

William Flagg Homer House
Belmont Woman's Club
Building Survey and Investigation



Wolf Architects, Inc.
MacLeod Consulting, Inc.

William Flagg Homer House Belmont Woman's Club

Introduction

Saved from likely demolition by the Belmont Woman's Club in 1927, the William Flagg Homer House is a historically and architecturally significant structure in Belmont, worthy of preservation and rehabilitation. Built as a summer house in 1853 for William Flagg Homer and Adeline Wellington Homer, the picturesque Italianate structure, with its projecting bay window and piazzas, is sited part way up the steep slope raised above the passing traffic and the town center below. Its upper-level dormer windows and towering cupola offer views of Boston in the distance.

A grant from the Town of Belmont's Community Preservation Committee has allowed the Woman's Club, through the Town, to hire Wolf Architects, Inc., along with MacLeod Consulting, Inc., to undertake this initial assessment of the conditions of the house, with a focus on the exterior envelope and structural considerations. Principal architect Gary Wolf AIA and Project Manager Benjamin Thomas have been the lead participants for this assessment, with Arthur MacLeod consulting for structural engineering. Contractor Tom Cooney provided carpentry services during the investigation, and developed preliminary order of magnitude cost estimates. We are grateful for the assistance of the Woman's Club committee, including Kelly Higgins, Priscilla Hughes, Eleanor Mullane, Maryann Scali and Susan Smart.

History and Significance

The significance of the William Flagg Homer House has been recognized over the decades since the Woman's Club purchased the house eighty-seven years ago. The house was described as the "focal point" of the Pleasant Street National Register Historic District in the district nomination form, in which the house was noted for its architectural as well as historic significance. The district was determined to be eligible for the National Register in 1978. As the home of artist Winslow Homer's uncle and aunt, this structure was a retreat for Homer in his youth and early career, and, while here, he completed drawings and paintings including a cover of *Harper's Weekly* in 1861 and the 1866 oil painting, "Croquet Scene," now in the collection of the Art Institute of Chicago. Thus, this hillside residence has a place in the history of 19th-century American painting. Additionally, as a prominent, dramatically sited summer house, this structure clearly illustrates the development of this portion of Belmont as an attractive garden setting to escape the city. (At the time of the Homer House's construction, this Pleasant Street address was part of West Cambridge—subsequently re-named Arlington—but it became part of Belmont with that Town's organization in 1859.) *Ballou's Pictorial Drawing Room Companion* featured a perspective rendering of the Homer House on its cover in 1859. As Joe Cornish observed in his March 2013 "Tour Suggestions," the Homer House "has been a landmark in Belmont Center since its construction."

While both of these categories of significance have been cited with respect to the Homer House, it is also possible now to speculate—as a result of preliminary research accompanying this condition assessment—that the architectural significance of the Homer House may extend beyond the local level, to the state and even the national level. This suggestion is made both because of the high quality of the building's architectural design, and because the Homer House may be among the earliest appearances of a mansard roof in American architecture.

Without dwelling too much on the history of mansard roofs—since historical research is outside the purview of this report—it suffices at present to observe that the initial experiments with this French-style roof, named after 16th-century architect Francois Mansart, began only in the late 1840's, and that relatively few examples of the style preceded its explosion in what has been called the Second Empire Style (named after the reign of Napoleon

III in Paris, 1852-70). The now outdated name of the "General Grant Style" perhaps more accurately reflects the period of the mansard roof's greatest proliferation in the US, in the 1860's. Boston's Deacon House of 1846-48 has been called the first mansard roof house in the U.S., a collaboration between visiting French architect Jean Lemoulnier and Boston architect Gridley J. F. Bryant. In 1848 Lemoulnier also designed a rebuilding of the Edward N. Perkins House, Pine Bank, on Jamaica "Lake" (now Pond), "in the style of a French masion de champagne....a most complete residence in the latest continental taste." (AJD, *Treatise*, 1856, Preface to 4th edition, 1849, p. 56)

Shortly after these initial buildings with mansard roofs, Detlef Lienau (1818-1887), a French-trained German architect who emigrated to the US in 1848, joined forces with the French-born designer Leon Marcotte to design the 1852 Oliver DeLancey Kane House in Newport, Beach Cliffe, which may have been the earliest mansard there. (However, one report is that "Such roofs had first appeared in some of the Italianate houses of Providence architect Thomas Alexander Teft).\" (Yarnall, p. 67)

In 1853, the same year as the Homer House construction, Boston architect Charles Edward Parker provided plans and specifications for the commercial block at 50-52 Broad Street in Boston, according to a Boston Landmarks Commission Report, "one of the earliest Mansards in the Central Business District, and perhaps in the City," (p. 5) and "quite ahead of its time." (p. 6)

This brief overview suggests that the Homer House was designed and built within five years of the completion of the first mansard roof structure in the U.S., making it one of the most up-to-date residences of the era. Thus, its appearance in *Ballou's Pictorial* in 1859 may well have played a key role in the dissemination of the mansard roof style across the country.

Report

This report provides an overview of the condition of the Homer House, with photographs and description; a separate assessment of structural conditions; recommendations for repairs and rehabilitation, with a concept for prioritizing and phasing of the work; and preliminary order-of-magnitude cost estimates for possible phases.

William Flagg Homer House Belmont Woman's Club

Conditions Overview

Overall, the landmark William Flagg Homer House is in fair to good condition, 161 years after its construction. Within the recent past, a new rubber roof was installed, new copper roofing was installed over the rounded top-floor dormers, and copper gutters and downspouts were installed on the main roof. However, elsewhere the exterior envelope is in need of attention, as are some structural conditions.

The areas of concern are the product of three factors over the years:

First is normal deterioration over time. Years of weathering and freeze/thaw cycles have led to building material deterioration and movement, such as damaged or rotting wood on the cupola and windows, erosion or spalling of brownstone and brick, and discoloration and peeling of finishes. While some issues are only cosmetic, other deterioration represents weak points in the building envelope, allowing the elements in and, potentially, causing more damage.

A second category of deterioration is settlement. Open joints in foundations are evidence of mostly minor settlement over time. Additionally, settling of granite at the piazzas and stairs may be evidence of inadequate original foundations in these secondary locations.

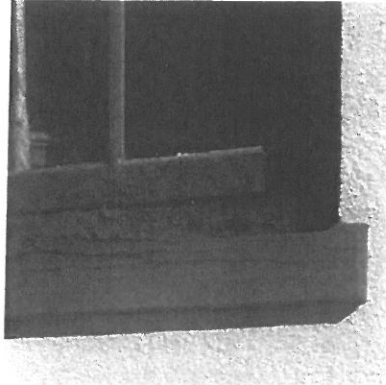
A third area for attention is where modifications and repairs were made over the decades that are unsympathetic to the original house. This can be seen in the Kitchen Ell chimney, the pressure-treated stairs at the Laundry Ell, the gutter and rubber membrane details at the exterior walls, missing historic brackets at the cornice, as well as missing balustrades at the piazzas' roofs, and poor quality edge details on the slate, among others. It is recommended that these missing or unsympathetic details be replaced as part of a long-term restoration/rehabilitation plan.

CONDITIONS OVERVIEW: TYPICAL CONDITIONS

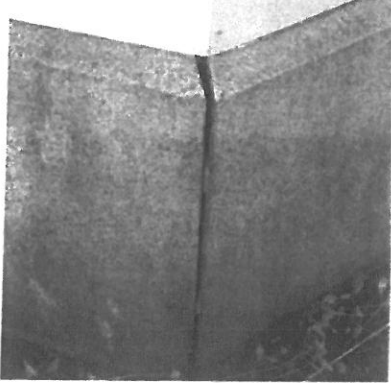
Exposed stucco at roof intersections



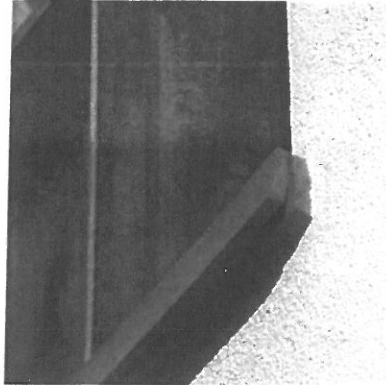
Split brownstone sill and peeling paint



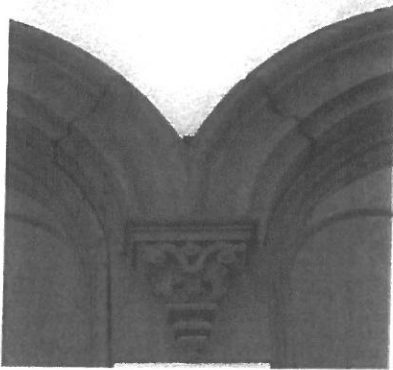
Deteriorated mortar; open joints at foundation



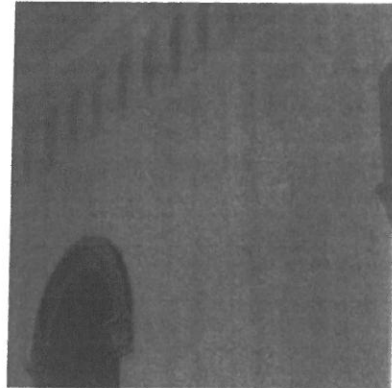
Split brownstone sill



Open joints at stone window arches



Streaked stucco



Exposed slate at edge detail

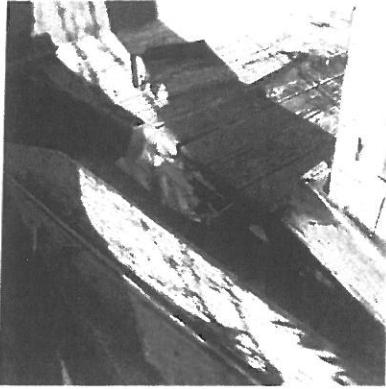


Brick replacement and repair



CONDITIONS OVERVIEW: TYPICAL CONDITIONS

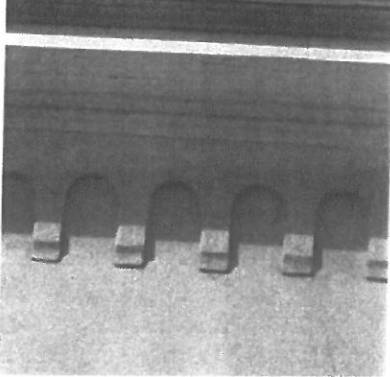
Porch degradation



Broken and damaged scrolls



Original moulding



Damaged cupola roof

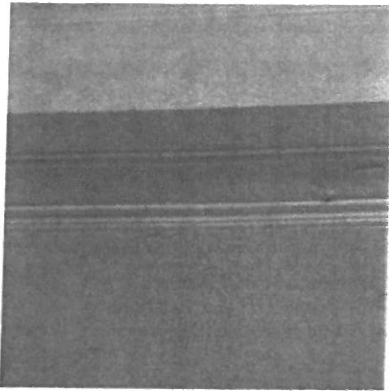


Drive cracking and patching

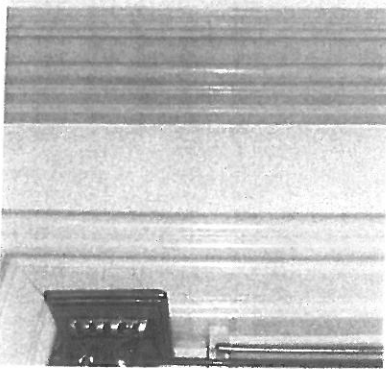


CONDITIONS OVERVIEW: TYPICAL CONDITIONS

Possible structural issues



Possible evidence of settling



Possible evidence of settling



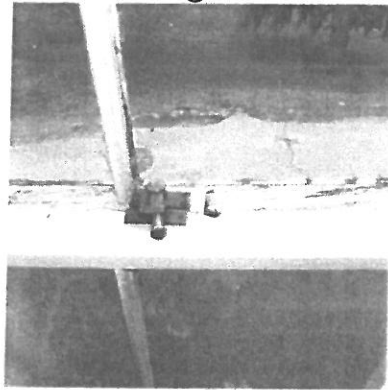
Peeling paint due to moisture



Window degradation



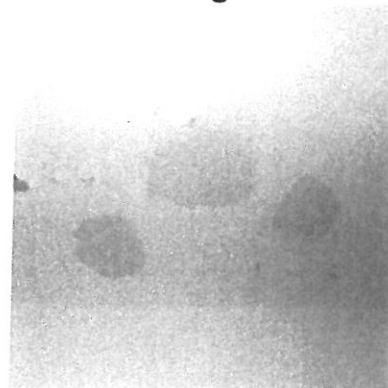
Window degradation



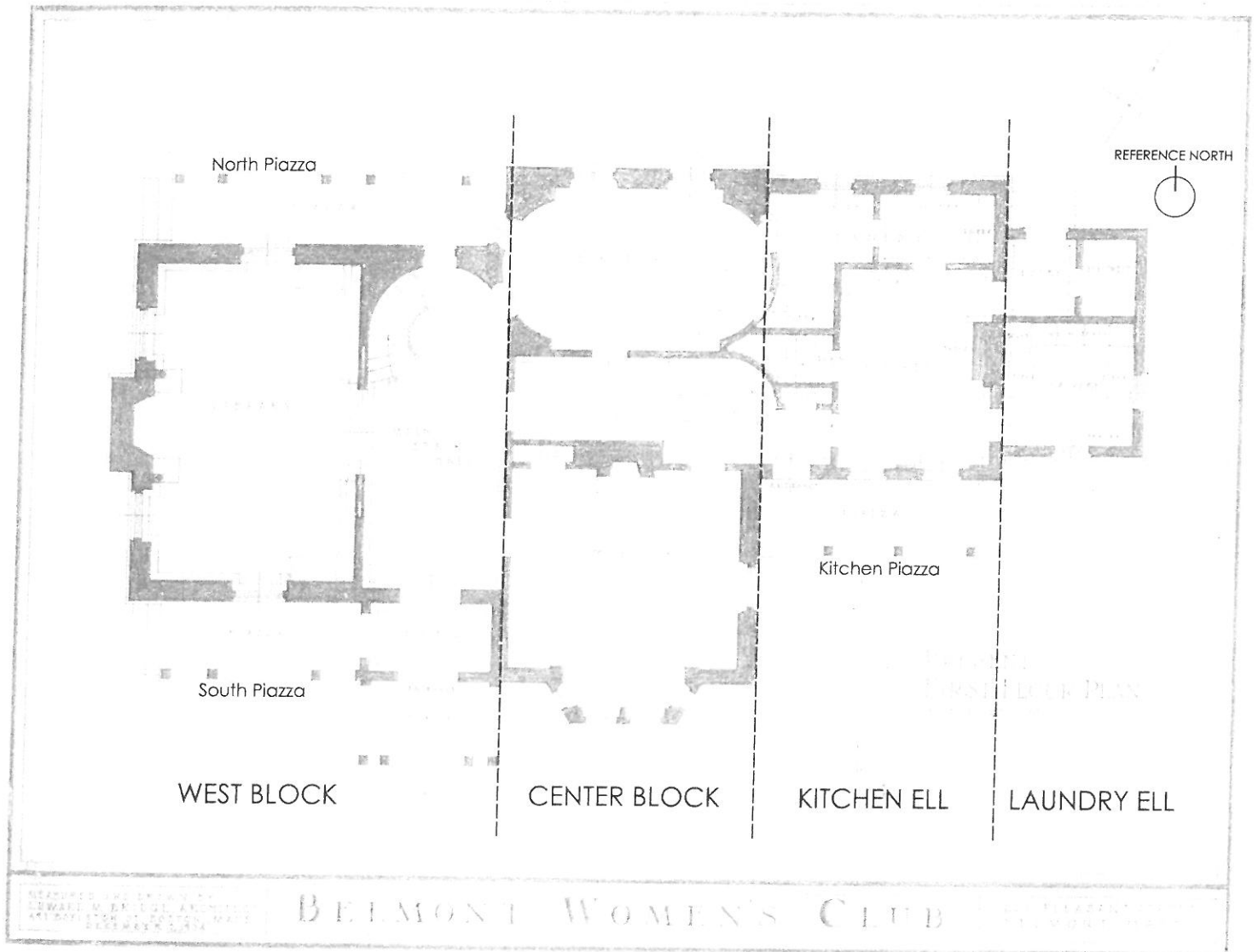
Window degradation



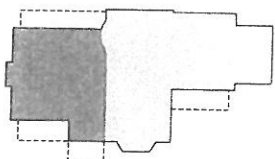
Water damage



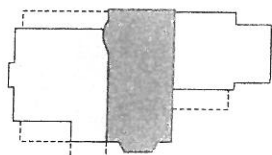
**William Flagg Homer House
Belmont Woman's Club
Conditions Assessment**



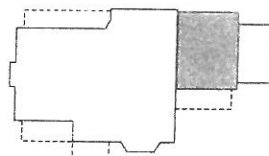
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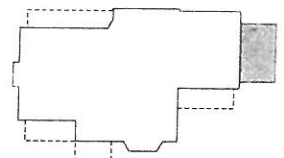
WEST BLOCK



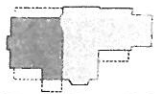
CENTER BLOCK WITH
BAY WINDOW



KITCHEN ELL

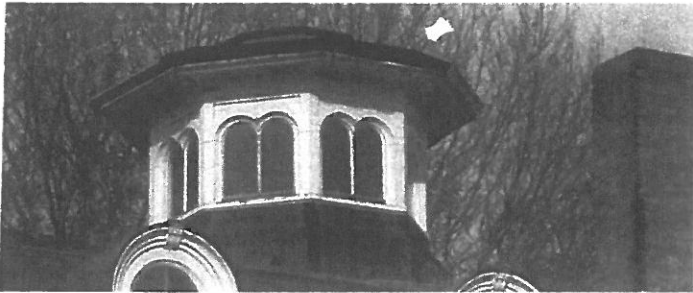


LAUNDRY ELL



SECTION I: WEST BLOCK

Top Roof Surface and Cupola



Rubber roof

-Some bubbling on North side, near cupola.

Flashing at cupola

-Rubber membrane up to window sill. Unable to determine state of building materials beneath.

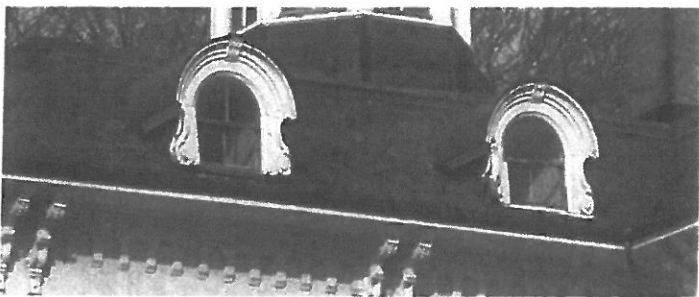
Cupola roof

-Deteriorating wood eave with sizable portions of fascia missing around entire structure.
-Exposed interior framing; probable deterioration.
-Top of original roof and ornamental spire missing.

Cupola edge flashing, gutters and downspouts

-Aluminum drip edge broken and missing on South side.

Front, South-facing Slope



Slate

-Missing slate shingles near valley and dormers.

Dormers

-Copper roof appears to be in good condition, typ.
-Wood sills deteriorated or missing.
-Wood scrolls deteriorated and broken, typ.
-Center bracket/keystone missing original extension, typ.

Flashing at dormers

-Copper on sides of dormers appears to be in good condition, typ.
-SW dormer – broken tar seal at metal flashing under window sill.

Gutters and downspouts

-Copper downspout drains directly onto roof of veranda below.
-Copper gutters attached to flat fascia replaced original, molded wood cornice at some point, typ.

South Elevation



Soffit, brackets and cornice

-Some joints opening in soffit.
-Small hole (or peeling paint) between brackets.

Wall

-Streaking, typ.
-Peeling paint.
-Crack above porch window.

Windows and surrounds

-Storm with slider on oversized porch – no surround.
-Deteriorating paint and putty, typ.

South Piazza

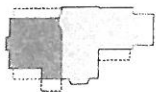


Rubber roof

-Appears to be in good condition, typ.

Flashing at walls of house

-Rubber membrane with no visible defects.



Gutters and downspouts

- Piazza gutters are different type, perhaps older, than main roof gutters.
- SW Corner – Copper drip edge and gutter broken.

Base

- Brownstone base at wall is cracked.

Floor and ceiling

- Two end columns are settling; rot at bottom; possible rotting of structural framing.
- Floor has warped and peeling paint.
- Beadboard at ceiling in fair condition.

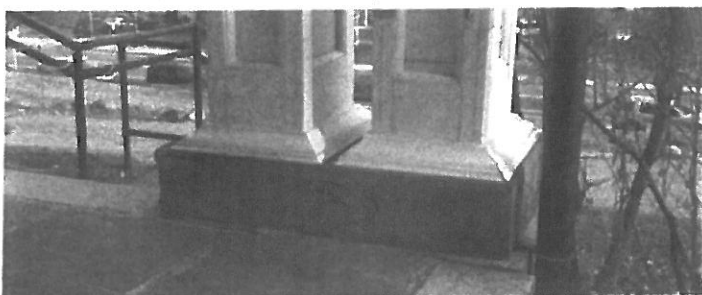
Foundation

- Joint mortar eroded.

Side stairs

- Slate shims exposed where grade is washed away
- Deteriorated grout at South face.
- Deteriorated wood riser at top.

Front Vestibule and Entry Porch



Rubber roof

- Bent aluminum snow diverter nailed into rubber roof; no rubber over penetrations.

West-facing wall and door of vestibule

- Inswinging French door at vestibule needs repair; storm/screen door missing (in basement)
- Flush board wall with 12-1/2" +/- wide single full-height boards at left and right of door.

South-facing wall, door and surround of vestibule

- Wood with applied ornament; some peeling paint.
- Left pilaster and floor have settled.

Front (South) entry porch

- Wood, vaulted panel trims are dropping

Floor and ceiling

- Multicolored sandstone, red stains have eroded the most.
- Brownstone column bases have eroded.

Foundation

- Has moved out on both sides.

Front stairs

- Some movement.
- Second flight down – cheek walls have settled and shifted; re-point ends of treads.

Gutters and Downspouts

- Porch West – Copper downspout with no drain, elbow away from stair.
- Porch East – Copper downspout with no drain, elbow away from stair.
- Copper replacement gutters' termination at original wood cornice in center is awkward.

West-Facing Slope



Slate

- Some deteriorating slate shingles.

Flashing at chimney

- Stepped copper flashing appears to be in good condition, typ.

Dormers

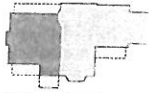
- Copper roof appears to be in good condition, typ.
- Wood sills deteriorated or missing.
- Wood scrolls deteriorated and broken.

Flashing at dormers

- Copper on sides of dormers appears to be in good condition, typ.
- SW Dormer
 - Bent and deteriorated metal flashing over copper pan at window.
 - Copper pan ribs bent at window flashing.

Gutters and downspouts

- NW – Copper downspout with no drain.
- SW – Copper downspout with no drain, diverted to stair under front piazza.
- Copper gutters attached to flat fascia; replaced original, molded wood cornice at some point, typ.



SECTION I: WEST BLOCK (continued)

West Elevation



Soffit, brackets and cornice

- Damage at chimney penetrations.
- Boards loose.

Wall

- Oil tank filler hose location.

Windows and surrounds

- Brownstone sills spalling.

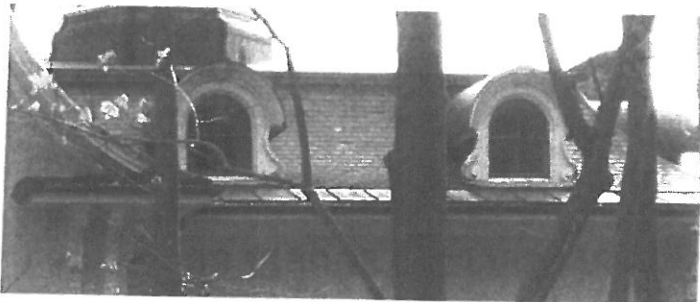
Chimney

- Open joints.
- Brick is spalling.

Foundation

- Joint mortar eroded; open joints, typ.

North-facing Slope



Slate

- Broken and missing slate shingles.

Dormers

- Copper roof appears to be in good condition, typ.

Flashing at dormers

- Copper on sides of dormers appears to be in good condition, typ.

Gutters and downspouts

- Copper gutter filled with leaves.
- Copper downspout drains directly onto rubber roof of back piazza.

North Elevation



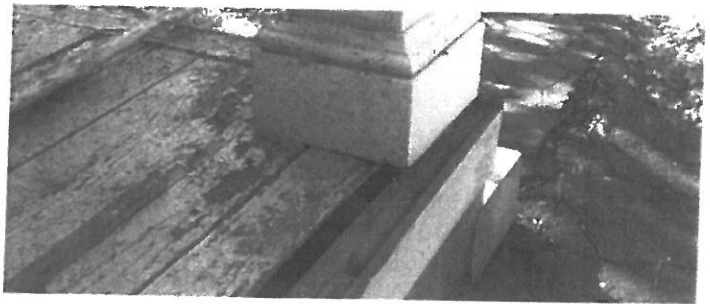
Soffit, brackets and cornice

- Two missing brackets at center of elevation.
- Simplified cornice replaced original at some point.

Wall

- Streaking, typ.

North Piazza



Rubber roof

- Debris overtop from roof above.

Flashing at walls of house

- Rubber membrane appears to be in good condition, typ.
- Low sill at Western-most window may compromise rubber.

Floor and ceiling

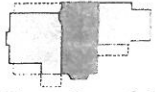
- Grate in floor.
- Settling at back edge.
- Scraped paint.
- Joints opening.

Foundation

- Granite blocks are tilting in at two locations; porch settling because of it.

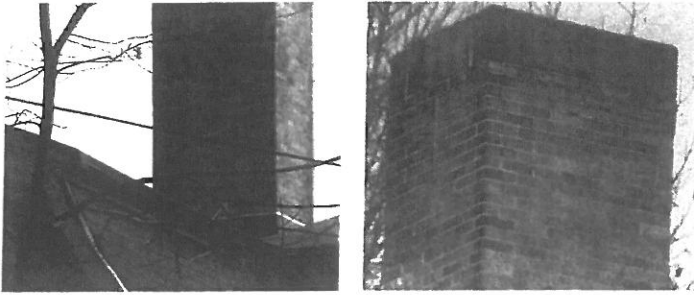
Side stairs

- Open joints where granite stairs meet wall.
- Infill stone piece below treads at North side has shifted.



SECTION II: CENTER BLOCK WITH BAY WINDOW

Top Roof Surface



Rubber roof

-Loose rubber overhanging North edge of roof.

Flashing at perimeter

-Some copper drip edge in need of attention.

Flashing at chimney

-Rubber membrane should be reviewed.

Chimney

-Chimney's iron spot brick appears to have repaired open joints.

-Some deterioration of brick near stone cap.

Windows and surrounds

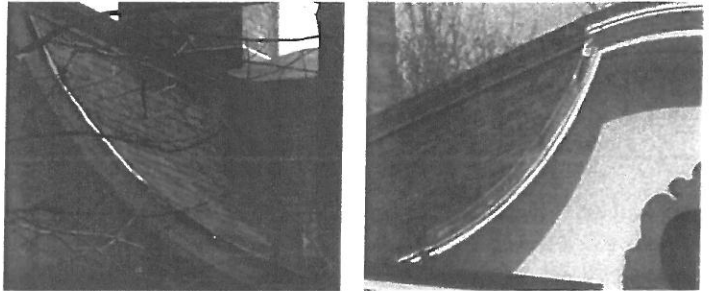
-Deteriorating paint and putty.

-Gaps in brownstone surrounds; center column settled due to beam deflection at bay window, possibly.

Foundation

-Joint mortar eroded; open joints, typ.

West-facing Slope



Metal

-Aluminum edge at front and back edge of slate poorly detailed.

Slate

-Worn slate shingles at front slope.

-Missing and worn slate at back slope.

Gutters and downspouts

-Copper gutter and pan with slate and wood debris.

-Front downspout drains directly onto roof of South piazza, below.

-Rear copper gutter filled with leaves.

-Rear downspout drains directly onto roof of North piazza, below.

South Elevation



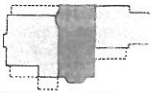
Soffit, brackets and cornice

-Right-handed gable fascia at lower edge is damaged

Wall

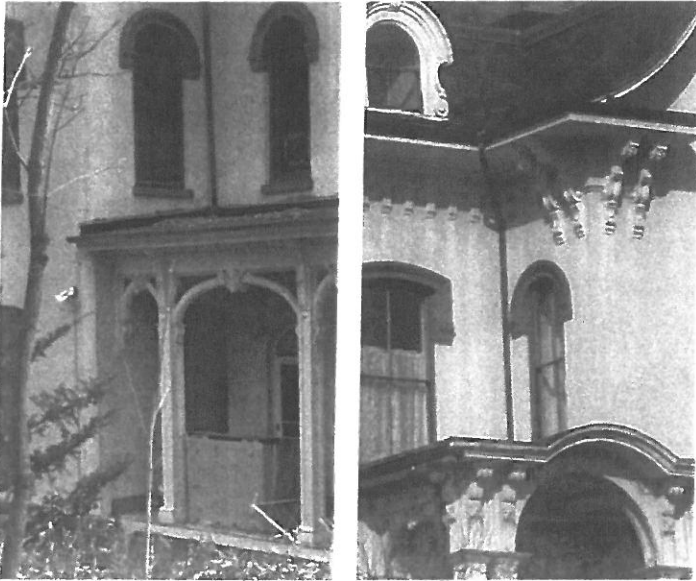
-Stucco is open to brick where gutter terminates on both sides of the gable.

-SW corner, abandoned corrugated downspout still on wall.



SECTION II: CENTER BLOCK WITH BAY WINDOW (continued)

West Elevation



Soffit, brackets and cornice

- Brackets at Northern corner have been removed.
- Damage at stucco corner of corbelled panel at brackets.
- Simplified cornice replaced original at some point.

Wall

- Streaking, typ.

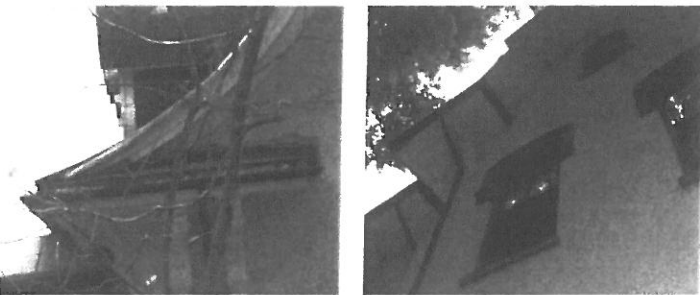
Window and surround

- Deteriorating paint and putty, typ.

Foundation

- Joint mortar eroded; open joints, typ.
- Movement away from North stone.

North Elevation



Flashing at wall of house

- Stucco chipping/broken where copper flashing of pan meets the exterior wall.

Soffit, brackets and cornice

- Peeling paint, typ.

Northern eaves

- Copper gutters filled with leaves.

Windows

- Deteriorating paint and putty, typ.
- Full-height screens missing cross piece, torn.

Foundation

- Basement chute(s) and window pieces missing.
- Joint mortar eroded; open joints, typ.

East-facing Slope



Metal

- Aluminum edge at South edge of slate poorly detailed.
- Aluminum edge at North edge of slate broken

Slate

- Missing and broken slate shingles.

Penetrations

- Snow fences between front edge and SE dormer, as well as SE and E dormers.

Dormers

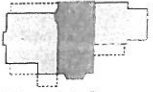
- Copper roof appears to be in good condition, typ.
- Wood scrolls damaged, typ.
- Missing ornament on keystones.

Flashing at dormers

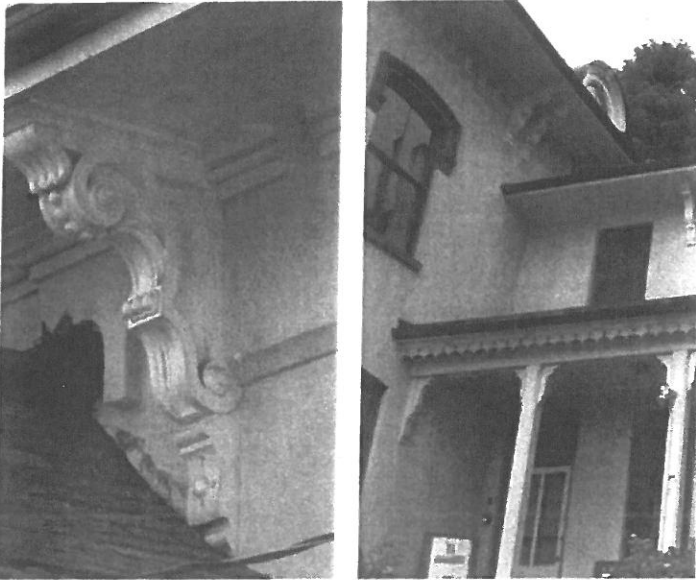
- Copper on sides of dormers appears to be in good condition, typ.
- Flashing under sills not visible.

Gutters and downspouts

- Copper gutters filled with leaves.
- SE copper downspout drains into PVC drain.



East Elevation



Soffit, brackets and cornice

- Missing/chipping paint, typ.
- Missing bracket at Northern corner of elevation.

Wall

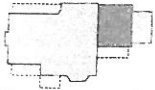
- Track of former conduit not well patched.
- Broken/chipped stucco at corbel detail at intersection with Kitchen Ell roof.

Windows and surrounds

- Deteriorating paint and putty, typ.
- Basement window frame rotting at corner and missing screen; window is partly open.

Foundation

- Joint mortar eroded; open joints, typ.



SECTION III: KITCHEN ELL BLOCK

Top Roof Surface



Flashing at perimeter

-NE corner – copper drip edge broken.

Flashing at chimney

-Rubber membrane appears to be in good condition, typ.

Flashing at wall of house

-Not visible.

Penetrations

-Chimney has been rebuilt and repaired; staining from grout shows potential weak points.
-Two vent stacks at South side from kitchen below.

South-facing Slope



Metal

-Aluminum edge at East side of slope is missing.

Slate

-Broken slate shingles at bottom of slope.

Other Penetrations

-Snow fence mounted to copper gutter pan at bottom of slate.

Gutters and downspouts

-Copper gutter dented with poor seams.
-SE downspout - copper; run to grade.
-SE cast iron drain abandoned .

South Elevation and Kitchen Piazza



Soffit, brackets and cornice

-Simplified cornice at upper roof; replaced original at some point.

Wall

-Streaking, typ.

Windows and door

-Stained glass at bath misshapen because of exposure.
-Full-sized screens need repair.

Kitchen Piazza

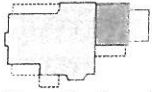
-Front edge of cornice is rotten in parts; slopes.
-Cut-out broken in one spot.

Floor and ceiling

-Ceiling beadboard peeling.
-Floor is worn.
-Deteriorated or missing trim at column bases, typ.

Stairs

-Shifted 1-3/4" forward.
-Open joints.
-Second set: some movement/settlement.
-Landings (2) have recent brick instead of "period" brick.



North-facing Slope



Metal

-Aluminum edging at slate poorly detailed and installed.

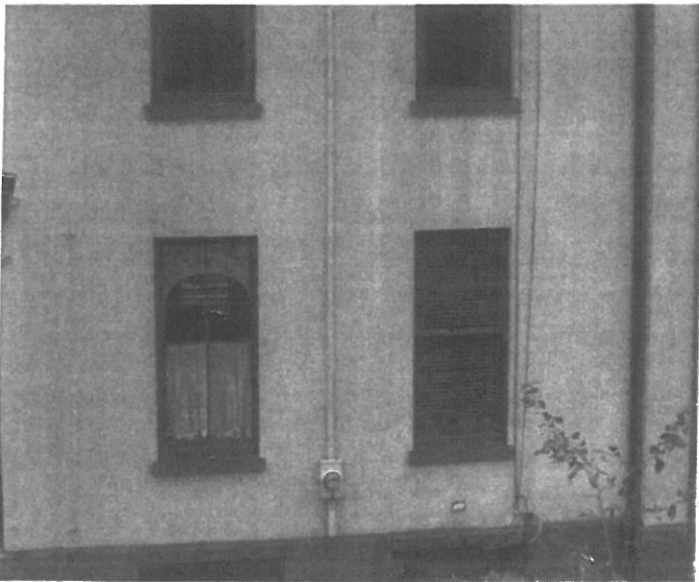
Slate

-Missing slate shingles.

Gutters and downspouts

-Copper gutters filled with leaves.
-Copper downspout into cast iron drain.

North Elevation



Soffit, brackets and cornice

-Simplified cornice.

Wall

-Streaking, typ.
-Asphalt approach along wall limits drainage.
-Damage where laundry ell roof is tied in.
-Patch at former electrical service location is not stucco.
-Location of phone lines.
-Location of old electrical service.
-Brackets left in wall at old downspout location.

Windows

-Deteriorating paint and putty, typ.
-Half-screens upstairs; nothing downstairs.
-Basement windows missing trim, screens; chicken wire at right-hand window.

Foundation

-Hole at old electrical service.
-Open joints, typ.

East Elevation



Soffit, brackets and cornice

-Appears to be in fair condition.

Wall

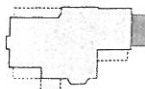
-Streaked stucco, typ.
-Chipped/broken stucco at eaves.
-Crack from attic window sill to bathroom window head.

Windows

-Deteriorating paint and putty, typ.

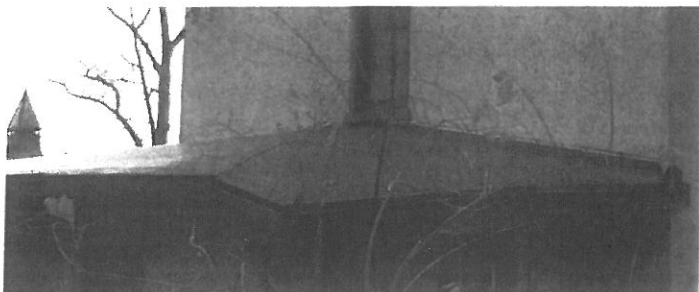
Foundation

-Joint mortar eroded; open joints, typ.



SECTION IV: LA UNDRY ELL BLOCK

Roof Surface



Flashing at wall

-Rubber membrane appears to be in good condition.

Gutters and downspouts

-No gutter; runoff to ground, below.

-Drip edge split at NE corner.

-Poor drip edge condition on East side.

South Elevation



Soffit, brackets and cornice

-Peeling paint at cove; possible rot.

Wall

-Location of gas service and meter.

Window

-Deteriorating paint and putty, typ.

North Elevation



Soffit, brackets and cornice

-Roof projection, not original to house, is settling; post at stairs is inadequate.

-Cove detail is missing.

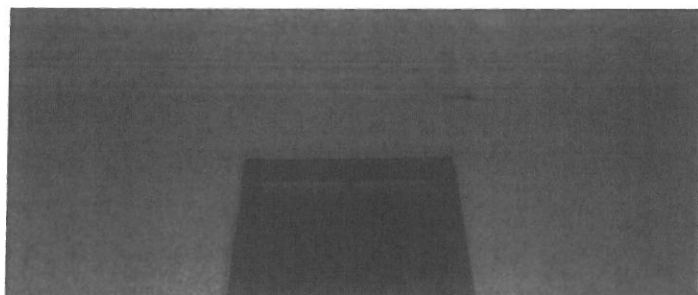
Foundation

-Open joints at granite stairs to back door.

Stairs

-Makeshift, pressure-treated stairs and post added; not original.

East Elevation



Soffit, brackets and cornice

-Peeling paint.

-Odd hole in soffit.

-Right soffit collapsing at cantilever.

Wall

-Streaking, typ.

Window

-Deteriorated paint and putty.

-Broken pane of glass.

Foundation

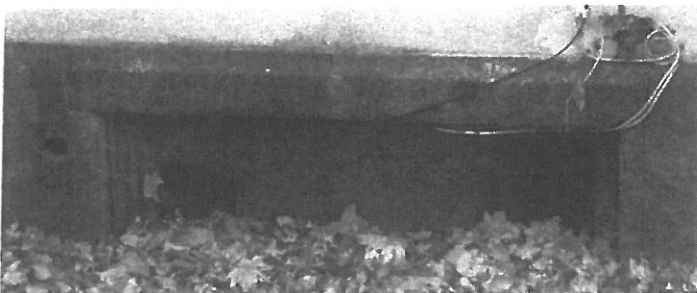
-Open joint at right side.

-Wood at bulkhead is deteriorating.

SECTION V: INTERIOR STRUCTURAL / CONDITIONS SURVEY

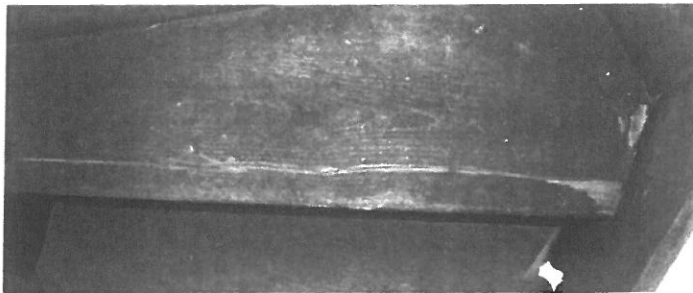
Walls, Floors, Windows

Basement



- Miscellaneous windows broken, missing, ajar.
- Miscellaneous brick partition walls have holes crudely broken through them for access, piping, etc.
- General debris, dirt, etc.
- Note: Miscellaneous storm windows, screens, doors, etc. stored here.
- Old insulation—which is likely asbestos-containing—is on some pipes and on mechanical equipment.
- Crawl space at NW corner is inaccessible.

Cupola



- Broken stair treads.
- Windows not operable; no venting capacity.

First Floor

- Miscellaneous small cracks in plaster, West wall of entrance/stair hall.

Second Floor

- Cracks in North wall of NW bedroom; floor seems to pitch toward north—settlement?
- Floor of SW bedroom seems to pitch toward NE; possible settlement?
- Note: Did not investigate small attic over kitchen ell (requires ladder to access hatch).

**William Flagg Homer House
Belmont Woman's Club**

Recommendations for Work: Breakdown by Specification Division

Division 1 – General Requirements

- New work to match historic, typ.
- Work to conform to Secretary of Interior's standards.

Division 2 – Site Construction

- Selective demolition as required for repairs and replacement.
- Selective Site Demolition
 - Remove debris, remnants of old asphalt paving, from hillside north of house.
 - Remove and reset stone stairs on hillside north of house.
- Site Clearing
 - Remove shrubs and trees as required for access for repair work.
 - Remove selected shrubs and trees from hillside north of house.
- Shoring and bracing, as required
- Earthwork as required for universal accessibility solution (not defined now).
- Excavation and filling, as required, including for future universal accessibility solution (not defined now).
- Perimeter drainage around entire house, including excavation, piping, gravel, etc.
- Landscape rough and finish grading (not defined now) .
- Landscaping (not defined now).
- Repairing, and repointing where appropriate, existing stone walls at perimeter of site.
- Repairing and/or replacing, and altering or extending as required for universal accessibility solution (not defined now), existing asphalt paving.
- Drive repair or replacement.

Division 3 – Concrete

- Underpinning of granite stairs and piazza foundations, as required.
- New slab below front piazza pavers.
- Foundations as required for universal accessibility solution (not defined now).

Division 4 – Masonry

- Brick
 - Chimney repair and/or rebuilding
 - West Block
 - Central Block

- Kitchen Ell
 - Brick repointing to match original.
 - Brick cleaning.
 - Replacement brick to match existing iron-spot brick.
- Cut granite foundation repointing, repositioning.
- New cut granite as required for universal accessibility solution (not defined now).
- Mortar
 - Mortar for repointing and/or rebuilding: materials, color and tooling to match existing.
- Brownstone windows sills, bases at piazza walls, and other elements
 - Parging with approved masonry patching and repair product, and/or replacement with new stone element.
 - Repointing
- Stucco
 - Cleaning and removal of loose material.
 - Patching and repair.
 - Possible scoring to recreate historic ashlar appearance.
 - Painting or coating with suitable product in historically appropriate color.

Division 5 – Metals

- Scrape and paint metal handrails.
- New finial atop restored cupola roof.
- New metal railings for universal accessibility solution (not defined now).

Division 6 – Wood

- Rough carpentry
 - Piazza and column framing, repair and/or replacement.
 - Cupola roof framing, repair tbd.
- Finish carpentry
 - Cupola fascia, soffit, roof repair and/or rebuilding, etc.
 - New piazza floors.
 - Window trim repair/replacement.
 - New historic-style cornice molding to match existing historic style.
 - New historic-style brackets to match existing historic style.
 - Carpentry repairs
 - Piazza column covers
 - Piazza floors

- Miscellaneous soffits and trim
- Restoration and repair of historic ornament.

Division 7 – Thermal and Moisture Protection

- Slate shingles repair and/or replacement.
- Rubber membrane repair and/or replacement.
 - Cupola – replace following roof rebuilding.
 - Repair where membrane exists (at low-slope areas of existing roof of main house, piazzas and front vestibule), including at penetrations for chimneys, snow diverter, and other items.
 - Remove for investigation at base of cupola and at window sills close to roof level where the existing membrane conceals wood conditions; replace as required.
- Flashing and Sheet Metals
 - Repair and or replace @ edge of slate roof.
 - Window sills (wood sill @ dormers).
 - Copper pans
 - Repair or replace copper drip edges.
 - Laundry ell
 - Kitchen ell
 - Perimeter flashing at chimneys.
- Copper Gutters and Downspouts
 - Cleaning
 - Repair
 - Replace at piazzas.
- Repair or replace snow guards and fences.

Division 8 – Doors and Windows

- Wood door repair
- Wood door replacement for universal accessibility solution (not defined now).
- Wood window repair
 - Repair sash, frames, hardware for operation.
 - Add weatherstripping.
 - Replace miscellaneous broken or cracked glass.
- Specialty – Stained glass restoration.
- Storm windows – new, low-profile storm windows.

Division 9 – Finishes

- Exterior painting and prep
 - Wood
 - Stucco

Division 10 – Specialties

- Pest control.

Division 11 – Equipment

- New lift for universal accessibility solution (not defined now).

Division 16 – Electrical

- Exterior lighting replacement and additional exterior building lighting.
- Site lighting replacement and additional site lighting.



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January 19, 2014

Mr. Gary Wolf
Gary Wolf Architects, Inc.
98 North Washington Street, Suite 304
Boston, MA 02114

Re: William Flagg and Homer House
Belmont Woman's Club
Structural Program

Dear Gary:

At your request, I met with you to review existing conditions at the Belmont Woman's Club (BWC) to evaluate needs for repairs.

BACKGROUND

This circa 1853 building is listed in the Belmont's Pleasant Street Historic District and is the former home of Winslow Homer's aunt and uncle. The exterior is finished with stucco. Reportedly, the original stucco was scored to mime stone masonry. The property is situated on the lower east slope of Belmont Hill suggesting it is founded on stable soil. The property is presently used for civic meetings and small functions. Some exterior components are well worn and need repair.

SURVEY

General

Except for the front vestibule, the exterior walls are twelve inch thick brick covered with stucco. These are supported on foundations faced with granite and backed up with brick from grade to floor which is in turn supported on rubble below grade. The interior basement walls are 8" thick brick supporting wood floor and wall framing. The interior walls above the first floor framing appear to be wood framed.

In conversations with BWC staff, we learned that the exterior of the building was "painted" in about 1995. There is no staff memory of when the stucco may have been recoated with new stucco.

The masonry walls appear in good condition and appear to have not moved or settled. They have the appearance of a robust structure.

Itemized Conditions

Refer to the attached first floor plan where conditions are noted on the plan to coordinate with the following list. In the following list, conditions are prioritized in one of three categories – safety where the public is at risk, durability where building fabric is at risk of rapid deterioration, and aesthetics where the cost of maintaining an authentic appearance is a premium. Repair needs are as follows: *safety* ones are urgent, *durability* ones may be deferred for a short time, and *aesthetic* ones are discretionary. The condition items listed below are each tagged at their ends with one of the aforementioned priorities. Within each priority category, the need for repair varies.

1. At the northeast corner, a stair to a door to receive ice for the ice chest room is constructed with pressure treated lumber in a style not in keeping with the historic appearance. Additionally, the roof was extended over this stair and supported with a post. *Aesthetic*.
2. At the rear piazza, the middle area of the north granite foundation stones has shifted outward 1". *Durability*.
3. At the rear piazza, the westernmost section of the north granite foundation stone shifted inward 3 1/2". *Safety*.
4. At the rear piazza, the deck flooring is well worn and cracked. The joists are rotted to varying degrees and have displaced down. This deck is not safe for use. *Safety*.
5. At the front west piazza, deck flooring is well worn and cracked. The joists are rotted to varying degrees and have displaced down. This deck is not safe for use. *Safety*.
6. At the front west piazza, column bases have many evident patches. *Aesthetic*.
7. At the front porch, the side wall has dislocated out 1/2". *Aesthetic*.
8. At the front porch, pavers settled along with pilaster base. Presumably, the soil on which the mortar bed supporting the pavers is not properly consolidated, thereby, the soil is subsiding. The front of the porch is settling and drifting away from the house. This has led to the porch soffit and columns following these movements. *Aesthetic*.
9. At the porch, the column bases have deteriorated following earlier repairs. *Durability*.
10. At the stairs to the porch, the west cheek wall stone settled 1". *Aesthetic*.
11. At the stairs to the porch, the east cheek wall stone settled 1/2". *Aesthetic*.
12. At the front east piazza, the column bases have patches from earlier repairs. I was able to plunge a knife to the hilt in the band joist behind the trim board. Rot is present in some of this framing. *Safety*.
13. At the base of the west chimney, some brick units are cracked apparently from movement of granite joints opening. *Durability*.
14. Above the roof line, the central chimney is leaning northward. Joints are heavily eroded. Some bricks are cracked. *Safety*.
15. Above the roof line, the east chimney joints are heavily eroded and bricks are cracked. *Safety*.
16. The east end of the front west piazza, the bracket appears to be pulling slightly away from the wall. *Durability*.

Suspect Conditions

1. In the east wall, some cracks emanate from the head of the second floor window up to the sill of the windows above. These are fresh having apparently formed since the wall was restuccoed and painted. Strength, vitrification, porousness, and freeze resistance of brick are unknown. Vapor permeability of paint is unknown.
2. The second floor sags under the wall separating two rooms on the west second floor.
3. The stucco recoating material and bonding agent are unknown.
4. The paint material properties used to coat the stucco is unknown.
5. The tops of chimneys above the roof are not readily accessible to look down the interior to see conditions.

CODE COMPLIANCE

Seeing the main structure is in good condition of structural walls and framing, the interior will not be significantly altered, and the exterior is being restored, the Code will permit "repairs in kind" without a need to investigate and strengthen the structure for earthquake and extreme wind loadings.

RECOMMENDATIONS

1. At the northeast corner, remove the added stair and roof overhang returning the structure to its original configuration.
2. At the rear piazza, replace flooring, assess joists replacing rotted ones (assume 50 percent), and reset displaced granite foundations, and add a slab on grade to brace the stones against future dislocation. The soil fill under and around the piazza is not well consolidated so it is not resisting uneven earth pressures associated with freezing and thawing of soils.
3. At the front west piazza, replace flooring and assess joists replacing rotted ones (assume 50 percent). Reconstruct the bases of the columns removing any rot and restoring detail historically correct.
4. At the front east piazza, replace flooring and assess joists replacing rotted ones (assume 50 percent). Reconstruct the bases of the columns removing any rot and restoring detail historically correct.
5. At the front porch, soil subsidence will eventually cease. After 160 years, most subsidence should be complete. The mortar bed supporting the pavers has an unknown construction. Resetting the pavers on a new reinforced concrete slab would be prudent. Realignment the out of plumb columns will require consideration of alignment to dislocated foundations. Restore the column bases to authentic detail.
6. Some further architectural and engineering assessment is needed to understand some anomalies such as the following:
 - a. Structural engineer to evaluate cause of cracking in stucco in upper east wall.
 - b. Structural engineer to survey tops of chimneys. This would require trade assistance with ladders and safety lines or working from an aerial lift.

Mr. Gary Wolf
William Flagg and Homer House, Belmont Woman's Club

January 19, 2014

Page 4

- c. Material technologist to determine the material and bonding agent used to restucco the exterior.
- d. Material technologist to determine the paint and its vapor permeability properties used to coat the stucco.
- e. Structural engineer to investigate the sagging floor framing at the west second floor to evaluate the strength of the floor. This will require trade assistance for accessing through finishes.
- f. Structural engineer to evaluate framing where interior walls have settled and cracked. This may require trade assistance for accessing through finishes.

In the above list, consideration should be given to balance funding with expenditures knowing that within each priority, the degree of need varies further phasing may be needed. Additionally, the attraction of this property for renting depends in part on aesthetics. Barricades to restrict access to unsafe areas would work against this attraction.

Sincerely,



Arthur H. MacLeod, P.E., Principal
MacLeod Consulting, Inc.

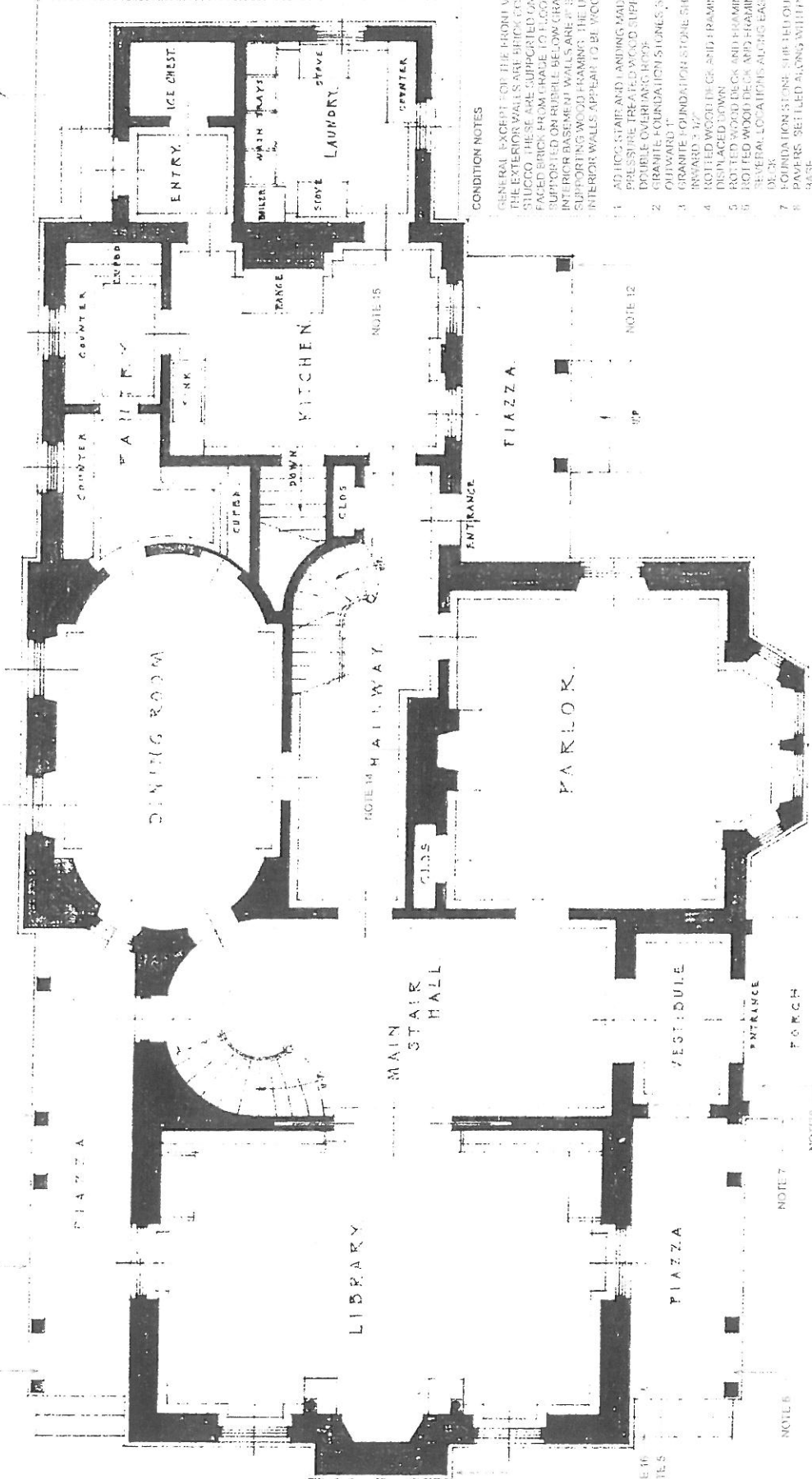


NOTE 1

NOTE 7

NOTE 3

NOTE 4



CONDITION NOTES

- GENERAL EXCEPT FOR THE FRONT VESTIBULE THE EXTERIOR WALLS ARE BRICK COVERED WITH STUCCO. BASE FOR THE SUPERIOR IS GRANITE FACED BRICK FROM THE SUPERIOR WHICH IS SUPPORTED ON RUBBER LEG LOGS WHICH ARE INTERIOR BASEMENT WALLS. THERE IS NO SUPPORTING WOOD FRAMING IN THE INTERIOR. INTERIOR WALLS APPEAR TO BE WOOD FRAMED.
1. ADJACENT STAIR AND LANDING MADE FROM PRESURE TREATED WOOD. STAIR BEING DOUBLE OVERHANG HOOR.
 2. GRANITE FOUNDATION STONES, SHELFED OUTWARD.
 3. GRANITE FOUNDATION STONE, SHELFED INWARD 1/2".
 4. ROTTED WOOD DECK AND FRAMING DISMANTLED DOWN.
 5. ROTTED WOOD DECK AND FRAMING IN SEVERAL LOCATIONS ALONG EAST EDGE OF DECK.
 6. FOUNDATION STONE SUB HEIGHT 1/2".
 7. PAVERS, SET FLEED ALONG WITH PLASTER BASE.
 8. COLUMN BASE DE-TERIORATED FOLLOWING EARLIER REPAIR.
 9. CHECK WALL STONE, GET LIFT 1".
 10. CHECK WALL STONE, SET LIFT 1/2".
 11. COLUMN BASE PATCHED FROM EARLIER REPAIR.
 12. REBUILD CHIMNEY TABLE.
 13. OLD CHIMNEY LEANING FORWARD. JOINTS HEAVILY BROKEN. SOME CRACKED BRICKS.
 14. OLD CHIMNEY JOINTS HEAVILY BEGGED. SOME CRACKED BRICKS.
 15. INVERTED OF BRACKET PULL AWAY FROM WALL.

MEASURED AND DRAWN BY
EDWARD M. BRIDGE, ARCHITECT
441 ROYLSTON ST BOSTON MASS.

BELMONT WOMEN'S CLUB

661 PLEASANT STREET,
BELMONT, MASS.

Belmont Woman's Club
Structural Condition Assessment

1. Belmont Woman's Club
viewed from the southwest.



2. Belmont Woman's Club
viewed from the southeast.



- Belmont Woman's Club viewed
from the northeast.





3. Belmont Woman's Club
viewed from the northwest.



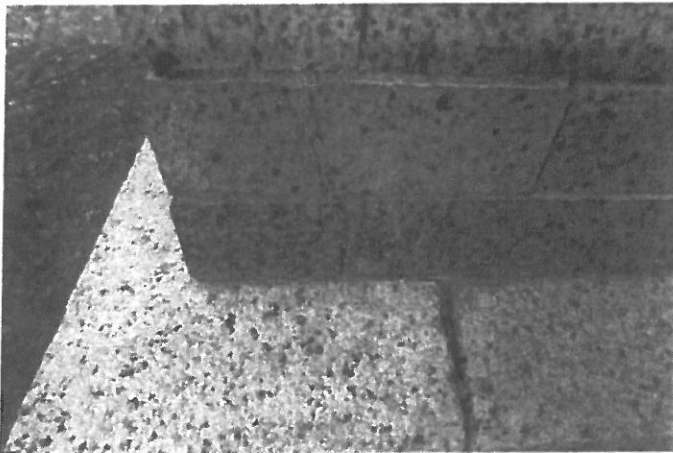
4. Ice chest stairs and roof
extension framing materials not
in historic context.



5. Rear piazza deteriorated deck
condition.



6. Dislocated foundation at rear piazza.



7. Cracks in brick in west chimney where granite foundation facing has opened up at head joint.



8. Front west piazza deteriorated deck condition.



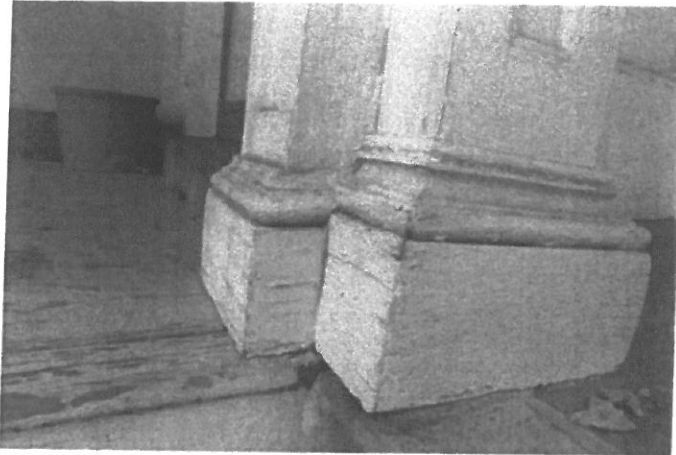
9. Front west piazza column bases.



10. Roof bracket at front west piazza may have pulled slightly from building.



11. Paving at front porch has settled.



12. Old repairs to column bases disregard alignment at bases.



13. Roof over porch has settled along with settlement of porch landing. Columns moved with foundation to out of plumb position.



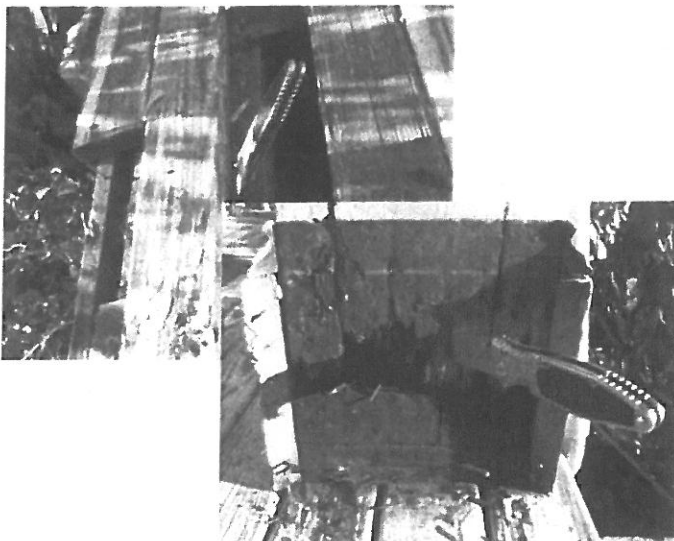
14. Cheek walls to front stairs have settled. West cheek in foreground.



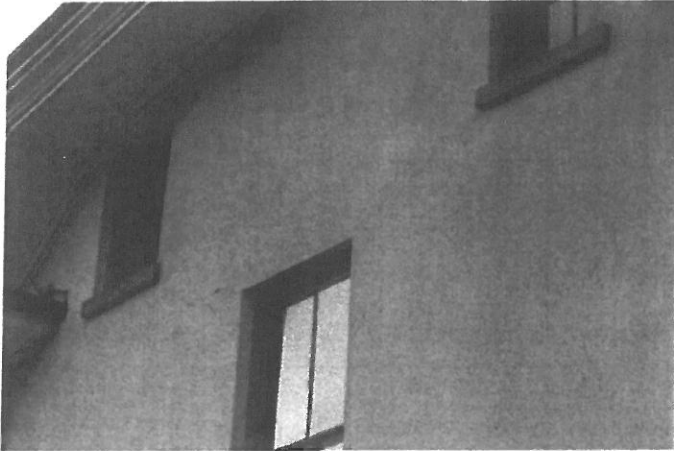
15. Cheek walls to front stairs have settled. East cheek in foreground.



16. Decking at front east piazza is worn.



17. Rot in east piazza joist in upper photo. Rot in column base at east piazza lower photo.



18. Cracks in stucco at second floor. These are new since 1995 painting.



19. Gary Wolf peering into opening to see conditions under piazza deck.



20. Access setup to review opening at edge of roof over ice chest entry.



William Flagg Homer House
Belmont Woman's Club

Proposed project phases

	Yearly Term				General Budget
	1-2 Years	2-3 Years	3-5 Years	5-10 Years	
Emergency Repairs					\$70-90,000±
Short Term					\$200,000±
Intermediate					\$700,000±
Long Term/Accessibility					\$340,000±
General Budget	\$70-90,000±	\$200,000±	\$700,000±	\$340,000±	

Emergency Repairs (1-2 years)

This category of work addresses high-priority concerns, including conditions that feature failed or missing elements, where either the building or users are at risk. While some repairs, such as the deterioration of the chimneys, may potentially fall into the category of emergency repairs, they have been placed in the next category because of the additional costs involved in staging the work and also the lack of evidence of active infiltration to the interior.

- Entry Porch, South Piazza, and Kitchen Porch
 - Remove flooring for access to structure; repair/replace damaged joists and other framing; repair/replace floor boards.
 - Open column covers at bases to reveal conditions; repair structure as required; repair/replace column bases pieces to match original conditions.
 - Repoint granite stairs
 - Repair/replace damaged gutters
- North piazza
 - Same as above, but also reset granite foundations that are shifted out of plumb. Alternatively provide temporary shoring for porch framing, or close off porch, until granite work can be completed in a future phase.
- Cupola
 - Modify one pair of windows in the cupola, and install new hardware for operation, in order to provide access to the roof.
 - Repair/replace missing fascia of roof in order to limit exposure to the elements.
 - (Assess condition of cupola roof framing where it has been exposed; access condition of wood exterior sheathing of cupola below window sills, where it has been covered by the rubber roofing membrane.)
 - (Assess existing windows for repair in future phase.)
- West and Central Chimneys
 - (Assess chimneys for work that will be required in future repairs/rebuilding.)

- Foundation
 - Repoint open joints in the granite foundations around the entire perimeter of the house and piazzas.
- Drive
 - Repair/seal existing cracks.

Short-term Repairs (2-3 Years)

The following section includes repairs that do not need to be undertaken immediately, but which are nevertheless a high priority. Because substantial staging is required for access for repairs at the chimneys and roof, this category includes repair and restoration work at the cupola roof, which can be more economically completed when staging is in place; this restoration work could provide a highly visible symbol of the building's rejuvenation, and thereby help in fund-raising for the substantial work yet to be undertaken.

- Chimneys
 - West Block Chimney
 - Rebuild chimney above roof, using salvaged original ironspot brick and new bricks to match.
 - Replace spalled and cracked ironspot brick and non-matching bricks from past repairs in lower two floors of chimney, as required.
 - Point new chimney and repoint existing, to match original.
 - Repair or replace stone cap
 - Repair wood soffit at intersection with chimney.
 - Provide new through flashing at roof intersection.
 - Central Block Chimney
 - Point new chimney to match original.
 - Repair or replace stone cap.
 - Provide new through flashing at roof intersection.
 - Kitchen Ell Chimney
 - Rebuild chimney above roof, using new ironspot bricks to match original.
 - Provide new stone cap.
 - Provide new through flashing at roof intersection.
- Cupola
 - Remove roofing of cupola and rebuild to match historic condition, with tall spire and finial, and original cornice details.
 - Repair window sashes, sills, and glazing.
 - Repair and/or rebuild cupola sheathing at lower walls based on conditions found under rubber membrane during previous investigation.
 - Re-flash rubber roof of West Block to the base of cupola.
- (Assess possible repair work for rubber membrane of West Block at North side of cupola.)
- (Assess degree of damage to existing slate shingles for future repair/replacement.)

- (Assess existing metal slate edge for future repair/replacement.)

Intermediate Repairs:

The following section includes repairs to the entirety of the exterior. Staging of the entire house will be necessary. Further investigation and the development of specifications will be necessary to define the full scope of work.

- Site Construction
 - Site clearing, as required, for access to repair work.
 - Assess potential for perimeter drainage around entire house.
- Concrete
 - Provide underpinning for resetting granite cheek walls at front stairs and at piazzas.
- Masonry
 - Patch or replace damaged brownstone details throughout house:
 - Windows sills and surrounds
 - Base trim at piazzas
 - Repoint as required.
 - Stucco
 - Clean entire exterior surface and remove loose material.
 - Apply new coating, including possibly scoring the stucco to match the historic ashlar appearance.
 - Provide finish paint color, or integrally colored coating, with historically appropriate color. (Research original colors as part of continuing study.)
- Metals
 - Scrape and paint existing metal handrails
- Wood
 - Removed existing pressure-treated stair and post; replace support for roof above.
 - Rough Carpentry
 - Rebuild bulkhead at Laundry Ell.
 - Finish Carpentry
 - Repair all soffits, fascias and ceilings not previously noted in earlier phases at all overhangs, eaves, and piazzas.
 - Replace/repair window trim where damaged or missing
 - Replace simplified cornices and other modern trim used for patching over time with appropriate, historic-style moldings to match original.
 - Replace missing and broken historic-style brackets.
 - Repair/replace damaged or missing wood scrolls at dormers and original keystone molding detail.
 - Clean and restore wood ornament
- Thermal and Moisture Protection
 - Slate

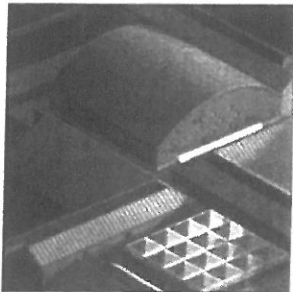
- Repair/replace damaged or missing slate shingles.
 - Assess snow fences and guards for proper installation
 - Rubber Membrane
 - Patch front vestibule snow diverter at penetrations, as required.
 - Flashing and Sheet Metal
 - Replace metal edge at ends of slate shingles.
 - Replace damaged and missing flashing at windows sills, as required.
 - Assess copper pans for proper installation; repair as required.
 - Repair/replace copper drip edges at Kitchen Ell and Laundry Ell; replace/repair drip edges around rest of house, as required.
 - Copper gutters
 - Repair dented and broken gutters, as required.
 - Repair/replace gutters at piazzas not performed in previous work.
 - Remove/replace snow guards and fences, if required.
- Doors and Windows
 - Repair wood doors
 - Wood windows
 - Repair/replace miscellaneous broken or cracked glass
 - Re-putty existing windows
 - Stained Glass
 - Restore; protect with exterior storm window
 - Install new, low-profile storm windows over existing windows for added protection and thermal efficiency.
- Finishes
 - Paint stucco, if not using an integrally colored top coat.
 - Score stucco to resemble original, ashlar pattern.
 - Scrape and paint all wood on windows, soffits, fascia, brackets, etc.
- Specialties
 - Exterior protection
 - Pest control
- Electrical
 - Replace exterior lighting with new historic-style lighting.
 - Provide new site lighting

Long Term Improvements and Accessibility Modifications/Additions

Implement accessibility improvements following full review of code and permitting requirements. Undertake additional site work for improvement of site, protection of building, and accessibility.

- Site Construction
 - Site clearing of hillside debris, shrubs, asphalt paving
 - Excavation for installation of perimeter drainage around entire house.

- Repair stone walls at site perimeter.
- Provide lift, ramp or other means for accessibility to building.
- Provide new asphalt or granite curb along hill-side of new drive.



Wolf Architects, Inc. is an architectural firm providing consulting and design for educational institutions and museums. The firm has received awards for both contemporary design and historic preservation, including a Preservation Award from the Massachusetts Historical Commission for the firm's work adapting a historic house and carriage house for the Lawrence Youth Commission; a Preservation Award from the Victorian Society of America – New England Chapter for an adaptive use for the Brookline Music School; and a "Renovation of the Year" Award for the contemporary addition and renovation at The National Heritage Museum in Lexington, MA.

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