



PRESERVATION PLANNING REPORT

**109 EAST ATLANTIC AVENUE
HADDON HEIGHTS, NEW JERSEY**

MARCH 2010

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Haddon Heights, New Jersey

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TABLE OF CONTENTS

Chapter 1: Introduction 1-1

Chapter 2: Existing Conditions Photographs 2-1

Chapter 3: Recommendations & Cost Estimate

 Scope of Work 3-1

 Important Considerations 3-2

 Preliminary Cost Estimates 3-3

 Exterior Recommendations & Costs 3-3

 Interior Recommendations & Costs. 3-4

Chapter 4: Cyclical Maintenance Program

 Overview 4-1

 Cyclical Maintenance Program 4-2

Appendices

Appendix A: The Secretary of Interior’s *Standards for Rehabilitation*

Appendix B: National Park Service *Preservation Briefs*

Appendix C: Technical Information & Contractors List

Appendix D: Haddon Heights Historic District Ordinance



Chapter 1

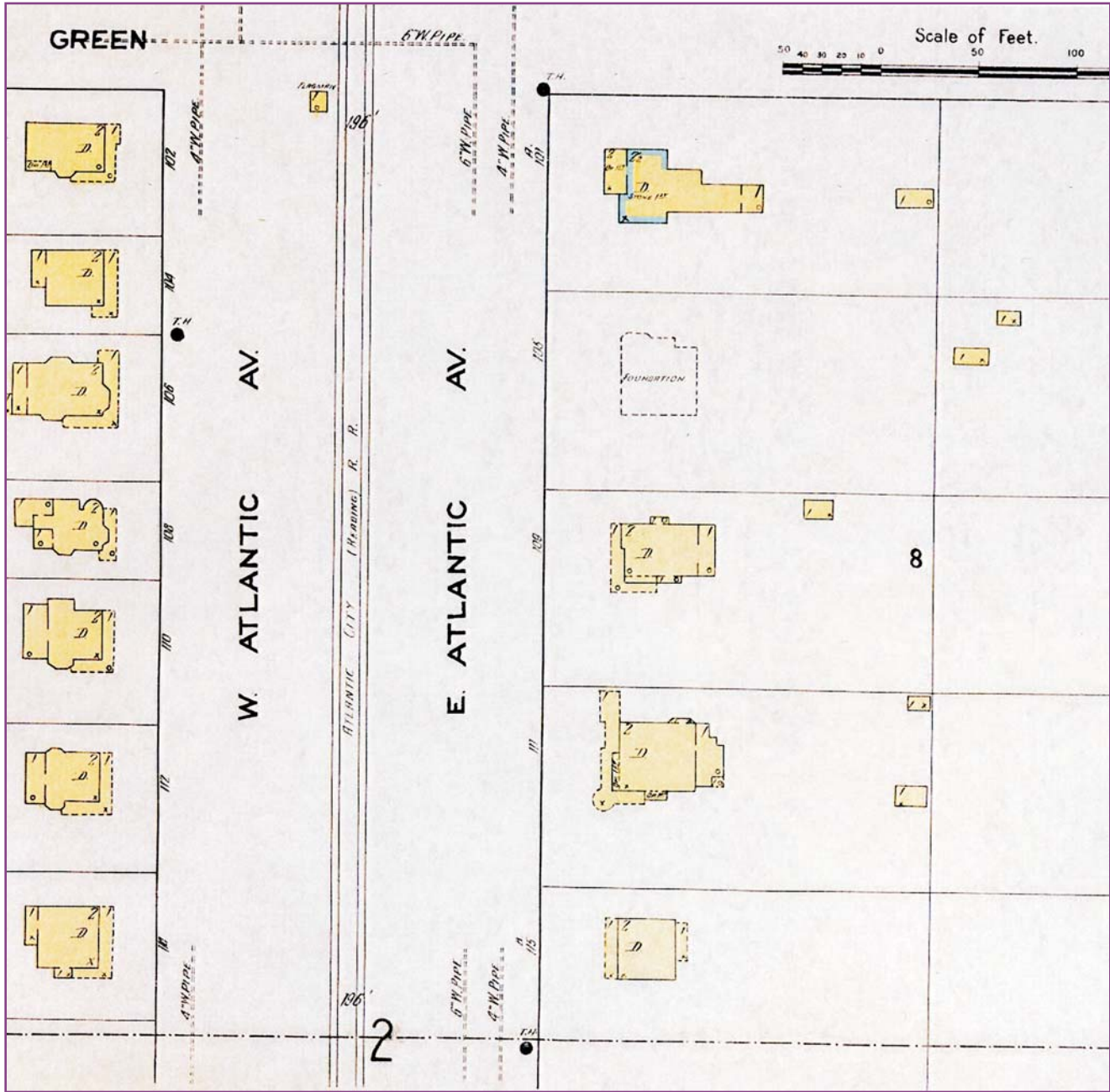
INTRODUCTION

BACKGROUND

The historic house located at 109 East Atlantic Avenue in Haddon Heights, Camden County, NJ was constructed c.1913. It first appears on the 1914 Sanborn Insurance map shown below. Note that the adjacent house at 105 E. Atlantic is under construction; the two properties were shown as a single lot on the 1909 map, suggesting they would have been subdivided and developed at approximately the same time. Symbols on the Sanborn map indicate the frame building at 109 featured a main slate roof, with tin roofs on the porch, bays, and rear wing. The footprint of the building has not changed since its construction – the only additions have been to the site.

Although the house fronts East Atlantic Avenue, suggesting the facade would be the west elevation, the building's rear left corner is actually north. East Atlantic Avenue runs southeast – northwest. Therefore, the front facade of the house is the southwest elevation, the driveway side is the northwest elevation, the rear is northeast, and the side abutting Stanfill Towers' lot is southeast.

Stanfill Towers, a 123-unit senior citizen facility, is located adjacent to the subject property and is purchasing the lot to provide for additional parking space for its residents. The modern carriage house in the rear of the property will remain in office use; the main house will eventually be put to a new use. In the interim, site development will proceed and the most urgent work to stabilize the house will be undertaken. This report was developed to assist Stanfill Towers with their preservation efforts.



Excerpt from Sanborn Map, 1914

Chapter 2

EXISTING CONDITIONS PHOTOGRAPHS

The following photographs were taken on March 10 and 12, 2010 to illustrate the current conditions of 109 East Atlantic Avenue, Haddon Heights, NJ. (*Photographs by Michael and Margaret Westfield*)



Photograph 1 of 46. View of 109 East Atlantic Avenue from the south showing the 2½ story shingled and sided frame building with slate roof and wrap around porch. Built circa 1913, the house is surrounded by overgrown vegetation that prevents full visibility.



Photograph 2 of 46. View of the front (southwest) facade showing the stone garden wall with cast iron gate. The shrubbery directly behind the wall would have historically been pruned to match the wall's height.



Photograph 3 of 46. View along front porch showing proximity of overgrown bushes that hold moisture against the porch's stone foundations. These bushes need to be pruned.



Photograph 4 of 46. Detail of southern cheek wall at front steps showing masonry movement in response to deteriorated mortar joints. Repair and spot repointing is required.



Photograph 5 of 46. Detail of front porch steps at porch pier showing settlement and structural movement. Stabilization of the floor framing will be necessary.



Photograph 6 of 46. Detail of same porch pier (from porch side) showing settlement.



Photograph 7 of 46. Detail of typical stone porch pier in need of spot repointing. Note original cast stone cap and wood balustrade at right.



Photograph 8 of 46. View of side return of front porch showing original flooring, balustrade, stone piers, and Doric posts. The metal railing at steps has been added.



Photograph 9 of 46. Detail of southern corner of front porch floor showing depression at failed floor framing. This framing will need to be stabilized.



Photograph 10 of 46. Detail of front porch's beaded board ceiling showing buckled board and peeling paint at small leak.



Photograph 11 of 46. View of the porch roof from the attic window. This roof is covered with flat seam metal (terne-plated steel, commonly called tin) that will last forever provided it is kept painted. The “tinner’s red” color is historically appropriate. Note that the pole gutters need cleaning.



Photograph 12 of 46. Detail of western corner of front porch soffit showing minor woodwork deterioration and failing paint on rusting drip edge.



Photograph 13 of 46. View of first floor front facade inside porch showing original paired beveled glass door opening and original tripartite twelve-over-one sash window. Note that this original first floor clapboard has been painted, unlike the unfinished replacement shingles at the second floor level. The plastic shutters should be removed to facilitate maintenance of the wall surfaces behind them.



Photograph 14 of 46. Detail of typical first floor original window sash showing missing glazing putty and deteriorating paint. The woodwork of the windows is in excellent condition and will last indefinitely if kept painted. None of the original window sash should be replaced.



Photograph 15 of 46. View of the house's main roof from the south showing a hipped roof over the Modified American Four-Square plan building with a projecting cross-gable on the front western corner and an unfenestrated cross-gable on the side southern corner. Note the paired 12/1 sash in the gabled dormers and the pole gutters above the closed soffits, all original building features.



Photograph 16 of 46. Detail of front roof valley showing rusting of the valley flashing, due to lack of maintenance (paint). Note debris and leaves collected at pole gutter.



Photograph 17 of 46. Detail of front roof slope showing properly repaired as well as missing slates, rusting pole gutter and downspout, and original slate dormer cheeks which should not be removed when the roof is replaced (because they are sound and will provide evidence of the original roof covering long after it is gone.)



Photograph 18 of 46. Detail of slate condition on southeastern side roof as seen from attic window. Note water running over the top of the clogged pole gutter causing deterioration to the woodwork of the cornice below.



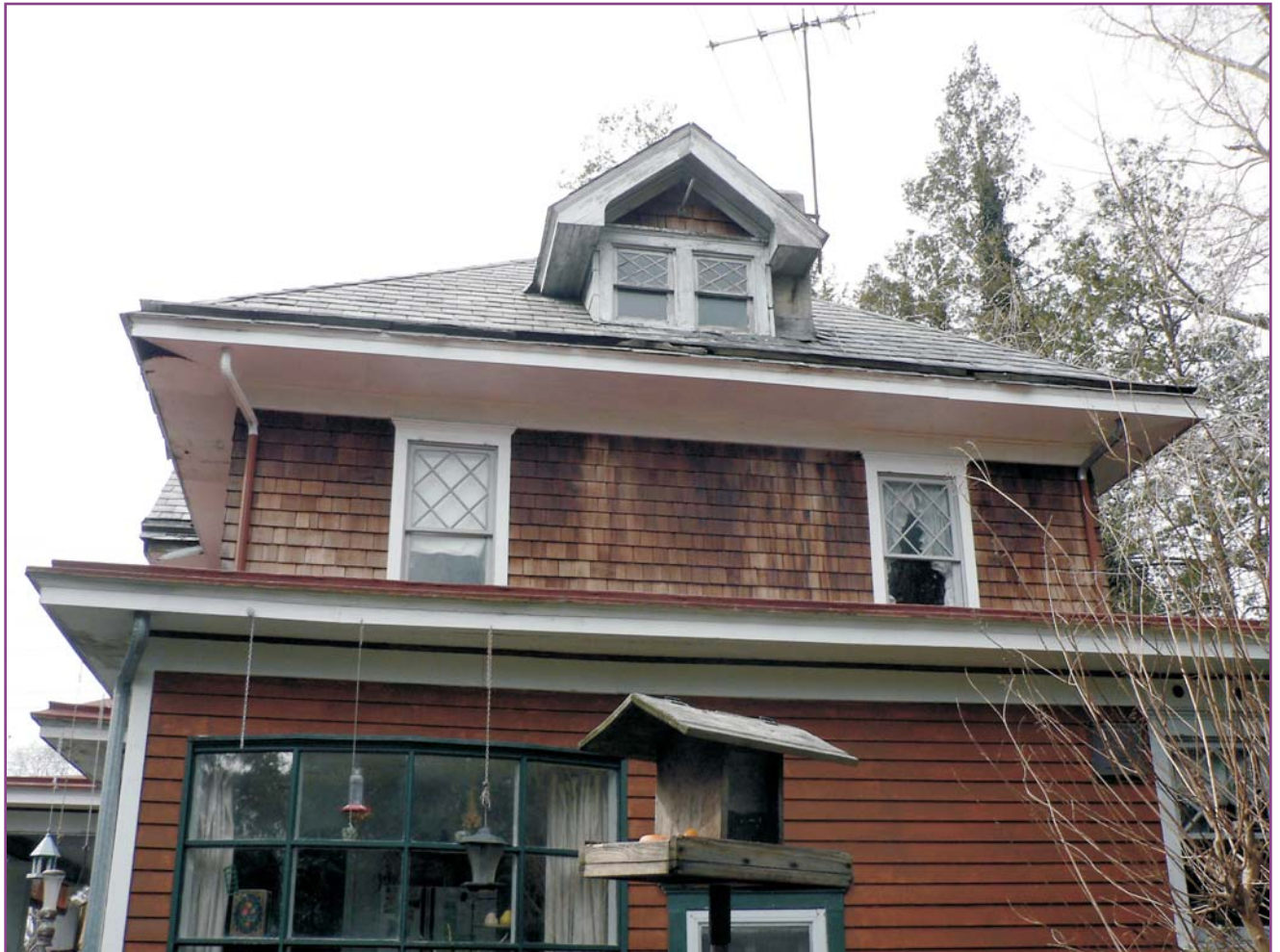
Photograph 19 of 46. Detail of the main chimney at the junction with the front roof slope showing a lack of proper flashing. The original flashing was apparently tin and deteriorated from a lack of re-painting. It appears to have been covered with bitumen (which is incompatible with tin) and allowed further moisture infiltration.



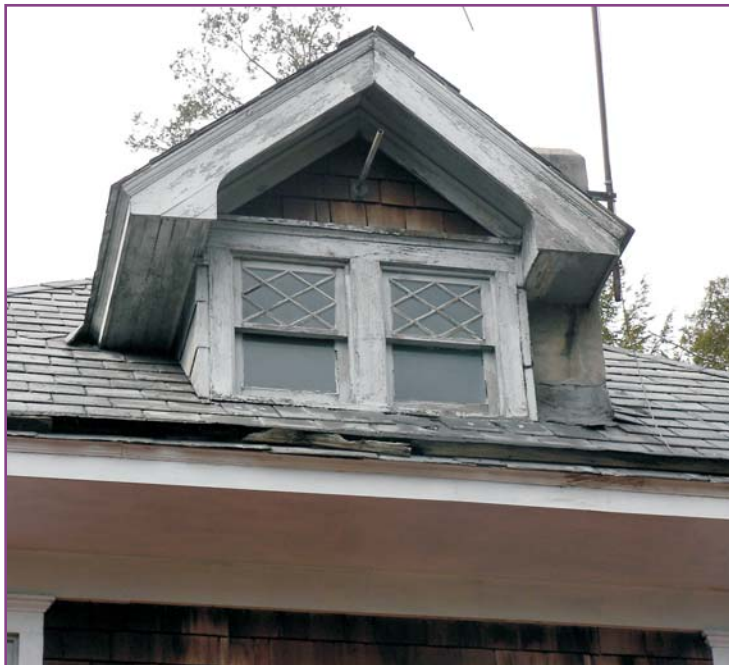
Photograph 20 of 46. Detail of the junction of the main chimney and the rear roof slope showing bitumen-coated flashing and need of spot repointing of the masonry.



Photograph 21 of 46. Detail of damaged plaster on chimney wall, directly below roof structure and attic ceiling.



Photograph 22 of 46. View of the rear elevation showing the hipped roof main section with gabled dormer, shingled second floor wall with two twelve-over-one sash windows, and projecting one-story rear wing with shallow hipped roof, added multi-light window, and head of basement door. This is the only side of the house not obscured by overgrown vegetation.



Photograph 23 of 46. Detail of rear dormer and pole gutter, both in need of repair. Note the secondary chimney to right of dormer that vents the basement water heater.



Photograph 24 of 46. Detail of the northwestern end of the rear elevation's roof showing the deteriorated pole gutter.



Photograph 25 of 46. View of the soffits and side cross-gable of the southeast elevation, viewed from the rear yard. Note hole in soffit.



Photograph 26 of 46. Cornice/soffit detail on the southeast elevation (Stanfill Towers side) showing deterioration of the roof slope beneath the pole gutter, loose fascia, and missing cornice woodwork. This is the same area shown in Photograph 18, taken from the attic window, above.



Photograph 27 of 46. View of northwest elevation (driveway-side wall) at box bay of stair landing showing failure of the downspout where it meets the bay's roof and broken stained glass in far first-floor window. (Also shown from the interior in Photograph 46.)



Photograph 28 of 46. Detail of the downspout failure showing organic growth on the wall shingles due to excessive dampness.



Photograph 29 of 46. Detail of bay and main soffits on northwest elevation (driveway side) showing moisture damage and need for woodwork repairs.



Photograph 30 of 46. Detail of the one story wall of the rear wing on the driveway (northwestern) side showing the encroachment of overgrown vegetation and corresponding deterioration of the woodwork due to the moisture held against the wall by the shrubbery.



Photograph 31 of 46. Detail of the dining room box bay on the Stanfill Tower (southeastern) side. Similar to the porch, it is roofed in flat seam metal that will hold up indefinitely as long as its paint coat is well maintained.



Photograph 32 of 46. Overall view of attic, facing northeast towards the rear dormer. Note that the paint and plaster is unstained under the field of the roof; however, it is likely that the inaccessible eave spaces (behind the knee walls) have been damaged by water infiltration, based on the exterior roof conditions at the deteriorated and clogged pole gutters.



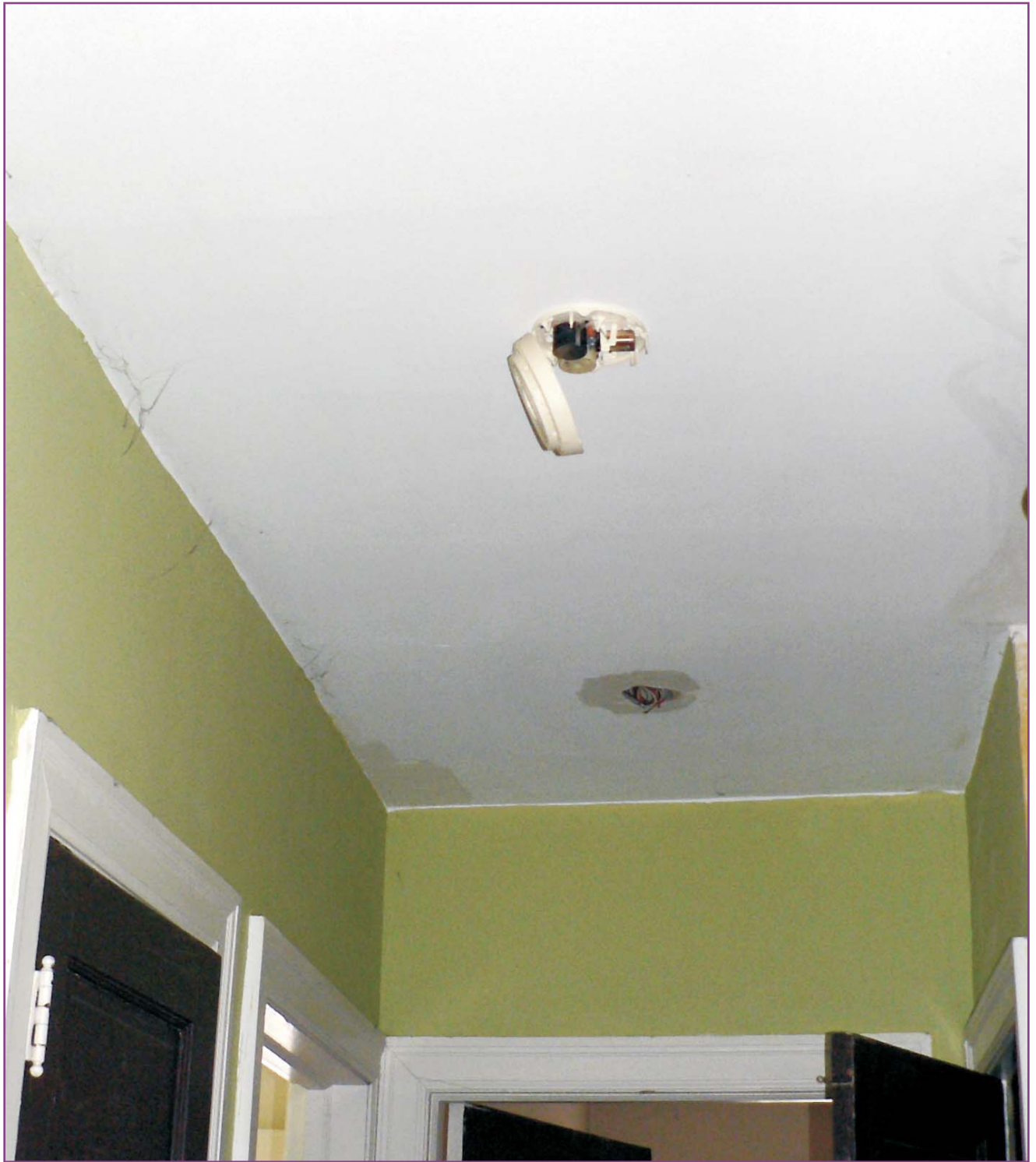
Photograph 33 of 46. View of the southeastern wall (Stanfill-Towers side) of the attic showing an old stain from a roof leak.



Photograph 34 of 46. View of first floor living room showing coffered ceiling. There is significant paint peeling on this ceiling; however it appears to be an aesthetic issue due to the paint's age, not a sign of water infiltration.



Photograph 35 of 46. Detail of living room stairs showing settlement of steps towards the center wall. There is a corresponding depression of the floor in the adjacent music room. Both are the result of the failed beam shown in basement photographs 40 and 41.



Photograph 36 of 46-View of the ceiling of the second floor hallway showing disabled smoke detector and open junction box for ceiling light fixture. There are similar conditions in the dining room, music room (space beside first floor



Photograph 37 of 46. Detail of southeastern foundation wall to the rear of the fireplace support showing moisture damage from the chimney leak nearly 30' above, and unsafe use of an extension cord to power the washing machine.



Photograph 38 of 46. Detail of the basement's northern corner showing vegetation entering through the three-light sash basement window and efflorescing moisture damage to the plastered stone foundation walls.



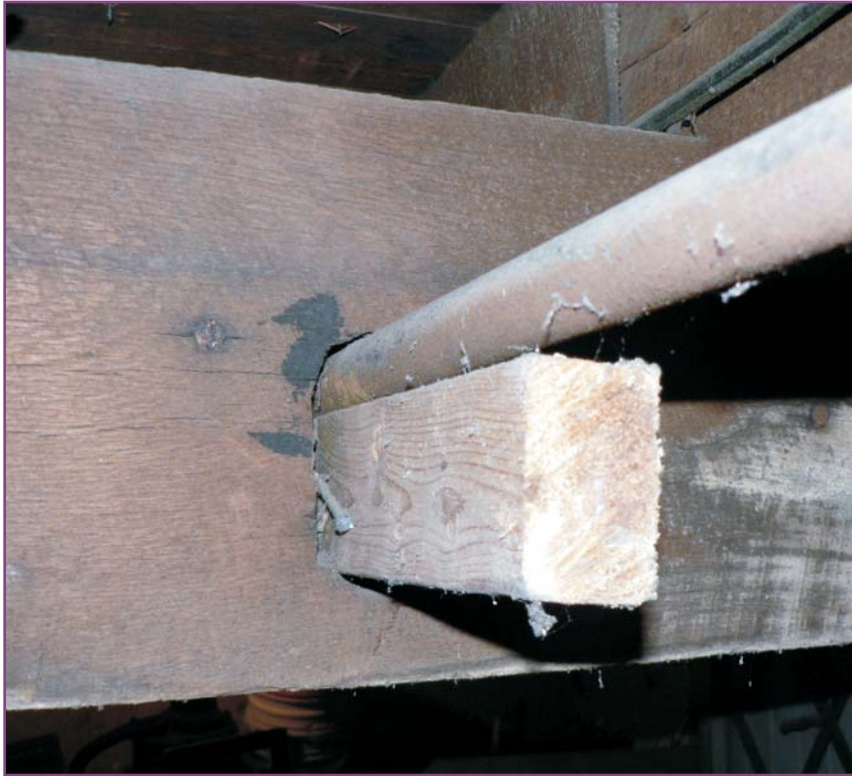
Photograph 39 of 46. Detail of typical area of moisture damage at the top of the foundation walls. Both the plaster and the mortar joints have deteriorated, and the wood framing is stained.



Photograph 40 of 46. View of central structural girder. Note deflection indicated by yellow line. (The white line shows where the bottom of the girder would be if it were level.)



Photograph 41 of 46. Detail of partially failed central built-up girder.



Photograph 42 of 46. Detail of altered support beam in basement that has had its bearing capacity compromised by the plumbing installation.



Photograph 43 of 46. Detail of exfoliating plaster caused by water entering the basement foundation walls.



Photograph 44 of 46. Detail of typical brick pier in basement in need of spot repointing.



Photograph 45 of 46. Detail of southern corner of basement during rain storm showing water entering despite exterior wrap-around porch in this location.



Photograph 46 of 46. Detail of two of the three stained glass windows on the stair landing showing broken section in lower left sash and cracked pane in lower right sash. Note that the intact sash cords on both windows. These sash cords are connected to sash weights hidden inside the window frame that counter balance the bottom sash when the window is opened.

Chapter 3

RECOMMENDATIONS FOR PRESERVATION & ESTIMATED COSTS

The historic fabric of 109 East Atlantic Avenue is largely intact, but deteriorated. The goal of these recommendations is to return the building fabric to stability, and prevent further deterioration.

SCOPE OF WORK

The scope of work for the preservation of 109 East Atlantic Avenue focuses on the repair and replacement of deteriorated building fabric, the rehabilitation of exterior elements and finishes, the stabilization of structural weaknesses, and the correction of clearly apparent fire hazards. Work that will be necessary to put the building back in service has not been itemized since the future use has not yet been determined. However, it is anticipated that all new building systems and finishes will be required. It is also likely that the first floor bathroom will need to be enlarged for handicapped access and an exterior access ramp will have to be introduced.

As the work may have to be undertaken in phases due to financial constraints, items pertaining to fire safety, structural stabilization, and on-going deterioration are identified as being of the highest priority. Items related to rehabilitation are classified as second priority level items, and those of only aesthetic importance are noted as the third level of priority. To distinguish between these three levels of priority; different fonts have been utilized. Highest priority items (critical life-safety issues and problem conditions) are presented in **bold red** typeface. Second priority items (problems related to long-term preservation) are presented in *italics*. Third priority level work items are presented in normal typeface. In some instances, two separate treatments may be presented for different phases of work. For example, repair of the slate roof is a top priority work item, while its future replacement with new roofing is a second level priority.

IMPORTANT CONSIDERATIONS

Consumers have been misled and confused by certain claims from factions of the construction industry, primarily in the areas of replacement windows and artificial siding. As the preservation of the house is undertaken, that Secretary of the Interiors *Standards for the Treatment of Historic Properties* should be used as a guide (see Appendix A). Furthermore, the following information should be considered.

❖ Replacement Windows:

The common perception, largely due to misleading marketing, that older wood windows are inefficient and ultimately disposable is incorrect. In truth, multiple studies have shown that the proper restoration of a single-paned wood window, complete with weatherstripping and caulked joints, combined with the installation of a storm window, will be equally as energy efficient as a double-paned replacement window. First and foremost, old wood windows were constructed of durable, old-growth lumber and will outlast replacement windows by decades when properly maintained. Replacement windows, on the other hand, typically come with only a 15 to 20 year warranty, and their construction does not lend to a sustainable product because they will have to be replaced within a fraction of the time an old wood window has already served. Any double-glazed window has an average life of only 14.2 years (before the UV rays of the sun destroy the seal between the two panes and condensation forms, clouding the window so it must be replaced), while it takes 43.7 years to pay for their cost in energy savings alone. Second, window restoration is the ultimate practice in recycling and reuse, and also reduces landfill waste. The production of vinyl replacement windows can be extremely hazardous to the environment, and replacement windows in general have a larger carbon footprint because they are manufactured many miles from where they are installed. Lastly, window restoration is a labor intensive practice opposed to materials intensive, which can lead to more sustainable jobs in this tough economy.

Another misconception is that windows are one of the greatest sources of energy loss in a building. On the contrary, the U.S. Department of Energy states that windows account for only 10% of air infiltration, while floors, walls, and ceilings account for over 30%. Insulation in floors and attics can offset the minimal energy loss in windows. Furthermore, the primary culprit for energy loss in windows is air infiltration around the perimeter of the frame and the movable sash, which can be rectified by weatherstripping, caulking, and the installation of a storm window.

❖ Artificial Siding:

During the 20th century, the construction industry advocated installation of artificial siding materials over original wood siding and wall shingles instead of painting the wood. First asbestos shingles, then aluminum siding, and most recently vinyl siding have been promoted as "maintenance free." This is simply not true. Applying aluminum or vinyl siding on historic buildings simply defers maintenance and ultimately creates more expensive problems to address in the future. These problems are the direct result of wall construction that was designed before the introduction of vapor barriers. Unlike new construction, historic buildings were built to allow the moisture generated inside the building -- from bathing, cooking, and breathing -- to travel through the exterior walls and dissipate. By applying artificial siding, this moisture is trapped behind the new material, creating condensation and saturating the wood finish and structure inside. Especially when there is no sound paint coat on the original wood, the moisture causing the deterioration of the finishes and structure. The condition is analogous to wrapping a human hand with plastic wrap -- the hand cannot breathe and moisture will collect on the skin. The best preservation approach is to prepare and paint the original woodwork. This issue is further discussed in Appendix D within National Park Service publications.

PRELIMINARY COST ESTIMATES

The associated Preliminary Cost Estimates for the preservation of 109 East Atlantic Avenue were established in consultation with Theodore H. Nickles, whose general contracting firm specializes in the preservation and rehabilitation of historic structures. Mr. Nickles has over 40 years of experience in this line of work and is based in Haddon Heights, on Kings Highway. These cost estimates are intended as a guide in budgeting for the work and in planning for fund-raising activities. They are only of a preliminary nature and were not developed with sophisticated analysis techniques.

Fluctuations within the construction industry, such as market conditions and material costs, could result in significant discrepancies over time.

EXTERIOR

SITE:

| | |
|----------------------------------------------------------------------------------------------------------------------------------------|----------------|
| Remove shrub at driveway adjacent to rear wing | \$300 |
| <i>Patch point front garden wall with high lime mortar to match the original</i> | <i>\$6,000</i> |
| <i>Repair concrete walk on southeast (Stanfill Towers) side to reduce trip hazards.</i> | <i>\$1,500</i> |
| <i>Clean up yard, include trimming of shrubbery and trees, and minor regarding to insure rainwater flows away from house</i> | <i>\$2,500</i> |
| <i>Trim bushes within two feet of front porch foundations to allow air circulation</i> | <i>\$600</i> |

PORCH

| | |
|--------------------------------------------------------------------------------------------------|----------------|
| Repair minor leak at front porch, scrape, and paint metal roof on porch and bays. | \$2,950 |
| <i>Repair and patch repoint stone piers and stair cheek walls.</i> | <i>\$6,500</i> |
| <i>Repair porch floor.</i> | <i>\$4,850</i> |
| <i>Install trim where missing on southern corner column on porch.</i> | <i>\$570</i> |
| <i>Repair porch's beaded board ceiling at leak</i> | <i>\$300</i> |
| <i>Remove porch curtains and fake front shutters.</i> | <i>\$230</i> |

ROOF

| | | | |
|------------------------------------------------------|---------|---------|--|
| Repair chimney flashing | \$1,450 | | |
| Repair/recoat pole gutters | \$3,400 | | |
| Repair slate where broken or missing | \$4,000 | | |
| Patch repoint chimney as needed | | \$1,000 | |
| Remove television antenna from rear dormer | | \$225 | |

WALLS

| | | | |
|----------------------------------------------------------------------------------------------|-----------------|----------|-------|
| Repair cornice, soffits and miscellaneous woodwork | \$8,100 | | |
| Prepare and paint exterior wood elements, using stain on second floor wall shingles. | \$26,000 | | |
| Refurbish windows and make operable | | \$14,000 | |
| Refurbish and paint wood storm windows | | \$12,000 | |
| Subtotals for Exterior | \$46,200 | \$46,945 | \$230 |

INTERIOR

| | | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|---------|-------|
| Structural repairs to framing in basement | \$5,100 | | |
| Investigate gas smell at meter | \$75 | | |
| Replace inoperable smoke detectors and address open junction boxes, missing switch plate in attic, and miscellaneous electrical safety concerns. | \$1,015 | | |
| Have entire electrical system evaluated by Nassau Electric for additional potential fire hazards | \$0 | | |
| Parge basement walls with high lime mix | | \$5,500 | |
| Investigate source of water infiltration at southern corner of basement and mitigate as necessary (allowance). | | \$800 | |
| Repair leaded glass windows at stair landing | | \$2,500 | |
| Patch deteriorated plaster in attic at chimney once flashing leak has been addressed | | | \$650 |
| Subtotal for Interior | \$6,190 | \$8,800 | \$650 |

SUMMARY

| | | | |
|-------------------------------------------------------|------------------|----------|---------|
| Subtotals for Exterior | \$46,200 | \$46,945 | \$230 |
| Subtotal for Interior | \$6,190 | \$8,800 | \$65 |
| Total for all Construction Work | \$52,390 | \$55,745 | \$880 |
| General Conditions (20% of Construction Cost) | \$10,478 | \$11,149 | \$176 |
| Grand Total by Priority Level | \$62,868 | \$66,894 | \$1,056 |
| Grand Project Total | \$130,818 | | |

Chapter 4

CYCLICAL MAINTENANCE

OVERVIEW

In the preceding chapter, restoration recommendations for 109 East Atlantic Avenue were presented. Many of these recommendations address the rehabilitation of deteriorated original historic fabric — deterioration resulting from unresolved preservation problems or deferred maintenance of the past. Cyclical maintenance is the most vital and cost-effective tool for the continued preservation of a historic structure. Accordingly, this section addresses the future maintenance concerns of the house to prevent future deterioration.

- ◆ The following maintenance tasks* have been outlined in accordance with their needed frequency: weekly, monthly, semi-annually, or annually. Several general maintenance recommendations have also been included. Additional tasks should be added to these lists and the frequency of specified tasks revised as necessary, so that thorough, conscientious maintenance can fully contribute to the continued preservation of the building.

** Note: Much of the material on proper maintenance procedures was obtained from the book *Cyclical Maintenance for Historic Buildings* by J. Henry Chambers.*

CYCLICAL MAINTENANCE PROGRAM

A. GENERAL MAINTENANCE RECOMMENDATIONS

- A.1** Monitor the basement and attic on a regular basis and in varying weather conditions is extremely important to observe early signs of a failing roof and/or rainwater drainage system before it accelerates to cause serious damage to the structure.
- A.2** Keeping the structure (including the basement, attic, and less frequently used areas) in a clean condition should be a high priority. The accumulation of dirt will lead to abrasive and chemical deterioration of the historic fabric affecting all long-term preservation efforts. Vacuuming is particularly important to pick up dirt and other protein-based materials such as hair that attract fabric-eating insects and other unwanted pests.
- A.3** Provide exterior natural fiber mats with solid backings at entrance doors to remove dirt from visitors' feet prior to entering the structure. During rainy or snowy weather, a second interior mat should be used to further prevent mud and water from being tracked into the building.
- A.4** If vandalism occurs, correct as soon as possible to deter additional damage by other vandals. Prior to removing graffiti, a small affected area should be tested with the least destructive cleaner and, if scrubbing is required, a natural fiber bristle brush should be employed.
- A.5** Do not use alkaline household cleaning products such as lye or ammonia on wood.
- A.6** Remove heavy accumulations of snow by top-layer shoveling and/or sweeping before foot traffic compresses and melts the snow. Do not use snow removal materials such as salt or chemicals which may damage the masonry. If use of snow removal material is necessary, urea, primarily used as fertilizer, is commercially available in white pellet form as a de-icing product. It does not chemically attack masonry, metal, or vegetation, but is not effective at temperatures below +25 degrees Fahrenheit. Of the salt-based de-icing products, calcium chloride, which can potentially harm vegetation and corrode metal, is effective to -25 degrees and requires an application rate of only 2 to 4 ounces per square yard. Potassium chloride and sodium chloride each require 8 ounces per square yard and are only effective to +25 and +20 degrees Fahrenheit respectively. Potassium chloride can harm vegetation, but will not corrode metal, while sodium chloride can potentially harm vegetation and corrode metal. All salt-based, de-icing products are potentially damaging to masonry, and should not be used adjacent to the historic fabric of the building.
- A.7** Painting should be undertaken only when actually necessary, and only on those areas requiring it. Unnecessary painting will obscure molding profiles and create an inflexible layer, which is subject to cracking and peeling.
- A.8** Extra amounts of paint should be maintained as samples for matching paint colors and for touch-up work. The container should be kept full, replenishing the medium as required, and stored upside down to retard oxidation.

B. WEEKLY TASKS

B.1 INTERIOR

- B.1.1** Vacuum floors, carpets, hearth, and firebox.
- B.1.2** Dust horizontal surfaces such as window sills, chair rails, baseboards, and tops of door and window trim, taking care not to rub adjacent surfaces.
- B.1.3** Remove cobwebs with a cloth-covered broom in an outward and upward motion to avoid smearing wall or ceiling surfaces.
- B.1.4** Remove and shake interior mats at entranceways.
- B.1.5** Look for evidence of pests such as the following:
 - ◆ termites – dirt tubes, especially in cellar
 - ◆ carpenter ants – saw dust beneath wooden elements
 - ◆ carpenter bees – $\frac{1}{4}$ " circular holes in wooden exterior elements, especially on the sunny side of the building
 - ◆ powder post beetles – bright white frass
 - ◆ bats – holes at eaves, and black staining on upper floor ceiling
 - ◆ squirrels and raccoons – access holes and claw marks, chewed elements, and excrement
 - ◆ birds – holes at eaves, birds perching on building
 - ◆ mice – chewed elements and excrement
 - ◆ webbing clothes moth – chewed protein-based materials such as wool
 - ◆ carpet beetles – silken trail of excrement in same color as damaged material
 - ◆ silverfish – lacy damage on paper and glued material

B.2 EXTERIOR

- B.2.1** Remove and shake exterior mats at entranceways.
- B.2.2** Sweep porch, walks, access ramp (if installed), and steps.

C. MONTHLY TASKS

C.1 PLASTERWORK

- C.1.1** Use dry methods to clean plaster surfaces. Use a vacuum cleaner with a wide dusting brush to clean walls and ceilings. Use a light, even touch with overlapping strokes, beginning at a corner near the floor and moving upward to the ceiling. Clean vacuum brush frequently.
- C.1.2** Inspect walls and ceilings for deteriorated plaster surfaces, evidence of water entering through exterior walls (at open mortar joints in foundations or gaps at

woodwork) or roof (at faulty roofing or flashing). Repoint mortar joints, caulk gaps at woodwork, and/or repair roofing/flashing as necessary.

- C.1.3 Inspect plaster surfaces for areas of plaster loose from the lath. Patch failing areas as necessary using new plaster matching the constituent composition, workmanship, and color of the old plaster.

C.2 FLOORING

- C.2.1 Clean or replace exterior natural fiber mats (with solid backings) at front and rear entrances as necessary.
- C.2.2 Wash or replace interior cloth mats at front and rear entrances as necessary.
- C.2.3 Remove carpets, shake, and vacuum the floors underneath.
- C.2.4 Inspect floor boards for dangerously worn sections, and cracked or broken boards. Repair as necessary, matching the existing. Replace only the deteriorated section(s) of the floor board, not the entire length.

C.3 DOORS

- C.3.1 Inspect door locks and latches for proper function, and door hinges for proper swing. When loose due to enlarged nail or screw holes, fill and reattach. Fill loose knob-set screw holes with solder and redrill. Build up worn hinge knuckles with matching material. If loose screws or worn knuckles are not the cause of an ill-fitting door, structural movement may be indicated.
- C.3.2 When possible, remove hardware when repainting doors to prevent sanding abrasions and to facilitate a quality painting job. Prior to reinstallation, recondition hardware as described in hardware paragraph below. When non-destructive removal of the hardware is infeasible, protect the hardware from paint spills and sanding abrasions.
- C.3.3 Clean easily soiled areas around doorknobs.

C.4 WINDOWS

- C.4.1 Wash plain windows with a weak non-ionic detergent solution, protecting sills and sash, and taking care not to allow solution to run onto woodwork.
- C.4.2 During the winter, inspect the window glass for condensation, which can cause damage if the paint film on the sash permits moisture infiltration. If condensation exists, apply a mixture of equal parts glycerin and methylated spirits to the inside of the glass with a soft cloth after each winter washing.
- C.4.3 Reseal paint film on sash as necessary. After repainting windows (interior or exterior), open and close for several days to prevent sealing of the windows by the paint film.
- C.4.4 Dust (only) stained glass windows.

C.5 INTERIOR WOODWORK & TRIM

- C.5.1 Wash oil-based modern paint surfaces with non-ionic detergent in soft water and two damp sponges, thoroughly rinsing and drying each area. Do not clean with

alkaline household cleaning products such as lye or ammonia. Do not allow solution to run or drip on to adjacent surfaces. Change rinse water frequently.

C.6 INTERIOR PAINT

C.6.1 Check for isolated blistering or peeling of paint surfaces on walls, ceilings, and woodwork.

C.6.2 Check where moisture is entering plaster/wood and stop leaks.

C.6.3 Split blisters, scrape peeling areas, and sand rough spots.

C.6.4 When substrate is completely dry, spot prime bare areas and apply two coats of finish paint.

C.7 BASEMENT

C.7.1 Inspect basement space noting musty or damp smells, and using a humidity-indicating device to test for moisture content. When moisture content exceeds twenty percent, an exhaust fan or dehumidifier should be used to dry the air and prevent wood deterioration.

C.7.2 Inspect floors for areas of standing water or visible dampness. Determine source of moisture infiltration and stop.

C.7.3 Inspect framing for fruiting bodies growing out of wood, a sign of active biological deterioration. Treat as necessary.

C.8 FIRE EXTINGUISHERS

C.8.1 Test fire extinguishers (to be located at each level) for proper function. Refill and/or replace as necessary.

C.8.2 Test smoke and fire detectors. Replace batteries as necessary.

C.8.3 Test all security systems (if installed) for proper operation.

C.9 STAIRWAYS

C.9.1 Inspect stair railings for loose or missing attachments; reattach as necessary.

C.9.2 Inspect treads for dangerously worn sections, cracking or broken treads. Replace when necessary, matching the size, thickness, nosing profile and projection, grain pattern, species, workmanship, and finish color of the original tread.

D. SEMI-ANNUAL TASKS (SPRING AND FALL)

D.1 BASEMENT WINDOWS

D.1.1 Check condition of basement window trim.

D.1.2 Remove leaves and debris.

D.2 ROOFING SLATES AND DORMER SHEATHING

- D.2.1 Check for worn, loose or missing slates.
- D.2.2 Repair leaks, weak areas, loose attachments.
- D.2.3 Replace missing slates using bibb hooks.

D.3 SHEET METAL FLASHING

- D.3.1 Check for cracks, warps, distortions or weak areas, loose or damaged seams, loose attachments.
- D.3.2 Check for loose, damaged or missing sections. Check substrate underneath for moisture damage, especially at attachment points.
- D.3.3 Replace damaged or missing sections to match existing sections. Repair leaks and weak areas.
- D.3.4 Reattach to repaired wood substrate.
- D.3.5 Paint flashings to match color(s) of adjacent construction.

D.4 GUTTERS AND DOWNSPOUTS

- D.4.1 During a heavy rainstorm, look for leaks or blocked sections of water conduction systems.
- D.4.2 Clean system of any blockages and repair leaks.
- D.4.3 Check for any loose downspouts. Reattach as necessary.
- D.4.4 Any downspout replacement sections should be installed with seam turned out or in such other manner that downspout leaks will not cause damage.
- D.4.5 Any downspout replacement should be of corrugated cylindrical form to match existing.

D.5 CAULKING COMPOUND

REPLACEMENT SCHEDULE: As required, about every 6 years

- D.5.1 Check caulk for brittle, cracked or missing pieces.
- D.5.2 Remove any damaged area, clean, prime or seal according to manufacturer's specifications, provide backer rods and bond-breaker tape as required, replace caulk.
- D.5.3 Sealant should be factory mixed color to match adjacent construction or should be paintable.

D.6 WOODWORK: DOORS, WINDOWS, DORMERS, CORNICES, AND TRIM

- D.6.1 Check for moisture damage, warping, splitting and unsound joints.
- D.6.2 If wood is decayed, determine source of moisture, stop leaks, and replace decayed wood and damaged flashing. Repair unsound joints.

- D.6.3 In painted woodwork, seal fine cracks with wood filler. Check putty for cracks or missing pieces. Re-glaze where necessary.
- D.6.4 Coat all bare wood with preservative and refinish in accordance with painting paragraph below.
- D.6.5 Prime and paint any new flashing, putty or other glazing materials.
- D.6.6 Check for loose attachments of hardware. Reattach as necessary.
- D.6.7 Lubricate moving parts, such as door hinges, with non-running grease or silicone.

D.7 GLASS

- D.7.1 Check for cracked or broken panes of glass.
- D.7.2 Where cracked glass is modern, replace; where cracked glass is historic (distinguishable by surface imperfections), check the pane for tightness and, if loose, replace. Replace all broken glass. Replacement panes should be tempered or other safety glass where required.

D.8 EXTERIOR PAINT

REPLACEMENT SCHEDULE: Every 5 to 8 years

- D.8.1 Check for worn, bare spots, blistering, peeling, mildew.
- D.8.2 Check where moisture is entering wood and stop leaks.
- D.8.3 Wash mildew with fungicide.
- D.8.4 Split blisters, scrape peeling areas, remove rust and sand rough spots.
- D.8.5 Coat bare wood with preservative.
- D.8.6 For ferrous metals, scrape and wirebrush deteriorated paint and rust from metal. Apply Rustoleum or similar paint formulated for ferrous metals.
- D.8.7 Prime and paint (two finish coats) wood using materials compatible with the preservative, and appropriate for the material.

D.9 TERMITES

- D.9.1 For Fall inspection – have a professional exterminator or house inspector inspect building for termites and other wood-damaging insects. Note evidence of insect activity: small holes in the wood, small piles of sawdust, clay tubes on pieces of wood, or actual insects.
- D.9.2 Treat as necessary.

D.10 HARDWARE

- D.10.1 Recondition hardware as required, cleaning locks of accumulated rust and dirt.

D.11 STORM/SCREEN WINDOWS (IF INSTALLED)

- D.11.1 Remove debris; unclog any drainage slots in frames.

D.11.2 Check for loose joints, deteriorated paint, corrosion, holes, moisture damage, wear.

D.11.3 Repair any loose joints or attachments.

D.11.4 When paint finish deteriorates, prepare and repaint according to exterior paint paragraph. Color shall match adjoining window.

D.12 EXTERIOR LIGHT FIXTURES

D.12.1 Check for deteriorated paint, rust, corrosion, moisture damage, and wear.

D.12.2 Repair any loose joints, weak links, attachments or hardware.

D.12.3 When paint finish deteriorates, repaint according to exterior paint paragraph.

D.12.4 Replace broken glass.

E. ANNUAL TASKS

Note: the annual tasks should be undertaken in the Spring or Fall months after a rainstorm. In addition, the building's exterior and grounds should also be inspected after any rainstorm with high winds (over 40 m.p.h.) so that any damage can be uncovered and immediately addressed.

E.1 BRICK AND MASONRY

E.1.1 Check for moist areas, cracks, crumbling material, loose pieces, missing mortar, and/or efflorescence (white discoloration).

E.1.2 Check where moisture is entering masonry and repair any leaks in flashing, downspouts, and/or joints between masonry and other materials.

E.1.3 If significant cracks, surface spalling, or material deterioration is found, review condition of masonry with a registered architect or professional engineer experienced in methods of evaluating historic brick and masonry. Take remedial action as necessary in accordance with professional's recommendations.

E.1.4 Repoint joints with loose or crumbling mortar using mortar which matches original in color, texture, constituent composition, and workmanship. Mortar should not have high Portland cement content and should be no harder than surrounding brick or masonry or original mortar.

E.1.5 Repointing work should be performed only by a qualified restoration mason experienced in the repointing of historic buildings. Repointing should be done as follows: Remove deteriorated or loose mortar with hand tools to a minimum depth of 2.5 times joint width; clean joints; apply fresh mortar to wetted joints in layers not thicker than $\frac{1}{4}$ " (one quarter inch). Exterior joints should be ribbon joints maintaining the original width and tooling to match original pointing; interior joints should be slightly recessed to maintain original width and tooled to match original finish. Model for repointing should be the original mortar. Sample panels for both joint cleaning and repointing mortar should be reviewed and approved by owner prior to mason continuing with work.

- E.1.6 Masonry should not be cleaned unless absolutely necessary. Such cleaning should be done with materials and techniques which will not damage the masonry. **Sandblasting, wire brushes, grinders, sanding discs, or other abrasive methods should not be used.** Neither should any harsh chemical which weakens the masonry be applied. Materials and techniques should be selected based on results of test patch samples. Any chemical cleaner should be chemically neutralized and thoroughly rinsed off in order to remove residues that could damage masonry or finishes. Only low-pressure water washes should be used with pressure not exceeding 600 psi at the nozzle or 4 gpm volume.
- E.1.7 Snow removal materials which might damage masonry, such as salt, should not be used adjacent to porch or foundation walls. (Alternatively, sand or old-fashioned kitty litter can be employed, but these materials should be removed by sweeping when no longer needed so they will not be tracked into the building.)
- E.1.8 Stonework should be patched to match the original in color and texture using a low Portland cement content patching material.

E.2 STUCCO AND CAST STONE (CONCRETE)

- E.2.1 Check for moist areas, cracks, loose chunks or crumbling stucco and concrete.
- E.2.2 Repair using stucco or concrete patching material which matches the composition, color, texture, and finish of existing. Adequately bond patches to substrate and reinforce large patches with fiberglass mesh or galvanized metal lath.
- E.2.3 Reflash and/or recaulk cracks and leaking joints as required.

E.3 METAL RAILINGS

- E.3.1 Check for deteriorated paint, rust, moisture damage, and wear.
- E.3.2 Repair any loose joints, attachments or hardware.
- E.3.3 Remove rust, using materials and methods which will not accelerate pitting and corrosion of the metal.
- E.3.4 Prime and paint according to exterior paint paragraph.

E.4 STAINED GLASS

REPLACEMENT SCHEDULE: Glazing cement every 20 years

REPLACEMENT SCHEDULE: Lead coming every 80 years

- E.4.1 Inspect stained glass. Look for fractures in the lead coming, broken lead joints, broken or loose tie wires, broken or cracked glass, minor bulging, excessive movement in the glass panels when gently pushed, rusting steel frames, and/or rotted wood.
- E.4.2 If any of the above conditions are observed, consult a reputable stained glass company that is experienced with historic leaded-glass window restoration to address the deficiencies.

E.5 STRUCTURAL CHECKPOINTS

- E.5.1 Check exposed exterior and interior surfaces of walls and foundations, with particular attention to floor openings, wall openings and changes in wall material. Check for cracks, collapsing, leaning or bulging areas or other signs of uneven settlement, movement or structural deterioration.
- E.5.2 Check interior wall surfaces at upper levels, with particular attention to joints between side and front and rear walls, joints between floor and end walls, and joints between partitions and ceilings. Check for cracks, crumbled plaster, gaps between finishes or other signs of movement.
- E.5.3 Check floor framing members for rotted, split, or cracked timbers. Check exposed masonry where the floor structure bears on walls for crumbling or gaps which might indicate wall movement.
- E.5.4 If deteriorated structural members, significant cracks or other signs of movement are observed, review structural condition of building with a professional engineer experienced in the evaluation of historic buildings and qualified to evaluate the structure's condition in order to ensure that adequate safety standards and precautions are met. Take remedial action as necessary in accordance with the engineer's recommendations.

E.6 BUILDING ENVELOPE CHECKPOINTS

- E.6.1 In the early fall, check for openings in the building envelope where pests could enter and nest for the winter. Caulk or fill holes as necessary. Use aerosol Styrofoam (recessed from surface) to fill holes that could potentially be used by mice to enter the building.

E.7 ELECTRICAL SYSTEM

- E.7.1 Have a professional electrician or house inspector check once a year (or as needed) for potential problems with the electrical system. Correct as necessary.

E.8 PLUMBING SYSTEM

- E.8.1 Have a professional plumber or house inspector check once a year (or as needed) for potential problems with the plumbing system. Correct as necessary.

E.9 HEATING SYSTEM

- E.9.1 Have a professional heating contractor service and check once a year (or as needed) for potential problems with the heating system. Correct as necessary.

E.10 AIR CONDITIONING SYSTEM, IF INSTALLED

- E.10.1 Have a professional air conditioning contractor service and check once a year for potential problems with the air conditioning system. Correct as necessary.
- E.10.2 Change the air conditioning filters once a year.

E.11 EXTERIOR PAVING

- E.11.1 Check for missing, loose, and/or broken paving bricks and dangerous or uneven sections of paving.

E.11.2 Re-secure loose bricks and replace missing or broken bricks with new or salvaged paving bricks to match.

E.11.3 Replace any uneven sections of paving which present tripping hazards.

E.12 HANDICAP RAMP, IF INSTALLED

E.12.1 Ensure that handicap ramps are in good condition during and after the winter weather.

E.13 VEGETATION

E.13.1 Check health of all existing trees.

E.13.2 Prune trees as necessary to promote health and to prevent branches from rubbing the building's roof or walls.

E.13.3 Remove any ivy growing on trees after first cutting ivy at ground and letting it dry out.

E.13.4 Remove any shrubs or volunteer plant growth within 2' of the foundation walls of the porch or building.

E.14 GRADING

E.14.1 Check slopes of grading adjacent to all foundation walls to verify rainwater will travel away from building.

E.14.2 Distribute additional topsoil as necessary to establish positive slopes away from building, taking care not to cover any wood sills or trim with soil.

E.15 Chimneys

E.15.1 Inspect all materials on the chimneys for corrosion or deterioration.

E.15.2 Repair materials and repoint joints as required, following material recommendations above.

APPENDICES

THE SECRETARY OF INTERIOR'S “STANDARDS FOR REHABILITATION”

The Secretary of the U.S. Department of the Interior, in response to federal legislation providing financial incentives to stimulate the revitalization of historic communities, developed a series of recommendations for the rehabilitation of older structures. These standards are now commonly used at all governmental levels to determine the appropriateness of proposed work on historic buildings and provide a sound guide for all sensitive rehabilitation.

The Standards (Department of Interior Regulations, 36 CFR 67) pertain to historic buildings of all materials, construction types, sizes, and occupancy and encompass the exterior and the interior, related landscape features and the building's site and environment as well as attached, adjacent, or related new construction.

❖ Standards for Rehabilitation

The Secretary of the Interior's “*Standards for the Treatment of Historic Properties 1995*”

1. A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.
2. The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.
3. Each property will be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.
4. Changes to a property that have acquired historic significance in their own right will be retained and preserved.
5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.
6. Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.
7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
8. Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.

9. New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work will be differentiated from the old and will be compatible with the historic materials, features, size, scale, and proportion, and massing to protect the integrity of the property and its environment.
10. New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

APPENDIX B

NATIONAL PARK SERVICE PRESERVATION BRIEFS

#2: Repointing Mortar Joints in Historic Masonry Buildings

#8: Aluminum and Vinyl Siding on Historic Buildings

#9: The Repair of Historic Wooden Windows

#10: Exterior Paint Problems on Historic Woodwork

#29: The Repair, Replacement & Maintenance of Historic Slate Roofs

*Note: The entire collection of Preservation Briefs can be downloaded at:
www.nps.gov/history/hps/tps/briefs/presbhom.htm*

APPENDIX C

PRODUCT INFORMATION

- ◆ Eco Star Majestic [synthetic] Slate Series

CONTRACTORS WITH HISTORIC PRESERVATION EXPERIENCE

(Note: inclusion on this list does not constitute an endorsement, but rather indicates a positive past experience working with on projects involving Westfield Architects)

- ◆ Roofing, Craig Alper, 866-5646
- ◆ Masonry, Vern Knapp, 783-5374
- ◆ General Contracting/Carpentry/Window Repair, Ted Nickles, 672-1440
- ◆ Carpentry/Window Repair, Jeff Barr, 215-247-2107
- ◆ Window Repair, Joe Debart, Collingswood Hardware, 858-2662
- ◆ Heating/Plumbing, John Schmidt, 547-0656
- ◆ General Contracting/Carpentry, Carl Blaetz, 609-304-7058
- ◆ Painting, Mike DeFalco, 609-980-2069

In addition, electrician Ted Kitchmire of Nassau Electric has previously worked on this building, 547-7516

APPENDIX D

HADDON HEIGHTS HISTORIC DISTRICT ORDINANCE

Article XXI, Section 450 of the Haddon Heights Code

