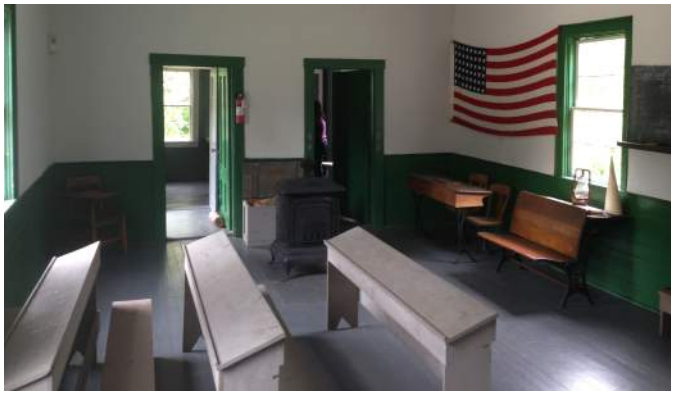
Wareham Historical Society
Historic Building Survey

October 21, 2013



Great Neck Union Chapel

Old District School No. 6

Old Methodist Meeting House

Fearing Tavern Museum

Captain Kendrick House

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ACKNOWLEDGMENTS

Successful completion of this study required the cooperation and hard work of many people, including the Board of Selectmen, Town Administrator, Administrative Assistant and the Wareham Historical Society. Work began on the report late in May of 2013. It has been a pleasure to collaborate with such a dedicated group on the important job of planning for the future of these significant historic buildings.

Durland ▪ Van Voorhis Architects would like to thank the following groups and individuals for their valuable input and assistance in creating this document:

Wareham Board of Selectmen

Peter W. Teitelbaum, Chairman
Alan H. Slavin, Clerk
Stephen M. Holmes
Judith Whiteside
Patrick Tropeano

Derek Sullivan, Town Administrator
Susan P. Green, Administrative Assistant

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Joe Leggett – Open Space Committee
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Wareham Historical Society

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Boston Building Consultants

Daniel Platcow, PE

PREFACE

In May of 2013 the Wareham Historical Society commissioned Durland Van Voorhis Architects to conduct an assessment of each of the five historic structures they owned – the Benjamin Fearing Tavern, the Old Methodist Meeting House, the Old District School No. 6, the Great Neck Union Chapel, and the Captain John Kendrick House. The assessment sought to document the existing conditions both structurally and architecturally, to develop short, medium and long-term preservation priorities with their related costs, to identify possible funding sources, to create a cyclical maintenance plan, and to identify any code related deficiencies.

The report can be broken down into six sections with several appendices. The first, the executive summary is a brief description of the methodology used to gather the information and as well as an over view of the findings. There is a brief section that discusses some of the various funding options available for these types of buildings.

The next five parts contain the architectural and existing conditions survey, structural investigation and preservation recommendations for each one of the five buildings. Also included with each part is a section which prioritizes the recommendations, one that provides cost information for the various repairs and one that can be used as a maintenance plan for short medium and long term upkeep of the buildings. Each of these five parts also includes measured as-built drawings of the buildings. These include floor plans and exterior elevations, and reference the photographs contained elsewhere in the report.

Finally there are several appendices which include a complete structural report, photographs of each of the buildings, and a copy of the National Park Service's *Preservation Brief 47 – Maintaining the Exterior of Small and Medium Size Historic Buildings*. There are also appendices that include miscellaneous articles and photographs of the buildings.

fearing tavern museum

captain kendrick house

old methodist meeting house, old district school no 6, and the great neck union chapel

PART I – EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

Historical Overview

The Old Methodist Meeting House was built in 1835 across Main Street from the First Congregational Church. A Greek Revival style meeting house, it had been used for a variety of functions including a bank and a laundromat before it was given to the Historical Society in the 1970s. Shortly thereafter, the Historical Society moved both the Old District School No. 6, originally built in 1825, and the Union Chapel from their original Great Neck locations to join the Meeting House on Main Street. The School House had served the residents of Great Neck for 100 years during which time it was also used for church services until the time the Union Chapel was built.


Great Neck Union Chapel


Old District School No. 6

Around the corner from these buildings is the largest of the five Historical Society buildings, the Benjamin Fearing Tavern. First begun in 1690 as a four room colonial house, the structure was significantly enlarged in the Georgian Style in 1765 by tavern keeper Benjamin Fearing. In 1820, his son, Benjamin Fearing, added the ell. During the late 1730s, the original proprietors of the Agawam Plantation met in Issac and Elizabeth Bump(as)'s house to conduct business and planning that eventually led to the incorporation of the Town of Wareham.


Old Methodist Meeting House

At the south end of Main Street, about a mile away, is the Captain John Hendrick House that overlooks the Narrows. The gambrel-roofed Cape, a more modest example of the Georgian Style, was built around 1745. Captain Kendrick purchased the house and wharf across the street in 1778 from David Nye. Since 1976 the Wareham Historical Society has run the house as a maritime museum.


Fearing Tavern

Located at the end of the report are five appendices that contain various documents and images – articles, photographs, and historical records – from the Wareham Public Library. These provide additional historical information and background on each of the five buildings.


Captain John Kendrick House

EXECUTIVE SUMMARY

Methodology

Representatives from both D■VV Architects and Boston Building Consultants, a structural engineering firm, thoroughly assessed each property using only non-destructive methods. This work involved close visual inspections, field measurement of the buildings and photographic documentation over several days ranging from late May and to September. The field measurements were used to create accurately scaled floor plans and elevations of the buildings. Focusing on the exterior repair and stabilization of the buildings, D■VV Architects annotated these drawing to describe the scope of work necessary for the restoration and repair of each of the five buildings.

D■VV Architects then developed construction cost estimates for this work and organized the various repairs into near, medium and long-term categories. To supplement these major repairs, D■VV Architects also developed an annual maintenance plan for each building that will help to identify problems earlier, when they tend to be smaller and less expensive to fix.

Recommendations

There are two important themes that recur throughout the report. The first is the need for better management of storm water and moisture in general, and the second is improving the integrity of the exterior envelope.

Proper grading around the building perimeter, functioning gutters and downspouts, and subsurface drainage systems would keep the majority of the moisture out of the buildings. The addition of a vapor barrier with better ventilation and dehumidification would eliminate virtually all of the remaining water that infiltrates the buildings. Keeping the water out of buildings should always be priority number one.

The exterior envelope is a buidling's first defense against the elements and as such should be well-maintained. The most important piece of this defense is the roof, followed immediately by the walls, windows and

doors. Most of the roofs appear to be intact and free from obvious signs of failure. In fact, only a portion of the Kendrick House roof is in need of replacement at this time, but most of the remaining roofs will require significant repair or replacement within the next 10 - 20 years. It is critical to monitor the roofs regualrly (see Annual Maintenance Plan to follow) and take action immediately should any leaks be discovered.

The walls are generally in good structural condition, however, the siding typically requires some attention. The exterior walls are either shingled or clad with clapboards and two of the buildings (Kendrick and Fearing) have a combination of both. Except for the Union Chapel, all of the buildings are in need of repainting (Kendrick House, Old Methodist Meeting House & Old District School No 6) or shingle replacement (Fearing Tavern). All of the buildings require selective siding and trim repairs, and rodents appear to have found their way into several of the buildings at precisely these locations.

Most of the exterior existing paint on the Meeting House, School and Kendrick House is failing and most of that can be attributed to poor preparation, incompatible paints and excessive intreior moisture. All of these surfaces should be scraped, sanded, primed with an oil-based primer and repainted with two coats of latex paint.

The windows are also in generally poor condition and typically require complete reglazing. Depsite their "worn-out" appearance, most of the wood in the windows is still sound and can be easily restored. Single-glazed windows require routine painting and minor repair to function at their best. It is clear that most of this kind of maintenance has been deferred for a very long time. While not quite as fragile as the windows, the doors have also suffered from benign neglect and require similar attention.

While the buildings have been added on to many times over literally centuries, most of those addition helps to tell a story. However, there are

a couple of "improvements" that the Historical Society might consider undoing. These include the small bathroom addition at the northwest interior corner of the Fearing Tavern main house and ell, as well as the accessible ramp and covering on the south side of the Meeting House. The bathroom addition should probably be removed and the window restored to the kitchen, while the siding and detailing of the Meeting House entrance could be improved by being made more sympathetic to the style of the historic building.

Project Cost

Included later in Part I is a summary of the costs for restoring all five buildings. It outlines the immediate, medium (1-3 years) and long-term (5-10 years) costs associated with the basic repairs and stabiliziation of the five buildings. While these figures should be revised as the various individual projects move forward, at this time, the total cost over a five to ten year period to upgrade the exterior envelopes of these five buildings is estimated to be between $225,000 and $325,000.

It is important to note that these figures are in addition to the routine maintenance costs associated with the buildings. It is typical for facilities managers to budget between one and two percent of the replacement cost of a facility each year to keep up with ongoing maintenance. Because it is critical that the buildings receive regular maintenance, the Wareham Historical Society should eventually include a similarly sized annual maintenance cost figure in their annual operating budget.

Funding

In order to put any of the recommendations contained in this report into action, the Wareham Historical Society will need to raise not only the cost for repairs, but will also need to continue to raise funds for the ongoing maintenance of these buildings. Beyond the obvious funders of historic preservation projects, like the Massachusetts Historical

Commission and the Wareham Community Preservation Committee there are several other organizations that should be considered.

An experienced grant writer can identify additional funders and not-for-profit organizations that could help support an organization like the Wareham Historical Society. Later in Part I is a partial list of local organizations that the Wareham Historical Society might consider approaching for additional financial support. Developing more fee-for-service programming might be another way to raise funds and something that could be considered.

Conclusion

The Wareham Historical Society is the guardian of five important historical buildings that represent an interesting sampling of Wareham's architectural history. The buildings are located in the heart of Wareham's historic center and have a visible presence in town. They include an extensive collection of artifacts and information about the town's past and some of its most illustrious citizens. Though still in generally good condition, the buildings are currently suffering and are in need of repair. This report has identified what work should be done and prioritized it. It has also provided estimates for how much that work will cost. It would be especially fitting if this report eventually served as the catalyst for the restoration and repair of these significant Wareham treasures.

CONSTRUCTION COST SUMMARY

	IMMEDIATE	NEAR TERM	LONG TERM
Old Methodist Meeting House	$23,750 –34,850	$6,000 – 9,500	$27,500 – 35,000
Benjamin Fearing Tavern	$23,050 –33,250	$7,500 – 13,000	$17,900 – 26,500
Great Neck Union Chapel	$9,000 - 13,500	$8,850 - 14,200	$3,000 - 4,500
Captain John Kendrick House	$30,750 – 43,500	$6,750 – 10,500	$41,250 – 56,750
Old District School House No. 6	$10,250 – 15,000	$2,750 – 4,500	$6,500 – 9,500
TOTAL (by phase)	$96,800 –140,100	$31,850 – 52,700	$96,150 – 132,250
TOTAL CONSTRUCTION COST	$224,800 –325,050		

An additional 35%–40% for soft costs (A/E fees, contingencies, clerk, testing, etc.) should be added to each of these subtotals to approximate the project costs above.

LIST OF POSSIBLE FUNDERS

Amelia Peabody Charitable Fund
Deadline: February 1 & July 1
Website: www.apcfund.org

Community Foundation of Southeastern Massachusetts
Website: www.cfsema.org
Address: 63 Union Street
New Bedford, MA 02740
508-996-8253

Henry H. Crapo Charitable Foundation
No deadlines
Contact: Peter C. Bullard, Esq, President
225 Orchard St.
New Bedford, MA 02740

Ludes Family Foundation
No deadline
Send letter of interest to
Address: PO Box 417
Marion, MA 02738
Avg grant: $500 - $5,000

Massachusetts Cultural Council
Deadline: Intent to Apply Deadline: February 15, 2013
Final Application Deadline: March 15, 2013
Website: www.masscultural council.org
Avg grant: $7,000 to $250,000
Contact Jay Paget
jay.paget@art.state.ma.us
Program Director
617-858-2723

Massachusetts Historical Commission
Website: www.sec.state.ma.us/mhc/mhcmppf/mppfidx.htm
Avg grant: less than $50,000

Preservation Massachusetts
Website: www.preservationmass.org
Contact: Old City Hall
45 School Street
Boston, MA 02108-3204
617-723-3383

Wareham Community Preservation Committee
Website: www.wareham.ma.us/public_documents/WarehamMA_BComm/preservation
Contact: cpc@wareham.ma.us

PARTIAL CHRONOLOGY OF RECENT REPAIRS

Great Neck Union Chapel

1970s Moved building from Great Neck to Main Street

Old District School No 6

1970s Moved building from Great Neck to Main Street

1995 Stripped and re-shingled old school house

Old Methodist Meeting House

1996 Rebuilt front corner

1976 Restoration began

Fearing Tavern Museum

2009 Removed and replaced small hip roof back left - repaired ceiling damage in back room

2008 Stabilized a portion of the ceiling located in the kitchen - water damage from chimney leak

2008 Scraped, reglazed and painted all windows, three exterior doors, all exterior trim boards - front of building scraped and painted

2007 Removed old flashing on 2 large chimneys, cut in new step flashing and repointed brick work

2007 Restored wooden bulkhead door

2007 Repaired fence

2007 Conducted lead inspection - exterior by Fred Hemmila

2007 Stabilized the wooden columns and pediment head at the front entrance

2006 Repaired roof and sidewall - back left side of building - cooper drainpipes stolen within a week

2006 Repaired fence

Captain Kendrick House

2012 Repaired stone foundation and grouted joints at rear of building

2007 Restored portion of wall area on the back 'L' (5'x3.5' wall under window fell away from the building because of water damage)

1974 Kendrick house deeded to Wareham Historical Society

chapel interior

PART II – GREAT NECK UNION CHAPEL

GREAT NECK UNION CHAPEL - ARCHITECTURAL SURVEY

Built in 1880, the Union Chapel is a charming example of the Shingle Style which was popular around the end of the nineteenth century and a particular favorite among resort and seaside communities of New England where it developed. The style is characterized by a focus on material textures like wood shingles and granite foundation blocks, as well as simple massing that spreads low against the ground. Large overhangs and hipped roofs are also quite common (UC-1). The detail tends not to be complicated and windows are generally regular and organized in horizontal bands (UC-2).


UC-1 Hip roof at east end of Chapel


UC-2 South side of Chapel

The Union Chapel is located on the same parcel with the Methodist Meeting House and Old District School No. 6 across Main Street from the east end of Park Street. The three buildings form a kind of historic quad with the Chapel at its south end, the Old District School at the east and the Meeting House at the north. The quad is open to the west and faces the First Congregational Church across Main Street.

The site abuts the old town green and it is not difficult to imagine the area as the old town center. It is flat with only a slight pitch down from the west to the east. Most of the lot is covered with grass and a few immature trees. The center of the lot is covered with gravel and serves as a makeshift parking lot. The western edge of the lot is bound by a concrete sidewalk with a single curb cut into it. The Chapel is oriented east/west with its gable end and entry vestibule facing Main Street. (UC-3).


UC-3 Chapel entrance

The structure is built on top of a one and one half foot granite block foundation that is in excellent condition (UC-4). It is said that these blocks were part of the original foundation and set on top of the new concrete foundation when the Historical Society moved the building in the 1970s. Aside from the windows that do not appear to be original and could be better detailed to match the original windows (UC-5) (thicker frame and sill and the sash should sit on top of the sill instead of behind it), the foundation is in very good condition. There is a small bulkhead door at the east end of the Chapel that appears to have been rebuilt or even added


UC-4 Stone foundation


UC-5 Basement window replacement

when the building was moved. The doors and interior steps are in very poor and even dangerous condition (UC-6). They should be repaired or replaced very soon. At the minimum, the opening should be protected with heavy plywood immediately to prevent injury. The deterioration of the stairs and bulkhead door appear to be caused by high levels of moisture. This could be a result of roof runoff falling on the doors or storm runoff finding its way into the basement, where it becomes trapped and supports mold growth and rot. Installing a dehumidifier in the basement would help remove this trapped moisture. Positively pitching the grade away from the building or installing a perimeter drainage system are two other ways of managing storm water runoff (UC-7).


UC-6 Bulk head door


UC-7 Pitch grade away from foundation

The building is divided into two sections; the larger one contains the sanctuary and the shorter, smaller one to the west contains the entrance and vestibule (UC-8). The exterior walls are covered in wood shingles with approximately 5 1/2" of exposure and appear to be in fair condition. The corners are woven, typical of the style, and there is only a very small painted frieze at the top of the wall just below the rafter tails. There is a noticeable wracking to the building with the top of the north and south walls tipping north which is of particular concern (see structural comments below). The walls are approximately 3 inches out of plumb and this is most visible when looking at the east end of the structure (UC-9). This condition may be quite old and not have changed since the building was moved or built; nevertheless, it should be stabilized.


UC-8 Entry vestibule & sanctuary


UC-9 Wall racking

The two sections have slightly different roofs. The sanctuary roof has a steeper pitch than the vestibule roof with its gable end facing west and a hip roof at its east end over the chancel. The asphalt shingles appear to be in good condition and should have 10 -15 years or more of useful life left in them. The large overhangs provide some management of roof run off by placing the water further away from the foundation, but the building would certainly benefit from gutters, some perimeter drainage or at least a gravel catch (UC-10).

GREAT NECK UNION CHAPEL - ARCHITECTURAL SURVEY

All of the exterior trim is painted (though the soffit around the sanctuary has not been painted for a very long time) and needs to be scraped, sanded, primed and painted. There are several bird nests in the eaves, and these should be removed and efforts made to prevent birds from nesting there in the future (UC-11).

There are signs of water infiltration around the small brick chimney at the southwest corner of the sanctuary (UC-12). The flashing should be carefully inspected and replaced to eliminate any source of water. The interior plaster has many cracks, typical for a building of this age (UC-13). These can be easily repaired, but unless the movement is corrected they are likely to reappear over time.

There are two large five panel wood doors that open onto a concrete stoop at the west end of the Chapel just off Main Street. These doors are in generally good condition but should be included with the soffits in any painting work. There is a missing light fixture over the entrance door that should be replaced.

The windows are typically two-over-two wood double-hung units with two one-over-one units either side of the vestibule (UC-14). All of them are in fair condition but the glazing is typically failing. All of the double-hung window sash should be carefully removed, the glass completely re-set, the windows reglazed and the sash repainted and reinstalled. The two leaded-glass windows at the back of the chancel are in generally good condition, but the sash should be repainted and the wire mesh protective screens replaced with bronze or stainless steel to prevent staining (UC-15). All of the exterior window casings should also be repainted.


UC-15 Leaded glass windows


UC-10 Existing wash area for roof run-off


UC-11 Bird nest in eaves


UC-12 Water damage around chimney


UC-13 Typical interior plaster cracks


UC-14 Typical wood window

GREAT NECK UNION CHAPEL - ARCHITECTURAL SURVEY

Structural Observations, Conclusions & Recommendations:

The following comments have been excerpted from a report prepared by Dan Platcow, P.E. of Boston Building Consultants dated June 20, 2013. The complete report is attached as Appendix A.

The concrete basement slab and perimeter foundation walls appear to be structurally sound and free of signs of distress or settlements; therefore, we do not anticipate the need for new structural reinforcements.

The 1st floor framing under the seating area is 2x6 joists, spaced 24" on center, spanning approximately 7'- 6" continuous over a 6x6 beam support at mid-span of the chapel (UC-16) *The joists are notched 4" at the foundation wall* (UC-20) *and at the center wood beam support. Horizontal splitting at the ends of several joists was noted* (UC-17). *The floor framing under the rear stage area and the front 6 ft. of the main hall are 2x8's spaced at 24" on center, spanning the full width (15 ft) of the building* (UC-18).

The current floor (live) load for an assembly area (Chapel) with movable seating is 100 psf (UC-19) *(not including the material self weights) and 60 psf for assembly areas with fixed seating. The as-built floor construction will require new structural reinforcements for either load case, but fewer reinforcements will be required for the fixed seating scenario. Following are recommendations for both cases:*

Fixed Seating (60 psf live load)

Connect each existing 2x6 joist to the foundation wall sill plates and to the intermediate 6x6 wood beam with new metal joist hangers sized for the appropriate floor loading.

Add a new wood beam at mid-span (in line with the existing 6x6 wood beam) of the 2x8 floor joist under the rear and the front 6 ft.

Connect each existing 2x8 joist to the foundation wall sill plates and to the new intermediate wood beam with new metal joist hangers sized for the appropriate floor loading.


UC-16 Center beam supported by columns


UC-17 Joists notched into beam


UC-18 Framing under raised floor area


UC-19 Existing seating arrangement


UC-20 Existing foundation & floor framing

Install solid wood blocking between each joist at the centerline of the existing 6x6 and the new wood beam.

Moveable Seating (100 psf live load)

Reinforce the center 6x6 wood beam with a new 2x10 LVL beam each side of the in place beam.

Install a new (3) 2x10 LVL beam at mid span of the rear 2x8 joists and mid span of the 2x8 joists in the front 6 ft.

Prior to reinforcing the existing wood beam, the existing joists must be temporarily shored to permit cutting the joists for the installation of the new LVL's.

Install new hangers at each end of each joist.

Sister every other 2x6 and 2x8 floor joist with a new 2x6 LVL.

Connect each new 2x6 LVL to the foundation wall sill plate and the new reinforced intermediate beam with metal joist hangers sized for the appropriate loading.

The bulkhead door is severely deteriorated and fell apart when I opened it. I suggest the opening be secured immediately to prevent access to the basement and suggest rebuilding the bulkhead door to fit the existing building opening (UC-6).


UC-21 North wall of Chapel


UC-22 Top plate of south wall


UC-23 Existing roof & ceiling framing


UC-24 Existing roof framing

The exterior side walls of the Chapel are noticeably out of square and not plumb (UC-21). *There is evidence of cracking on the interior walls and ceiling finishes that is indicative of movement of the exterior walls as noted from a small ceiling hatch, the ceiling/attic joists are supported by the exterior wall and hung from the roof rafters* (UC-22). *It appears that the attic/ceiling joists are nailed into the side of the wall studs, eg. below the wall top plate and not directly connected to the roof rafters* (UC-23). *Several of the attic/ceiling joists are not continuous (eg. one piece from side wall to side wall).*

The attic was not easily accessible, but from a view through the ceiling hatch it appears that the roof structure is not properly tied at the eave level to resist the horizontal thrust of the sloped roof rafters (UC-24). *The lack of*

adequate ties has resulted in the horizontal movement of the exterior walls and may have resulted in cracking of the wall finishes.

It will be difficult and costly to straighten and plumb the exterior walls, however, I suggest installing new ties at the eave level to reduce the possibility of future lateral movement, damage, etc. The new ties could be steel rods or wood joists provided the ties are continuous (one piece) from eave to eave and a properly connected to the ends of the rafters.

Wareham Historical Society - Historic Buildings Survey

Wareham, Massachusetts

October 21, 2013

KEY NOTES

A. Scrape, sand, prime & paint all existing wood siding

B Scrape, sand, prime & paint all existing wood trim

C. Scrape, sand, prime & paint all existing wood doors

D. Scrape, sand, prime & paint all existing wood windows

E. Repair/replace wood shingle siding in this area

F. Repair/replace wood clapboard siding in this area

G. Repair/replace damaged/rotten trim, as req'd

H. Remove existing roof shingles, patch sheathing as req'd and install new roof shingles

I. Install new wood shingle hip cap

J. Replace wooden ridge boards

K_1 Repair wood window

K_2 Replace wood window

L. Install new gutters & downspouts

M. Clean out existing storm drain

N. Install new perimeter drainage system

O. Lower existing grade

P. Provide positive drainage away from building

Q. Reglaze wood window

R. Re-coat masonry

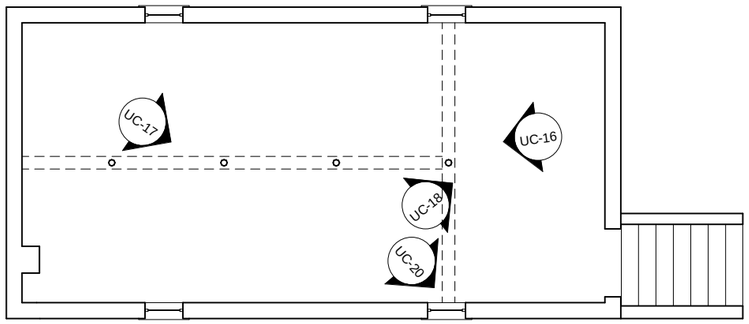
S. Replace bulkhead door

T. Install wood shutters

U. Remove foundation plantings

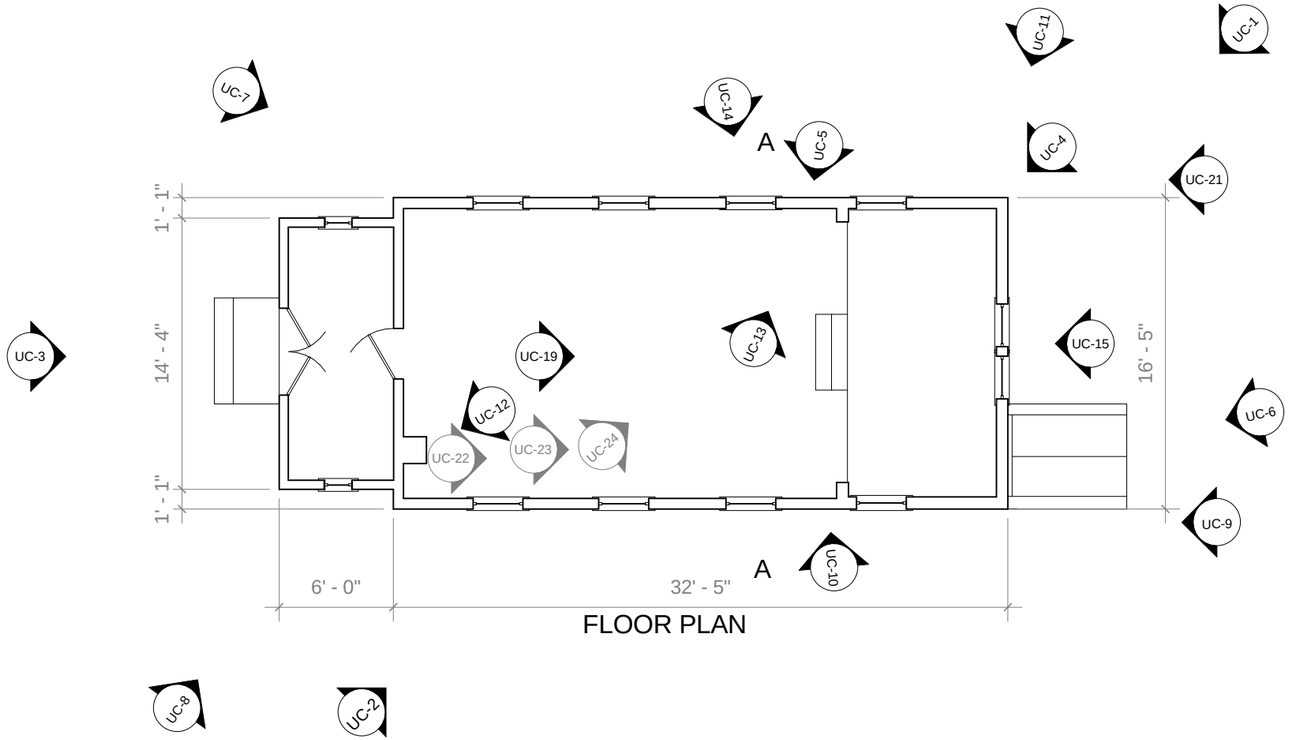
V. Repoint masonry

W. Replace flashing

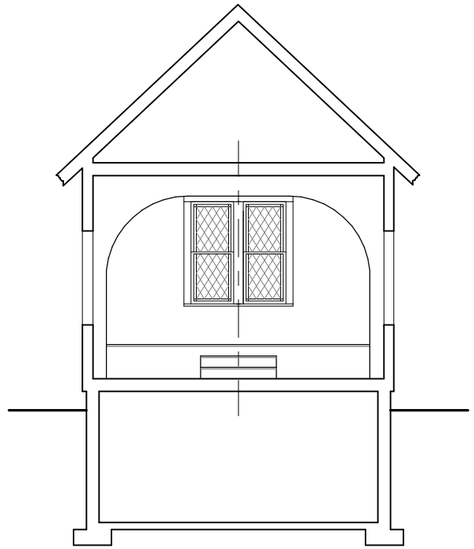


A

BASEMENT PLAN



FLOOR PLAN



SECTION A-A

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0' 5' 10'

Union Chapel - Plans & Section

1/8" = 1'-0"

N

UC-1.1

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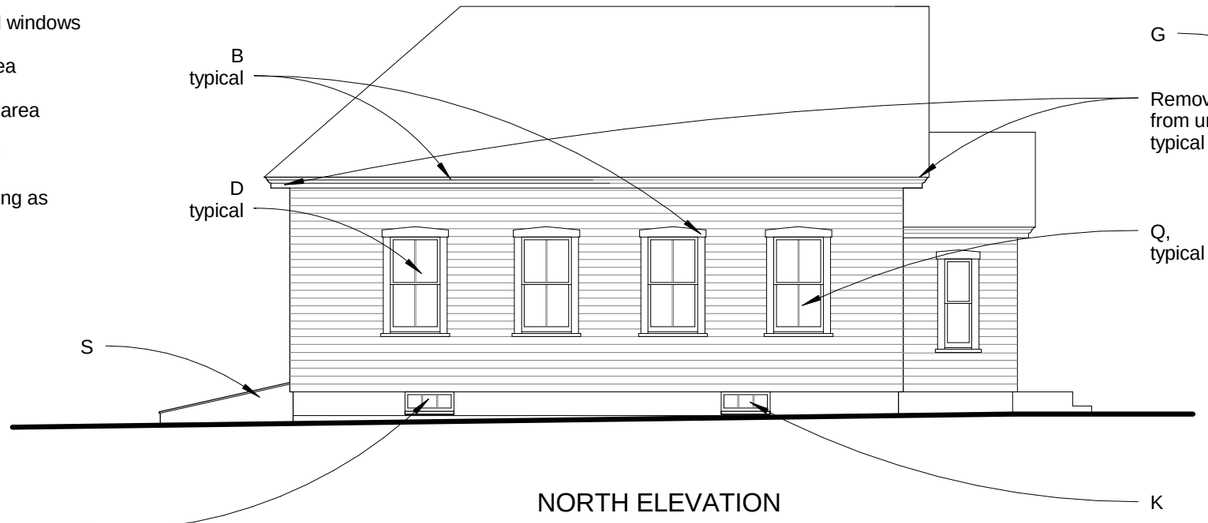
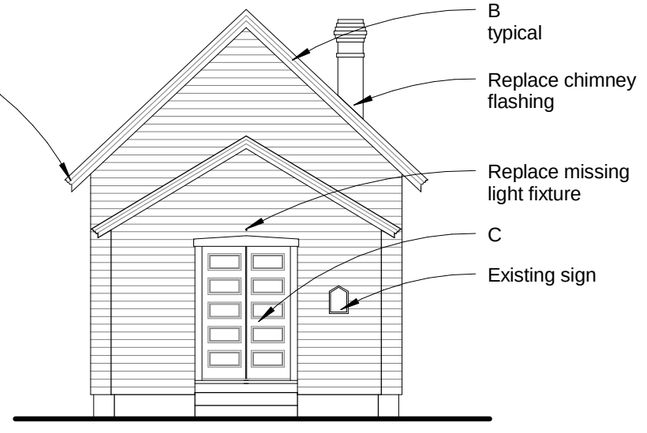
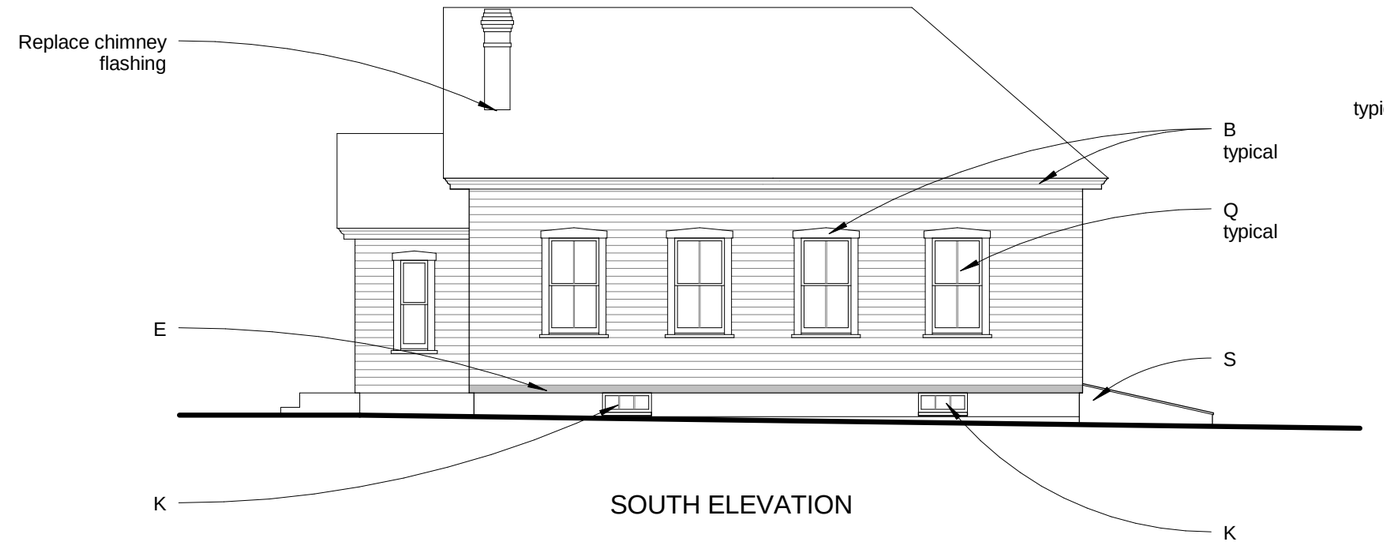


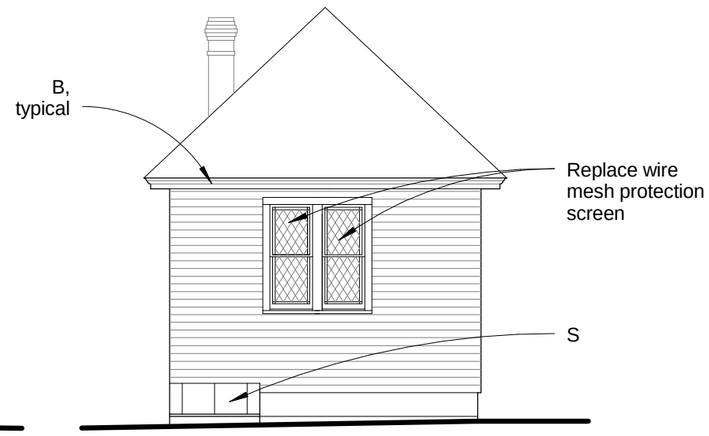
NORTH ELEVATION



WEST ELEVATION



SOUTH ELEVATION



EAST ELEVATION

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Union Chapel - Exterior Elevations

1/8" = 1'-0"

UC-2.1

GREAT NECK UNION CHAPEL - PROJECT COST ESTIMATE

Repair Priorities

IMMEDIATE NEAR TERM LONG TERM	COST RANGE	
• Repair bulkhead door & stairs	$2,000 –	3,500
• Reputty (as req'd) & repaint windows (12)	$3,000 –	4,000
• Repaint trim	$2,500 –	3,500
• Repaint exterior doors (2)	$500 –	$750
• Remove bird nests from soffits & eaves	$500 –	750
• Replace chimney flashing	$500 –	1,000
• Install dehumidifier in basement	$750 –	1,200
• Reinforce floor framing	$2,500 –	4,000
• Stabilize roof framing	$2,500 –	5,000
• Patch interior plaster cracks	$2,500 –	4,000
• Replace missing exterior light	$250 –	500
• Replace wire mesh for leaded windows	$350 –	500
• Replace basement windows (4)	$3,000 –	4,500
GC OHP @ 15%	$3,128 –	4,980
ESTIMATED CONSTRUCTION COST	**$23,978 –**	**38,180**
A/E Fees @ 15%	$3,597 –	5,727
Clerk		
Printing, Testing & Misc.		
Construction Contingency @ 20%	$4,796 –	7,636
PROJECT COST	**$32,371 –**	**51,543**

GREAT NECK UNION CHAPEL - ANNUAL MAINTENANCE PLAN

Every 1-3 months (periodic or monthly)

- regular drive by surveillance
- check attic during storms if possible
- monthly walk-arounds
- check entrances
- check window panes for breakage
- mowing as required (more frequently in spring and early summer)
- check for graffiti or vandalism
- enter every 3 months to air out (dry breezy weather is preferred)
- check for musty air
- check for moisture damage (at roofs, exterior walls, windows, doors, chimneys and other roof penetrations)
- check battery packs and monitoring equipment
- check light bulbs
- check for evidence of pest intrusion
- check for building movement (in identified areas of concern)

Every 6 months (spring and fall)

- site clean-up; pruning and trimming
- check basement for pests

Every 12 months (annually)

- maintenance contract inspections for equipment/utilities
- check roof for loose or missing shingles
- termite and pest inspection/treatment
- exterior materials spot repair and touch up painting (fall is best time)
- remove bird droppings or other stains from exterior
- check and update building file

PART III - OLD DISTRICT SCHOOL NO 6

classroom interior

exterior

PART III – OLD DISTRICT SCHOOL NO. 6

OLD DISTRICT SCHOOL NO. 6 - ARCHITECTURAL SURVEY

The Old District School No. 6 was originally built on Great Neck in 1825 where it served as a school for approximately 100 years. During that time it also functioned as a chapel when travel into town was too difficult. It was moved to Main Street in the 1970s by the Wareham Historical Society. The building in its current location is oriented north/south and the main classroom section is flanked to the north by the kitchen addition from the late 1800s and by a later storage addition to the south. The classroom space measures approximately 24' - 4" long by 16' – 4" wide. It is a one story simple Greek Revival styled structure (DS-1). Like the Chapel next to it, the schoolhouse is on a flat site with a gentle pitch down from the west to the east. Along the north side trees and small plants have overgrown the school (DS-2). These should be cut back considerably or better yet removed entirely. Vegetation too close to a building traps moisture and can encourage the deterioration of the paint, siding or even the framing.


DS-1 View facing east from parking lot


DS-2 Overgrown plantings at north end

The building is set on new concrete piers except along the west side where a granite block foundation veneer was installed when the building was moved (DS-3). The veneer foundation is clearly a recreation because the joints between the classroom space and the storage wing to the south were not built with the spaces above. There should be a foundation joint where the new space was added (DS-4). The north, south and east sides are covered by a lattice work of pressure-treated dimensional lumber, some panels of which appear to be removable. The crawl space underneath is relatively dry, but gutters and downspouts, a perimeter drainage system or careful grading around the building would keep the space even drier. There also appear to be signs of animals living in the crawl space.


DS-3 Masonry veneer wraps SW corner


DS-4 Missing masonry joint at storage addition

The exterior walls are wood framed, likely of post and beam construction and covered with painted clapboards with approximately four inch exposure. The paint is typically failing and all of the siding should be scraped, sanded, primed and painted (DS-5). The trim is generally in good condition, but there are several places where the trim is rotten, damaged or missing. Some of these appear to have been caused by rodents and all


DS-5 Failing paint at east side

OLD DISTRICT SCHOOL NO. 6 - ARCHITECTURAL SURVEY

of them should be carefully repaired and the trim scraped, sanded, primed and repainted (DS-6).

The roof is covered with asphalt shingles that appear to be in good condition (DS-7). There are no gutters or down spouts to control the roof runoff. An aluminum drip edge is visible along the eaves of the roof. For future roof work other more traditional drips should be used, like wood shingles.

There are three exterior wood doors – two four-panel doors on the west side (one on the kitchen wing and one on the storage wing) and one glazed, two-panel door on the south side of the storage wing. The two four-panel doors appear to be in fair condition, but require repainting. The glazed two-panel door on the storage wing is in poor condition and should be entirely rebuilt or replaced (DS-9).

The windows are typically six-over-six wood double-hung units. The sash themselves are generally in fair condition, but the glazing and paint have failed completely (DS-10). All of the windows should have the glazing removed, the sash scraped, sanded, and primed. The glass should be reset and the windows entirely reglazed and repainted. Old blown or salvaged glass should be used to replace any broken or missing panes. Full height stops screwed into the frame provide a clean method for fixing the upper sash in place.

There is evidence that shutters were installed on the building originally which would have helped keep it cooler in the summer by keeping out the hot sun while still allowing the sea breeze to blow through. It does not appear that the newer addition ever had shutters. Were shutters to be reinstalled, it would be interesting, educational and more authentic to select operable shutters and actually use them.

There is some old knob and tube wiring visible in the storage wing against the old exterior wall of the school (DS-11). This type of wiring is


DS-6 Damaged & missing trim at eave


DS-7 Existing asphalt shingle roof


DS-8 Roof framing at storage addition


DS-9 South end exterior door

unreliable and sometimes can be quite dangerous. All knob and tube wiring should be removed completely, whether active or not. The wiring is very easily shorted and is frequently the cause of fires in old buildings.

Structural Observations, Conclusions & Recommendations:

The following comments have been excerpted from a report prepared by Dan Platcow, P.E. of Boston Building Consultants dated June 20, 2013. The complete report is attached as Appendix A.

The first floor is framed over a crawl space. The wood joists are supported by perimeter and interior wood beams that are supported by a series of concrete piers (DS-12). *Access to the floor framing was not accessible, however, from an access hole to one location of the perimeter skit board* (DS-13), *the framing appeared to be free of decay or rot and the concrete piers appeared to have been located in some organized fashion. Due to limited access, a general analysis and close inspection of the existing floor framing was not possible.*

However, the floors appeared to be relatively sound with no obvious soft areas and relatively level; however, it appears to my limited perspective that some of the floor joists were not bearing on the wood beams. I suggest all of the joists be inspected and shims added to ensure the joists are bearing solid on the intermediate wood beams.

The gable roof structure of the original school house and the two additions appears to have been conventionally framed with rafters and ties at the eave elevation (DS-8). *The roofs, walls and ceilings do not appear to have any obvious signs of structural distress. Therefore, I don't anticipate the need for new structural reinforcements.*


DS-10 Existing 6/6 wood double-hung window


DS-11 Knob & tube wiring


DS-12 New floor framing


DS-13 Perimeter framing detail

The exterior paint is peeling, most likely due to moisture trapped in the wood clapboards. The current condition does not appear to have affected the building structure, however, extended inadequate protection of the exterior siding can ultimately lead to deterioration of the building structure.

Wareham Historical Society - Historic Buildings Survey

Wareham, Massachusetts

October 21, 2013

KEY NOTES

A. Scrape, sand, prime & paint all existing wood siding

B Scrape, sand, prime & paint all existing wood trim

C. Scrape, sand, prime & paint all existing wood doors

D. Scrape, sand, prime & paint all existing wood windows

E. Repair/replace wood shingle siding in this area

F. Repair/replace wood clapboard siding in this area

G. Repair/replace damaged/rotten trim, as req'd

H. Remove existing roof shingles, patch sheathing as req'd and install new roof shingles

I. Install new wood shingle hip cap

J. Replace wooden ridge boards

K_1 Repair wood window

K_2 Replace wood window

L. Install new gutters & downspouts

M. Clean out existing storm drain

N. Install new perimeter drainage system

O. Lower existing grade

P. Provide positive drainage away from building

Q. Reglaze wood window

R. Re-coat masonry

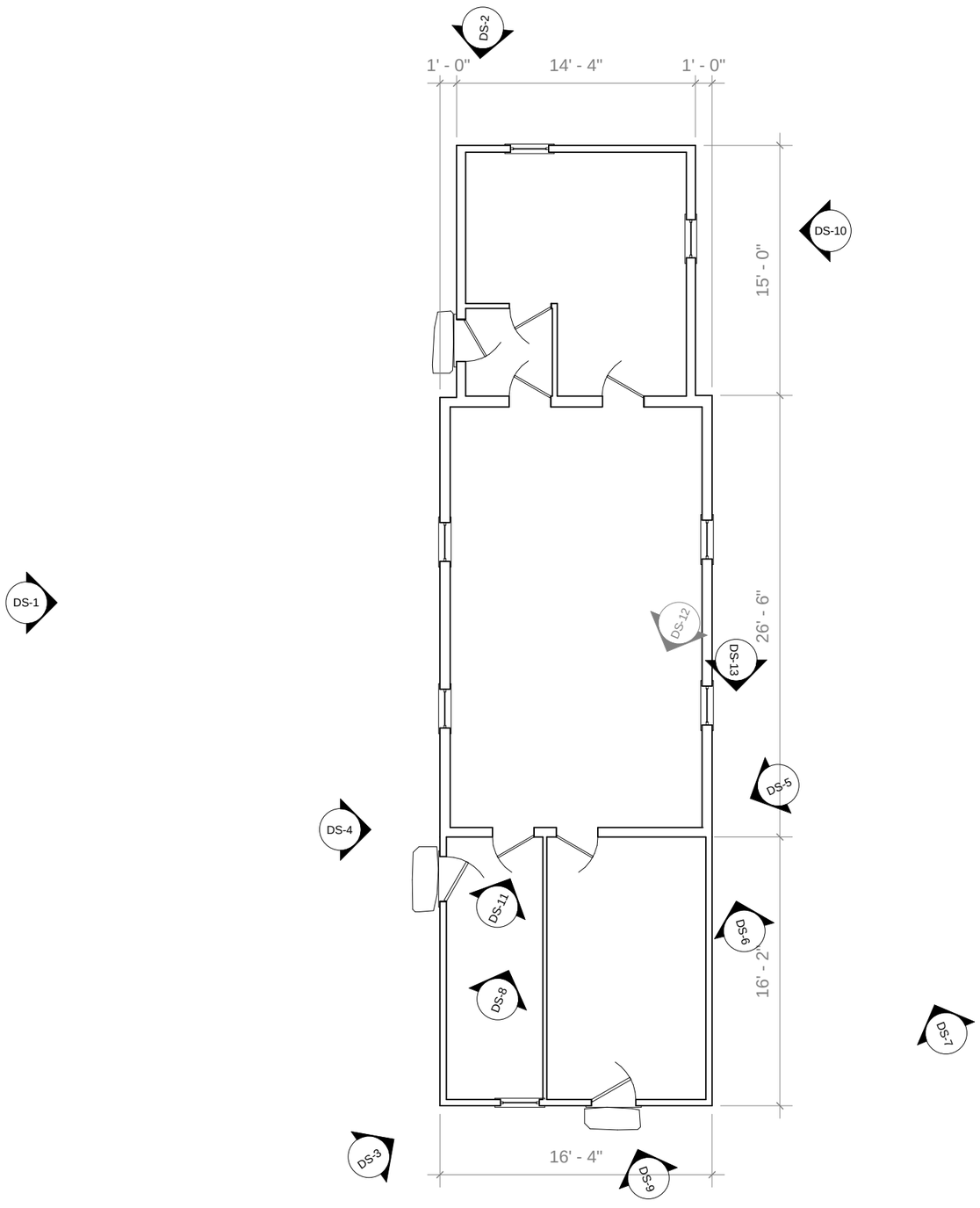
S. Replace bulkhead door

T. Install wood shutters

U. Remove foundation plantings

V. Repoint masonry

W. Replace flashing



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0' 5' 10'

Old District Schoolhouse No 6 - Plan

1/8" = 1'-0"

N

DS-1.1

Wareham Historical Society - Historic Buildings Survey

Wareham, Massachusetts

October 21, 2013

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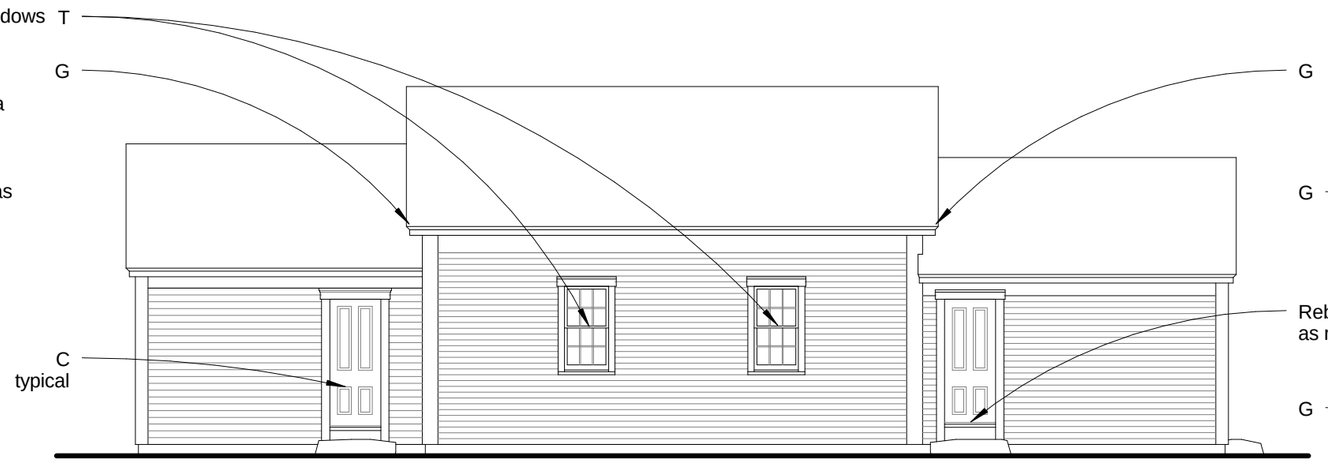
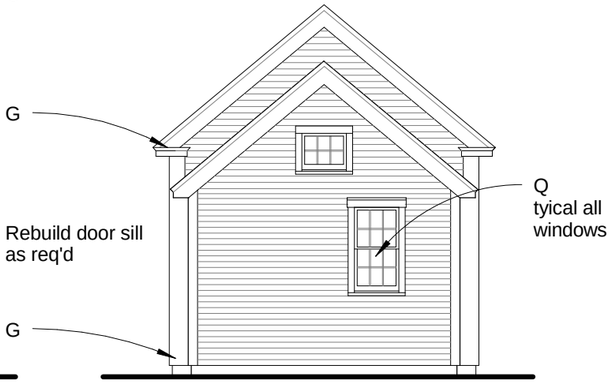
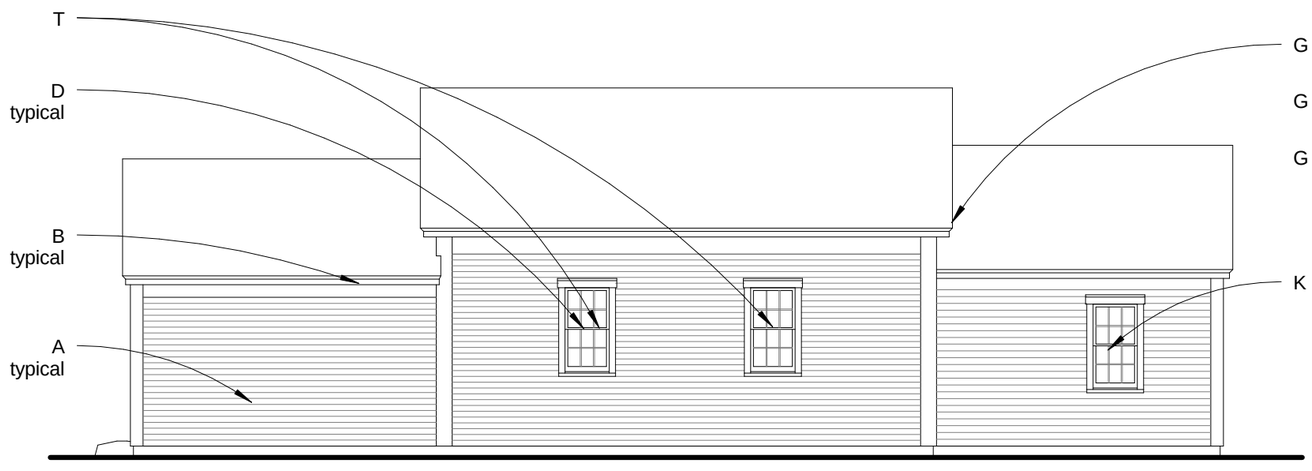


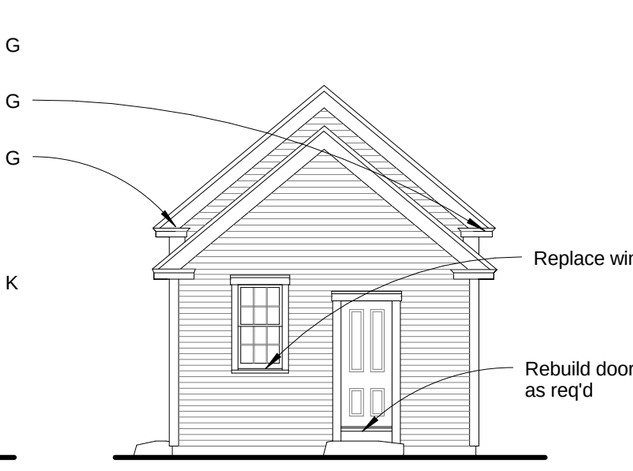
WEST ELEVATION



NORTH ELEVATION



EAST ELEVATION



SOUTH ELEVATION

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Old District Schoolhouse No 6 - Exterior Elevations

1/8" = 1'-0"

DS-2.1

OLD DISTRICT SHOOL NO 6 - PROJECT COST ESTIMATE

REPAIR PRIORITIES

IMMEDIATE NEAR TERM LONG TERM	COST RANGE	
• Cut back or remove perimeter vegetation	$750 –	1,250
• Reglaze/repaint windows (8)	$3,000 –	4,500
• Repaint siding & trim (1582 sf)	$4,750 –	6,000
• Repair/repaint exterior doors (3)	$750 –	1,250
• Repair broken, rotten or missing trim	$1,000 –	2,000
• Shim select floor joists	$500 –	750
• Install wire mesh behind lattice	$750 –	1,250
• Regrade building perimeter	$1,500 –	2,500
• Install gutters & d'spouts (116 lf)	$1,000 –	1,500
• Install perimeter drainage (161 lf)	$2,500 –	4,000
• New window shutters (4)	$3,000 –	4,000
GC OHP @ 15%	$2,925 –	4,350
ESTIMATED CONSTRUCTION COST	**$22,425 –**	**33,350**
A/E Fees @ 15%	$3,364 –	5,003
Clerk		
Printing, Testing & Misc.		
Construction Contingency @ 20%	$4,485 –	6,670
PROJECT COST	**$30,274 –**	**45,023**

OLD DISTRICT SCHOOL HOUSE NO 6 - ANNUAL MAINTENANCE PLAN

Every 1-3 months (periodic or monthly)

- regular drive by surveillance
- check attic (during storms, if possible)
- monthly walk-arounds
- check entrances
- check window panes for breakage
- mowing as required (more frequently in spring and early summer)
- check for graffiti or vandalism
- enter every 3 months to air out (dry breezy weather is preferred)
- check for musty air
- check for moisture damage (at roofs, exterior walls, windows, doors, chimneys and other roof penetrations)
- check light bulbs
- check for evidence of pest intrusion
- check for building movement (in identified areas of concern)

Every 6 months (spring and fall)

- site clean-up; pruning and trimming
- check crawlspace for pests

Every 12 months (annually)

- check roof for loose or missing shingles
- termite and pest inspection/treatment
- exterior materials spot repair and touch up painting (fall is best time)
- remove bird droppings or other stains from exterior
- check and update building file

PART IV - OLD METHODIST MEETING HOUSE

meetinghouse c 1900

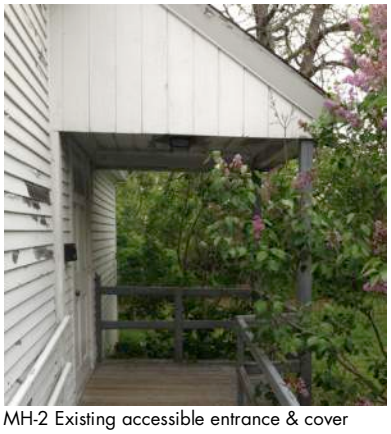

meetinghouse c 2013

PART IV – OLD METHODIST MEETING HOUSE

OLD METHODIST MEETING HOUSE – ARCHITECTURAL SURVEY

The Old Methodist Meeting House is the only one of the three buildings located at 495 Main Street that was originally built there. Completed in 1835, the Meeting House is a typical example of Greek Revival architecture. Its gable end, which faces Main Street, is graced by a three bay portico, Doric pilasters, frieze, and pediment (MH-1). At the rear of the main building is a slightly narrower addition that houses a kitchen, closet and toilet room, and at the intersection where the two meet on the south side is a second covered entrance and accessible ramp (MH-2). The siding, proportion, and detailing of this covered porch clashes with the rest of the building.

MH-1 Old Methodist Meeting House c. 1890


MH-2 Existing accessible entrance & cover

The site is relatively flat with a gentle slope down from west to east just like the Chapel and School. Because the building is substantially longer west to east, the total grade change is significantly more (approximately 18") than either of the other two buildings on the lot. The fieldstone foundation under the older section of the building is barely visible at the west end (MH-3). This should be regraded to provide a minimum of six to eight niches of exposure. The field stone should be carefully repointed to minimize rodent access. The foundation under the kitchen addition is poured concrete and appears to be in good condition. However, the areaways at both basement windows should be cleaned out and drainage improved (MH-5).


MH-3 Overgrown plantings & high grade

There is a large bluestone patio outside the main entrance on the western face of the main hall that extends virtually all the way to Main Street (MH-4). This is complimented by a blue stone landing just outside of the main entrance doors inside the "portico".


MH-4 Bluestone paving at main entrance

There are several large trees and quite a few foundation plantings that have grown up around the structure. These should all be cut back considerably or removed entirely. Vegetation too close to the building can trap moisture and encourage rot or mold growth. The basement which is only partially excavated is very damp. One step inside the building and the musty smell tells the story. Much of the original floor framing has been replaced or repaired, and the few pieces that remain show signs of insect


MH-5 Leaking basement window

OLD METHODIST MEETING HOUSE – ARCHITECTURAL SURVEY

infestation, mold growth and rot. A dehumidifier, perimeter drainage system, perhaps even gutters and downspouts and careful grading around the building to shed water would all help keep the space drier. Replacing the Homosote finish flooring would also remove a great reservoir of moisture from inside the building. Covering the dirt cellar with a very heavy polyethylene vapor barrier covered with a few inches of pea stone or 3/8" river rock would stop most of the moisture rising up from the ground.


MH-6 Peeling paint

The exterior walls of the original meeting house are wood framed, likely post and beam, sheathed with random width boards and covered with wood clapboards (approximately 4" exposure). The kitchen addition is similarly clad but likely platform-framed with dimensional lumber. The paint is failing particularly badly on the east and south sides, but all of the siding should be scraped, sanded, primed and repainted (MH-6). The side entrance roof covering is sided with T1-11 siding and while the roof pitch matches to the historic structure, the proportion and detail of it appear very much out of place.


MH-7 Rodent damage

There are several instances around the building but particularly on the north side where the trim is damaged and it appears that rodents may have access to the inside of the building (MH-7). This should be corrected immediately by patching or replacing all of the damaged trim. The rest of the trim is generally in good condition, but should be selectively patched and repaired and all of the trim should be scraped, sanded, primed and painted.


MH-8 Damaged roof area

The roof is covered with asphalt shingles that appear to be in generally good condition (MH-8). There is, however, an area on the north side of the main roof where the sheathing appears distressed, however, the exact cause is not known (MH-9). The framing appears intact but displaced in this area so some repair to the top plate/girt may be required. The roof shingles and possible eave and soffit trim in this area should be carefully removed and the sheathing and framing repaired as required.


MH-9 Broken roof sheathing


MM-10 Existing front door

OLD METHODIST MEETING HOUSE – ARCHITECTURAL SURVEY

There is a pair of six-panel exterior wood doors tucked inside a rectangular recess between the center two pilasters that serves as the main entrance to the meeting house (MH-10). These are in good condition but would benefit from a careful scraping, sanding and repainting. The hardware has a pull with a thumb latch, a single leaf is less than 34 inches wide, and there is a small step up to the landing from the patio, all of which makes the main entry somewhat inaccessible.


MH-11 Accessible entrance & ramp

Around on the south side is a second entrance connected to the parking lot by a wooden ramp that leads to a covered landing (MH-11). The door hardware is still not fully accessible (knobs do not conform with accessibility regulations); however, this entrance is much more accessible than the other and leads into the vestibule where the accessible toilet room is located.


MH-12 Existing window

The windows are typically six-over-six wood double-hung units. The sash themselves are generally in fair condition, but the glazing and paint have failed nearly completely (MH-12). All of the windows should have the glazing removed, the sash scraped, sanded, and primed. The glass should be reset and the windows entirely reglazed and repainted. New or salvaged blown glass should be used to replace any broken or missing panes. Be sure to match the color and optics for the best fit. Full height stops screwed into the frame provide a clean method for fixing the upper sash in place.

There is evidence that shutters were installed on the building originally which would have helped keep it cooler in the summer by keeping out the hot sun while still allowing the sea breeze to blow through. It does not appear that the newer addition ever had shutters.

OLD METHODIST MEETING HOUSE – ARCHITECTURAL SURVEY

Structural Observations, Conclusions & Recommendations:

The following comments have been excerpted from a report prepared by Dan Platcow, P.E. of Boston Building Consultants dated June 20, 2013. The complete report is attached as Appendix A.

The foundation wall of the original building appears to be a stone wall while the rear addition has a cast in place concrete wall (MH-13). *There were no obvious signs of cracking of the foundation or the interior wall finishes that would be indicative of ongoing foundation settlements. Therefore, it appears that the foundation is adequately serving its current use.*

The first floor is framed with wood joists supported by the perimeter foundation walls and intermediate wood beams. It appears the original floor joist and floor sheathing was removed, the original support beams left in place, a new ledger installed along each side of the original wood beams, new joists installed and connected with metal hangers to the new ledgers and new plywood sheathing placed over the new joists (MH-14).

There is evidence of decay in the original wood beams due to water and insect infestation, therefore I suspect that the original floor joists and sheathing were removed due to rot and decay from water and insect infiltration. It's not clear why the original wood beams were retained, but I suspect that they were evaluated and deemed to be structurally sound.

Accurately measuring and analyzing the as-built floor structure is beyond the scope of this report and would require selective demolition to expose existing conditions and to access all areas of the framing. However, based on my limited observations, I have the following structural concerns:

- *The attachment of the new ledger to the original wood beam.*
- *The extent of damage to the original wood beams.*

MH-13 Existing basement (conc foundation @ Left with fieldstone foundation @right & beyond

MH-14 Existing first floor framing repairs

MH-15 Existing roof rafters

MH-16 Existing concrete footing

- *The metal joist hanger connections to the ledgers.*

At the very least I suggest all joist hangers be inspected and all hanger nail holes filled and a qualified exterminator periodically inspect and treat any signs of ongoing active insect infestation (MH-17). *Also, I suggest any signs of movement (e.g. sagging floors, cracking wall or ceiling finishes, doors and windows that no longer function, etc.) be reported to a professional to investigate the floors for structural issues and ongoing movement.*


MH-17 Reinforced floor framing

The roof is a gable structure with a vaulted ceiling and periodic steel tie rods across the meeting house ceiling to resist the horizontal thrust of the roof rafters. A noticeable sag in the roof is evident from the exterior. I attempted to access the area of the sagging roof from the attic and noticed broken roof sheathing and a dip in the roof (MH-18), *but I was unable to access the eave or the tie rod locations for a close inspection. According to Charlie and as evidenced by an uprooted tree stump, a tree recently fell on the roof in the area in question. It is unclear how the roof was repaired, but the sag is still evident. The stability of the roof structure cannot be accurately evaluated without selective demolition of the finishes, however, there were no obvious signs of structural distress (eg. cracking wall and ceiling finishes, etc.) other than the roof sag noted previously. I suggest the roof and ceiling and wall finishes be inspected periodically for signs of movement and any evidence of movement be reported to a qualified professional for further investigation.*


MH-18 Damaged roof area


MH-19 Insect damage

I noted the wood clapboards close to the ground have signs of rot and decay due to the ground cover too close to the clapboard sheathing and the overgrown shrubs and plantings around the perimeter promoting a wet environment (MH-19). *The current conditions will at a minimum result in decay and rot of the clapboards and in the worst case create an attractive environment for insect infestation that could ultimately damage the building*

structure. The current extent of damage cannot be determined without further investigation and selective demolition

I suggest the plantings around the perimeter be removed, the ground cover lowered, the site graded so surface and roof downspout water will run away from the building (MH-20). *Also, I suggest the deteriorated clapboards be removed, the structure behind investigated for additional damage and all decayed material replaced with new materials.*

I noted damage to the exterior wooden fascia/crown at the roof eave that appears to be from an animal, rodent or possibly resulted from the tree accident. The hole appears to provide easy access to the attic for animals, rodents, water, insects, etc. I suggest the attic be inspected by an exterminator and all openings closed to inhibit access from animals, rodents, etc. that can ultimately cause damage to the building.


MH-20 Overgrown plantings

Wareham Historical Society - Historic Buildings Survey

Wareham, Massachusetts

October 21, 2013

KEY NOTES

A. Scrape, sand, prime & paint all existing wood siding

B Scrape, sand, prime & paint all existing wood trim

C. Scrape, sand, prime & paint all existing wood doors

D. Scrape, sand, prime & paint all existing wood windows

E. Repair/replace wood shingle siding in this area

F. Repair/replace wood clapboard siding in this area

G. Repair/replace damaged/rotten trim, as req'd

H. Remove existing roof shingles, patch sheathing as req'd and install new roof shingles

I. Install new wood shingle hip cap

J. Replace wooden ridge boards

K_1 Repair wood window

K_2 Replace wood window

L. Install new gutters & downspouts

M. Clean out existing storm drain

N. Install new perimeter drainage system

O. Lower existing grade

P. Provide positive drainage away from building

Q. Reglaze wood window

R. Re-coat masonry

S. Replace bulkhead door

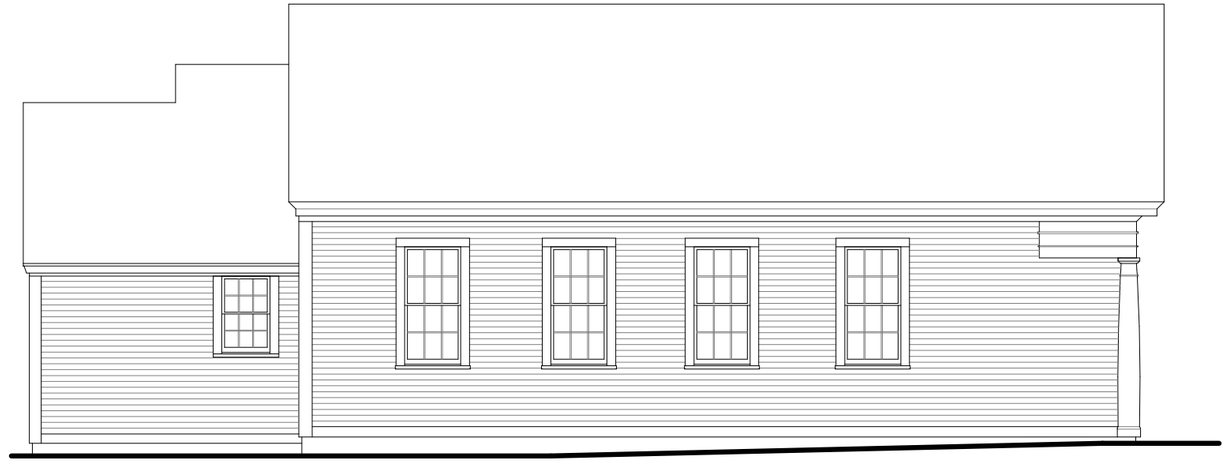
T. Install wood shutters

U. Remove foundation plantings

V. Repoint masonry

W. Replace flashing

EAST ELEVATION



NORTH ELEVATION

WEST ELEVATION

SOUTH ELEVATION

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Old Methodist Meeting House - Exterior Elevations

1/8" = 1'-0"

MH-2.1

Wareham Historical Society - Historic Buildings Survey

Wareham, Massachusetts

October 21, 2013

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K_2 Replace wood window

L. Install new gutters & downspouts

M. Clean out existing storm drain

N. Install new perimeter drainage system

O. Lower existing grade

P. Provide positive drainage away from building

Q. Reglaze wood window

R. Re-coat masonry

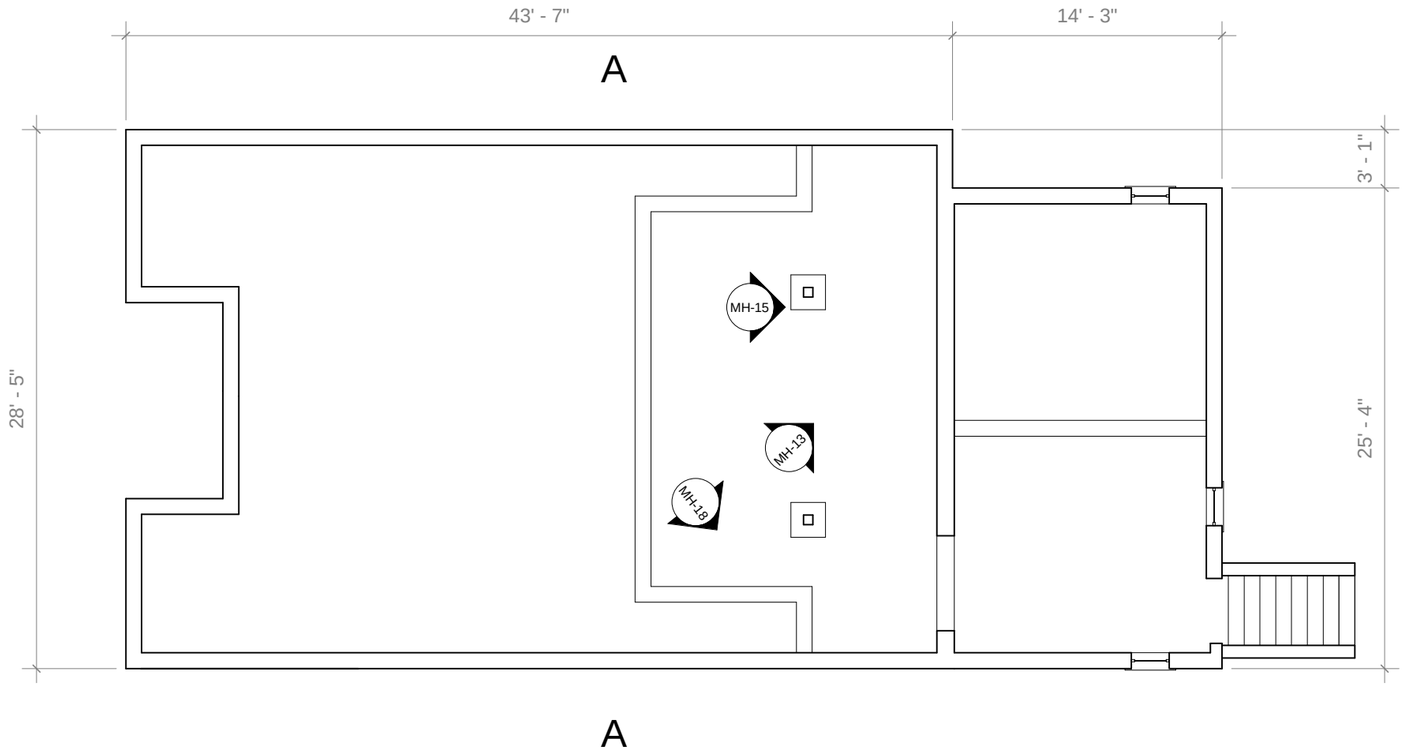
S. Replace bulkhead door

T. Install wood shutters

U. Remove foundation plantings

V. Repoint masonry

W. Replace flashing



BASEMENT PLAN

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0' 5' 10'

Old Methodist Meeting House - Basement Plan

1/8" = 1'-0"

N

MH-1.2

Wareham Historical Society - Historic Buildings Survey

Wareham, Massachusetts

October 21, 2013

KEY NOTES

A. Scrape, sand, prime & paint all existing wood siding

B Scrape, sand, prime & paint all existing wood trim

C. Scrape, sand, prime & paint all existing wood doors

D. Scrape, sand, prime & paint all existing wood windows

E. Repair/replace wood shingle siding in this area

F. Repair/replace wood clapboard siding in this area

G. Repair/replace damaged/rotten trim, as req'd

H. Remove existing roof shingles, patch sheathing as req'd and install new roof shingles

I. Install new wood shingle hip cap

J. Replace wooden ridge boards

K_1 Repair wood window

K_2 Replace wood window

L. Install new gutters & downspouts

M. Clean out existing storm drain

N. Install new perimeter drainage system

O. Lower existing grade

P. Provide positive drainage away from building

Q. Reglaze wood window

R. Re-coat masonry

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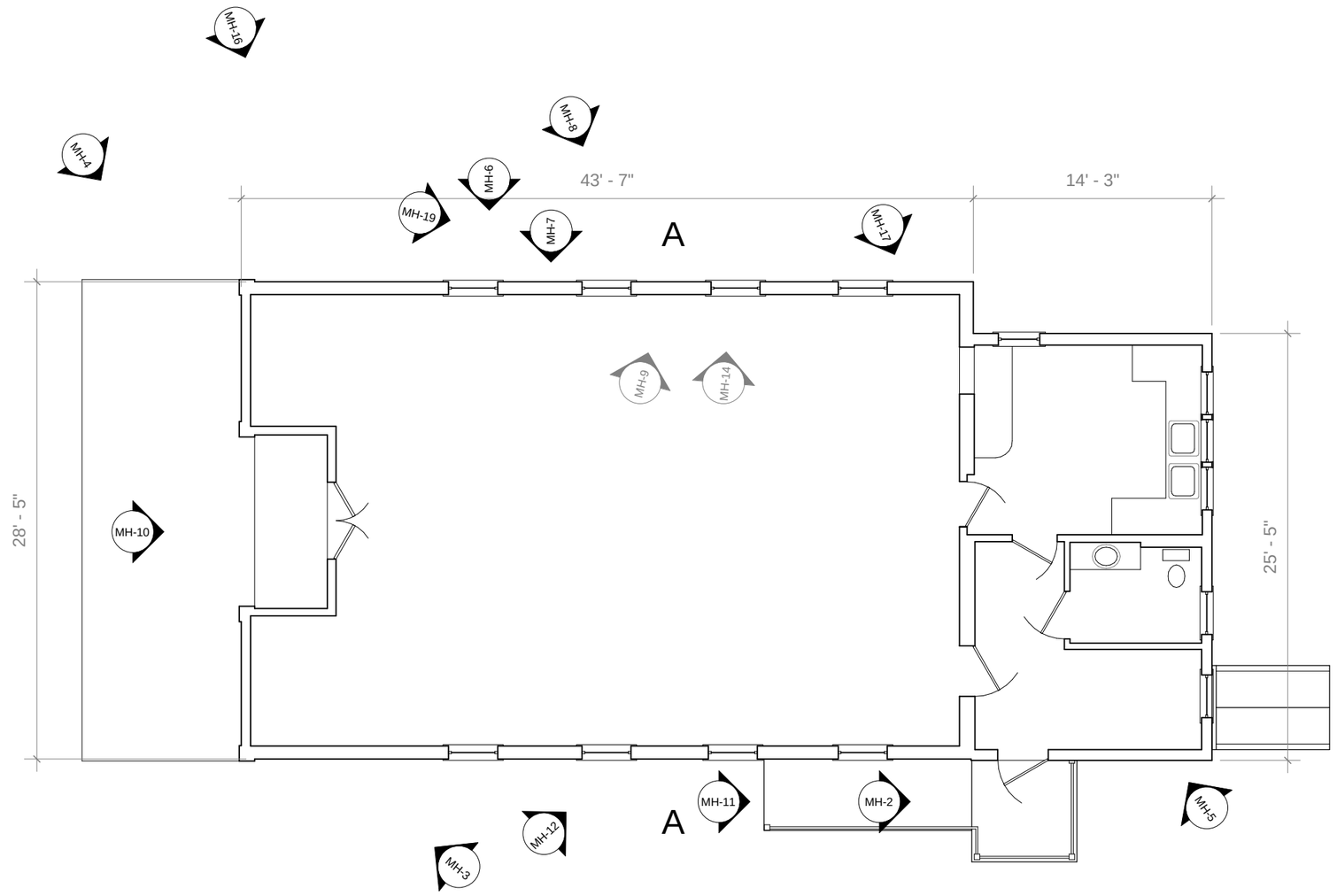

FIRST FLOOR PLAN

MH-1

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0' 5' 10'

Old Methodist Meeting House - First Floor Plan

1/8" = 1'-0"

N

MH-1.1

OLD METHODIST MEETING HOUSE - PROJECT COST ESTIMATE

REPAIR PRIORITIES

IMMEDIATE NEAR TERM LONG TERM	COST RANGE	
• Cut back or remove perimeter vegetation	$1,500 –	2,000
• Reglaze/repaint windows (15)	$7,000 –	9,000
• Repair broken, rotten or missing trim	$1,000 –	2,500
• Repaint siding & trim (2148 sf)	$6,000 –	8,500
• Repaint steel bulkhead	$250 –	350
• Repair/repaint exterior doors (3)	$750 –	1,250
• Repair roof sheathing/framing damage	$2,000 –	3,500
• Repair trim damage from rodents	$750 –	1,250
• Install dehumidifier/ventilation system in basement	$1,000 –	1,500
• Reinforce floor framing connection at ledger	$3,500 –	5,000
• Install vapor barrier in cellar (1600 sf)	$1,500 –	2,000
• Regrade building perimeter	$1,500 –	2,500
• Install perimeter drainage system (172 lf)	$2,500 –	4,000
• Lower grade around basement windows	$500 –	1,000
• Install gutters & d'spouts (116 lf)	$1,000 –	1,500
• Redesign porch enclosure	$12,500 –	17,500
• New wood flooring (1204 sf)	$14,000 –	16,000
GC OHP @ 15%	$8,588 –	11,903
ESTIMATED CONSTRUCTION COST	**$65,838 –**	**91,253**
A/E Fees @ 15%	$9,876 –	13,688
Clerk		
Printing, Testing & Misc.		
Construction Contingency @ 20%	$13,168 –	18,251
PROJECT COST	**$88,882 –**	**123,192**

OLD METHODIST MEETING HOUSE - ANNUAL MAINTENANCE PLAN

Every 1-3 months (periodic or monthly)

- regular drive by surveillance
- check attic during storms if possible
- monthly walk-arounds
- check entrances
- check window panes for breakage
- mowing as required (more frequently in spring and early summer)
- check for graffiti or vandalism
- enter every 3 months to air out (dry breezy weather is preferred)
- check for musty air
- check for moisture damage (at roofs, exterior walls, windows, doors, chimneys and other roof penetrations)
- check battery packs and monitoring equipment
- check light bulbs
- check for evidence of pest intrusion
- check for building movement (in identified areas of concern)

Every 6 months (spring and fall)

- site clean-up; pruning and trimming
- check crawlspace for pests

Every 12 months (annually)

- maintenance contract inspections for equipment/utilities
- check roof for loose or missing shingles
- termite and pest inspection/treatment
- exterior materials spot repair and touch up painting (fall is best time)
- remove bird droppings or other stains from exterior
- check and update building file

parlor

exterior

PART V – FEARING TAVERN MUSEUM

FEARING TAVERN MUSEUM - ARCHITECTURAL SURVEY

Located just around the corner from the three structures described above is the oldest of the Historical Society's properties. The first structure on this Elm Street lot, a four room colonial that later became the Fearing Tavern, may have been built as early as 1690. It was inhabited by Issac and Elizabeth Bump(as) who moved there after the King Phillip War and lived there until 1747.


FT-1 Fearing Tavern

During that time, it became the meeting place of the original proprietors of the Agawam Plantation who used the site for conducting their business and planning which eventually lead to the incorporation of the Town of Wareham in 1739. In 1747, the Bump's sold their house to Israel Fearing and it remained in the Fearing family for over 200 years. Benjamin Fearing, Israel's son, was the tavern keeper who enlarged the house in the Georgian Style (which it maintains to this day) with its white clapboards and split pediment entrance. In the 1820s, Benjamin's son, Benjamin Haskell Fearing, added the summer kitchen/bedroom ell, and the house has remained largely unchanged since then.


FT-2 Classic Georgian entrance

The house lies on the north side of Elm Street just a few lots from the old town green (FT-1). It is set back from the road and separated from it by a white rail fence. The house is a wonderful example of the Georgian Style with its typical 12 over 12 windows, split pediment entry (FT-2), five bay symmetrical façade, simple frieze and generous water table. The lot is relatively flat, though the grade does drop off significantly in the lot immediately to the north. One of the most striking site features is a spectacularly large rock in the east yard which at its closest is only a few inches from the foundation (FT-3). Just behind this along the water table there is pealing paint which appears to be evidence of moisture infiltration, likely back splash from the rock. This should be carefully inspected. Particularly at the back around the ell, vegetation has grown up too close to the building (FT-4). This all should be cut back dramatically or removed altogether. The foundation is loose laid rubble and is in need of general repointing. One basement window is now well below grade and


FT-3 East wall bulge behind granite boulder


FT-4 Overgrown northwest corner

completely overgrown. This surely contributes to the moisture in the basement and this condition should be corrected.

There is a small cellar under only a small portion of the front of the house that may belong to the original structure (FT-5). The rest of the house including all of the ell is built over a very shallow crawl space with limited access. There is a small access hatch in the closet under the stairs in the summer kitchen (FT-14).


FT-5 Corner of partial cellar

The cellar is quite damp, and while access to the crawl space was not possible, it is likely that surface runoff is also entering that space. Without sounding like a broken record, stopping moisture from entering the building is the most important goal for preserving historic buildings. Regrading the perimeter or even installing a perimeter drainage system would help manage the surface water. Gutters and downspouts, if maintained properly, do a wonderful job of this. There is a wooden bulkhead door at the front of the west side that is in good condition.


FT-6 Worn out wood shake siding

The exterior walls are framed with posts and beams and are clad in white clapboards on the front (south elevations) and large wood shakes on the sides and back. The clapboards are in good condition but do require repainting. The shakes on the other hand are at the end of their useful life (FT-6). Many are split or warped and some have worn away to almost nothing. This siding should be replaced. Older photographs show that the heavy shakes have been installed fairly recently. Other siding options might be more in keeping with the building's 18th century appearance – i.e. wood shingles.


FT-7 Bulging east wall

There is a noticeable bulge in the center of the east wall of the main house (right behind the large rock) (FT-7). Water washing down the rock may have caused settling in the foundation or elevated the moisture content of the sill and framing. This area has been recently repaired but should be carefully monitored. The exterior trim is in generally good condition, but should be repainted.

The entry is one of the most important stylistic elements of the house and one that speaks loudest to the vocabulary of Georgian architecture. The paint finish suggests that the flashings remain intact. Careful inspection on a regular basis to monitor their condition should be included as part of the ongoing maintenance plan.


FT-8 Painted brick chimneys

Both the roof on the main house and the ell are covered with asphalt shingles that appear to be in good to fair condition. Currently there are no gutters or down spouts. There are three roof hatches located near the ridge of the north side of the roof. There are two large masonry chimneys located on the ridge of the main roof and one located along the ridge of the ell roof. All three of the chimneys have been painted white with black bands (sometimes referred to as Tory Chimneys), but the paint has worn away.


FT-9 West entrance

There are three entrances to the Fearing Tavern. The most important is the south entrance with its elaborate split pediment and sidelights. This entrance leads to an elegant central stair hall. There are also two additional entrances, one on each side of the ell. The entrance on the west appears to have been the tavern entrance, and the one on the east side appears more like a kitchen entrance located adjacent to the well and old herb garden. The sill of the kitchen entrance is badly rotten and requires replacement. The sill underneath should be inspected and repaired, if necessary, as part of this work.


FT-10 Kitchen door

The windows on the main house are 12-over-12 double hung wood windows, a signature detail of Georgian houses. They are in generally good condition, but require at least some glazing repair and repainting. There are several pintles (pieces of earlier hinges), still visible at some of the windows, evidence that shutters were once installed, though no shutters are currently in use. Consideration should be given to reinstalling these wonderfully efficient elements of historic climate control.


FT-11 Typical 12-over-12 window

FEARING TAVERN MUSEUM - ARCHITECTURAL SURVEY

Structural Observations, Conclusions & Recommendations:

The following comments have been excerpted from a report prepared by Dan Platcow, P.E. of Boston Building Consultants dated June 20, 2013. The complete report is attached as an Appendix.

The building appears to be a post and beam structure whereby the building was constructed as a skeleton of posts, beams and diagonal cross bracing (FT-12). *Once the skeleton was complete the floors and walls were built within the skeleton* (FT-13).

The basement is limited to a small area in the front of the building (FT-16). *The basement was damp and the wood framing had signs of insect infestation and decay due to moisture, the framing noted in the basement has undergone various reinforcements and changes* (FT-14&15).

I noted a sag in the 2nd floor/1st floor ceiling. My investigation to determine the cause for the sag was limited due to finishes, but it appears that a past fire and a staircase in this area may have caused damaged that required altering the building structure.

Typically in a post and beam structure the posts are uninterrupted from the roof to the foundation. However, in my attempt to follow the posts I noted a window at the first floor interrupting the posts and in another place an interior posts could not be tracked.

The Fearing Tavern has most likely undergone numerous changes, renovations, repairs, fires, water and insect infiltration, damage, etc. over the course of its 300+ years. A structural analysis of the as-built construction would require extensive demolition and removal of the finishes which is not possible and beyond the scope of this


FT-12 Post & beam frame


FT-13 Attic framing


FT-14 Floor framing at crawl space access


FT-15 Floor framing connection


FT-16 First floor framing

FEARING TAVERN MUSEUM - ARCHITECTURAL SURVEY

investigation. However, I suggest the following items that are evident and of current concern be addressed:

- *All overgrown plantings be cut down to expose the exterior to reduce the possibility of future decay due to moisture and insect infestation* (FT-19).

- *The gutters appear to have been taken off the house. I suggest a drainage bed and possibly a perforated pipe be installed around the perimeter to collect and dispose of surface and roof rainwater off site.*

- *A basement drainage system with a sump and ventilation system be considered in the basement to reduce the moisture levels and reduce the possibility of future rot and decay due to water and insect infestation.*

- *An exterminator inspect and treat the property periodically to inhibit insect and rodent infestation.*

- *I suggest the sag in the 2nd floor be investigated further by a qualified Contractor who can selectively remove and replace interior historic finishes and determine the cause of the sag and possible repairs.*


FT-17 Water shut off


FT-18 Cellar window


FT-19 Overgrown cellar window

Wareham Historical Society - Historic Buildings Survey

Wareham, Massachusetts

October 21, 2013

KEY NOTES

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B Scrape, sand, prime & paint all existing wood trim

C. Scrape, sand, prime & paint all existing wood doors

D. Scrape, sand, prime & paint all existing wood windows

E. Repair/replace wood shingle siding in this area

F. Repair/replace wood clapboard siding in this area

G. Repair/replace damaged/rotten trim, as req'd

H. Remove existing roof shingles, patch sheathing as req'd and install new roof shingles

I. Install new wood shingle hip cap

J. Replace wooden ridge boards

K_1 Repair wood window

K_2 Replace wood window

L. Install new gutters & downspouts

M. Clean out existing storm drain

N. Install new perimeter drainage system

O. Lower existing grade

P. Provide positive drainage away from building

Q. Reglaze wood window

R. Re-coat masonry

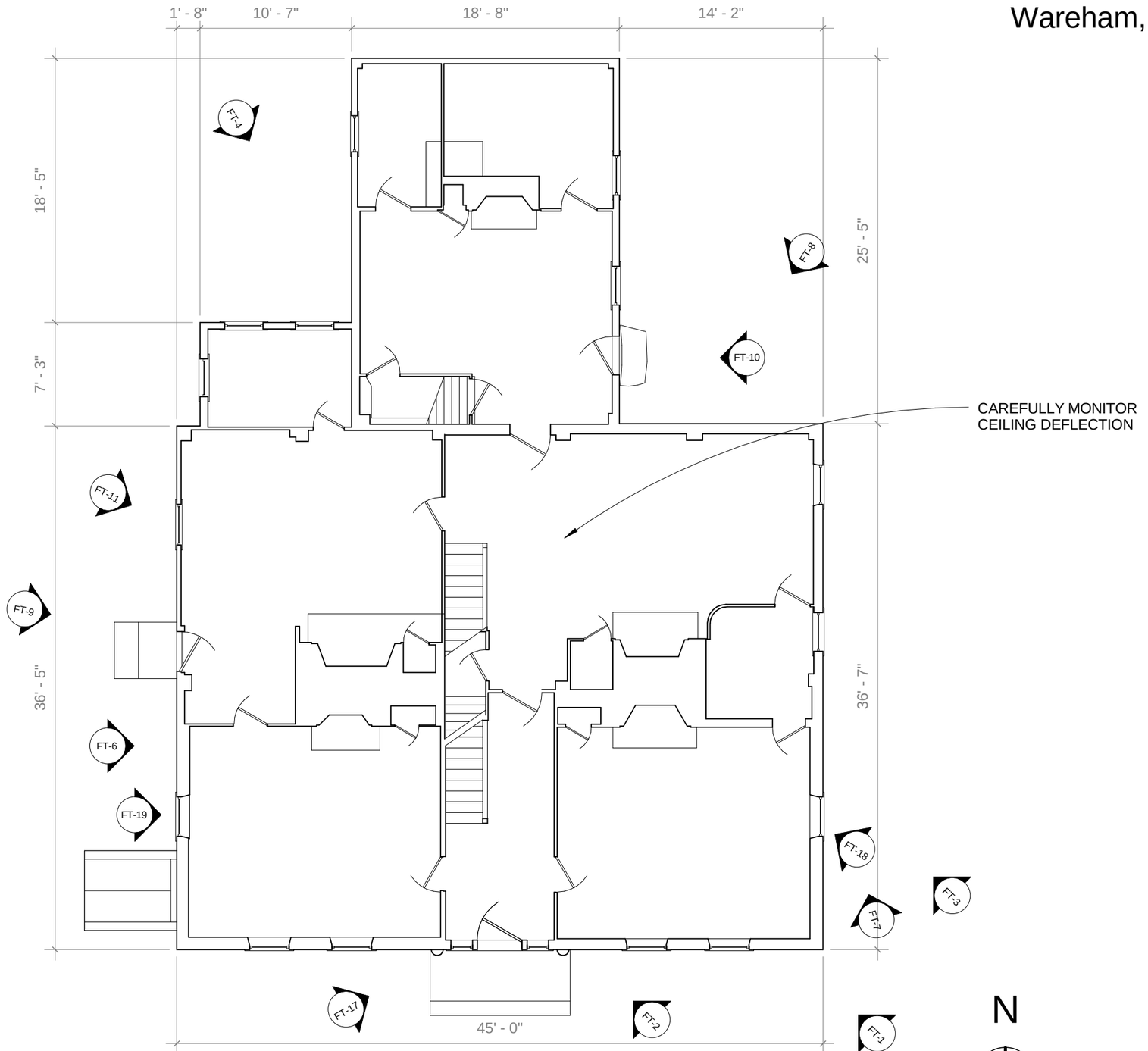
S. Replace bulkhead door

T. Install wood shutters

U. Remove foundation plantings

V. Repoint masonry

W. Replace flashing



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0' 5' 10'

Fearing Tavern - First Floor Plan

1/8" = 1'-0"

N

FT-1.1

Wareham Historical Society - Historic Buildings Survey

Wareham, Massachusetts

October 21, 2013

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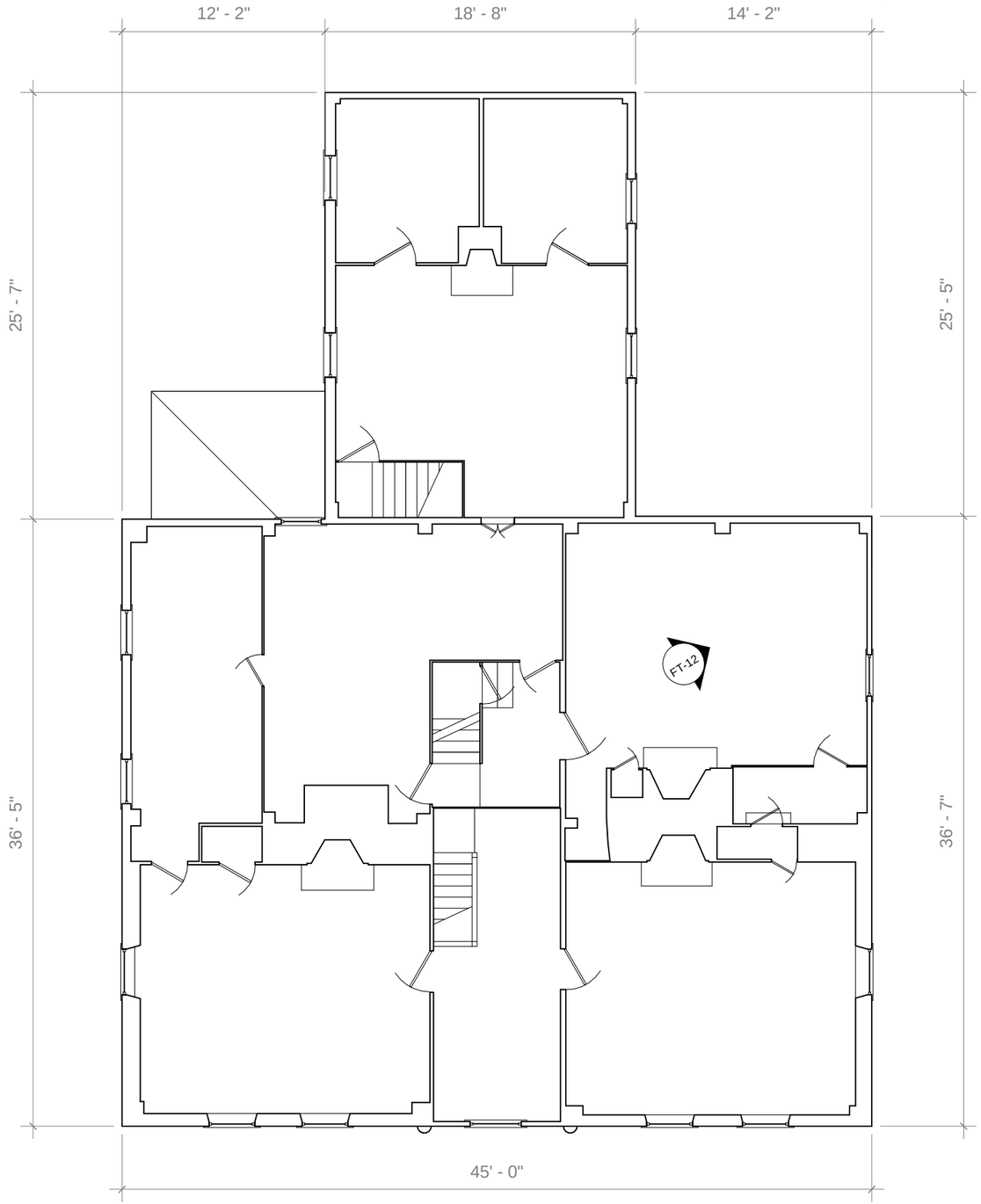

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0' 5' 10'

Fearing Tavern - Second Floor Plan

1/8" = 1'-0"

N

FT-1.2

Wareham Historical Society - Historic Buildings Survey

Wareham, Massachusetts

October 21, 2013

KEY NOTES

A. Scrape, sand, prime & paint all existing wood siding

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C. Scrape, sand, prime & paint all existing wood doors

D. Scrape, sand, prime & paint all existing wood windows

E. Repair/replace wood shingle siding in this area

F. Repair/replace wood clapboard siding in this area

G. Repair/replace damaged/rotten trim, as req'd

H. Remove existing roof shingles, patch sheathing as req'd and install new roof shingles

I. Install new wood shingle hip cap

J. Replace wooden ridge boards

K_1 Repair wood window

K_2 Replace wood window

L. Install new gutters & downspouts

M. Clean out existing storm drain

N. Install new perimeter drainage system

O. Lower existing grade

P. Provide positive drainage away from building

Q. Reglaze wood window

R. Re-coat masonry

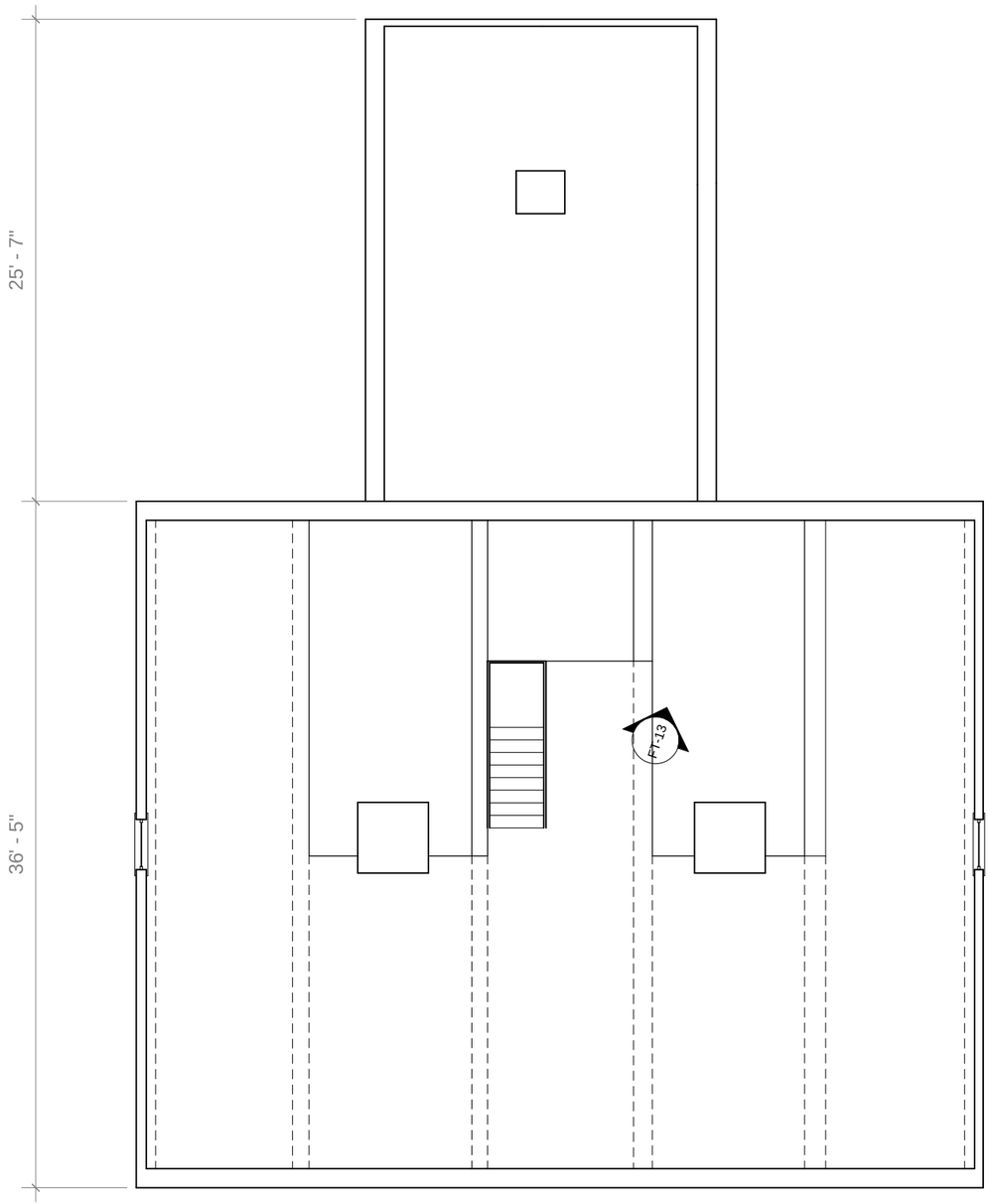
S. Replace bulkhead door

T. Install wood shutters

U. Remove foundation plantings

V. Repoint masonry

W. Replace flashing



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0' 5' 10'

Fearing Tavern - Attic Plan

1/8" = 1'-0"

N

FT-1.3

Wareham Historical Society - Historic Buildings Survey

Wareham, Massachusetts

October 21, 2013

KEY NOTES

A. Scrape, sand, prime & paint all existing wood siding

B Scrape, sand, prime & paint all existing wood trim

C. Scrape, sand, prime & paint all existing wood doors

D. Scrape, sand, prime & paint all existing wood windows

E. Repair/replace wood shingle siding in this area

F. Repair/replace wood clapboard siding in this area

G. Repair/replace damaged/rotten trim, as req'd

H. Remove existing roof shingles, patch sheathing as req'd and install new roof shingles

I. Install new wood shingle hip cap

J. Replace wooden ridge boards

K_1 Repair wood window

K_2 Replace wood window

L. Install new gutters & downspouts

M. Clean out existing storm drain

N. Install new perimeter drainage system

O. Lower existing grade

P. Provide positive drainage away from building

Q. Reglaze wood window

R. Re-coat masonry

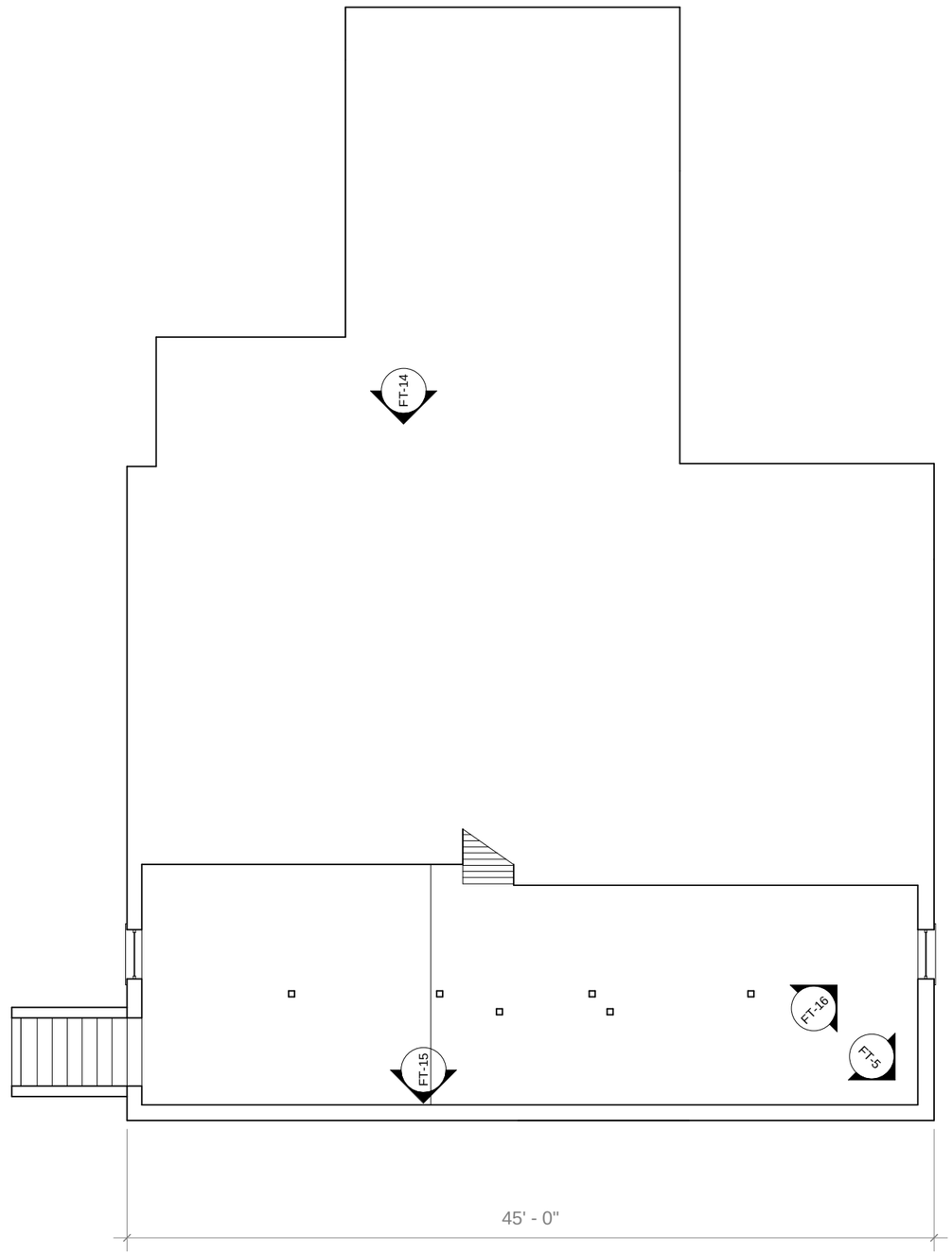
S. Replace bulkhead door

T. Install wood shutters

U. Remove foundation plantings

V. Repoint masonry

W. Replace flashing



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0' 5' 10'

Fearing Tavern - Basement Plan

1/8" = 1'-0"

N

FT-1.4

Wareham Historical Society - Historic Buildings Survey

Wareham, Massachusetts

October 21, 2013

KEY NOTES

A. Scrape, sand, prime & paint all existing wood siding

B Scrape, sand, prime & paint all existing wood trim

C. Scrape, sand, prime & paint all existing wood doors

D. Scrape, sand, prime & paint all existing wood windows

E. Repair/replace wood shingle siding in this area

F. Repair/replace wood clapboard siding in this area

G. Repair/replace damaged/rotten trim, as req'd

H. Remove existing roof shingles, patch sheathing as req'd and install new roof shingles

I. Install new wood shingle hip cap

J. Replace wooden ridge boards

K_1 Repair wood window

K_2 Replace wood window

L. Install new gutters & downspouts

M. Clean out existing storm drain

N. Install new perimeter drainage system

O. Lower existing grade

P. Provide positive drainage away from building

Q. Reglaze wood window

R. Re-coat masonry

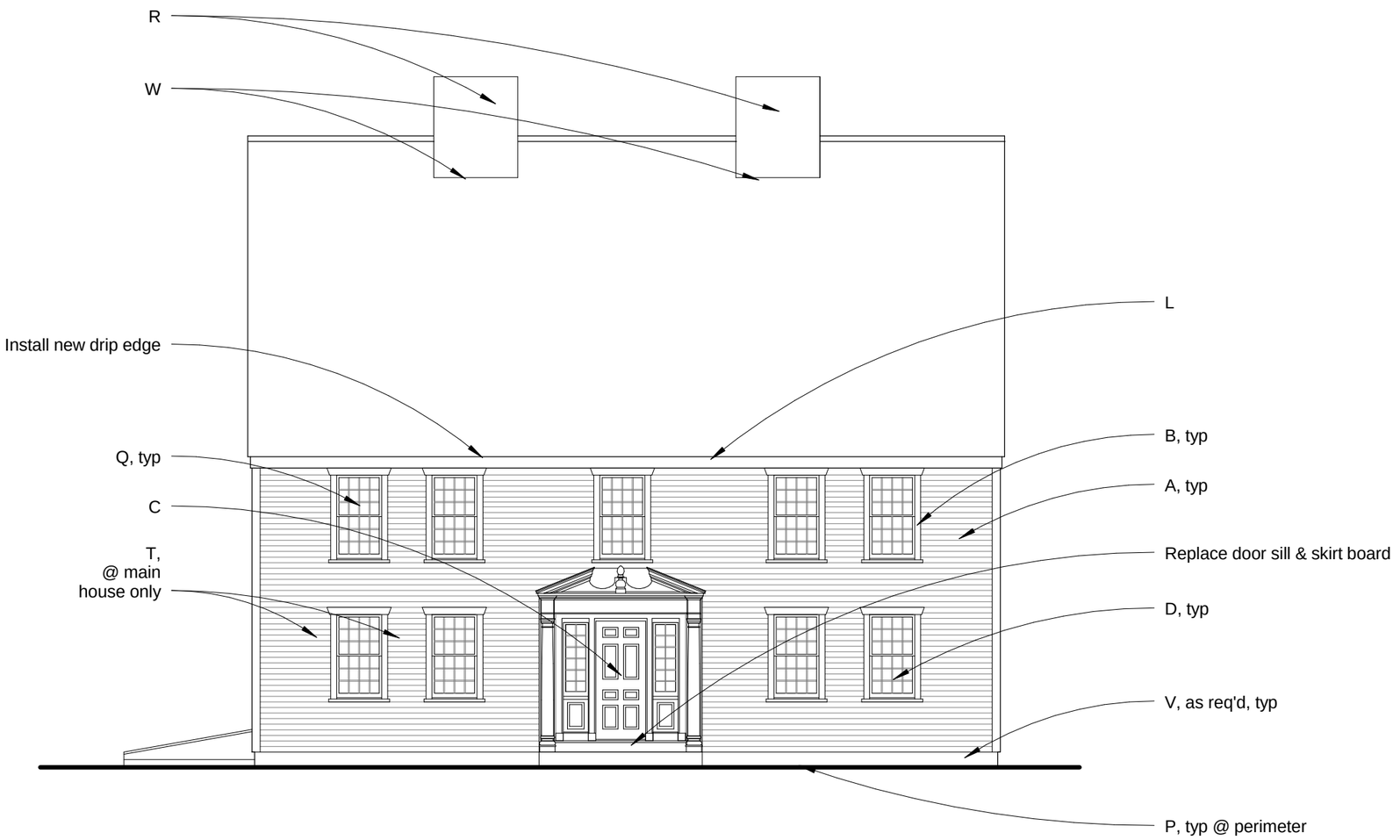
S. Replace bulkhead door

T. Install wood shutters

U. Remove foundation plantings

V. Repoint masonry

W. Replace flashing



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Fearing Tavern - South Elevation

1/8" = 1'-0"

FT-2.1

Wareham Historical Society - Historic Buildings Survey

Wareham, Massachusetts

October 21, 2013

KEY NOTES

A. Scrape, sand, prime & paint all existing wood siding

B Scrape, sand, prime & paint all existing wood trim

C. Scrape, sand, prime & paint all existing wood doors

D. Scrape, sand, prime & paint all existing wood windows

E. Repair/replace wood shingle siding in this area

F. Repair/replace wood clapboard siding in this area

G. Repair/replace damaged/rotten trim, as req'd

H. Remove existing roof shingles, patch sheathing as req'd and install new roof shingles

I. Install new wood shingle hip cap

J. Replace wooden ridge boards

K_1 Repair wood window

K_2 Replace wood window

L. Install new gutters & downspouts

M. Clean out existing storm drain

N. Install new perimeter drainage system

O. Lower existing grade

P. Provide positive drainage away from building

Q. Reglaze wood window

R. Re-coat masonry

S. Replace bulkhead door

T. Install wood shutters

U. Remove foundation plantings

V. Repoint masonry

W. Replace flashing

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Fearing Tavern - East Elevation

1/8" = 1'-0"

FT-2.2

Wareham Historical Society - Historic Buildings Survey

Wareham, Massachusetts

October 21, 2013

KEY NOTES

A. Scrape, sand, prime & paint all existing wood siding

B Scrape, sand, prime & paint all existing wood trim

C. Scrape, sand, prime & paint all existing wood doors

D. Scrape, sand, prime & paint all existing wood windows

E. Repair/replace wood shingle siding in this area

F. Repair/replace wood clapboard siding in this area

G. Repair/replace damaged/rotten trim, as req'd

H. Remove existing roof shingles, patch sheathing as req'd and install new roof shingles

I. Install new wood shingle hip cap

J. Replace wooden ridge boards

K_1 Repair wood window

K_2 Replace wood window

L. Install new gutters & downspouts

M. Clean out existing storm drain

N. Install new perimeter drainage system

O. Lower existing grade

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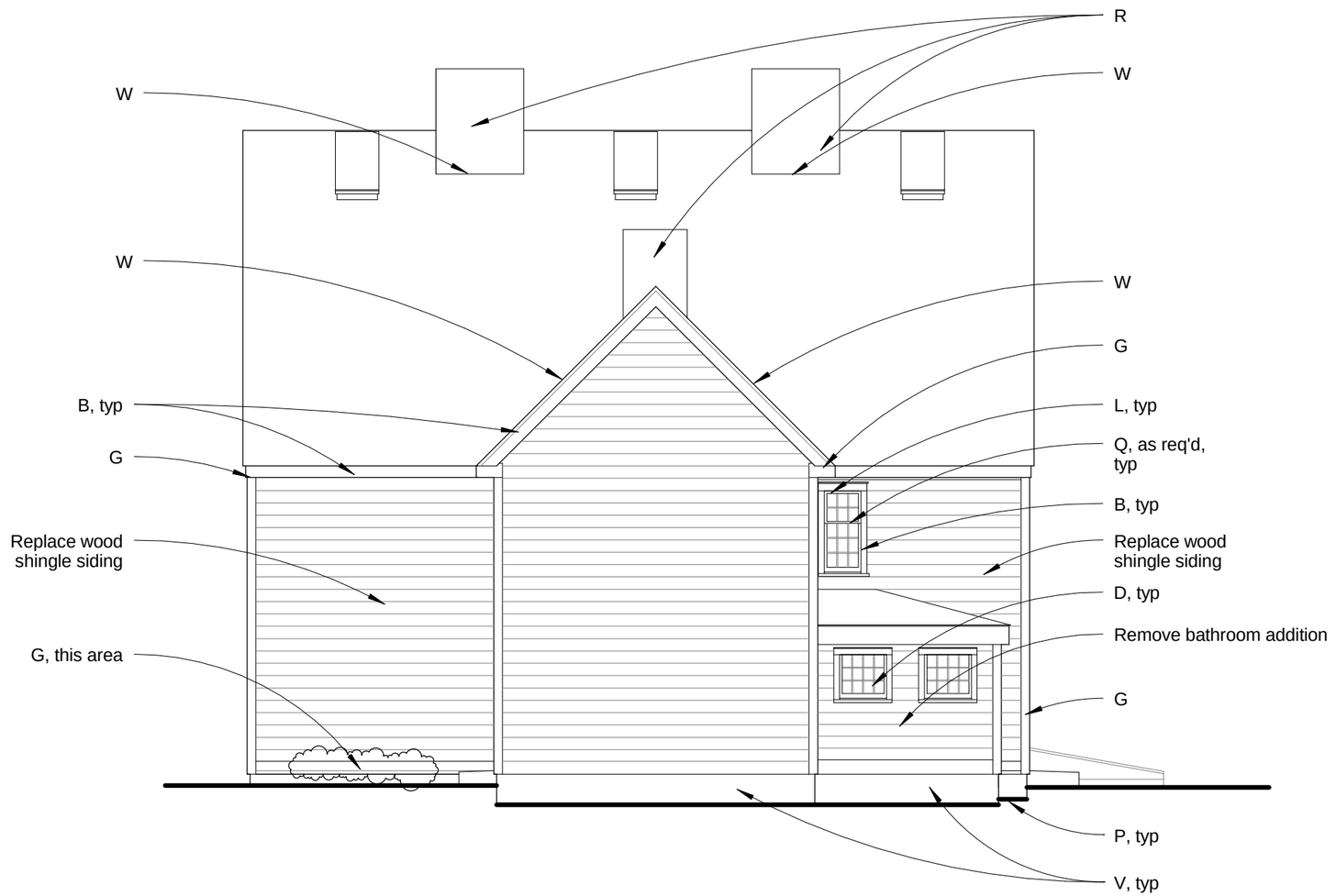

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Fearing Tavern - North Elevation

1/8" = 1'-0"

FT-2.3

Wareham Historical Society - Historic Buildings Survey

Wareham, Massachusetts

October 21, 2013

KEY NOTES

A. Scrape, sand, prime & paint all existing wood siding

B Scrape, sand, prime & paint all existing wood trim

C. Scrape, sand, prime & paint all existing wood doors

D. Scrape, sand, prime & paint all existing wood windows

E. Repair/replace wood shingle siding in this area

F. Repair/replace wood clapboard siding in this area

G. Repair/replace damaged/rotten trim, as req'd

H. Remove existing roof shingles, patch sheathing as req'd and install new roof shingles

I. Install new wood shingle hip cap

J. Replace wooden ridge boards

K_1 Repair wood window

K_2 Replace wood window

L. Install new gutters & downspouts

M. Clean out existing storm drain

N. Install new perimeter drainage system

O. Lower existing grade

P. Provide positive drainage away from building

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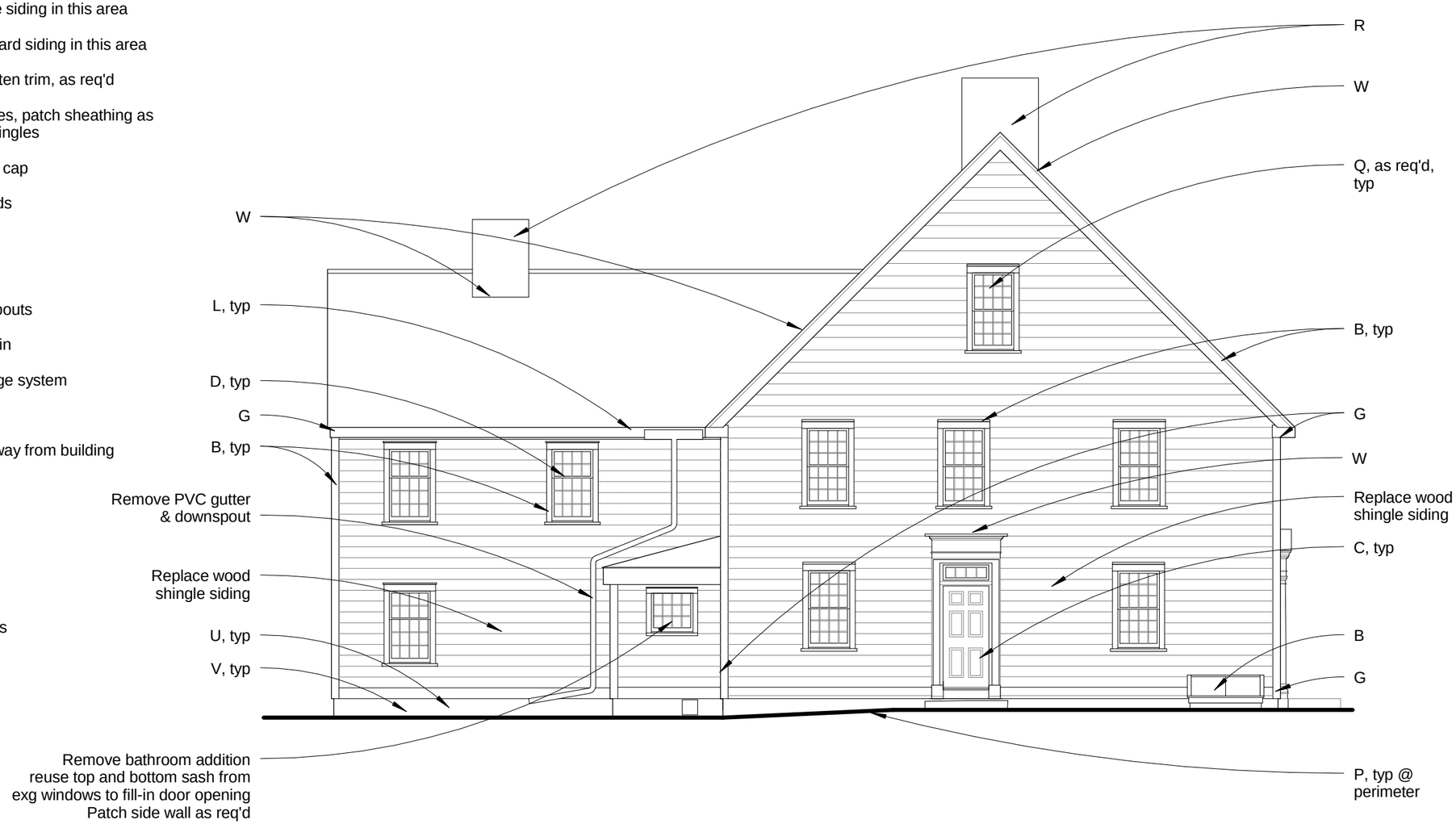

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Fearing Tavern - West Elevation

1/8" = 1'-0"

FT-2.4

FEARING TAVERN MUSEUM - PROJECT COST ESTIMATE

REPAIR PRIORITIES

IMMEDIATE NEAR TERM LONG TERM	COST RANGE	
• Reglaze/repaint windows (33)	12,000 –	16,500
• Repaint siding & trim (765 sf)	3,800 –	5,000
• Repair/repaint exterior doors (3)	750 –	1,000
• Repair rotten door sill	1,000 –	1,250
• Repair broken, rotten or missing trim	2,500 –	5,000
• Cut back or remove perimeter vegetation	1,500 –	2,000
• Investigate sagging second floor framing	1,500 –	2,500
• Repair bulging side wall @ east	2,500 –	5,000
• Reshingle exterior (3630 sf)	19,000 –	22,000
• Repoint foundation (180 sf)	2,000 –	3,000
• Repaint chimneys (3)	1,500 –	2,500
• Replace chimney flashing	1,500 –	2,500
• Install gutters/downspouts (120 lf)	2,400 –	3,000
• Install perimeter drainage (210 lf)	2,500 –	5,000
• Reinstall window shutters (21)	10,500 –	13,500
• Restore herb garden	2,500 –	5,000
GC OHP @ 15%	$10,118 –	14,213
ESTIMATED CONSTRUCTION COST	**$77,568 –**	**108,963**
A/E Fees @ 15%	$11,635 –	16,344
Clerk		
Printing, Testing & Misc.		
Construction Contingency @ 20%	$15,514 –	21,793
PROJECT COST	**$104,717 –**	**147,100**

FEARING TAVERN MUSEUM - ANNUAL MAINTENANCE PLAN

Every 1-3 months (periodic or monthly)

- regular drive by surveillance
- check attic during storms if possible
- monthly walk-arounds
- check entrances
- check window panes for breakage
- mowing as required (more frequently in spring and early summer)
- check for graffiti or vandalism
- enter every 3 months to air out (dry breezy weather is preferred)
- check for musty air
- check for moisture damage (at roofs, exterior walls, windows, doors, chimneys and other roof penetrations)
- check battery packs and monitoring equipment
- check light bulbs
- check for evidence of pest intrusion
- check for building movement (in identified areas of concern)

Every 6 months (spring and fall)

- site clean-up; pruning and trimming
- gutter and downspout check
- check crawlspace for pests
- clean out storm drains

Every 12 months (annually)

- maintenance contract inspections for equipment/utilities
- check roof for loose or missing shingles
- termite and pest inspection/treatment
- exterior materials spot repair and touch up painting (fall is best time)
- remove bird droppings or other stains from exterior
- check and update building file

PART VI - CAPTAIN KENDRICK HOUSE

exterior

PART VI – CAPTAIN KENDIRCK HOUSE

CAPTAIN KENDRICK HOUSE – ARCHITECTURAL SURVEY

Located approximately one mile south on Main Street from the other four of the Wareham Historical Society's buildings, the Captain John Kendrick House sits peacefully across the street from the shore of the Agawam River. It was built in 1745 and sold by David Nye to Captain John Kendrick in 1778. The house is sited at the top of a small rise just west of Main Street, and the house is set back from the road and separated by a stone wall and four steps at the street side, a gently rising sidewalk, and another four steps that lead to a small pedimented entry vestibule (KH-1). Despite a much larger grade change at the edges of the lot, the grade changes approximately two feet under the building from east to west, so that while there are five risers to reach the first floor on the east side, along the south side of the rear ell, there are only two.


KH-1 Capt John Kendrick House


KH-2 Overgrown foundation plantings

There are two large trees on the lot, a 60 foot Hemlock off the front, northeast corner and a 30 foot Black Walnut at the rear northwest corner. There are also several large shrubs in and around the building. Many of them are too large and should be pruned back or removed altogether (KH-2). There is a small brick walk that connects two doors on the south side of the ell to the parking lot to the west (KH-3).


KH-3 Brick wall at western ell

The foundation of the main house is brick that has been painted or waterproofed. Some of this coating is beginning to fail and the differential in vapor permeability has caused areas of brick to spall where the coating has already failed (KH-4). This non-breathable coating is not recommended for masonry because it does not allow the free passage of moisture through the material. The various coatings should be removed and the exposed brick treated with a more vapor permeable, potassium silicate-based coating instead.


KH-4 Coated brick foundation

The foundation of the rear ell is fieldstone and requires some repointing and gap filling (KH-5). This should be checked regularly to prevent rodents from getting inside the house. There is a plywood bulkhead door on the southwest side of the main house. While the location may be quite old the material choice, plywood, does not integrate well with the rest of the


KH-5 Fieldstone foundation needs selective repointing

structure (KH-6). When at the end of its useful life, perhaps a material palette more in keeping with the Georgian Style could be considered.

The grade along much of the ell is only a few inches below the siding and even more of the foundation is overgrown with vegetation (KH-7). This condition is not good for the framing and certainly contributes to water infiltration into the cellar and basement.

The basement is quite damp and there were pools of standing water visible (KH-8). The dirt floor is covered with small pieces of polyethylene covered with Homosote panels that are completely saturated with water. This should all be removed and replaced with large sheets of heavy, 10 mil poly covered by a few inches of pea stone or $^{3}/_{8}$" river rock.

The walls of the main house (except for the rear, or west side) as well as the north and east sides of the ell are covered in clapboards and painted. The remaining faces are covered with painted wood shingles. The paint on most of the siding is in very poor condition. There are several locations where the paint is peeling off in large flakes. While in fair condition, most of the wood trim is also generally in need of repainting (KH-9).

There is a small area on the north side of the main house where part of a clapboard has broken away and the sheathing is now exposed to the weather (KH-10). There are also areas where the nails have failed or the sheathing is no longer able to hold fasteners. The siding should be carefully checked and repaired as appropriate. All of these conditions should be repaired to prevent further water infiltration. There is also a newer patch on the south side of the ell where the shingles have been replaced (KH-11). There were apparently some framing repairs performed in this area in 2007 after a portion of the wall failed.

There are several instances where the existing trim is missing, broken or damaged. In a few of these locations, it appears that rodents have made the most of it by making themselves at home in the eaves, attic and walls


KH-6 Existing bulkhead door


KH-7 Low clearance between grade & siding


KH-8 Existing basement


KH-9 Failed exterior paint – typical


KH-10 Missing clapboard

CAPTAIN KENDRICK HOUSE – ARCHITECTURAL SURVEY

(KH-12). These areas should be repaired and an exterminator consulted to prevent future investations.

Over the main house is a wood-shingled gambrel roof, while over the ell is a gable-roof running east west off the back of the main roof. The northeast corner of the ell has a small hip roof covering the exposed end where the side door is located. The roof is in fair to poor condition and should be replaced soon (KH-13). There are also signs of insect infestation in the roof rafters in the attic. All of the accessible original framing (including floor framing in basement) should be treated regularly with a borate-based preservative to inhibit mold growth, insect infestation and rot.

There is evidence that there used to be gutters and downspouts, but they have been removed (KH-14). At the bottom of the roof valleys, large amounts of water are discharged on the ground. This has eroded the grade and created a catch which holds water against the building (KH-15). Reinstalling these elements and maintaining them is the best way to manage roof runoff which will prevent this water from finding its way into the cellar.

There are two chimneys – a large central brick chimney in the main house roof and a smaller one located in the northeast corner of the ell – both appear in good condition. The chimney is flashed with lead, however this should be replaced when the roofs are reshingled.

There is a small entry vestibule on the east side of the main house approximately four feet deep and eight feet wide with one four-over-four wood double-hung window on each side. It is covered with a finely proportioned pediment and gable roof. Some of the trim is in very bad condition – rotten and victimized by rodents (KH-16). All of the damaged trim should be repaired or replaced.


KH-11 Siding patch on ell


KH-12 Rodent damage at rotten trim


KH-13 – Missing & worn out roof shingles


KH-14 Existing gutter hangers


KH-15 Missing downspouts

CAPTAIN KENDRICK HOUSE – ARCHITECTURAL SURVEY

There is a single two panel door that leads to a charming "good morning" stair. This stair has a short run that leads to a platform from which two other runs go off in opposite directions (KH-17).


KH-16 Rodent & water damage


KH-17 Existing "Good Morning" stair


KH-18 Existing framing with reinforcements


KH-19 Existing basement

Structural Observations, Conclusions & Recommendations:

The following comments have been excerpted from a report prepared by Dan Platcow, P.E. of Boston Building Consultants dated June 20, 2013. The complete report is attached as Appendix A.

The floors, walls and roof structure have undergone movements and settlements over the 170 year life of the building. Some of the settlements may be due to questionable soil conditions and dimensional changes of the building framing, but these conditions would have occurred soon after construction and most likely were not the main cause of the observed settlements.

The main house perimeter foundation wall and the center chimney/ floor support structure have been reinforced with new cast in place concrete (KH-18). *I suspect that water infiltration damaged the original building foundations, creating an unstable condition and a need for new reinforcements. Also, the basement was very damp, mold was evident and there were signs of past insect infestation and damage to the existing wood framing* (KH-19). *I suspect that replacement of foundation sill plates, wall framing, and other decayed framing was required and performed during the foundation reinforcements, most likely these conditions were the primary cause of noticeable settlements.*

Assuming the cause for the settlements has been addressed and repaired, I suggest the basement carpet/flooring be removed, an under slab drainage system with a sump and a ventilation/dehumidification system be installed to reduce the high level of humidity and moisture in the basement. Also, the floors, roof, ceilings, and walls should be inspected periodically for signs of ongoing movement, e.g. cracking finishes, poorly

CAPTAIN KENDRICK HOUSE – ARCHITECTURAL SURVEY

functioning doors or windows, etc. and report any suspected issues to a qualified professional for more investigation.

The exterior clapboards, shingles, trim, etc. are in need of attention and repair. I noted holes in the trim along the roof eave that allow animals, rodents and insects, water, etc. easy access into the interior (KH-20). *Also, the plantings around the perimeter are over-grown, creating a wet environment that promotes rot and decay due to moisture and insect infestation* (KH-21).


KH-20 Rodent damage at trim


KH-21 Insect damage at basement window sill

I suggest all plantings and ground cover around the perimeter be trimmed, all damage and rotted materials replaced, all holes repaired and the exterior siding scraped and painted to prevent deterioration and reduce the possibility of decay due to water infiltration. Also, I suggest a drainage bed and possibly a perforated pipe be installed around the building perimeter to collect and discharge surface water and roof runoff away from the building foundations.

The first floor framing is a combination of original framing members and reinforcements added at a later date. It appears that posts, joists and beams have been added throughout the 1st floor framing most likely to address concerns as they arose. Evidence of insect infestation was evident, therefore, I suspect that the new supports may have been added to address decayed members.


KH-22 Existing roof framing

I suggest a qualified exterminator inspect the property on a periodic basis for signs of active insect infestation and treat the property as required reducing the possibility of infestation. Also, I suggest a qualified contractor/carpenter review the as-built framing to make specific recommendations for permanent supports to replace the as-built temporary members.

I noted several original roof rafters have been reinforced with new rafters sistered along side the existing decayed members (KH-22). *The existing*

members appeared to be infested with insects and fresh wood powder was evident on the attic floor directly under the members in question.

A structural analysis of the as-built framing and new reinforcements is beyond the scope of this review and inspection. However, as noted previously, I suggest a qualified Exterminator inspect the roof framing on a periodic basis for signs of active insect infestation and treat the property as required reducing the possibility of infestation. Also, I suggest any members found to be infested with insects or decayed due to rot, fungus or mold be removed, disposed off site and replaced with new members of an equivalent size and strength.

Wareham Historical Society - Historic Buildings Survey

Wareham, Massachusetts

October 21, 2013

KEY NOTES

A. Scrape, sand, prime & paint all existing wood siding

B Scrape, sand, prime & paint all existing wood trim

C. Scrape, sand, prime & paint all existing wood doors

D. Scrape, sand, prime & paint all existing wood windows

E. Repair/replace wood shingle siding in this area

F. Repair/replace wood clapboard siding in this area

G. Repair/replace damaged/rotten trim, as req'd

H. Remove existing roof shingles, patch sheathing as req'd and install new roof shingles

I. Install new wood shingle hip cap

J. Replace wooden ridge boards

K_1 Repair wood window

K_2 Replace wood window

L. Install new gutters & downspouts

M. Clean out existing storm drain

N. Install new perimeter drainage system

O. Lower existing grade

P. Provide positive drainage away from building

Q. Reglaze wood window

R. Re-coat masonry

S. Replace bulkhead door

T. Install wood shutters

U. Remove foundation plantings

V. Repoint masonry

W. Replace flashing

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0' 5' 10'

Capt John Kendrick House - First Floor Plan

1/8" = 1'-0"

N

KH-1.1

Wareham Historical Society - Historic Buildings Survey

Wareham, Massachusetts

October 21, 2013

KEY NOTES

A. Scrape, sand, prime & paint all existing wood siding

B Scrape, sand, prime & paint all existing wood trim

C. Scrape, sand, prime & paint all existing wood doors

D. Scrape, sand, prime & paint all existing wood windows

E. Repair/replace wood shingle siding in this area

F. Repair/replace wood clapboard siding in this area

G. Repair/replace damaged/rotten trim, as req'd

H. Remove existing roof shingles, patch sheathing as req'd and install new roof shingles

I. Install new wood shingle hip cap

J. Replace wooden ridge boards

K_1 Repair wood window

K_2 Replace wood window

L. Install new gutters & downspouts

M. Clean out existing storm drain

N. Install new perimeter drainage system

O. Lower existing grade

P. Provide positive drainage away from building

Q. Reglaze wood window

R. Re-coat masonry

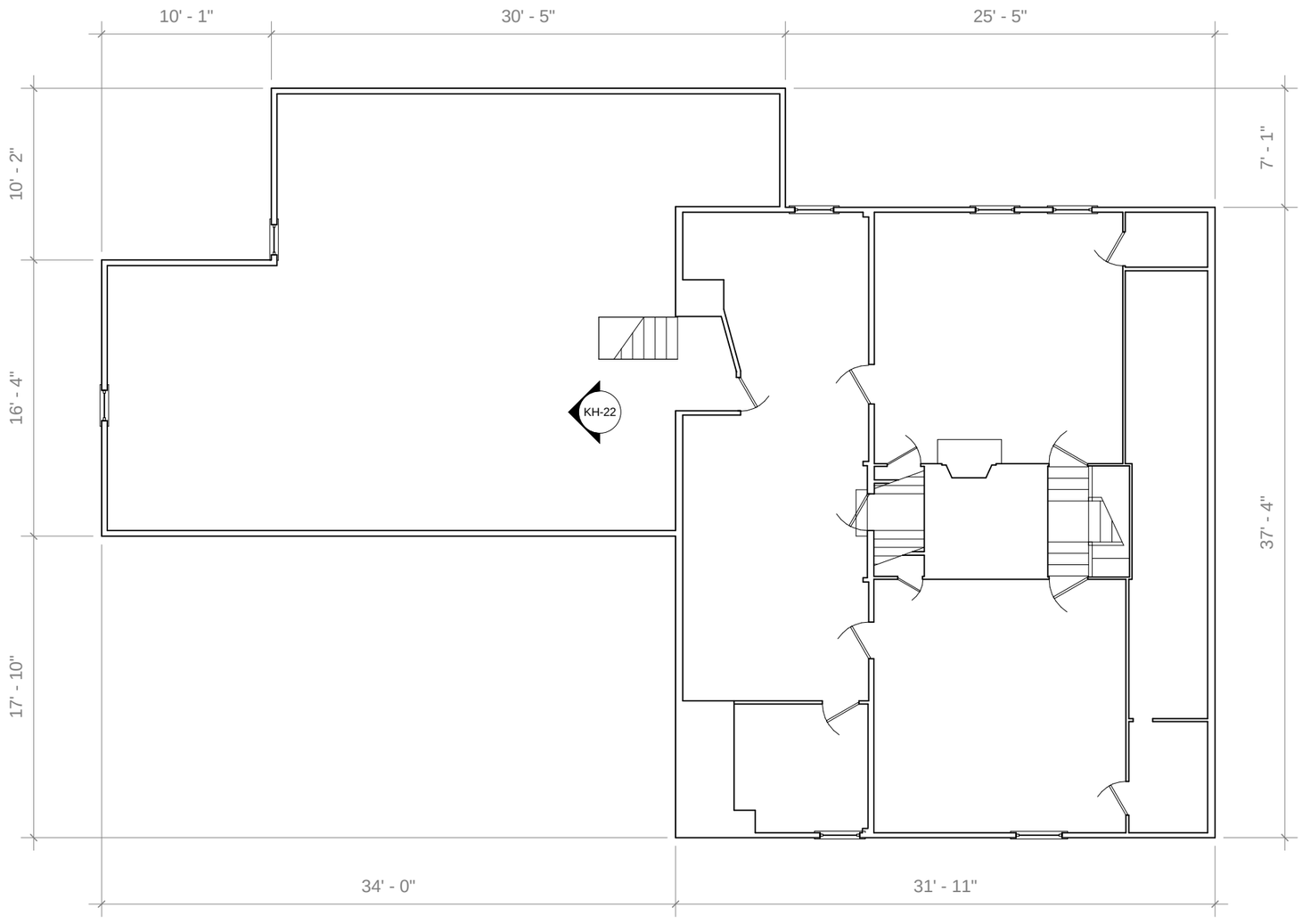
S. Replace bulkhead door

T. Install wood shutters

U. Remove foundation plantings

V. Repoint masonry

W. Replace flashing



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0' 5' 10'

Capt John Kendrick House - Second Floor Plan

1/8" = 1'-0"

N

KH-1.2

Wareham Historical Society - Historic Buildings Survey

Wareham, Massachusetts

October 21, 2013

KEY NOTES

A. Scrape, sand, prime & paint all existing wood siding

B Scrape, sand, prime & paint all existing wood trim

C. Scrape, sand, prime & paint all existing wood doors

D. Scrape, sand, prime & paint all existing wood windows

E. Repair/replace wood shingle siding in this area

F. Repair/replace wood clapboard siding in this area

G. Repair/replace damaged/rotten trim, as req'd

H. Remove existing roof shingles, patch sheathing as req'd and install new roof shingles

I. Install new wood shingle hip cap

J. Replace wooden ridge boards

K_1 Repair wood window

K_2 Replace wood window

L. Install new gutters & downspouts

M. Clean out existing storm drain

N. Install new perimeter drainage system

O. Lower existing grade

P. Provide positive drainage away from building

Q. Reglaze wood window

R. Re-coat masonry

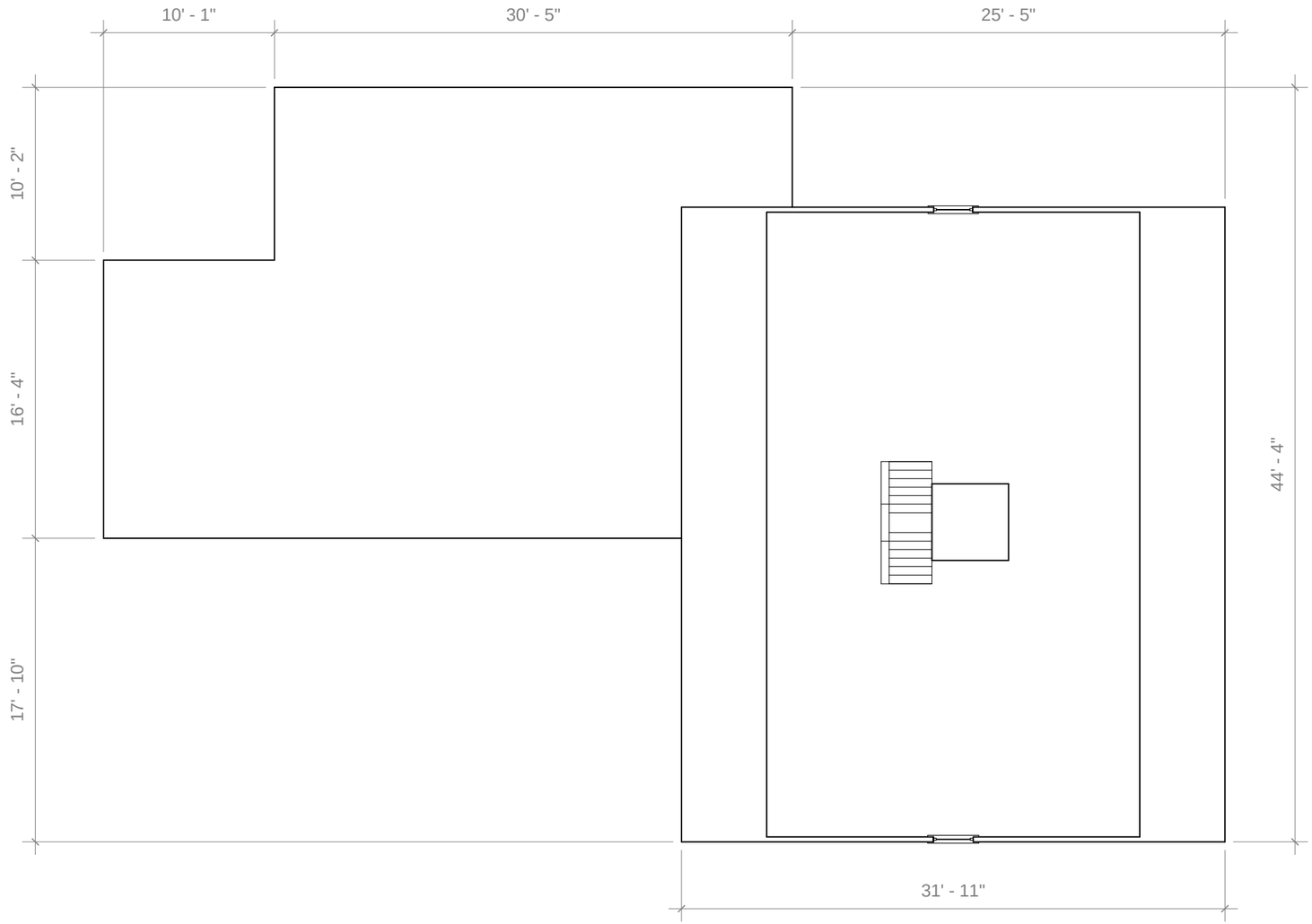
S. Replace bulkhead door

T. Install wood shutters

U. Remove foundation plantings

V. Repoint masonry

W. Replace flashing



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0' 5' 10'

Capt John Kendrick House - Attic Plan

1/8" = 1'-0"

N

KH-1.3

Wareham Historical Society - Historic Buildings Survey

Wareham, Massachusetts

October 21, 2013

KEY NOTES

A. Scrape, sand, prime & paint all existing wood siding

B Scrape, sand, prime & paint all existing wood trim

C. Scrape, sand, prime & paint all existing wood doors

D. Scrape, sand, prime & paint all existing wood windows

E. Repair/replace wood shingle siding in this area

F. Repair/replace wood clapboard siding in this area

G. Repair/replace damaged/rotten trim, as req'd

H. Remove existing roof shingles, patch sheathing as req'd and install new roof shingles

I. Install new wood shingle hip cap

J. Replace wooden ridge boards

K_1 Repair wood window

K_2 Replace wood window

L. Install new gutters & downspouts

M. Clean out existing storm drain

N. Install new perimeter drainage system

O. Lower existing grade

P. Provide positive drainage away from building

Q. Reglaze wood window

R. Re-coat masonry

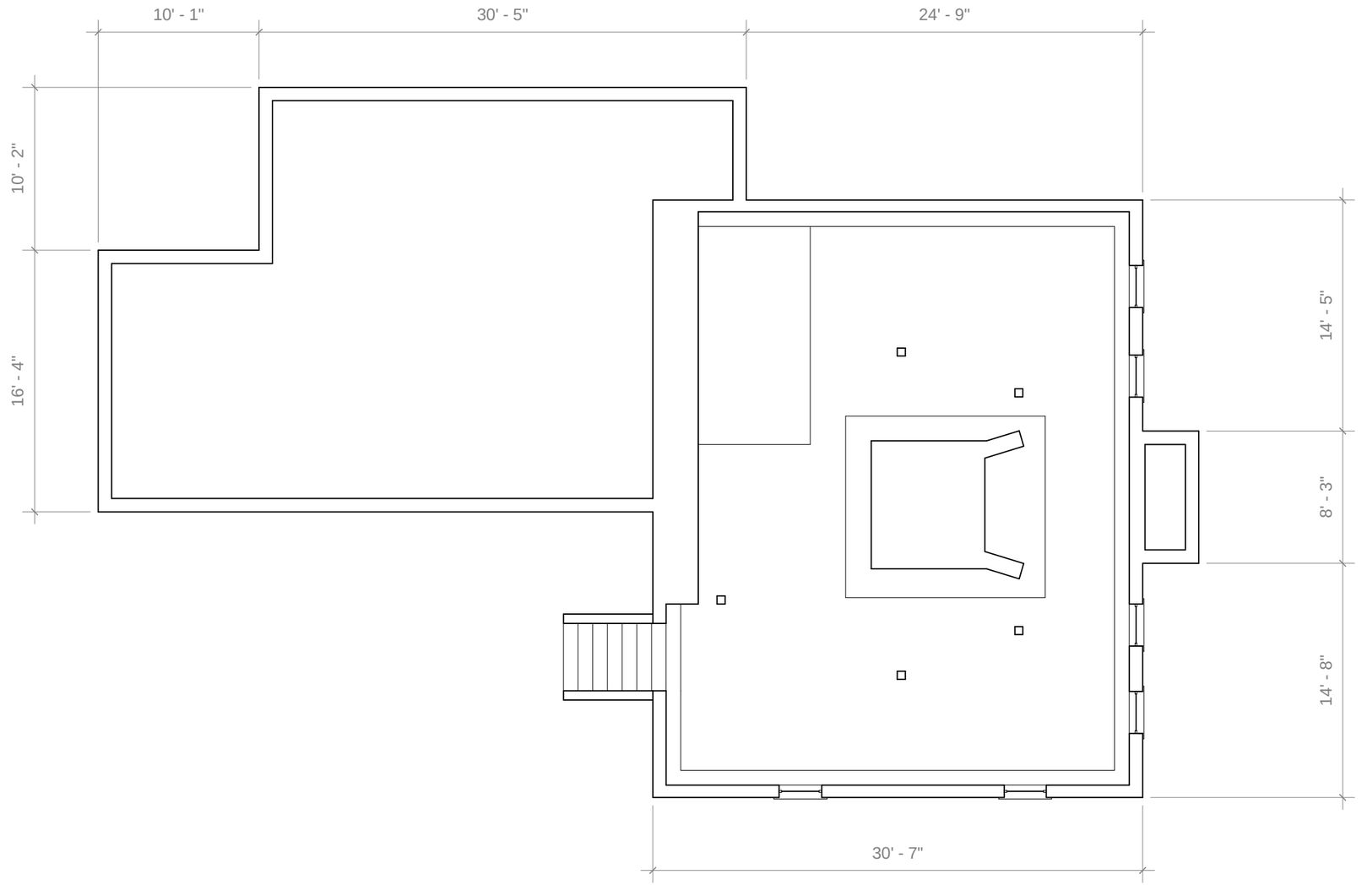
S. Replace bulkhead door

T. Install wood shutters

U. Remove foundation plantings

V. Repoint masonry

W. Replace flashing



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0' 5' 10'

Capt John Kendrick House - Basement Plan

1/8" = 1'-0"

N

KH-1.4

Wareham Historical Society - Historic Buildings Survey

Wareham, Massachusetts

October 21, 2013

KEY NOTES

A. Scrape, sand, prime & paint all existing wood siding

B Scrape, sand, prime & paint all existing wood trim

C. Scrape, sand, prime & paint all existing wood doors

D. Scrape, sand, prime & paint all existing wood windows

E. Repair/replace wood shingle siding in this area

F. Repair/replace wood clapboard siding in this area

G. Repair/replace damaged/rotten trim, as req'd

H. Remove existing roof shingles, patch sheathing as req'd and install new roof shingles

I. Install new wood shingle hip cap

J. Replace wooden ridge boards

K_1 Repair wood window

K_2 Replace wood window

L. Install new gutters & downspouts

M. Clean out existing storm drain

N. Install new perimeter drainage system

O. Lower existing grade

P. Provide positive drainage away from building

Q. Reglaze wood window

R. Re-coat masonry

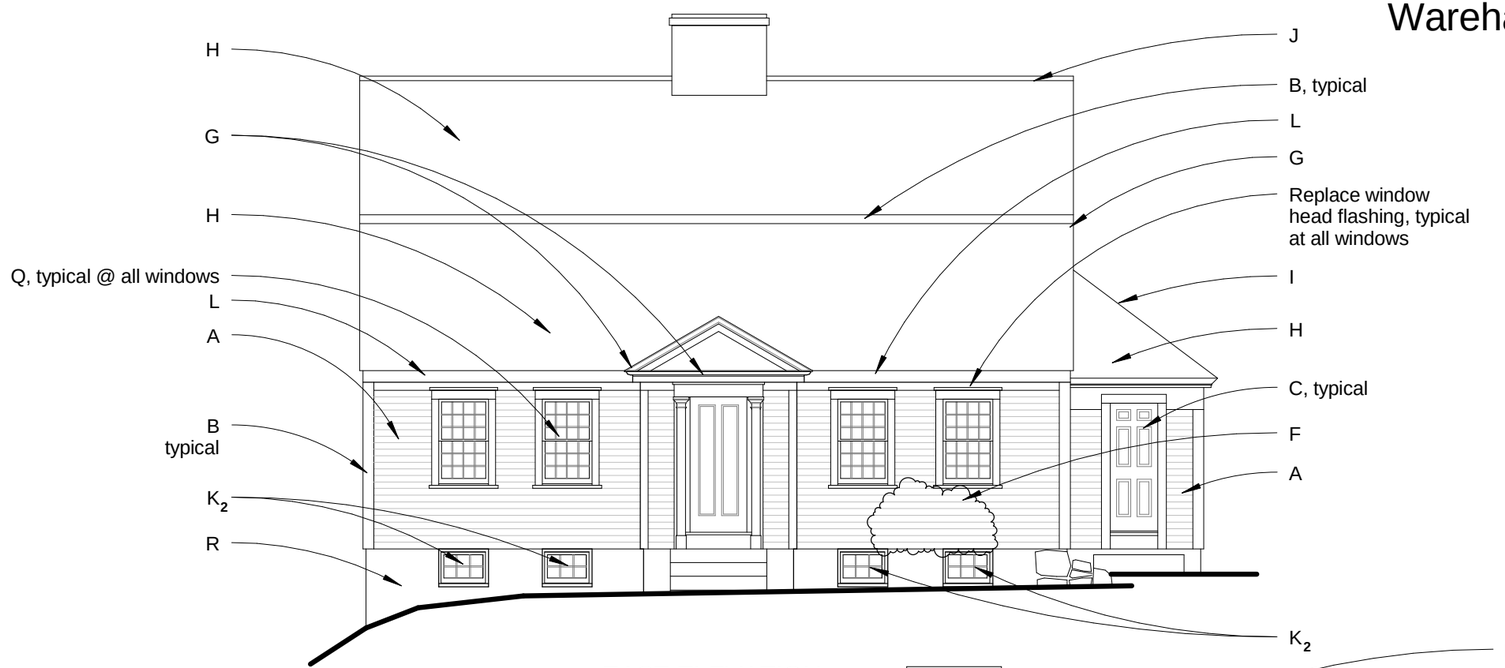
S. Replace bulkhead door

T. Install wood shutters

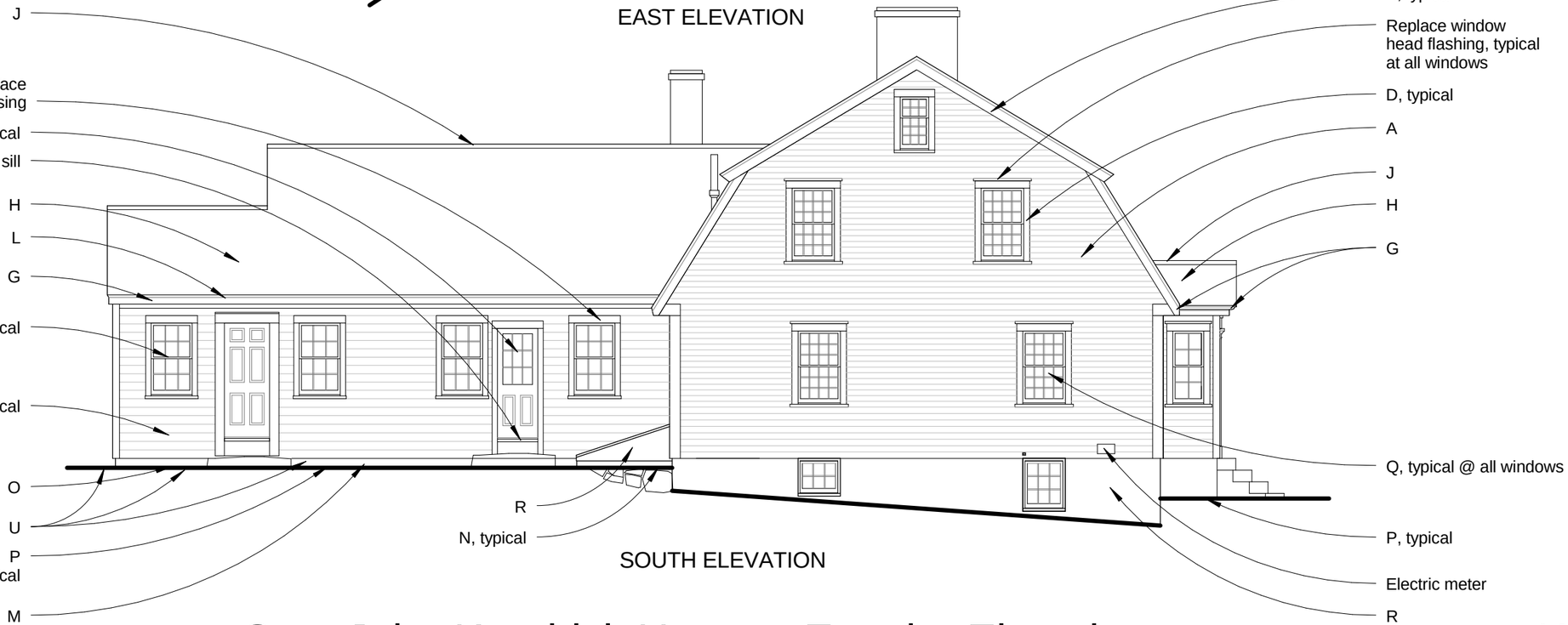
U. Remove foundation plantings

V. Repoint masonry

W. Replace flashing



EAST ELEVATION



SOUTH ELEVATION

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Capt John Kendrick House - Exterior Elevations

KH-2.1

1/8" = 1'-0"

Wareham Historical Society - Historic Buildings Survey

Wareham, Massachusetts

October 21, 2013

KEY NOTES

A. Scrape, sand, prime & paint all existing wood siding

B Scrape, sand, prime & paint all existing wood trim

C. Scrape, sand, prime & paint all existing wood doors

D. Scrape, sand, prime & paint all existing wood windows

E. Repair/replace wood shingle siding in this area

F. Repair/replace wood clapboard siding in this area

G. Repair/replace damaged/rotten trim, as req'd

H. Remove existing roof shingles, patch sheathing as req'd and install new roof shingles

I. Install new wood shingle hip cap

J. Replace wooden ridge boards

K_1 Repair wood window

K_2 Replace wood window

L. Install new gutters & downspouts

M. Clean out existing storm drain

N. Install new perimeter drainage system

O. Lower existing grade

P. Provide positive drainage away from building

Q. Reglaze wood window

R. Re-coat masonry

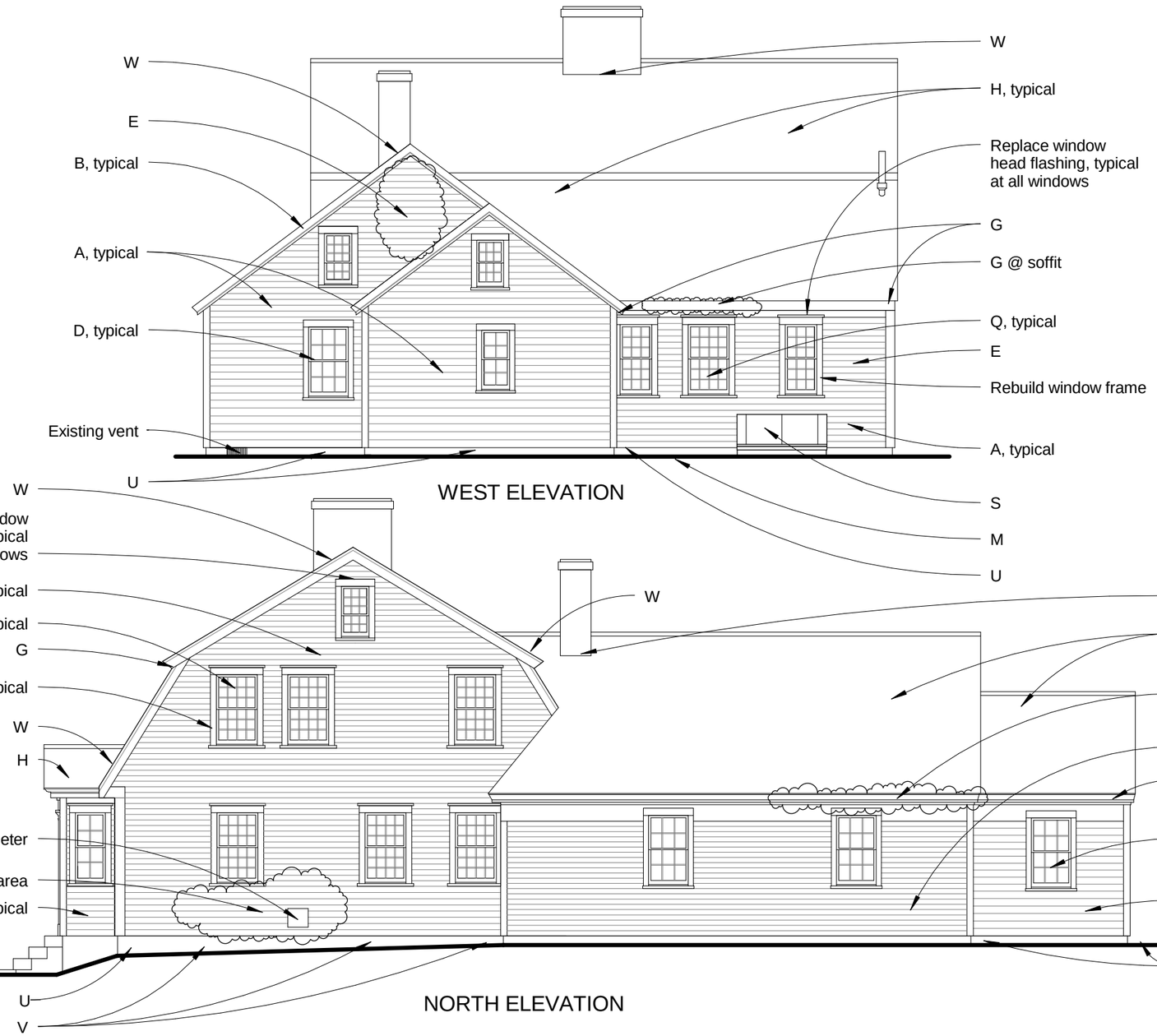
S. Replace bulkhead door

T. Install wood shutters

U. Remove foundation plantings

V. Repoint masonry

W. Replace flashing



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Capt John Kendrick House - Exterior Elevations

1/8" = 1'-0"

KH-2.2

CAPT KENDRICK HOUSE - PROJECT COST ESTIMATE

REPAIR PRIORITIES

IMMEDIATE NEAR TERM LONG TERM	COST RANGE	
• Cut back or remove perimeter vegetation	1,000 –	2,500
• Cutback overhanging tree	500 –	1,000
• Reglaze/repaint windows (38)	15,000 –	18,000
• Repair/repaint exterior doors (4)	1,000 –	1,500
• Repair damaged siding	500 –	1,000
• Repair broken, rotten or missing trim	2,500 –	5,000
• Repaint siding & trim (2790 sf)	7,500 –	10,000
• Treatment to prevent insect infestation (220 lf)	1,000 –	1,500
• Regrade building perimeter	1,500 –	2,500
• Establish baseline for settlement	250 –	500
• Install dehumidifier in basement	1,000 –	1,500
• Install basement vapor barrier (2500 sf)	1,500 –	2,500
• Monitor building settlement	250 –	500
• Repair foundation waterproofing (345 sf)	1,500 –	2,500
• Selectively replace roof rafters	2,500 –	3,500
• Replace roof shingles (3000 sf)	25,000 –	35,000
• Install gutters & downspouts (110 lf)	1,500 –	2,500
• Install perimeter drainage (220 lf)	2,000 –	3,000
• Replace bulkhead door	2,500 –	4,000
• Reinstall window shutters (13)	8,500 –	10,000
• Install new storm doors (4)	2,000 –	2,750
GC OHP @ 15%	$11,813 –	16,613
ESTIMATED CONSTRUCTION COST	**$90,813 –**	**127,863**
A/E Fees @ 15%	$13,584 –	19,104
Clerk		
Printing, Testing & Misc.		
Construction Contingency @ 20%	$18,113 –	25,473
PROJECT COST	**$122,510 –**	**172,440**

CAPT KENDRICK HOUSE - ANNUAL MAINTENANCE PLAN

Every 1-3 months (periodic or monthly)

- regular drive by surveillance
- check attic during storms if possible
- monthly walk-arounds
- check entrances
- check window panes for breakage
- mowing as required (more frequently in spring and early summer)
- check for graffiti or vandalism
- enter every 3 months to air out (dry breezy weather is preferred)
- check for musty air
- check for moisture damage (at roofs, exterior walls, windows, doors, chimneys and other roof penetrations)
- check battery packs and monitoring equipment
- check light bulbs
- check for evidence of pest intrusion
- check for building movement (in identified areas of concern)

Every 6 months (spring and fall)

- site clean-up; pruning and trimming
- gutter and downspout check
- check crawlspace for pests
- clean out storm drains

Every 12 months (annually)

- maintenance contract inspections for equipment/utilities
- check roof for loose or missing shingles
- termite and pest inspection/treatment
- exterior materials spot repair and touch up painting (fall is best time)
- remove bird droppings or other stains from exterior
- check and update building file

APPENDIX A – STRUCTURAL REPORT BY BOSTON BUILDING CONSULTANTS

BOSTON
BUILDING
CONSULTANTS

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Fax 617/426-8922

June 20, 2013

Mr. Charlie Van Voorhis
Durland and Van Voorhis Architects
PO Box 1169
Mattapoisett, MA 02739

Re: Structural Assessment **BBC Job #13052.00**
Five (5) Wareham Historical Buildings
Wareham, MA

Dear Charlie,

At your request on May 31, 2013, I visited five (5) historic buildings in Wareham, MA to inspect the as-built construction for signs of structural distress, damage and concerns. My investigations were limited to elements that were visible at the time of my visit and accessible. Following are my observations, conclusions and recommendations for each of the five (5) properties:

GREAT NECK UNION CHAPEL

General Building Description:
The Chapel is a single story wood framed building that was moved to the current location and supported by a new concrete foundation. The building has a hipped roof over the rear end and a gable roof over the remaining footprint. There is a full basement under the chapel and no access under the floor or above the ceiling of the front entrance. The exposed foundation is a cast in place concrete foundation wall to grade and granite block from grade to the first floor level. The first floor is framed with wood joists spanning left to right (when facing the entrance) supported by the exterior foundation walls and an intermediate wood beam. The wood beam is supported by a series of steel pipe columns. The basement floor appears to be a ground supported concrete slab.

Structural Observations, Conclusions & Recommendations:

1. The concrete basement slab and perimeter foundation walls appear to be structurally sound and free of signs of distress or settlements; therefore, we do not anticipate the need for new structural reinforcements.

2. The 1st floor framing under the seating area is 2x6 joists, spaced 24" on center; spanning approximately 7'-6" continuous over a 6x6 beam support at mid-span of the chapel. The joists are notched 4" at the foundation wall and at the center wood beam support. Horizontal splitting at the ends of several joists was noted. The floor framing under the rear stage area and the front 6 ft. of the main hall are 2x8's spaced at 24" o.c.; spanning the full width (15 ft) of the building..
   The current floor (live) load for an assembly area (Chapel) with movable seating is 100 psf (not including the material self weights) and 60 psf for assembly areas with fixed seating. The as-built floor construction will require new structural reinforcements for either load case, but fewer reinforcements will be required for the fixed seating scenario. Following are recommendations for both cases:

Fixed Seating (60 psf Live Load)

- Connect each existing 2x6 joist to the foundation wall sill plates and to the intermediate 6x6 wood beam with new metal joist hangers sized for the appropriate floor loading.
- Add a new wood beam at mid-span (in line with the existing 6x6 wood beam) of the 2x8 floor joist under the rear and the front 6 ft.
- Connect each existing 2x8 joist to the foundation wall sill plates and to the new intermediate wood beam with new metal joist hangers sized for the appropriate floor loading.
- Install solid wood blocking between each joist at the centerline of the existing 6x6 and the new wood beam.

Moveable Seating (100 psf Live Load)

- Reinforce the center 6x6 wood beam with a new 2x10 LVL beam each side of the in place beam.
- Install a new (3) 2x10 LVL beam at mid span of the rear 2x8 joists and mid span of the 2x8 joists in the front 6 ft.
- Prior to reinforcing the existing wood beam; the existing joists must be temporarily shored to permit cutting the joists for the installation of the new LVL's.
- Install new hangers at each end of each joist.
- Sister every other 2x6 and 2x8 floor joist with a new 2x6 LVL.
- Connect each new 2x6 LVL to the foundation wall sill plate and the new reinforced intermediate beam with metal joist hangers sized for the appropriate loading.

3. The bulkhead door is severely deteriorated and fell apart when I opened it. I suggest the opening be secured immediately to prevent access to the basement and suggest rebuilding the bulkhead door to fit the existing bulkhead opening.

4. The exterior side walls of the Chapel are noticeably out of square and not plumb. There is evidence of cracking on the interior walls and ceiling finishes that is indicative of movement of the exterior walls. As noted from a small ceiling hatch, the ceiling / attic joists are supported by the exterior wall and hung from the roof rafters. It appears that the attic / ceiling joists are nailed into the side of the wall studs, e.g. below the wall top plate and not directly connected to the roof rafters. Several of the attic / ceiling joists are not continuous (e.g. one piece from side wall to side wall).
   The attic was not easily accessible, but from a view through the ceiling hatch it appears that the roof structure is not properly tied at the eave level to resist the horizontal thrust of the sloped roof rafters. The lack of adequate ties has resulted in the horizontal movement of the exterior walls and may have resulted in cracking of the wall finishes.
   It will be difficult and costly to straighten and plumb the exterior walls; however, I suggest installing new ties at the eave level to reduce the possibility of future lateral movement, damage, etc. The new ties could be steel rods or wood joists provided the ties are continuous (one piece) from eave to eave and a properly connected to the ends of the rafters.

OLD METHODIST MEETING HOUSE

General Building Description:
The Meeting House is a single story wood framed building with a basement. According to documentation in the Meeting House, the structure was moved to its current location and a rear addition was added for a kitchen, and accessibility. The roof is gable structure. The façade is wood clapboards. The basement is a dirt floor with limited height and accessibility.

Structural Observations, Conclusions & Recommendations:

1. The foundation wall of the original building appears to be a stone wall while the rear addition has a cast in place concrete wall. There were no obvious signs of cracking of the foundation or the interior wall finishes that would be indicative of ongoing foundation settlements. Therefore, it appears that the foundation is adequately serving its current use.

2. The first floor is framed with wood joists supported by the perimeter foundation walls and intermediate wood beams. It appears the original floor joist and floor sheathing was removed, the original support beams left in place, a new ledger installed along each side of the original wood beams; new joists installed and connected with metal hangers to the new ledgers and new plywood sheathing placed over the new joists.

   There is evidence of decay in the original wood beams due to water and insect infestation; therefore, I suspect that the original floor joists and sheathing were removed due to rot and decay from water and insect infiltration. It's not clear why the original wood beams were retained, but I suspect that they were evaluated and deemed to be structurally sound.

   Accurately measuring and analyzing the as-built floor structure is beyond the scope of this report and would require selective demolition to expose existing conditions and to access all areas of the framing. However, based on my limited observations, I have the following structural concerns:
   - The attachment of the new ledger to the original wood beam.
   - The extent of damage to the original wood beams.
   - The metal joist hanger connections to the ledgers.

   At the very least I suggest all joist hangers be inspected and all hanger nail holes filled and a qualified Exterminator periodically inspect and treat any signs of ongoing active insect infestation. Also, I suggest any signs of movement (e.g. sagging floors, cracking wall or ceiling finishes, doors and widows that no longer function, etc.) be reported to a Professional to investigate the floors for structural issues and ongoing movement.

3. The roof is a gable structure with a vaulted ceiling and periodic steel tie rods across the meeting house ceiling to resist the horizontal thrust of the roof rafters. A noticeable sag in the roof is evident from the exterior. I attempted to access the area of the sagging roof from the attic and noticed broken roof sheathing and a dip in the roof, but I was unable to access the eave or the tie rod locations for a close inspection. According to Charlie and as evidence by an uprooted tree stump, a tree recently fell on the roof in the area in question. It's unclear how the roof was repaired, but the sag is still evident. The stability of the roof structure cannot be

accurately evaluated without selective demolition of the finishes; however, there were no obvious signs of structural distress (e.g. cracking wall and ceiling finishes, etc.) other than the roof sag noted previously. I suggest the roof and ceiling and wall finishes be inspected periodically for signs of movement and any evidence of movement be reported to a qualified Professional for further investigation.

4. I noted the wood clapboards close to the ground have signs of rot and decay due to the ground cover too close to the clapboard sheathing and the overgrown shrubs and plantings around the perimeter promoting a wet environment. The current conditions will at a minimum result in decay and rot of the clapboards and in the worst case create an attractive environment for insect infestation that could ultimately damage the building structure. The current extent of damage cannot be determined without further investigation and selective demolition.
   I suggest the plantings around the perimeter be removed, the ground cover lowered, the site graded so surface and roof downspout water will run away from the building. Also, I suggest the deteriorated clapboards be removed, the structure behind investigated for additional damage and all decayed material replaced with new materials.

5. I noted damage to the exterior wooden fascia/crown at the roof eave that appears to be from an animal, rodent or possibly occurred from the tree accident. The hole appears to provide easy access to the attic for animals, rodents, water, insects, etc.. I suggest the attic be inspected by an Exterminator and all openings closed to inhibit access from animals, rodents, etc. that can ultimately cause damage to the building.

OLD DISTRICT SCHOOL #6

General Building Description:
The original Old School #6 built before 1825 is a wood framed one room single story building with two additions, one on each gable end, added at a later date. The original building was moved to this site and is now bearing on concrete piers.

Structural Observations, Conclusions & Recommendations:

1. The first floor is framed over a crawl space. The wood joists are supported by perimeter and interior wood beams that are supported by a series of concrete piers. Access to the floor framing was not accessible; however, from an access hole in one location of the perimeter skirt board, the framing appeared to be free of decay or rot and the concrete piers appeared to have been located in some organized fashion. Due to limited access, a general analysis and close inspection of the existing floor framing was not possible.
   However, the floors appeared to be relatively sound with no obvious soft areas and relatively level; however, it appears from my limited perspective that some of the floor joists were not bearing on the wood beams. I suggest all of the joists be inspected and shims added to ensure the joists are bearing solid on the intermediate wood beams.

2. The gable roof structure of the original school house and the two additions appears to have been conventionally framed with rafters and ties at the eave elevation. The roofs, walls and ceilings do not appear to have any obvious signs of structural distress. Therefore, I don't anticipate the need for new structural reinforcements.

3. The exterior paint is peeling, most likely due to moisture trapped in the wood clapboards. The current condition does not appear to have affected the building structure; however, extended inadequate protection of the exterior siding can ultimately lead to deterioration of the building structure.

FEARING TAVERN

The Fearing Tavern, dating to the 1600's, is a two story building with an accessible attic and a partial basement. The floor beyond the basement is an inaccessible crawl space. A close inspection of the building structure to identify specific areas of concern is not possible due to the interior historic finishes and limited access. However, following are several general structural concerns and observations noted during my inspection.

1. The building appears to be a post beam structure whereby the building was constructed as a skeleton of posts, beams and diagonal cross bracing. Once the skeleton was complete the floors and walls were built within the skeleton.
2. The basement is limited to a small area in the front of the building. The basement was damp and the wood framing had signs of insect infestation and decay due to moisture. The framing noted in the basement has undergone various reinforcements and changes.
3. I noted a sag in the 2nd floor / 1st floor ceiling. My investigation to determine the cause for the sag was limited due to finishes, but it appears that a past fire and a stair case in this area may have caused damaged that required altering the building structure.
4. Typically in a post and beam structure the posts are uninterrupted from the roof to the foundation. However, in my attempt to follow the posts I noted a window at the first floor interrupting the posts and in another place an interior posts could not be tracked.
5. The Fearing Tavern has most likely undergone numerous changes, renovations, repairs, fires, water and insect infiltration, damage, etc. over the course of its 400 + years. A structural analysis of the as-built construction would require extensive demolition and removal of the finishes which is not possible and beyond the scope of this investigation. However, I suggest the following items that are evident and of current concern be addressed:
    - All overgrown plantings be cut down to expose the exterior to reduce the possibility of future decay due to moisture and insect infestation.
    - The gutters appear to have been taken off the house. I suggest a drainage bed and possibly a perforated pipe be installed around the perimeter to collect and dispose of surface and roof rainwater off site.
    - A basement drainage system with a sump and ventilation system be considered in the basement to reduce the moisture levels and reduce the possibility of future rot and decay due to water and insect infestation.
    - An Exterminator inspect and treat the property periodically to inhibit insect and rodent infestation.

- I suggest the sag in the 2nd floor be investigated further by a qualified Contractor who can selectively remove and replace interior historic finishes and determine the cause of the sag and possible repairs.

CAPTAIN JOHN KENDRICK MARITIME MUSEUM

The Captain John Kendrick Museum is a two story wood framed building built in 1745 as a private residence. It appears that a single story addition was added a later date. The main residence has two floors, an accessible attic and a full basement while the single story addition is built over an inaccessible crawl space. Following are my observations and recommendations to address general structural issues for areas that were visible and accessible.

1. The floors, walls and roof structure have undergone movements and settlements over the 170 year life of the building. Some of the settlements may be due to questionable soil conditions and dimensional changes of the building framing, but these conditions would have occurred soon after construction and most likely were not the main cause of the observed settlements.

2. The main house perimeter foundation wall and the center chimney / floor support structure have been reinforced with new cast in place concrete. I suspect that water infiltration damaged the original building foundations, creating an unstable condition and a need for new reinforcements. Also, the basement was very damp, mold was evident and there were signs of past insect infestation and damage to the existing wood framing. I suspect that replacement of foundation sill plates, wall framing, and other decayed framing was required and performed during the foundation reinforcements. Most likely these conditions were the primary cause of noticeable settlements.

3. Assuming the cause for the settlements has been addressed and repaired, I suggest the basement carpet / flooring be removed, an under slab drainage system with a sump and a ventilation / dehumidification system be installed to reduce the high level of humidity and moisture in the basement. Also, the floors, roof, ceilings, and walls should be inspected periodically for signs of ongoing movement, e.g. cracking finishes, poorly functioning doors or windows,, etc. and report any suspected issues to a qualified professional for further investigation.

4. The exterior clapboards, shingles, trim, etc. are in need of attention and repair. I noted holes in the trim along the roof eave that allow animals, rodent, insects, water, etc. easy access into the interior. Also, the plantings around the perimeter are overgrown, creating a wet environment that promotes rot and decay due to moisture and insect infestation.

   I suggest all plantings and ground cover around the perimeter be trimmed, all damage and rotted materials replaced, all holes repaired and the exterior siding scrapped and painted to prevent deterioration and reduce the possibility of decay due to water infiltration. Also, I suggest a drainage bed and possibly a perimeter perforated pipe be installed around the building perimeter to collect and discharge surface water and roof runoff away from the building foundations.

5. The first floor framing is a combination of original framing members and reinforcements added a later date. It appears that posts, joists and beams have been added throughout the 1st floor framing most likely to address concerns as they arose. Evidence of insect infestation was evident; therefore, I suspect that the new supports may have been added to address decayed members.

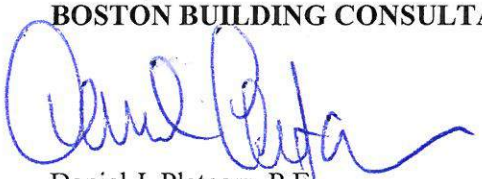
   I suggest a qualified Exterminator inspect the property on a periodic basis for signs of active insect infestation and treat the property as required reducing the possibility of infestation. Also, I suggest a qualified Contractor / Carpenter review the as-built framing to make specific recommendations for permanent supports to replace the as-built temporary members.

6. I noted several original roof rafters have been reinforced with new rafters sistered along side the existing decayed members. The existing members appeared to be infested with insects and fresh wood powder was evident on the attic floor directly under the members in question.

   A structural analysis of the as-built framing and new reinforcements is beyond the scope of this review and inspection. However, as noted previously, I suggest a qualified Exterminator inspect the roof framing on a periodic basis for signs of active insect infestation and treat the property as required reducing the possibility of infestation. Also, I suggest any members found to be infested with insects or decayed due to rot, fungus or mold be removed, disposed off site and replaced with new members of an equivalent size and strength.

This concludes the structural observations noted during my visit along with my conclusions and recommendations. The preceding observations and recommendations are based on the structural elements that were clearly visible and easily accessible at the time of my visit and did not include any demolition or selective removal of any finishes. If you have any questions, comments or require clarifications please call.

Sincerely,
BOSTON BUILDING CONSULTANTS



Daniel J. Platcow, P.E.
Vice President

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APPENDIX B – GREAT NECK UNION CHAPEL PHOTOGRAPHS

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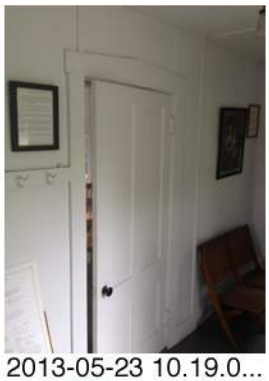
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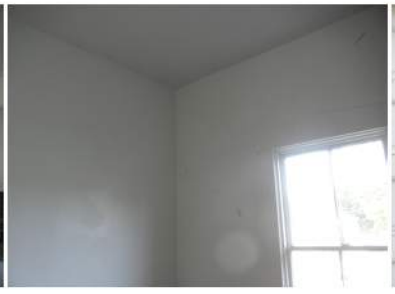

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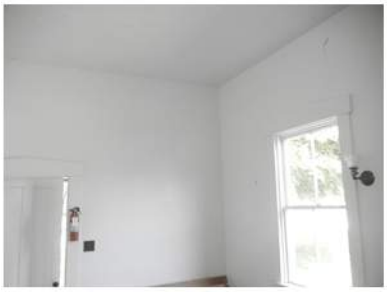

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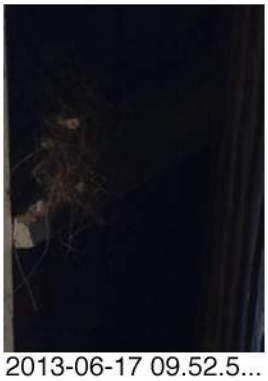

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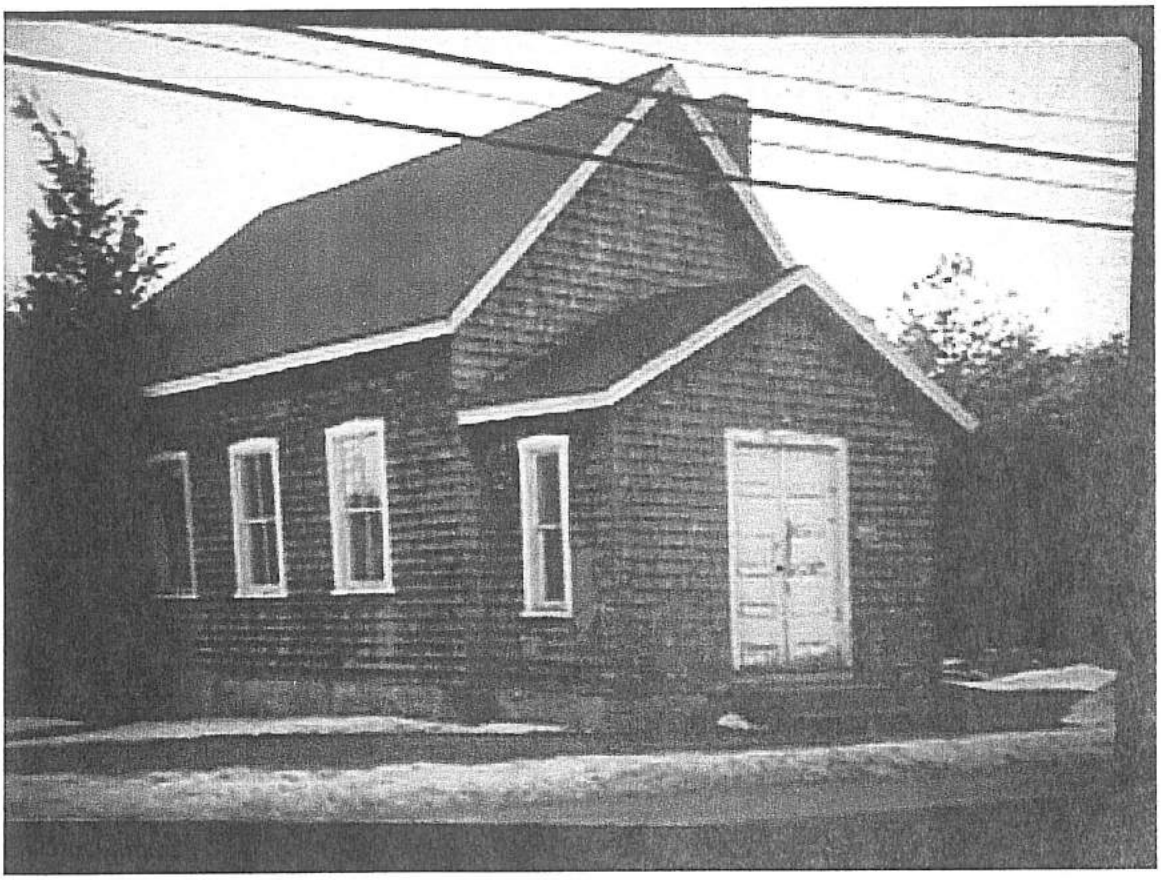
APPENDIX C – GREAT NECK UNION CHAPEL - MISCELLANEOUS ARTICLES & IMAGES

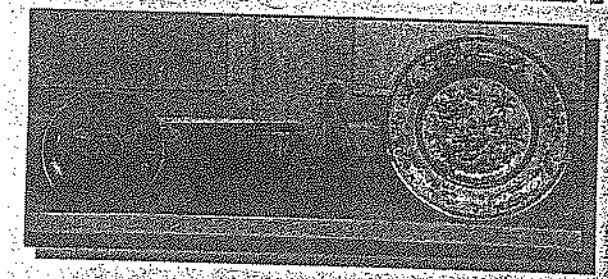
The Chapel



by Sara W. and Hildy W.

The Union Chapel was built around 1880.Originally it stood on Great Neck Road. The Union Society purchased a one-room schoolhouse and moved it to stand beside its chapel. The buildings have been restored to their original condition and stand together on Main Street, across from the town green. The Chapel can be rented for weddings or other events. Contact Mrs. Betty Wright, Curator, at (508) 295-3227 for more information.

The Captain John Kendrick Maritime Museum

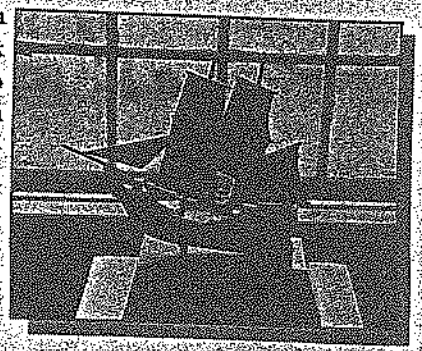


Captain Kendrick's home is owned and operated by the Wareham Historical Society as a museum honoring the maritime history of the town. It is a gambrel roofed Cape style house with a center chimney and a "good morning" stairway. Built circa 1745, it contains original paneling and early wallpapers.

On display, you will find furnishings dating from the 18th and 19th centuries, Maritime paintings by local artist **Charles Sidney Raleigh** who lived briefly in the house, and a model of the Schooner **"Ernestina"**. The "Ernestina" served for many years as a packet ship, sailing between the United States and the Cape Verdean Islands. Textiles and costumes of the era also form a part of the museum's collection.

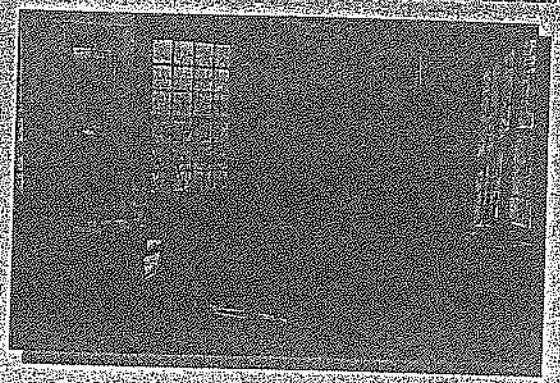
Captain Kendrick gained prominence during the American Revolutionary War when he commanded several Privateers in the Patriot cause. While serving as captain of the "Fanny" he successfully captured two vessels of the British Jamaican fleet in Biscay Bay.

Captain Kendrick came home to Wareham where he purchased a house and wharf from David Nye in 1778.



Kendrick was chosen to lead an expedition to China via the Northwest Coast in 1787 for a group of Boston businessmen. This expedition gave the United States an entrance into the lucrative China Trade for tea, silks and ceramics by trading furs obtained from Native Americans in the area of present day Washington and Oregon. His ships were the "Columbia Redviva" and the sloop "Lady Washington".

The expedition was instrumental in the exploration and acquisition of the vast Oregon Territory for the U.S. and also the discovery of the Columbia River which was named for the ship "Columbia". Captain Kendrick was the first



American to attempt trade with Japan. Captain Gray of Tiverton, R.I. who was his second in command was the first to carry the American flag around the world.

⚓⚓⚓MEMBERSHIP FORM⚓⚓⚓

Name(s): _____

Address: _____

City: _____ State: ____ Zip: ____

Day phone: _____

Eve. phone: _____

Membership Dues:

____ Individual ... $15 ... $ ____

____ Family ... $25 ... $ ____

____ Lifetime ... $250 ... $ ____

Donations:

____ I wish to make a tax deductible* gift of ... $ ____

____ I would like more information about including the Wareham Historical Society in my estate planning

____ I wish to be contacted about making a gift of documents, books, furniture, or real estate to the Society.

Publications:

____ "The Fearings and the Fearing Tavern" by Raymond Ryder @10 ... $ ____

____ "Life and Times in Wareham Over 200 Years 1739-1939" by Raymond Ryder @ $20 ... $ ____

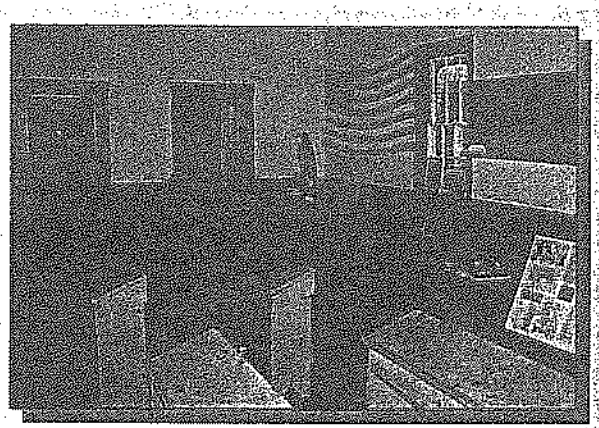
TOTAL INCLUDED $ _____

*Recent financial reports and tax exemption letter for the Wareham Historical Society are available for review by writing us at the address below.

Mail to:

WAREHAM HISTORICAL SOCIETY, INC.
P.O.Box 211
Wareham, MA 02571

The One Room Schoolhouse

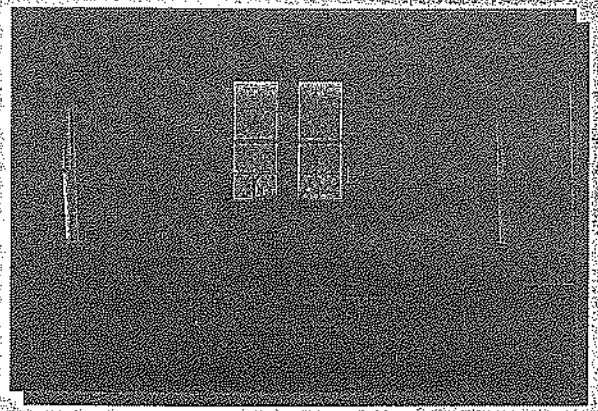


The Schoolhouse was built in 1825 and was used for 100 years. A kitchen was added in Victorian times by the Union Chapel Association of Great Neck while they owned the building.

The Chapel

The Union Chapel, circa 1880, rests next to the schoolhouse.

The Chapel and Meetinghouse are available for weddings and other special events.

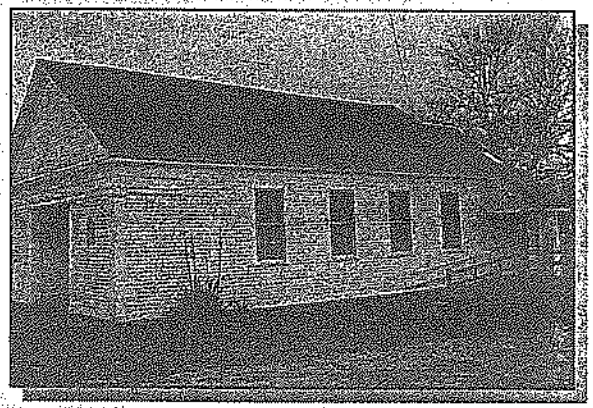


The Old Methodist Meetinghouse

The Meetinghouse was built in 1835 and is now used by the Historical Society for it's meetings. Across the green (center park) you can see the First Congregational Church founded the same year as the town, in 1739.

Travel a mile down Main Street to visit the Captain John Kendrick Maritime Museum across the street from the beautiful Mary Besse Park in the Narrows Historic District on Wareham's waterfront.

During the War of 1812, on July 13, 1814 British Marines from the H.M.S. Nimrod came ashore under a flag of truce and proceeded to march down Main Street burning the ships in the harbor and in William Fearing's Shipyard. They set a cotton factory on fire with Congreve rockets and took 12 citizens hostage before returning to sea.



The Fearing Tavern Museum

Open
July and August
Thursday thru Sunday 1-4
(with guided tours)
Also open by appointment.
Call Betty Wright at: 508-295-3227

The Captain John Kendrick Maritime Museum

Open
July and August
Saturday and Sunday 1-4
(with guided tours)
Also open by appointment.
Call Betty Wright at: 508-295-3227

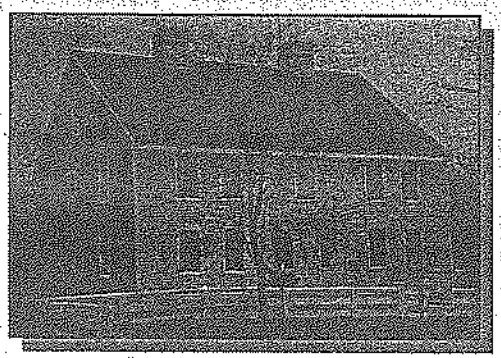
Wareham is located in Southeastern Massachusetts and is easily reached from Routes 195, 495, 25, 6, and 28.

The Fearing Tavern Museum

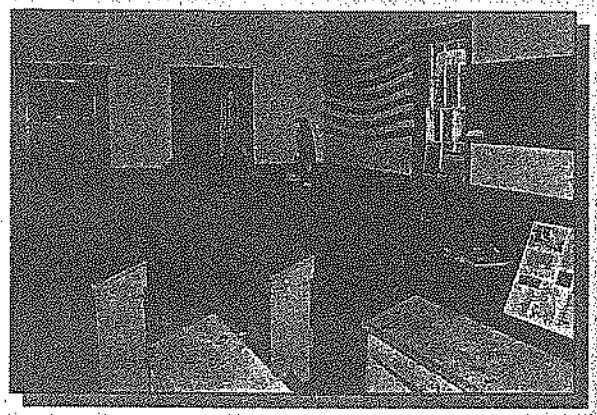
The Tavern, restored in 1958, is located in Wareham, Massachusetts where the Wampanoag Indian Agawam Trail from Plymouth crossed the Wankinco (Wareham) River.

The building contains portions built in 1690, 1765, and 1820. Sixteen period rooms contain authentic 18th and 19th century furnishings, toys, tools, and many decorative and useful objects. The major portion of the Georgian Colonial house with it's white clapboarded facade was built by tavern keeper **Benjamin Fearing** in 1765 and it remained in the Fearing family for over 200 years. It retained the earlier house his father Israel Fearing had purchased from Isaac and Elizabeth Bump (or Bumpas) in 1747.

Isaac operated a grist mill and lived in this 1690 house after the conclusion of King Phillip's War made it safe to live in the area. In Isaac's four room house, citizens met to conduct business and made their plans to create the town of Wareham, which was incorporated in 1739. Benjamin's son, Benjamin Haskell Fearing added a new kitchen and bedroom wing in the 1820's.



The One Room Schoolhouse



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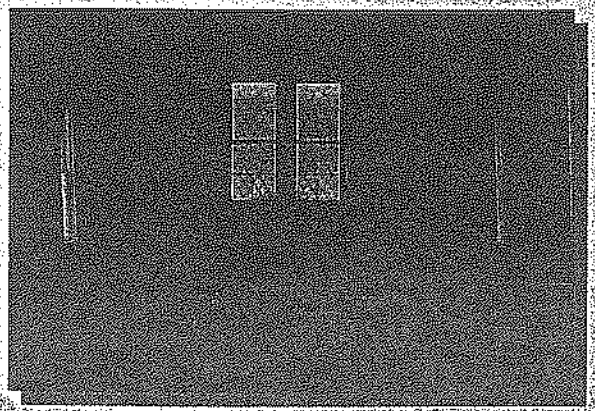
The Union Chapel, circa 1880, rests next to the schoolhouse.

The Chapel and Meetinghouse are available for weddings and other special events.



THE FEARING TAVERN MUSEUM

Open
July and August
Thursday thru Sunday 1-4
(with guided tours)
Also open by appointment.
Call Betty Wright at 508-295-3227

THE CAPTAIN JOHN KENDRICK MARITIME MUSEUM

Open
July and August
Saturday and Sunday 1-4
(with guided tours)
Also open by appointment.
Call Betty Wright at 508-295-3227

Wareham is located in Southeastern Massachusetts and is easily reached from Routes 195, 495, 25, 6, and 28.

l of proposed Wareham historic district

a knoll overlooking Broad
Marsh, the Prince Burgess house
n East Wareham, and the
ambrel-roofed Kendrick house on
ower Main St. There are also the
ociety buildings on Great Neck
d,—the District 6 schoolhouse,
he Union Chapel. Historic spot
oning could protect them, Mr.
ider suggests.

The committee met last month, nd after hearing Mr. Rider's out- ne of the monument square area as an historical district, approved the plan. Atty. Decas read the law regarding establishing an historic district, and he was charged with drafting a letter, in compliance with the law, regarding the Wareham plan, to the Massachusetts Historical Commission; the commissioner of Commerce and the commissioner of Natural Resources.

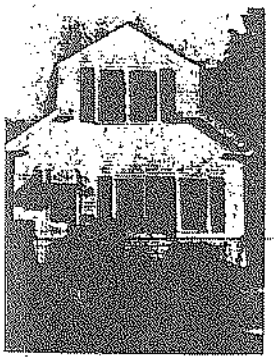
At the present time the Wareham committee will concentrate on the monument square plan, which encompasses that area of town which was the original Wareham center area. Spot zoning is not being ruled out as a future development. It is doubtful that the plan will be ready in time for March town meeting, Mr. Rider states.

In the short ten years of its existence, the society has raised the funds to bring the Fearing Tavern to its nearly complete restoration. With only work on the main roof, the west wall and the wing at the back, remaining to be done, the building, when completed will have cost $45,000 to restore. In addition to attracting many historically minded visitors, it has been toured by many Wareham school children, winning a new generation of citizens interested in preserving their town's history.

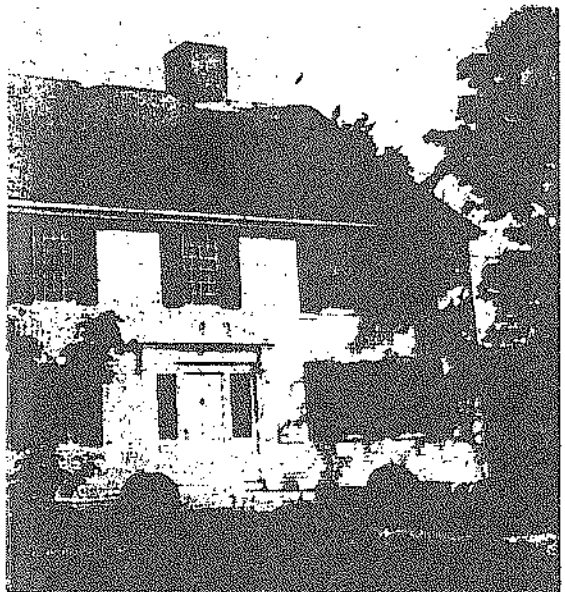
With the completion of the Fearing Tavern, the society will not be without projects to work on. Sitting in the woods next to Mary Wing Park, is their next project.

The Thacher house has been moved two times before it reached its present site. Originally where the Roland Thatcher House is now, it was moved across the street when the nursing home was built. The original brickwork in the chimneys and fireplaces were lost in this move. The society was offered the building by the Dunns, and, at a cost of $5,000 moved it to its present location. Fill is now being dumped around its new foundation.

Mr. Rider estimates that $5,000 will put the building in final condition. It would then be open for viewing during the summer season. Furnishings, he said, prove no problem, as people are always calling up "with antiques to use." This is a demonstration, he explains, of how firmly the society is now established.



A HOUSE THAT BLEW its top — this house, which is located in the proposed district, is probably basically very old; however, it suffered the fate of many a well-kept house — it was renovated. In this case, a whole new story was put on it, and its oldtime lines were lost.



EM of the lding—The hich within essence of than prob- rical build- restoration. be done is wing. Inside this 1690 building is revealed ample evidence of its involvement in the Revolutionary war, its use as a stage stop, selectmen's meeting place, post office, and, originally, the simple home of miller Isaac Bump. It is the gift to the Historical Society, of Mr. and Mrs. Ernest Blanchard. When work on it is completed, $45,000 will have been spent on its restoration.

AMONG THE HOMES in the monument area which are nearly 200 years old is the Raymond A. Riders'. Historical Society president, Mr. Rider (shown here) proposes that a Wareham historic district should center around this area, including not only the homes here, but also, of course the Society's Fearing Tavern and Thacher house. The later, a gift of Mr. and Mrs. William A. Dunn, now awaits restoration on its new site next to Mary Wing park.

clothing, to a ment table was bright with cloth with the singing of "Silent Night"
returned from and napkins in a holiday motif, to a guitar accompaniment by
ica, and to the tall red candles, and the colorful Mrs. Carignan.

Preservation of history is go

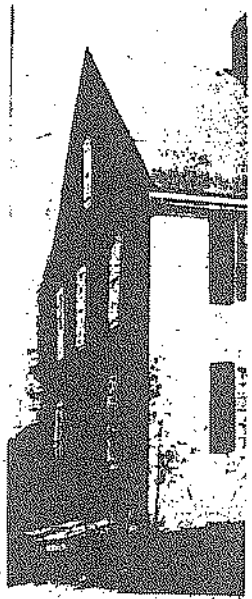
Historic District Committee, for their approval of the changes.

Such districts have been established in many New England towns, as well as elsewhere in the U.S. They are generally believed to increase land values and attractiveness. Present structures in the district are not effected by the district, except if their owners want to change them. Then changes must conform to the district regulations as interpreted by the committee.

On the day the old Courier building was torn down, we felt a little nostalgic, and with Historical Society, president, Ray Rider, went for a tour of the area which has been over the years considered for a Wareham historic district. Exclusive of the business buildings in the area, the district would include the buildings around monument square, the Fearing Tavern and the Thacher house, the Tremont Nail Co. and the buildings up Main St. to Mackie's Bridge.

Many of the private homes in this area approach 200 years in age; others have historic interest. Key to the area are the Society's Fearing Tavern and Thacher house. Also included are the old town office—now the "Rec" center, the adjacent town-owned parking area, and the Congregational Church and parsonage.

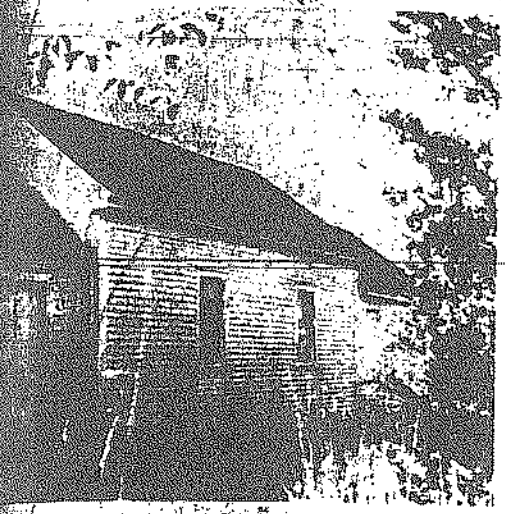
However, all the interesting and historic buildings in Wareham are not confined to these few streets. Among the many others that Mr. Rider finds worth protecting would be the old Bates house which sits



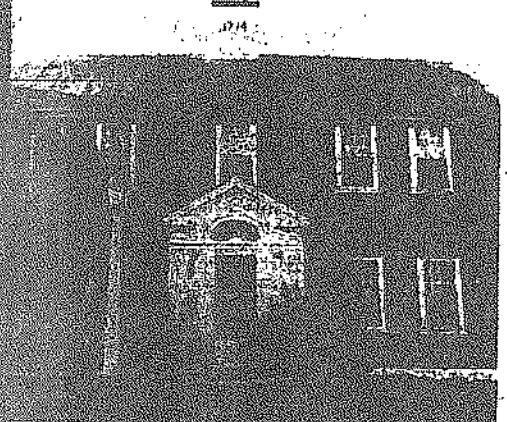
WHAT WILL ALWAYS BE ' Wareham Historical Societ Fearing Tavern. This buildi its walls contain more of early American towns and l ably any other surviving ing, is within sight of com The only major work remain the main roof, west side and

...ctober 26, 1966

...rict, Florence S. Otke, and Society ...historical district. President Raymond A. Ridder, ...pose of the old Union historical districting. ...byn, and last building construction and remodel... ...ence was approved ing, paint colors, and other land ...n, with the expec- uses in the district are limited in ...ey would frame a an effort to preserve the appear... ...be brought to the ance of a period in the past. Prop... ...meeting. Members of erty owners in the district seek... ...tee are Mrs. Wil- ing building or remodeling per... ...Mrs. Mary Clarke, mits must not only go to the build... ...Sampos, George De- ing inspector (and gas, wiring ...arry G. Seidl, Mrs. etc., if necessary) but also to the



...D DISTRICT SCHOOLHOUSE, with the adjacent Union ...located on Great Neck Road at Crooked River, are ...historic buildings the society protects. Only about 60 ...old, according to Society's President Ray Rider, the ...ings represent a time and way of life that has rapidly ...ished. The buildings are now occasionally used for ...y meetings; however, three times recently vandals ...broken in and caused damage. The chapel, a gift of ...Ethel H. Burgess, is a special project of hers.



...ACKIE'S" HOUSE, ...Mackie's house next to ...two of the other large estates in the proposed district ...The houses, still imprinted with the names of former ...are kept in proud condition by today's owners. The ...name also designates the bridge over the railroad ...a few yards further along Main Street. Mr. Berthole... ...was one of the superintendents of the local iron mills; ...went into cranberries.

...men's group enjoys

...stant coffee and tea and moistened towelettes sent to a missionary family now on furlough from India; a quantity of dish towels for distribution ... missionary f... Chile, South ... building fund

APPENDIX D – OLD DISTRICT SCHOOL NO 6 PHOTOGRAPHS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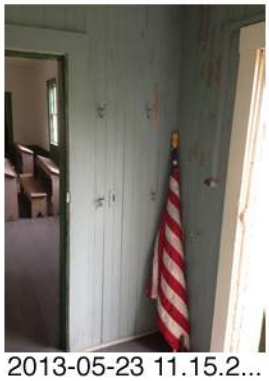
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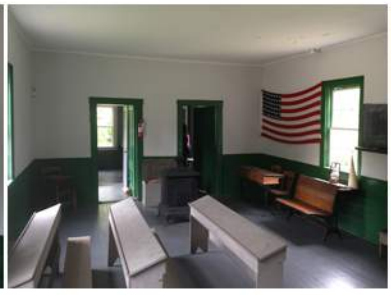
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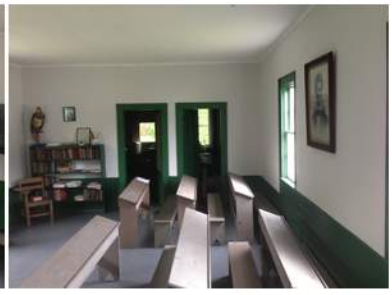
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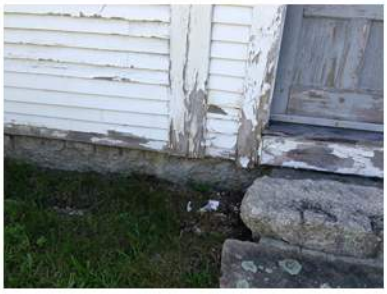

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2013-08-29 09.26.1...

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2013-08-29 09.27.1...

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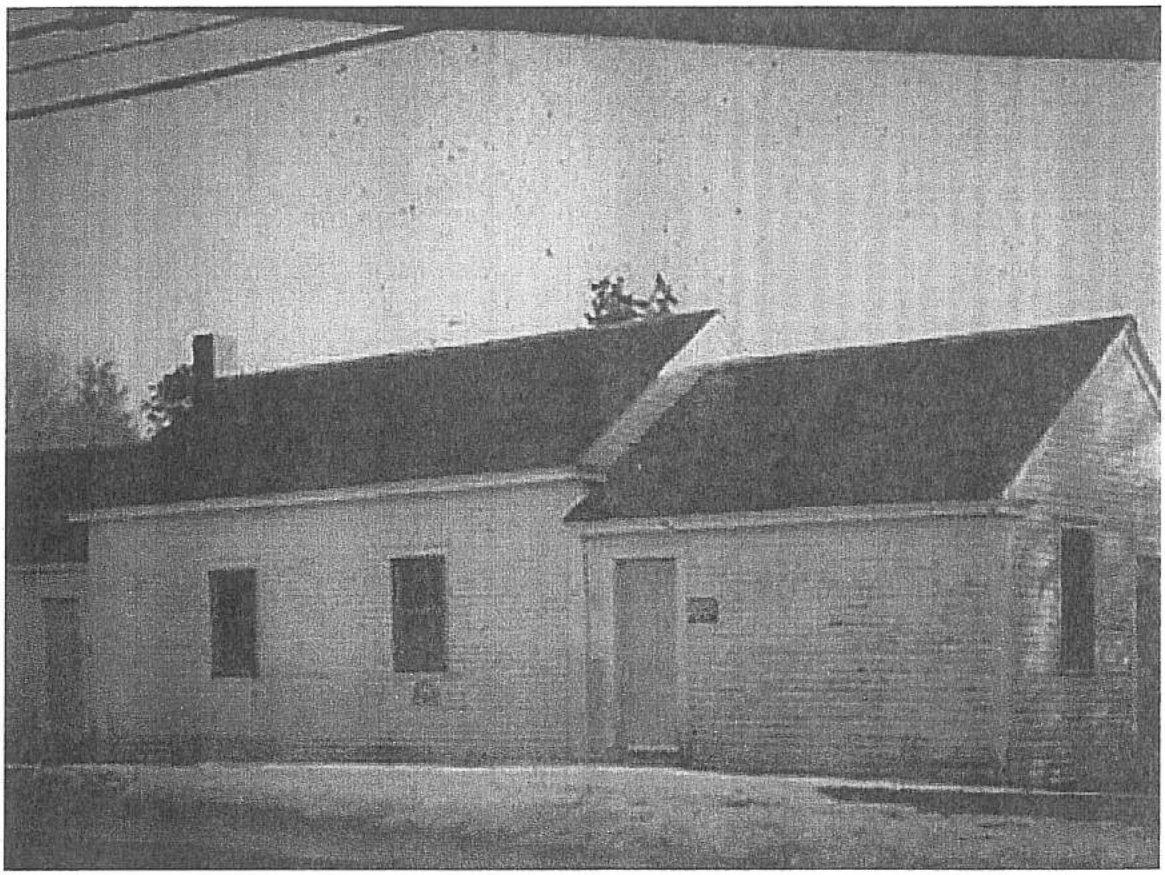
APPENDIX E – OLD DISTRICT SCHOOL NO 6 - MISCELLANEOUS ARTICLES & IMAGES

Old District School No. Built Before 1825



Welcome to the only remaining district schoolhouse in Wareham. It was known as District School No.6 or the Indian Neck School. It was built before 1825 and used as a school until June of 1920. Up to eight grades were taught by one teacher in the single classroom. The Union Chapel Association of Great Neck added a kitchen and cloakroom after they purchased it to be used for church suppers and other functions. The building was moved to Main Street, Wareham so that it could be preserved. It now stands between The Old Methodist Meetinghouse and The Chapel, two other buildings owned by the

Peek at the past

By RAYMOND RIDER

We often hear older people say, "Oh, for the good old days." The trouble with that expression is it ignores all problems of the good old days.

One remembers only the quiet subtleties of simple meals, simple pleasures, pleasant family evenings together. Most people who remember the good old days have put aside the 12-hour working day at a dollar a day, the long walk to the grocery store, hand-scrubbing the weekly laundry, interminable hours over the cooking stove, and other hands-on duties with the broom and dustmop.

Those were the days (1874) when Wareham had an almshouse on a lot purchased from Oliver Swift for $300 and built by Charles F. Washburn for $3,626 with a few extras such as stone work by W.W. Griffith for $350 and other small items for a total of $4,374.76. Every inmate in the almshouse was duly registered in the town report as well as any other person on relief.

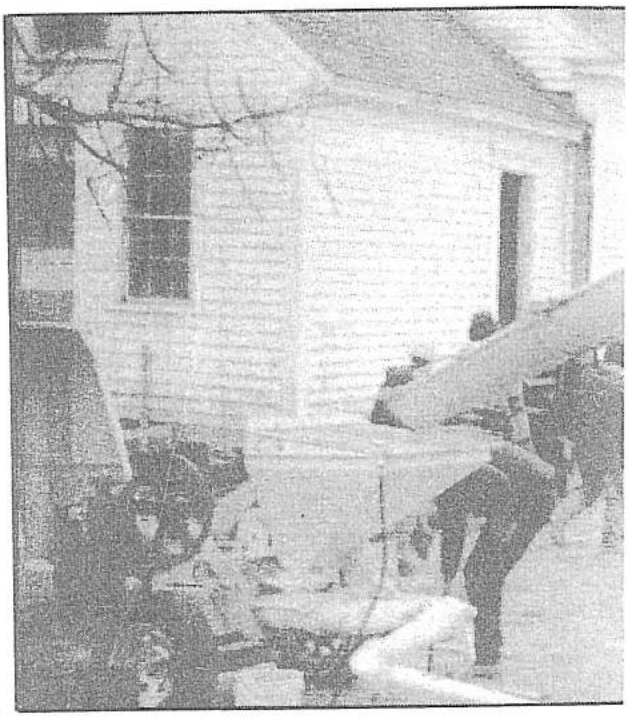
Every vendor who furnished goods for any town purpose was also in the town reports. A list of resident and non-resident taxpayers was there with the amount of taxes each paid and also the industries then in business. The Franconia Iron and Steel Company paid $1,226.75, for example, Tremont Nail Company paid $1,909.90, Parker Mills, $1,590.03, Wareham Nail Company, $711.90 and Union Store Company, $11.25.

The school committee members in 1874 were John M. Kinney, Galen Humphrey and Samuel B. Bumpus, and there were 11 district schools in operation. The Center School classes were so small that one teacher, Miss Nettie Sampson, was released and her class joined a senior group under Miss Abby Brett for the winter term. The district schools had mixed grades 1-9 in their one-room buildings.

District School No. 6 was near the entrance to Agawam Beach when Miss Ruth F. Bourne taught there in 1874. Now the old schoolhouse, in its second moving, is near Center Park in what used to be District No. 1.

The "dog money" (dog tax) was used in this year for "apparatus for the high school" and the balance of $161 was distributed among the district schools. Those were the "good old days!"

Raymond Rider is a founder and charter member of the Wareham Historical Society and currently serves on its board of directors.



Moving day District School No of Raymond Rider

past

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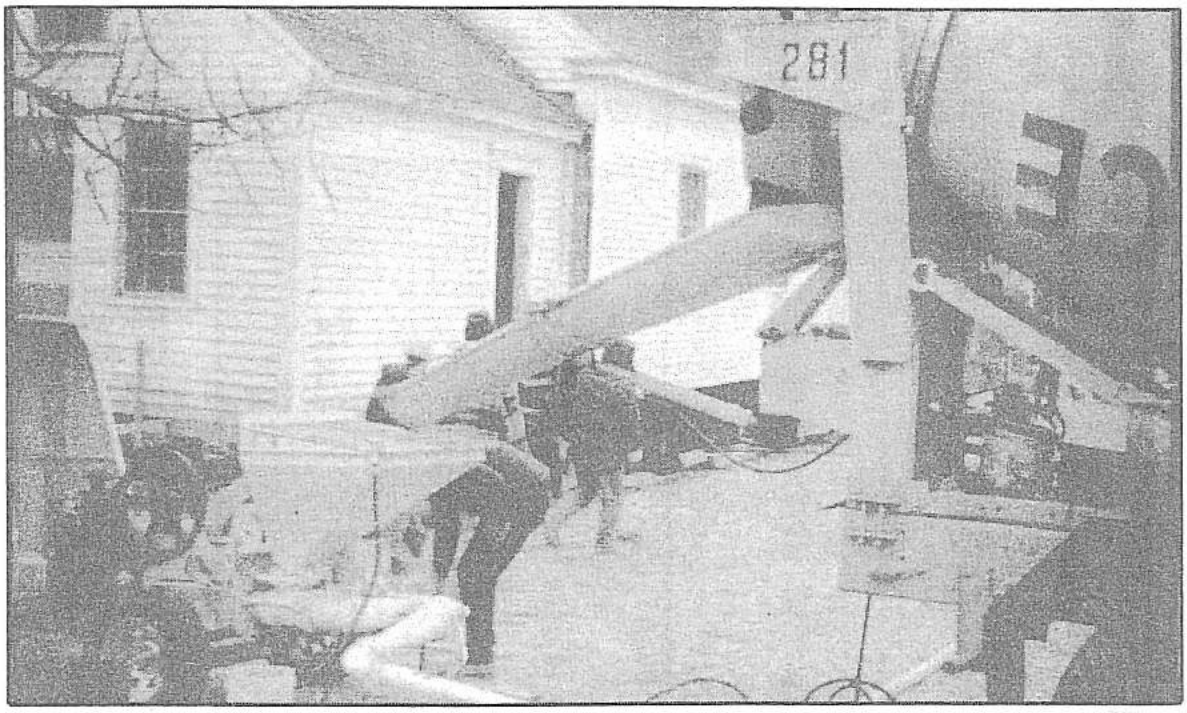

Moving day

District School No. 6, recently moved to District No. 1 (Photo courtesy of Raymond Rider)

APPENDIX F – OLD METHODIST MEETING HOUSE PHOTOGRAPHS

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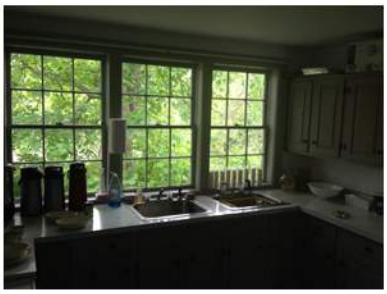

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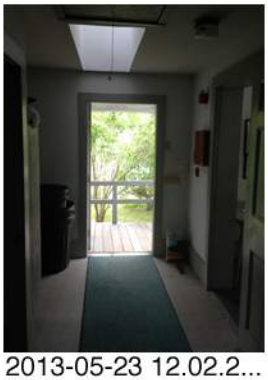

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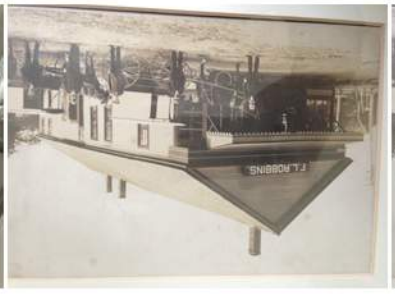

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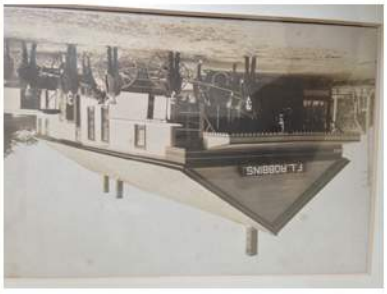

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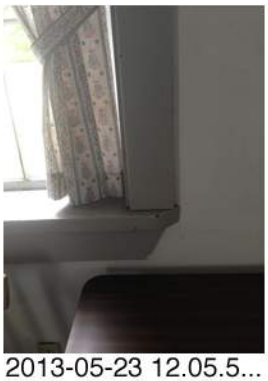

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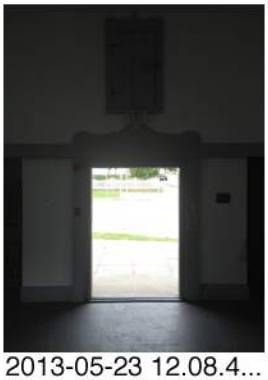

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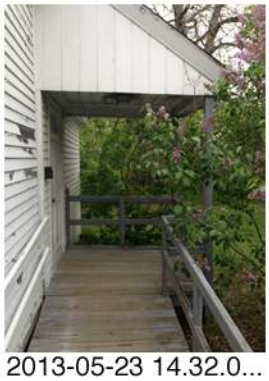

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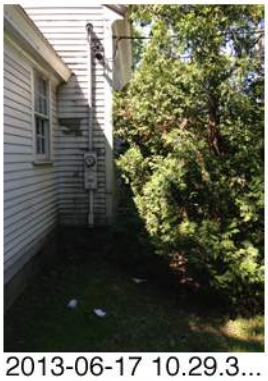

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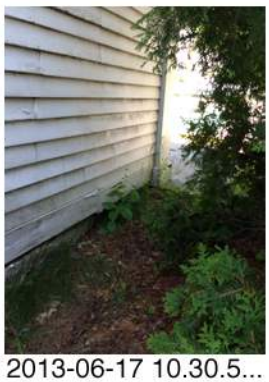

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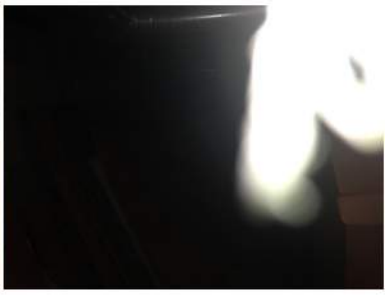
2013-08-29 10.17.5...



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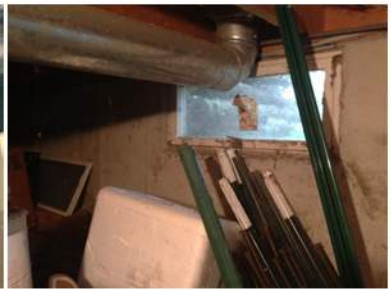

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2013-08-29 10.22.5...

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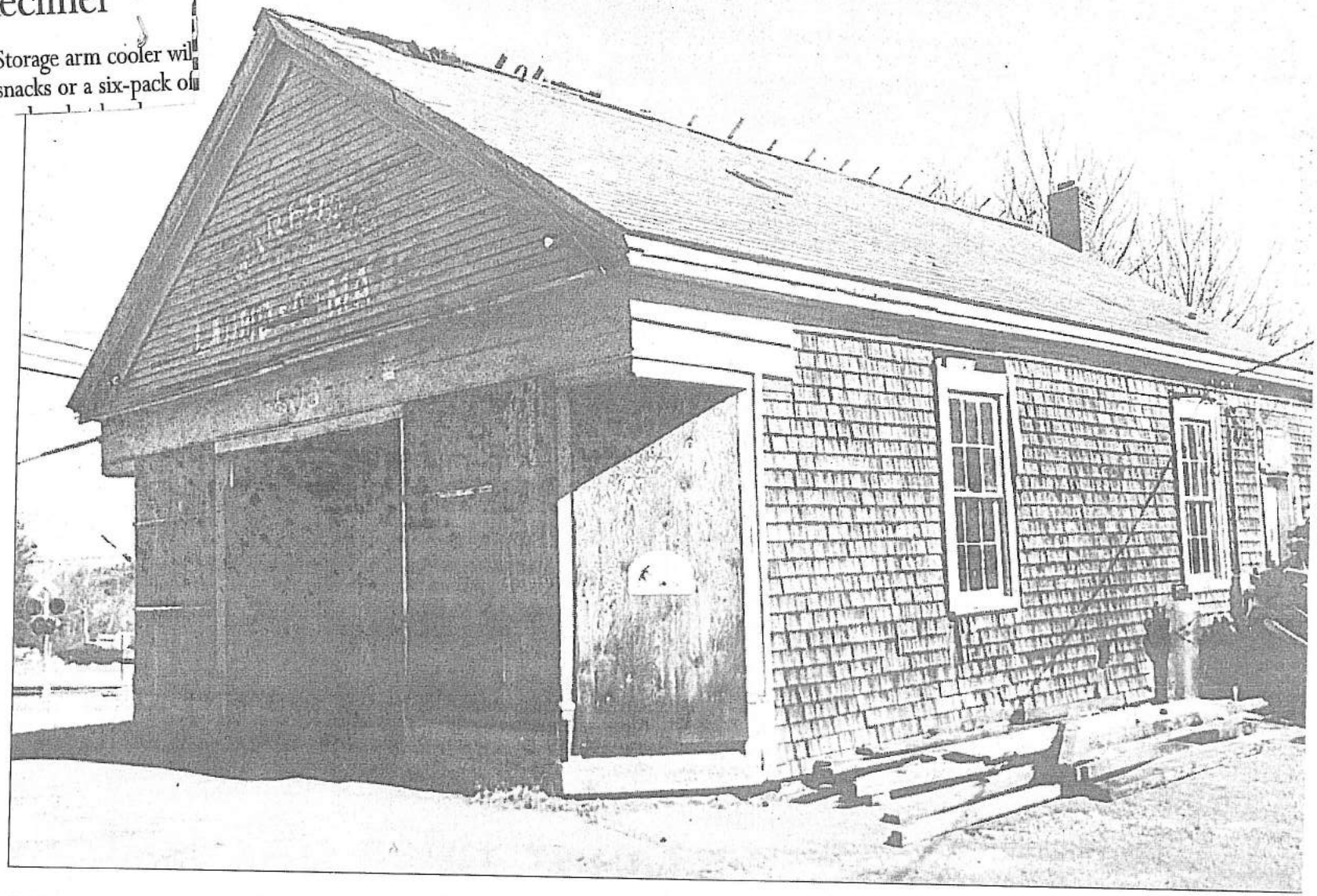
2013-09-04 12.29.0...

2013-09-04 12.29.4...

APPENDIX G – OLD METHODIST MEETING HOUSE - MISCELLANEOUS ARTICLES & IMAGES

Parker Mills



Standard-Times library phot

Before restorations were begun in 1976, this little building, which was last used as a Laundromat, was the first Methodist church ir Wareham. Standing across from Town Common at Parkers Mills, it was given to the Wareham Historical Society by Mr. and Mrs Joseph Chamberlain of Rochester. If you have memories or photos of Wareham churches you would like to share with our readers please contact Sharon Desrosiers at 10 N. Main St., Fall River, MA 02720, or call 508-979-4404.

CHRONOLOGY

1811 Services held in homes sometime during 1811-1812
1812
1813
1814
1815
1816
1817
1819
1820
1821
1822
1823
1824
1825
1826
1827
1828
1829
1830 Pheneson Slocum, a Methodist Circuit rider, from the south, comes to Wareham.
1831 A meeting house is built on Tihonet Road during 1831-32. It was 28 feet square and cost $1,000.00.

1832
1833
1834 No regular services are held during this year because of acts of violence against the Methodists.
1835 Methodist Meeting house is moved to the "Centre" where it was more secure from vandalism.
1836
1837
1838
1839
1840
1841 Seventy people are converted at a revival meeting held this year.
1842 First reference to an old Methodist traditional campmeeting under a tent was held. Quarterly meeting decides to build a new meeting house. When completed, it held fifty to sixty pews and cost approximately $3,000.00
1843 January 6 - Plot of land on Main Street deeded to Trustees of the Methodist Episcopal Church for construction of church.
1844
1845
1846
1847
1848
1849
1850
1851
1852
1853

1854
1855
1856 **Records of the church are destroyed by an unknown person.**
1857
1858
1859
1860
1861
1862
1863
1864 **Because of differences of opinion, the Agawam Chapel (later East Wareham Methodist Church) was opened.**
1865
1866
1867
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1895
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1897
1898
1899
1900
1901
1902
1903 Wes H. Elmer

1904
1905
1906
1907
1908
1909
1910
1911 D. L. Jeffers
1912
1913
1914
1915
1916
1917
1918
1919
1920
1921
1922
1923
1924
1925 William Schaffstall
1926
1927
1928
1929
1930
1931 E. McP. Ames
1932
1933 E. McP. Ames
1934 E. McP. Ames, pastor
1935 **Ralph Seaver, pastor**
There was a large youth group and young adults in the church
1936 Ralph Seaver, Jr.
1937 Ralph Seaver Jr.
1938 **George Andrews, pastor**

1939 George Andrews
1940 George Andrews
1941 Loren W. Dow
1942 Loren W. Dow
1943 C. W. Ackley / Stanley E. Smith
1944 **The original belfry was destroyed by a hurricane** H. A. Stuart / Stanley Smith
1945
1946 H. A. Stuart /
1947 George R. Halverton
1948 G. R. Halverton
1949
1950 Fr. Frank Gulinello
1951 **Belfry rebuilt.** Gulinello
1952 Gulinello

Church History 1811-2000 -

1953 Gerald C. Mucker, pastor Frank Sulinello, Sr

1954 August 31, Hurricane Carol does extensive damage to the church building causing it to be declared unsafe for use. The church met in the recreational building of the Congregational Church on Gibbs Avenue for one month. Then, due to the pastor leaving to attend school, the church joined with the Methodist Church in Marion until a new pastor was named.

1955 February – The Official Board appointed a building committee. Building plans from the Nelson Jacobs Associates of Boston were accepted by the congregation. The reconstruction and renovation was estimated to have a cost of $25,000.00. Laminated arches were manufactured and shipped from Albert Lea, Minnesota. Summer services held at the Wareham Drive In Theater from May to September when inclement weather forced them to have services indoors. The Red Men offered their building for Sunday services and the American Legion provided shelter for the kindergarten which was the first public preschool with state certified instructors within the town of Wareham. The school was operated by the church for several years until the town assumed responsibility in accordance with state regulations.

1956 February 12 – rededication of the present church building. James Knorr

1957 James N. Knorr

1958 Gerald L. Mucker

1959 Gerald L. Mucker

1960 Gerald L. Mucker

1961

1962

1963

1964 The Sunday School is very large. An Army barracks is obtained, at no charge, from Otis Field to be converted to church school rooms. The generosity of Herman T. Gammons, along with others, made this addition possible. During the dedication on January 26, it was named the Gammons Room.

1965 Thomas Banks

1966

1967 N B. Pierce

1968 R. Dawtelle

1969 Earl B. Luscombe

1970 Earl B. Luscombe

1971

1972

1973 Bruce Pehrson, pastor

1974

1975

1976

1977

1978

1979

1980

1981 Robert Kendall, pastor

1982

1983

Church History 1811-2000

1984 John Disburg, pastor

1985 In December a committee is named to provide access to the church sanctuary for the handicapped and elderly of the congregation.

1986 An elevator was installed making the sanctuary more accessible to the handicapped

1987 January 11, the congregation votes to seek "Strategic Parish" status thereby enabling the church to seek a pastor on a full-time basis. Rev. Jon Disburg was the pastor at this time.

1988 Rev. Marjorie Mollar is appointed pastor. Under her loving care and guidance, the church continued its growth.

1989

1990

1991

1992 June 4, rededication of newly renovated downstairs hall. It was decided to rename it Friendship Hall. A gift from the estate of Barbara Smith provided a great boost toward completion of this room.

1993

1994

1995

1996 In June the new steeple was lowered into place. This steeple replaces the one destroyed by Hurricane Carol in 1954.

1997 Elizabeth M. McClintock is appointed half-time pastor by the Conference.

1998

1999 A committee is formed to plan the refurbishing of the sanctuary. New carpeting is installed, the pews refinished to their 1850 condition and beauty. In October a service of rededication was held. The goal of $15,000.00 was raised by the time the work was completed in late August. This extra-mile giving was in addition to oversubscribing the budget for the past two years! A generous gift from a benefactor made it possible to obtain a new sound system for the church

2000 Major repairs are made on the parsonage (mandated by state law, the Annual Conference guidelines for parsonages, and lack of attention during the past 5-6 years). Pastor Liz and her family will be moving into the parsonage in May. July 1st of this year Pastor Liz McClintock was reappointed for her fourth year as pastor. In July of this year the congregation voted to construct a ramp into the building and install a new elevator chairlift making the sanctuary and Friendship Hall much more accessible to those less physically able

2001 The handicapped ramp and elevator chairlift is completed by mid-February and all funds are in hand by April 1.

Pastor Liz McClintock is transferred by the Annual Conference to Harwich, MA .

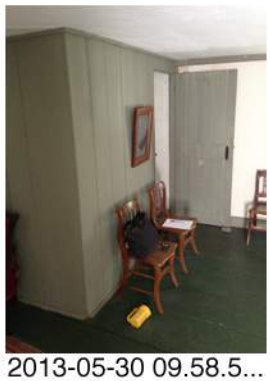
The Rev. Walter Wnek is appointed by the Conference as our new pastor effective July 1, 2001.

APPENDIX H – FEARING TAVERN MUSEUM PHOTOGRAPHS


2013-05-30 09.47.0...


2013-05-30 09.58.4...


2013-05-30 09.58.4...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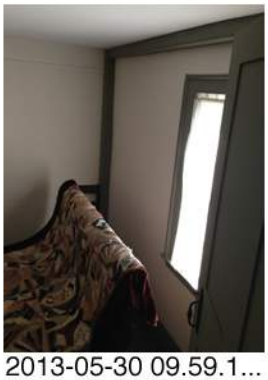
2013-05-30 09.59.0...


2013-05-30 09.59.0...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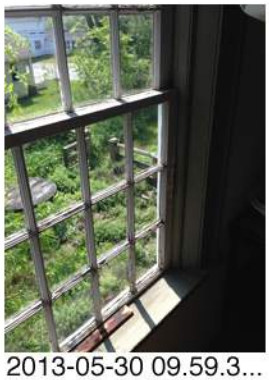
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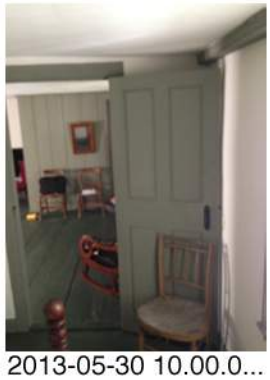
2013-05-30 10.00.0...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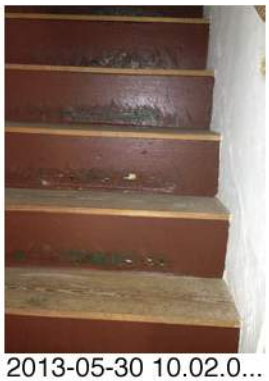
2013-05-30 10.00.3...

2013-05-30 10.01.1...



2013-05-30 10.02.0...

5-30-13 078.jpg

5-30-13 079.jpg

5-30-13 080.jpg

5-30-13 081.jpg

5-30-13 082.jpg

5-30-13 083.jpg

5-30-13 084.jpg

5-30-13 085.jpg

5-30-13 086.jpg

5-30-13 087.jpg

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5-30-13 089.jpg

5-30-13 090.jpg

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5-30-13 096.jpg

5-30-13 097.jpg

5-30-13 098.jpg

5-30-13 099.jpg

5-30-13 100.jpg

5-30-13 101.jpg

5-30-13 102.jpg

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5-30-13 115.jpg

5-30-13 116.jpg

5-30-13 117.jpg

5-30-13 118.jpg

5-30-13 121.jpg

5-30-13 122.jpg

5-30-13 123.jpg

5-30-13 124.jpg

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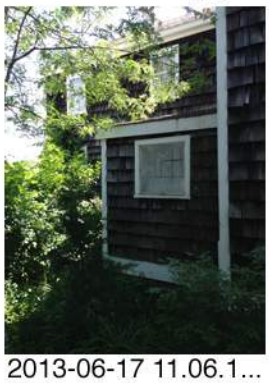
2013-06-17 11.06.0...



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2013-06-17 11.10.24...


2013-06-17 11.10.24...


2013-06-17 11.10.5...


2013-06-17 11.11.2...


2013-06-17 11.11.4...


2013-06-17 11.12.0...


2013-06-17 11.14.3...


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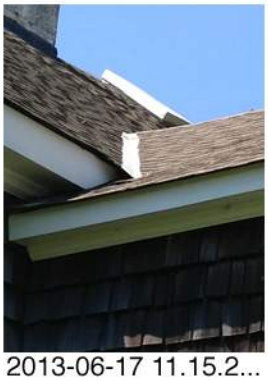
2013-06-17 11.15.2...


2013-06-17 11.15.2...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2013-06-17 11.18.3...

2013-06-17 11.18.5...

2013-06-17 11.19.0...

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2013-06-17 11.19.3...

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2013-06-17 11.20.0...

2013-06-17 11.20.3...

2013-06-17 11.20.4...

2013-06-17 11.20.4...

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2013-06-17 11.21.0...

2013-06-17 11.21.1...

2013-06-17 11.21.3...

2013-06-17 11.21.3...

2013-08-29 10.30.3...

2013-08-29 10.30.3...


2013-08-29 10.30.4...


2013-08-29 10.30.5...


2013-08-29 10.30.5...


2013-08-29 10.30.5...


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2013-08-29 10.33.0...


2013-08-29 10.33.1...


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2013-08-29 10.33.2...


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2013-08-29 10.38.4...

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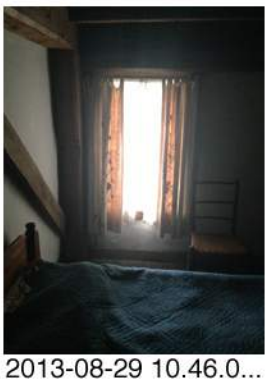

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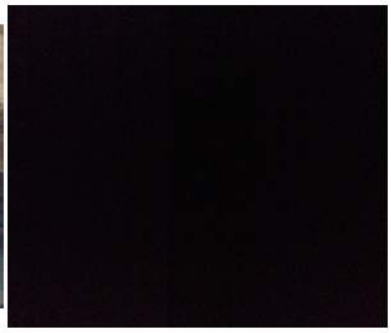
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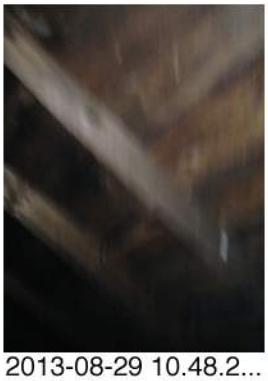
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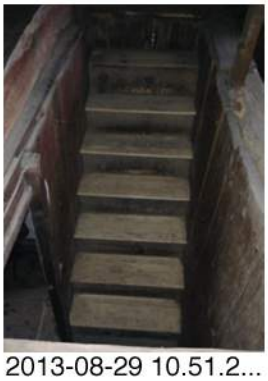
2013-08-29 10.51.1...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2013-08-29 10.54.3...

2013-08-29 10.56.1...

2013-08-29 10.56.1...

2013-09-04 12.11.2...

2013-09-04 12.12.2...

2013-09-04 12.12.3...

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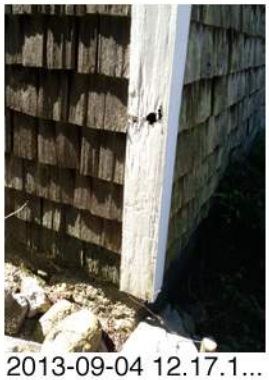

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2013-09-04 12.17.5...

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2013-09-04 12.22.3...

2013-09-04 12.22.4...

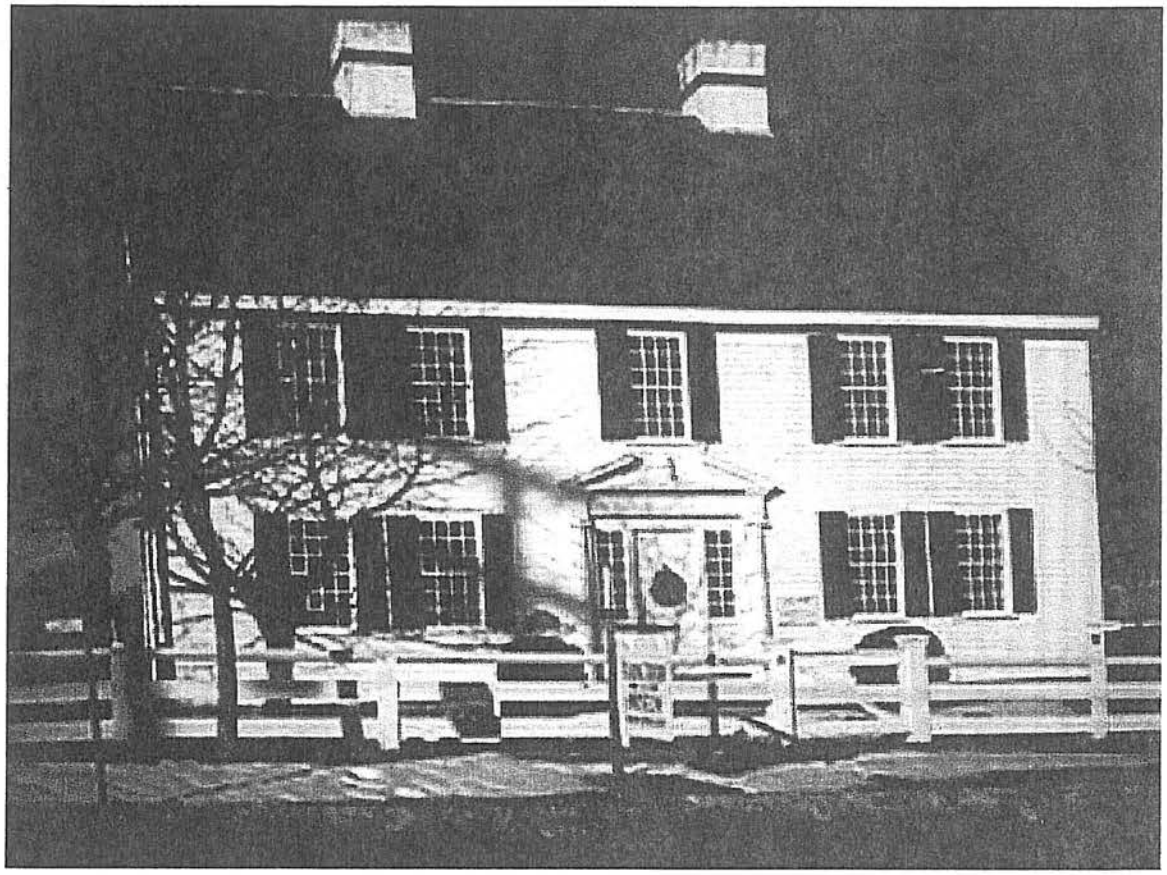
2013-09-04 12.22.5...

2013-09-04 12.24.4...

2013-09-04 12.25.1...

APPENDIX I – FEARING TAVERN MUSEUM - MISCELLANEOUS ARTICLES & IMAGES

The Fearing Tavern



The Fearing Tavern Museum is located in Wareham, MA. In 1690 the original house was build by Isaac Bumpus, the miller. In this house, Wareham men met to vote on Wareham's incorporation in 1739. There are many artifacts to see and experience in the seventeenth century rooms. There are a granny cradle, a hearth, a horse's mudshoe, a peel, powder horns, a bellows, and antique furniture. There are iron pots, spinning wheels, a linsey-woolsey blanket, a beehive oven, a trundle bed, and a cat hole leading to the basement, a knitty-knotty, and a burl bowl. In this section of the museum, you can see Wareham's first post office, and part of a secret closet.

In 1765, Benjamin Fearing, whose family had purchased the house, had an addition built onto two sides of the building. The Fearing addition has six rooms, including a taproom. When you walk in the

front door, to your right is the Fearing East Parlor, and to your left is the Fearing West Parlor. These rooms contain period furnishings, such as a grandfather clock with wooden gears, a piano with a mirror under it so the ladies could be sure their ankles were not showing, china that is fragile and delicate, and a sampler done by a girl who lived here in Wareham. The West parlor connects to the room, which Benjamin Fearing made into a tavern to serve food and drinks to Wareham residents and visitors arriving by stagecoach. The owner had a miniature elevator, called a "dumb waiter" to transport bottles and money from downstairs to upstairs or the other way around. Upstairs there are bedrooms, a children's playroom, and part of a secret closet.

Early in the 1800's, an ell was added to the rear of the building. This part contains a kitchen and a borning room, or sick room, downstairs and two bedrooms and a parlor upstairs. This part was built as a boarding house for men who were working in the factory that was across the street. Some of the interesting items found here are a bed that is shaped like a sleigh, another bed with hand-carved wooden cannon balls, a rolling wheel invented to measure land, and an antique music box.

The Fearing Tavern Museum was restored by the Wareham Historical Society. It is dedicated to Irene and Raymond Rider, who made sure it didn't go to waste. Come and see this house because it's been here for centuries!

by Fabian D. and Meghan C.

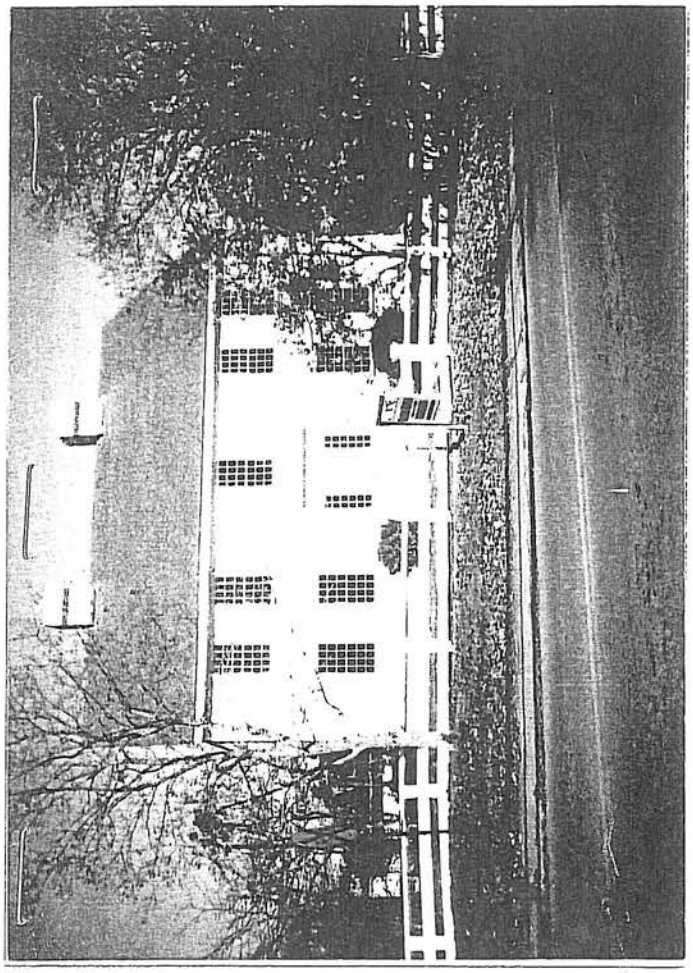
The Fearing Tavern Museum

Open July and August

FORM B - BUILDING

Assessor's number	USGS Quad	Area(s)	Form Number
132-1001	Wareham	B	WRH.2

Massachusetts Historical Commission
Massachusetts Archives Facility
220 Morrissey Boulevard
Boston, Massachusetts 02125



Sketch Map

see attached map

Town Wareham

Place *(neighborhood or village)* Wareham

Address 8 Elm Street

Historic Name Fearing Tavern

Uses: Present education

Original social

Date of Construction c. 1690

Source

Style/Form Federal

Architect/Builder

Exterior Material:

Foundation stone

Wall/Trim wood frame

Roof asphalt shingles

Outbuildings/Secondary Structures

Major Alterations *(with dates)*
modern replacement door, wood surround

Condition good

Moved X no ____ yes Date

Acreage 0.15

Setting highway

Recorded by J.E. Klee, J.D. Emidy and I. Matos

Organization PAL

Date *(month/day/year)* March 2005

Follow Massachusetts Historical Commission Survey Manual for instructions for completing this form.

BUILDING FORM

ARCHITECTURAL DESCRIPTION ☑ *see continuation sheet*

Describe architectural features. Evaluate the characteristics of this building in terms of other buildings within the community.

HISTORICAL NARRATIVE ☑ *see continuation sheet*

Discuss the history of the building. Explain its associations with local (or state) history. Include uses of the building, and the role(s) the owners/occupants played within the community.

BIBLIOGRAPHY and/or REFERENCES ☑ *see continuation sheet*

☑ **Recommended for listing in the National Register of Historic Places.** *If checked, you must attach a completed National Register Criteria Statement form.*

Massachusetts Historical Commission
Massachusetts Archives Facility
220 Morrissey Boulevard
Boston, Massachusetts 02125

Area(s)

Form No.

ARCHITECTURAL DESCRIPTION

The Fearing Tavern is located at 8 Elm Street, in Wareham. It is a two-story, Federal-style building with a side gable roof and a T-shaped plan made up of the main block and an addition from the center of the north elevation. The roof is pierced by two brick chimneys toward the ends of the ridge, and is clad with asphalt shingles. The exterior walls are covered with wood clapboards, and the foundation is constructed of stone. The main entrance is centered on the south elevation and consists of a wood panel door flanked by multi-pane sidelights over wood panels, and with flat pilasters supporting a broken pediment. Fenestration consists of twelve-over-twelve, double-hung sash windows with simple wood surrounds. The building is in excellent condition. Alterations to its original appearance include the modern replacement door and wood surround.

HISTORICAL SIGNIFICANCE

The original building at the Fearing Tavern was constructed about 1690 by Isaac Bump (or Bumpus) (1642-?), the town miller, who had a grist mill nearby. The building was set across the road from what would become the location of the Wareham Town Green and the meetinghouse (1735), at the center of the town. This area was known as Fresh Meadow Village in the time of the construction of Bumpus' building, and was a part of Rochester. It remained so until Wareham was incorporated in 1739. Fresh Meadow Village consisted of all of the lands on the west side of the Wankinco River, including the later villages of Tremont (or West Wareham), South Wareham, and Centre and Narrows villages (Rider 1977: 21,62,63).

Bump's property is said to have included 26½ acres, bounded on the east by the Wankinco River, upon which his mill was constructed. In 1747, Bump sold the house and property to Israel Fearing (1682–1754), the son of Isreal and Elizabeth (Wilder). The younger Israel Fearing moved from his birthplace of Hingham to Wareham, and became the first of the family in this town. He was married to Martha Gibbs, and they had nine children. He served as a town selectman in 1744 and as a justice of the peace in 1747. Fearing retained the building essentially as Bump had constructed it—a small, two-story, four room house which was oriented to the north (Anonymous n.d.; Rider 1977:5–6,100).

Benjamin Fearing, one of five sons of Israel, inherited the house upon the death of his father (Rider 1977:119). He enlarged it by adding four rooms and raising the roof to accommodate a full attic, in the process reorienting the building so that the primary entrance was on the south elevation. A third phase of construction of the building was carried out in 1800, when a rear, two-story ell was added (Anonymous n.d.).

In the early 1800s, Benjamin Fearing's house was located along the stage coach route through town. It became a stopping point for the coach, where a meal and lodging could be had for the weary traveler, and was known simply as "Benjamin's House" (Rider 1989:110). Benjamin's son, William Fearing, became the town clerk, and established Wareham's first post office in the building in 1814. William would later become the postmaster of Wareham (Rider 1977:101).

An 1832 map of Wareham shows the building labeled simply as an inn. One other building was located on the same side of Elm Street at that time, while three buildings are shown on the south side of the same segment of the road. On the east side of the Wankinco River, the Wareham Iron Company had developed its facility. The damming of the Wankinko River for the iron company flooded a large portion of the original 26½-acre parcel. To the west, the town center was developing at this time, with the Congregational church, a school, and approximately 10 other buildings nearby (Bourne 1832). By

1850, a small number of other buildings had been constructed in the area, but the biggest change was the railroad line that passed by the west side of the Fearing property, between it and the Congregational church (Whitlock 1850). By 1879, the Wareham Iron Company buildings on the east side of the river had been purchased by the Parker Mills. Parker Mills had also constructed a large facility on the south side of the road, west of the river, over the outfalls of the pond. Mrs. William S. Fearing is shown as the owner of the Fearing property at this time. The parcel had been reduced by the separation of two lots at the eastern portion of the parcel, along the shore of Parker Mills Pond. West of the Fearing property, the Parker Mills Depot had been constructed, a new school was built, and the center of the village contained a store, carriage factory, the Congregational church, a Methodist church, and 15 to 20 residences. Of these, three were owned by members of the Fearing family (Walker 1879).

A 1903 map of Wareham illustrates Wareham Centre as a dense, residential and commercial area. East of the river, the Tremont Nail Company, now having expanded its holdings from Tremont to the former Parker Mills facility, had constructed more buildings on the site, and a residential area had grown up to the east of the facility. The company had also built new structures on the south side of Elm Street, west of the river. On the west side of the railroad right of way, the village center now included a park, the town office, the Methodist and Congregational churches, the school, and a number of estates. Smaller residential properties occupied a number of parcels as well, particularly along Main and High streets. The Fearing property was labeled as the W.H. Fearing estate in 1903 (Anonymous 1903).

The property remained in the Fearing family until 1958, when they gifted it to the Wareham Historical Society for preservation. The Society performed substantial renovations to the building, which had fallen into disrepair over the first half of the century. The historical society operates the Fearing Tavern as a museum with period furnishings (Anonymous n.d.).

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The Fearings and the Fearing Tavern with the Bumpus Family. Raymond A. Rider, Wareham, Massachusetts. 1977.

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Anonymous. *Town of Wareham Plymouth County.* On file at Wareham Free Library, Wareham, Massachusetts. 1903.

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Thacher, Rowland, Israel Fearing and Joshua Gibbs. *Map of the Town of Wareham.* On file at Wareham Free Library, Wareham, Massachusetts. 1795.

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INVENTORY FORM CONTINUATION SHEET

Community: Wareham

Property Address: 8 Elm Street

Massachusetts Historical Commission
Massachusetts Archives Facility
220 Morrissey Boulevard
Boston, Massachusetts 02125

Area(s)

Form No.

National Register of Historic Places Criteria Statement Form

Check all that apply:

☒ Individually eligible ☐ Eligible **only** in a historic district

☐ Contributing to a potential historic district ☐ Potential historic district

Criteria: ☒ **A** ☐ **B** ☒ **C** ☐ **D**

Criteria Considerations: ☐ **A** ☐ **B** ☐ **C** ☐ **D** ☐ **E** ☐ **F** ☐ **G**

Statement of Significance by Jeffrey D. Emidy

The criteria that are checked in the above sections must be justified here.

The Fearing Tavern is significant under NRHP criteria A and C at the local level. Under criterion A, the building is significant because of its role as an inn, tavern, and meeting place since the eighteenth century. It has hosted town proprietors' meetings, visiting travelers, and likely most types of social functions that occurred within the town in the eighteenth and nineteenth centuries. Under criterion C, the building is eligible for the NRHP as a rare, surviving local example of colonial architecture. It possesses integrity through its retention of original materials, massing, and interior spaces. The building is in an excellent state of preservation.

INVENTORY FORM CONTINUATION SHEET

Community: Wareham

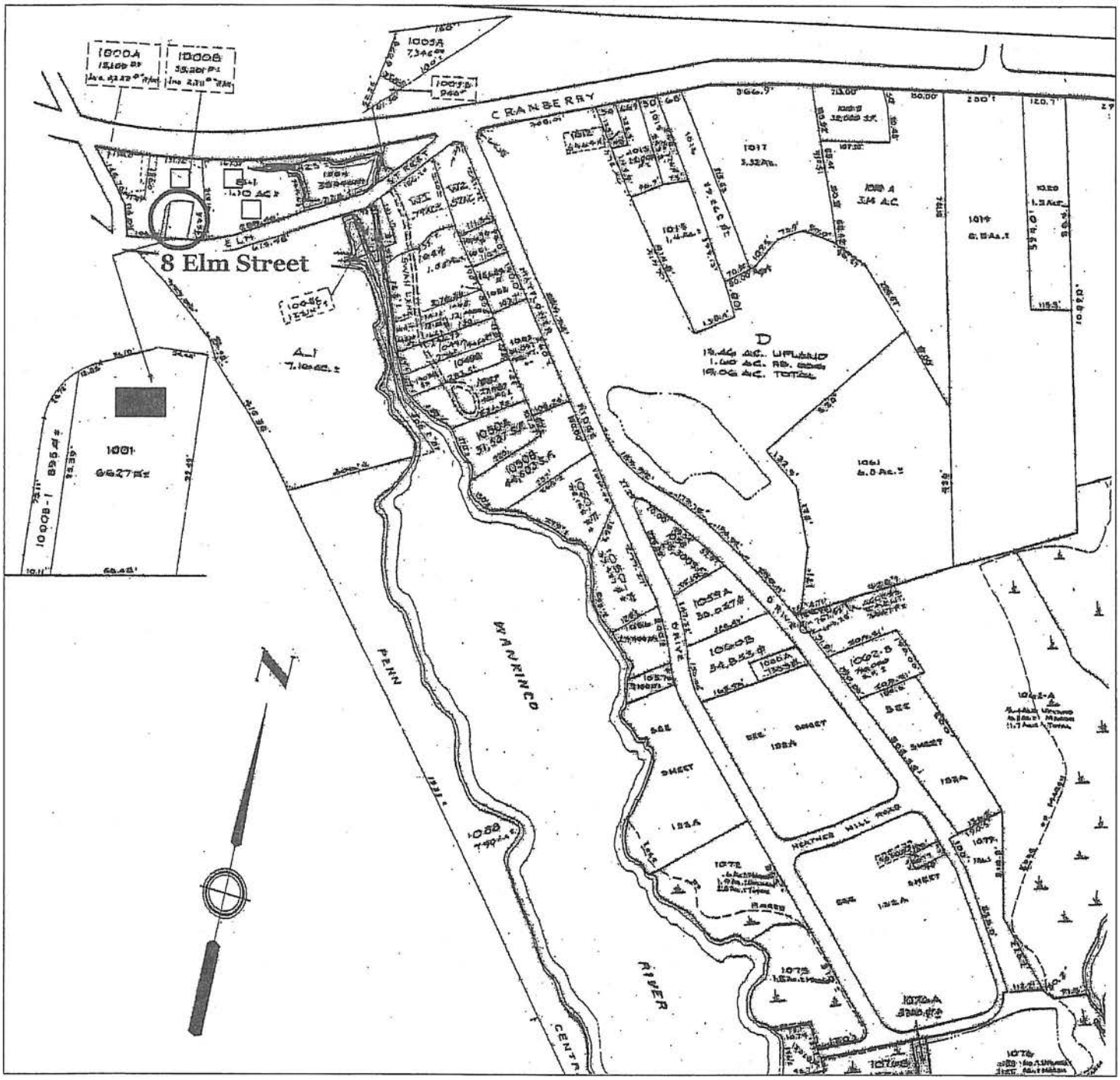
Property Address: 8 Elm Street

Massachusetts Historical Commission
Massachusetts Archives Facility
220 Morrissey Boulevard
Boston, Massachusetts 02125

Area(s)

Form No.

SITE MAP



road over the dam, called Stage Coach Road, went to Sandwich.

As the industrial revolution was getting underway, large sums of money were provided to improve and provide new roads and bridges all over town. The town records note that the "Wareham Manufacturing Co. paid $20.36 for cutting stone and repairing road."

The Stage Coach and Early Wareham

In the early 1800's the Stage Coach came into Wareham, when the roads were narrow and difficult ways for even the crudest vehicles. The coach was slow and cumbersome and needed several places to stop on its rough journey from town to town. Along its route many ordinaries sprang up to serve the needs of the passengers and the tired horses pulling this awkward vehicle over deeply rutted roads. Among the stops was the Fearing Tavern, known then as "Benjamin's House," where food and lodging could be obtained by the weary traveler. There was also a great barn in the rear where fresh horses were kept to replace the tired, hard-working coach horses.

These public houses were regularly patronized and most were highly successful until the railroad came in 1846. Then they were the first to suffer a loss of patronage when the Stage Coach was abandoned. With the closing of these roadside accommodations went the sales of liquor and food and the jobs of the innkeeper and his helpers. Not all of the ordinaries ceased operation, as some were within the town and near the mills, where they continued to do business for many years.

The Stage Coach from Wareham to New Bedford took three hours, with maximum discomfort and limited accompanying baggage. The route was the Country Road to Rochester across the narrow part of the Weweantic River, over the dam of a grist mill or sawmill going by Mary's Pond and Blackmore's Pond, heading towards Mattapoisett. This route avoided the great marshes along the Weweantic and crossed the bridge in Rochester over the Sippican River dam and finally reached New Bedford.

Another section of the Stage Coach route was a deeply rutted road to Sandwich, which at the time contained the area we know as Bourne and Buzzards Bay. The boundary ran through Cohasset Narrow, up Red Brook to a point at White Island Pond. More particularly, "at Red Brook head of Buzzards Bay a stone monument.....near Dutchmen's Bridge or Dutchmen's Ditch Bridge, a stone monument.....on the southerly side of White Island Pond, a stone monument..." (Town Records)

funds for the poor would raise the taxes of the affluent.

Herring

The Wankinco River's headwaters were cold springs, not inviting to the herring. The Weweantic River's headwaters were several ponds in Middleboro, and were a magnet to the fish.

"The Town met att the Day and time set att the adjurdment. The Moderator put to vote whether the town was for haveing 410 Barels of hering catchet out of ye several Streams in Wareham ye Present year for Markit Provide the men that catchet them would Pay to ye town four shillings Bounty on each Barel for ye youse of the town and ye vote Past in the Affirmative:

oute of Weweantic River . . . . . 300 barrels
oute of Agawam River . . . . . 80 barrels
oute of Wankinco River . . . . . 8 barrels
oute of Cohasit Creek socaled Cohasset Narrows . . 16 barrels
oute of ye Brook by Micah Gibbs (Red Brook) . . . . . 6 barrels
410 barrels"

Later in town history, the sale of rights to catch herring was auctioned off at the Fearing Tavern, leaving the successful bidder the obligation to sell four hundred alewives to any householder for 64 cents, and to give all widows a full barrel of herring.

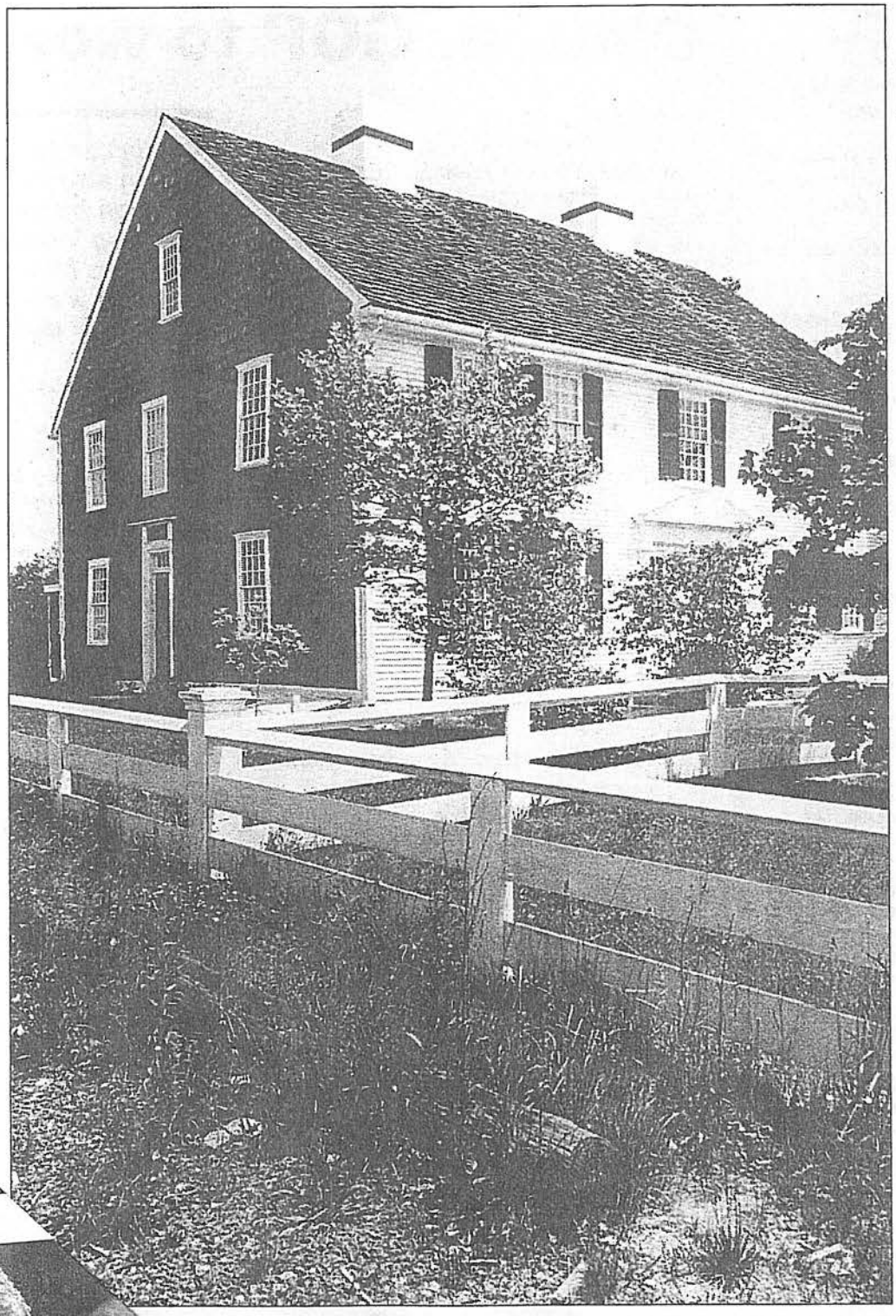
Alewives (herring) were always a source of food and profit. They came early into regulation and there was a persistent effort to make sure Wareham got its part of the shared rivers.

There was a problem in sharing the catch of fish from the Weweantic and ensuring a "passage up and down the river for ye fish." Agawam River was shared with Plymouth in an agreement which was mutually changed from time to time to the advantage of first one town and then the other. Red Brook, a boundary stream with Sandwich, seemed almost free of dispute.

The Weweantic and Agawam Rivers became sources of power for many mills, and dams were built to hold a pond of water for year-round operation of the industries. It was voted by the town each year to see that a sufficient passageway was provided around these dams, and each river had its own committee to watch for obstructions.

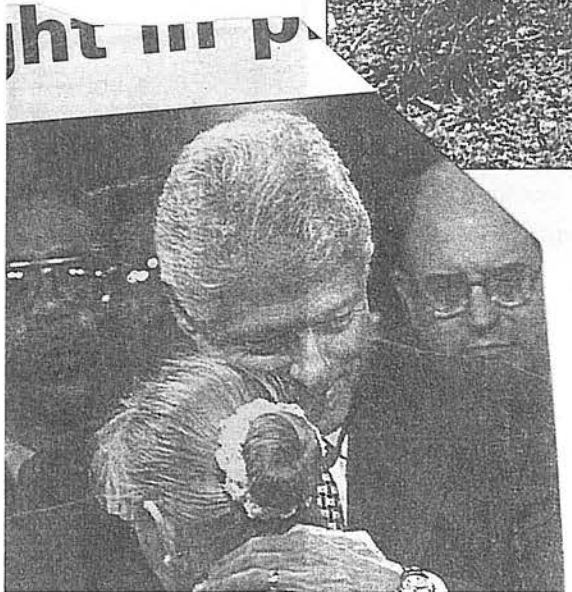
Also, a great deal of poaching went on in the towns, for the herring came in great numbers. The poor people and others were tempted to take large amounts for their needs.

At first, great efforts were made to prevent the illegal catching



Wareham's Fearing Tavern, as seen in July 1979.

Standard-Times library photo



A look back at the Fearing fam

By RAYMOND A. RIDER

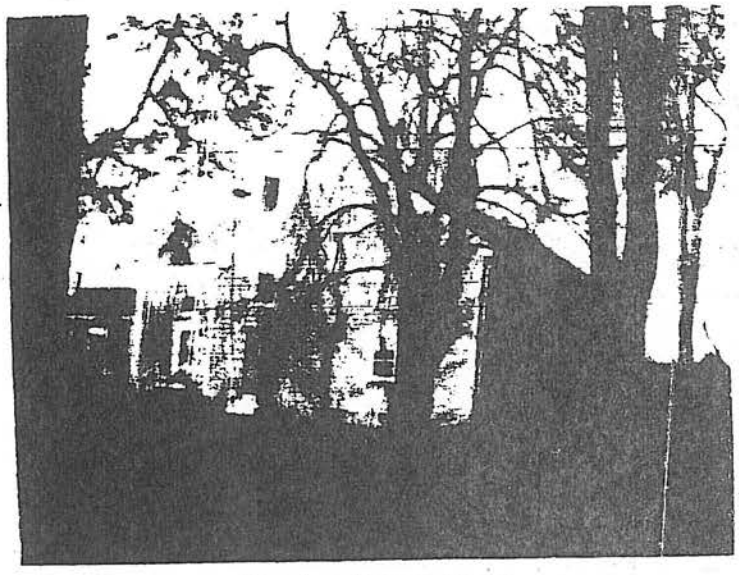
WAREHAM-- Israel Fearing had a home in Agawam (now called East Wareham) that burned in the mid-1930s. In its place is a flat-roofed house built by Joshua Hall, son of Daniel Hall who owned the *Wareham Courier*. "Josh" and his wife, Edith, lived in this house until they died

In the original Fearing Homestead of Israel lived John, one of his sons who became the squire after his father died in 1757. John then married and built a house on the Country Road going from Wareham to Rochester Center. Like all roads that have lost their original standing, its name has changed. This happens especially if the road is interrupted by a bridge, another more important road, or a railroad — all of which happened to the Country Road as Route 6 came down Old Main Street.

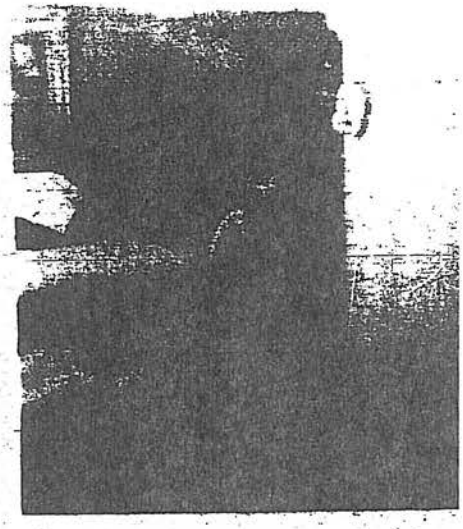
Because John Fearing lived on the hillside, the road was named Fearing Hill Road. Incidentally, the road went to County Road; on the other side, Country Road came to be known as Mary's Pond Road in Rochester.

John Fearing, as we said, became Squire Fearing, as Justice of the Peace in his father's place. As an officer of the court, he tried all but criminal cases, either in his home or at his brother Benjamin's House (Fearing Tavern). He was not a lawyer, but he learned from the lawyers who practiced before him and gave him the privilege of reading their law books. This enhanced his abilities to conduct his court and aided his judgment in his decisions.

The stocks and whipping post were visible from the church and from Benjamin's House — a reminder to the patrons of the tavern and to the meeting-house attendants to be on their best behavior — or else.



Fearing Homestead



Northeast Parlor Fearing

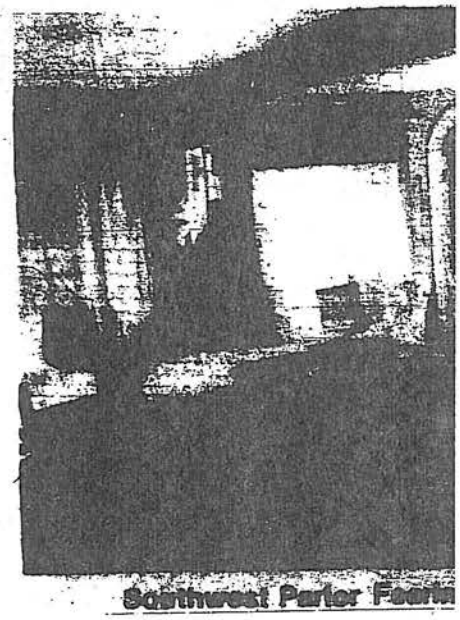
John Fearing's house was larger than his father's, but it was no mansion either. A later addition as large as the original house gave the home a rambling appearance but a poor architectural perspective. The home was last occupied by Mr. and Mrs. Walter J. Ligon, she being the last Fearing descendant to live in the homestead. The Ligons had in mind to give the old homestead to the Wareham Historical Society, but the society had purchased the old William Fearing-Benjamin Fearing Homestead that had more historical background.

This house, once owned by John Fearing, is now minus the wing, leaving the original building restored much as it used to be.

One of the descendants had a name of enormous length, it being "Aldaberontophoseofomia Bowen Fearing." She was a resident of the John Fearing House.

A picture of her is in the west parlor or "town room" of the Fearing Tavern. She is also referred to as the "Boston Belle." She was related to William Root Bliss, author of "Colonial Times on Buzzards Bay," essentially a story of the town of Wareham in the 1700s, and the "Old Colony Town and the Ambit of Buzzards Bay," again a story of land bordering this great bay facing south. It includes Plymouth, Onset and other points in Wareham along the shores, the flight of the albatross, the story of the last man on a wreck, and seven days in a jinrikisha (rickshaw). The author married Elizabeth Fearing, one of the great-great-granddaughters of Israel Fearing of the Agawam Plantation who was a grandson of John Fearing of Norfolk County in Old England, landing in Hingham in 1635.

Israel Fearing who came to Agawam in 1720 was formerly of Hingham. He is the man given great credit for the incorporation of Wareham, composed of a slice of Old Rochester and a chunk of land from Plymouth



Southwest Parlor Fearin

Discussion on rail saf to be public meeting

WAREHAM— State transportation officials will address the need for safety improvements at Cape rail crossings at a public meeting expected to take place in a month or so. Gov. Michael Dukakis has agreed to send Executive Office of Transportation and Construction (EOTC) officials to hear the concerns of area residents upset by the lack of safety features at

Correction

for th ing, s of re pass Th is de will

Isaac Bump's house, sold to Israel Fearing in 1747, was expanded and transformed into a tavern by Israel's son Benjamin. Preserved by the Wareham Historical Society as the Fearing Tavern Museum, it is open on summer weekends.

West End of town. The area containing his farm would be known as Fearing Hill and that part of the Old Country Road would be known as Fearing Hill Road.

He received the honor his father once enjoyed, the office of justice of the peace. There were others in the community who had been elevated to this position, but John succeeded to his father Israel's special place as the leading justice.

Having inherited his ancestor's mantle in 1755 (he received his appointment in Middleboro on June 26), Squire John Fearing accepted all of the responsibilities of conducting court, both at his home on Fearing Hill and also at Benjamin's Inn (Fearing Tavern, or Benjamin's House). Here the stocks and whipping post were erected in the yard on the west side of the tavern for the convenience of the justice and the constabulary. Sentences could be carried out quickly with little trouble and no loss of time.

The culprits would pay penance of the allotted time set by the presiding Squire Fearing. Sometimes a fine of several shillings would be assessed instead for their civil errors.

Only the most minor misdemeanor could be handled by the local court, such as swearing, insults or minor assaults, debts of one kind or another, thievery and failure to attend church.

The power of John Fearing, Esquire, went beyond the restraint of the local people in matters of law. He also governed the domestic as well as the civic life of the citizens of the Town of Wareham. He was often called upon to perform marriages after intentions were filed with the town clerk and announced three times in town meetings. His position was maintained, not because he was learned in the laws, but because he was one of the "most sufficient persons" dwelling in the country, known to be loyal and dignified and possessed of lands or tenements yielding certain annual increments.

Benjamin Fearing

Israel Fearing gave his son Benjamin primarily the lands he had purchased from Isaac Bumpus. There were some 28 acres — much of it flooded for water power. This parcel extended west to what is now Route 195 and north to Tihonet, east to the Fresh Meadows and south to John Bumpus' lot.

In bequeathing this property to Benjamin, it would seem that Israel made a wise choice, as Benjamin became a successful businessman. He was part of the industrial revolution in Wareham and profited greatly from it. Of all the children of Israel, Benjamin, though not the firstborn son, received the most profitable part of his father's estate.

In 1754, Benjamin took the former dwelling house of Isaac Bumpus and turned it into a public house, known variously as "a house of entertainment," a "grog shop," a tavern or an inn. It was fondly known locally as "Benjamin's House" and is now the Fearing Tavern on Elm Street.

Benjamin's Inn was centrally located near the meetinghouse. It was a popular place to gather for the news; sometimes to listen to John Fearing, justice of the peace, holding court there; or to gaze at a man in the stocks or one tied to the whipping post. His place was also a shelter for the freezing congregation from the meetinghouse on Sundays. The house was heated by a huge fire place, but the meetinghouse was not heated at all.

Success seemed assured, because in 1765 Benjamin enlarged the property by building four new rooms and expanding the lean-to to encompass a tap room and bar. Once he had a bar set up and began to serve liquor, the town meeting would adjourn there to sell the poor people, especially during the winter months. It was warmer there, and besides, liquor was available to lubricate the proceedings of the meeting. (The selling of the poor was an auction of those unfortunate people who had no means of sup-

Fearing Tavern

Over 200 years 1739 - 1935

"Seeing my performance among you have found such acceptance that you have given me a call to minister to you, officially in holy things, and having seriously weighed the matter and asked the direction of heaven, I conclude your call to be from God. Therefore being deeply sensible of my own unworthiness and unfitness for the great work, yet depending on Christ, do accept your call depending on you for such support from time to time as the Gospel does require; earnestly asking your prayers to God for me, that when I have preached to you, I myself may not be found cast away, but when I am called to give an account of my ministry to God the Great Shepherd and Bishop of Souls, I may do it with joy, having many of your souls as seals of my ministry and Crown of rejoicing.

Wareham, Oct. 17, 1739

signed, Rowland Thacher"

He was unanimously approved by Selectmen Jireh Swift, Jeremiah Bumpus and Town Clerk Jonathan Hunter.

The day before the ordination of Rowland Thacher, the following persons incorporated into a church:

Mary Besse; Sarah Blackmer; William Blackmer, Deacon; Abigail Bump; Edward Bump (died Nov. 24, 1745); Hannah Bump; Jane Bump; Jonathan Bump; John Bump; John Bump, Jr.; Isaac Bump (died 1761); Martha Bump; Mary Bump; Rebecca Bump; Samuel Bump (died May 26, 1770); Susannah Bump; Mercy Burgess; Elizabeth Doty; Hannah Doty; Rebecca Edwards; John Ellis, Deacon; Rose Ellis; Joshua Gibbs, Deacon; Mercy Gibbs; Ebenezer Hamlin, Deacon; Ruth Hamlin; Thomas Hamlin; Hopestill Hunter; Deborah Landers; Ebenezer Luce; Sarah Luce; Mary Ellis May; John Norris; Mary Norris; Ann Sanders; Henry Sanders; Thankful Sanders; Deborah Savery; Sarah White; Rowland Thacher, Pastor.

In 1739, when Rowland Thacher was ordained, Edward Bump was chosen to be master of ceremonies. Thacher proceeded to carry out his duties, "Not according to the custom of tavern selling of victuals, but as shall be judged reasonable by the people." The next day he organized his church.

Next, he set about building a house, probably in 1739. Built on land owned by Isaac "Bump the Miller," it was part of the Rochester Sea Lot on the bank of the Wankinco River. The original house had four rooms downstairs and four rooms on the second floor, with stairs leading to a large open attic. There were five fireplaces and a huge center chimney. When first con-

ructed, the house faced north and the foundation was granite locks.

It sat on land later taken by the railroad for its tracks which ltimately extended to Provincetown. The fireplaces and himney were removed to lessen the weight when the house was ıoved off the railroad right of way, turned around to face south, nd set on a foundation on the north side of the road "going to fiddleboro and Carver," now Route 28.

Attending an unheated church in that time was an endurnce contest. It was the reverend's practice to mount the pulpit tairs and, once inside, sit down in order to be invisible to all ɔelow him. He would arise to start with a prayer; then the deacon vould lead the singing in a voice hoarse from calling to his oxen he day before, but he bravely rasped out the psalm.

When that was over, the deacon would turn the hour-glass 'or the parson to start his sermon. Sometimes it was necessary to ɪurn the hour-glass two or three times as the clergyman proceedɛd from "thusly" to "thirdly" up to 'twelfthly." Then he would ɔpen up a new gradient to cover the rest of the world and God's ɔountry.

Toward the end, he would come to "finally", which could include several "finals." When "Amen" was sounded to end the sermon, the boys flew for the doors as the deacons jumped nimbly aside to prevent themselves from being bowled over.

Lunches were then eaten and business transacted among the men. After 1757, when Benjamin's House was open, they sat at the tables talking and enjoying a mug of grog. Church resumed in the afternoon for an hour or more before the start for home began.

Benjamin's Inn, better known as Benjamin's House, was a mecca for the freezing congregation from the meetinghouse on Sundays. It would be over one hundred years before the town relented and put in a furnace to heat the town house/church.

Subsequently, the church membership under Rowland Thacher included:

BENSON: Ebenezer and Joannah, his wife; Joseph, Jr.; Kesiah; Samuel.

BESSE: David; Deborah; Dinah, David's wife; Jabez and Marjorie, his wife; Jabez, Jr.; Joshua; Martha, wife to Benjamin; Robert and Ruth, his wife; Ruth, wife to Jabez; Sarah, wife of Nehemiah.

BOURNE: Ebenezer.

BRIEF HISTORY OF FEARING TAVERN WITH ROUGH FLOOR PLAN ATTACHED. ELL WHICH WAS ADDED IN 1800 AND WHICH HAS NOT YET BEEN RESTORED IS NOT OPEN TO VISITORS. IT IS NOT DESCRIBED AND IS NOT SHOWN ON THE DRAWING.

The Fearing Tavern is believed to be the oldest house in Wareham; built by Isaac Bump, or Bumpus, the town miller, who owned a grist mill nearby.

Israel Fearing bought the property from Bumpus in 1747 and it remained in the Fearing family until 1958 when the Wareham Historical Society acquired it by gift from the Fearings to restore and preserve as one of the distinguished and important landmarks of the area.

This old two-storey house was built in three distinct periods. The original structure, built in 1690, and which then faced north, consists of two lower rooms, two upper rooms, two chimneys each with a fireplace and oven, a lean-to and cellar. The lean-to is now part of the taproom. When the floor of the kitchen which the Society calls the Publick Room was restored, the original cellar was found. Access to it was probably by way of a trap door.

The small room next to the Publick Room with a window facing east was later used as the town post office (the first) from about 1765-1800.

In 1765 (the date is imprinted in the original plaster of the front hall) Benjamin Fearing, son of Israel, added four rooms to the by then seventy-five year old building. This second portion has four large rooms with a stairway and halls and a front door facing south. He also added to the lean-to and put a fireplace in what was to become the taproom. The beam separating the old lean-to from the addition can be very plainly seen. The bar which had been removed from the taproom at some later time was found intact and carefully restored and placed in its original position. The original archway over the bar had never been disturbed.

Finally Benjamin raised a roof over the entire structure making room for a large attic in which are the original hand-hewn beams, forty feet or more in length, each numbered and notched. Three exceptionally well-built flights of stairs rise from the attic floor to skylights in the roof. Some believe that the stairs were built to provide access to the roof in case of fire while others have suggested that small cannon may have been hauled up over them and aimed from the roof. There is an iron hook in the roof to support this latter theory.

The third section, built in 1800, consists of an ell at the rear facing north with its two storeys, fireplaces and ovens. This part of the house has not yet been restored and is not open to visitors.

It will be noted that the ceilings in the 1765 section are higher than those in the original structure which accounts for the different floor levels.

The Tavern was the scene of early activities in the Town of Wareham. Israel Fearing was the first Justice of Peace commissioned in Agawam Purchase by George I. He had authority to perform marriage ceremonies, settle accounts, receive complaints, settle disputes, hold trials, record legal documents and make indentures and agreements. The selectmen of the town held their meetings in the taproom and were served victuals and grog at town expense. Fearing tradition tells of a British soldier who lay hidden for three days from Liberty Men in the closet reached by a secret passage opening off the second-floor southeast chamber of the 1765 addition. The Captain of Town Militia maintained his headquarters in the Tavern and there was always a free lunch when a new minister was installed. Because of the situation of his dwelling before the days of stagecoaches it seems probable that Isaac Bump, along with operating his grist mill, entertained travelers when the horse, the river and "Shank's Mare" were the chief modes of transportation.

Patrons

MR. and MRS. M. B. MAKEPEACE, Wareham
GEORGE R. FRENCH, Onset
FLORA B. McGREGOR, Onset
MRS. CHARLES H. MEYER, Onset
DR. and MRS. ROBERT N. LaMARCHE, Springfield
FIRST SPIRITUALIST CHURCH, Onset
DOROTHY B. MARSH, Onset
WAREHAM BOARD OF SELECTMEN
MARILYN E. KEITH, Pocasset
DECAS CRANBERRY CO., INC., Wareham
MILDRED J. BRADSHAW, Onset
ALEX PULANSKI, Onset
RAYMOND FITZGERALD, Onset
FRANK MESSINA, Melrose
PAUL LINDSEY, Onset
DR. and MRS. SAMUEL GOLDFARB, Onset
MR. and MRS. LOUIS O. ST. AUBIN, Achushnet

The FEARING TAVERN MUSEUM

ELM STREET WAREHAM, MASS.

The Fearing Tavern is believed to be the oldest house in Wareham; lived in by Isaac Bump, or Bumpus, the town miller, who owned a grist mill nearby.

Israel Fearing bought the property from Bumpus in 1747 and it remained in the Fearing family until 1942. The Wareham Historical Society acquired it by gift from Mr. and Mrs. Ernest Blanchard to restore and preserve as one of the distinguished and important landmarks of the area.

This old two-storey house was built in three distinct periods. The original structure, built in 1690, and which then faced north, consists of two lower rooms, two upper rooms, two chimneys each with a fireplace and oven, a lean-to and cellar. The lean-to is now part of the taproom. When the floor of the kitchen which the Society calls the Publick Room was restored, the original cellar was found. Access to it was probably by way of a trap door.

One of the most unusual features of the old building is that all of its ancient fabric is original and intact.

The small room next to the Publick Room with a window facing east was later used as the town post office (the first) from about 1765-1800.

In 1765 (the date is imprinted in the original plaster of the front hall) Benjamin Fearing, son of Israel, added four rooms to the by then seventy-five year old building. This second portion has four large rooms with a stairway and halls and a front door facing south. He also added to the lean-to and put a fireplace in what was to become the taproom. The beam separating the old lean-to from the addition can be very plainly seen. The bar which had been removed from the taproom at some later time was found intact and carefully restored and placed in its original position. The original archway over the bar had never been disturbed.

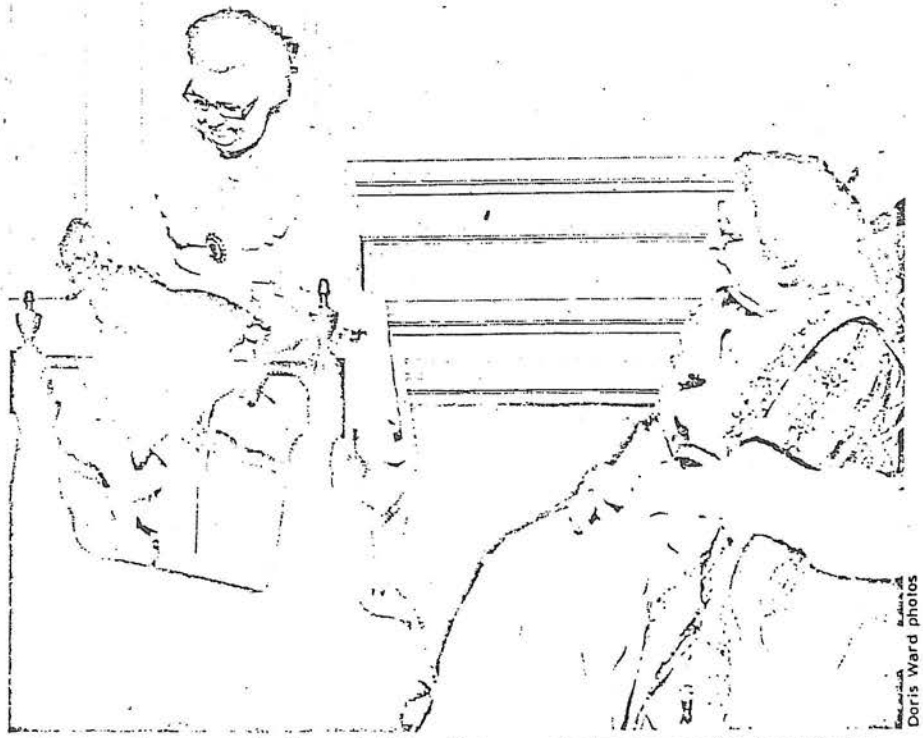
Finally Benjamin raised a roof over the entire structure making room for a large attic in which are the original hand-hewn beams, forty feet or more in length, each numbered and notched. Three exceptionally well-built flights of stairs rise from the attic floor to skylights in the roof. Some believe that the stairs were built to provide access to the roof in case of fire while others have suggested that small cannon may have been hauled up over them and aimed from the roof. There is an iron hook in the roof to support this latter theory.

The third section, built in 1800, consists of an ell at the rear facing north with its two storeys, fireplaces and ovens. This part of the house has not yet been restored and is not open to visitors.

It will be noted that the ceilings in the 1765 section are higher than those in the original structure which accounts for the different floor levels.

The Tavern was the scene of early activities in the Town of Wareham. Israel Fearing was the first Justice of Peace commissioned in Agawam Purchase by George I. He had authority to perform marriage ceremonies, settle accounts, receive complaints, settle disputes, hold trials, record legal documents and make indentures and agreements. The selectmen of the town held their meetings in the taproom and were served victuals and grog at town expense. Fearing tradition tells of a British soldier who lay hidden for three days from Liberty Men in the closet reached by a secret passage opening off the second-floor southeast chamber of the 1765 addition. The Captain of Town Militia maintained his headquarters in the Tavern and there was always a free lunch when a new minister was installed. Because of the situation of his dwelling before the days of stagecoaches it seems probable that Isaac Bump, along with operating his grist mill, entertained travelers when the horse, the river and "Shank's Mare" were the chief modes of transportation.

Olive Caires, Gladys Evenson and Eda Cowing, left to right, take time for a cup of tea while visiting the Fearing Tavern.



Gladys Evenson, left, and Olive Caires admire an early American doll and suspended cradle now a part of the Fearing Tavern Museum.

The women of the Tavern

WAREHAM — Local residents, dressed in hand-fashioned, ...entic early American costumes, enjoy a bit of nostalgia by ...ing the Fearing Tavern Museum in Wareham.

...ne of the town's most prized historical buildings, the Fearing ...ern was once the site for public meetings held by local ...ectmen, complete with "free grog," so the story goes.

...he original building dates from 1690, and was built by Capt. ...el Fearing, with additions to the structure being made in 1750 ... 1765. Used for a tavern for generations, it was also the site of ...reham's first post office.

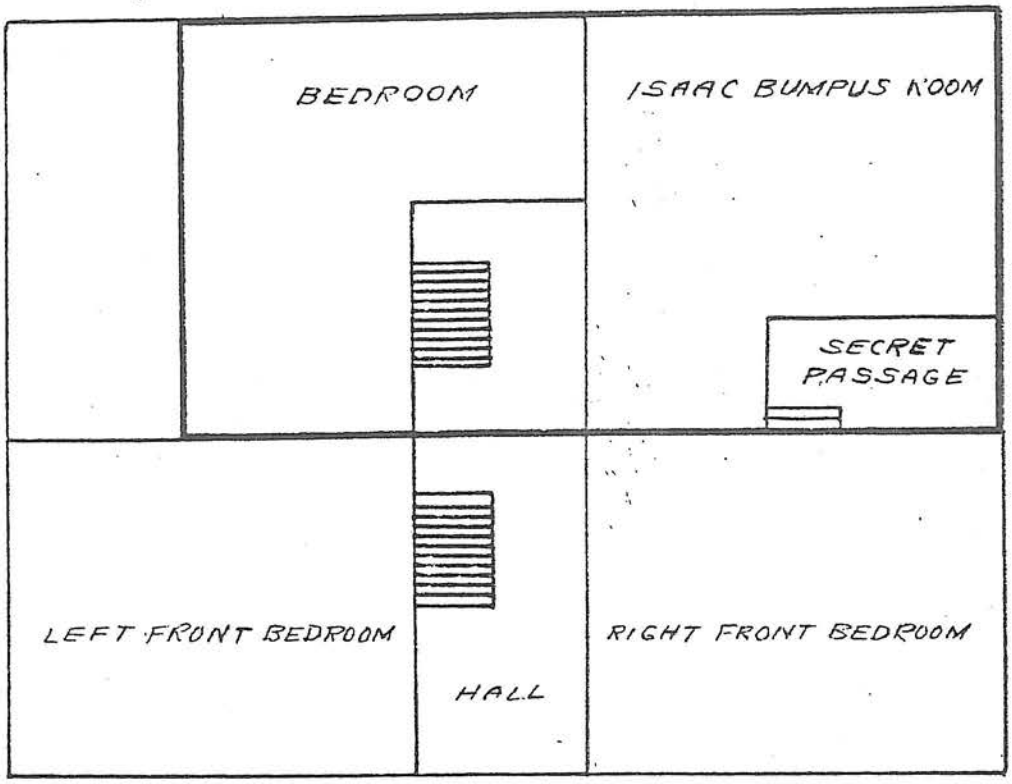
...ed now by the Wareham Historical Society, this remnant ...the town's past remains closed most of the time, but is open ...ing the summer for several hours each week.

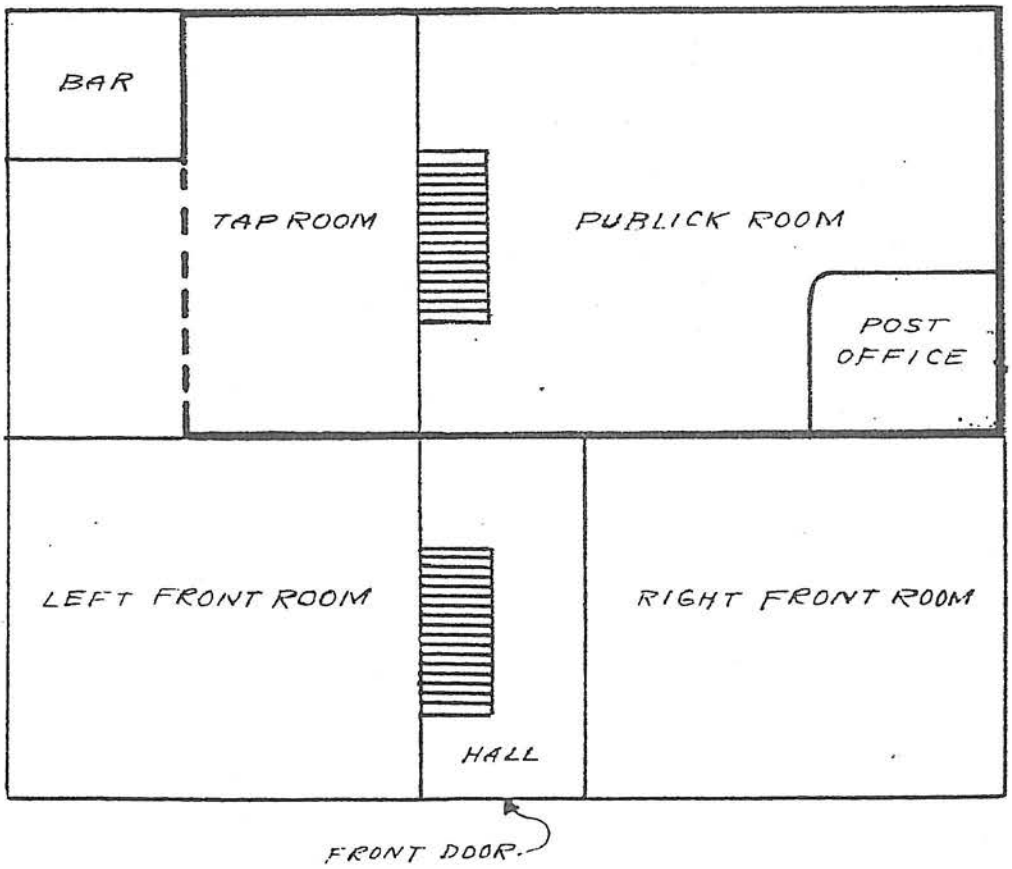
...t is also opened for special events, such as tours, Bicentennial ...ctions. flower shows, and by special request of various local ...anizations for meetings and other activities.

...the spirit of the original Fearing Tavern atmosphere, a smile ...d a song by M... Richard Reed, left, and Eda Cowing.

A pensive moment for Eda Cowing as she admi... wheel straight from the early Fearing Tavern days.

ROUGH PLAN OF THE FEARING TAVERN





ORIGINAL HOUSE (1690)

ADDITION (1765)

Fearing Tavern is said to be the oldest existing structure in Wareham. It is a clapboard building comprised of 3 separate sections, which were each built in a different era. The oldest part of the structure was built by Isaac Bump, the miller, in 1690 on a 26½ acre parcel of land. This parcel has been reduced over the years by flooding for a holding pond, a dam, a road and sale of part of the land to the Tremont Nail Co.. The lot is now only about 2500 square feet in size. Isaac Bump operated a grist mill on the nearby mill pond. He also operated two other mills in town. He was an ancestor of Mercy Lavinia Warren Bump, better known as Mrs. Tom Thumb. On April 7,1747 Isaac Bump sold his house and land to Israel Fearing. Israel Fearing died in 1754, leaving his son Benjamin to inherit the house, lands, and water-rights. From this time it remained in the Fearing family until 1942.

Shortly after Benjamin inherited he converted the dwelling into a tavern. Eleven years later he added four large rooms, a stairway and halls to the original structure which had consisted of two upper and two lower rooms, two chimneys, a lean-to and a cellar. He roofed the entire structure over, makinga large attic with skylights and an imposing front door facing south. Originally the house had faced north. It was customary in those days upon liscencing an inn, to require that it be established near a church. In this case the old Congregational Church on the green is quite visible up the road, The last section, consisting of a2story ell at the rear and facing north was added in 1800. The inn was a resting place for weary travelers on horseback. It became a stage coach stop only after roads widened and improved, just prior to the railroad era.

Benjamin's brother, Squire John, often used the Tavern as the place from which he dispensed justice and performed his other functions as Justice of the Peace. He could perform marriages, make indentures and agreements, settle accounts, listen to complaints and settle disputes, hear trials and record legal documents. Also, selectmen often met on the taproom and were served grog and victuals at town expense. The Publick room served as town post office from 1765 to 1800. The tavern was also the headqquarters of the captain of the town militia. It was also customary to provide a free luncheon everytime a new minister accepted the leadership of the church. There is a tradition that a British soldier hid from the town militia for three days in a closet reached by a secret passage in the second floor southeast chamber of the 1765 addition which backed onto a closet of the older part of the house making passage back and forth easy and undetectable.

(cont.)

The last Fearing to live in the house was Mary Fearing and her husband William Warr. They lost the house through foreclosure in 1942. Finally the house was sold to the Historical Society for one dollar and considerations by Mr. and Mrs. William Blanchard through the efforts of Raymond Rider. Some of the $50,000 raised for the costs of renovation were donated by three Fearing Desendents, Doris Engel, Jean Killhour, Eleanor G. Price and their husbands. There are several plaques placed throughout the tavern commemorating other ancestors and donators. The inside of the house was renovated before the outside in order to spark local interest and support. The grill for the taproom was found intact in the attic and was restored to its original position, fitting exactly into and arched beam in the taproom. The date 1765 was found to be traced into the plaster work at the right of the south entrance. Period furniture was donated to restore authenticity. Finally, split cedar shingles replaced asphalt shingles and a new roof using hand hewn beams and joists was raised one section at a time.

The imposing structure of the old Fearing Tavern on Elm St. in Wareham had been painstakingly restored omer the past twenty years by the Wareham Historical Society. It is owned by the Society and is open three days a week to the public Tuesdays, Wednesdays and Thursdays from 2:00 4:00 P.M. The Historical Society has been very generous in opening the Tavern for the edification and enjoyment of school classes. The founder of the Historical Society, Raymond A. Rider, his wife, Irene, and architect Lloyd Hendrick assiduously supervised the restoration for fifteen years. Mr. Rider has written a book entitled the Fearings and the Fearing Tavern with the Bumpus Family, which explains in detail the history of the tavern and the families associated with it and other facts of general interest related to the era in which it was built.

APPENDIX J – CAPTAIN KENDRICK HOUSE PHOTOGRAPHS

2013-05-31 09.34.5...

2013-05-31 09.35.0...

2013-05-31 09.35.1...

2013-05-31 09.35.1...

2013-05-31 09.35.3...

2013-05-31 09.35.3...

2013-05-31 09.35.5...

2013-05-31 09.36.1...

2013-05-31 09.36.2...

2013-05-31 09.36.3...

2013-05-31 09.37.1...

2013-05-31 09.37.24...

2013-05-31 09.37.24...

2013-05-31 09.37.3...

2013-05-31 09.37.4...

2013-05-31 09.38.0...

2013-05-31 09.38.0...

2013-05-31 09.38.3...

2013-05-31 09.38.4...

2013-05-31 09.38.4...

2013-05-31 09.38.5...

2013-05-31 09.39.1...

2013-05-31 09.39.2...

2013-05-31 09.39.3...

2013-05-31 09.39.5...

2013-05-31 12.39.2...

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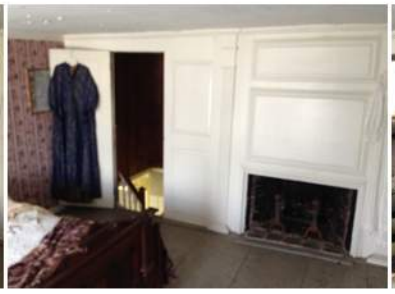
2013-05-31 12.39.4...



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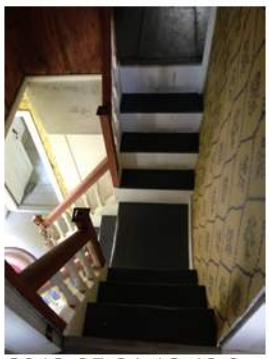

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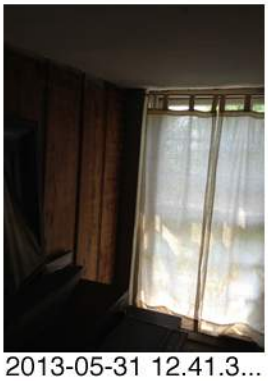

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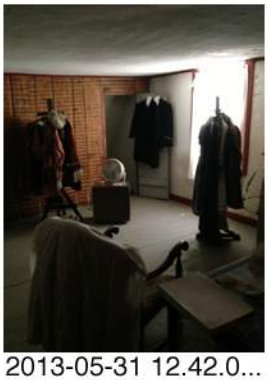

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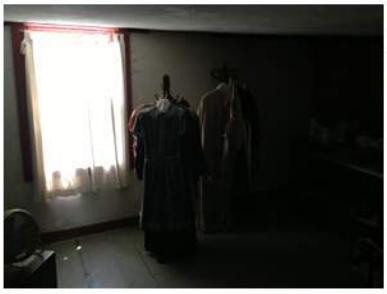

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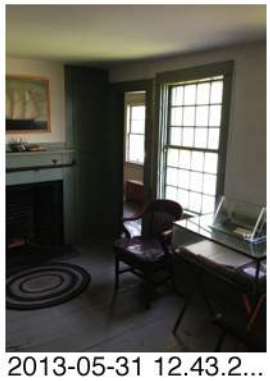
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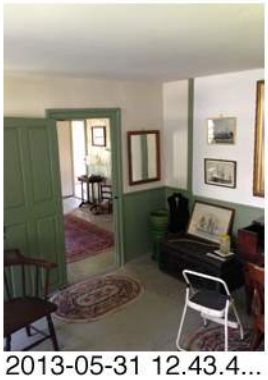
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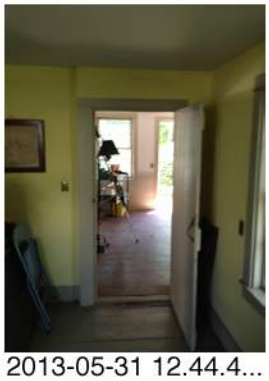
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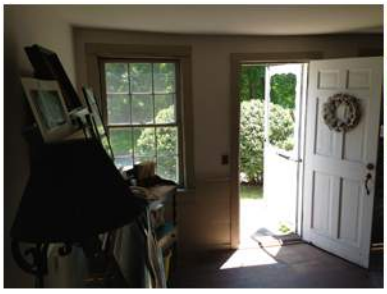
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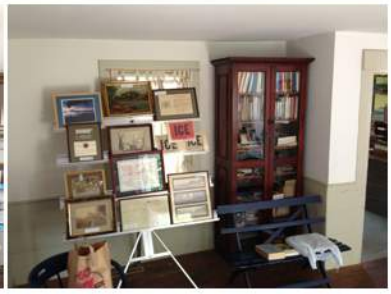
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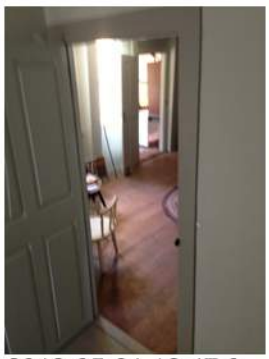
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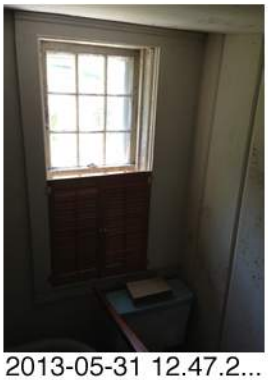
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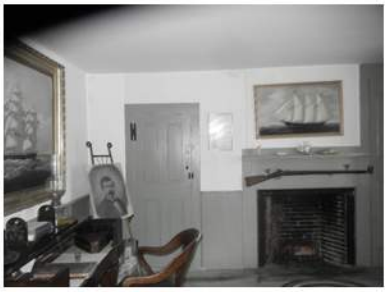

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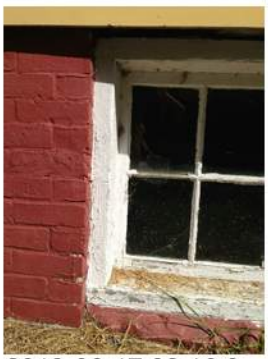

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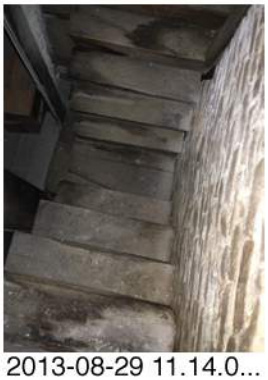

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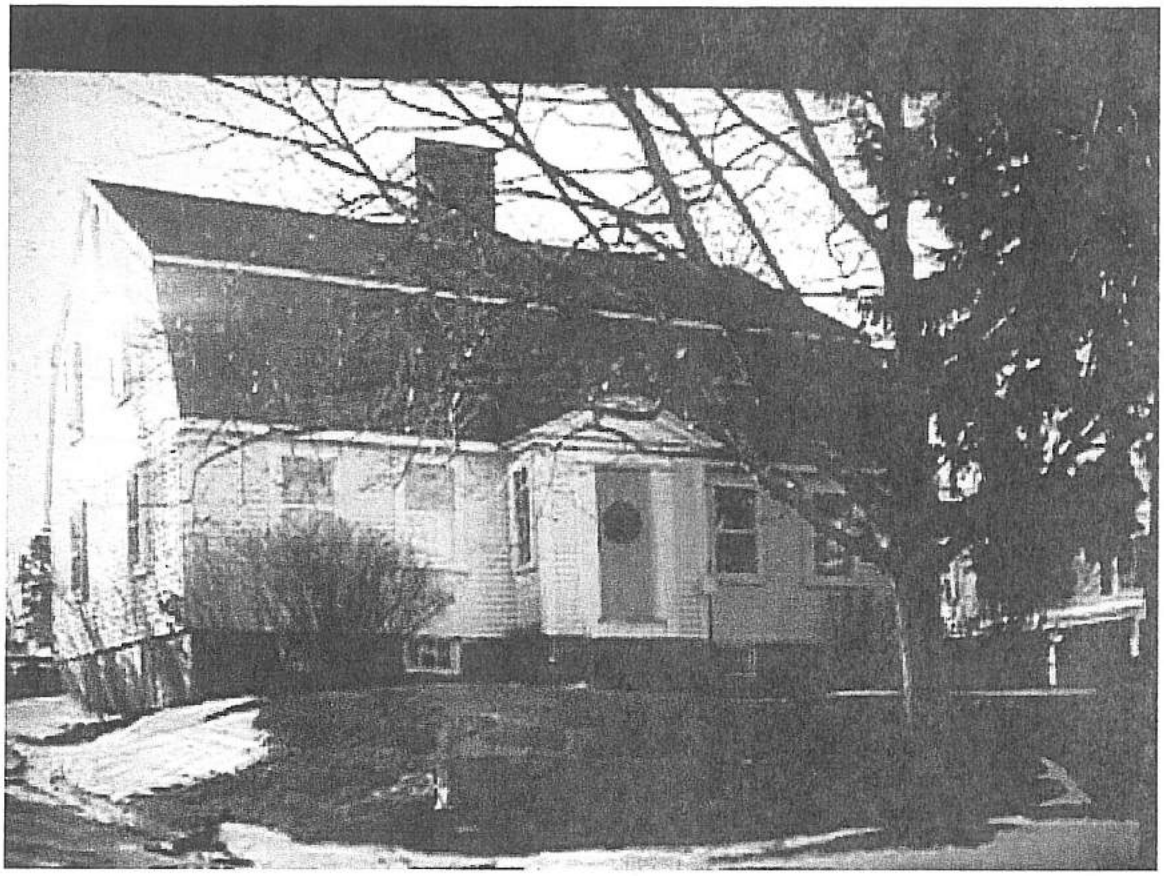
APPENDIX K – CAPTAIN KENDRICK HOUSE – MISCELLANEOUS ARTICLES & IMAGES

Captain John Kendrick Maritime Museum

By Jessica Walsh



The Captain John Kendrick Maritime Museum, owned and operated by the Wareham Historical Society, is a fine example of a colonial house and also a museum. All of the rooms contain furnishings and artifacts dating from the 18th and 19th centuries. There are many items that remind the visitors of the ocean. The Captain John Kendrick Museum is a great place to travel back in time!

The Kendrick house, built around 1745, is a gambrel roofed Cape style house. In the interior, every room has a fireplace, and there is a hearth in the keeping room. There are two "good morning" staircases. Shaped like a "Y", they go up, then off to the right and the left. On the second floor there are three rooms, two bedrooms and a storage room. Above these rooms is an attic. Some of the rooms are

decorated with wallpaper, which has been reproduced from original samples. Artifacts, like cranberry scoops, spinning wheels, a whip's handle, ice skates, fabrics, costumes, and antique furniture, such as a marble-topped table, can be seen. The exterior of the John Kendrick Museum is painted golden and brightens the area.

The Kendrick house is also a maritime museum. There is a model of the Ernestina, a sculpture of the Lady Washington, and maritime paintings by local artist Charles Sidney Raleigh. There are also whale oil lamps, a telescope, scrimshaw, whale teeth, hardtack, and paintings of a sea captain and his wife. What better place to have a maritime museum than across the street from the ocean? The Captain John Kendrick Museum is truly a great maritime museum.

The Captain John Kendrick Museum has exhibits with information about the ocean and about life in colonial America. It gives its visitors a feeling of what it was like to live in a colonial house, with its low ceilings and furnishings. It also reminds visitors how much a part of Wareham the ocean is. The Kendrick house is a great place to visit!

The Captain John Kendrick

Maritime Museum

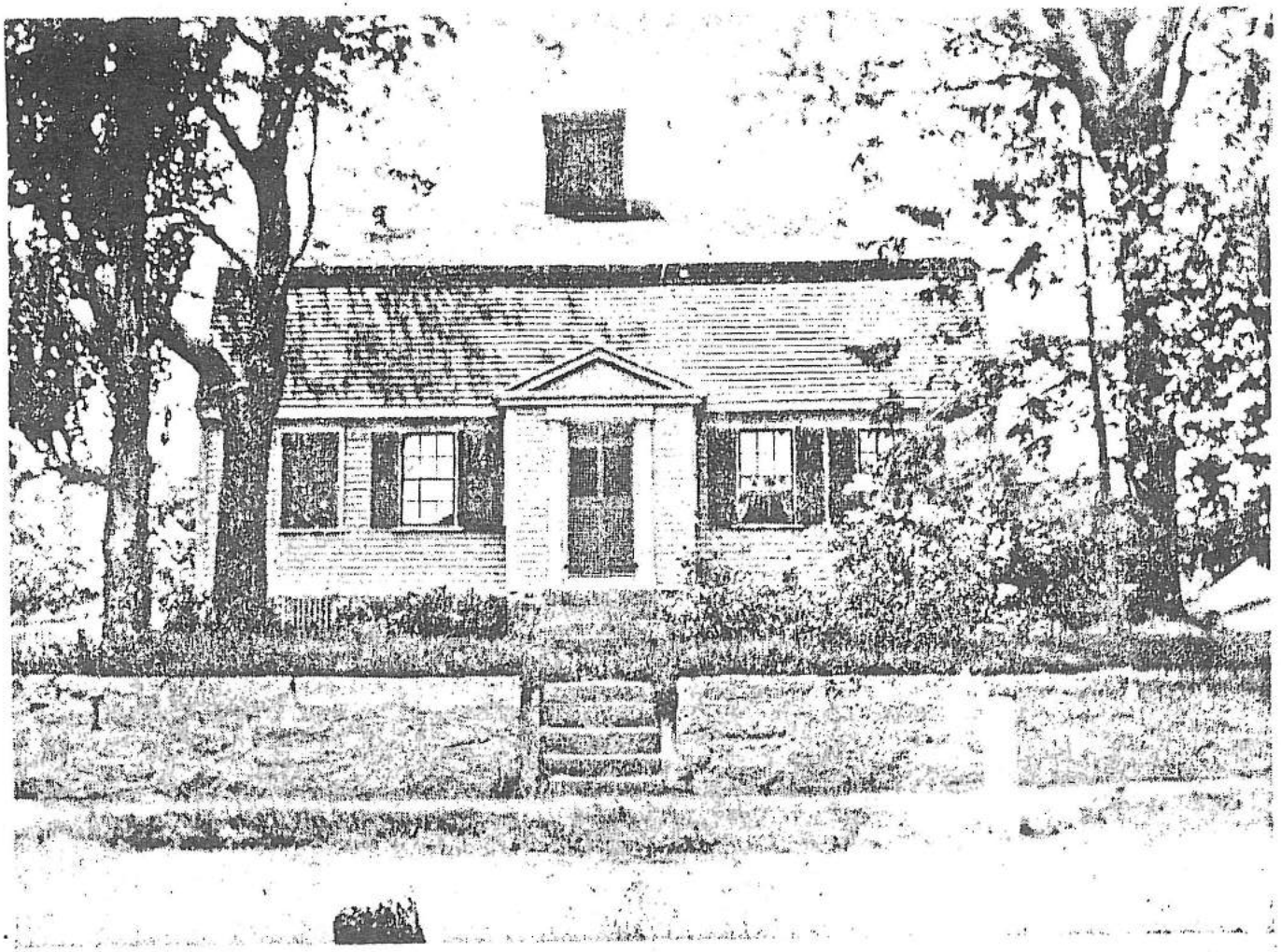
Open July and August

Saturday and Sunday 1 – 4

(with guided tours)

Also open by appointment:

Call Betty Wright at (508) 295-3227



Home of Capt. John Kendrick, who commanded first U.S. trading expedition to China via the Pacific Northwest.


Howard

APPENDIX L – PRESERVATION BRIEF 47
MAINTAINING THE EXTERIOR OF SMALL & MEDIUM SIZED HISTORIC BUILDINGS

Some of the web versions of the Preservation Briefs differ somewhat from the printed versions. Many illustrations are new and in color; Captions are simplified and some complex charts are omitted. To order hard copies of the Briefs, see Printed Publications.

PRESERVATION BRIEFS

47

Maintaining the Exterior of Small and Medium Size Historic Buildings

Sharon C. Park, FAIA

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Preservation is defined as "the act or process of applying measures necessary to sustain the existing form, integrity, and materials of an historic property. Work, including preliminary measures to protect and stabilize the property, generally focuses upon the ongoing maintenance and repair of historic materials and features rather than extensive replacement and new construction."[1]

Maintenance helps preserve the integrity of historic structures. If existing materials are regularly maintained and deterioration is significantly reduced or prevented, the integrity of materials and workmanship of the building is protected. Proper maintenance is the most cost effective method of extending the life of a building. As soon as a building is constructed, restored, or rehabilitated, physical care is needed to slow the natural process of deterioration. An older building has already experienced years of normal weathering and may have suffered from neglect or inappropriate work as well.

Decay is inevitable but deterioration can accelerate when the building envelope is not maintained on a regular basis. Surfaces and parts that were seamlessly joined when the building was constructed may gradually become loose or disconnected; materials that were once sound begin to show signs of weathering. If maintenance is deferred, a typical response is to rush in to fix what has been ignored, creating additional problems. Work done on a crisis level can favor inappropriate treatments that alter or damage historic material.

There are rewards for undertaking certain repetitive tasks consistently according to a set schedule. Routine and preventive care of building materials is the most effective way of slowing the natural process of deterioration. The survival of historic buildings in good condition is primarily due to regular upkeep and the preservation of historic materials.

Well-maintained properties tend to suffer less damage from storms, high winds, and even small earthquakes. Keeping the roof sound, armatures and attachments such as shutters tightened and secured, and having joints and connections functioning well, strengthens the ability of older buildings to withstand natural occurrences.

Over time, the cost of maintenance is substantially less than the replacement of deteriorated historic features and involves considerably less disruption. Stopping decay before it is widespread helps keep the scale and complexity of work manageable for the owner.

This Preservation Brief is designed for those responsible for the care of small and medium size historic buildings, including owners, property administrators, in-house maintenance staff, volunteers, architects, and maintenance contractors. The Brief discusses the benefits of regular inspections, monitoring, and seasonal maintenance work; provides general guidance on maintenance treatments for historic building exteriors; and emphasizes the importance of keeping a written record of completed work.

Getting Started

Understanding how building materials and construction details function will help avoid treatments that are made in an attempt to simplify maintenance but which may also result in long-term damage. It is enticing to read about "maintenance free" products and systems, particularly waterproof sealers, rubberized paints, and synthetic siding, but there is no such thing as maintenance free when it comes to caring for historic buildings. Some approaches that initially seem to reduce maintenance requirements may over time actually accelerate deterioration.

Exterior building components, such as roofs, walls, openings, projections, and foundations, were often constructed with a variety of functional features, such as overhangs, trim pieces, drip edges, ventilated cavities, and painted surfaces, to protect against water infiltration, ultraviolet deterioration, air infiltration, and pest infestation. Construction assemblies and joints between materials allow for expansion and contraction and the diffusion of moisture vapor, while keeping water from penetrating the building envelope. Older buildings use such features effectively and care must be taken to retain them, avoiding the temptation to reduce air infiltration or otherwise alter them.

Figure 1. Maintenance involves selecting the proper treatment and protecting adjacent surfaces. Using painter's tape to mask around a brass doorknocker protects the painted door surface from damage when polishing with chemical compounds. On the other hand, hardware with a patinated finish was not intended to be polished and should simply be cleaned with a damp cloth.

Monitoring, inspections, and maintenance should all be undertaken with safety in mind. Besides normal safety procedures, it is important to be cognizant of health issues more commonly encountered with older buildings, such as lead-based paint, asbestos, and bird droppings, and to know when it is necessary to seek professional services (see sidebar).

Original building features and examples of special craftsmanship should be afforded extra care. The patina or aging of historic materials is often part of the charm and character of historic buildings. In such cases, maintenance should avoid attempts to make finishes look new by over-cleaning or cladding existing materials. As with any product that has the potential to harm historic materials, the selection of a cleaning procedure should always involve testing in a discreet location on the building to ensure that it will not abrade, fade, streak, or otherwise damage the substrate (Figure 1).

Cautions During Maintenance Work

All maintenance work requires attention to safety of the workers and protection of the historic structure.

Examples include the following:

- Care should be taken when working with historic materials containing lead-based paint. For example, damp methods may be used for sanding and removal to minimize air-borne particles. Special protection is required for workers and appropriate safety measures should be followed.
- Materials encountered during maintenance work, such as droppings from pigeons and mice, can cause serious illnesses. Appropriate safety precautions need to be followed. Services of a licensed contractor should be obtained to remove large deposits from attics and crawlspaces.
- Heat removal of paint involves several potential safety concerns. First, heating of lead-containing paint requires special safety precautions for workers. Second, even at low temperature levels, heat removal of paint runs the risk of igniting debris in walls. Heat should be used only with great caution with sufficient coverage by smoke detectors in work areas. Work periods need to be timed to allow monitoring after completion of paint removal each day, since debris will most often smolder for a length of time before breaking out into open flame. The use of torches, open flames, or high heat should be avoided.
- Many chemical products are hazardous and volatile organic compounds (VOC) are banned in many areas. If allowed, appropriate respirators and other safety precautions are essential for use.
- Personal protection is important and may require the use of goggles, gloves, mask, closed-toed shoes, and a hard hat.
- Electrical service should be turned off before inspecting a basement after a flood or heavy rain, where there is high standing water.

Cyclical Maintenance Checklist (Figure 2)

Cyclic Building Inspection Checklist: Horse Stable			**Inspection date: 04/24/05**	
Building Feature	**Material(s)**	**Condition Description**	**Maintenance Action Required**	**Work Done**
ROOF:				
Covering	Clay tile	Two slipped tiles	Reattach tiles	5/4/05
	Painted metal standing seam	Slight corrosion; blistering paint on metal roof section	Sand and repaint area that is peeling	6/8/05
Flashing	Painted metal	Flashing in good condition	N/A	N/A
Gutters/Downspouts	6” half round galvanized metal	Gutter sagging; downspouts OK	Realign gutter and put on new hanger strap	5/4/05
			Flush out downspouts	5/5/05
Chimneys	No masonry chimney	N/A	N/A	N/A
Attachments/Penetrations	Metal vent stack and weathervane	Vent stack hood has some peeling paint; vane OK	Sand and repaint vent stack	6/8/05

Figure 2. All personnel associated with a historic structure need to become acquainted with how existing building features should appear and during their daily or weekly routines look for changes that may occur. This will help augment the regular maintenance inspection that will occur at specified intervals based on seasonal changes, use, and other factors. A segment of an inspection form showing the roof elements of a horse stable is shown. The inspection report should be kept along with the maintenance plan and other material in notebook, file or electronic form

Maintenance Plan, Schedules and Inspection

Organizing related work into a written set of procedures, or a Maintenance Plan, helps eliminate duplication, makes it

easier to coordinate work effort, and creates a system for prioritizing maintenance tasks that takes into account the most vulnerable and character-defining elements.

The first time a property owner or manager establishes a maintenance plan or program, it is advisable to have help from a preservation architect, preservation consultant, and/or experienced contractor. Written procedures should outline step-by-step approaches that are custom-tailored to a building. No matter how small the property, every historic site should have a written guide for maintenance that can be as simple as:

1. Schedules and checklists for inspections;
2. Forms for recording work, blank base plans and elevations to be filled in during inspections and upon completion of work;
3. A set of base-line photographs to be augmented over time;
4. Current lists of contractors for help with complex issues or in case of emergencies;
5. Written procedures for the appropriate care of specific materials, including housekeeping, routine care, and preventive measures;
6. Record-keeping sections for work completed, costs, warranty cards, sample paint colors, and other pertinent material.

This information can be kept in one or more formats, such as a three-ring binder, file folders, or a computer database. It is important to keep the files current with completed work forms to facilitate long-term evaluations and planning for future work (Figure 2).

Proper maintenance depends on an organized plan with work prescribed in manageable components. Regular maintenance needs to be considered a priority both in terms of time allotted for inspections and for allocation of funding.

Maintenance work scheduling is generally based on a variety of factors, including the seriousness of the problem, type of work involved, seasonal appropriateness, product manufacturer's recommendations, and staff availability. There are other variables as well. For example, building materials and finishes on southern and western exposures will often weather faster than those on northern or eastern exposures. Horizontal surfaces facing skyward usually require greater maintenance than vertical ones; in regions with moderate or heavy rainfall, wood and other materials in prolonged shadow are subject to more rapid decay.

Maintenance costs can be controlled, in part, through careful planning, identification of the amount of labor required, and thoughtful scheduling of work. Maintenance schedules should take into account daily and seasonal activities of the property in order to maximize the uninterrupted time necessary to complete the work. Institutions generally need to budget annually between 2 and 4 percent of the replacement value of the building to underwrite the expense of full building maintenance.[2] Use of trained volunteers to undertake maintenance can help reduce costs.

Exterior inspections usually proceed from the roof down to the foundation, working on one elevation at a time, moving around the building in a consistent direction. On the interior, the attic, inside surfaces of exterior walls, and crawlspaces or basements should be examined for signs of potential or existing problems with the building envelope.

The following chart lists suggested inspection frequencies for major features associated with the building's exterior, based on a temperate four-season climate and moderate levels of annual rainfall. For areas of different climate conditions and rainfall, such as in the more arid southwest, the nature of building decay and frequency of inspections will vary. For buildings with certain inherent conditions, heavy use patterns, or locations with more extreme weather conditions, the frequency of inspections should be altered accordingly.

Note: All building features should be inspected after any significant weather event such as a severe rainstorm or unusually high winds.

Survey observations can be recorded on a standardized report form and photographs taken as a visual record. All deficient conditions should be recorded and placed on a written schedule to be corrected or monitored.

INSPECTION FREQUENCY CHART

Feature	Minimum Inspection Frequency	Season

Roof	Annually	Spring or fall; every 5 years by roofer
Chimneys	Annually	Fall, prior to heating season; every 5 years by mason
Roof Drainage	6 months; more frequently as needed	Before and after wet season, during heavy rain
Exterior Walls and Porches	Annually	Spring, prior to summer/fall painting season
Windows	Annually	Spring, prior to summer/fall painting season
Foundation and Grade	Annually	Spring or during wet season
Building Perimeter	Annually	Winter, after leaves have dropped off trees
Entryways	Annually; heavily used entries may merit greater frequency	Spring, prior to summer/fall painting season
Doors	6 months; heavily used entry doors may merit greater frequency	Spring and fall; prior to heating/cooling seasons
Attic	4 months, or after a major storm	Before, during and after wet season
Basement/Crawlspace	4 months, or after a major storm	Before, during and after rain season

Building Components

For purposes of this discussion, the principal exterior surface areas have been divided into five components and are presented in order from the roof down to grade. While guidance for inspection and maintenance is provided for each component, this information is very general in nature and is not indeed to be comprehensive in scope. Examples have been selected to address some typical maintenance needs and to help the reader avoid common mistakes.

Roofs/Chimneys

The roof is designed to keep water out of a building. Thus one of the principal maintenance objectives is to ensure water flows off the roof and into functional gutters and downspouts directly to grade and away from the building—and to prevent water from penetrating the attic, exterior walls, and basement of a building. (Note: Some buildings were designed without gutters and thus assessments must be made as to whether rain water is being properly addressed at the foundation and perimeter grade.) Keeping gutters and downspouts cleared of debris is usually high on the list of regular maintenance activities (Figure 3). Flashing around chimneys, parapets, dormers, and other appendages to the roof also merit regular inspection and appropriate maintenance when needed. The material covering the roof—wood shingles, slate, tile, asphalt, sheet metal, rolled roofing—requires maintenance both to ensure a watertight seal and to lengthen its service life; the type and frequency of maintenance varies with the roofing material. Older chimneys and parapets also require inspection and maintenance. With the exception of cleaning and minor repairs to gutters and downspouts, most roof maintenance work will necessitate use of an outside contractor.

Inspection

The functioning of gutters and downspouts can be safely observed from the ground during rainy weather and when winter ice has collected. Binoculars are a useful tool in helping to identify potential roofing problems from the same safe vantage point. Careful observation from grade helps to identify maintenance needs between close-up inspections by an experienced roofer. Observation from the building interior is also important to identify possible leak locations. When access can be safely gained to the roof, it is important to wear shoes with slip-resistant soles and to use safety ropes. Depending on the nature of the roof, some common conditions of concern to look for are:

- sagging gutters and split downspouts;
- debris accumulating in gutters and valleys;
- overhanging branches rubbing against the roof or gutters
- plant shoots growing out of chimneys;

- slipped, missing, cracked, bucking, delaminating, peeling, or broken roof coverings;
- deteriorated flashing and failing connections at any intersection of roof areas or of roof and adjacent wall;
- bubbled surfaces and moisture ponding on flat or low sloped roofs;
- evidence of water leaks in the attic;
- misaligned or damaged elements, such as decorative cresting, lightning rods, or antennas; and
- cracked masonry or dislodged chimney caps.

Figure 3. Keeping gutters clean of debris can be one of the most important cyclical maintenance activities. On this small one-story addition, a garden hose is being used to flush out the trough to ensure that the gutter and downspouts are unobstructed. Gutters on most small and medium size buildings can be reached with an extension ladder and a garden hose. Photo: Bryan Blundell.

Maintenance

- Remove leaves and other debris from gutters and downspouts. Utilize a ladder with a brace device, if necessary, to keep the ladder from crushing the gutter. Use a garden hose to flush out troughs and downspouts. Patch or repair holes in gutters using products such as fiberglass tape and epoxy adhesive in metal gutters. Avoid asphalt compounds since acidic material can cause further deterioration of metal gutters.
- Correct misaligned gutters and adjust, if necessary, so that water flows to drains and does not pond. If gutter edges sag, consider inserting wooden wedges between the fascia board and the back of the gutter to add support. Seal leaking seams or pinholes in gutters and elbows.
- Broom sweep branch or leaf debris away from shingles, valleys, and crickets, particularly around chimneys and dormers.
- Where mechanical equipment is mounted on flat or low-sloped roofs, ensure that access for maintenance can be provided without damaging the roof. Clean out trapped leaves and debris from around equipment base and consider adding a protective walkway for access.

Figure 4. Damage to roofs often requires immediate attention. As a temporary measure, this damaged roof tile could be replaced with a brown aluminum sheet wedged between the existing tiles. Photo: Chad Randl.

- Remove biological growth where it is causing erosion or exfoliation of roofing. Use low-pressure garden hose water and a natural or nylon scrubbing brush to remove such growth, scraping with a plastic putty knife or similar wood or plastic tool as needed on heavier buildup. Most growth is acidic and while there are products designed to kill spores, such as diluted chlorine bleach, they should be avoided. Even fairly weak formulas can still cause unexpected color changes, efflorescence, or over-splash damage to plantings or surfaces below the roof. Where appropriate, trim adjacent tree branches to increase sunlight on the roof since sunlight will deter further biological growth.
- Re-secure loose flashing at the dormers, chimneys or parapets. Clean out old mortar, lead, lead wool, or fastening material and make sure that flashing is properly inserted into reglet (slot) joints, taking care not to damage the substrate. Avoid installing new step flashing as a single metal component where multiple pieces are required to provide proper waterproofing. Also avoid attaching step flashing with mastic or sealant. Properly re-bed all step flashing. Use appropriate non-ferrous flashing metal or painted metal if needed. Since cap, step, valley, cricket, and apron flashings each have specific overlap and extension requirements, replacement flashing should match the existing material unless there has been a proven deficiency.
- Repoint joints in chimneys, parapet, or balustrade capping stones using a hydraulic lime mortar or other suitable mortar where the existing mortar has eroded or cracked, allowing moisture penetration. In general, a mortar that is slightly weaker than the adjacent masonry should be used. This allows trapped moisture in the masonry to migrate out through the mortar and not the masonry. Spalled masonry is often evidence of the previous use of a mortar mix that was too hard.
- Use professional services to repair chimneys and caps. Avoid the use of mortar washes on masonry since they tend to crack, allowing moisture to penetrate and promoting masonry spalling. Repoint masonry with a durable mortar that is slightly weaker than the adjacent masonry. Slope the masonry mortar cap to insure drainage away from the flue. If a chimney rain cap is installed, ensure adequate venting and exhaust.

- As a temporary measure, slip pieces of non-corrosive metal flashing under or between damaged and missing roofing units until new slate, shingles, or tile can be attached. Repair broken, missing or damaged roofing units with ones that match. Follow roofing supplier and industry guidance on inserting and attaching replacement units (Figure 4). Avoid using temporary asphalt patches as it makes a proper repair difficult later on.
- For long-term preservation of wooden shingle roofs coated with a preservative, recoat every few years following the manufacturer's recommendations. Be aware of environmental considerations.
- Scrape and repaint selected areas of coated ferrous metal roofing as needed; repaint on a regularly scheduled basis. Ferrous metal roofs can last a long time if painted regularly. Alkyd coatings are generally used on metal roofs; be sure to wash and properly prepare the area beforehand. Environmental regulations may restrict the use of certain types of paints. Apply the coating system in accordance with manufacturer's recommendations. Prepare the surface prior to application to obtain good adhesion with the prime coat. Apply both a prime coat and a topcoat for good bonding and coverage; select primer and topcoat products from the same manufacturer.
- Re-secure loose decorative elements, such as finials and weathervanes. Seek professional advice if decorative elements exhibit considerable corrosion, wood rot, or structural instability. Small surface cracks may benefit from a flexible sealant to keep moisture out; sealants have a limited life and require careful inspection and periodic replacement (Figure 5).

Figure 5. The use of a sealant to close an exposed joint is not always an effective long-term solution. Where this decorative wood element connects to the slate roof, the sealant has failed within a short time and a proper metal flashing collar is being fitted instead. Photo: Bryan Blundell.

Figure 6. Stucco applied to an exterior wall or foundation was intended to function as a watertight surface. Unless maintained, rainwater will penetrate open joints and cracks that may occur over time. A spa lied section of stucco indicates some damage has occurred and a wooden mallet is being used to tap the surface to determine whether the immediate stucco has lost adhesion. Photo: Bryan Blundell.

Exterior Walls

Exterior walls are designed to help prevent water infiltration, control air infiltration, and serve as a barrier for unwanted animals, birds and insects. The primary maintenance objective is to keep walls in sound condition and to prevent water penetration, insect infestation, and needless decay (Figure 6). Depending on the materials and construction methods, walls should have an even appearance, free from unwanted cracks, and should be able to shed excess moisture. Where surfaces are significantly misaligned or where there are bulging wall sections or cracks indicative of potential structural problems, seek professional guidance as to the cause of distress and appropriate corrective measures. Wood-frame construction generally will require more frequent maintenance than buildings constructed of brick, stone, or terra cotta (Figure 7).

Inspections

It is best to inspect walls during dry as well as wet weather. Look for moisture patterns that may appear on the walls after a heavy or sustained rainfall or snow, recording any patterns on elevation drawings or standard recording forms. Monitoring the interior wall for moisture or other potential problems is important as well. Look for movement in cracks, joints, and around windows and doors and try to establish whether movement is seasonal in nature (such as related to shrinkage of wood during dry weather) or signs of an ongoing problem. For moderate size buildings, a ladder or mechanical lift may be necessary, though in some cases the use of binoculars and observations made from windows and other openings will be sufficient. When examining the walls, some common conditions of concern to look for are:

- Misaligned surfaces, bulging wall sections, cracks in masonry units, diagonal cracks in masonry joints, spalling masonry, open joints, and nail popping;
- Evidence of wood rot, insect infestation, and potentially damaging vegetative growth;
- Deficiencies in the attachment of wall mounted lamps, flag pole brackets, signs, and similar items;
- Potential problems with penetrating features such as water spigots, electrical outlets, and vents;

- Excessive damp spots, often accompanied by staining, peeling paint, moss, or mold; and
- General paint problems (Figure 8).

Figure 7. One of the advantages of wood shingles as a wall covering is that individual shingles that are damaged can easily be replaced. On this highly exposed corner, worn shingles have been selectively replaced to help safeguard against water damage. The new shingles will be stained to match the existing shingles.

Maintenance

- Trim tree branches away from walls. Remove ivy and tendrils of climbing plants by first cutting at the base of the vine to allow tendrils to die back, and later using a plastic scraper to dislodge debris and an appropriate digging tool to dislodge and remove root systems. Be cautious if using a commercial chemical to accelerate root decay; follow safety directions and avoid contact of chemicals with workers and wall materials.
- Wash exterior wall surfaces if dirt or other deposits are causing damage or hiding deterioration; extend scheduled times for cleaning for cosmetic purposes to reduce frequency (Figure 9). When cleaning, use the gentlest means possible; start with natural bristle brushes and water and only add a mild phosphate-free detergent if necessary. Use non-abrasive cleaning methods and low-pressure water from a garden hose. For most building materials, such as wood and brick, avoid abrasive methods such as mechanical scrapers and high-pressure water or air and such additives as sand, natural soda, ice crystals, or rubber products. All abrasives remove some portion of the surface and power-washing drives excessive moisture into wall materials and even into wall cavities and interior walls. If using a mild detergent, two people are recommended, one to brush and one to prewet and rinse. When graffiti or stains are present, consult a preservation specialist who may use poultices or mild chemicals to remove the stain. If the entire building needs cleaning other than described above, consult a specialist.
- Repoint masonry in areas where mortar is loose or where masonry units have settled. Resolve cause of cracks or failure before resetting units and repointing. Rake out joints by hand, generally avoiding rotary saws or drills, to a depth of 2 ½ times the width of the joint (or until sound mortar is encountered), to make sure that fresh mortar will not pop out. Repointing mortar should be lime-rich and formulated to be slightly weaker than the masonry units and to match the historic mortar in color, width, appearance, and tooling. Off-the-shelf pre-mixed cement mortars are not appropriate for most historic buildings. Avoid use of joint sealants in place of mortar on vertical masonry wall surfaces, as they are not breathable and can lead to moisture-related damage of the adjacent masonry (Figure 10).

Figure 8. The paint on the siding of this south-facing wall needs to be scraped, sanded, primed and repainted. Postponing such work will lead to further paint failure, require greater preparatory costs, and could even result in the need to replace some siding. Photo: Charles Fisher.

- Correct areas that trap unwanted moisture. Damaged bricks or stone units can sometimes be removed, turned around, and reset, or replaced with salvaged units. When using traditional or contemporary materials for patching wood, masonry, metal, or other materials, ensure that the materials are compatible with the substrate; evaluate strength, vapor permeability, and thermal expansion, as well as appearance.
- When patching is required, select a compatible patch material. Prepare substrate and install patch material according to manufacturer's recommendations; respect existing joints. Small or shallow surface defects may not require patching; large or deep surface defects may be better addressed by installation of a dutchman unit than by patching.
- Where a damaged area is too large to patch, consider replacing the section with in-kind material. For stucco and adobe materials, traditional patching formulas are recommended.
- When temporarily removing wood siding to repair framing or to tighten corner boards and loose trim, reuse the existing siding where possible. Consider using stainless steel or high strength aluminum nails as appropriate. Putty or fill nail holes flush with siding prior to repainting. Back-prime any installed wood with one coat of primer and coat end grain that might be exposed with two coats of primer.
- Prepare, prime, and spot paint areas needing repainting. Remember that preparation is the key to a successful long

Figure 9. To help extend a repainting cycle, dirt and spider webs should be removed before permanent staining occurs. In this case, a natural bristle brush and a soft damp cloth are being used to remove insect debris and refresh the surface appearance.

lasting paint job. Ensure beforehand the compatibility of new and existing paints to avoid premature paint failure. Remove loose paint to a sound substrate; sand or gently rough surface if needed for a good paint bond; wipe clean; and repaint with appropriate primer and topcoats. Follow manufacturer's recommendations for application of coatings, including temperature parameters for paint application. Use top quality coating materials. Generally paint when sun is not shining directly onto surfaces to be painted.

- Remove deteriorated caulks and sealants, clean, and reapply appropriate caulks and sealants using backer rods as necessary. Follow manufacturer's instructions regarding preparation and installation.
- Correct deficiencies in any wall attachments such as awning and flag pole anchors, improperly installed electrical outlets, or loose water spigots.

Openings

Exterior wall openings primarily consist of doors, windows, storefronts, and passageways. The major maintenance objectives are to retain the functioning nature of the opening and to keep in sound condition the connection between the opening and the wall in order to reduce air and water infiltration.

Figure 10. Repointing of masonry should usually be approached as repair rather than maintenance work in part because of the need for a skilled mason familiar with historic mortar. In this case, a moisture condition was not corrected and the use of a waterproof coating and off-the-shelf Portland cement mortar trapped water and resulted in further damage to these 19th century bricks. Photo: NPS files

Inspection

Wall openings are typically inspected from inside as well as out. Examinations should include the overall material condition; a check for unwanted water penetration, insect infiltration, or animal entry; and identification of where openings may not be properly functioning. Frames should be checked to make sure they are not loose and to ascertain whether the intersection between the wall and the frame is properly sealed. Secure connections of glazing to sash and between sash and frames are also important. Particular attention should be placed on exposed horizontal surfaces of storefronts and window frames as they tend to deteriorate much faster than vertical surfaces. Inspections should identify:

- loose frames, doors, sash, shutters, screens, storefront components, and signs that present safety hazards;
- slipped sills and tipped or cupped thresholds;
- poorly fitting units and storm assemblies, misaligned frames, drag marks on thresholds from sagging doors and storm doors;
- loose, open, or decayed joints in door and window frames, doors and sash, shutters, and storefronts;
- loose hardware, broken sash cords/chains, worn sash pulleys, cracked awning, shutter and window hardware, locking difficulties, and deteriorated weatherstripping and flashing;
- broken/cracked glass, loose or missing glazing and putty;
- peeling paint, corrosion or rust stains; and
- window well debris accumulation, heavy bird droppings, and termite and carpenter ant damage.

Maintenance

- Replace broken or missing glass as soon as possible; in some cases cracked glass may be repaired using specialty glues. For historic crown glass and early cylinder glass, a conservation approach should be considered to repair limited cracks. Where panes with a distinct appearance are missing, specialty glass should be obtained to match, with sufficient inventory kept for future needs. Avoid using mechanical devices to remove old putty and match historic putty bevels or details when undertaking work.
- Reputty window glazing where putty is deteriorated or missing. Take care in removing putty so as not to crack or break old glass or damage muntins and sash frames. Re-glaze with either traditionally formulated oil putties or modern synthetic ones, making sure to properly bed the glass and secure with glazing points (Figure 11).

- Clean window glass, door glazing, storefronts, transom prism lights, garage doors, and storm panels using a mild vinegar and water mixture or a non-alkaline commercial window cleaner. Be cautious with compounds that contain ammonia as they may stain brass or bronze hardware elements if not totally removed. When using a squeegee blade or sponge, wipe wet corners with a soft dry cloth. Avoid high-pressure washes.
- Clean handles, locks and similar hardware with a soft, damp cloth. Use mineral spirits or commercial cleaners very sparingly, as repeated use may remove original finishes. Most metal cleaners include ammonia that can streak and stain metal, so it is important to remove all cleaning residue. Polished hardware subject to tarnishing or oxidation, particularly doorknobs, often benefits from a thin coat of paste wax (carnauba), hand buffed to remove extra residue. Avoid lacquer finishes for high use areas, as they require more extensive maintenance. Patinated finishes should not be cleaned with any chemicals, since the subtle aged appearance contributes to the building's character.

Figure 11. Glazing putty should be maintained in sound condition to prevent unwanted air infiltration and water damage. New glazing putty should be pulled tight to the glass and edge of the wood, creating a clean bevel that matches the historic glazing

- Remove and clean hardware before painting doors and windows; reinstall after the paint has dried.
- Tighten screws in doorframes and lubricate door hinges, awning hardware, garage door mechanisms, window sash chains, and pulleys using a graphite or silicone type lubricant.
- Check weather stripping on doors and windows and adjust or replace as necessary. Use a durable type of weather stripping, such as spring metal or high quality synthetic material, avoiding common brush and bulb or pile weather stripping that require more frequent replacement.
- Adjust steel casement windows as needed for proper alignment and tight fit. Avoid additional weather stripping as this may lead to further misalignment, creating pathways for air and water infiltration.
- Check window sills for proper drainage. Fill cracks in wood sills with a wood filler or epoxy. Follow manufacturer's instructions for preparation and installation. Do not cover over a wood sill with metal panning, as it may trap moisture and promote decay.
- Repair, prime, and repaint windows, doors, frames, and sills when needed. Clean out putty debris and paint chips from windows using a wet paper towel and dispose of debris prior to repair or repainting. Take appropriate additional precautions when removing lead-based paint. Sand and prepare surfaces and use material-specific patching compounds to fill any holes or areas collecting moisture (Figure 12). Avoid leaving exposed wood unpainted for any length of time, as light will degrade the wood surface and lead to premature failure of subsequent paint applications. Immediately prime steel sash after paint is removed and the substrate prepared for repainting.
- Adjust wood sash that bind when operated. Apply beeswax, paraffin, or similar material to tracks or sash runs for ease of movement. If sash are loose, replace worn parting beads. Sash runs traditionally were unpainted between the stop and parting bead; removing subsequent paint applications will often help improve sash operation.
- Correct perimeter cracks around windows and doors to prevent water and air infiltration. Use traditional material or modern sealants as appropriate. If fillers such as lead wool have been used, new wool can be inserted with a thin blade tool, taking care to avoid damage to adjacent trim. Reduce excess air infiltration around windows by repairing and lubricating sash locks so that windows close tightly.
- Remove debris beneath window air conditioning units and ensure that water from units does not drain onto sills or wall surfaces below (Figure 13). Removal of air conditioning units when not in season is recommended.
- Adjust storm panels and clean weep holes; check that weep holes at the bottom of the panels are open so water will not be trapped on the sill. Exterior applied storm windows are best attached using screws and not tightly adhered with sealant. Use of sealant makes storm units difficult to remove for maintenance and can contribute to moisture entrapment if weep holes become clogged.
- Remove weakened or loose shutters and store for later repair. Consider adding a zinc or painted metal top to shutters as a protective cap to cover the wood's exposed end grain. This will extend the life of the shutters.

Figure 12. Good surface preparation is essential for long lasting paint. Scraping loose paint, filling nail holes and cracks, sanding, and wiping with a damp cloth prior to repainting are all important steps whether touching up small areas or repainting an entire feature. Always use a manufacturer's best quality paint. Windows and shutters may need repainting every five to seven years, depending on exposure and climate.

Figure 13. Window air conditioning units can cause damage to surfaces below when condensation drips in an uncontrolled manner. Drip extension tubes can sometimes be added to direct the discharge.

Contracting Maintenance and Repair Work

Many contractors are very proficient in using modern construction methods and materials; however, they may not have the experience or skill required to carry out maintenance on historic buildings. The following are tips to use when selecting a contractor to work on your historic building:

1. Become familiar with work done on similar historic properties in your area so that you can obtain names of possible preservation contractors.
2. Be as specific as possible in defining the scope of work you expect to undertake.
3. Ask potential contractors for multiple references (three to five) and visit previous work sites. Contact the building owner or manager and ask how the job proceeded; if the same work crew was retained from start to finish; if the workers were of a consistent skill level; whether the project was completed in a reasonable time; and whether the person would use the contractor again.
4. Be familiar with the preservation context of the work to be undertaken. Use the written procedures in your maintenance plan to help define the scope of work in accordance with preservation standards and guidelines. Always request that the gentlest method possible be used. Use a preservation consultant if necessary to ensure that the work is performed in an appropriate manner.
5. Request in the contract proposal a detailed cost estimate that clearly defines the work to be executed, establishes the precautions that will be used to protect adjoining materials, and lists specific qualified subcontractors, if any, to be used.
6. Insure that the contractor has all necessary business licenses and carries worker compensation.

Projections

Numerous projections may exist on a historic building, such as porches, dormers, skylights, balconies, fire escapes, and breezeways. They are often composed of several different materials and may include an independent roof. Principal maintenance objectives include directing moisture off these features and keeping weathered surfaces in good condition. Secondary projections may include brackets, lamps, hanging signs, and similar items that tend to be exposed to the elements.

Inspection

In some cases, projections are essentially independent units of a building and so must be evaluated carefully for possible settlement, separation from the main body of the building, and materials deterioration. Some electrical features may require inspection by a electrician or service technician. Common conditions of concern to look for are:

- damaged flashing or tie-in connections of projecting elements;
- misaligned posts and railings;
- deteriorated finishes and materials, including peeling paint, cupped and warped decking, wood deterioration, and hazardous steps;
- evidence of termites, carpenter ants, bees, or animal pests (Figure 14);
- damaged lamps, unsafe electrical outlets or deteriorated seals around connections;
- loose marker plaques, sign, or mail boxes; and
- rust and excessive wear of structural, anchorage, and safety features of balconies and fire escapes.

Figure 14. When inspecting connections between projections and the main building, look for areas where birds, bees and pests may enter or nest. Birds have been nesting in this porch roof and the area is being cleaned of their debris. Where an opening exists, it may be necessary to cover it with a trim piece, screening, or sealant. Photo: Bryan Blundell

Maintenance

- Selectively repair or replace damaged roofing units on porches and other projections. Ensure adequate drainage away from the building. Repair flashing connections as needed; clean and seal open joints as appropriate.
- Secure any loose connections, such as on porch rails or fire escapes.
- Maintain ferrous metal components by following manufacturer's recommendation for cleaning and repainting. Remove rust and corrosion from porch handrails, balconies, fire escapes, and other metal features; prepare, prime, and repaint using a corrosion-inhibitive coating system. Apply new primer before new corrosion sets in, followed by new topcoat. Take appropriate safety measures when dealing with existing lead-based paint and in using corrosion-removal products (Figure 15).
- Reattach loose brackets, lamps, or signs. With electrical boxes for outlets or lighting devices, ensure that cover plates are properly sealed. Prime and paint metal elements as needed.
- Keep porch decks and steps free from dust, dirt, leaf debris, and snow as soon at it accumulates using a broom or plastic blade shovel.
- Repair areas of wood decay or other damage to railings, posts, and decorative elements. Repair with wood dutchman, wood putty, or epoxy filler, as appropriate; replace individual elements as needed. Prime and repaint features when necessary and repaint horizontal surfaces on a more frequent basis.

Figure 15. Metal projecting elements on a building, such as sign armatures and railings, are easily subject to rust and decay. Proper surface preparation to remove rust is essential. Special metal primers and topcoats should be use

- Sand and repaint porch floorboards to keep weather surfaces protected. The exposed ends of porch floorboards are especially susceptible to decay and may need to be treated every year or two.
- Carefully cut out damaged or buckled porch flooring and replace with wood to match. Back-prime new wood that is being installed; treat end grain with wood preservative and paint primer. Ensure that new wood is adequately kiln or air-dried to avoid shrinkage and problems with paint adherence.
- Repair rotted stair stringers; adjust grade or add stone pavers at stair base to keep wooden elements from coming into direct contact with soil.
- Consider durable hardwoods for replacement material where beading, chamfering, or other decorative work is required in order to match existing features being replaced. Although appropriate for certain applications, pressure treated lumber is hard to tool and may inhibit paint adherence if not allowed to weather prior to coating application.

- Clean out any debris from carpenter bees, ants, termites, and rodents, particularly from under porches. Replace damaged wood and add screening or lattice to discourage rodents. Consider treating above ground features with a borate solution to deter termites and wood rot and repaint exposed surfaces.

Foundations and Perimeter Grades

The foundation walls that penetrate into the ground, the piers that support raised structures, and the ground immediately around a foundation (known as grade) serve important structural functions. To help sustain these functions, it is important that there is good drainage around and away from the building. The maintenance goal is to prevent moisture from entering foundations and crawl spaces and damaging materials close to the grade, and to provide ventilation in damp areas.

Inspection

Inspections at the foundation should be done in conjunction with the inspection of the downspouts to ensure that water is being discharged a sufficient distance from the building perimeter to avoid excessive dampness in basements or crawl spaces. In addition, crawl spaces should be adequately vented to deter mold and decay and should be screened or otherwise secured against animals. Look for:

- depressions or grade sloping toward the foundation; standing water after a storm;
- material deterioration at or near the foundation, including loss of mortar in masonry, rotting wood clapboards, or settlement cracks in the lower sections of wall;
- evidence of animal or pest infestation;
- vegetation growing close to the foundation, including trees, shrubs and planting beds;
- evidence of moisture damage from lawn and garden in-ground sprinkler systems;
- evidence of moss or mold from damp conditions or poorly situated downspout splash blocks (Figure 16); and
- blocked downspout drainage boots or clogged areaway grates.

Figure 16. This chronically wet area has a mildew bloom brought on by heat generated from the air-conditioning condenser unit. The dampness could be caused be a clogged roof gutter, improper grading, or a leaking hose bibb.

Maintenance

- Remove leaves and other debris from drains to prevent accumulation. Detach drain grates from paved areas and extract clogged debris. Flush with a hose to ensure that there is no blockage. Use a professional drain service to clear obstructions if necessary.
- Conduct annual termite inspections. Promptly address termite and other insect infestations. Use only licensed company for treatment where needed.
- Keep the grade around the foundation sloping away from the building. Add soil to fill depressions particularly around downspouts and splash blocks. Make sure that soil does not come too close to wooden or metal elements. A 6” separation between wooden siding and the grade is usually recommended.
- Avoid use of mulching material immediately around foundations as such material may promote termite infestation, retain moisture or change existing grade slope.
- Reset splash blocks at the end of downspouts or add extender tubes to the end of downspouts as necessary (Figure 17).
- Lubricate operable foundation vent grilles to facilitate seasonal use; paint as needed.
- Manage vegetation around foundations to allow sufficient air movement for wall surfaces to dry out during damp periods. Trim plantings and remove weeds and climbing vine roots. Be careful not to scar foundations or porch piers with grass or weed cutting equipment. If tree roots appear to be damaging a foundation wall, consult an engineer as well as a tree company.
- Wash off discoloration on foundations caused by splash-back, algae, or mildew. Use plain water and a soft natural or nylon bristle brush. Unless thoroughly researched and tested beforehand on a discreet area of the wall, avoid chemical

products that may discolor certain types of stone. If cleaning products are used, test beforehand in a discreet area; and avoid over splash to plantings and adjacent building materials.

- Selectively repoint unit masonry as needed. Follow guidance under the wall section in regard to compatible mix, appearance, and texture for pointing mortar.
- Avoid using salts for de-icing and fertilizers with a high acid or petro-chemical content around foundations, as these materials can cause salt contamination of masonry. Use sand or organic materials without chloride additives that can damage masonry. Where salt is used on icy walks, distribute it sparingly and sweep up residual salt after walks have dried.
- Use snow shovels and brooms to clean snow from historic paths and walkways. Avoid blade-type snow removers as they may chip or abrade cobblestones, brick, or stone paving. Note that use of steel snow removal tools in areas where salt-containing snow melters are used may result in rust staining from steel fragments left on the paving.

Sealants and Caulks

Using sealants and caulks has become a familiar part of exterior maintenance today. As the use of precision joinery and certain traditional materials to render joints more weathertight has waned in recent years, caulks and more often elastomeric sealants are used to seal cracks and joints to keep out moisture and reduce air infiltration. Where cracks and failing joints are indicators of a serious problem, sealants and caulks may be used as a temporary measure. In some cases they may actually exacerbate the existing problem, such as by trapping moisture in adjacent masonry, and lead to more costly repairs.

Manufacturer's recommendations provide instructions on the proper application of caulks and sealants. Special attention should be placed on ensuring that the subsurface or joint is properly prepared and cleaned. Backer rods may be necessary for joints or cracks. Tooling of the caulk or sealant is usually necessary to ensure contact with all edge surfaces and for a clean and consistent appearance.

Caulks generally refer to older oil resin-based products, which have relatively limited life span and limited flexibility. Contemporary elastomeric sealants are composed of polymer synthetics. Elastomeric sealants are more durable than caulks and have greater flexibility and wider application. Caulks and sealants can become maintenance problems, as they tend to deteriorate faster than their substrates and must be replaced periodically as a part of cyclical maintenance of the structure.

The selection criteria for caulks and sealants include type of substrate, adhesion properties, size and configuration of joint, intended appearance/color and paintability, movement characteristics, and service life. Both one-part and two-part sealants are available; the latter require mixing as part of the application process. Sealants are commonly used for a variety of places on the exterior of a building such as around windows and doors, at interfaces between masonry and wood, between various wood features or elements, and at attachments to or through walls or roofs, such as with lamps, signs, or exterior plumbing fixtures. Their effectiveness depends on numerous factors including proper surface preparation and application. Applications of sealants and caulks should be examined as part of routine maintenance inspection, irrespective of their projected life expectancy.

Installation of caulks and sealants often can be undertaken by site personnel. For large and more complex projects, a contactor experienced in sealant installation may be needed. In either case, the sealant manufacturer should be consulted on proper sealant selection, preparation, and installation procedures.

Summary and References

Maintenance is the most important preservation treatment for extending the life of a historic property. It is also the most cost effective. Understanding the construction techniques of the original builders and the performance qualities of older building materials, using traditional maintenance and repair methods, and selecting in-kind materials where replacements are needed will help preserve the building and its historic character.

Maintenance can be managed in small distinct components, coordinated with other work, and scheduled over many years to ensure that materials are properly cared for and their life span maximized. A written maintenance plan is the most effective way to organize, schedule, and guide the work necessary to properly care for a historic building. The maintenance plan should include a description of the materials and methods required for each task, as well as a schedule

for work required for maintenance of different building materials and components.

Historic house journals, maintenance guides for older buildings, preservation consultants, and preservation maintenance firms can assist with writing appropriate procedures for specific properties. Priorities should be established for intervening when unexpected damage occurs such as from broken water pipes or high winds. Worker safety should always be paramount. When work is beyond the capabilities of in-house personnel and must be contracted, special efforts should be made to ensure that a contractor is both experienced in working with historic buildings and utilizes appropriate preservation treatments.

A well-maintained property is a more valuable property and one that will survive as a legacy for generations to come.

Figure 17. Extending downspouts at their base is one of the basic steps to reduce dampness in basements, crawl spaces and around foundations. Extensions should be buried, if possible, for aesthetics, ease of lawn care, and to avoid creating a tripping hazard. Photo: NPS files.

Endnotes

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Acknowledgements

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