

**Sagamore Hill National Historic Site**  
**20 Sagamore Hill Road**  
**Oyster Bay, New York 11771**

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# **Rehabilitate**

# **Theodore Roosevelt Home**

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**PMIS No. SAHI-077375**



**John G. Waite Associates, Architects PLLC**

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**64 Fulton Street, Suite 402, New York, New York 10038**  
**384 Broadway, Albany, New York 12207**

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**Cover Image: Jack Boucher, 1964, Historic American Buildings Survey  
(Library of Congress)**

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## INTRODUCTION

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The Theodore Roosevelt Home was designed by Lamb & Rich, Architects and constructed between 1884 and 1885 for the man who would become the twenty-sixth President of the United States. It is the primary resource and attraction at the Sagamore Hill National Historic Site.

The Queen Anne style house is a three-story, wood-framed building of approximately 14,175 square feet with painted brick masonry and wood shingle siding, a wood shingle roof, and massive brick chimneys. The interiors are typically finished in painted or wallpapered plaster or wood paneling, with wood floors that are carpeted in many of the publicly-accessible spaces. Throughout the house, there are extraordinary collections, which include many furnishings, works of art, and a significant number of big game and hunting trophies.

There is a generous attic over the central portion of the house, and a raised basement with stone or brick masonry walls under much of the house. Two crawlspaces are accessed from the basement; they are located underneath the eastern portion of the house and underneath the north wing, which was designed by C. Grant LaFarge and constructed in 1905.

The house, several other associated structures, and the surrounding landscape is located in the town of Oyster Bay, on the north shore of Long Island in Nassau County, New York. The house and site are currently administered by the National Park Service.

John G. Waite Associates, Architects, in consultation with engineers from MACTEC Engineering Consultants (civil engineering) and Robert Silman Associates (structural engineers), surveyed the interior and exterior of the building over the course of three days during the Fall and early Winter of 2008. The survey was limited to a non-intrusive visual survey of the building envelope of the Theodore Roosevelt Home, including the wood shingle roof and its copper flashings, gutters, and downspouts, as well as an inspection of the exterior above-grade walls and building elements, and the floor, wall, and ceiling surfaces of all interior rooms. A visual survey of existing site drainage and groundwater conditions, and a non-intrusive structural engineering analysis of the house were also undertaken. Some archival sources, including the 2008 General Management Plan, the 1997 Historic Structure Report, and drawings from the 1983 wood shingle re-roofing project, were also examined.

The objective of this report is to identify and document existing building envelope and surrounding site conditions that may be contributing to moisture problems that are evident throughout the house. It appears that many of these problems are interrelated. Areas of interior deterioration were mapped along with exterior problems to determine correlations. The recommendations from this report will guide the future planning and design efforts for the long-term preservation of the Theodore Roosevelt Home and its collections.

## SUMMARY OF OBSERVED CONDITIONS

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The specific problems observed at the Theodore Roosevelt Home have been recorded with photographs and illustrated on floor plan and exterior elevation drawings (using copies of the Historic American Building Survey drawings of the house completed in 1963). Representative photographs, with captions and a photo key, and a complete set of survey drawings are included in this report. Also included are a set of plan drawings illustrating significant changes made to the building over time; some of these changes occurred during the Roosevelt family's occupation of the house, while others were made by the subsequent property steward, the Theodore Roosevelt Association.

### EXTERIOR

The exterior of the Theodore Roosevelt Home has not seen extensive modifications since its original construction and family additions, except for locations where toilet rooms were added on to the second floor, and where porches were altered. These modifications, in particular the bathroom off the South Bedroom (Room 214), may require further structural investigation to ascertain the reasons for minor deflections that were observed. Overall, the exterior building envelope has been well maintained over the course of time. However, many problems currently exist that require more extensive restoration efforts than can be undertaken by National Park Service maintenance staff.

The size and location of the existing metal gutters and leaders are a significant problem. The gutters have been replaced within the last decade. They do not effectively collect rainwater from the various roof slopes of the building, and neither they nor the downspouts appear to be properly sized or located. The copper construction of these features may not be historically accurate. While some archival drawings indicate underground drainage elements, the as-built configuration and full extent of any underground storm drainage is undocumented, and its present condition is unknown. Given these conditions, it seems likely that the ground immediately adjacent to the house may often be oversaturated, and roof and surface storm water may not be properly drained away from the site.

A diagram illustrating the existing roof drainage conditions, showing flat and pitched roof areas and locations of downspouts, has been included in this report. Preliminary calculations based on current rainfall data for the State of New York were used to estimate the volume of water that should be conducted away from the building and its foundation in an effective manner.

Typical and consistent problems observed with the exterior building fabric of the Theodore Roosevelt Home include:

- open mortar joints in many areas of brick masonry and stone water table construction
- open mortar joints and surface spalling of the stone watertable of the north wing
- algae growth on both wood roof and wall shingles, and on masonry surfaces, including chimneys

- rotted wood trim where it comes in contact with the ground, especially at porch locations
- existing grade sloping towards the building's foundation wall in many areas, most significantly to the east of the Library (Room 110) and to the east of the Dining Room (Room 104) in the area adjacent to the basement stair bulkhead
- basement window sill locations that are very close to grade level
- blistering and peeling paint on wood wall shingles and trim, and at painted masonry surfaces
- curling, broken, and missing roof shingles and painted wall shingles
- scoured, undersized, and incorrectly located metal roof gutters, as well as missing metal drip edges
- window wells that do not have drainage systems

## **INTERIOR**

The interior of the Theodore Roosevelt Home is generally in good condition, with localized areas of deterioration often corresponding with exterior problems associated with the building envelopes. Many of the important rooms on the first and second floors have been restored by the National Park Service and continue to receive a very high level of care. Basement and third floor spaces often have deterioration that appears to be caused by active water infiltration from the exterior. Some of the basement wall surfaces are covered with a thick coating of what appears to be waterproof paint, applied to retard water infiltration.

It should be noted that the two crawl spaces, which have dirt floors located several feet higher than the existing concrete basement floor, appear very dry and do not exhibit evidence of past damage or current water infiltration. Since there is no indication of water infiltration from below the floor slab or pervasive rising damp issues, this would seem to suggest that a high groundwater table is not a concern. Additionally, recent excavations for the leach fields of the septic system several hundred feet to the east of the house did not encounter ground water at 45 feet below the surface; this reported evidence would appear to corroborate our analysis.

The interior of the house has been modified in substantial ways over the course of its history, most significantly when the property was under the stewardship of the Theodore Roosevelt Association. These changes included the addition of new stairways to provide better visitor access and egress, significant building system additions and upgrades, and other modifications to third floor rooms. These changes have resulted in conditions that are not historically accurate and may be structurally deficient. One area of the second floor framing, to the west of the staircase to the third floor (Room 202), slopes noticeably to the east and should be evaluated further.

Other modifications undertaken by the National Park Service include several campaigns to structurally augment the first run and landing of the main stair leading from the first floor to the second floor. Despite these past efforts, some dating back to the

1960s, the paneled wood trim on the first floor hallway side of the stair has a few open joints where stiles and rails meet, and several balusters are loose within their mortised connections. The stair balustrade railing, as a whole, is loose despite the installation of decorative metal brackets on the hallway side. Further structural analysis of the main stair should be undertaken to confirm the effectiveness of past repairs, and to evaluate additional improvements that may be required.

Problems observed throughout the interior of the house include:

- localized efflorescence and some mortar deterioration at the exterior basement walls
- blistering and peeling paint on exterior basement walls;
- evidence of frequent water infiltration through the basement stair bulkhead, as well as general deterioration of the concrete stairs and the wooden bulkhead construction
- many small areas of peeling and deteriorated decorative leather wallpaper within the Trophy Room (Room 103)
- minor areas where wood floors have settled, often in areas expected in older wood frame houses. These areas do not represent a structural concern at this time.
- plaster cracking in several first floor spaces, in particular in the Drawing Room (Room 102) and the Hall (Room 101) around Chimney A
- minor surface deterioration of brick hearths and fireboxes, especially in the Library (Room 110)
- localized evidence of water damage at plaster ceiling locations, especially high within the southern end of the Trophy Room (Room 103) where modifications were made to the house in 1910, and in the Gate Room (Room 203)
- water staining and plaster deterioration at many second floor rooms on the north and east sides of the house
- significant diagonal cracking of wall plaster and minor racking of the door trim between two of the second floor rooms, the Little Guest Room (Room 207) and the Big Guest Room (Room 208)
- multiple areas of plaster cracking along the walls and sloped ceiling surfaces of the Gun Room (Room 305)
- pervasive water staining and plaster deterioration at walls and ceilings throughout the third floor rooms, particularly at locations corresponding with roof valleys and around window frames
- evidence of water staining at the roof ridge within the attic, located on both original and replacement roof sheathing boards;



## RECOMMENDATIONS

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Over the years the Theodore Roosevelt Home has been subjected to a series of modifications. These have resulted in a loss of historical integrity. In addition, the building no longer performs as it was originally designed and constructed. There is excessive damage from water infiltration, and the interior environment of the house is threatened.

The following recommendations are based on the visual inspection of the existing exterior and interior conditions of the house:

- Replace roof, flashings, gutters, and downspouts
- Repair exterior building fabric – masonry walls and wood shingle siding, windows, doors, and trim, including the stair bulkhead to the basement
- Excavate, re-point foundation walls and provide drainage for foundation walls. Remove waterproof masonry paint from interior surfaces of basement walls.
- Provide effective underground drainage system for roof and surface storm water, with drywells located more than 50 feet away from the building's foundation
- Re-grade the landscape in areas immediately adjacent to the house, taking care to significant tree, such as the Copper Beech to the southeast of the Library (110)
- Repair main stair and handrail balustrade
- Repair interior plaster, and repaint or repair wallpaper where required
- Relocate collections storage and curatorial offices remotely from the house

Additional information and documentation should be obtained in the near future to assist in the planning and design of remedial repairs and restoration efforts at the Theodore Roosevelt Home. At a minimum, the following should be accomplished:

- A detailed set of measured drawings of the interior and exterior of the Main House in NPS standard CAD format
- an update to the historic structure report, including archival research and physical investigations focusing on the original roof construction, heating system, and gas and electrical lighting systems
- a detailed topographic map (at six-inch contour intervals) of the site area around the house
- a utilities survey that records the location of existing underground utilities and structures in the vicinity of the house
- documentation of the existing underground storm pipe and drainage system, using a combination of careful excavations to expose pipes, as well as video-taping of pipe runs. The type, size, location, and condition of its components should be evaluated.
- a preliminary archeological investigation in areas adjacent to the house where sub-surface construction may occur, and along proposed utility corridors

- a soils investigation report to determine soil classification, density, consistency, and drainage characteristics
- an interior video inspection and a close proximity exterior survey (utilizing a lift) a closer investigation from the roof of the condition of the five masonry chimneys, which may not be properly ventilated