2 Easements

The drainage easement is registered in book 59889 page 18 along with plan 2012/609 and is written in a manner not to obligate NPS. SOH has the obligation for maintenance of the drainage system on the property to the south of the road (#449) where the drainage pipes carry the water to the drainage ditch and Assabet River.

1.10.3 Grant Related

A historic preservation easement was signed between SOH and the Town of Concord and registered (book 53517 page 55). This easement was required by both the CPA and SAT grants. This easement is no longer in effect due to the transfer of the property to NPS.

1.10.4 Archaeological

During the period of SOH ownership, artifacts and operations were under control of state regulations. The Park now has possession and operations under federal regulations.

1.11 Investment and Funding

The Barrett's Farm Project was funded by both private and public contributions. Save Our Heritage purchased the much of the land in 2004 and the house in 2005. SOH build a house for the Barrett farmhouse resident to move into in 2004-2005. SOH undertook restoration from 2005-2012. The NPS purchased the property from SOH in 2012. The funding of the overall project was split approximately evenly between the funding for cost of acquisition of the property and funding for the cost of the restoration (including drainage and other site improvements). The total project cost was funded as shown in Figure 120.

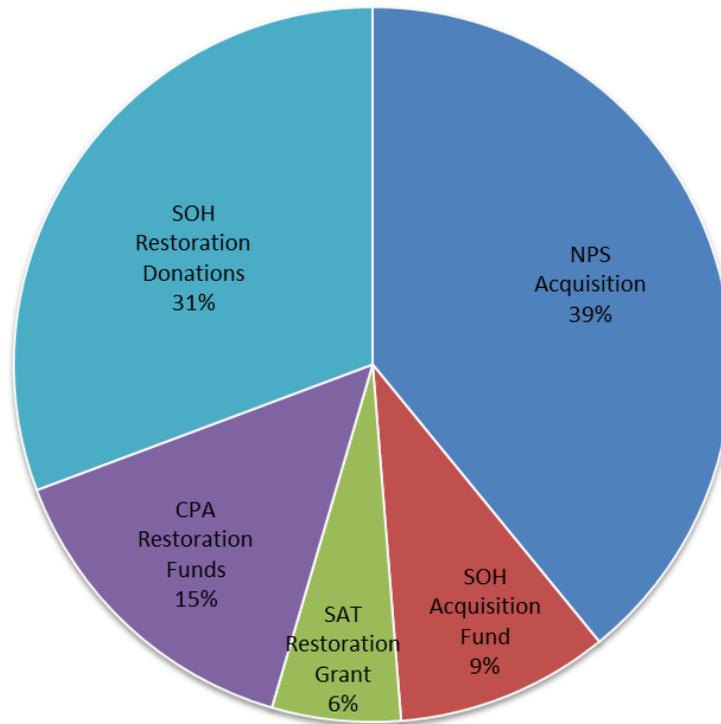


Figure 120 Project Funding Sources

In addition to the NPS acquisition funds and the many donors of Save Our Heritage, the project received 15% of total funding from the Town of Concord Community Preservation Act (CPA) grants and 6% of total funding from a grant from the Federal Save America’s Treasures program. The Barrett family also provided significant private contributions.

1.11.1 Town of Concord Community Preservation Act Grants

The Massachusetts Community Preservation Act (CPA) assists towns with funding for projects in a variety of areas including historic preservation. The CPA funds are managed via the town’s Community Preservation Committee (CPC) with town staff support from the Planning department. SOH submitted grant applications over the duration of the project and was awarded four grants totaling \$560K in financial support. SOH was required to meet specific conditions including reporting and a historic preservation agreement.

Table 39 Community Preservation Act Grants

Date (FY)	Amount	CPA Topic
2012	\$60K	Drainage
2011	\$0K	Drainage and barn restoration (not granted)
2009	\$100K	Exterior and Interior restoration
2008	\$0K	Exterior and Interior restoration (not granted)
2007	\$200K	Exterior restoration
2006	\$200K	Structural stabilization
Total	\$560K	

1.11.2 Federal Save America’s Treasures (SAT) Grant

The federal SAT grants are for the protection of our nation’s endangered and irreplaceable cultural heritage. Grants are available for preservation and/or conservation work on nationally significant intellectual and cultural artifacts and historic structures and sites. SOH received an SAT grant (#25-06-ML-0508) in 2006 for \$220,000 primarily focused on the restoration of the North wall structural elements of the house.

1.12 Restoration Expenses

The restoration work on the Barrett Farm homestead consisted of structural improvements, interior restoration, and exterior restoration. The work on the building was 90% of the restoration expense. Site work, including archaeology, drainage, and landscaping, comprised the remaining 10% of restoration expenses.

The expenses for restoring the Barrett Farm from 2005 to 2012 are summarized in Table 40.

Table 40 Restoration Expenses

Task	\$K	%
Carpentry	675	35.4%
Timber Framing (Structural)	288	15.1%
Plaster and Paint (Interior)	171	9.0%
Historic Architect	156	8.2%
Drainage	109	5.7%
Lead Paint Removal	94	4.9%
Windows	76	4.0%
Material (claps, floors, walls)	72	3.8%
Operations (power, water, ...)	48	2.5%
Legal and Insurance	46	2.4%
Masonry (fireplaces, chimney)	41	2.1%
Site (landscaping, invasives)	35	1.8%
Environmental (cleanup, permits)	26	1.4%
Structural Engineering	25	1.3%
Archaeology	23	1.2%
Electrical	17	0.9%
Supervision (paid)	6	0.3%
Total	1,908	100.0%

1.13 Maintenance

1.13.1 Windows

The Windows will need to be periodically cleaned (depending on condition) and recoated with the specified preservative supplied by Camger; the schedule and procedure will be best determined by visual inspection. It is especially important to coat any exposed end grain (sills and heads in particular) to inhibit changes in moisture content. Since it is unfinished, the glazing compound may also benefit from an occasional coating (2 year intervals) of the same product to keep it elastic and to prevent seal failure. After allowing adequate time for penetration, any excess, unabsorbed preservative should be removed and the application area carefully dried. Obviously, proper safety/ environmental procedures should be followed at all times. The windows must be occasionally examined to determine if the preservative is providing adequate protection of the component materials. Changes in application, formula, or the preservative coating itself should be made accordingly.

1.13.2 Clapboards and Doors

Maintenance on the clapboards and doors are similar to the windows protocol. Pay particular attention to end grains. The clapboards should be inspected for loose nails. Clapboards were installed over "Home Slicker" which should keep the back sides of the clapboards relatively free from water build-up or excessive moisture. Doors should be inspected for water ingress and damage.

1.13.3 Interior Paint Finishes

Gently dust interior paint finishes. Clean with damp Q-tip.

1.13.4 Chimney

Disintegration of the various chimney flues has been noticed. The chimneys need to be cleaned, lined, and capped. Leaving them uncapped will result in significant deterioration.

1.14 Possible Future Work

1.14.1 East Entry Dairy / Cheese Room

The original Dairy or Buttery remains intact at the James Barrett Jr. House and it also should be carefully measured and drawn for evidence of shelves, etc. for the final reconstruction of the Dairy-Cheese Room at Col. Barrett's. This room would be an important contribution to an interpretive program as Mrs. Barrett served the British soldiers milk bread and cheese, and Col. Barrett had two cheese presses in his 1779 inventory.

1.14.2 Second Floor North Room Partitions

These partitions are gone and were probably removed by McGraths in the ca.1911 renovation or later when the North Wall was rebuilt. No original finishes remain in this area and due to the fragments of original framing this area has been left unfinished for further study. However, one partition board, planed on both sides, and an 18th century 4-panel door and jambs remain, re-used out of context in the 1911 renovations, but salvaged for study and re-use. Since mortises and other evidence remains for the early partition layout, it is recommended that these be restored on the basis of these fragments, and comparative evidence of similar construction at the James Barrett Jr. House at 612 Barrett's Mill Road., where the second-floor rear partitions remain intact. Later partitions were removed for the restoration and those partition locations can be located by the floor paint patterns.

1.14.3 West Ell Chimney Reconstruction

The West Ell chimney was not reconstructed due to budget and schedule restrictions (\$30K estimate). However, the framing retains evidence of the eight-foot hearth and a kitchen fireplace on the lower floor with a smaller fireplace in the chamber above. Any restoration of this would be conjectural; however, the original woodwork of the 1796 West Ell of the James Barrett Jr. House remains at 612 Barrett's Mill Road. This has been documented with photos but due to inaccessibility has not been measured and drawn to scale. This would prove helpful as comparative data for the West Ell restoration at Col. Barrett's.

1.14.4 Outside Staircases

There are two temporary wooden platforms/steps on the North (rear) side of the house. Stone entries would be more appropriate for the period, but safety and ADA compliance are other considerations.

1.14.5 North-East Corner

There is a wooden walkway that goes around the north-east corner of the house. It covers old foundation stones and a well hole. This should be maintained or improved for safety.

1.14.6 West Ell Rear Staircase

The West Ell rear staircase provides a second exit from the upper floor. Its steps are narrow and there is currently no hand-rail or adequate protection at the second-floor level. There are drawings for fixing this situation. There is a wall stored on the second-floor West Ell that could be re-installed. Check Col. James Barrett's son's house (at the corner with College Road) for a similar layout.



Figure 121 West Ell Staircase



Figure 122 Top of West Ell Staircase

1.14.7 Barn

The 19th century Barrett Barn is well documented in photographs dating from the 1880s, when still occupied by the Barretts, through the McGrath Period. Its future reconstruction could be done with complete accuracy. There is also archaeological potential for discovering more in archives regarding the original Barrett Barn that was similar and apparently not far from its present location, based upon preliminary information. A comparable large 18th century English barn once stood at James Jr.'s home at 612 Barrett's Mill Road, and is documented with historic photographs. A similar well preserved 18th century barn at the Hunt Hosmer House was well documented by HABS/HAER drawings and photos prior to its conversion for use as a dwelling. New England Landmarks has done documentation and preliminary studies that are available for reference.

1.14.8 Woodshed

The 19th century Barrett East Ell Woodshed is also well documented in photographs dating from the 1880s, when still occupied by the Barretts, through the McGrath Period. The NPS photographically documented it and the barn when they collapsed in 1977. Its reconstruction could include the well room, woodshed, chaise (one-horse shay), and 3-seat privy (salvaged and stored at Barrett Farm) and could be done with complete accuracy. There is also archaeological potential for discovering more in artifacts regarding the earlier Barrett East Ell Shed of 18th century form (it existed with an "old chaise" by 1808) that was probably shed roofed (versus gable) and stood in its present location, based upon preliminary information. A comparable series of sheds once stood at James Jr.'s home at 612 Barrett's Mill Road that is documented with historic photographs. A similar early set of woodshed with chaise house and privy also existed at the Minot House (Thoreau Birthplace) on Virginia Road, as well as at the Merriam House at the corner of Lexington and Bedford Roads and another Minot House on Lexington Road, now demolished. New England Landmarks has done documentation and preliminary studies that are available for reference.

1.14.9 Furnishings / Inventories

The Barrett Farm furnishings, farm equipment, livestock, and other implements as well as crops are extensively well-documented in Barrett family probate records and inventories of 1779, 1799, 1808, 1813, 1846, and 1862 and others may also be found. Most of these are transcribed in the *Historic Structure Report Appendix* and available for

reference. The Barrett Farm has the potential to be one of the most authentic living history farms due to the extent and detail of our knowledge of its contents and use, not only during one day of the American Revolution, but throughout its entire 307-year history.

The original Col. Barrett desk is at the Gen. Israel Putnam house in Greenwich, CT. A replica of that desk could be placed in the Muster Room.

1.15 Work Phases

There were three basic phases to the restoration work:

Emergency Repair – emergency structural repair to keep the house from collapse

Phase 1 – Primarily structural and exterior restoration

Phase 2 – Primarily interior restoration

1.15.1 Work Performed – Emergency Repair Phase

The General Contractor, Custom Copper and Slate, Inc., (GC) coordinated with framing contractor Traditional Framers (TF) in completion of Emergency Repair phase repairs indicated below including assistance with final installation of framing tie-in connections, repair and replacement of deteriorated sills, girts and floor framing components at the main house north rear wall, east entry door and west ell first floor front. The north rear wall was re-supported with final framing installation by Traditional Framers. The General contractor, Custom Copper and Slate and Traditional Framers (TF) coordinated repair activities with work allocated to each as indicated by Custom Copper and Slate (GC) or Traditional Framers (TF) below:

Shoring:

(TF) Existing shoring was retained as long as necessary to brace the upper wall below the rear roof plate to keep the building in place while repairs were made.

(GC) Provided necessary additional shoring, temporary support and staging prior to disassembly for repairs as shown on Architectural and Structural drawings. Included were all the necessary staging, scaffolding, shoring and protection according to code and OSHA requirements.

North Wall, First Floor Wall Framing:

(TF) At the north, rear wall, completed repair/replacement of the sills, posts and studs between posts as shown on the drawings.

(GC) Repaired/replaced rough-sawn board sheathing removed in the course of repairs to match the original weather-lapped, bevel-edge exterior sheathing in species, grade and dimension.

North Wall, Second Floor Framing:

(TF) Completed repair/replacement of damaged portions of second floor rear intermediate and roof plates, studs, and floor joists. Framers used appropriate joinery and/or epoxy resins or approved alternative methods (see structural drawings) for attachment/infill. Framers replaced damaged portions of the wall framing with care to preserve early interior components and finishes wherever possible.

Sheathing:

(TF/GC) Historic components found in the course of the work were removed, tagged and salvaged, and if in not re-used, were stored for study and eventual disposition by SOH.

(GC) Contractor installed new sheathing matching the original weather-lapped, bevel-edge pine sheathing as specified.

Doors & Windows:

(TF, GC) Removed damaged window sills, sash, doors, frames, and trim; openings were provided with weather-resistant temporary closure to prevent further infiltration of moisture and pests until installation of new door and window units.

Nails and fasteners:

(TF) Supplied and installed appropriate FastenMaster® TimberLok® wood screws, Tremont or equal cut nails with wrought heads for fasteners for studs and related light framing in progress.

1.15.2 Phase 1 Exterior Restoration

General: The intent was to provide a fully weather-tight, authentically restored exterior in conformance with the Secretary of the Interior's Standards for the Treatment of Historic Properties. Interior work was limited to particular structural, stairway, floor, wall and ceiling repairs required for safety of limited occupancy requirements during final restoration.

Site Work: The area around the house was re-graded to provide drainage away from building and allow foundation repair and re-point as shown in the drawings.

Masonry: Masons repaired existing foundation, window wells, areaway and steps as specified in section 04500 Masonry. They rebuilt the existing center chimney top above roof to match previous chimney top using salvaged brick from the previous chimney and some new brick matching in size, color and texture.

Miscellaneous Metals: Fasteners: GC supplied and installed appropriate FastenMaster® TimberLok® wood screws for light timber frame repairs. For general and visible repairs to light framing, blocking, sheathing, clapboards, etc. they used appropriate Tremont or equal cut nails with square or wrought heads for both for their holding power and for the ability to distinguish between them and the original hand-wrought nails, meeting the Secretary of the Interior's Standards. Exterior wrought-head clapboard nails were galvanized and painted with Rustoleum bronze finish to match originals in appearance with superior longevity.

Roof Framing Repairs: (TF) Framers repaired roof framing including installation of rafter and attic floor level tie beams with assistance of GC to jack and level structure during and after installation. They also repaired/replaced roof purlins and attic floor joists as shown in the drawings and specifications.

Roof Sheathing: (GC and TF) Removed deteriorated and inappropriate previously repaired roof sheathing boards as necessary to perform repairs and as shown on the drawings and specifications attached. Re-installed new sheathing to match original as specified.

Roofing: Removed existing asphalt shingle and other existing roofing to be replaced. Installation of new wood cedar shingles matched original as shown in the drawings and specifications attached.

Wall Sheathing: Removed deteriorated and inappropriate previously repaired wall sheathing boards as necessary to perform repairs and as shown on the drawings and specifications attached. Re-install new sheathing to match original as specified.

Underlayment: "Home Slicker Plus Tyvar" was used as the house wrap, an approved wind and water resistant material covering the exterior wall sheathing, as approved by Owner and Architect prior to re-clapboarding. This is intended to increase the longevity of clapboards by allowing ventilation for their drying out in moist and humid climate of New England.

Floors: Contractors removed existing later narrow board floors and related trim (ie. baseboards, blocking, etc. as required) to be replaced with appropriate materials matching originals or to reveal original finish materials beneath. Work included installation of new wood floors where originals were damaged or missing to match wide white pine originals as shown in the drawings and specifications.

Clapboards & Trim: Contractors removed existing ca. 1911 McGrath renovation wood clapboards and trim and other existing roofing to be replaced. Samples were kept for study. They installed new clear pine skived (end-lapped) clapboards to match original as shown in the drawings and specifications. Earlier Barrett-era clapboards had disappeared; however, they were visible in old photos. New clapboards matched the earlier type that probably came from Barrett's Mills. Work on the Barrett Farm may have had a history similar to that recorded in the Journal of Bronson Alcott:

“1874 September

“This morning ride with my wife to **Barrett's Mills** and engage **carpenter George [Barrett]** to put clapboards onto the ends of my house and make such other repairs as seem necessary. When the whole building was remodelled [sic] and repaired 16 years ago the shingles on the ends were allowed to remain. These are now much weather worn and admit moisture and cold. They have given an antique appearance to the building and must have been laid many years since, fifty years - I judge - at least. All other portions of the outside were covered anew at the time of our coming to occupancy of the estate in 1858.”

Doors & Windows: Contractors removed existing ca. 1911 and later McGrath period exterior wood doors, windows, trim, and other blocking to be replaced. They installed new custom wood exterior doors and windows to match Barrett Period originals as shown in the drawings and specifications. Drawings and specifications were based upon fragments of original window frames found re-used as blocking within the walls, silhouettes of original

front window and door pediments found on exterior sheathing below later clapboards, and an exterior door and original transom lights from the West Ell doorway found at the Concord Museum.

Hardware: Contractors provided and installed authentic reproduction wrought-iron hardware for exterior doors and cellar windows as shown in the drawings and specifications including a detailed hardware schedule. Hammersmith Studios of West Concord custom hand-forged wrought iron latches duplicating the original one found on an exterior door that came from the house, found in the Medford Historical Society, and now in the Concord Museum. Other hardware duplicated originals based upon silhouettes that matched other original wrought-iron examples still found in the house.

1.15.3 Phase 2 – Interior and Site Restoration

Lead Paint Stripping and In-Filling: Contractors (Alpine Environmental and paint interns) stripped the lead paint from the front rooms on the first and second floors. The in-filling (Smith College interns and others) blended the spots where the lead paint scraping was not effective. Small bronze plates covered areas where the lead paint history is preserved.

Plaster Restoration: Much of the plaster was in poor repair. Lath was reattached to the studs and also filled in where it had been removed for later period, larger and shifted windows. The plaster was then epoxied back onto the lath and refinished.

Masonry: The fireplaces were all repaired, especially the kitchen fireplace which was ready to collapse.

Drainage: Drainage was added in the basement and directed to two sump pumps. This drainage was connected to a new drainage system in the back yard which then went across the road and then to a ditch running to the Assabet River.

Utilities: Water service had been in the house before restoration except that some of the inside pipes had burst. The inside pipes were removed and plastic tubing run to a spigot on the north wall of the house. Electrical service was changed from overhead to underground, a new breaker box and new wiring through the house. The outlets are generally well hidden from normal viewing. There is no HVAC in the house.

Site Restoration: Extensive work was done to clear the invasives, primarily Bittersweet and Multi-Floral Rose. A lawn that covers much of the property is now easily maintained.

2 Project Participants

The following people have performed work on the project. It is felt that they could provide valuable information about the products, material, methods, and techniques used in accomplishing the project. Personal telephone numbers have not been provided; however, you should be able to get in touch with everyone through their place of employment.

Table 41 Project Participants

Company or Organization	Employee or Contractor Name	Knowledge Area
Save Our Heritage	Neil Rasmussen	SOH President
	Anna Winter	SOH Executive Director
	Jim Cunningham	Barrett Farm Project Manager
New England Landmarks	Frederic Detwiller	Historic Architect
Structures North	John Wathne, Beth Acly	Structural engineering
Traditional Framers/JD McCarthy, Inc.	Joe Roy	Timber framing 2006 - end
	Dan Pederson	Timber framing 2006 - 2008
	Chad Mathrani	Timber framing 2006 - 2009
	Justin McCarthy	East door, window jambs, finish carpentry 2010 - end
Schnepel Woodworking	Paul Evans	Windows
Custom Copper and Slate	Marc Green	Roof
Hammersmith Studios	Carl and Susan Close	Blacksmith – gutter spikes, nails, latches, and hinges
North Bennet Street School	Restoration carpentry	2 Front and 2 rear doors
Oxbow Associates	Scott Smyers	Drainage natural resources compliance
Perley Associates	Jeff Perley	Surveying, drainage engineering
Architectural Conservation Services	John Vaughn	Paint analysis
Alpine Environmental	Ron Peik	Lead paint removal
Bridget Byrne	Bridget Byrne	Paint conservation
Catherine Lipscomb	Catherine Lipscomb	Paint conservation
Wenda Kochanowski	Wenda Kochanowski	Paint conservation
Marylou Davis, Inc	Marylou Davis	Paint conservation
Fineran's Finishes	Mike Fineran	Plaster conservation
Henderson-Striker	Jim Henderson	Landscape
LVI Services		Asbestos and oil cleanup
Boy Scouts	Concord Boy Scouts	Basement work (3 years)
UMass/Boston/Fiske Center	David Landon, Christa Beranek	Archaeology
Mike McGrath and Don Martinson		House and landscape
Macone Excavation	Joel Bohy	Drainage system
Patriot Electric	Herb Chellis	Electrical
Richard Irons Restoration Masons	Richard Irons	Chimney Masonry

3 Vendors

The following vendors have provided material or services assisting us in accomplishing the project. The project files (invoices) that are stored at the SOH office contain specific information on quantities and specifications of consumed items.

Table 42 Vendors

Name, Address and Contact Info	Product or Material Description
Camger	Wood preservative (linseed oil, etc.)
Eric Starbard, Sterling, MA	Lumber
Tremont Nail Company (Acorn Manufacturing)	Nails
Carl Close, Hammersmith Studios, Newton, MA	Nails, brackets, hinges
Richmond Clapboards	Clapboards and floor boards
Craftsman Lumber, Groton, MA	Floor and wall boards
Plastermagic.com	Big Wally plaster epoxy

4 Materials Specifications

The following materials have been used in the construction and repair of this project. Some of the items have a specific makeup such as paint or mortar formulas.

Table 43 Materials Specifications

Materials Used on the Project	Notes
Home Slicker	Used on exterior walls between clapboards and sheathing. Has a Tytar sheet with “mesh” to allow moisture and water to escape.
Cedar Breather	Used on roof between sheathing and cedar shingles to allow moisture and heat to escape.
Clapboard nails	Tremont nails #CW8ZL 8d DEC Wrought nail, Hot-dip galvanized. Then spray painted with Krylon.
Fire Door Clinch Nail	Tremont nails #CD8V. Modified by Hammersmith Studios (blacksmith).
Preservative linseed oil	Camger #50-109 “Clear Vintage Dip Oil” consisting of: - 50% refined raw linseed oil - 50% turpentine - fungicide/mildewicide as required - insecticide as required Camger order #SS-180859 Note: MMNHP retains remaining oil
Cellar window frames	S.A. Cedar
House window frames	Eastern White Pine
Structural Wood	First floor (sills) – white oak. Upper floors (mid-plate) – white pine.

5 Maintenance Schedule

The following components of the project will require routine maintenance. Those items are identified in the table below.

Table 44 Maintenance Schedule

Maintenance Item	Description	Frequency
Water service	Seasonal – due to no heat in the house, water service is seasonal. The Concord water department controls this at the street and at the meter in the basement. This must be done or the meter freezes and floods the basement (as occurred in 2005). NPS needs to request the seasonal turn-on in the spring and turn-off in the fall. Concord water department needs access to the basement to remove the meter when the water is turned off. NPS should check that the outside meter control hole is filled in after Concord accesses it since it can be a safety hazard.	Spring and Fall
Exterior wood	Darkening over time is natural. Use of the Camger mix is recommended for rot resistance but excess must be removed. Check for damage, rot, and water intrusion. Balance any cleaning treatment with the natural aging of exterior wood. Note that aggressive cleaning can damage the wood.	Annual
Exterior wood	Check for protruding nails and hammer in. Spare nails are available from SOH.	Annual
Windows	Check for water damage, especially under the sash. Check all components (wood strips, magnets, screw locks) are intact and operational. Use of the Camger mix is recommended but excess must be removed. Use especially on grain edge of sills. Re-oiling is recommended every other year.	Annual
Drainage	Check sump pumps in basement for operation, clean sumps if needed.	Early spring
Electrical	Check GFI circuits (sumps and panel). Check outlets through house for any damage or inappropriate attached wiring.	Annual
Plaster	Check for cracks and water damage.	Spring
Roof	Check for water intrusion in the attic.	Annual
Gutters	Check for appropriate flow and overall condition.	Annual
Chimneys	Check for water damage or disintegration. Note amount of debris that accumulates in the fireplaces. Especially watch East Chamber chimney.	Annual