

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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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

Wareham Community Preservation Committee

Angela Dunham, Chair – Historical Comm
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George Barrett – Planning Board

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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.



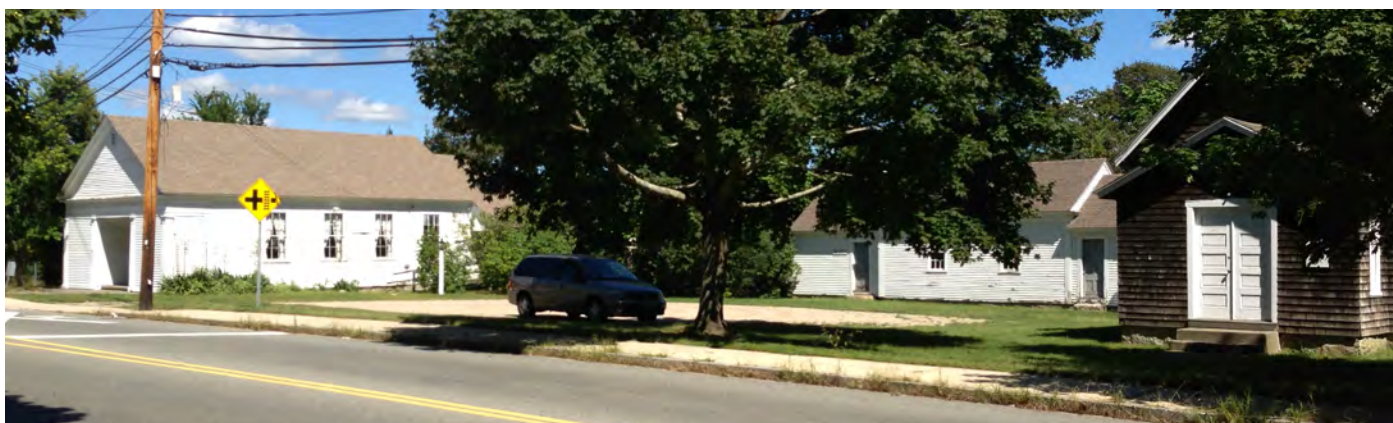
PART I – EXECUTIVE SUMMARY



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

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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.

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.

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.

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.



Great Neck Union Chapel



Old District School No. 6



Old Methodist Meeting House



Fearing Tavern



Captain John Kendrick House



EXECUTIVE SUMMARY

Methodology

Representatives from both D&V 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&V Architects annotated these drawing to describe the scope of work necessary for the restoration and repair of each of the five buildings.

D&V 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&V 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 building'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



EXECUTIVE SUMMARY

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 regularly (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 interior 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. Despite 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



EXECUTIVE SUMMARY

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 stabilization 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



EXECUTIVE SUMMARY

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.massculturalcouncil.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



PART II - GREAT NECK UNION CHAPEL



chapel interior

PART II – GREAT NECK UNION CHAPEL

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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).

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).

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-1 Hip roof at east end of Chapel



UC-2 South side of Chapel



UC-3 Chapel entrance



UC-4 Stone foundation



UC-5 Basement window replacement



GREAT NECK UNION CHAPEL - ARCHITECTURAL SURVEY

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).

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.

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).



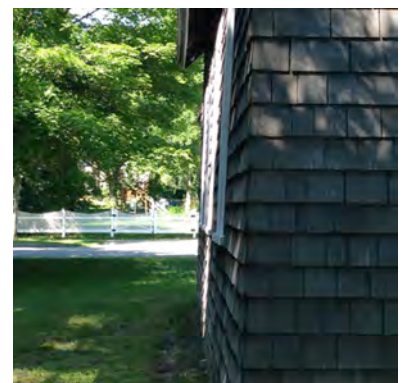
UC-6 Bulk head door



UC-7 Pitch grade away from foundation



UC-8 Entry vestibule & sanctuary



UC-9 Wall racking



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).

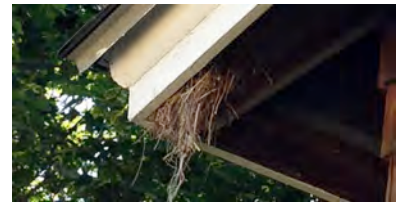
There are signs of water infiltration around the small brick chimney at the southwest corner of the sanctuary (UC-12). The flashing should be carefully inspected and replaced to eliminate any source of water. The interior plaster has many cracks, typical for a building of this age (UC-13). These can 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-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-15 Leaded glass windows



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



GREAT NECK UNION CHAPEL - ARCHITECTURAL SURVEY

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.

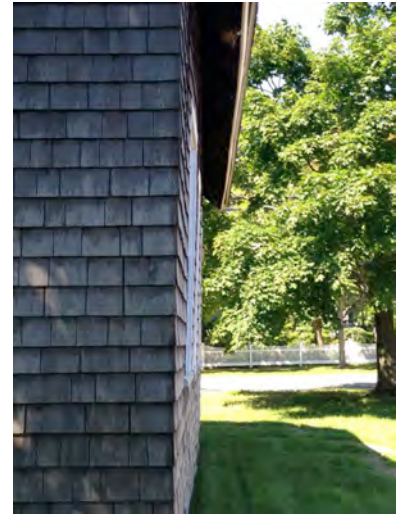
Sister every other 2x6 and 2x8 floor joist with a new 2x6 LVL.

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).

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



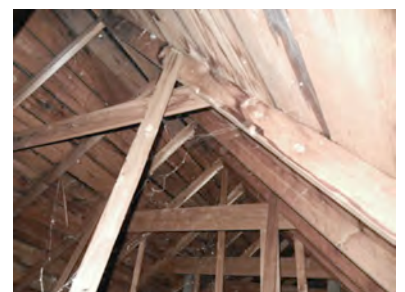
UC-21 North wall of Chapel



UC-22 Top plate of south wall



UC-23 Existing roof & ceiling framing



UC-24 Existing roof framing



GREAT NECK UNION CHAPEL - ARCHITECTURAL SURVEY

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.

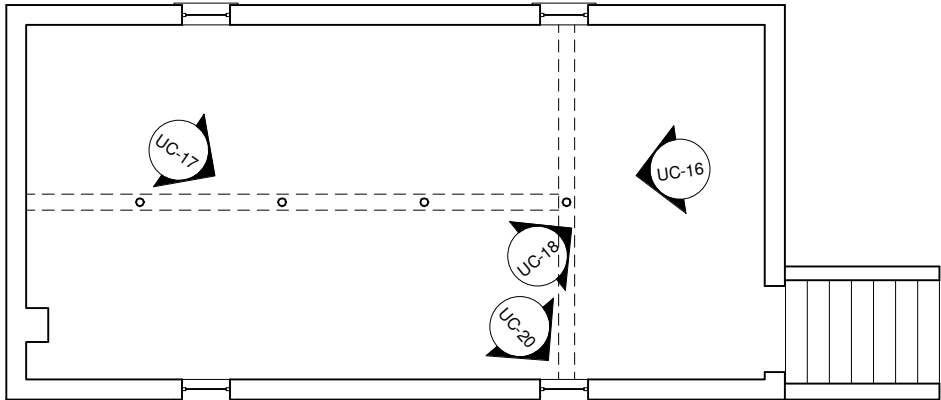
Wareham Historical Society - Historic Buildings Survey

Wareham, Massachusetts

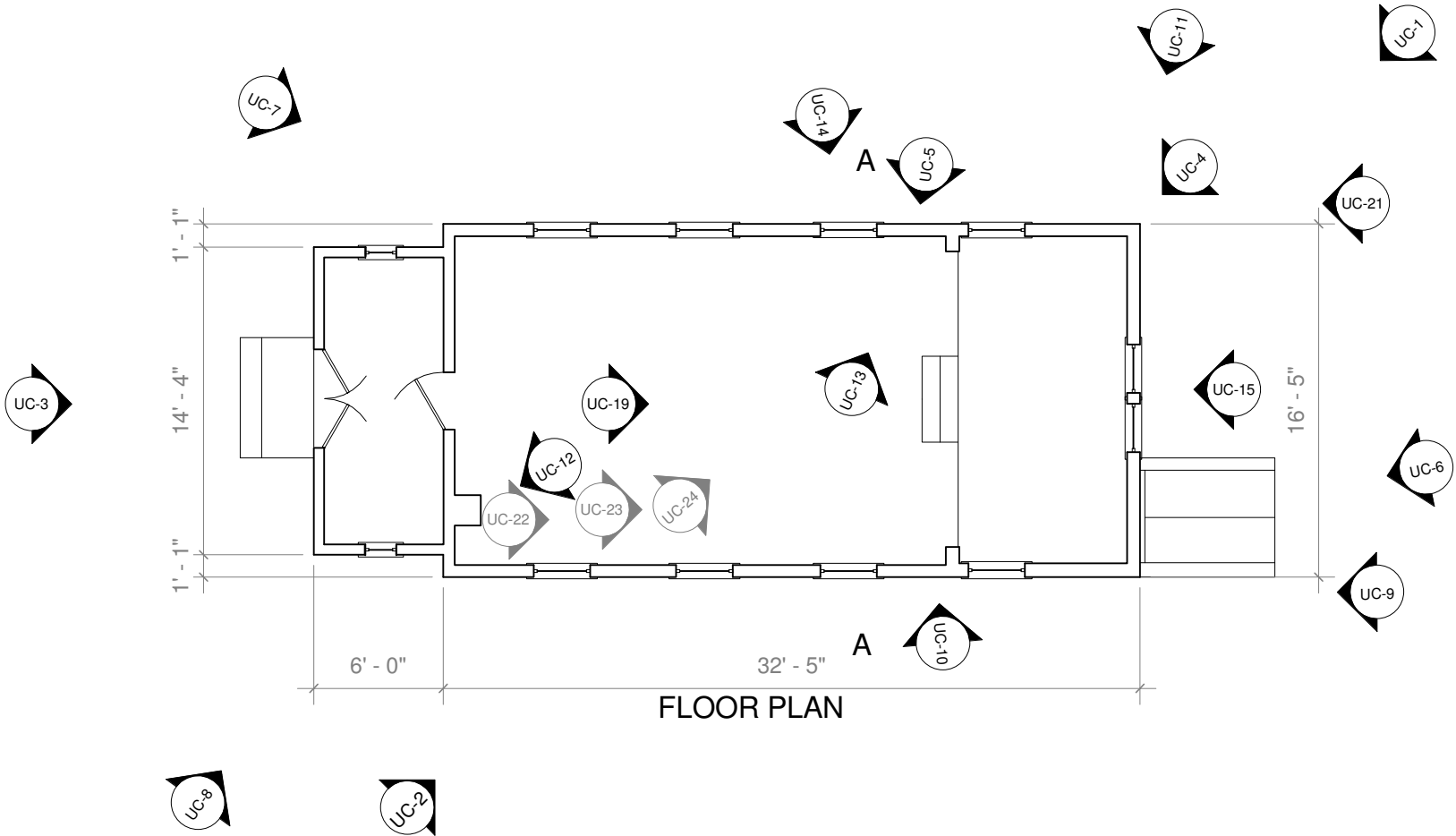
October 21, 2013

KEY NOTES

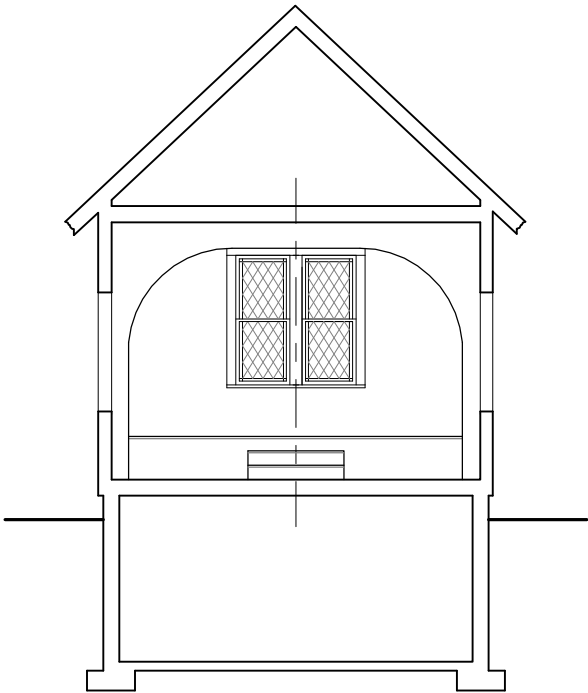
- A. Scrape, sand, prime & paint all existing wood siding
- B. Scrape, sand, prime & paint all existing wood trim
- C. Scrape, sand, prime & paint all existing wood doors
- D. Scrape, sand, prime & paint all existing wood windows
- E. Repair/replace wood shingle siding in this area
- F. Repair/replace 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
- K₁ Repair wood window
- K₂ 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



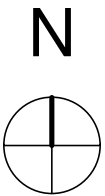
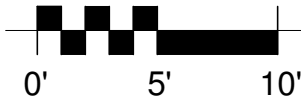
A
BASEMENT PLAN



FLOOR PLAN



SECTION A-A



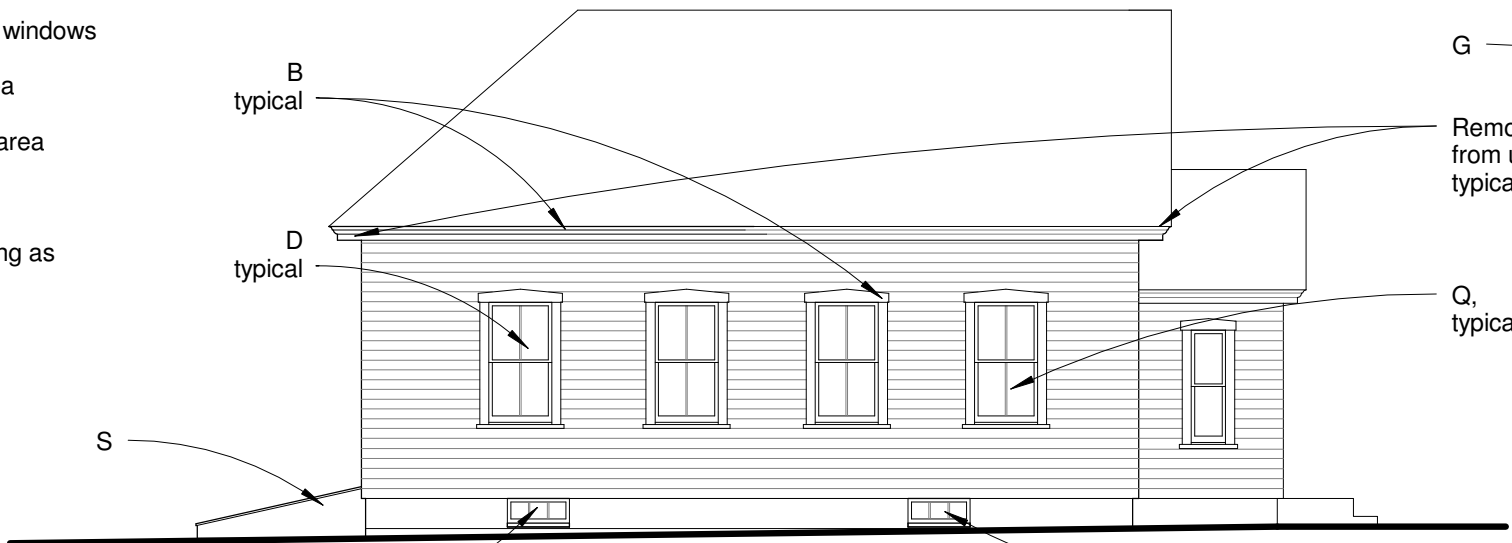
Wareham Historical Society - Historic Buildings Survey

Wareham, Massachusetts

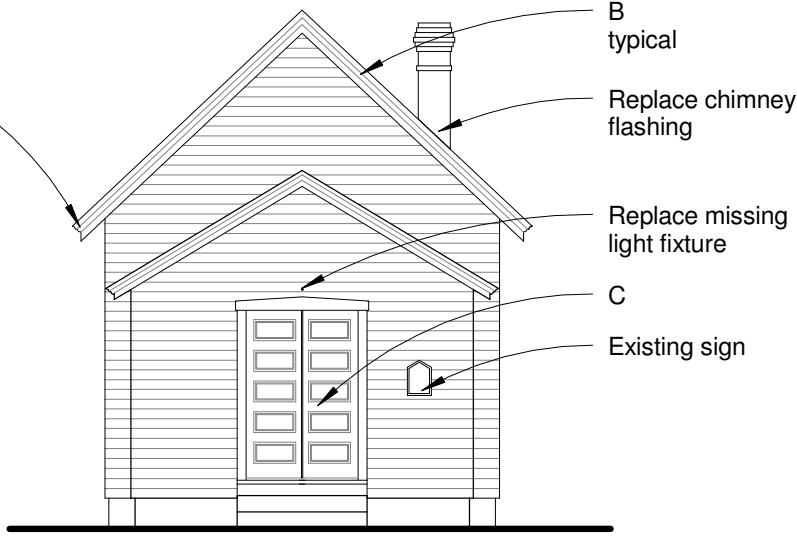
October 21, 2013

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
- K₁ Repair wood window
- K₂ 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



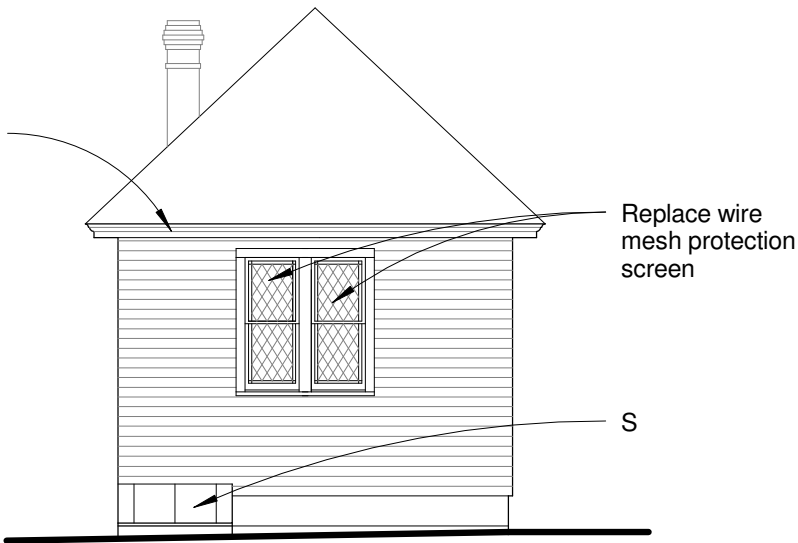
NORTH ELEVATION



WEST ELEVATION



SOUTH ELEVATION



EAST ELEVATION

DURLAND • VAN VOORHIS



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
<u>GC OHP @ 15%</u>			<u>\$3,128 –</u>	<u>4,980</u>
ESTIMATED CONSTRUCTION COST			\$23,978 –	38,180
A/E Fees @ 15%			\$3,597 –	5,727
Clerk				
Printing, Testing & Misc.				
<u>Construction Contingency @ 20%</u>			<u>\$4,796 –</u>	<u>7,636</u>
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

Architectural Survey	26
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Annual Maintenance Plan	33



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.

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.

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-1 View facing east from parking lot



DS-2 Overgrown plantings at north end



DS-3 Masonry veneer wraps SW corner



DS-4 Missing masonry joint at storage addition



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



OLD DISTRICT SCHOOL NO. 6 - ARCHITECTURAL SURVEY

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



OLD DISTRICT SCHOOL NO. 6 - ARCHITECTURAL SURVEY

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.

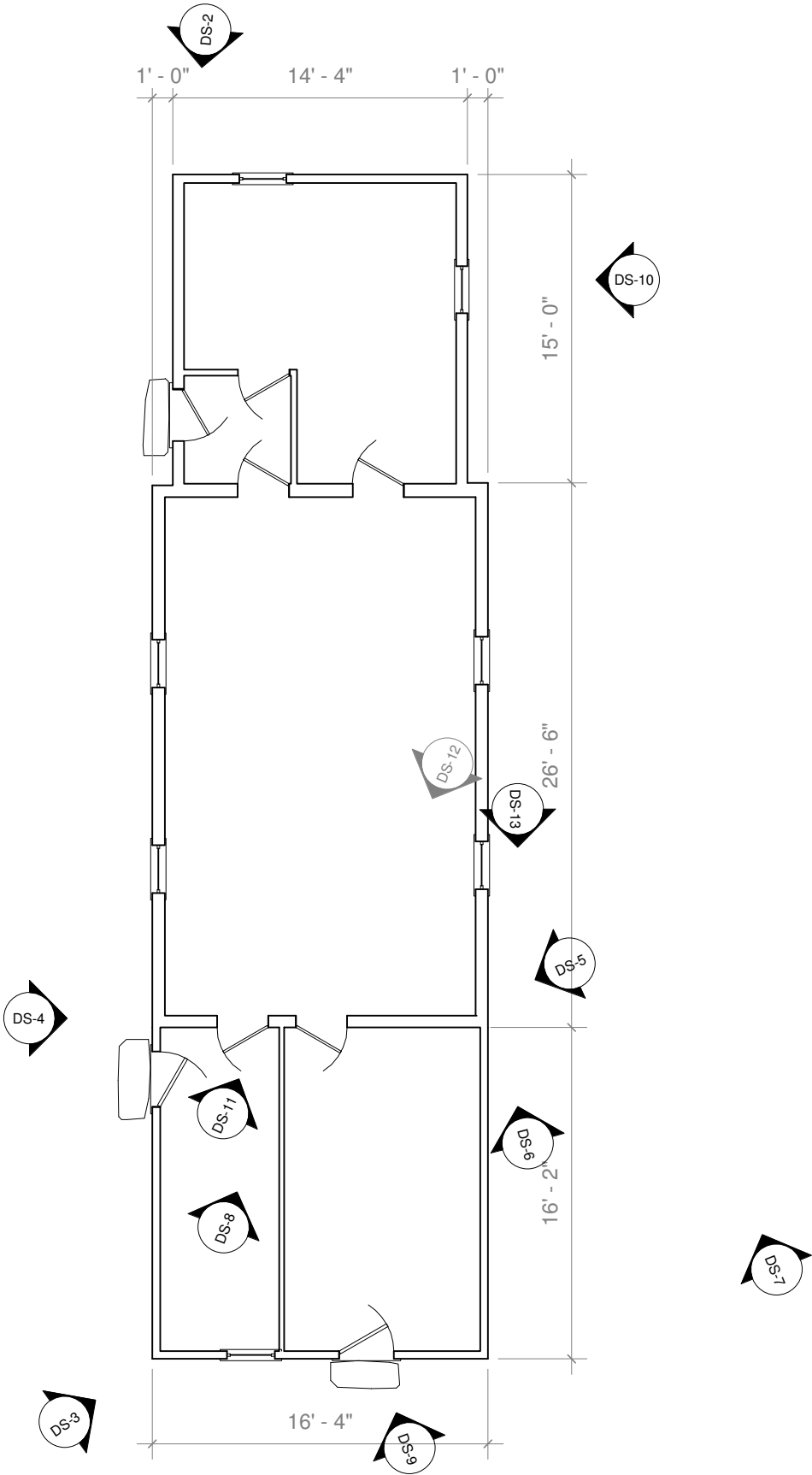
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- O. Lower existing grade
- P. Provide positive drainage away from building
- Q. Reglaze wood window
- R. Re-coat masonry
- S. Replace bulkhead door
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Wareham Historical Society - Historic Buildings Survey

Wareham, Massachusetts

October 21, 2013

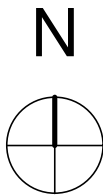


DURLAND • VAN VOORHIS



Old District Schoolhouse No 6 - Plan

1/8" = 1'-0"



DS-1.1

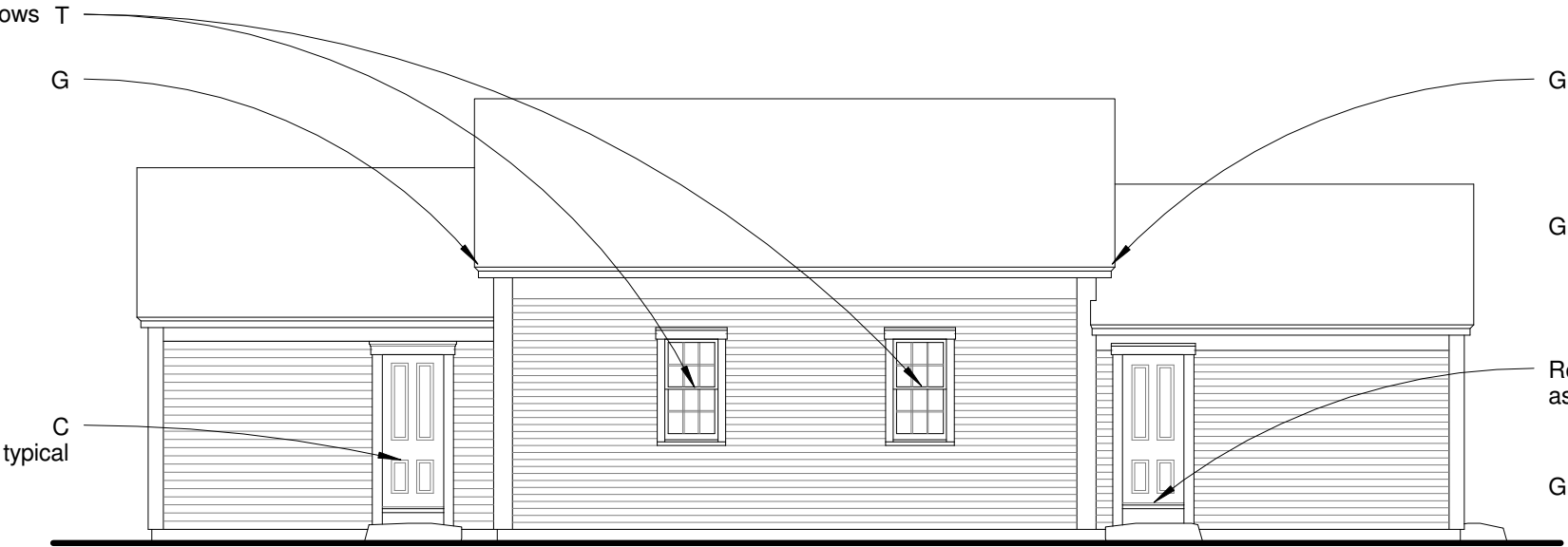
Wareham Historical Society - Historic Buildings Survey

Wareham, Massachusetts

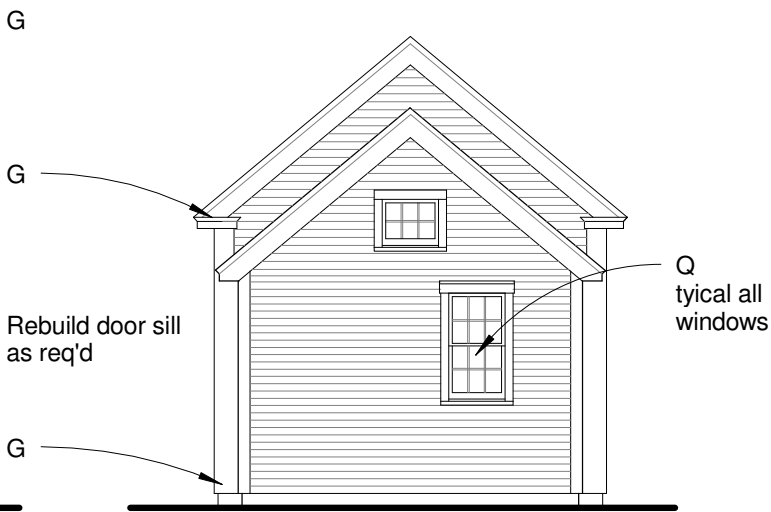
October 21, 2013

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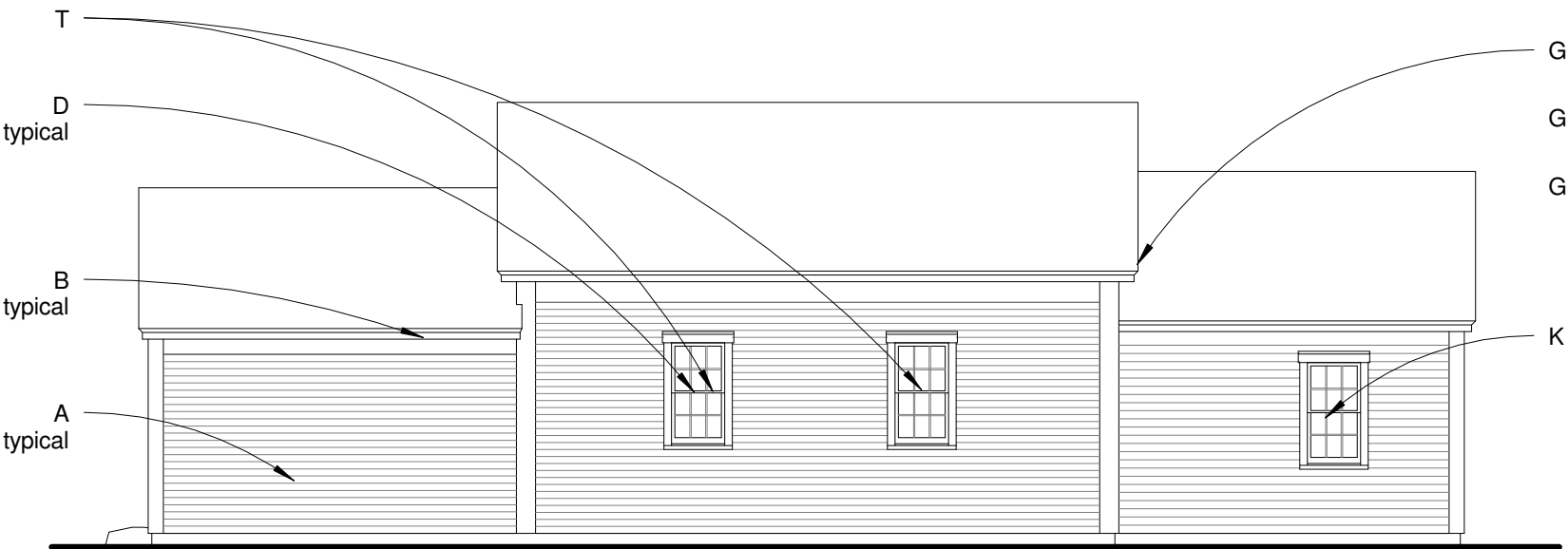
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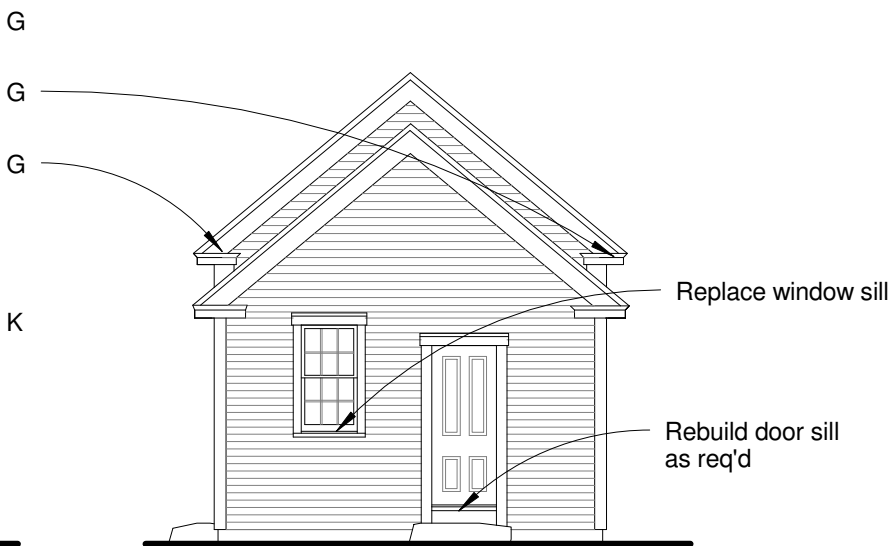
WEST ELEVATION



NORTH ELEVATION



EAST ELEVATION



SOUTH ELEVATION



OLD DISTRICT SHOOOL 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
		<u>GC OHP @ 15%</u>	<u>\$2,925 –</u>	<u>4,350</u>
		ESTIMATED CONSTRUCTION COST	\$22,425 –	33,350
		A/E Fees @ 15%	\$3,364 –	5,003
		Clerk		
		Printing, Testing & Misc.		
		<u>Construction Contingency @ 20%</u>	<u>\$4,485 –</u>	<u>6,670</u>
		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

Architectural Survey	35
Drawings	41
Project Cost Estimate	44
Annual Maintenance Plan	45



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.

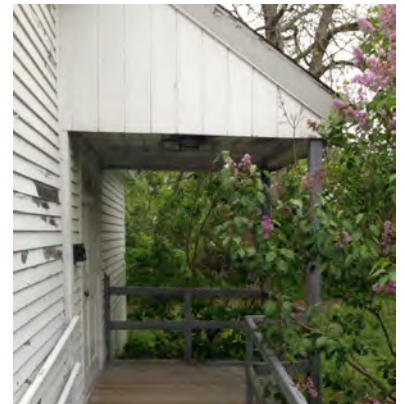
The site is relatively flat with a gentle slope down from west to east just like the Chapel and School. Because the building is substantially longer west to east, the total grade change is significantly more (approximately 18") than either of the other two buildings on the lot. The fieldstone foundation 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).

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".

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-1 Old Methodist Meeting House c. 1890



MH-2 Existing accessible entrance & cover



MH-3 Overgrown plantings & high grade



MH-4 Bluestone paving at main entrance



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.

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.

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.

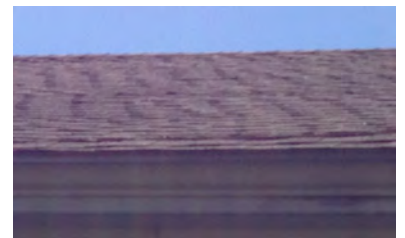
The roof is covered with asphalt shingles that appear to be in generally good condition (MH-8). There is, however, an area on the north side of the main roof where the sheathing appears distressed, however, the exact cause is not known (MH-9). The framing appears intact but displaced in this area so 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-6 Peeling paint



MH-7 Rodent damage



MH-8 Damaged roof area



MH-9 Broken roof sheathing



MM-10 Existing front door



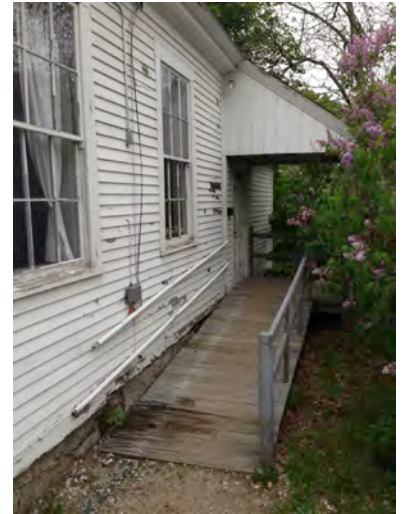
OLD METHODIST MEETING HOUSE – ARCHITECTURAL SURVEY

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.

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.

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.



MH-11 Accessible entrance & ramp



MH-12 Existing window



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



OLD METHODIST MEETING HOUSE – ARCHITECTURAL SURVEY

- 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.

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.

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



MH-17 Reinforced floor framing



MH-18 Damaged roof area



MH-19 Insect damage

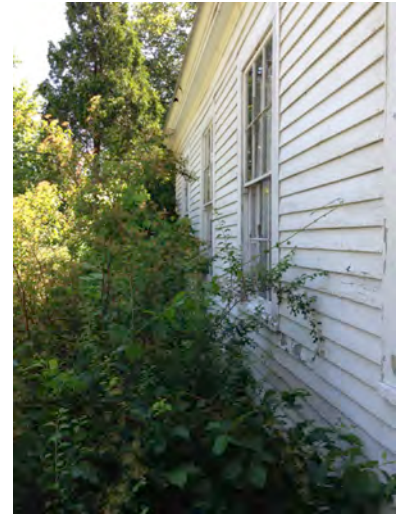


OLD METHODIST MEETING HOUSE – ARCHITECTURAL SURVEY

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

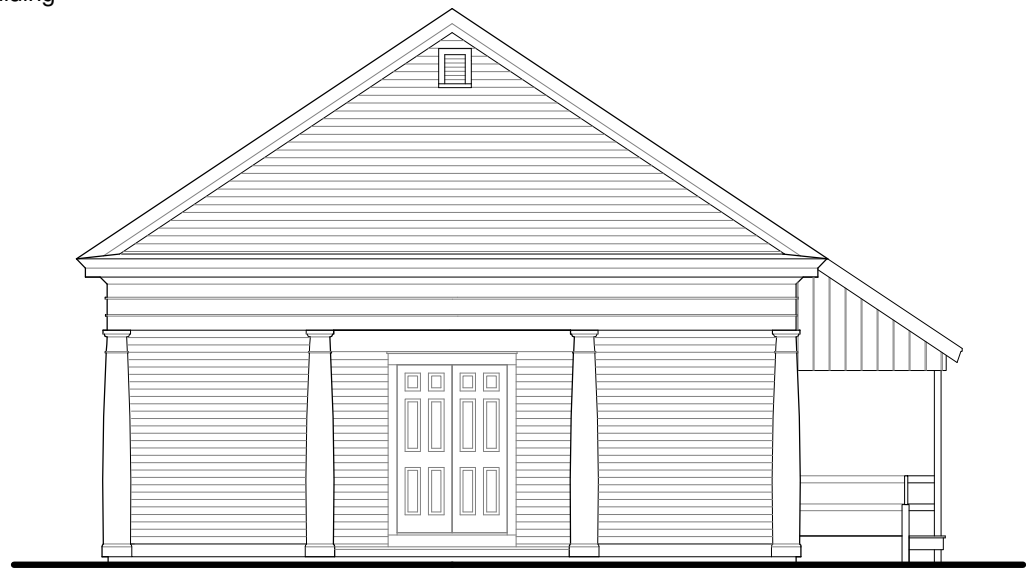
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- J. Replace wooden ridge boards
- K₁ Repair wood window
- K₂ Replace wood window
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- M. Clean out existing storm drain
- N. Install new perimeter drainage system
- O. Lower existing grade
- P. Provide 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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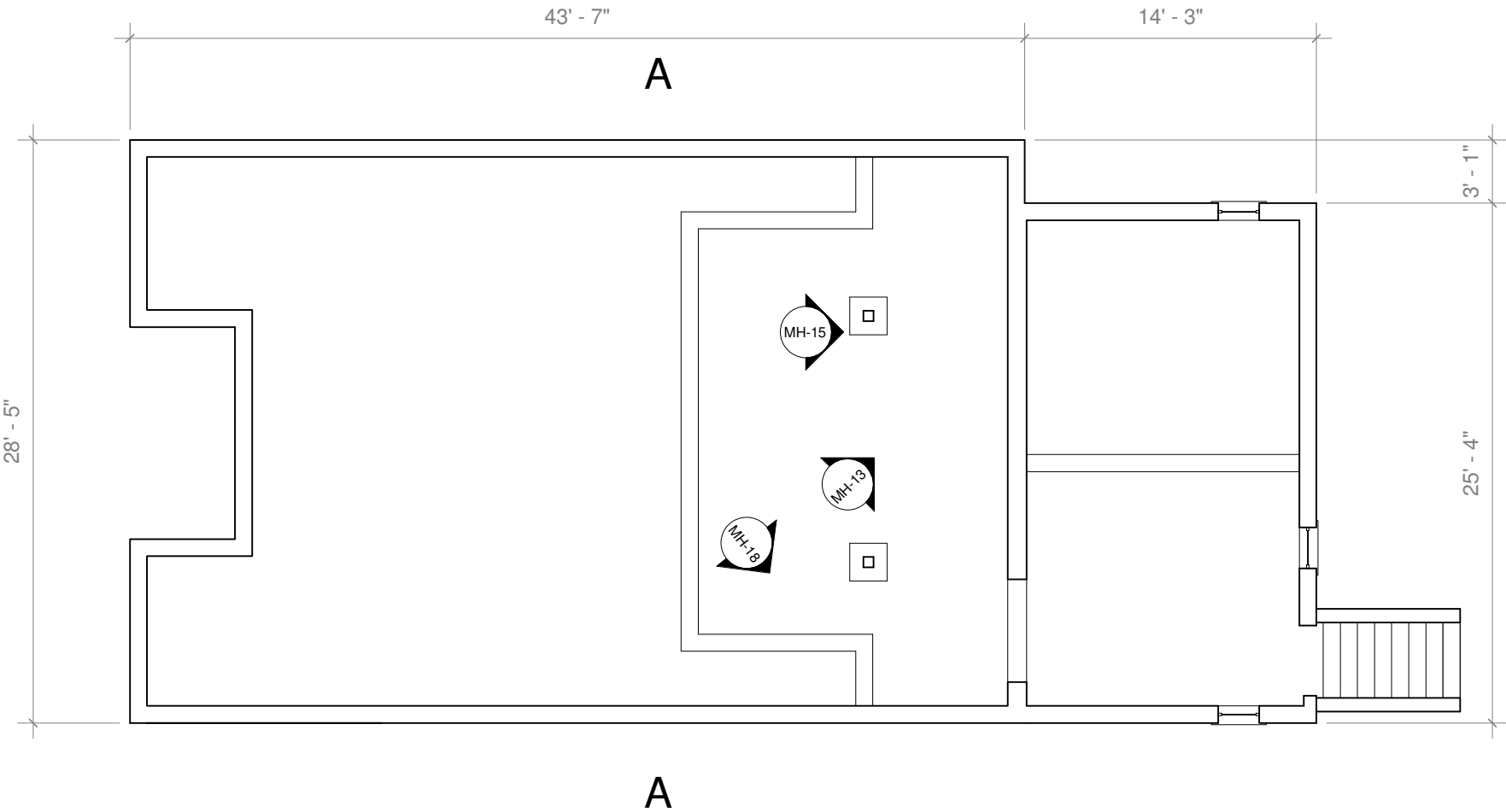
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BASEMENT PLAN

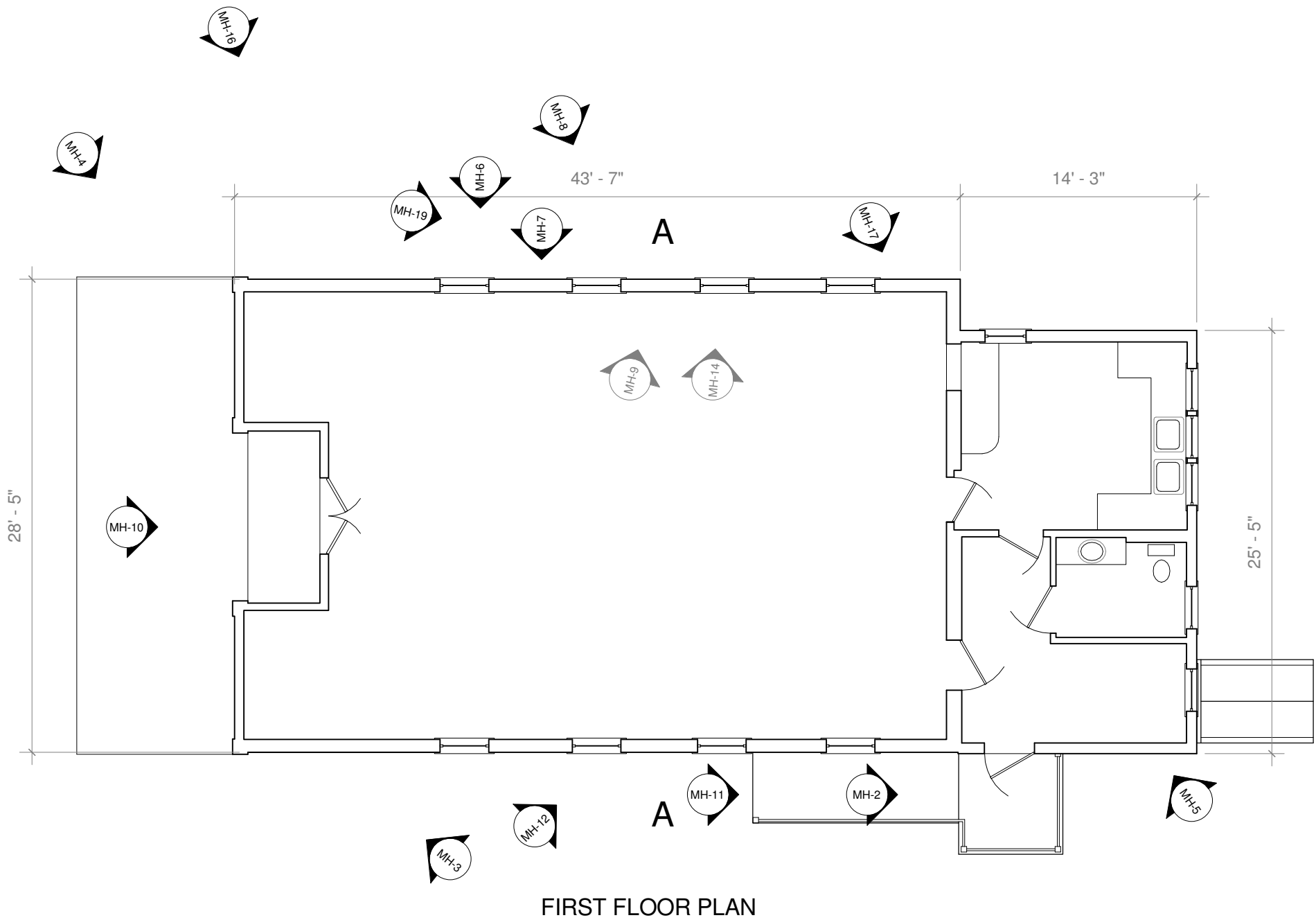
Wareham Historical Society - Historic Buildings Survey

Wareham, Massachusetts

October 21, 2013

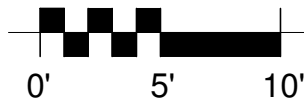
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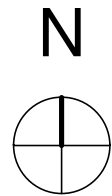
FIRST FLOOR PLAN

DURLAND • VAN VOORHIS



Old Methodist Meeting House - First Floor Plan

1/8" = 1'-0"



MH-1.1



OLD METHODIST MEETING HOUSE - PROJECT COST ESTIMATE

REPAIR PRIORITIES

IMMEDIATE	NEAR TERM	LONG TERM	COST RANGE	
		<ul style="list-style-type: none"> • Cut back or remove perimeter vegetation • Reglaze/repaint windows (15) • Repair broken, rotten or missing trim • Repaint siding & trim (2148 sf) • Repaint steel bulkhead • Repair/repaint exterior doors (3) • Repair roof sheathing/framing damage • Repair trim damage from rodents • Install dehumidifier/ventilation system in basement • Reinforce floor framing connection at ledger <ul style="list-style-type: none"> • Install vapor barrier in cellar (1600 sf) • Regrade building perimeter • Install perimeter drainage system (172 lf) • Lower grade around basement windows • Install gutters & d'spouts (116 lf) • Redesign porch enclosure • New wood flooring (1204 sf) 	\$1,500 – \$7,000 – \$1,000 – \$6,000 – \$250 – \$750 – \$2,000 – \$750 – \$1,000 – \$3,500 – \$1,500 – \$1,500 – \$2,500 – \$500 – \$1,000 – \$12,500 – \$14,000 –	2,000 9,000 2,500 8,500 350 1,250 3,500 1,250 1,500 5,000 2,000 2,500 4,000 1,000 1,500 17,500 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



PART V - FEARING TAVERN MUSEUM



parlor



exterior

PART V – FEARING TAVERN MUSEUM

Architectural Survey	47
Drawings	52
Project Cost Estimate	60
Annual Maintenance Plan	61



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.

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.

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 peeling 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-1 Fearing Tavern



FT-2 Classic Georgian entrance



FT-3 East wall bulge behind granite boulder



FT-4 Overgrown northwest corner



FEARING TAVERN MUSEUM - ARCHITECTURAL SURVEY

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).

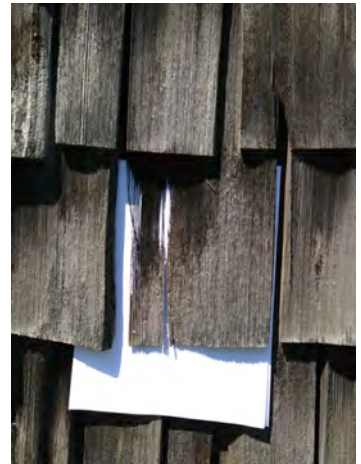
The cellar is quite damp, and while access to the crawl space was not possible, it is likely that surface runoff is also entering that space. Without sounding like a broken record, stopping moisture from entering the building is the most important goal for preserving historic buildings. Regrading the 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.

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.

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.



FT-5 Corner of partial cellar



FT-6 Worn out wood shake siding



FT-7 Bulging east wall



FEARING TAVERN MUSEUM - ARCHITECTURAL SURVEY

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.

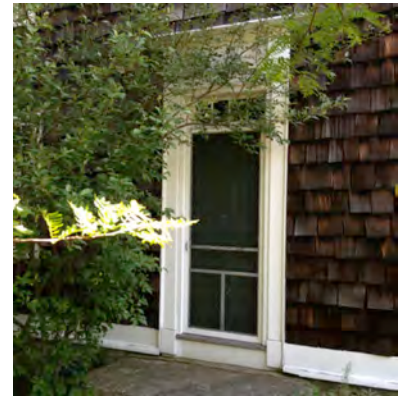
Both the roof on the main house and the ell are covered with asphalt shingles that appear to be in good to fair condition. Currently there are no gutters or down spouts. There are three roof hatches located near the ridge of the north side of the roof. There are two large masonry chimneys located on 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.

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.

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-8 Painted brick chimneys



FT-9 West entrance



FT-10 Kitchen door



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

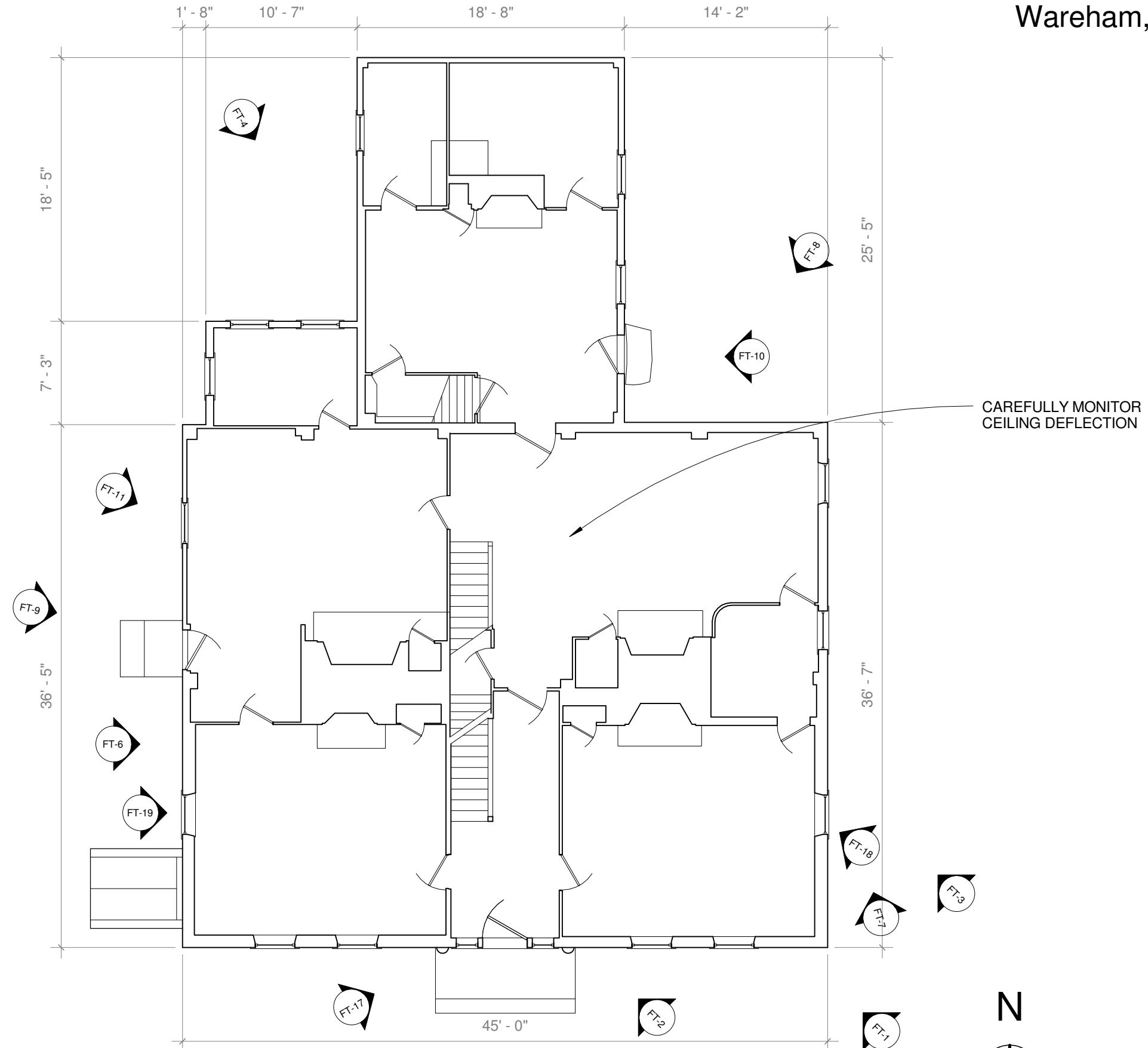
Wareham Historical Society - Historic Buildings Survey

Wareham, Massachusetts

October 21, 2013

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- V. Repoint masonry
- W. Replace flashing



Fearing Tavern - First Floor Plan

1/8" = 1'-0"

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FT-1.1

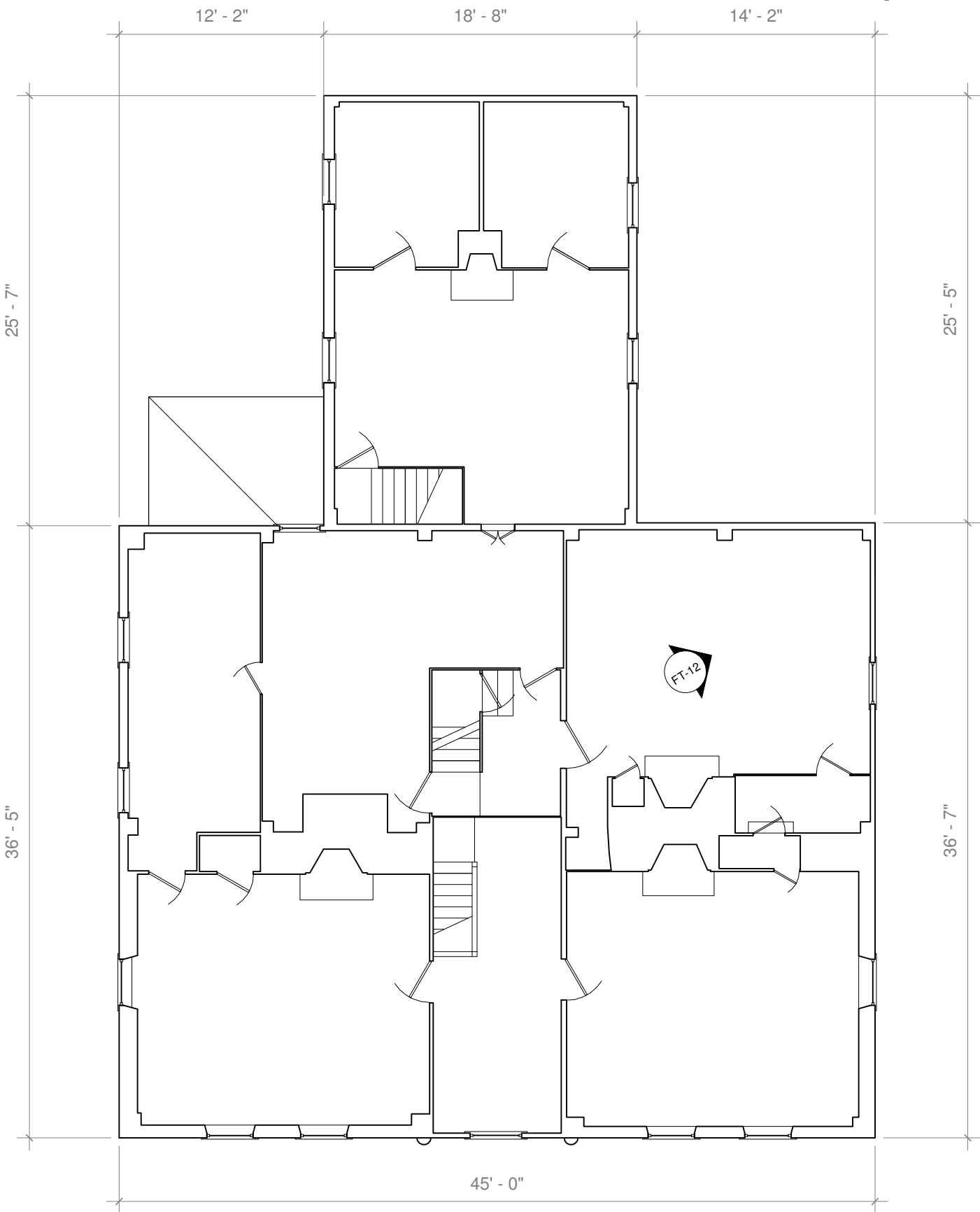
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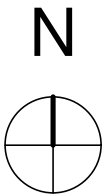
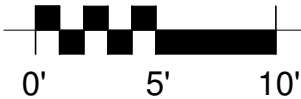
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Fearing Tavern - Second Floor Plan

1/8" = 1'-0"

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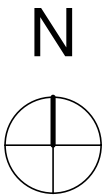
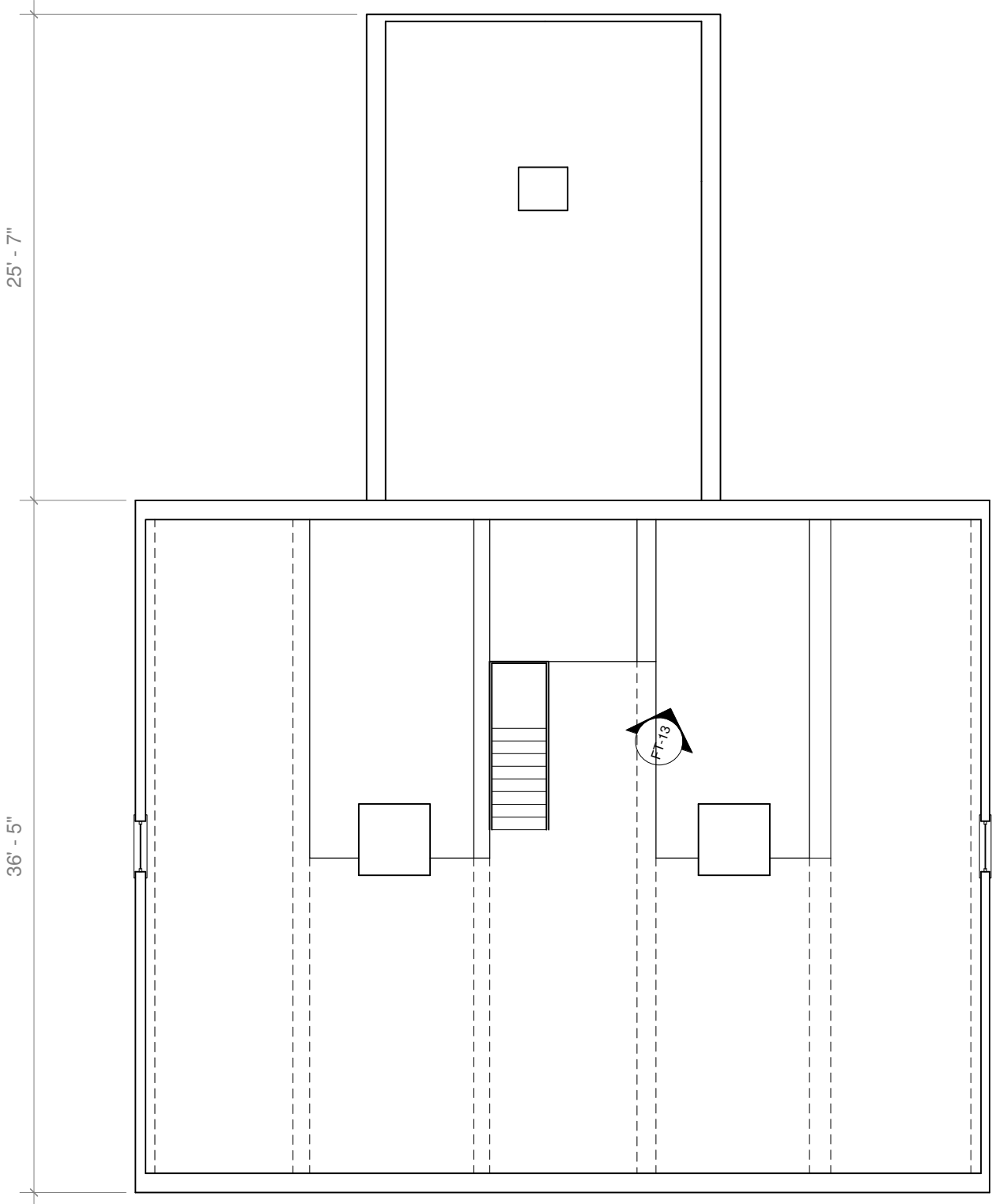
FT-1.2

Wareham Historical Society - Historic Buildings Survey

Wareham, Massachusetts

October 21, 2013

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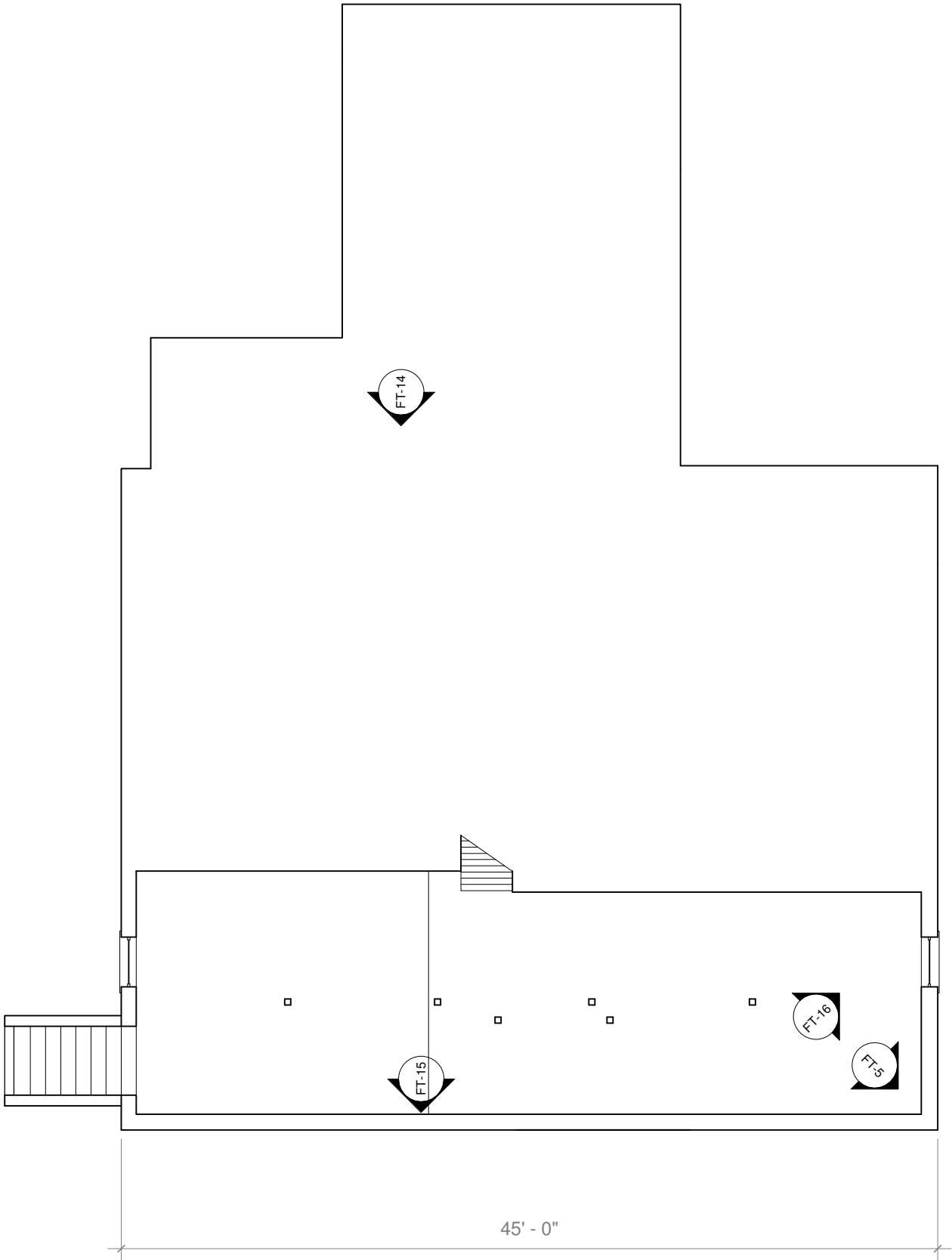
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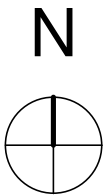
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Fearing Tavern - Basement Plan

1/8" = 1'-0"

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FT-1.4

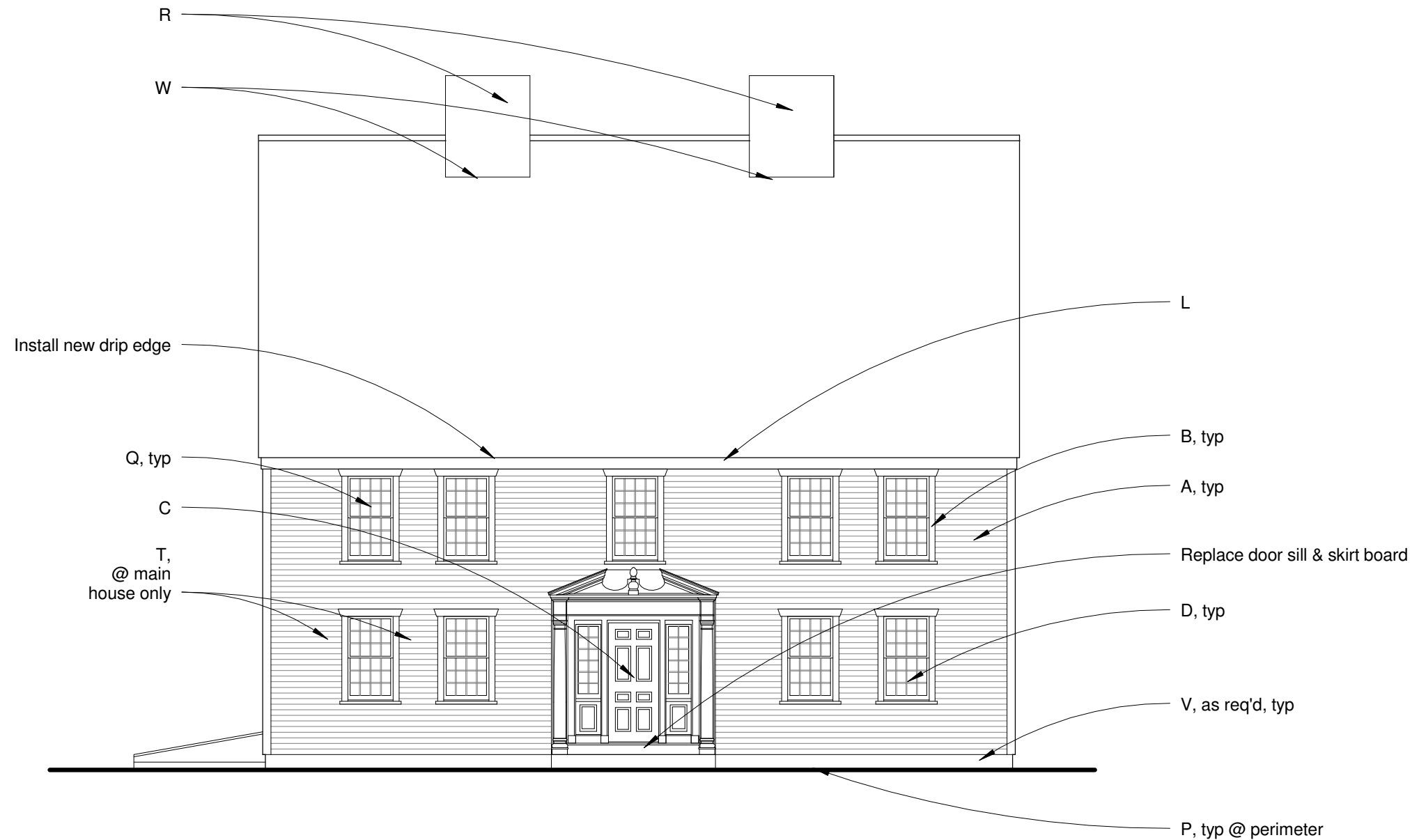
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Wareham Historical Society - Historic Buildings Survey

Wareham, Massachusetts

October 21, 2013



DURLAND • VAN VOORHIS



Fearing Tavern - South Elevation

1/8" = 1'-0"

FT-2.1

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Wareham Historical Society - Historic Buildings Survey

Wareham, Massachusetts

October 21, 2013



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Fearing Tavern - East Elevation

1/8" = 1'-0"

FT-2.2

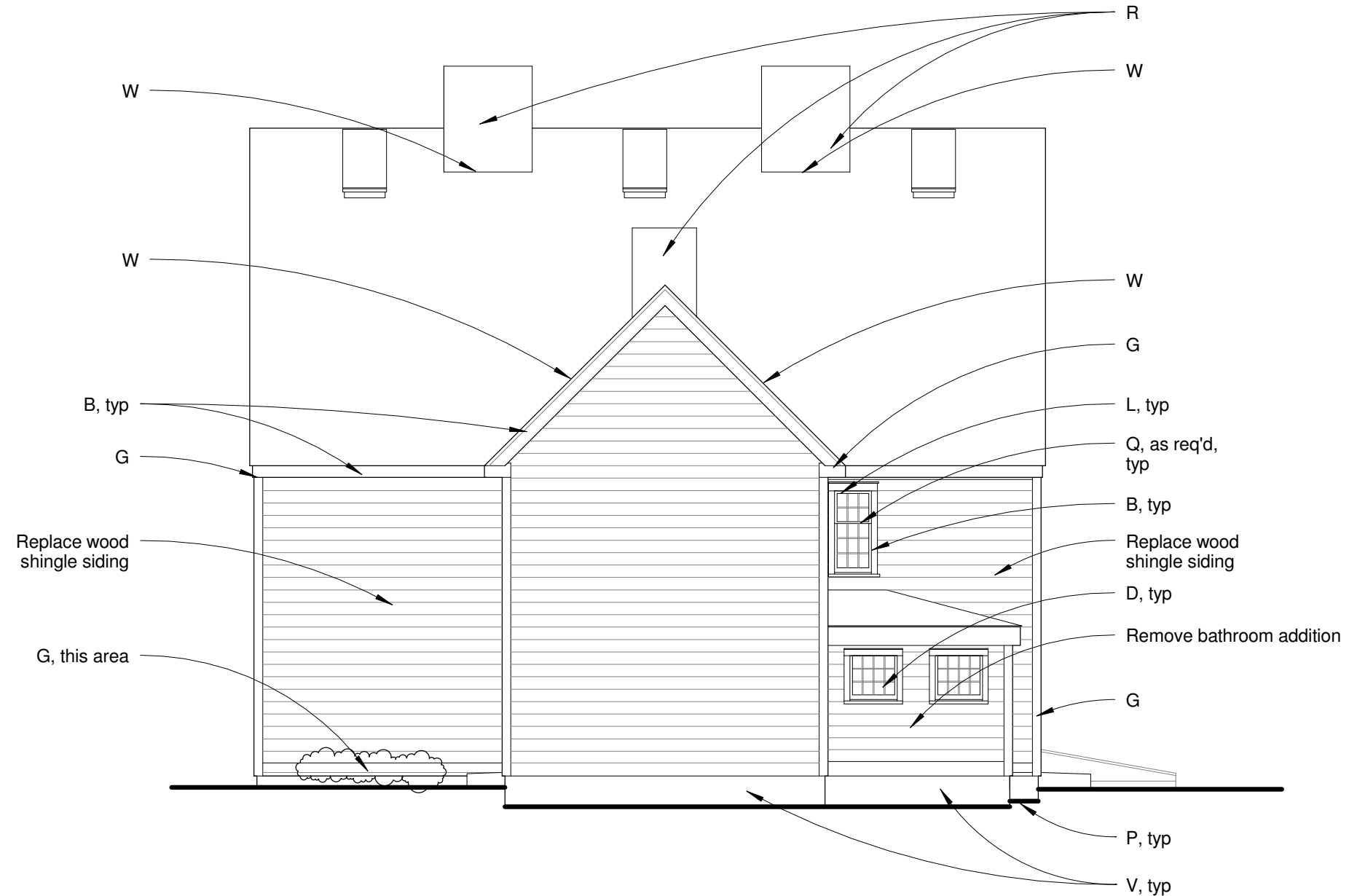
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Wareham Historical Society - Historic Buildings Survey

Wareham, Massachusetts

October 21, 2013



DURLAND • VAN VOORHIS



Fearing Tavern - North Elevation

1/8" = 1'-0"

FT-2.3

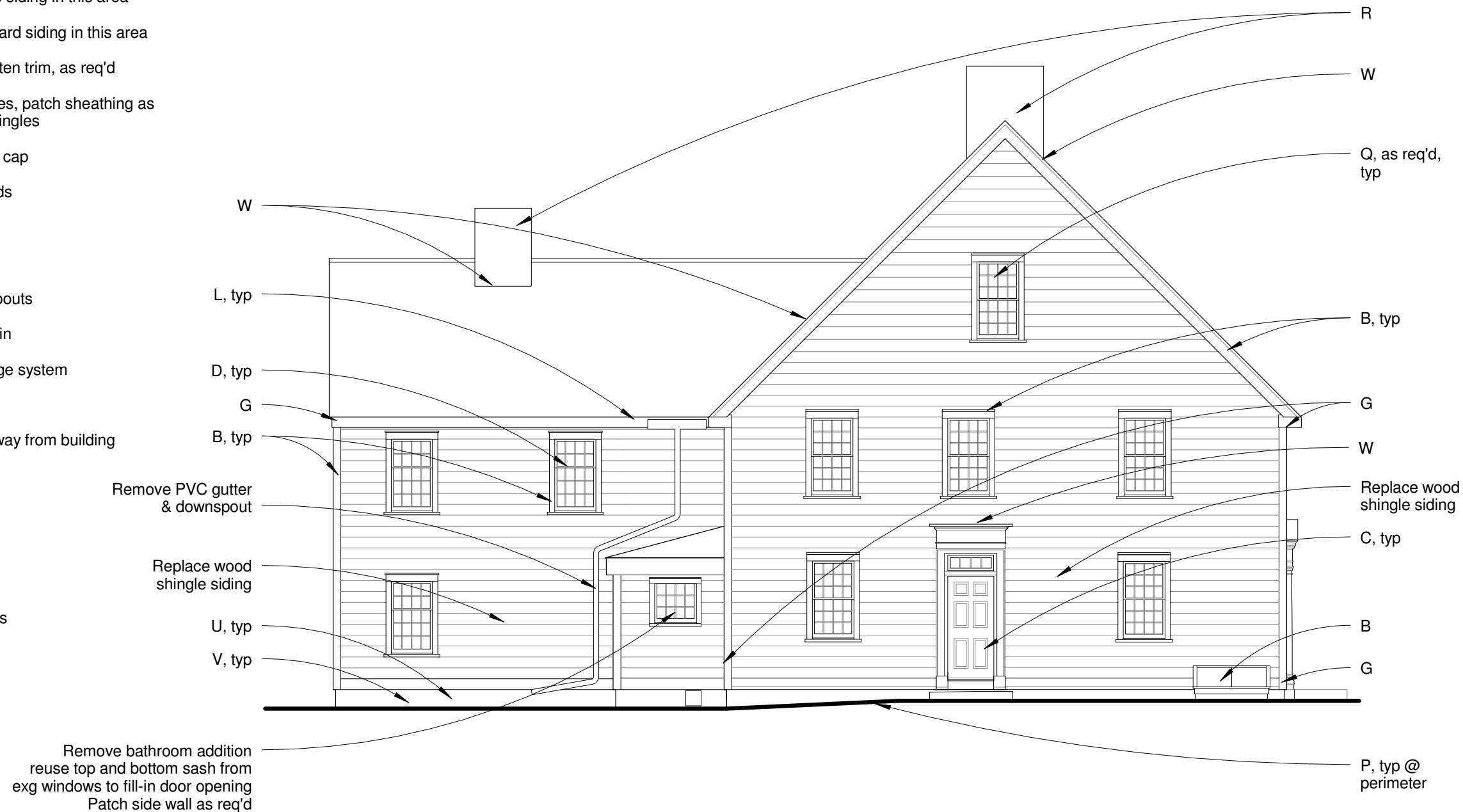
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- U. Remove foundation plantings
- V. Repoint masonry
- W. Replace flashing

Wareham Historical Society - Historic Buildings Survey

Wareham, Massachusetts

October 21, 2013





FEARING TAVERN MUSEUM - PROJECT COST ESTIMATE

REPAIR PRIORITIES

IMMEDIATE	NEAR TERM	LONG TERM	COST RANGE	
		<ul style="list-style-type: none"> • Reglaze/repaint windows (33) • Repaint siding & trim (765 sf) • Repair/repaint exterior doors (3) • Repair rotten door sill • Repair broken, rotten or missing trim • Cut back or remove perimeter vegetation • Investigate sagging second floor framing • Repair bulging side wall @ east <ul style="list-style-type: none"> • Reshingle exterior (3630 sf) • Repoint foundation (180 sf) • Repaint chimneys (3) • Replace chimney flashing • Install gutters/downspouts (120 lf) • Install perimeter drainage (210 lf) • Reinstall window shutters (21) • Restore herb garden 	12,000 – 3,800 – 750 – 1,000 – 2,500 – 1,500 – 1,500 – 2,500 – 19,000 – 2,000 – 1,500 – 1,500 – 2,400 – 2,500 – 10,500 – 2,500 –	16,500 5,000 1,000 1,250 5,000 2,000 2,500 5,000 22,000 3,000 2,500 2,500 3,000 5,000 13,500 5,000
<u>GC OHP @ 15%</u>			<u>\$10,118 –</u>	<u>14,213</u>
ESTIMATED CONSTRUCTION COST			\$77,568 –	108,963
A/E Fees @ 15%			\$11,635 –	16,344
Clerk				
Printing, Testing & Misc.				
<u>Construction Contingency @ 20%</u>			<u>\$15,514 –</u>	<u>21,793</u>
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

Architectural Survey	63
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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.

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).

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.

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



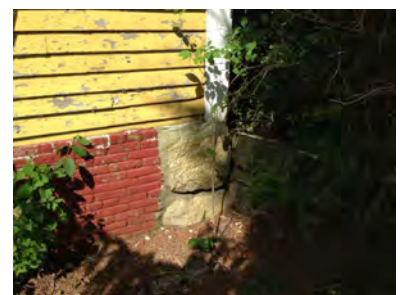
KH-1 Capt John Kendrick House



KH-2 Overgrown foundation plantings



KH-3 Brick wall at western ell



KH-4 Coated brick foundation



KH-5 Fieldstone foundation needs selective repointing



CAPTAIN KENDRICK HOUSE – ARCHITECTURAL SURVEY

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 $\frac{3}{8}$ " 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 investigations.

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 resingled.

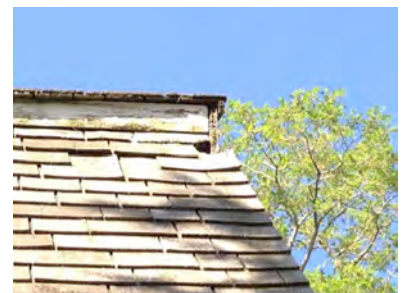
There is a small entry vestibule on the east side of the main house approximately four feet deep and eight feet wide with one four-over-four wood double-hung window on each side. It is covered with a finely proportioned pediment and gable roof. Some of the trim is in very bad condition – rotten and victimized 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).

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.

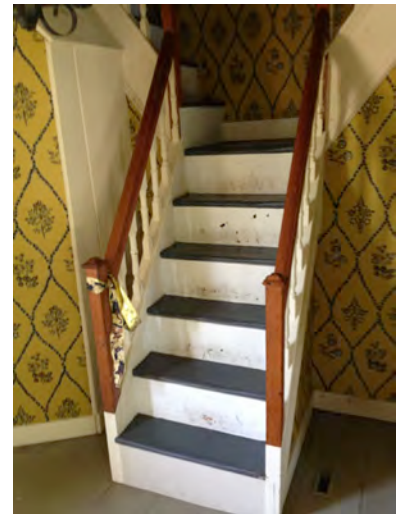
The floors, walls and roof structure have undergone movements and settlements over the 170 year life of the building. Some of the settlements may be due to questionable soil conditions and dimensional changes of the building framing, but these conditions would have occurred soon after construction and 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



KH-16 Rodent & water damage



KH-17 Existing “Good Morning” stair



KH-18 Existing framing with reinforcements



KH-19 Existing basement



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).

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.

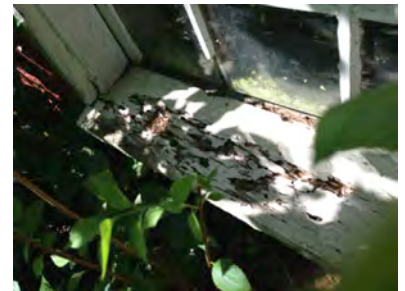
The first floor framing is a combination of original framing members and reinforcements added at a later date. It appears that posts, joists and beams have been added throughout the 1st floor framing most likely to address concerns as they arose. Evidence of insect infestation was evident, therefore,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

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



KH-20 Rodent damage at trim



KH-21 Insect damage at basement window sill



KH-22 Existing roof framing



CAPTAIN KENDRICK HOUSE – ARCHITECTURAL SURVEY

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.

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- 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

K₁ Repair wood window

K₂ 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



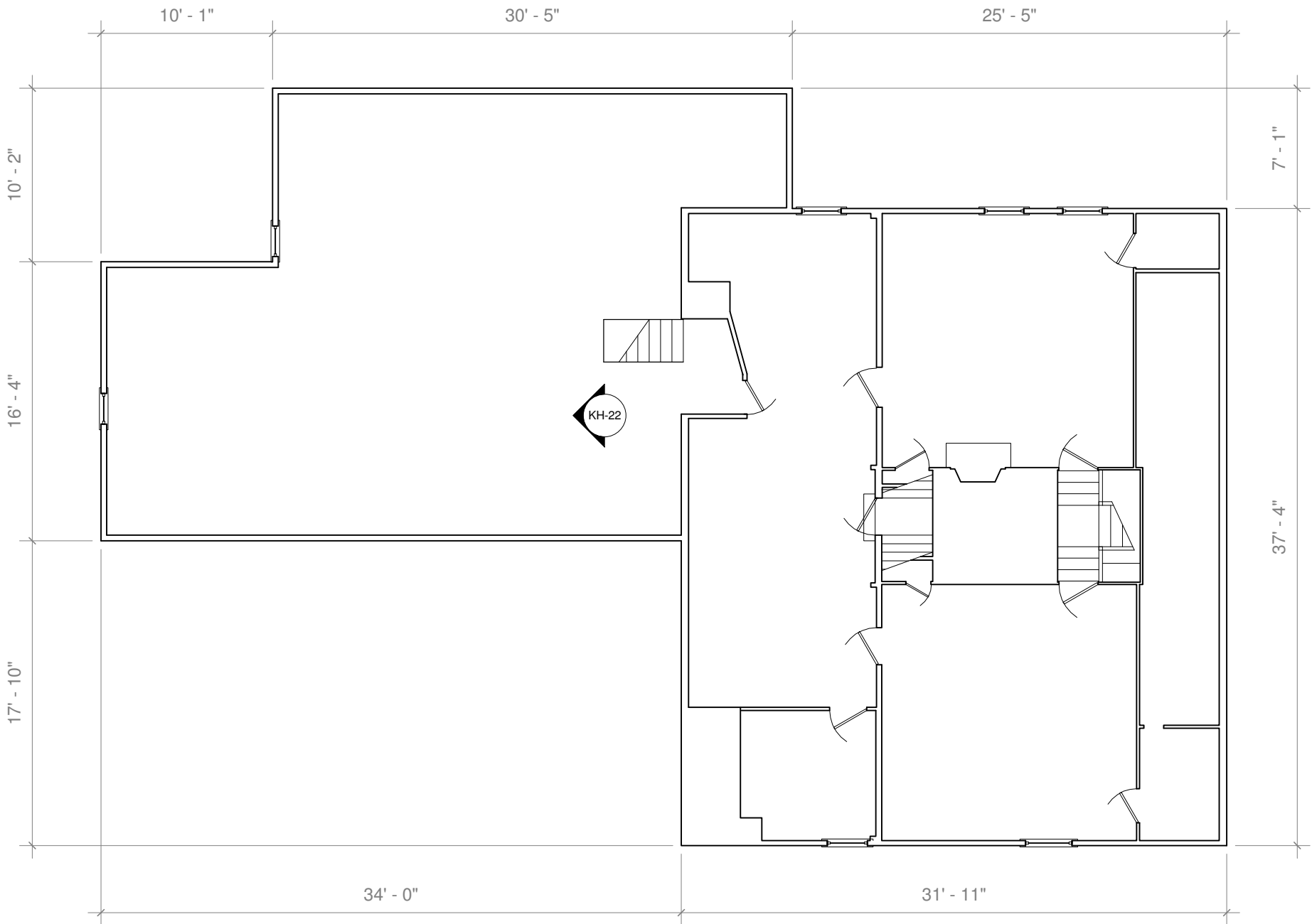
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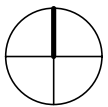
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Capt John Kendrick House - Second Floor Plan

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
- K₁

Repair wood window
- K₂

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.

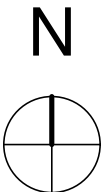
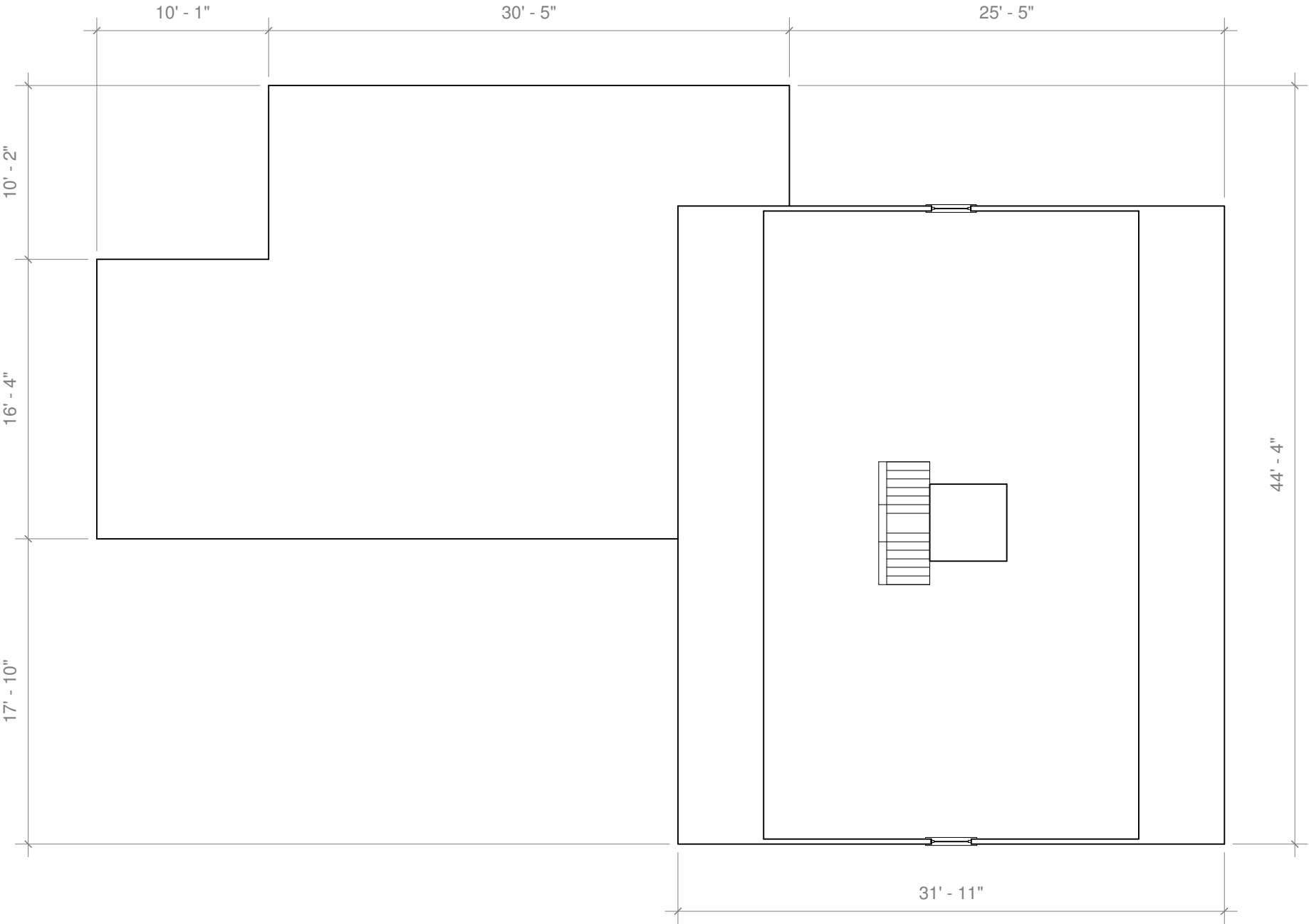
Replace bulkhead door
- T.

Install wood shutters
- U.

Remove foundation plantings
- V.

Repoint masonry
- W.

Replace flashing



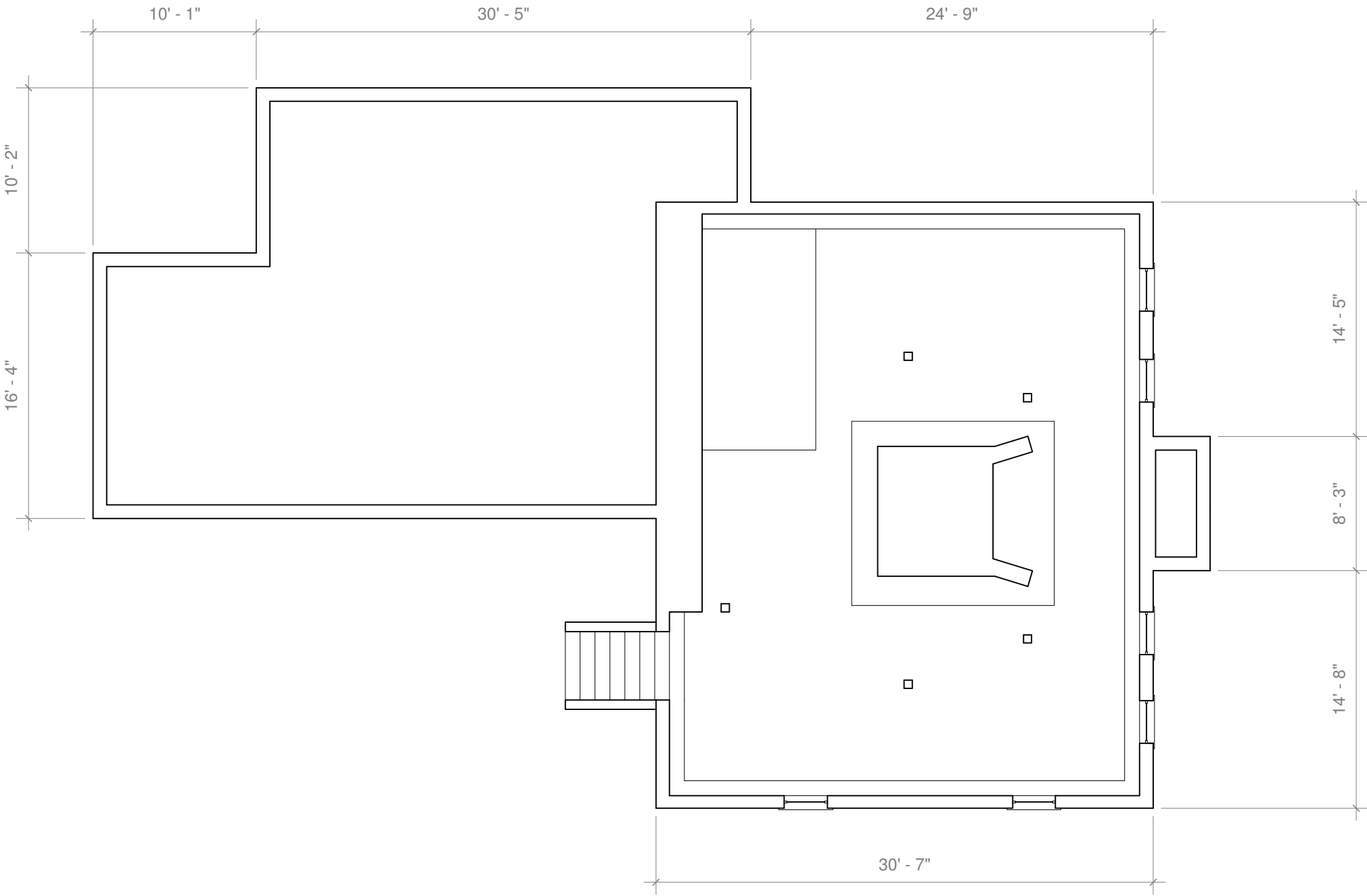
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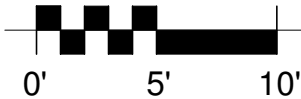
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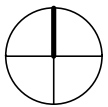
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Capt John Kendrick House - Basement Plan

1/8" = 1'-0"

N



KH-1.4

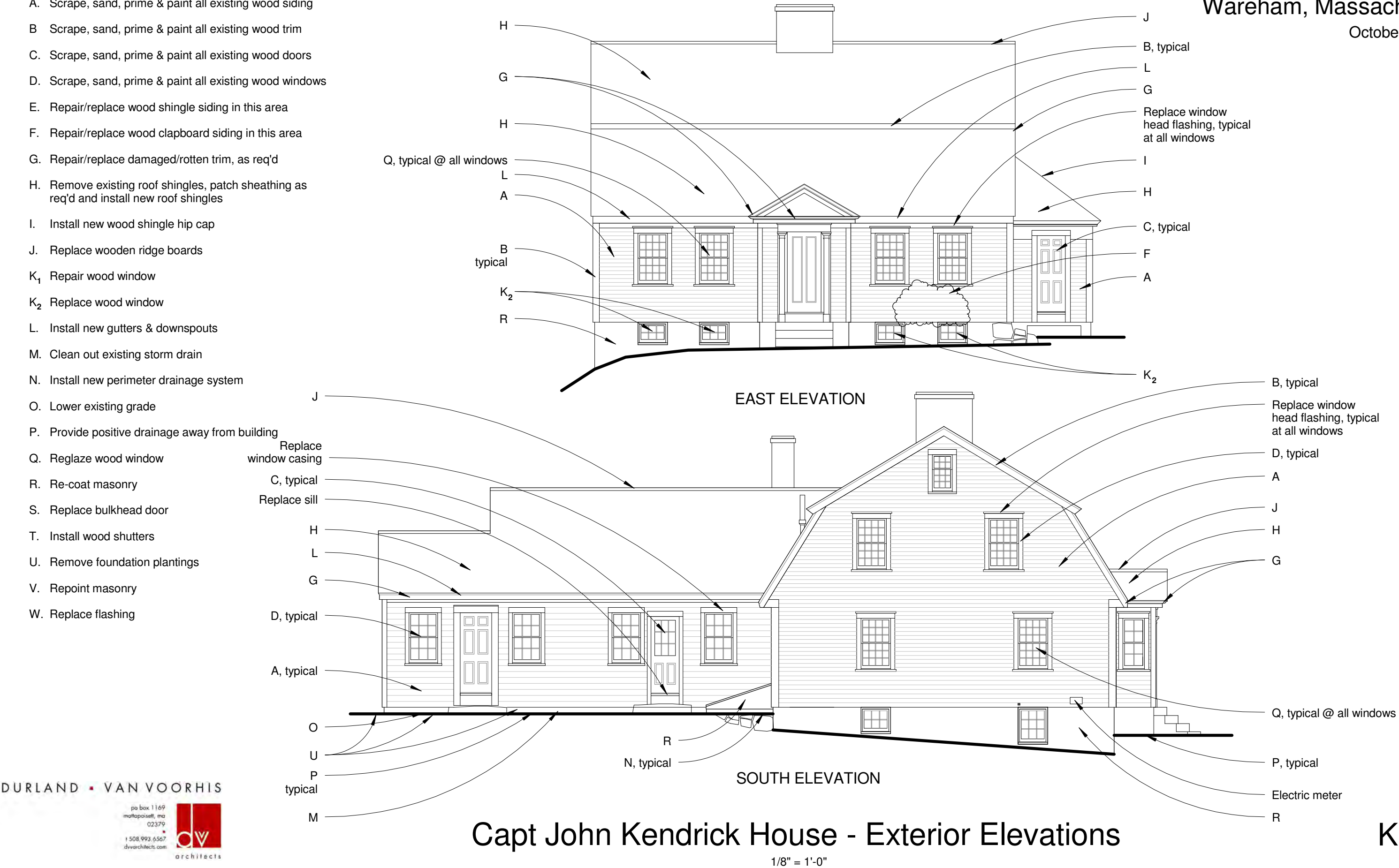
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Wareham Historical Society - Historic Buildings Survey

Wareham, Massachusetts

October 21, 2013



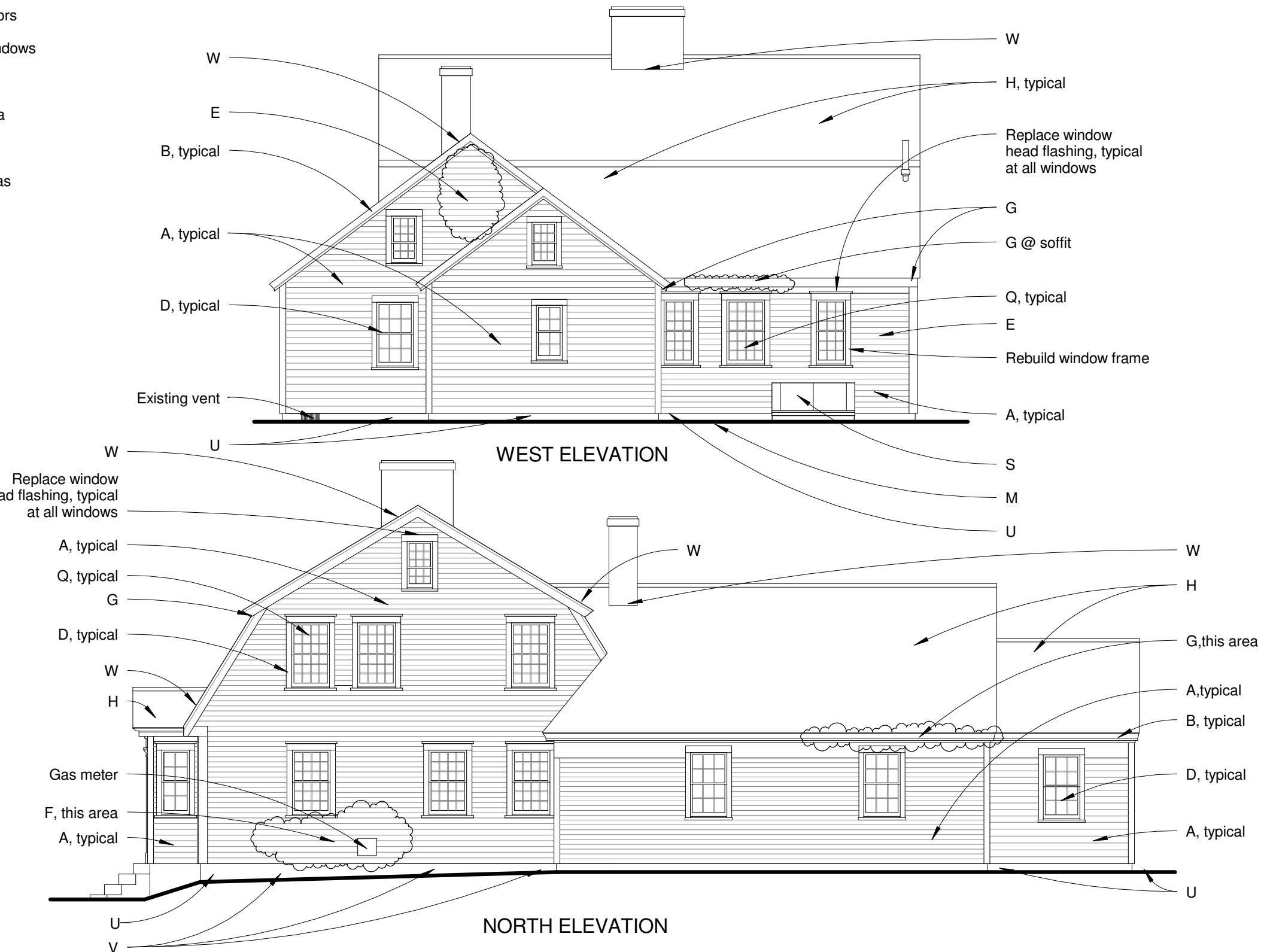
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Wareham Historical Society - Historic Buildings Survey

Wareham, Massachusetts

October 21, 2013



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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
<u>GC OHP @ 15%</u>			<u>\$11,813 –</u>	<u>16,613</u>
ESTIMATED CONSTRUCTION COST			\$90,813 –	127,863
A/E Fees @ 15%			\$13,584 –	19,104
Clerk				
Printing, Testing & Misc.				
<u>Construction Contingency @ 20%</u>			<u>\$18,113 –</u>	<u>25,473</u>
PROJECT COST			\$122,510 –	172,440