# WILLIAM REDDICK MANSION

# HISTORIC STRUCTURE REPORT

Completed November 2013 for the

REDDICK MANSION ASSOCIATION


**Project Team**
Sullivan Preservation
with
The Structural Shop
Architectural Consulting Engineers
Historic Surfaces
Cardno ATC

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# Introduction

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# Introduction

The Reddick Mansion Historic Structure Report was compiled between January and July of 2013 by Sullivan | Preservation and their professional consultants. The Reddick Mansion Association, represented by President Diane Sanders and HSR committee members Donna Nordstrom, Steve Meyer, George Cary and Edmund Thornton commissioned the Sullivan | Preservation team to undertake the study. Diane Sanders provided general oversight for the project and maintained day-to-day contact with the Team.

The Reddick Mansion Historic Structure Report (HSR) was funded by the Jeffris Family Foundation as part of the Jeffris Heartland Fund with matching funds from the Reddick Mansion Association.

The Jeffris Family Foundation Jeffris Heartland Fund supports the development of important historic preservation projects in the states of Iowa, Illinois, Indiana, Michigan, Minnesota, Missouri, Ohio, and Wisconsin. Grants for Historic Structure Reports and other advanced planning studies are provided but must be matched dollar-for-dollar with cash from sources unrelated to the Jeffris Family Foundation.

The Reddick Mansion Association (RMA) was formed in 1974 as a not-for-profit corporation with a mission to preserve and operate the building and grounds. Between 1888 and 1974 the Mansion served as Reddick Library, the public library for Ottawa, Illinois. After the library board constructed new facilities and abandoned the Mansion, a lease was prepared between the Reddick Mansion Association and the City of Ottawa to allow the RMA to administer and operate the Mansion building. A similar agreement is in place today.

The Association's Mission Statement reads:

> The Reddick Mansion Association is responsible for the historic preservation and restoration of the Reddick Mansion by adhering to acceptable restoration practices in conformance with adaptive public use.
>
> The Association will foster the use of the Reddick Mansion for the community's cultural, educational, social, recreational experiences and other beneficial purposes.[1]

[1] Reddick Mansion Website: http://www.reddickmansion.org/mission2.html accessed June, 2013.

## Statement of Purpose

A Historic Structure Report (HSR) serves to fully document the history and physical condition of a structure in a particular place and time. The following excerpt from the ASTM Standard on Performance of Building Constructions, specifically Historic Structure Reports, explains:

> "The Purpose of a Historic Structure Report is to (1) document and analyze the building's initial construction and subsequent alterations through historical, physical and pictorial evidence; (2) document the current state of the building's architectural materials and overall structural stability; (3) select an appropriate historic preservation treatment (protection, stabilization, preservation, rehabilitation, and restoration or reconstruction); (4) establish priorities for project work items; and (5) make an estimate of project costs. When completed, the report becomes the planning document which is the basis for developing the working drawings and specifications… prior to commencement of project work"[2]

The Reddick Mansion Historic Structure Report was based on precedents developed by the National Park Service, the Association for Preservation Technology International, and the ASTM Task Group Guide for Historic Structure Reports.

## Project Team

The Sullivan | Preservation Team was comprised of:

Sullivan | Preservation:

- Anne Sullivan, AIA
  - Served as team leader, reviewed architectural issues, worked with consultants during their site visits as appropriate and served as primary author of the HSR.

Consulting Professionals

- The Structural Shop - Christopher Botkin under the supervision of Ken Veach, PE, SE
  - Reviewed structural issues and compiled a report of findings with recommendations.
- Architectural Consulting Engineers - Mark Nussbaum, PE
  - Reviewed mechanical, electrical, plumbing and fire suppression issues and compiled a report of findings with recommendations.
- Historic Surfaces - Anthony Kartsonas
  - Reviewed existing paint analyses, provided additional paint sampling and exposure windows, and compiled a report of findings with recommendations.
- Cardno ATC - Andrew Nilson under the supervision of Ash Memon
  - Compiled a hazardous materials report to assess the presence of asbestos-containing products.

[2] ASTM, E-6 on Performance of Building Constructions; Task Group E06.24.04: Historic Structure Reports, "Mission Statement."

## Methodology

The compilation of the Reddick Mansion Historic Structure Report was undertaken in several stages: a review of archival material, interviews, physical documentation, assessment of condition, and compilation of recommendations for repair with budget cost estimates leading to a long-term plan.

### *Archival Material Review*

The Sullivan | Preservation team members became familiar with William Reddick and the history of the Reddick Mansion and Library primarily through historic material provided to us from the RMA. These documents include, but are not limited to:

- A report compiled in 1975 by Dr. Paul Sprague with architect William Dring, entitled "History, Significance, and Feasibility for Adaptive Use of the William Reddick Mansion at Ottawa, Illinois." This document was prepared for the National Trust for Historic Preservation and the Ottawa Silica Company Foundation. Much of this document is reproduced herein as the Historical Analysis portion of the HSR, with supplemental information added by our team.
- "Notes Prepared April 4, 1978 Regarding the Reddick Mansion" compiled by David Mumper.
- "Notes Gleaned from the Minutes of the Reddick Library Board of Directors" prepared by David Mumper, 2009, which was of extraordinary use to our team.
- The original carpenter specifications for construction of the William Reddick Mansion in Ottawa, Illinois, provided to our team in the following forms:
    - A photocopy of the handwritten original.
    - A transcription by David Mumper, completed in 2010 from a photocopy of the original.
- The Reddick family's original inventory of furniture in each room.

Additional primary research was undertaken by our team members at the Reddick Library local history room. Scans were made of original photographs and newspaper clippings.

Unless otherwise noted:

- Current photographs of the building and site were taken by the Sullivan | Preservation team members in Spring 2013.
- Photographs dating to c. 1970 were copied from photo albums in the Reddick Mansion Association (RMA) collection, unless they are noted as part of the Brookman collection. A number of these were held within records kept by R.A. (Jim) McClevey, whose personal files on the Mansion have recently been added to the RMA collection.
- A number of c. 1970 photographs were offered to the project team by Mr. and Mrs. Ken Brookman. Mr. Brookman is credited where they have been used.
- All of the historic photographs predating Library occupation were found in the Reddick Library local history room files. Copies of most of these photographs are in the RMA collection. Copies of several historic photographs are framed and hanging on the Lower Level of the Reddick Mansion. Their original source is unknown

except for those credited to the Funk Family, which was indicated on one framed collage of photographs.
- Early and Mid-20th century Reddick Library Photos were found in the Reddick Library local history room files. Copies of some, but not all, of these are in the RMA files.
- Photographs taken in the 1970s by Dr. Paul Sprague in preparation for his 1975 assessment report have been credited to him. Scanned copies of his photographs are available in the RMA files (kindly donated by him for this study in 2013).
- A number of newspaper clippings pertaining to the Reddicks, the Mansion and the Library are available in the Reddick Library local history room files.
- A number of post-1975 receipts, memos, letters, short reports and the like are available in the RMA files.

***Interviews***

The Sullivan | Preservation team met with several persons who have had long-term experience with the building and who have undertaken previous investigations. Among those who met with us or provided information are:
- Ken Brookman, former site manager (c. 1970s-1980s), who walked the site with us and provided us with a great number of photographs dating from the early days of the RMA that document changes made to the Mansion at that time.
- George Cary, architect, former RMA board member and principal of Basalay, Cary & Alstadt Architects, Ltd. (BCA). Cary's firm completed a Capital Needs Assessment for the Mansion in Sept. 2011 that was the basis for our cost study, as well as Window and Exterior Trim Restoration construction documents that were of use to our team. BCA also shared with our team building elevations and plans that have been utilized in this report.
- Steve Meyer and Larry Swanson, RMA members, who didn't mind getting their hands dirty in reviewing the attic and sub-basement with our team members. They also compiled a thorough "HSR Report Suggestions" list of questions that kept our team on our toes. They provided research regarding properties that preceded the Reddick Mansion on the Mansion site.
- Tom Weiss, a contractor who has worked at the Reddick Mansion in the past and had memory of a number of things that have since been altered.
- Dave Rabideau, an RMA board member and local contractor, who provided the boom lift for the exterior inspection and worked with us to brainstorm various issues regarding exterior conditions.

A full list of resources utilized for compilation of this report are listed in the Bibliography, attached as an Appendix to this report.

***Physical Documentation and Assessment of Condition***

The Sullivan | Preservation Team undertook site visits both as a team, individually, and in pairs throughout spring 2013. Conditions were noted and digital photographs taken. Unfortunately no original building plans or elevations exist. Our team utilized base plans and elevations provided by either the RMA or BCA Architects for our inspections.

***Recommendations for Repair***

Based on an analysis of the consultant reports and the findings of the Sullivan | Preservation team, a list of work items was compiled for the Reddick Mansion interior, exterior, MEP and structural systems and immediate site elements as well as for the Caretaker's House exterior. This information was utilized to prepare the cost estimates and phased recommendations. The cost study prepared by BCA Architects for the 2011 Capital Needs Assessment was used as a basis for our cost study, with costs escalated, revised and supplemented as required, based upon our experience with historic properties of this type. The cost study with prioritized/phased recommendations is found herein and is summarized in the Executive Summary.

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# Executive Summary

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# Executive Summary and Long Term Plan

## Project Identification

The William Reddick Mansion is located at 100 West Lafayette Street in Ottawa, LaSalle County, Illinois, 61350. At the time of Reddick's death in 1885, his estate occupied the entire east half of block 56 immediately north of Washington Park, and was comprised of five structures: the Mansion, the two story brick building west of the Mansion,[1] the Barn, Carriage House, and a wood frame residence. Reddick willed his home (lot 10 & 11) to the library association in 1885. Reddick Library occupied the building until 1978 when it moved to a new structure.

In the middle part of the 20th century the north half of the property was sold. An auto garage occupies the land where the two northernmost buildings once stood. The land around the Reddick Mansion now serves somewhat as a city park, and is tastefully landscaped.

## Existing Building Use and Integrity

The Mansion currently serves as an interpreted house museum with non-interpreted meeting spaces available on the Lower Level and Main Level. The exterior of the Mansion has high historic integrity, there having been little replacement of original material in its 157-year history. The interior has varying degrees of historic integrity. The Lower Level has lost most of its historic fabric, with the exception of the windows and associated trim, and some doors and associated trim.

The Main Level has high historic integrity, mainly owing to the extraordinary decorative plaster ceilings and superior original wood graining on some interior features. The East Parlors have been restored to their original configuration and are now interpreted spaces, but details such as paint color, window dressings and light fixtures are not entirely authentic. Two West Parlors remain modified in their configuration, and lack original finishes. The Northwest Room has no historic integrity.

The Bedroom Level has high historic integrity, mainly owing to the extraordinary decorative plaster ceilings. The trim was originally wood grained but has been over-painted. Currently the Southeast Bedroom is restored and interpreted. The Central Hall is also interpreted, but it has been altered from its original configuration with two partitions, breaking it in to three spaces. The other bedrooms remain un-restored. They retain original trim and plaster ceilings, but were modernized in the 1970s for office use. The

[1] This building currently serves the Ottawa Visitor's Center, but served as a Caretaker's House during the Library period, and has been referred to alternatively as a "smokehouse," as an "icehouse" in the Library Minutes, and as a "laundry and tool shed" in an interview with Sylvia Funk. The building's original use is not known, as it underwent a considerable rehabilitation in the 1920s when converted for a Caretaker's residence.

Center West Dressing Room has been seriously modified. A restoration here will mean fabrication of material in order to interpret the space. The Northwest "Wet Room" has no historic integrity and would be very difficult to fabricate for interpretation.

The Servants' Level has high historic integrity and has remained virtually untouched since 1888. As a result the rooms are in very poor condition and in need of plaster repair and painting, proper lighting, and restored floor finishes.

The site retains moderate historic integrity. Only the Mansion and Caretaker's House remain from the original five buildings on the site. The Barn, Carriage House and a wood frame house north of the Mansion were demolished in the mid-20th century. The existing landscape is lush and beautifully maintained, although not in keeping with the period of significance.

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**Discussion of Significance**

The Reddick Mansion is listed as a contributing property within the Washington Park Historic District (National Register of Historic Places, 1973). Washington Square is of particular historic significance because it hosted the first of the famous Lincoln-Douglas Debates, held on August 21, 1858. The debate lasted three hours under the hot August sun, and focused on the issues of popular sovereignty, setting the tone for the other debates to come in 1858.[2] Because of its historic significance as the location of the first Lincoln-Douglas debate, the integrity of its contributing properties, and significance to local life, the Washington Park Historic District was added to the United States National Register of Historic Places on April 11, 1973. [3]

The Reddick Mansion was constructed between 1856 and 1858, from a design completed by Chicago architects Olmsted and Nicholson. The Italianate-style building was and is a formidable presence facing Washington Park. It is significant for its embodiment of the park's period of significance (relating to the 1858 debates), as well as for its association with a prominent Illinois citizen. Reddick served as "one of the earliest and best remembered sheriffs of LaSalle County, and as a state senator for nearly a decade… Were it not for his continued dedication to the Democratic Party, Reddick might well have fulfilled his ambitions to become governor of Illinois and U.S. Senator… Reddick (remained) active in civic affairs, (working) on behalf of free public education… reach(ing) its finale in his last bequest. The gift of his residence to the City of Ottawa for use as a public Library."[4]

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[2] National Register of Historic Places, Washington Park Historic District, Ottawa, LaSalle County, Illinois, Constance Fetzer, ed., 1974.

[3] Excerpted from http://en.wikipedia.org/wiki/Washington_Park_Historic_District.; originally quoted from the National Register Historic District Nomination.

[4] Sprague, Paul PhD and William B. Dring, AIA. "History, Significance, and Feasibility for Adaptive Use of the William Reddick Mansion" prepared for the National Trust for Historic Preservation and the Ottawa Silica Company Foundation, 1975, p. 11.

## Periods of Significance and Changes Through Time

The Reddick Mansion has three periods of significance:

- **The Reddick Family Period: 1856 – 1887**
  - This period extends the initial design date of c. 1856 through 1887, when Mansion Library Board took possession of the building.
  - Key dates during this period are:
    - 1858: The first Lincoln-Douglas debate was held across the street in Washington Park (historic significance).
    - 1883: Eliza Collins Reddick died July 5, 1883.
    - 1885: William Reddick died March 8, 1885.
    - 1887: Elizabeth Burrier Funk Reddick (adopted daughter) died February 22, 1887.

- **The Reddick Library Period: 1888 – 1974**
  - This period extends from the date the Library opened through when it relocated to 1010 Canal St., Ottawa, IL.
  - Key dates during this period are indicated below. Those in italics are deemed periods of significant change:
    - 1888: Steam heating, toilets and electric lighting were installed.
    - 1906: The Lower Level was renovated for the new janitor.
    - 1908: The Library was re-wired.
    - *1912 - 13: Significant changes were made to the Library, including:*
      - A square arch was put on the west side of the Central Hall at the foot of the stairs.
      - Rooms on the Bedroom Level were converted into a Juvenile Department and LaSalle Co. Historical Museum.
      - A fire escape was installed at the east porch.
      - Stairs were removed from the Lower Level to the Main Level (assumed; Richardson report from 1923 states they were removed prior to 1920).
    - *1917: Second set of significant changes were made, under the direction of architect Jason Richardson.*
      - The Lower Level was outfitted for the Juvenile Department.
    - 1922: Murals were executed in the Fourth Floor Camp Fire Girls room.
    - *1923: The third set of significant changes were made, under the direction of architect Jason Richardson.*
      - Steel beams were added in various locations.
      - A wall was removed in the Northwest Room, Main Level (assumed).
      - The opening was enlarged between the Southwest Room (Library) and Center West Parlors, Main Level (assumed).
      - The Assembly Room was created on the Bedroom Level by removing partitions in the Southeast and Southwest Bedrooms.

- 1925: The floor was lowered in the Boiler Room and Coal Room and a new boiler/heating plant was installed.
- 1929: Significant repairs were made to the cornice and brackets, and all but one chimney were removed.
- 1934: A new chimney was constructed against the west elevation.
- 1940: A report was prepared by architect Louis Gerding to identify immediate repairs.
- 1946-1947: Fluorescent lights were installed throughout the Library.
- 1951: Architect Earl Gerding was approached again to complete a condition assessment, leading to a master plan of repairs submitted in 1952. He identified the danger of overloading floors with stacks.
- 1953: Major structural repairs were undertaken, including installation of three steel beams supported by pillars to reinforce the west side of the Main Level.
- 1961: The fourth set of significant changes included modifying the main entrance to create an aluminum vestibule, removing the west wall of the Southeast Parlor on the Main Level, misc. repairs.
- 1962 - 66: The State Fire Marshall required fire doors at the head and base of the main stairs.
- 1963: A new floor was installed over the coal bin in the northwest corner of the Lower Level (now the Kitchen).
- 1967: A king-post truss is thought to have been installed in the Servants' Level, off of which book shelving was hung in the Southwest Room, Bedroom Level.
- 1974-1975: The Reddick Library moved from the Reddick Mansion.

- **The Reddick Mansion Association Period: 1975 – Present**
  - This period extends from when the fledgling RMA entered into a short-term agreement with the City of Ottawa to operate the building. Ultimately, a longer-term agreement was established in 1978.
  - Key dates during this period are:
    - *1976 - 1978: Major Restoration Campaign including:*
      - 1976: The removed west wall of the Southeast Parlor on the Main Level was reconstructed, and the Southeast Parlor was restored.
      - 1977: The Kitchen in the Northwest Room, Lower Level, was remodeled.
      - 1978: The three East Parlors on the Main Level were painted, grained, and restored.
      - 1978: The South Elevation porch balustrades were reconstructed and installed.
      - 1978: The vestibule doors were recreated and the pier mirror was moved to the vestibule from the Southeast Parlor.
    - 1978: The not-for-profit Reddick Mansion Association was formed, and a final draft agreement was made with the City of Ottawa.

- 1981: Storm windows were fabricated and installed on the interior face of the window sash.
- 1983: A heat and smoke alarm system was installed.
- *1991-92: The perimeter retaining wall and cast iron fence were reconstructed.*
- 1998: The Lower Level was remodeled for Ottawa Visitor's Bureau use.
- 2004: The Main Level windows were repaired and painted.

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**Restoration Target Date and Interpretation**

We recommend that the Restoration Target Date be set within what we consider the primary period of significance: **The Reddick Family Period: 1856 – 1887.**

The RMA has previously identified 1875 as the restoration target date. The Sullivan | Preservation Team feels this date should be pushed forward to the early 1880s, when both Mr. and Mrs. Reddick were living and still active within the community. Historic photographs exist of the East Parlors from their funerals in 1883 and 1885, which should continue to be used for identifying appropriate décor and furniture.

**Main Level**

On the Main Level, the Central Hall, the Southeast and Center East Parlors, and the Dining Room are interpreted as historic spaces. They should remain museum spaces, but we recommend that the walls and ceilings be painted in the original paint colors identified in our analysis in order to better understand the spaces' original design intent.

The two parlors on the west half of the Main Level are currently used as rental space to the public. It is appropriate that these spaces continue to be used as public gathering space, and that they be "moderately interpreted." The walls and ceiling should be painted in the original colors identified in our analysis, but because the original grained trim was stripped at some point, it may remain a complimentary solid color. The original floors are covered with a new hardwood floor. It should be stained darker to be more in keeping with the original wood in the house.

The service areas in the northwest corner of the Mansion on every floor level have been so altered over time that they retain no historic integrity. We recommend that these remain neutral service spaces, and that they ultimately house an elevator shaft that extends from the Lower Level to the Servants' Level. The elevator would provide access for the disabled and make life generally more pleasant for all users. An accessible unisex restroom can be provided on one or more levels in this area as well.

**Bedroom Level**

On the Bedroom Level, the Central Hall and Southeast Bedroom are interpreted as historic spaces. They should remain museum spaces, but we recommend that the Central Hall's partitions be removed, since they confuse the interpretation of the space, and that the walls

and ceilings in both rooms be painted in the original paint colors identified in our analysis. The RMA will have to negotiate with the local fire department and code officials regarding removal of the fire-rated stair enclosure, positioning of exiting signage, and the fact that there is only one means of exit from this level.

The Northeast Bedroom, Center East Bedroom, Southwest Bedroom and Center West Dressing Room are now vacant and available for interpretation. The Northeast Bedroom can be restored to represent Elizabeth Funk Reddick's bedroom, and be interpreted to depict the daily life of a young woman in the 19th century. The Southwest Bedroom and adjacent Dressing Room should be restored for interpretation as Mrs. Eliza Reddick's bedroom suite. All the aforementioned rooms should be painted using the original paint colors identified in our analysis, and appropriate furniture obtained.

Due to the fact that the Reddick Library occupied the structure longest, coupled with the significance of William Reddick's gesture in leaving his private home to the City of Ottawa for use as a public library, we feel that a space within the Mansion should be utilized for Library interpretation. The Center East Bedroom on the Bedroom Level would be most appropriately interpreted to represent the Reddick Library era, as it still contains several of the Reddick Library's original bookshelves. A display describing the **Reddick Library Period: 1888 – 1974** should be prepared for this space.

**Servant's Level**
The rooms on the Servant's Level should be refurbished, their plaster repaired or replaced and painted, and those rooms used for storage and possibly RMA (or other) offices. Without a second means of access, (and due to the steep existing stairs) it would not be possible to have public visitation on this level. Once the elevator is installed, these spaces may become available for museum use or office rental.

**Attic**
The attic should be insulated between the roof rafters and prepared for installation of mechanical equipment. The floor joists and roof rafters may have to be structurally supplemented to support the integration of mechanical equipment and associated insulation.

**Lower Level**
The rooms at the Lower Level have lost most of their historic integrity through modernizations. It has become popular in recent years to interpret the servants' lifestyle in historic house museums of this type. It would be appropriate to make modifications to the Southeast Room in order to interpret it as a Servants' Dining or Sitting Room. It seems probable that the original Kitchen was located in the Northeast Room. This space may be renovated with a new kitchen that is more serviceable and in keeping, design-wise, with a historic home of this period, and will serve "double-duty" as a catering kitchen for the Main Level event space.

## Space Utilization and Museum Operation

The Reddick Mansion Association is entering an important new era regarding use of the Mansion. For over twenty years most of the rooms on the Bedroom Level were being utilized as offices, rented to outside non-profit organizations, which limited the ability to interpret these spaces. This year the last of these tenants left the building, allowing RMA the freedom to use the spaces for their own purposes. The Association's primary wish is to fully interpret the Main and Bedroom Levels as a house museum, while receiving additional income from rental spaces.

Today, most museums like the Reddick Mansion have found it difficult to operate solely as interpreted house museums. The RMA has survived for many years on office rental income together with entry fees, and a number of generous donations of both money and volunteer time. The organization rightly sees a future in offering event space, and has worked toward making the west side of the Main Floor as desirable as possible for events rental. They have also upgraded the site surrounding the Mansion, making the grounds available for events.

House Museums need to be an integral part of the community, serving many audiences in different ways. In order to survive, the RMA must expand their programming, and work toward filling their underutilized spaces with activity.

We have recommended that the vacant bedrooms on the Bedroom Level be returned to museum interpretation, but this may take some time. In the meantime, RMA should consider upgrading the rooms to be "moderately interpreted" by removing and replacing the industrial carpets, and painting the rooms in the colors identified in our analysis, making the spaces available for rental income again.

We see a great opportunity for partnerships within the Illinois River/I&M Canal National Heritage Corridor. House museums in this region should form a coalition and focus their programming and advertising dollars on making this area a destination, with the Reddick Mansion and Hegeler Carus Mansion serving as highlights on the tour.

The next step as the Reddick Mansion Association moves forward is to find a part- or full-time executive director who has the skills to raise awareness, money and interest in this important property. The volunteer efforts of the RMA have been extraordinary over its thirty-five year history, but in order to move to the next level they must invest in professionalizing the organization.

## Summary of Findings from the Physical Analysis

### Mansion Exterior

The Reddick Mansion is a massive stone and brick masonry structure that has survived well over the past 150+ years. The exterior is in overall fair to good condition. Areas of the building are in need of re-pointing, but overall, the mortar joints are stable. The stone has been inappropriately patched in the past, but it appears stable except at the base of the building where areas of the stone are cracked and spalling. Lowering the grade approximately six inches and grading the soil away from the building prior to stone patching should be effective. The sheet metal cornice is also in surprisingly good condition, although in need of painting. The only exterior elements that are in poor condition are the original wood windows, which are in immediate need of stabilization and in some cases rebuilding.

### Mansion Interior

The Mansion interior retains many of its original details, which is remarkable, considering it served as a public library for nearly 100 years. The rooms that are furnished for interpretation are authentic, although the paint colors on the walls and ceiling should be modified to better match the original design intent. No seriously deteriorated areas were noted; the roof is relatively new and no interior water damage was noted. Several Bedroom Level rooms are in un-restored condition, having served as offices for many years. The Servants' Level is in poor condition—the plaster walls and ceilings retain their original paint (!) and exhibit considerable cracking and failure. In order to be a usable space, that level will need complete refurbishment. It now serves, however, as an interesting look back into time. The Lower Level has been modernized to serve RMA office and gathering space requirements. There is enough original material in the Southeast Room to interpret that space as a Servant's Dining Hall or Sitting Room.

### Mansion Structure

The infrastructure within the Mansion has been modified over time, as recorded by architect Jason Richardson in the 1920s, and other accounts after that time. Our investigation found that the structure is sound. However, if/when mechanical equipment is integrated into the Attic space, the Attic floor joists may have to be reinforced. Similarly, the roof rafters may need reinforcement to ensure that they can support the snow load once the attic space is fully insulated.

### Mansion MEP

The Mansion is currently heated with radiant (radiator) heat, and is not air conditioned except by window units. We recommend that the radiators be retained, and that the entire structure be outfitted for ducted air conditioning with supplemental heat/de-humidification. A ground-source heat pump (GSHP) system is most appropriate, and capable of simultaneous control of temperature and humidity (assumed at a maximum 60%), through the use of hot gas reheat. New humidifiers would be integrated for winter humidification to recommended levels (35%). Our energy model predicts that the GSHP system will operate for about the same cost as the current system ($9,000/year), despite

the fact that the current system has almost no cooling and does not control for humidity at all. When compared to a standard air conditioning system with reheat, we see an annual savings using the GSHP system of about $2,500.00. This system has an initial installation up-charge from a standard split type A/C of just $20,000, indicating a roughly 10-year payback. An architect should be included on the HVAC integration team in order to properly design and detail integration of the system into the building. The system can be effectively integrated within the historic structure without disturbing too much historic fabric, as the house contains sufficient closets to accommodate the new ducted system.

**Caretaker's House Exterior**

The Caretaker's House is constructed of brick with limestone trim. The brick masonry is in fair to poor condition, and in general need of re-pointing. The brick and stone have some seriously deteriorated areas that are in need of patching or possible replacement. The wood cornice is suffering from spot deterioration. Repairs should be made to the cornice as soon as possible to prevent bird and animal infestation. The windows and doors are in overall fair condition with a few exceptions; in one case a window is in danger of collapse and should be addressed immediately.

**Site**

The site on which the Mansion sits has a lovely park setting and is well maintained by volunteers. The pavement is in fair condition and is spalling in some locations. The RMA has been upgrading the site, most notably this summer with the construction of a portico north of the Mansion. Site features like this will attract visitors and persons wishing to hold an event on the site. The site as it is does not reflect the Reddick Family Period, when it was quite austere, based on historic photographs. We think it is appropriate that the green space around the Reddick Mansion remain landscaped and vibrant in order to attract visitors.

**Summary**

The Reddick Mansion was well built initially and has fared generally well over time. An enormous amount of energy and a fair amount of money was fed into restoring the public spaces of the building between the inception of the RMA in 1978 and about 1990. Since then, repairs have been undertaken on an as-needed and piecemeal basis. The lack of records after 1990 (as evidenced in the Timeline) indicate that perhaps the working relationship between the RMA and the City of Ottawa should be strengthened and better records kept of repairs and changes made to the Mansion.

The co-operative relationship between the RMA and the City of Ottawa must be strengthened in order to successfully restore and maintain the Mansion. It is hoped that this Historic Structure Report and the Cost Study with recommended phased restoration work will open a dialogue, and the two entities will work together to create a Master Plan for the next twenty years. Both City *and* RMA funds must be faithfully dedicated on a *yearly basis* to the restoration and maintenance of this important piece of Illinois history.

# Long Term Plan

The Reddick Mansion Historic Structure Report provides a detailed condition assessment report with recommendations for the following structures:

- Reddick Mansion Interior, Structural, MEP, and Mansion Exterior Conditions
- Caretaker's House Exterior Condition
- Reddick Mansion Site Issues

Observations of existing condition and recommendations for repair/restoration are discussed within the chapters pertaining to those areas. The recommendations for each building area were entered into the Final Cost Study chart. For each recommendation, an estimate of probable cost was provided, in 2013 dollars. Subtotals were generated, onto which several contingencies were added: 9% for General Conditions, Bond and Insurance, 5% Contractors Fee, 5% Design Contingency and an 8% Construction Contingency. For planning purposes, an estimate of Professional Design Fees was provided within the estimate for each scope of proposed work.

The Final Cost Study was organized to provide two planning options for the Reddick Mansion Association:

1. A large-scale restoration project, in which the work will be undertaken over a one- to two-year period following one year of planning and construction document preparation.
2. A phased restoration approach, whereby money is raised over the next five years in order to start restoration in the sixth year. Work would spread out over a twenty-year period:
    a. Priority 1: 6-10 years
    b. Priority 2: 11-15 years
    c. Priority 3: 15-20 years
3. A third category was provided, entitled Maintenance & Repair, into which critical items or scopes of work that can be categorized as maintenance were placed.

**Summary of Costs**

A detailed chart is provided on the last page of the Cost Study, and is summarized here:

**Option 1: Large-Scale Restoration**

Mansion total estimated Construction Cost:

| | |
|---|---|
| Construction Cost (2015-2016): | $2,924,935 |
| Design Fees (2014): | $287,087 |
| Maintenance & Repair (2014): | $57,982 |

Caretaker's House Exterior total estimated Construction Cost:

| | |
|---|---|
| Construction Cost (2015-2016): | $343,934 |
| Design Fee (2014): | $31,149 |
| Maintenance & Repair (2014): | $43,855 |

| | | |
|---|---|---|
| Site total estimated Construction Cost: | | |
| Construction Cost (2015-2016): | | $78,819 |
| Design Fee (2014): | | $6,100 |
| Maintenance & Repair (2014): | | $23,873 |
| **Option 1 Total:** | | |
| **Construction Cost (2015-2016):** | | **$3,348,688*** |
| **Design Fee (2014):** | | **$324,336*** |
| **Maintenance & Repair (2014):** | | **$125,710*** |

*Note: These are estimates for planning purposes only. Construction Documents must be prepared and cost estimates obtained from them in order to identify actual planned construction cost. In the case of Maintenance & Repair, bids must be sought from qualified contractors for the work proposed. Note also that scopes of work and professional design fees were estimated on an individual line item basis; there would be a savings if a large scope of work were undertaken at one time, and one set of construction documents prepared for all the work.

**Option 2: Phased Restoration over time**

| | | |
|---|---|---|
| Priority 1 (2018-2023): | | |
| Mansion: | | $1,637,416 |
| Caretaker's House: | | $117,418 |
| Site: | | $91,759 |
| | Total**: | $1,846,593 |
| Priority 2 (2024-2029): | | |
| Mansion: | | $675,538 |
| Caretaker's House: | | $96,905 |
| Site: | | $7,787 |
| | Total**: | $780,230 |
| Priority 3 (2030-2035) | | |
| Mansion: | | $1,136,409 |
| Caretaker's House: | | $152,784 |
| Site: | | $5,840 |
| | Total**: | $1,295,034 |

**Note: These are estimates for planning purposes only, and were generated for the year 2013. With each passing year, the estimate must be raised by between 4% and 7%, cumulatively.

## Recommended Procedure for Moving Forward

The estimates provided are for planning purposes only. They were generated based upon verbal description of work and broad estimates of quantity. There may be economy in combining scopes of work in to one large project, or in to several smaller projects that

utilize contractors within similar trades (i.e. all the masonry work at one time vs. over several years, etc.).

**Option 1: Large-Scale Restoration**

In order to identify actual scopes of work with associated costs for a full restoration, Construction Documents must be prepared by an Architecture/Engineering (A/E) team first. There are several phases of the Construction Document process as relating to building restoration:

1. **Pre Design** – The A/E undertakes an investigation to understand the building's complexities and formulates an idea of what needs to be undertaken. The HSR serves as a Pre Design document.
2. **Schematic Design** – The A/E identifies an appropriate scope of work and finalizes recommendations for repair. The HSR serves as a Schematic Design document.
3. **Design Development** – The A/E translates the verbal recommendations in to drawings, notes and descriptions that provide enough critical information so that a cost analysis can be undertaken.
4. **Construction Documents and Bidding Document Preparation** – With Owner go-ahead, the construction documents, comprised of drawings and project manual/specifications, are prepared in order to bid to several pre-qualified contractors.
5. **Bidding & Negotiation** – The project is bid and the Owner chooses from among several contractors who have bid on the same exact scope of work. With pre-qualified bidders, the lowest bid typically receives the contract. If prequalification is not possible, then the project should be awarded to the lowest *qualified* bidder (sometimes not the lowest bid).
6. **Construction and Construction Administration** – While the general contractor and his sub-contractors complete the work, it is advisable to continue the involvement of your architect and engineer/s during Construction Administration in order to verify that the work being undertaken is being completed as described in the construction documents.

The first step we recommend is that the RMA contract with an A/E team to generate Design Development documents for the scope of work identified in this project. The documents should be prepared in a way that they could be broken apart and scopes of work undertaken separately if necessary. Upon completion of Design Development documents, a line item cost estimate should be prepared by a construction cost estimator familiar with building restoration practices. This should give the RMA the best idea of projected construction costs related to each scope of work.

When RMA is ready to move forward with a large-scale restoration, the project should be bid to pre-qualified general contractors who have secured sub-contracts with trades who have exhibited experience working on historic and National Register properties.

### Option 2: Phased Restoration over time - Mansion

If the RMA decides to undertake the restoration in a phased manner over several years, work must be prioritized based upon several criteria, the first of which is safety; the second of which is utilization of funding to best serve the use of the building for the future.

Mansion

1. Priority 1: Exterior
    a. Original wood window restoration (can be undertaken over several years by floor or by elevation)
    b. Spot repointing of Mansion and removal of damaged stone
    c. Paint and repairs to cornice
    d. Repairs and repainting of East Porch
    e. Mechanical upgrade to include Heating and A/C with associated structural and integration of attic insulation
2. Priority 1: Interior
    a. Central Hall and Wainscot restoration
    b. Move Kitchen to northeast corner and redesign so it can be used as a catering kitchen for events

Caretaker's House

1. Priority 1:
    a. Repairs to soffit and fascia
    b. Repairs / restoration of windows
    c. Repairs to stone sills
    d. Paint / seal roof

Site

1. Priority 1:
    a. Repair/rebuild brick wall
    b. Regrade soil around mansion perimeter
    c. Clean/paint iron fence and make repairs to stone wall

**END EXECUTIVE SUMMARY**

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# Historical Analysis

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# Historical Analysis

## Introduction

Because the Historical Analysis of the Reddick Mansion was previously undertaken by Paul Sprague, PhD, in his 1975 report, Sullivan | Preservation was not charged with researching and re-writing the history of the Reddick Mansion and explaining the significance of William Reddick. However, our team conducted a great deal of primary research both at the Reddick Library and by sifting through the RMA files provided to us, in order to produce this Historic Structure Report.

Since the Sprague report describes the history of the building only through 1975, we felt it important to include the history of the early years of the Reddick Mansion Association, as they were so significant in saving and restoring this important building.

We have reproduced here significant portions of the two following documents:

Sprague, Paul PhD and William B. Dring, AIA. "History, Significance, and Feasibility for Adaptive Use of the William Reddick Mansion," prepared for the National Trust for Historic Preservation and the Ottawa Silica Company Foundation, 1975.

_____. "A History of The Reddick Mansion Association." Unpublished binder, RMA collection. c. 1980.

The history of modifications made to the Reddick Mansion between 1980 and the present day are fairly well documented in a timeline that was created for this project and is included in Appendix D. The information we entered into the Excel spreadsheet was gathered from the following sources:

Mumper, David (compiled by). "Notes Gleaned from the Minutes of the Reddick Library Board of Directors." 2009.

_____. "Facts on Reddick The Man and the Reddick Mansion." Unpublished paper document, RMA collection. c.1975.

Many miscellaneous post-1975 receipts, memos, letters, short reports and the like that were in the RMA files. Of particular use were records collected by R.A. (Jim) McClevey whose personal files on the Mansion have recently been added to the RMA collection.

A written history of the Mansion under the care and guidance of the RMA from 1980 onward has yet to be written. In 18 years the 175th anniversary of the building's construction will be celebrated. We are hopeful that the building will be fully restored before 2031.

PART ONE

THE LIFE AND SIGNIFICANCE OF WILLIAM REDDICK

Early Life

William Reddick was born October 31, 1812[1] in the town of Ballynahinch, County Down, now Northern Ireland. His father, James Reddick, was an Irish Presbyterian "of the most excellent character," who "was earnest in securing for his children not only a sound moral training, but as thorough an education as his means would permit."[2] Reddick brought his family to America in 1816,[3] settling first in New Jersey and shortly thereafter, in Zanesville, Ohio, where he worked at the salt works.[4] In autumn of 1821, when William was nine years old, his father died leaving his wife with William and four other sons and a daughter. Mrs. Reddick, Bessie, survived her husband by only a few years, dying at Wheeling, West Virginia, in 1828. The sons were James (born 1814, died at Ottawa, October 12, 1847); John (died in Texas 1849); Joseph (died in California, 1870); and David, of LaSalle (born August 1, 1810), who survived his brother William The sister was Mrs. James Stanley (died at Birmingham, Alabama, February 5, 1884).

In 1825, William Reddick, having reached the age of fourteen, was apprenticed as a glass and hollow-ware blower at Wheeling and Wellsburg, West Virginia, his compensation reported as $4 a month.[5] Two years later, William moved to nearby Brownsville in Fayette County, Pennsylvania, where, at the age

of 16, he was apprenticed on November 10, 1828, to W. P. Campbell for a period of 2 years, 2 months, and 2 days, to learn to blow window glass.[6] When the apprenticeship ended, William, then 18 years old, married Eliza Jane Collins of Brownsville,[7] where he continued to work in the glass industry. Mrs. Reddick, evidently several years his senior, was born at Brownsville in August 1810.[8]

The Reddicks moved to Washington, D. C., in 1832 where for two years William continued in the glass blowing business. While in Washington "he made a sturdy effort to acquire a substantial education. He studied during the evenings and during the long period when the fires of the glass works remained extinguished."[9] While working in Washington, Reddick managed to save the substantial sum of $1000. In 1834, he and his wife returned to Brownsville, Pennsylvania.[10]

Political Career

Having decided to take up farming, Reddick and his wife left Brownsville in the spring of 1835 and settled on property purchased in Section 11 of Bruce Township, LaSalle County, Illinois. Section 11 is one section east and four sections north of Streator.[11] Reddick did not remain a farmer long, for in 1838 he was elected County Sheriff and moved to Ottawa, the county seat. Although reluctant to become sheriff, for which it is reported Reddick did not campaign, he agreed to serve and the citizens of the County elected him by a large majority and continued to return him to the office every two years until 1846 when he became a state senator.[12]

2.

The circumstances of Reddick's draft as sheriff, recounted in several places, give some idea of his character:[13]

> In 1838, Ottawa was infested with a gang of trouble-makers, employees of the canal contractors. The question arose as to who was the best man to deal with these men in the capacity of sheriff. Wash[ington] Armstrong, a political leader in those days, suggested that William Reddick would fill the bill. He was big, powerful, and fearless. Accordingly Mr. Armstrong went out to the Reddick farm to see Mr. Reddick. He was found working in a field, barefooted. His wife was also working in the field. When the suggestion was made that Mr. Reddick should become a candidate for the office of sheriff, he ridiculed the idea. He said that he was not well enough educated, and offered many reasons why he would not make a good county official. But Mr. Armstrong insisted, and Mr. Reddick finally consented. He made no fight for the office, but was elected by a large majority.

Evidently Reddick was also made county collector at the time he became sheriff. According to his obituary in the Ottawa Free Trader, "The office of collector in those days was of much more consequence than that of sheriff, and the times being 'hard' [Panic of 1837], Mr. Reddick no doubt laid the foundation of much of his large personal popularity by his kindly advances he had made to hard-up taxpayers."[14]

There are reports that Reddick was a state land appraiser, but this remains unconfirmed.[15] A letter by him written in 1841, which speaks of surveying land on the Rock River, lends support to the idea.[16] These reports may, however, refer to Reddick's appointment in 1848 by State authorities as one of the Illinois and Michigan Canal appraisers.[17]

Several references in the Ottawa Republican, reprinted in 1914, illuminate Reddick's career as sheriff and collector:

> December 7, 1838: On this day Sheriff William Reddick presented an account [to the County Commissioners] for work done on the courthouse. . . . [18]

> June 2, 1840: [the Circuit Court] ordered that William Reddick, collector, be allowed with the next term of the court, to make settlement for the tax collected by him, for the reason that the sale of lots and lands has not been completed. [19]

> October, 1841: The old courthouse was advertised to be sold at public auction by Sheriff William Reddick. . .on the afternoon of October 21, 1841.[20]

In 1846 Reddick was elected state senator from his district, the term beginning in 1847. The Illinois Constitution of 1848, which changed the election of state senators to coincide in date with federal elections caused Reddick's second term, which began in 1849, to be extended by two years so it did not expire until 1852.[21]

In that year Reddick ran unsuccessfully for Congress from the 3rd District of Illinois.[22] His plurality of 332 votes in La Salle County proved insufficient to carry the district which he lost to Jessie O. Norton by 147 votes.[23] Thus began the decline of Reddick's political fortunes. He ran for Congress again in 1854,[24] but did not even get on the ticket. In 1854, the new Republican Party carried many offices in Ottawa including Congressional, and Reddick, had he been slated, might well have been defeated again.

That he remained staunchly Democratic in the face of overwhelming Republicanism, meant the end of his political career. He held state office only one more time when, during the Democratic year of 1870, he was again elected state senator for two years.[25] Reddick's affection for the Democratic Party is revealed in the often-quoted words of Reddick when his health began to fail: "'Well, this will be a good time to die -- under a Democratic administration,' and he expired six days after the inauguration of Grover Cleveland. . . ."[26] At Reddick's death the Ottawa Free Trader had this to say about his unfulfilled political ambitions:

> Having been all his life an active Democrat, his politics for the last 24 years were no doubt the chief bar to his higher political advancement, and he was mentioned in connection with Congress, the governership, U.S. Senator, etc., positions which, no doubt, he would easily have attained but for the minority condition of the Democratic Party.[27]

Some notices of Reddick's activities during his political years follow:

In September, 1841, Reddick was among 19 persons who voted at the first election of officers when the Village of Ottawa was incorporated.[28] In the legislature of 1849, he opposed a bill preventing free Negroes from settling in Illinois. When it passed, 13 to 12, he proposed that the title of the legislation be changed to "An Act for a Crusade by a Christian State Against Negroes."[29] In 1850, Reddick attended the Democratic Congressional Convention at Joliet that nominated R. S. Molony.[30] Reddick was later reported to be "another of Judge Douglas' friends who stood

on the stand with him at Ottawa" during the Lincoln-Douglas debate of August 21, 1858.[31] Finally there is the notice in the Ottawa Free Trader of February 11, 1860, that the "first regular meeting of the Democratic Club came off Saturday evening, February 4, with the Honorable William Reddick, President, presiding."

Education and Temperance

Reddick's interest in bringing the advantages of education to persons who, like himself, had been forced to educate themselves, is evident from the bequest by which he gave his home to Ottawa as a public library:

> Deprived of the advantages of early educational training, it became a purpose which grew with his years, so to apply his fortune that the people, especially the young people of Ottawa, whose circumstances in life are like those of his own early youth, might at least have access to books, to better equip themselves for the duties of work and life. [32]

As early as 1851, Reddick was at work promoting education. In November of that year he served with Professor J. B. Turner of Jacksonville, Illinois, as a vice president of the Granville Convention. There Professor Turner "first proposed the plan for establishing higher institutions of scientific industrial learning by federal aid, a plan which laid the foundation of the University of Illinois and all the land-grant colleges of the nation." [33]

Reddick was also involved in organizing a free public

school system in Ottawa. The first steps were taken January 11, 1854, at a citizens' meeting in the courthouse. There a committee of nine persons, including Reddick, was constituted to prepare a plan for a school program. This committee recommended the establishment of free graded schools and, subsequently, a law permitting such schools in Ottawa was passed by the state legislature.[34]

Although not credited in standard sources with introducing the Illinois enabling legislation permitting municipalities to maintain public libararies, it is probable that Reddick was deeply involved in getting the bill through the legislature. This act, passed March 7, 1872, during the second year of Reddick's last year in the state senate, authorizing cities "to establish and maintain free public libraries and reading rooms," provided the legal mechanism by which the Reddick home was later converted for use as a public library.

It was also during his second term as state senator that Reddick came especially to be associated with the temperance movement. According to his biography of 1875:

> In 1870 the Democrats of his section, who had never been able to elect their candidates since Mr. Reddick had withdrawn from politics and engaged exclusively in private pursuits, now cast about for a standard-bearer who it was possible to place in office. The temperance people, likewise in the minority, were looking about for the same purpose. Mr. Reddick, a plain, hard-working, upright citizen, firmly grounded in the principles of temperance and standing in the very best repute in the county, was the only man who could successfully lead a forlorn hope against strong opponents.[35]

7.

Reddick succeeded during this short two-year term to have enacted in 1872 a temperance law which limited the sale of liquor and became known as "Reddick's Temperance Law."[36]

Reddick the Businessman

After the precipitous decline in his political fortunes, Reddick opened in 1854 a store for general merchandise in Ottawa under the name of Reddick & Hurlbut.[37] The firm continued until 1856 when Hurlbut withdrew. After that, Reddick operated the store alone. In the LaSalle County Directory of 1858-59, Reddick is listed as: "dry goods, etc., Reddick's blk, Court; h. Lafayette cor Columbus." In 1868, perhaps because he was planning to run again for the state legislature, Reddick took Hugh B. J. Gillen into partnership as Reddick & Gillen. In May, 1873, Reddick sold his interest in the business to Gillen and retired at age 60.[38]

Although thus engaged in the dry goods business for 20 years, it is unlikely Reddick made his fortune in this business. His magnificent residence, begun in 1856, is ample evidence that Reddick was already wealthy by 1854 when he opened the dry goods store. Instead, it was probably through real estate transactions that Reddick amassed his fortune. In 1876, according to the Warner and Beers Atlas of LaSalle County, Reddick owned 57.38 acres in the first ward of Ottawa, 115.25 acres in section 16 and 29.18 acres in section 17 of Ottawa township, and 80 acres in section 5 of Bruce township, and it is likely that these properties were not all of his real estate holdings.

8.

According to Reddick's 1875 biography, he "is now, as he has ever been since his advent in LaSalle County, an agriculturalist on a very large scale, owning and conducting several large and very fine farms in various townships."[39]

No doubt because of his reputed frugality, Reddick was able to save enough money in the early years to take advantage of government land sales at low prices. The rapid increase in land values during the 1840's would be more than enough to explain Reddick's affluence by the 1850's. That he was also county collector and a land appraiser could only have helped. In 1877, Reddick's fortune was listed as $300,000.[40]

In the 1860's Reddick was associated with several public enterprises of a commercial nature. In 1863, he was one of the incorporators of a company chartered to build a hotel in Ottawa.[41] In 1867, the state legislature constituted William Reddick and four other persons a board of commissioners to organize a company to dam the Fox and Illinois Rivers for water power. The dams, both finished in 1871, were washed away in floods the following spring.[42] In 1869, Reddick served on a commission to acquire the toll bridges across the Illinois and Fox Rivers. When one of the bridges fell and had to be rebuilt, Reddick became President of the Illinois River Bridge Company.[43] He was also one of the founders of the Ottawa Glass Works.[44]

Reddick's Passing and Funeral

Reddick's wife, Eliza Collins Reddick, died July 5, 1883,[45] and he followed her not two years later, on March 8, 1885.[46]

Although childless, the Reddicks were survived by an adopted daughter, Elizabeth Burrier Funk Reddick. She was born in Prussia November 10, 1840, the daughter of Franz Joseph Funk. When Funk's wife died about 1852, he was left with two small children, John and Elizabeth. On learning that the Reddicks wished to adopt a child, and being unable to give his daughter proper care, Funk assented to the Reddicks' wishes and placed Elizabeth with them.[47]

At his death, Reddick left his home to the city of Ottawa as a library together with an endowment of approximately $100,000 for its maintenance. He also left 100 acres of farm land to LaSalle County as an addition to their farm in support of the poor.

According to the Ottawa Republican of March 13, 1885, Reddick's funeral was one of the largest ever seen in Ottawa.

> The services were conducted by Reverend M. K. Whittlesy [Congregational pastor of Ottawa] and Reverend G. S. Young [Methodist pastor of Elgin] who, when pastor of the Methodist Episcopal Church in Ottawa, was a warm friend of the deceased. At the conclusion of the services a procession was formed, Judge Evans, Sheriff Milligan, and C. D. Tumble of Ottawa; Honorable Elmer Baldwin of Farm Ridge, Colonel Plumb of Streator, A. M. Vaughey of Seneca, and S. M. Heslet of Mendota, acting as pall-bearers. Company D and the fire department marched at the head. Following the hearse were carriages containing Ottawa and LaSalle relatives, Judges of the Supreme and Circuit Courts, trustees and officers of the Kankakee Asylum, members of the Board of Supervisors, the City Council, old residents and citizens of LaSalle County.[48]

The Reddick monument at Ottawa Avenue Cemetery marks the graves

of William and Eliza Reddick, Elizabeth Funk Reddick [adopted daughter], James Reddick [brother of William], Mary Sterns Collins Bowen [sister of Eliza], and Virginia E. Gray [niece of William].

Reddick's Significance

Thus ended the remarkable career of a man who should be accorded a foremost place among Ottawa's most distinguished citizens of all time. Serving as one of the earliest and best remembered sheriffs of LaSalle County, and as state senator for nearly a decade, Reddick became a political giant in his time. Were it not for his continued dedication to the Democratic party Reddick might well have fulfilled his ambitions to become governor of Illinois and U.S. Senator.

Even after the decline of his political fortunes, Reddick continued to be active in civic affairs. His work on behalf of free public education - aimed at assisting young persons who, like himself, might otherwise be deprived of a complete education - reached its finale in his last bequest. The gift of his residence to the City of Ottawa for use as a public library, together with a substantial endowment -- the two worth well over $1,000,000 in today's money -- have made Reddick one of Ottawa's best-known and most respected benefactors.

Certainly there is no question that this self-made man, William Reddick, -- farmer, statesman, businessman and philanthropist -- deserves a place of honor in the Ottawa Valhalla.

11.

NOTES

1. "Hon. William Reddick," The Biographical Encyclopedia of Illinois of the Nineteenth Century, Philadelphia, 1875, p. 293.

2. Ibid.

3. According to A. J. Reddick, quoted in Ottawa: Old and New, A Complete History of Ottawa, 1823-1914, Ottawa: The Republican Times, 1912-14, James Reddick "became a citizen of Bedford, Pennsylvania, in 1918, he having come to America a few years before his family."

4. "Hon. William Reddick," op. cit.

5. Ibid.

6. Indenture preserved in Reddick's Library.

7. Although Reddick is said to have married in 1830, it is likely the marriage did not take place until 1831 as the terms of his apprentice agreement would have prevented him from marrying until January or February, 1831.

8. The date is from the Reddick monument in Ottawa Avenue Cemetery.

9. "Hon. William Reddick," op. cit.

10. Ottawa: Old and New.

11. According to the Warner and Beers Atlas of LaSaSalle County, in 1876 Reddick owned 80 acres in Section 5 of Bruce Township.

12. The following results of elections in which Reddick ran are found in The History of LaSalle County, Illinois, Chicago: Interstate Publishing Co., 1886, 2 vols., I, 276:

Election of Aug 3, 1840 - Sheriff

| | |
|---|---|
| Reddick | 2093 |
| Walker | 511 |
| Hidden | 24 |

Election of Aug 8, 1842 - Sheriff

| | |
|---|---|
| Reddick | 888 |
| Potter | 655 |

Note there was no page 12 in original document

13.

Election of Aug 5, 1844 - Sheriff

| | |
|---|---|
| Reddick | 754 |
| Hoffman | 446 |
| Leonard | 368 |
| Kelsey | 94 |
| Maclay | 33 |

Election of Aug 3, 1846 - State Senator

| | |
|---|---|
| Reddick | 1443 |
| Mason | 553 |
| Champlin | 200 |

Election of Nov 2, 1852 - U.S. Representative

| | |
|---|---|
| William Reddick | 1653 |
| Jesse O. Norton | 1321 |
| John H. Bryant | 465 |

13. Ottawa Old and New.

14. Ottawa Free Trader, March 14, 1885.

15. Ottawa Old and New.

16. Original at the State Historical Library, Springfield.

17. "Hon. William Reddick," op. cit., p. 294; Ottawa Free Trader, March 14, 1885.

18. Ottawa: Old and New, p. 27.

19. Ibid., p. 30.

20. Ibid., p. 20.

21. No figures are given in the 1886 History of LaSalle County, op. cit., for the state senatorial election of 1848.

22. This was the Thirty-third Congress, ibid., p. 151.

23. Information kindly supplied by a member of the Reddick Mansion Association.

24. Ottawa Republican, February 4, 1854, and Ottawa: Old and New, p. 40.

25. Several sources maintain that Reddick served in both houses of the Illinois Legislature, but there seems to be no documentary evidence to support the assertion. The earliest source of this apparent error is Elmer Baldwin, History of LaSalle County, Illinois, 1877, p. 345.

26. Michael O'Byrne, History of LaSalle County, 3 vols., 1924, II, 266.

27. Ottawa Free Trader, Mar. 14, 1885

28. Ottawa Republican, Sept. 21, 1841, as quoted in Ottawa: Old and New.

29. Senate Journal, 1849, p. 271, as quoted in Transactions of the Illinois State Historical Society, 1904, pp. 427-28.

30. Edwin Erle Sparks, ed., "The Lincoln-Douglas Debates of 1858," Collections of the Illinois State Historical Library, III, 238.

31. Ibid., p. 239.

32. Finding List of the Reddick's Public Library of Ottawa, Illinois, 1896, p. v.

33. Dean M. Inman, "Professor Jonathan Baldwin Turner and the Granville Convention," Journal of the Illinois State Historical Society, XVII (April, 1924 to Jan., 1925), 148.

34. History of LaSalle County, 1886, I, 495.

35. "Hon. William Reddick, "op. cit., p. 294.

36. Obituary, Mar. 8, 1885, unidentified newspaper clipping.

37. "Hon. William Reddick," op. cit., p. 294; the firm is listed in the Illinois State Directory of 1854, p. 67.

38. "Hon. William Reddick," op. cit., p. 294.

39. Ibid.

40. The Past and Present of LaSalle County, Illinois, 1877, p. 379.

41. Ottawa Republican Times, Mar. 7, 1863; in Ottawa: Old and New, p. 63.

42. History of LaSalle County, 1886, I, 481-82; also The Past and Present of LaSalle County, Illinois, 1877, p. 283.

43. "Hon. William Reddick, op. cit., p. 294.

44. Ibid.

45. According to the Reddick Monument, Ottawa Avenue Cemetery.

46. The date of March 10, 1885, given for Reddick's death in Ottawa: Old and New and repeated by C. C. Tisler, Story of Ottawa, 1953, is erroneous; see the unidentified Chicago newspaper clipping at the Chicago Historical Society dated March 8: "The Hon. William Reddick. . .died at his residence this morning. . . .; and also the Press Release, dated Sept. 18, 1958, in manuscript at Reddick's Library.

47. This information kindly supplied by Robert Funk.

48. As quoted in Ottawa: Old and New.

PART TWO

## THE RESIDENCE OF WILLIAM REDDICK AND ITS ARCHITECTURAL SIGNIFICANCE

### The Reddick Mansion

It was in 1855 that William Reddick contracted with the architectural firm of Olmsted & Nicholson for a large residence to be built at Ottawa, Illinois. The contract, casually reported in the Annual Review of the Commerce, Railroads, and Manufacturers of Chicago for the Year 1855, reads: "Improvements Contracted For by Olmsted & Nicholson, Architects -- Brick and stone residence at Ottawa, Illinois, for Wm. Reddick, to cost $25,000."[1]

Reddick had purchased the property, lots 10 and 11 in block 56 of the States addition to Ottawa, on October 17, 1851.[2] It well may be that Reddick, flushed with his political successes as Sheriff and State Senator, and about to run in 1852 for Congress, looked forward to a prestigious residence commensurate with the offices to which he is said to have aspired: U.S. Representative, U.S. Senator, and Governor of Illinois. Yet even though thwarted in his attempts to fulfill these political ambitions, beginning with his try for Congress in 1852, Reddick evidently did not immediately give up all hope for ultimate success.

Thus in 1856 he contracted for the design and construction of a palatial residence on the corner of Lafayette and Columbus

in Ottawa. The house was probably begun in the spring of 1856 for by the late summer of that year the Ottawa Free Trader was able to report that "the residence of Mr. Reddick, just passing the first story, would attract attention in any eastern city. The stone work alone about it (*sic*) will cost $10 to $12,000, while the whole must cost sixty or seventy thousand dollars."[3] But in another mention of the commission in the Annual Review for 1856 the total cost was again given as $25,000: "Brick and Stone Residence at Ottawa for Wm. Reddick. Height 50 feet, 64 x 55 feet. $25,000.[4]

Writers on Ottawa have reported widely varying figures for the cost of the house: $17,500, over $40,000, $60,000, and $80,000.[5] It is likely, however, that the house did indeed cost in the neighborhood of $25,000, as reported in the Annual Review. That this was an impressive sum for a residence in 1855-56 is obvious at once from estimates given in the Annual Review's of 1854-56. A few examples will suffice: "A villa in the Italian style, South Chicago, for W.F. Myrick. One of the most superior structures of that style in the West; architects, Van Osdel & Olmsted. . .Cost $15,000."[6] "The 'Bishop's Palace,' as it is called,. . .is perhaps the finest and most princely residence in our city [Chicago] . It is the residence of Rt. Reverend Dr. O'Regan of this city [the Catholic Bishop of Chicago]. Cost $22,000. . .Van Osdel & Olmsted, architects." "At Michigan City, a first class Italian villa, $18,000. Van Osdel & Olmsted,"[7] "a house for George F. Rumsey, Esquire to be built on the corner of Huron and Rush Streets, to be three stories high, with tower,

in Italian style. Walls to be of brick, with cut stone trimmings Size 49 x 60 feet. Cost $23,000, by Burling and Backus, architects." Even county courthouses were costing less than the Reddick mansion: Boone County Courthouse, $10,000; Carroll County Courthouse, $22,000; La Porte, Indiana Courthouse, $20,000; Grundy County Courthouse, $20,000. Only the McHenry County Courthouse cost more, $36,000. Thus, even though the $25,000 estimated cost of Reddick's house may be low compared to the figures given by later writers, it was in fact one of the most expensive residences constructed in the Midwest before the Civil War.

Olmsted & Nicolson

Although William H. Olmsted and Peter A. Nicholson were prominent Midwestern architects with much substantial work during the boom years before the Panic of 1857, they remain obscure personalities today. Even Henry Ericsson, who seemed somehow to know something about most of the architects in Chicago during the 1850's, has only this to say about Nicholson: "Peter A. Nicholson, if lost to memory as an architect, is known for the 'Nicholson pavement' first laid in Chicago on Wells Street from Lake to South Water in November 1856."[8] Ericsson doesn't even mention Olmsted.

What we know of these architects must, therefore, be pieced together from city directories and obscure journals. Neither Olmsted or Nicholson was listed in the Chicago directories before the one of 1855 when both appear as partners at 16 Dearborn Street. Thus it is probable that each arrived in the city between June

1853, when information for the directory of 1853 was compiled, and June 1855, when data was taken for the next biennial directory. Olmsted must have arrived between July and December 1853 for in 1853 he was already the partner of Chicago's first professional architect, John M. Van Osdel, the firm being Van Osdel and Olmsted. Among the better known buildings by that firm are the elegant Lyonsville Congregational Church, still standing, begun in March 1854; the Governor's House at Springfield, Illinois, reported being finished in 1854; the Grundy County Courthouse at Morris, Illinois; and the old St. Joseph County Courthouse at South Bend, Indiana. All their buildings in Chicago perished in the fire of 1871.

In 1854, Olmsted left Van Osdel and joined Nicholson. Van Osdel's firm then became Van Osdel & Bauman. That Olmsted & Nicholson was formed in 1854, is also confirmed by the 1854 county records in Carroll County, Illinois, which refer to the firm as architects of the elegant courthouse at Mt. Carroll. Their role as architects of that courthouse is amplified somewhat in the Annual Review of the Commerce of Chicago for 1855 where, under "Improvements Contracted For," there is listed, "a brick court house for Carroll County, Illinois, to cost $20,000, Olmsted & Nicholson architects."[9] The Carroll County Courthouse is on the National Register of Historic Places and the Lyonsville Church has been nominated. Olmsted & Nicholson designed many other substantial residences, business buildings, and hotels, all of which are presently unidentified.[10]

Sometime in 1856, the architects went their separate ways,

with the Reddick commission going to Nicholson. Again each architect is listed in the Annual Review for 1856 with numerous substantial commissions.[11] It is probable that some of these were not carried out, first because of the Panic of 1857, and later because of the Civil War.

The general hiatus of building between 1856 and 1865 reduced the ranks of architects everywhere and so it was with both Nicholson and Olmsted. The latter was evidently not in Chicago during June, 1857, for he is not listed in the directory of that year. So far all attempts to discover what happened to him have failed. Nicholson formed a short-lived partnership with Theodore Wadskier in 1857, but it too was dissolved sometime in 1858. He remained in Chicago during most of the war, but left the city sometime between the directory of 1864 and the one of 1865. The only clue is contained in the Illinois State Gazateer and Business Directory for 1864-65, which lists Nicholson both in Chicago and Cairo.

Apparently Reddick's house was finished and occupied by Reddick when information for the LaSalle County Directory was gathered in June, 1858 for in the directory Reddick's home address is given as Lafayette cor Columbus.[12] Other reports indicate that the front steps of Reddick's house were used by persons watching the Lincoln-Douglas debate across the street in Washington Park on Saturday afternoon, August 21, 1858.[13] The same reports mention persons looking out of windows in the house

Original Arrangement of Reddick's Mansion

As the original plans are lost, it is not possible to be certain about the use of the rooms in the Reddick residence (see floor plans pp. 37-39).

Because of its position at the end of the hall, and its direct access from the basement which must have housed the kitchen, it is probable that the large room in the northeast corner was the dining room. The other superbly decorated rooms on the east side of the first floor were certainly the parlors. The three rooms opened into each other through archways that were closed with sliding doors. The main room on the west side, in being more secluded and having only a door of ordinary width connecting it with the room behind, was probably a library or reception room. At the rear of the house, immediately west of the central hall, was a servants' hall and stairs.

On the second floor there were four large rooms corresponding to the rooms below, and three smaller rooms. On the third floor there were five rooms with closets, presumably for servants but perhaps also guests.

The center hall was an elaborate spatial affair illuminated by a skylight. The skylight opened into a central hall on the third floor hall and from there its light radiated from floor to floor through an open well surrounded by elegant walnut railings.

When finished, the house had no mechanical systems as we know them today, except, perhaps, for gas lighting. The evidence of flues in the chimneys suggests that during the winter months stoves were used for heating the house, presumably removed in

the warmer months. Rooms on the third floor must always have been heated by such stoves. There were no bathrooms, of course, and no plumbing.

Three other substantial brick buildings, probably dating from the late 1860's or early 1870's,[14] also stood on the property (see site plan p. 35). One of them, still standing, was later a caretaker's house; its original purpose is unclear. The other two were a carriage house and a horse barn. There was also a frame house in which Reddick may have lived while his mansion was being built.

The Reddick Will

At his death in March 1885, Reddick left his residence and the lots on which it stood to the city as a public library.[15] In addition, he provided a substantial endowment, quoted at between $75,000 and $100,000 for its maintenance.[16] The lots form an L-shaped tract at the corner of Columbus and Lafayette running 200 feet north on Columbus and 152 feet west on Lafayette (see property map p. 33).

Reddick left to his adopted daughter, Elizabeth Funk Reddick, the L-shaped series of lots on the northeast corner of the block (see property map p. 33). These lots, sold by her descendants in 1891,[17] contained the carriage, horse barn, and frame dwelling which, in thus being separated from the rest of the property, were neglected and finally demolished sometime after 1943.[18]

The City of Ottawa was not to receive Reddick's gift until Reddick's will had been tested in the courts. In July, 1885,

Reddick's surviving brother, David, and many of Reddick's nephews and nieces, brought suit in circuit court against the City of Ottawa, the County of LaSalle, the Directors of the Library, Elizabeth Funk Reddick, and the attorneys who had drawn the will. In the meantime, the City of Ottawa had passed on April 7, 1885,[20] an ordinance establishing the library and the Mayor appointed a board of directors.[21] In November 1885, and January, 1886, deeds not previously entered in the County Recorder's books were recorded for most of Reddick's extensive real estate holdings including the land on which his residence stands.[22]

Although the court eventually ruled in favor of the defendants, one of them, Elizabeth Funk Reddick, did not live to see that day. She died February 22, 1887, aged 46, from pneumonia, brought on, it is said from the strain of the trial and from sitting in the drafty courtroom in mid-winter.[23] The Library Board took possession of the property in the autumn of 1887 and "for nearly a year the work of putting the building into shape for a library, and arranging and cataloguing books, was carried forward."[24] On September 19, 1888, the library at last opened to the public.[25]

The Reddick House and Washington Park

The Reddick house faces Washington Park, laid out by the Illinois and Michigan Canal Commission in 1831 when they added their States Addition to Ottawa. Of the important and substantial structures that face the park on its north, east, and south

sides, only Reddick's house was standing when Lincoln and Douglas met for the first of their famous debates.[26]

The Supreme Court Building was under construction at the time, ground having been broken in May, 1857.[27] Construction was suspended after reaching the second story for want of funds and did not resume until July 1859, in response to an appropriation of the legislature.[28] By April, 1860, the building, 50 x 90 feet and costing $29,600 was completely finished except for the wings which were added about 1870.[29] Reddick was one of five Ottawans appointed to a commission to supervise the erection of the court building.[30]

Christ Episcopal Church, begun in 1871, was probably under construction at the same time as the wings of the Supreme Court. The church, measuring 52 x 104 feet, was finished in January, 1872 at a cost of $14,150.[31] The First Congregational Church was built at the same time, being dedicated March 26, 1871.[32] The present county jail and sheriff's residence were built at a cost of about $29,500.[33] The last substantial structure built facing the park was the Masonic Temple constructed in 1910.[34] It replaced a frame schoolhouse.

Significance of the Reddick Mansion

Reddick's splended Italianate mansion, measuring 55 x 64 feet and costing about $25,000 when built in 1856-57, is thus the oldest and second most expensive (after the Appellate Court) building facing Washington Park.

The Reddick mansion is also unique in the annals of

architectural history in Illinois. Of the many Italianate residences built in Chicago before the Civil War, some of which may have been as splendid as Reddick's house, few, if any remain. Although residences in the Italianate style abound throughout the state, it is likely that most postdate the Civil War. But whether they do or not, there is no other Italianate residence in the state having the colorful contrasts of light stone and rich red brick of the Reddick mansion. Other Italianate residences approach the Reddick house in the ornateness of their brackets and, especially in buildings after 1870, in the sumptuousness of window moldings. But the Reddick house is unusual in being a highly elaborate Italianate mansion built at a time -- only a few years after the style became popular in America -- when simplicity still governed the style.

It is also unlikely that there is another pre-Civil War house in Illinois that can match, either in quality or complexity, the ornamental plaster cornices or centerpieces of the ceilings in the Reddick mansion. In fact, it is probable that no other Italianate house in Illinois even comes close in this respect. It is also unlikely that pre-Civil War fireplaces of such high quality exist in any other residence in Illinois except Reddick's.

Although the plan with a central hall flanked by spacious rooms on either side is fairly typical as Italianate residences go, certain aspects of it are not. The polygonal bays embracing the two story porch on the east front are unique in Illinois. The bay windows are also rare in houses of this period. The full

basement above grade is also unusual, perhaps even unique for Italianate houses, as no other in Illinois comes to mind. Closest perhaps is Magnolia Manor at Cairo of 1869-71, but even there the ground floor is partly below grade.

That the Reddick mansion is also an especially high quality design seems obvious enough. This fact is supported by the high cost of its construction and by the other excellent work done in Illinois and elsewhere by its now obscure architects. That the building should seem exceptional in so many respects to a professional architectural historian who for four years has been conducting a survey of architecture in Illinois, serves to underline the great importance of the Reddick mansion for the people of Ottawa and Illinois. Given these facts, there can be little question of the extremely high architectural significance of the Reddick mansion.

27.

NOTES

1. P. 62

2. The deed for lot 10 (see property map p. 33) was not recorded until Jan. 1886, Book 252, p. 19, County Recorders Office. The deed for Lot 11 seems never to have been recorded.

3. Aug. 16, 1856. The date is also confirmed by notations made in the 1920's by Jason F. Richardson Jr., an Ottawa architect who remodeled the Reddick Library, and had the original plans and specifications (now lost) in his possession. Richardson's notes are in the collection of the Library.

4. P. 15.

5. Obituary, unidentified Chicago newspaper, March 8, 1885: $60,000.00; LaSalle County History, 1886: "$60,000.00";

6. P. 66 Ottawa: Old and New: "Over $40,000.00";

7. P. 63 John Drury, "The Reddick House," Chicago Daily News, Nov. 13, 1942: "more than $40,000.00"; C. C. Tisler, The Story of Ottawa, 1953, p. 25: "an $80,000.00 mansion."

8. Henry Ericcson, Sixty Years a Builder, Chicago, 1924, p. 128.

9. P. 62.

10. For which see the Annual Review, 1855, pp. 55, 57, 61, 62.

11. Pp. 7, 9, 12, 14, 15.

12. LaSalle County Directory for 1858-59, p. 67. That information for the directory was compiled in May and June, just after commercial leases expired on May 1, is suggested by a notice in the Ottawa Republican of July 10, 1858, that an advance copy of the directory had just been received.

13. Information kindly supplied by Prof. McGinnis of Eastern Illinois University whose research was undertaken recently for a re-enactment of the Lincoln-Douglas debate at Ottawa.

14. It may be to one of these buildings that a writer for the Ottawa Republican referred when in the issue of July 4, 1869, he reported that "Reddick has improved the northeast corner of his residence lot."

Note there was no page 28 in original document

29.

15. Last Will and Testament of William Reddick, June 21, 1884.

16. Perhaps the most trustworthy estimate of the amount of the endowment is given in the Funding List of the Reddick's Public Library of 1911 where it is stated that Reddick "left his splendid home residence to be used as a library, and a permanent fund of about Seventy-Five Thousand Dollars for its maintenance, which amount under the economical management of its directors has grown to about Ninety Thousand Dollars."

17. The lots were sold March 26, 1871, by John and Mary A. Funk to Taylor Woodward, Book 287, p. 573, County Recorders Office.

18. They were standing when C. C. Tisler wrote about the residence in the Ottawa Daily Republican of Jan. 15, 1943.

19. Ottawa Free Trader, July 11, 1885.

20. Funding List, 1911.

21. George W. Watkin's, "William Reddick," pamphlet, n.d.

22. But not all of it. The deed for lot 11 does not seem to have been recorded at all.

23. Grave marker, Ottawa Avenue Cemetery; and information kindly supplied by Robert Funk.

24. Republican-Times 53rd Year Edition Dedicated to Ottawa, April, 1897, p. 20.

25. Ibid.

26. L. O. Leonard, "The William Reddick House," Rock Island Magazine, November, 1928, writes that the Lincoln-Douglas debate took place "just a few months after the home was completed." As Leonard gives no sources, one cannot be certain whether his statement, which is probably true, was guesswork or based on documentary evidence. He makes a number of other plausible statements that for the moment cannot be confirmed: "The woodwork throughout the house is solid walnut. . . .," "Double doors lead off this front room [s.e. corner] to the second parlor to the north. . . ." Leonard also seemed to know when the house was constructed for he says "it was built in 1857." On the other hand, he makes other statements that either are not, or cannot be true as for example: "It. . .cost more than $60,000." and "Just east of this fireplace [in the room in the s.e. corner] is a circular bay window [they are

rectangular and polygonal]. . . ." Thus it is difficult to know what to believe and what not to believe in his article.

27. Ottawa Republican, May 23, 1857.

28. The Ottawa Free Trader of Feb. 12, 1858, reported that the legislature had appropriated $14,000 to complete the building. Work was resumed in the summer of that year, Ottawa Free Trader, July 16, 1859.

29. Ottawa Free Trader, Apr. 14, 1860, reported the building finished. The total cost of $29,600 given by C. C. Tisler, The Story of Ottawa, 1953, p. 22, agrees closely with the amount appropriated: $16,000 in 1857 and $14,000 in 1859. According to the LaSalle City Directory of 1872, p. 181, the wings were a "recent addition."

30. Tisler, op. cit., p. 22.

31. The Past and Present of LaSalle County, Illinois, 1877, p. 292; Souvenir of the One Hundredth Anniversary of Christ Episcopal Church, Ottawa, Illinois.

32. Constance Fetzer, ed., "Washington Park Historic District," LaSalle County Historical Society, 1974.

33. Elmer Baldwin, History of LaSalle County, 1877, p. 440; and Ottawa: Old and New, p. 20.

34. Fetzer, op. cit.

A HISTORY

of

THE REDDICK MANSION ASSOCIATION

CONTENTS



ENCLOSURES: A Copy of The Feasibility Report
February and March, 1976, Issues
of OUTDOOR ILLINOIS
Architect's Original Specifications for Carpenters

FOREWORD

This is a saga of dedication. It is a story of determination. It is a record of volunteerism and service.

It is a representation of deep-seated belief that out of our past can come great good for the present. It is a reflection of the conviction that nothing is so old or out-moded as to be utterly useless and worthy only of destruction.

It is an expression of a staunchly-held opinion that much of our heritage is worth preserving, not only as an inspiration from days of less comfort in life that required greater effort and sacrifice for success, but also to serve us in different and modern ways in an ever-changing world.

This is the story of how the home of William Reddick, willed to the City of Ottawa for a public library, was saved from an unknown fate to become a meeting-place for community organizations and a home for community service agencies.

This is the story of The Reddick Mansion.

MANSION FACTS
GLEANED FROM THE CARPENTERS' SPECIFICATIONS

The stone in the building is Joliet limestone which was brought from Joliet by barge on the Illinois-Michigan Canal.

The brick was probably formed and kilned in the yard back of the house.

The marble came from Italy and was worked on site by artisans probably from Italy.

All wood in the house is soft white pine except for the walnut spindles and mahogany rail in the main stairs.

All woodwork in the main rooms was hang-grained to look like hard wood.

Outer walls and center or hall walls are brick and are about twelve inches thick.

Water from the gutters was stored in two cisterns; an old hand-operated cistern pump is still in the boiler room.

Water was pumped to a tank on the top floor and gravity-fed to the basins in the bedrooms through lead pipes.

The house was lighted by gas ceiling fixtures and wall fixtures. Ottawa had a gas works in 1848.

There were five fireplaces on the two main floors and five chimneys on the roof.

Parlor and chamber floors and areas around doors and windows were prepared for deadening with three inches of concrete; this also served to block passage of rats and other vermin.

By description of molding, the southeast room on the ground floor was a dining-room; the main dining-room was in the northeast corner of the first floor.

There was a bell system to the main rooms, but no remaining evidence has been located.

There were speaking tubes from the kitchen to the main rooms, but they have not been found.

There was a skylight in the roof that admitted light down the open main stairway and through all levels down to the basement.

There was a back or servants' stairway that started in the back hall and went up to the top floor.

THE REDDICK MANSION ASSOCIATION

How the Building Was Preserved and Restored for Use

As the years went by during which the Reddick Mansion served as the Reddick Library, the expansion of library offerings and their use began to tax the amount of space available in the building. Eventually, after long discussion, the library board concluded that the building could no longer be used for that purpose, and a new structure was started about three blocks to the west of the mansion. This was in 1974, and the question that loomed large in the thoughts of many Ottawa citizens was "What is going to happen to the Reddick Mansion?"

Certain organizations in the community addressed themselves to the question, notably the LaSalle County Historical Society and the Zonta Club. On March 3, 1974, the LaSalle County Historical Society held an open meeting at which several recommendations were agreed upon, and it was at an open meeting called by the Zonta Club on July 19 that the determination was made to create a special committee to investigate the matter and find a solution.

A "Save Reddick's Committee The "Save Reddick's Committee" was organized on June 25, 1974, at a meeting held in the basement of Christ Episcopal Church. Representatives of all organizations in the city had been invited to attend, and the original membership of the committee was made up of those representatives. At the meeting it was decided to expand the committee in order to establish contact with more organizations to involve more people. Mrs. Constance Fetzer was se;ected temporary chairman and Mrs. Marjorie Moulton as secretary.

Those people who composed the original committee were well aware of the monumental task before them. They were determined to go about it carefully in order to make as few mistakes as possible. For their direction, at an early meeting they adopted a Statement of Purpose.

## STATEMENT OF PURPOSE

We, a group of concerned citizens of Ottawa, representing, individually and collectively, a spectrum of our community interested in the preservation of the historic structure now known as Reddick's Library, propose to address ourselves to the following concerns: the acquisition, restoration, and adaptive public use of the property compatible with the community's cultural needs.

The Committee will direct its efforts toward determining possible methods of acquisition and appropriate ownership of the property; the specific requirements to preserve and restore the building; and appropriate public uses for the building as a community cultural center.

All of this must be accomplished with a minimum of economic burden to the citizens of Ottawa.

- From the Reddick Mansion Association Files

Formation of Reddick Mansion Association It soon became clear also that a more solid organization than just a committee was needed. Accordingly, steps were taken to draw up a constitution and by-laws that could in due time be incorporated by the State of Illinois as a not-for-profit organization. It was decided that the name of the organization was to be The Reddick Mansion Association.

The incorporation meeting was held om October 9, 1974. Constance Fetzer was elected president; Mike Reagan, vice-president; Marjorie Moulton, secretary; and Jane Stansell, treasurer. Aboard of directors of twenty-one members was elected, divided into three groups to serve one, two, and three years respectively.

The Feasibility Report The newlt-created association was certain of one thing: it wanted to prevent the destruction of the building and to keep it from being diverted to private use. But for what purpose should it be preserved? The Ottawa Silica Foundation had early, even before the association was officially formed, agreed to help underwrite a feasibility study for the mansion and had submitted an application to The National Trust for Historic Presernation for a matching grant for that purpose. The grant was quickly awarded, and work started on the study.

The Feasibility Report, prepared by Paul E. Sprague and William B. Dring of Chicago, was presented in its final form to the Mansion Association at its regular board meeting on January 22, 1975, and was officially adopted as the "bible" for the organization's work at its February meeting. It is a beautiful report, containing an in-depth study of the life and times of William Reddick, the architecture of the mansion, and recommendations for the rehabilitation and use of the structure. On the latter, the report said in general that

1. The mansion should be owned by the city and leased to the association.
2. Part of the building should be made available to the public for meetings and other activities.
3. The remainder of the building should be leased as office space to public non-profit organizations.
4. The association should develop a long-range plan for restoration, maintenance, and operation of the property.
5. The organization should raise funds and rehabilitate the building.

All that appeared to be a big order. While city ownership would be a happy solution, it seemed a very high hurdle to clear. Many people thought the city already owned the building, but its actual ownership rested legally with the Library Board of Ottawa, to which it had been deeded directly as a result of Mr. Reddick's will. There was also a question as to whether or not the Library Board could legally sell the mansion for any purpose other than a library. Eventually the Chicago Title and Trust Company announced that it would guarantee the title, which meant that the Library Board was free to go ahead and sell the mansion.

Who Will Buy? The Library Board had made it known that its selling price for the mansion was $100,000, the amount it needed to complete payment for its new library. Rumors that the building was to be sold to private interests only applied more pressure on the association to raise the money from some other source so that the mansion might remain under public control.

But where to get the money? It seemed entirely unlikely that a drive to raise the funds by public subscription could be successful. So the Executive Committee approached Mayor James Thomas and the Ottawa City Council to see if there was any possibility that the city would look with favor upon finding and spending $100,000 to preserve the historic mansion for the community. Since the city felt an obligation to the library, it indicated tentative interest in such a move, and eventually committed itself to turning the money over to the Library Board in return for the deed to the property.

A Suit Is Filed But, in the meantime, another hurdle had been raised. A suit had been filed on behalf of the heirs of Elizabeth Funk Reddick asking that the property be turned over to them, now that it was no longer used as a library as specified in the will of William Reddick. This litigation meant that no disposition of the property could be made until a court decision was reached and the case disposed of in some manner.

Eventually the plea of the heirs was denied, but they then appealed that decision to the Illinois Appellate Court. Late in 1976 that court upheld the decision of the lower court that the heirs of William Reddick did not have a valid claim to the mansion property. However, there was the possibility that this action might be appealed to the Illinois Supreme Court, so matters were still very much in limbo.

Events Force Action But long before matters had reached this point, the association had been forced into action. The library moved out of the mansion and into its new quarters in February of 1975. A building that is left

unoccupied without use or maintenance deteriorates rapidly, especially when it becomes a target for vandalism. This was happening to the mansion, and the association soon realized that something had to be done, even if it was on an interim basis only.

Accordingly, the Reddick Mansion Association forwarded to the Mayor and the City Council a letter dated June 25, 1975, which outlined a series of proposals, the basic one being that the Library Board should grant a short-term lease to the association for a period of at least as long as the future of the property remained in the courts. On July 9, 1975, Mrs. Fetzer, in her position as association president, appeared before a joint meeting of the City Council and the Library Board to discuss the proposals in detail. She pointed out the need to put the building to immediate use to help discourage vandalism. She also made it clear that nothing could be done about securing tenants for the building because of the uncertainty as to its future. Furthermore, the association could not make any plans or solicit any funds because it had at that time no legal standing or authority to do any of these things.

As a result of this meeting, an interim lease agreement was worked out with the City and the Library Board which was approved by the board of the Mansion Association at a special meeting on July 12, 1975. Under its terms the City agreed to provide custodian service and to pay the bills for utilities. Major rents were to be earmarked for the City but held in escrow until the court litigation was ended. Funds realized from the use of the ground floor by various organizations were to be kept by the association for repairs and rehabilitation.

Rehabilitation Begins The association immediately went into action. Much volunteer work helped clean the rooms, wash walls, and paint. The Painters' Union donated two full Saturdays to paint most of the ground floor. When it was discovered that each of the windows had magnificent shutters that folded into a recess in the wall on each side of a window and were then covered with a door that closed over them but that these shutters had been nailed and painted into the wall for years, the long process of opening the doors and removing and cleaning and repairing the shutters began. As soon as possible, the association announced that the ground floor was open for use by community organizations on a reservation basis. The response was most gratifying. Since many that were interested could not afford much in the way of rental, it was decided to begin by asking each user to make a voluntary contribution to the Mansion Association. The first group to use the ground floor was the Junior Woman's Club on September 9, 1975. Membership fees had been established, and the association began to have money with which to work.

Space Is Rented Even though the matter of ownership of the building was still in the courts, the interim lease to the Mansion Association and the promise that a permanent lease would be given whenever the title for the property could legally pass from the Library Board to the City appeared to give assurance that the building would continue to be available for public use. The association then let it be known that it would be interested in renting office space on the first and second floors (the two above the ground floor. The Ottawa United Fund very quickly asked for space, and two rooms on the second floor, east side, rear, were hurriedly prepared. A wall that had been taken out between the two rooms was restored, and both rooms were painted. The United Fund moved in September 1, 1975, and on November 7 the Ottawa Area Chamber of Commerce and Industry occupied the three rooms on the west side of the first floor, which had been prepared for them quickly by installing a wall and painting and carpeting the entire area. Late in 1976 the LaSalle County Regional Planning Commission moved into two rooms on the west side of the second floor, and early in 1977 Tom Corcoran, who had been elected U. S. Representative from this district, occupied two rooms on the south side of the second floor. Later, when the Regional Planning Commission was disbanded, most of its space was taken over by the United Fund, with the north portion of the northwest room being partitioned off to make a work-room for the Chamber of Commerce when its work-room at the north end of the hall on the first floor was opened to become a part of the hall when it was painted and carpeted. The Campfire Girls then rented the northeast room on the second floor vacated by the United Fund.

Local Funding The work of rehabilitation and restoration created a constant demand for money. The city had agreed to cover maintenance of the building, but it was up to the Reddick Mansion Association to produce the funds necessary for restoring the building and making it ready for use. A Local Funding committee was created, and quite naturally it began its work by soliciting memberships in the association. Community response has been good in this respect, indication good general support for the project.

In the fall of 1975 Hayna Sine, a commercial artist who is the son of Chief Walks-With-the-Wind, began work on a mural drawing of the fact of the building on the north wall of the southwest room on the ground floor. On it the bricks and stones were outlined to be used in connection with a Restore-a-Brick program inaugurated in August of that year. Under this program a five dollar contribution would "restore" one brick in the mansion, with larger contributions "restoring" stones, steps, and windows. As these gifts came in, the names of the contributors were put in appropriate places on the mural in accordance with the size of the contribution.

Other local fund raising projects include the Reddick Mansion Ball which was first held in September of 1977 and has been repeated annually since then. Each year the ball has brought in at least

$2500 for the work of the association, in addition to providing those attending a delightful evening.

In addition to these projects, the committee has sponsored many other events, working in conjunction with various local organizations. These include concerts, recitals, coffees, carnivals, and the like. By the time of the annual meeting held in October, 1978, it was reported that more than $55,000 had been raised locally for the work of the association. The city has been very good about maintaining the building and the premises, the latest work being the restoration in 1979 of the brick wall running north from the Caretaker's House and tuckpointing that to the south.

Other Funding The Grants and Bequests committee has pursued many avenues in its attempt to secure funds. A paperweight made of glass and containing a picture of the mansion has been distributed to all local attorneys and funeral directors in the expectation that it will serve as a reminder when clients are looking for worthy local projects to which to bequeath funds. Also, it has surveyed a list of philanthropic foundations in Illinois and the surrounding area, and letters have been written in an attempt to interest them in the mansion. To date the results have not been overwhelming.

However, at the board meeting on August 12, 1976, the president announced that the association had received a matching grant from the National Register program through the Illinois Department of Conservation in the amount of $25,000. This meant the association had three years in which to raise a like sum to match the grant. Later, another matching grant for $10,000 was received from the National Register. These grants have helped greatly in the huge job of restoration and rehabilitation.

Restoration and Rehabilitation It is not the purpose here to set forth a detailed account of everything done in the way of restoration, but a general report certainly is in order. Attention was focused first on the ground floor, to make it ready for community use. The walls were washed and painted; the shutters were opened; and new baseboard was installed. In 1976 two custodians from Ottawa High School volunteered to scrub from the tile on the ground floor the dirt and wax that had accumulated over many years. Still later, special coffees to raise money turned the northwest room into a fine kitchen, and a contribution from Mrs. Harry Olmstead took care of refurbishing the ladies' powder room.

As reported earlier, a quick job was called for to make quarters on the second floor ready for occupancy by the Ottawa United Fund in September, 1975. This was followed immediately by preparation of the rooms on the west side of

the first floor for use by the Ottawa Area Chamber of Commerce and Industry in November. Shortly after that, Prof. Ed Syrek of Northern Illinois University was engaged to restore as a mural a portion of the decoration that apparently had run completely around the hall on the first floor. This section had been uncovered when bookcases built along the east wall had been removed When the restoration was complete, it was covered with tempered glass through the courtesy of the Libbey Owens Ford Glass Company.

All the wood on the outside of th e building was painted in the summer of 1976. By that time the balconies and balustrades had been repaired or restored.

In 1975 and '76 the wall between the hall and the southeast room on the first floor was replaced. It had been removed to make way for the check-out counter in the library A fireplace and chimney on the east side of that wall had also been removed, and proper restoration called for their replacement. Fortunatelt, most of the pieces of the fireplace had been located on the third floor, but the mantel and hearth were missing. After much searching, a firm was located near Chicago which still had artisans who could custom-make the missing pieces to fit. Eventually the fireplace was replaced in a dummy chimney so the appearance of the room would be just as it was in the time of William Reddick.

Following preparation of the Feasibility Report, Dr. Paul E. Sprague, one of its authors, was hired by the association as its consultant. It was felt that the help of a man experienced in th e field of restoration would be of considerable assistance to the association. When Dr. Sprague resigned in the summer of 1976, he was replaced by Ron Nelson, who had been serving in a similar capacity at Bishop Hill.

The library had removed walls to make a very large room all the way across the south side of the second floor. In preparation for tenants, those walls were replaced and the entire area was painted. This meant that the bulk of the work remaining to put the entire building into usable condition was concentrated in the hall and the east three rooms on the first floor.

First, the entryway had to be restored. The original vestibule had been removed by the library, and now the wall was reinstalled. The work was done by John Kerste and his staff, with his brother Clyde creating doors and woodwork to match the original, including the front doors which were installed after the aluminum entry cubicle had been removed. Then the walls and woodwork were painted by Willcox Paint, even to the point of replacing the original graining on the doors, except for the sliding doors which were brought out of the walls where they had been boarded in during the time the mansion was used as a library. Then new carpeting was laid in the hall and up the stairway, whose railing had been restored by removing all the varnish and then refinishing. As soon as possible, carpet is to be laid in the three rooms on the east and period fixtures installed in the ceilings in place of the florescent fixtures which were removed.

Thus, by the spring if 1980, the major items of restoration and rehabilitation in the Reddick Mansion had been accomplished. From here on maintenance would be the principal obligation. But the Caretaker's House remains. It is in very bad condition, both inside and out, and will require a large sum of money to restore. Some outside work is needed promptly simply to stabilize the structure and keep it from further deterioration. This work will be undertaken just as quickly as funds are forthcoming.

Association Officers At the Annual Meeting held on October 9, 1975, the following officers were elected: President, Constance Fetzer; Vice-President, Paul Martin; Secretary, Marjorie Moulton; and Treasurer, Jane Stansell. In 1976 LaClair Perkins became president; R. A. McClevey, vice-president; Constance Fetzer, secretary; and James Stansell, treasurer. A year later, all 1976 officers were reelected to a second term.

At the Annual Meeting on October 12, 1978, R. A. McClevey became president; Ernest Pool, vice-president; Peggy McGrath was elected secretary and Constance Fetzer, treasurer. At the Annual Meeting in October, 1979, the president and vice-president were reelected; Constance Fetzer became secretary and Patty Godfrey, treasurer. These officers continue in office as this report is being prepared.

A Permanent Lease At the 1978 Annual Meeting it was announced that a permanent lease had been signed with the city giving the Reddick Mansion Association authority to manage the mansion until November 30, 2003, so the future seems reasonably secure. Under the terms of the lease, all rents are to go to the association, which assumes all utility bills. In a fine gesture of cooperation, the city turned over to the association all rents collected to date which had been held in escrow.

Mention should be made here that Ken Brookman has been mansion custodian from the time the city agreed to purchase the building. Ken has shown an intense interest in the structure and in its restoration and has taken pictures of the many steps in that process. Some of Ken's pictures are included with this report as an integral part of the history of the association's work.

But the work of the association is far from finished. However, when one looks back over what has been accomplished in five years time since the association came into existence, one cannot help but be amazed at what has been done and enormously grateful to all who have volunteered time and effort and money to preserve the Reddick Mansion. It is to be hoped that this fine community spirit and support will continue and that the mansion, now with a new lease on life, may look forward to many, many years of service to the community.

# Site Description

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# Site Description

**Original Reddick Site Planning**

- The Reddick Mansion is positioned in the block immediately north of Washington Park (a.k.a. Washington Square).
- **Photo Site – 1** shows a map of Ottawa from 1876 as illustrated in the Warner & Beers Union Atlas that helps position the location of the Mansion within the community.
- RMA member Larry Swanson provided us with a hand-sketched diagram relating the information he has gathered about the Reddick Mansion site c.1857. **Photo Site – 1a** shows the Reddick Mansion in the southeast corner of Block 56 (East ½) on lot 11 with the Caretaker's House at the north end of lot 12 and open land behind the mansion (lot 10).
    - What appears to be a residence with addition and ancillary structure are positioned on lot 7 immediately north of the Mansion and are recorded as being the home of John A. Shuler per the 1858 City Directory (he had moved by 1866/67 per a later directory listing).
    - Another residential structure is positioned on lot 6, which thought to have been the boarding house of Mrs. Caroline Murray.
    - A third structure is positioned in the northeast corner of Block 56 (East ½) on lot 1. It was the home of Benjamin Conley (or Connelly) per both the 1858 and 1866/67 City Directories.
    - Finally, an ancillary structure (purpose and owner unknown at this time) was positioned on lot 2 c.1857.
- The information illustrated in Photo Site 1a indicates that the Reddick estate contained a number of existing buildings c.1857 that were demolished over the next thirty years and replaced with other Reddick-built structures.
- The next available view of the block on which the Reddick Mansion sits is illustrated in **Photo Site – 2**, which is a detail view from the 1883 Sanborn Fire Insurance Map. The only indication of buildings on the site is in writing, stating that there were two brick dwellings and two frame dwellings.
- The next two available illustrations showing the configuration of the Reddick Estate on Block 56 were available in the 1883 and 1888 Sanborn Fire Insurance Map.
    - Unfortunately only the western half of the Reddick site was shown in the 1883 map (thereby cropping off the Mansion and frame dwelling north of it) (**Photo Site – 3**).
    - Fortunately in 1888 the detail view of Block 56 shows all the buildings on the Reddick site.
    - A present-day (2013) Google aerial map was obtained by the author via the Internet. The existing (2013) configuration of buildings on the Reddick property and the rest of the city block were traced over the aerial map for reference **(Photo Site – 4**).
    - For comparison we have superimposed a line drawing of the present day building layout over the 1888 map. (**Photo Site – 5**).

- Finally, the last available period Sanborn Insurance Map dates from 1907, as shown in **Photo Site – 6**. The Reddick property remains the same, but the neighboring buildings on the west side of Block 56 have changed to some degree.
    - Interestingly, the building at the northwest corner of the Reddick half of Block 56 is shown as being masonry in 1883 but wood frame in 1888.
- As we understand it, the configuration of the Reddick property during the latter part of the Reddick Period of Significance (1856 – 1887) was this:
    - The Reddick Mansion was prominently positioned toward the southeast corner of the site, near the intersection of W. Lafayette and Columbus Streets (**Photo Site – 7**).
    - A wood frame residential structure was positioned at the northeast corner of the site. **Photo Site – 8** best represents this building. (Note that this building replaced pre-existing wood frame structures that were described as having been on the site c.1857).
    - A two-story Italianate-style brick building, square in plan with a wood frame belvedere atop the roof, was positioned in the northwest corner of the Reddick site (**Photo Site – 9**). This building is thought to have served as the Horse Barn. However, historic sources are conflicting on this topic.[1]
    - A larger two-story Italianate style brick building with belvedere was positioned on the west side of the site. We believe it was the Carriage House that was later converted in to a residence by the Funks. (**Photo Site – 10**).
    - A two-story Italianate-style brick building on a raised basement with belvedere was located just west of the Mansion (**Photo Site – 11**). Its original use is unknown but because it served as a Caretaker's House for much of the 20th century, it is referred to by that name now.[2] We believe second floor windows were added in 1914 when the building was converted for residential use (**Photo Site – 21**).
    - A brick wall seems to have existed on the west side of the site (at least north of the present-day Caretaker's House) since at least 1883.
    - A cast-iron fence sits upon a short limestone retaining wall on the south and west sides of the present property.
        - The original cast iron fence and stone wall were installed c. 1865.[3] Prior to that time a wood fence lined the property (**Photo Site – 7**).
        - The original fence was removed in the early part of the 20th century but was re-fabricated by the Reddick Mansion Association in the 1970s (discussed below).

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[1] A 1943 article in the *Daily Republican Times* of Jan. 15, 1943 stated: "North of the custodian's home (Caretaker's House) is the former Reddick horse barn and beyond that, on Washington St. is the old Reddick carriage house." Apparently in 1943 these buildings were still standing.

[2] This building currently serves the Ottawa Visitor's Center, but served as a Caretaker's House during the Library period, and has been referred to alternatively as a "smokehouse," as an "icehouse" in the Library Minutes, and as a "laundry and tool shed" in an interview with Sylvia Funk. The bulding's original use is not known, as it underwent a considerable rehabilitation in the 1920s when converted for a Caretaker's residence.

[3] This date was given in a 1992 Daily Times article (Jan 13, 1992). We found no other reference to the fence being installed in 1865, but we do know that it was not there originally.


**Photo Site – 1**: Plat Map of Ottawa, 1876. (Map of Ottawa, Illinois. Union Atlas Co., Warner & Beers, Proprietors. Lakeside Building Cor: of Clark & Adams Sts. Chicago. 1876).

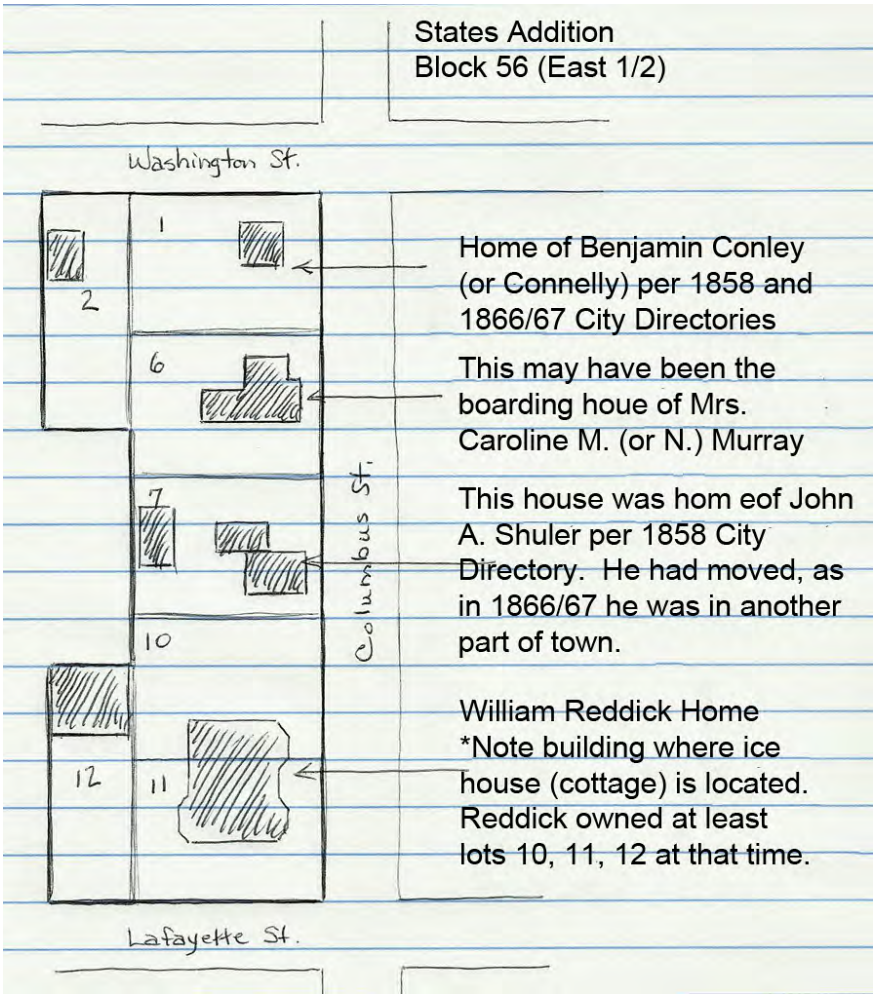


**Photo Site – 1a**: Diagram provided by Larry Swanson, as taken from the Map of the City of Ottawa, Il, 1857 by Doran and Maher. (Note that buildings may not be exact in size or shape)

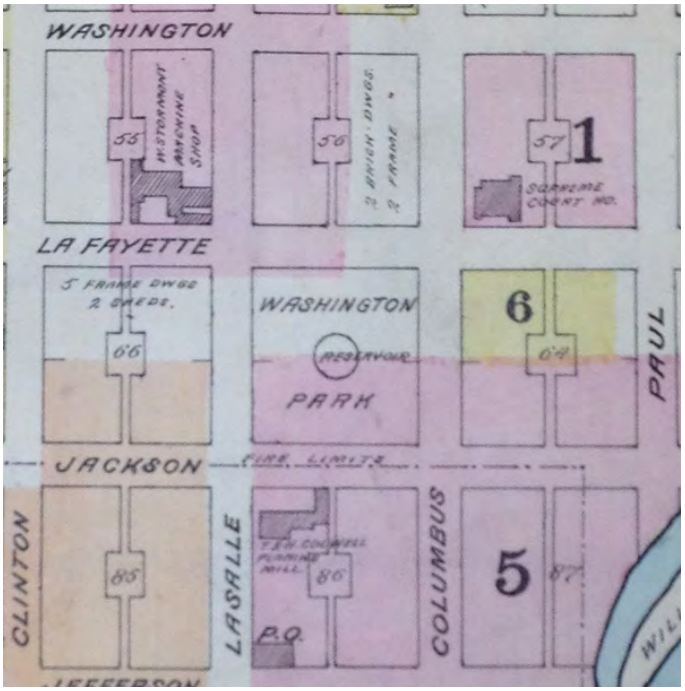


**Photo Site – 2**: Detail view from 1883 of the 9-block area surrounding Washington Park, including the Reddick Mansion site, center top.
*(1883 Sanborn Fire Insurance Maps of Ottawa, La Salle County, Illinois.)*


**Photo Site – 3**: Enlarged view of Block 56 from the
*1883 Sanborn Fire Insurance Maps of Ottawa, La Salle County, Illinois*.
Unfortunately only the west half of the Reddick site was documented.


**Photo Site – 4**: 2013 aerial view from Google Maps (obtained from Internet by author) with outlines of existing buildings overlaid.

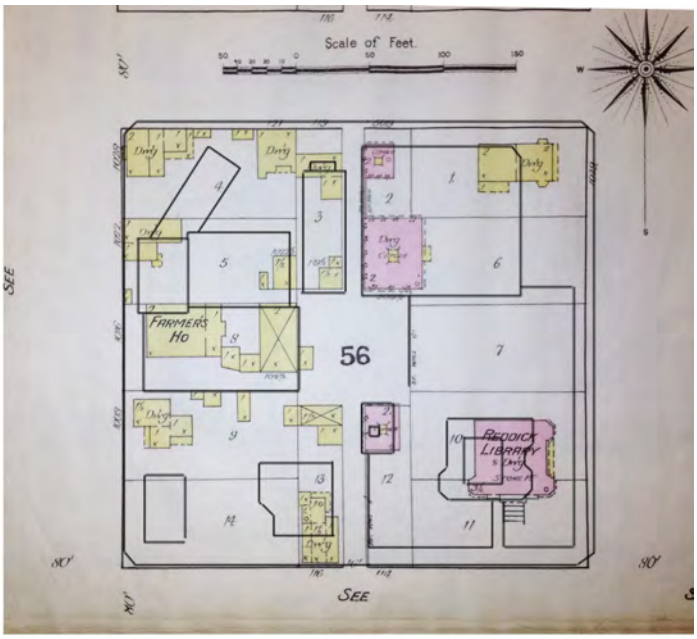


**Photo Site – 5**: View of Block 57 from the *1888 Sanborn Fire Insurance Maps of Ottawa, La Salle County, Illinois* showing placement of all the buildings on the Reddick site.

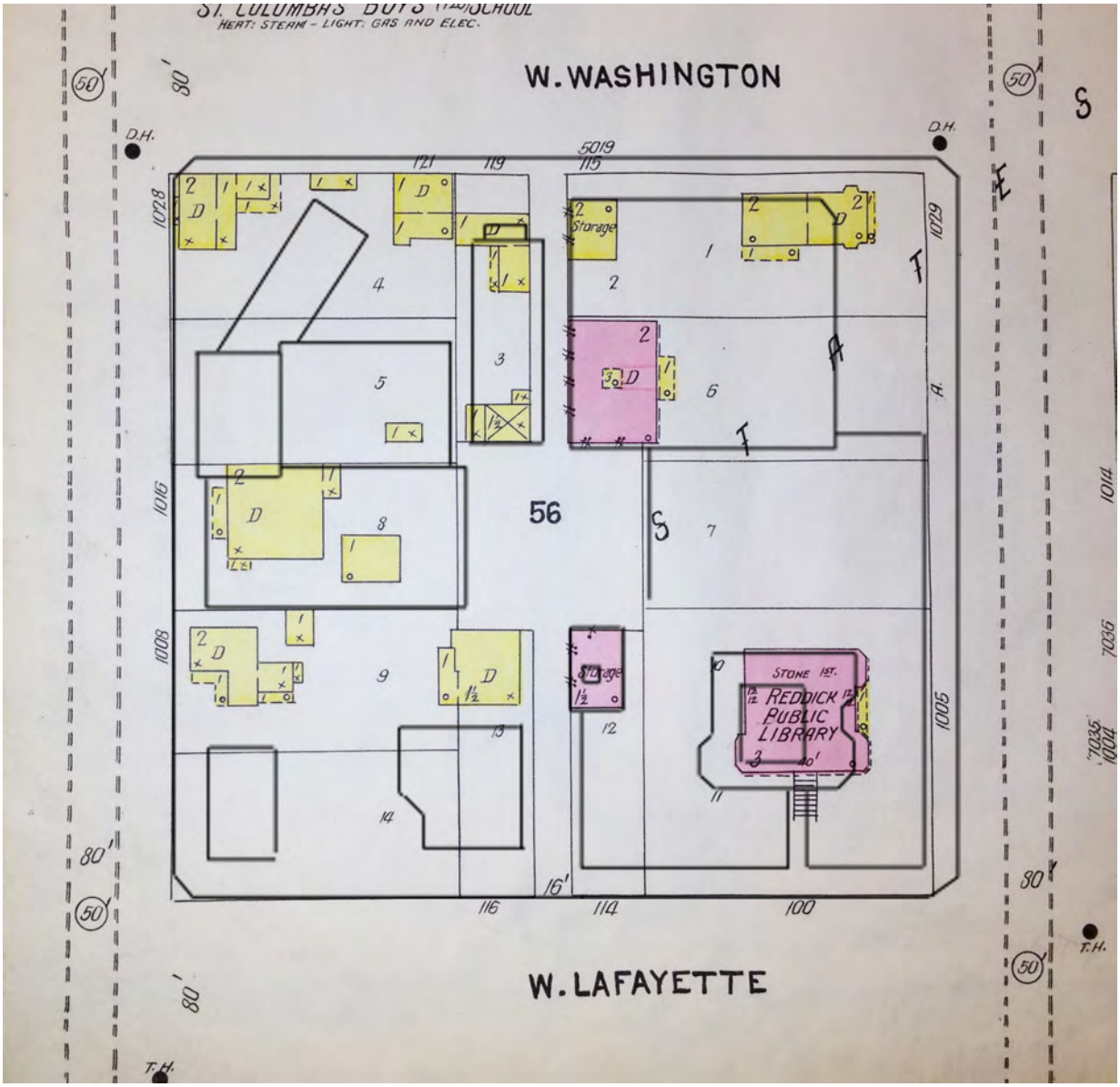


**Photo Site – 6**: View from the *1907 Sanborn Fire Insurance Maps of Ottawa, La Salle County, Illinois*. Buildings were color coded on Sanborn Maps based upon their flammability (brick buildings were shown in pink; wood frame buildings in yellow).

**Photo Site – 7**: Historic view of Reddick Mansion, taken by Ottawa photographer Bowman. This photo dates from pre-1865 (when the cast iron fence was installed).

**Photo Site – 8**: View of the wood frame residence once positioned north of the Reddick Mansion (From the Funk family collection).

**Photo Site – 9**: Pre-1943 view of the Reddick Horse Barn. This photo shows the Wood Frame House to the right and the Carriage House to its left. (Reddick Library photo collection).

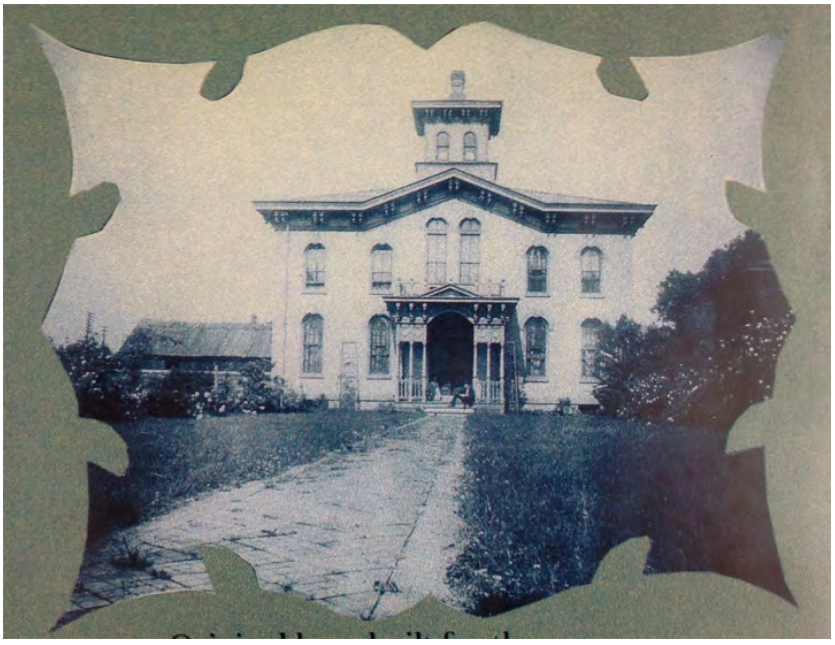

**Photo Site – 10**: View of the Carriage House, later converted to a residence by the Funk family. (From the Funk family collection)

**Wood Frame Residence**

- The earliest view of a Wood Frame House on the Reddick site is depicted in **Photo Site – 12**.[4] We date this photo to pre-1865 because the fence in the foreground is still wood. The cast iron fence was installed c. 1865. Note the building's Carpenter Gothic style, with wood scallops and a short parapet located at the eave.
    - The residence depicted is that of John Shuler, which was demolished post-1865 by William Reddick.
    - Reddick replaced the earlier wood frame house with the Italianate style Wood Frame House depicted in the post-1865 photograph of the east side of the site (**Photo Site – 13**). The house is also depicted in **Photos – Site 8 and Site 9**.
        - It is thought that Reddick built the house c. 1870 for his friend Judge Lockwood,[5] and that Reddick retained ownership of the building. At the time before his death a Mrs. Meigs lived in it and paid rent.[6]
    - It is generally understood that the c.1870s Wood Frame House is the house that William Reddick intended his adopted daughter Elizabeth and her maid Mary O'Donnell to live in after his death, once the main house was converted in to a library.
    - After Elizabeth Burrier Funk Reddick's untimely death in 1887 her natural brother John Funk inherited her belongings and retrofitted the Carriage House as a home for his family of seven.
        - One of John Funk's daughters was Sylvia Funk, who was interviewed in a newspaper article from September 28, 1973, entitled: "Sylvia Funk, 90, Recalls Some of Ottawa's Rich History."
    - The Wood Frame House existed in 1943 when it was pictured in a newspaper article about the site.
    - The Wood Frame House was demolished in the mid-20th century. The date and year are unknown.
    - A one-story brick service garage and gas station owned by Jim Boe is now situated over the footprints of the Wood Frame House and adjacent Carriage House. This mid-20th-century building previously served as a car dealership.

[4] Some say that the Reddick family lived here before their house was constructed. The present-day thought is that this was not the case, but it has not been confirmed

[5] … Reddick putting up a beautiful residence near his well known place at the north-east corner of Washington Square. Rumor says Arthur Lockwood will occupy the new dwelling… (Ottaw Free Trader Sat 23 April, 1870)

[6] Discussion with Diane Sanders, RMA President, 8.4.13.

**Photo Site – 11**: Early view of the Caretaker's House (note there is no entry porch) before the second story windows were installed. The Carriage house is beyond (From a larger panoramic photograph, RMA collection).

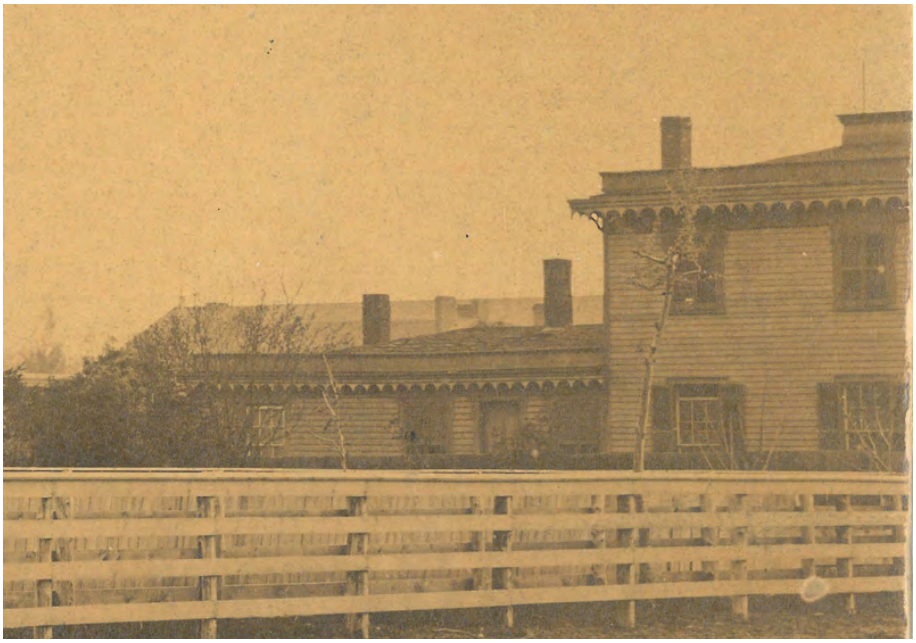

**Photo Site – 12**: View of the Shuler house positioned north of the Mansion (Pre-1865). (From the RMA photo collection).

**Photo Site – 13**: View of the east side of the site showing the Mansion (left) and Reddick-built Wood Frame House (right) post-1870 (when the house was thought to have been constructed). (Reddick Library collection)

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**Horse Barn**

- Little is known about the Horse Barn (**Photo Site – 9**).
    - From the Inventory of Personal Property, William Reddick Estate Probate, 1885, we know that the following livestock were owned (the great number of animals seems to indicate that some were housed on a farm separate from the Mansion site):
        - 50 horses, mares or colts
        - 85 cows, heifers or calfs
        - 30 Steer
        - 3 bulls
        - 16 hogs
        - 150 chickens
        - 13 geese
        - 30 ducks
        - 8 turkey
    - Also from the inventory of personal property, only the following vehicles were listed:
        - 2 buggies
        - 1 double carriage
        - 4 wagons

**Carriage House**

- Little is known about the Carriage House (**Photo Site – 10**).
  - In her 1973 interview, Sylvia Funk related that the Elizabeth Burrier Funk Reddick furniture was used in the Carriage House, which was remodeled into a home in which she was raised. Her father was John Funk, the natural brother of Elizabeth B.F. Reddick.
  - The Carriage House existed in 1943 when it was pictured in a newspaper article about the site.
  - The Carriage House was demolished in the mid-20th century. The date and year are unknown.
  - The Carriage House and the Wood Frame House were replaced with a one-story brick garage and gas station in the mid-20th century.

**Brick Wall at Northwest Corner of Site**

- A brick wall extends southward from the northwest corner of the site, and terminates at an arched opening at the Caretaker's Cottage. The wall has a center opening that leads to a parking area (**Photo Site – 14 and 15**).
  - A brick wall seems to have existed on the west side of the site (at least north of the present-day Caretaker's House) since at least 1883 (when it appears on the Sanborn Maps)
- Another brick wall continues south from the Caretaker's House and terminates at Lafayette Street.
  - We do not know if either wall is original to the site, but both walls appear in the 1888 Sanborn map.
  - The library minutes indicate that in 1911 the janitor was to repair the wall along the alley.
  - The wall seems to have fallen in to disrepair a number of times throughout its history.
    - A photograph from the 1970s shows the wall in dilapidated condition (**Photo Site – 16**).
    - That portion of the wall was reconstructed with brick over a concrete masonry unit (CMU) backup (**Photo Site – 17**). The brick utilized at the Reddick site is a very soft older brick. It is much softer than CMU. With differential expansion and contraction natural to building materials, the softer material will sacrifice itself for the harder. This is exhibited at the top of the wall where a brick course was set between the CMU and the limestone capstones (**Photo Site – 19**).
    - The wall north of the center opening is in poor but not irreparable condition (**Photo Site – 18**).
- Condition
  - The wall is in generally poor condition. The southern portion of the wall is a brick veneer over a concrete block wall. A stone coping covers the wall, but joints in the coping are open, allowing water to enter the wall. The stone is generally worn.

- Recommendation
  - Repoint the entire wall utilizing soft Type N mortar to match the original in color, texture and profile. Reset brick as required. Reconstruct the portion of the wall currently backed-up with CMU with brick; the differential expansion between the brick and the CMU will cause continued deterioration. Remove and re-set stone cap over through-wall flashing.
  - The wall should not receive a water repellent, which has the potential to allow moisture to become trapped within the wall, which would cause further irreparable damage.
  - Salvage brick from the backside of the wall for use on the Museum side; utilize recycled common brick from the early 20th century on the backside.

**Photo Site – 14**: Brick wall to the north of the Caretaker's House, as depicted in a c. 1970s photograph (Brookman collection). Note the brick walkway in the foreground. (RMA collection)

**Photo Site - 15**: Current view of the Brick Wall arch adjacent to the Caretaker's House.


**Photo Site - 16**: This c.1970s photograph shows the brick fence in great disrepair. (RMA collection)


**Photo Site - 17**: Current view of the north side of the fence showing how it was reconstructed using concrete masonry units

**Photo Site-18**: Current view of the west side of the wall, toward the north end of the site. There are many open joints.


**Photo Site-19**: Detail view at the capstones where the joints are eroded and brick placed at the top of the wall is being crushed.

**Photo Site-20**: Open joints near the top of the arched wall.

**Caretaker's House**

- The Reddick Caretaker's House was one of the five original (or very early) structures on the Reddick property (**Photo Site – 21**).
    - Its historic use is not documented, but a 1943 newspaper article refers to it as the former Smokehouse.
    - The 1973 interview with Sylvia Funk said the house was used for butchering, laundering, and storage of house and garden tools.
- Changes Through Time
    - In 1914 the Library board secured plans and specifications for remodeling the building for use as a Caretaker's House. We believe the second floor windows were added at this time, to accommodate residential use.
        - Based upon historic photographs the structure originally had windows and doors only on the first floor level (**Photo Site - 11**). According to the Reddick Library minutes, a considerable renovation was undertaken in 1914. At that time it appears that the second-floor windows, the westernmost window on the north façade and the door on the west elevation were added when the building was converted to residential use.
        - On Aug. 3, 1914, the following bids for the above projects were accepted: Sanders Bros., $1,675; W.E. Berndt, $188.94 for plumbing; John Walters, $145 for heating; and Reliable Electric, $35 for wiring.
        - On Nov. 13, 1914, $1000 was paid to Sanders Bros. toward the payment for work on the janitor's house. On Dec. 14, a balance of $700 was paid to Sanders Bros., and the Executive Committee was authorized to arrange for the stairs and cupboard in the Janitor's House (Caretaker's House).
    - On Jan. 9, 1922, it was decided that the exterior of the Janitor's Cottage (Caretaker's House) was to be painted for $160.
    - According to the April 8, 1929 Librarian's report, the caretaker, William McMahon, received an annual salary of $780 plus the use of the Caretaker's House and all utilities.
    - On Dec. 8, 1930, the new caretaker was recorded to be E.H. Lever, Mr. McMahon having died. The Caretaker's House was completely renovated inside.
    - On Oct. 12, 1931, the chimney on the Caretaker's House was determined to be in need of repair and would have to be partially rebuilt.
    - On Jan. 10, 1938, it was recorded that a new furnace was installed in the residence building (Caretaker's House) by E. Ludwig for $187.29. A hot water coil was also put in the furnace for $7.48.
    - The March 31, 1950 Librarian's report stated that a new furnace had been installed in the Custodian's Cottage (Caretaker's House).
    - In 1977, a $23,400 grant was awarded for repairs (the actual amount received was $18,642). Work undertaken included the installation of a terne metal roof, a new belvedere and chimney alteration, and repaired soffit and coping, for a total of $46,262.

- In 1980 the RMA minutes announced the acceptance of a bid by Koch Brothers for restoration of the roof and construction of a belvedere on the Caretaker's House. Work began August 11.
- The July 1981 RMA minutes reported that although it was originally thought that the Caretaker's House roof would not require painting, it had finally been determined that it would. A bid for two coats was accepted.
- In 1984 the Appellate Court looked at the Caretaker's House as a possible sight for a research office.
- In 1985, the Caretaker's House interior was rebuilt: a new furnace, plumbing, and wiring were installed, and there was some wall removal and some additions. The building was ready for occupancy on July 1, 1985 for the Appellate Court research office. The City loaned the RMA $30,000 to aid in the cash flow for the work.
- In Dec. 1985, the RMA minutes reflect the total figures on the renovation of the Caretaker's House: $62,450, with the skylight costing $4,211, and the Simplex $498.
- The RMA files include a proposal dated July 3, 1990, in which Wilcox Paint and Decorating proposed to undertake interior cleaning and partial repainting of the Caretaker's House at the Reddick Mansion for $1130. The proposal was signed by Mellott, dated July 12, 1990.

- The condition of the Caretaker's House is discussed in a separate chapter of this report.

**Photo Site – 21**: Historic view of the Caretaker's House after 1914 when the second floor windows were added. (RMA collection)

**Sidewalks and Site Improvements**

- The site surrounding the Reddick Mansion was reviewed as it pertains to the historic interpretation of the Mansion. Site elements such as the parking lot, site lighting, etc. are sufficiently covered in the Capital Needs Assessment of 2011.
    - A stained and patterned concrete curved walkway extends from the perimeter sidewalk to the Mansion, and around the site.
    - The site has been beautifully landscaped over time and serves now more as a public park than as a residential lawn (**Photo Site – 22 and 24**).
    - The original landscape plan was probably pretty barren, and not unlike how it was during the Library period. A 1970s Brookman photograph shows the lawn prior to landscaping (**Photo Site – 23**).
- Changes Through Time:
    - On Aug. 11, 1899 it was recorded that a new concrete sidewalk was poured from the steps to the front gate by Sanders Bros. for $115.
    - On July 11, 1902 a proposal was made to obtain bids to have a concrete walk laid around the Library property, and to remove and sell the fence around the Library.
    - On Nov. 14, 1902, the Executive Committee was authorized to remove the lattice between the (Caretaker's) House and Barn.
    - On March 13, 1903 the motion was moved and carried to proceed with building the sidewalk.
    - As of April 10, 1903, work on the sidewalk had commenced and the cost was $382.
    - On May 8, 1903, the sidewalk was reported to be completed and an additional sidewalk was poured from the East Gate to the back door (of the Mansion) for an additional $46.00 by James Leix.
    - On April 12, 1907, it was recorded that a new concrete walk leading from the front door (of the Mansion) to the basement and connecting with the front walk was to be poured.
    - During the Reddick Mansion Association Board meeting on June 9, 1994:
        - Keith Johnson reported on the progress of the concrete walkways portion of the grounds renovation. $3,000 was to come from the City of Ottawa. The total cost for Phase I was $14,287.50. This included sod removal, sand base, set and poured, stamped concrete, installing gravel sidewalks, extra grading for brick and adding a stone patio.
- Condition
    - The sidewalk is in stable condition. Some surface wear is exhibited, and because the concrete was surface stained, some of the color has rubbed off.
    - The sidewalk's configuration is not in keeping with the original 1850s design intent, but does not particularly deter from the interpretation of the site.
    - In locations on the north and south elevations of the Mansion, the sidewalk was poured directly against the raised stone foundation, which is causing deterioration to the building's stone. It is never recommended that concrete be poured directly against stone.

**Photo Site – 22**:
Current view of the pressed concrete walkway and landscaped plantings.

- Recommendations
  - While elements of the existing site, including concrete walkways and plantings, are not in keeping with the 1858 original, we propose that they be retained and maintained as-is.
    - The original site was extremely austere (**Photo Site - 25**), and the Mansion landscaping best resembled it in the 1970s.
    - The use of the Reddick Mansion and site today is much more versatile. The landscape surrounding the Mansion has evolved into a public park and it is to the benefit of the Museum that this space be welcoming to the public. We do not recommend returning the site to its original configuration at this time. However, we recommend the following revisions to benefit the building:
      - Lower the grade around the perimeter of the building where required approx. 6" and slope the grade away from the building so that moisture drains away, rather than toward, the foundation.
      - Extend the downspout leaders at least 3 ft. from the building and terminate them on splash blocks.
      - Saw cut and carefully chisel the sidewalk where it was poured against the limestone building base approx. 1" from the stone face. Fill the joint with appropriately-sized backer rod, sealant and sand fill.
  - Any further site additions such as gazebos and the like should be designed to reflect the style of the Mansion, and details should be taken from the entry portico and rails and east elevation porch details.

**Photo Site – 23**: 1970s view of the lawn (Brookman collection).

**Photo Site – 24**: Existing view looking toward Washington Park.

**Photo Site – 25**: Undated historic view of the Mansion and immediate site. (Reddick Library collection)

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**Cast Iron Fence and Stone Retaining Wall**

- According to a *Daily Times* article from Jan. 13, 1992, the cast iron fence was originally made in 1865.
- Between 1909-10 it was disassembled by the Library.
    - On Dec. 10, 1909, a motion was made and approved to have a new curb built and have the old fence repaired and painted. It was moved and carried that the Executive Committee dispose of the fence at the best price obtainable.
    - On April 8, 1910, it was recorded that the library fence was sold to the Jewish Cemetery Association for $201.00.

**Original Fence Parts Found**

- In 1980 the Jewish Cemetery Board inquired of the RMA whether they would be interested in an old fence at their Cemetery that was to be removed due to a widening of Route 23. They donated the fence in exchange for the RMA paying to erect a 6' chain link fence in its place (**Photo Site – 26**).
    - The Cemetery Board furnished the RMA with a copy of an appeal for funds when they purchased the Reddick Library fence, verifying that the fence was original to the Reddick Mansion and had been sold to them in 1910.
    - The RMA made arrangements with LaSalle Co. Historical Society to store the fence in the Carriage House at the Conkey property.

**Photo Site – 26**:
View of the cast iron fence when it was installed at the Jewish Cemetery. (RMA collection)

  - In 1985 the fence was moved from the Conkey property to the northwest corner of the Mansion grounds (**Photo Site – 27**).
- A certificate of gift is in the RMA files, which states that Harry (Delmar) Hayward donated the following to the RMA on Dec. 27, 1984:
  - 12 cast iron decorative sections, each 10 feet long.
  - 120 feet of 12"x18" limestone cap stones with 1"x1" wrought iron posts leaded into the stone.
  - 1 wrought iron gate with the same decorative pattern, parts and ornamental posts, etc.
- It was discovered that the Hayward fencing was one-sided while the fencing from the Jewish Cemetery was two-sided, making it unlikely that both were original to the site. Since there was documentation that the Cemetery fencing had originally belonged to the Reddick Library, the Hayward fencing was determined to have likely originated at a different site.
- The original pieces obtained from the Jewish Cemetery were restored and re-used, however, 25 more sections had to be created to complete the fence.

**Planning**

- Extensive files were kept by Mr. R.A. McClevey regarding reconstruction of the fence and retaining wall, and continue to be held in the RMA collection.
  - LeClair Perkins worked closely with McClevey to make this impressive project come to fruition.

**Photo Site – 27**: View of the sections of cast iron fence obtained from Delmar Hayward that were stored in the northwest corner of the Reddick site. (RMA collection)

**Photo Site – 28**: Newspaper clipping (no date) showing the dilapidated state of the retaining wall in the mid-1970s. (RMA collection)

**1991 – 2 reconstructions**

- In 1984 the existing disheveled retaining wall and capstones were removed on the south along Lafayette St. and replaced with a reinforced concrete footing and wall. The concrete was also installed on the Columbus Street (west) side.
    - The original limestone retaining wall was removed by the City because of its rundown and dangerous condition (**Photo Site – 28**).
    - The new perimeter stone retaining wall was constructed of concrete with a shallow foundation and a natural stone veneer toward the street.
- In 1988 a contract was entered into with Tri-State Stone Co. of Frankfort, IL to furnish stone for the retaining wall. The stone was delivered in June 1989 and installed later that summer by Koehler Masonry.
    - The stone used for the new retaining wall is an oolitic limestone from Kansas (Kansas Silverdale oolitic limestone in smooth machine finish) that matches the Joliet limestone closely.

**Casting of new fence elements**

- In 1990, Keith Johnson, co-owner of Johnson Pattern and Machine Co. and one of the RMA's 24 board members, donated his time and materials to make the patterns used to cast the new fence. He was assisted by his father Floyd Johnson. (**Photos Site – 29 and 30**).


**Photo Site – 29 and 30**: In 1991 Keith Johnson (left) and his father Floyd Johnson donated considerable time and materials to fabricate patterns to be used for re-casting the missing fence cast iron elements. The casts were made from original fence pieces obtained from the Jewish Cemetery. (RMA collection)

- The ornamental patterns were cast from original pieces of fence from the Jewish cemetery.
    - Their efforts were written up in the *Daily Times* on January 13, 1992.
        - Each cast iron post was composed of five castings.
        - Although the fence would be nearly identical to the original, Johnson mentioned that there would be one significant difference. The original fence had two gates but Johnson decided not to replace those gates at that time, instead leaving it to future generations (**Photo Site – 31**).
        - Based upon the gate shown in a historic photograph (undated) (**Photo Site – 32**) as compared with the gate obtained from Delmar Hayward, and the fact that the Hayward fence elements were half casts vs. full casts, we think the Hayward fence may have come from another site. The fence and gate elements were very likely purchased from a catalogue.

**Photo Site – 31** (above left): Photograph of original gate, obtained from Harry (Delmar) Hayward in 1984. (RMA collection)

**Photo Site – 32** (above right): View of the front gate from a historic photograph of the Reddick Mansion. Note how light the gate is compared with the one in **Photo Site – 31**. (Reddick Library collection)

**Restoration of existing original fence elements**

- In 1990, Andrew Corbus Enterprises was contracted to sandblast the parts of the original fence from the Jewish Cemetery.
    - They also repaired and erected the historic pieces near the southeast corner of the site.

  - Seven sections were erected at the corner of the lot: five on Lafayette and two on Columbus.
- A decision was made not to install the original gate that had been obtained from Delmar Hayward.
  - Valley Metal Products in Marseilles agreed to refurbish, paint and erect the portions of the fence from the Jewish Cemetery for $10,860.

**Installation**

- In 1991, additional fence components were fabricated to complete a fence on Lafayette & Columbus Street sides.
  - The posts were cast by one foundry, Sandwich Iron Foundry of Plano who completed them in early August 1991.
  - Sperry & Co. in North Aurora initially received the bid for casting the fence "webs" and "spikes." The contract with Sperry was terminated.
    - The contract was eventually given to Sandwich Iron Foundry, who completed all the castings by January 1992.
  - The original portions of fence that had been put up on the corner had rust coming out of the inside of the posts, which stained the stone.
    - Valley Metal Products of Marseilles agreed to refurbish, paint and re-erect the portions of the fence from the Jewish Cemetery.
    - The fence elements were painted in a drop tank.
      - In 1991 the original seven sections on the corner were reinstalled, beginning at the alley and heading east toward the front entrance.
- The entire cost for acquiring, casting and installing the retaining wall and fence was $123,607.

**Existing Conditions and Recommendations**

- The existing cast iron fence is in fair to good condition.
  - Some areas of peeling paint and rusting were observed.
  - In order to mitigate further deterioration (the cast iron hasn't been painted in over 20 years), the peeling paint should be removed and all exposed iron wire-brushed back to white metal, primed with a rust-prohibitive primer and coated with two coats of a high-grade metals paint (such as those produced by TNEMEC)

**END SITE**

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# Physical Analysis – Caretaker's House

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# Caretaker's House - Exterior Condition Assessment

The Reddick Caretaker's House was one of the five original (or very early) structures on the Reddick property. Its historic use is not documented, but a 1943 newspaper article refers to it as the former Smokehouse.[1]

The Italianate-style building is a solid masonry bearing wall structure comprised of two stories over a raised basement. The main body of the building is constructed of red brick with an exposed limestone foundation, watertable, and window sills/keystones. The building is surmounted by a decorative wood cornice with paired brackets that support a hipped roof. The roof and built-in gutters are covered with a standing seam painted tin roof. A square belvedere (cupola structure) is mounted atop the roof.

Based on historic photographs, the structure originally had windows and doors only on the first floor level (**Photo C-1**). Per Reddick Library minutes, a considerable renovation was undertaken on the building in 1914 to convert it to a caretaker's cottage. We believe the second floor windows, the westernmost window on the north façade, and the door on the west elevation were added when the building was converted to residential use and the second floor outfitted for sleeping rooms.

The building is now approached via a poured concrete ramp and accompanying steps, poured against the east elevation. A c.1943 photograph of the Caretaker's House east elevation shows a one-story wood porch constructed at the front entrance (**Photo C-2**). This photo was taken after the second story windows were added. We do not think that this porch structure was original to the building (it is not evident in Photo C1 from post-1910). It was probably constructed as part of the 1914 conversion for residential use. By the 1970s the building had fallen in to disrepair (**Photo C-3**). This was the condition when Dr. Paul Sprague photographed the building as part of his 1975 study, although the building looks somewhat better in black and white (**Photo C-4**). Exterior repairs were undertaken mainly of the cornice and roof (described in the Roof section below), and the belvedere was reconstructed. **Photo C-5** shows the building shortly after that work.

Each building material/element will be discussed separately, with conditions noted first and recommendations noted afterwards.

[1] This building currently serves the Ottawa Visitor's Center, but served as a Caretaker's House during the Library period, and has been referred to alternatively as a "smokehouse," as an "icehouse" in the Library Minutes, and as a "laundry and tool shed" in an interview with Sylvia Funk. The bulding's original use is not known, as it underwent a considerable rehabilitation in the 1920s when converted for a Caretaker's residence.

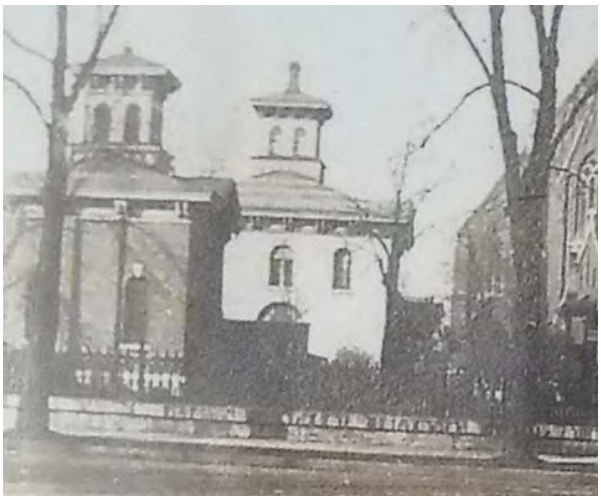

**Photo C-1**: View post 1910 from undated panoramic photograph in the RMA Museum collection showing the Caretaker's House with its original belvedere, and before the second floor windows or entry porch were installed. The original Carriage House is beyond.

**Photo C-2**: This photograph was included among the Dr. Paul Sprague photos taken during his 1975 site visit. It shows the Caretaker's House prior to 1943. The same view was illustrated in an article in the *Daily Republican Times*, Jan. 15, 1943.

**Photo C-3**: The Caretaker's House was quite dilapidated by the time this 1970s photograph was taken. Windows on other elevations were boarded up. This is before the cornice and roof were restored and the belvedere reconstructed.

**Photo C-4**: This c. 1975 photograph was taken by Dr. Paul Sprague as part of his assessment of the site. Note how the window sash are painted a dark color, while the adjacent trim was light.

**Photo C-5**: Post-cornice/roof restoration photograph taken in the 1970s, showing the new belvedere.

## Brick

**Description of Conditions**

- A lesser quality brick that varies in color and texture throughout the building was utilized for the building's construction.
    - The bricks are set in generous mortar joints (**Photo C-06**).
        - Small shells were noted in some joints on the east elevation (**Photo C-07**), suggesting a lime-based mortar.
- Approximately 1/3 of the structure has been spot-repointed, mainly utilizing an inappropriate Portland cement-based mortar. A prime example of how this type of hard mortar can be deleterious to soft historic brick was noted at the southwest corner (**Photo C-08**).
    - Mortar joints throughout the building are quite worn, but we noted only perhaps 10% of the joints to be open and requiring immediate repointing.

  - Some mortar patching was undertaken at missing brick locations. This is an inappropriate repair; brick similar in age and hardness should be utilized for spot repairs.
- The brick faces appeared unusually worn on the east elevation to either side of the second floor central window (**Photo C-09**). We assumed this weathering was caused by backsplash from the now-demolished porch roof, which may be the case, but Brookman photos from the 1970s renovation of the building show that those areas had quite a bit of efflorescence (**Photo C-10**). This may have been due to backsplash, or from leaking from the cornice above. (Please note that all the 1970s photographs contained in this section were provided to us from former site manager Ken Brookman and his wife.)
- The east façade still exhibits evidence of the former front porch. Two areas are patched with modern brick where the porch beams engaged the masonry wall (**Photo C-11**).
  - A dark grey mortar line can be seen on the east façade that extends outward from either side of the central second floor window sill. This is likely residue from the previous porch roof and the flashing where it engaged the brick.
- The original round arch windows are set within a brick arched opening, in which the arch is formed by bricks with a limestone keystone.

**Brick Recommendations**

<u>General</u>

- Missing or damaged brick should be replaced in-kind rather than the open area filled with mortar
- The brick and stone surfaces should not receive any water repellent coatings.

<u>Short-Term</u>

- Undertake spot repointing on four elevations at isolated areas of open joints (est. 10% of surface area in various locations).
  - Obtain mortar analysis prior to future repointing to match original mortar in mix, color, texture and joint profile.

<u>Mid-Term</u>

- Because the mortar joints on the Caretaker's House are so large and generally worn, we recommend a larger repointing project be undertaken in the mid-term.
  - In a large restoration campaign the following should be undertaken:
    - The entire building could be repointed with appropriate mortar.
    - The modern brick used to patch in the beam pockets on the east elevation should be removed and replaced with matching brick.
    - Spot brick replacement should be undertaken using matching brick (the brick may be salvaged from the back side of the garden wall).

**Photo C-6**: Typical brick condition on the Caretaker's House. Notice the grey Portland cement vertical mortar joint repairs, and how other joints are tinted red. This is a remnant from when the building was painted red.

**Photo C-7**: Shell fragments were noted in the mortar on the east elevation.

**Photo C-8**: Area on the southwest corner where the use of hard Portland cement has resulted in efflorescence (salt deposits) and cracked/spalling brick. This type of mortar is very harmful to older, softer historic bricks.

**Photo C-9**: View on the east elevation of the lighter, worn brick, to the left of the central second floor window.

**Photo C-10**: This photograph, taken during the 1970s restoration work, shows that there was efflorescence on the brick at the second-floor level on either side of the center second-floor window.

**Photo C-11**: A patch of modern brick indicates where the former porch beam was once engaged into the wall.

## Limestone

**Description of Conditions**

- The original window and door opening of the Caretaker's House were embellished with limestone sills and keystones. The keystones have a raised profile.
    - The limestone keystones and sills are now painted.
    - The keystones appear in stable condition.
    - The limestone sills are in poor condition and are severely scaling; this is probably why they have been painted.
        - One sill on the west elevation is deteriorating beneath the paint coat and on the underside. This is a good example of how paint surfaces can trap moisture (**Photo C-12**).
        - It appears that in general, lesser quality brick and stone were utilized for the Caretaker's House than were used on the Mansion.
- The window sills on all the non-original windows (c. 1914) are of painted brick set in a row-lock bonding pattern.
    - This includes the second-floor double-hung windows and the first-floor window on the north elevation.
    - Interestingly, the original first-floor arched window on the north elevation also has a brick sill. The stone sill must have been so deteriorated by 1914 that the sill was replaced with brick.
        - The brick sills should be retained because they make a clear demarcation of the work that was done in 1914.
        - The problem with brick sills is that they include open mortar joints that face the sky (and tend to allow water entry).
        - The sills are painted, and probably always have been, both to prevent water entry and to create a uniform appearance.
- The limestone foundation wall is exposed at the base of the building, and is topped by a limestone watercourse. The foundation stone is set in a running ashlar bond (**Photo C-13**).
    - Interestingly, the exposed foundation stone is grey (indicating a low iron content and likely a higher clay content), while the string course has a golden color (indicating a higher iron content). The golden color is typical of aged Joliet Limestone.
        - We do not know the quarry source of the foundation limestone but suspect it is not the same as the limestone used for the stringcourse, windowsills, keystones or the limestone trim on the Mansion.
        - The grey limestone is relatively stable for its age. It has some damage at the northwest corner, likely due to impact.
- The east elevation entry stoop, stairs and ramp date from the latter part of the 20th c. and were constructed of concrete, poured directly against the stone foundation and watercourse (**Photo C-14**).
    - A space and soft joint should have been provided where the concrete met the limestone in order to prevent damage to the limestone. Because the concrete is harder than the limestone, it can cause fracture of the adjacent stone.

**Limestone Recommendations**

General

- Natural limestone should not be painted. It is difficult to remove paint from porous stone, and removal may cause more damage than not.
    - The paint on the keystones should be allowed to wear away, or be removed chemically after testing various products to ensure that they do not cause further deterioration to the stone.

Short-Term

- The stone sills are very deteriorated. To extend their life it is recommended that they be stripped of paint and a combination stone consolidant / water repellent be applied to the stone sills only. Products manufactured by ProSoCo are most appropriate for use.
    - Severely deteriorated stone sills can be removed and replaced with stone to match.
    - Limestone is no longer quarried in the Joliet/Lemont area. A fairly good matching stone can be obtained from the Halquist quarry in Sussex, WI.
- Once the stone sills are stripped of paint, the brick sills should be painted a more natural golden color to more closely resemble stone.

**Photo C-12**: A severely deteriorated limestone sill on the west elevation shows how paint can trap moisture and further exacerbate damage.

**Photo C-13**: The upper portion of the foundation wall is exposed on the Caretaker's House. It is topped by a limestone watercourse.

**Photo C-14**: View looking down at the limestone watercourse, illustrating how the concrete ramp / entry stair assembly was poured directly against the building.

## Cornice

**Description of Conditions**

- A decorative cornice surmounts the Caretaker's House. It is comprised of a wood fascia and soffit that is visually supported by paired decorative brackets. Wood trim is utilized on the fascia board between the brackets to create rectangular "picture trim."
    - Both the fascia and soffit are constructed of wood boards (possibly tongue-and-groove) rather than solid wood pieces.
    - A Brookman photograph from the 1970s shows that the soffit was experiencing severe deterioration at that time (**Photo C-15**).

**Photo C-15**: 1970s view of severe water damage at the northeast corner of the cornice prior to cornice/roof restoration work.

- A large program of repair was undertaken in the 1970s, during which the entire overhanging cornice was disassembled to expose the support outriggers (**Photos C-16 and C-17**).
  - It appears that most of the fascia remained in place.
  - It appears that most of the brackets were removed, repaired and re-set in place.
    - 1970s photographs show shadow lines where paired brackets were removed in 1914 when the second floor windows were added.
      - The second floor windows were placed in such a manner that it was necessary to remove the brackets.
  - It also appears that many soffit boards were removed and then reinstalled, with only rotted boards being replaced. This has resulted in a patchy appearance on the soffit (**Photo C-18**).
- Areas of deterioration in the gutter fascia and the soffit underneath the overhang were noted in several locations:
  - At the east end of the north façade (**Photo C-19**).
  - On the east elevation, to the upper right of the south second-floor window.
  - On the south elevation, east end (**Photo C-20**).
  - On the west elevation, north end.
    - Based on 1970s photographs it appears that much of the deterioration we see today is happening at boards that were installed as replacements in the 1970s.
      - In general, old-growth wood (as was used on the original cornice assembly) has a much longer lifespan than modern lumber due to its closed grain.

**Photo C-16**: This photo was taken during the 1970s restoration work on the cornice. It is a view of the east elevation. Note how much of the cornice was disassembled for repair.

**Photo C-17**: View of the north elevation showing the outriggers that support the cornice assembly. The entire cornice soffit and gutter fascia were reconstructed here.

**Photo C-18**: Typical view on the underside of the overhanging eave where boards were used to create the soffit. The area appears to be a mix of original and 1970s wood.

**Photo C-19**: Current view of water / animal damage on the west elevation at the cornice fascia.

**Photo C-20**: Water damage/rot on the south elevation at the cornice fascia. Note that originally, paired decorative brackets were originally positioned about where the downspout leader is, to the left of the window. Of course, the second floor windows weren't there originally.

- During our period of investigation, RMA board member and local contractor Dave Rabideau provided a boom lift for our closer investigation. Mr. Rabideau took the following detailed photographs of deterioration at the cornice:
  - One of the rotted gutter fascia boards (**Photo C-21**). This level of deterioration in such specific locations is probably due to water entry at the built-in gutter above. It is likely made worse by bird or other animal entry.
  - Two areas showing loose or separated trim boards (**Photos C-22 and C-23**).
    - Deterioration at the built-in gutters will be discussed in the Roof/Gutter/Downspout section of this report.

**Photo C-21**: Detail photograph of the rot in the gutter fascia board. Large openings like this allow birds and small animals to enter the attic.

**Photo C-22**: Detail view of an open joint at the gutter fascia trim.

**Photo C-23**: Detail view of loose and bowing trim boards on the south elevation.

**Cornice Recommendations**

General

- The boards comprising the cornice fascia and soffit are over 150 years old.
    - Utilizing individual boards rather than wood planks to construct the cornice was not a good choice in the first place, as water entry can occur so easily at open joints and seams.
    - The cornice will be a constant maintenance issue due to all these open joints.
- It is not appropriate to re-install brackets that were removed when the second-floor windows were installed. In fact, in some locations it would be impossible.
    - This document will serve as documentation that they once existed, and the building remains as it is in order to show change over time.

Short-Term

- The gutter fascia boards that exhibit gaping and open holes should be removed and replaced as soon as possible to prevent animal entry and further damage.
    - A wood species that is naturally decay resistant should be utilized. It should be primed on all surfaces prior to installation and non-rusting fasteners should be used.
- When this work is being undertaken, any other loose boards or trim should be secured using non-rusting fasteners.
- Spot repainting should be undertaken.

Mid-Term

- The cornice system should be reviewed at close range from a boom lift every 5-7 years, and repairs made immediately in order to prevent further damage.

## Wood Windows / Exterior Doors / Porch

### Description of Conditions

**Windows**

- There are seven types of windows found at the Reddick Caretaker's House. They are all painted wood:
  - First-floor level:
    - Original round arch double-hung four-over-four (6).
    - Original round arch double-hung six over four (1).
    - 1914 shallow arch double-hung four over four (1).
  - Second floor level:
    - Original round arch double-hung two-over-two (1).
    - 1914 steel lintel (assumed) double-hung two-over-two (8).
  - Belvedere cupola level:
    - 1970s round arch double-hung one-over-one (8).
- Overall observations about windows:
  - Original round-arched windows:
    - The original windows have a painted-wood, round-profile brick casing that is a historic detail of the mid-19th century and is missing from the 1914 window openings.
    - The original windows are in fair condition. The original muntins separating the glass panes are very thin and have the tendency to expand and contract with variations in moisture and temperature, which leads to deterioration of the window putty.
    - The window sill and lower areas of the bottom sash tend to weather more quickly than the upper areas of the window.
    - The painted surfaces and glazing putty are nearing the end of their serviceable life.
  - 1914 shallow-arch and second-floor windows:
    - The 1914 first-floor window on the north elevation is in a hazardous condition. The bottom rail of the top sash is ready to collapse, which will cause the panes of glass to fall out. The sash needs to be removed and repaired (**Photo C-24**).
    - The second-floor windows are in fair condition.
      - The window sill and lower areas of the bottom sash tend to weather more quickly than the upper areas of the window (**Photo C-25**).

**Photo C-24**: The first-floor window on the north elevation is not original and was likely installed in 1914 when the building was converted for residential use. This window is in extremely poor condition; the upper sash bottom rail is ready to collapse.

**Photo C-25**: Typical view of one of the c. 1914 second-floor windows. These windows are in fair condition; the bottom rail of the lower sash and the wood window sill are typically more deteriorated due to weather exposure.

**Exterior Doors**

- The exterior doors are in stable condition. Like the windows, paint finishes and glazing putty should be maintained.
- Both the east and west exterior door have wood storm doors.
    - The east elevation door appears to be racking; it has supplemental metal braces screwed between stile and rail to keep it square. Deterioration due to weathering was noted.
    - The west elevation door shows general weather deterioration in the form of peeling paint.

**Wood Porch**

- The wood porch that was original (or at least early) to the structure was removed post-1975.
    - In a larger restoration program, the porch and railing would be reconstructed based upon historic photographs.
        - At that time, the poured concrete steps and ramp could be removed to better protect the stone foundation, and a new ramp and step system could be integrated into the porch design.

**Wood Windows / Exterior Doors / Porch Recommendations**

General

- Important notes regarding window and door restoration of historic properties:
    - Only wet methods of paint removal should be utilized on these windows, rather than grinding or heat methods of paint removal.
        - The mullions in these windows are extremely small, as typical of the time period, and grinding or chiseling paint can mar or destroy them.
        - Heat methods of paint removal are never recommended for buildings of this age.
    - Because maintenance work was undertaken in the mid-20$^{th}$ century, there is a likelihood that there may be asbestos in the caulk. Proper care should be taken during removal.
    - Because of the age of this building, it is probable that early layers of paint contain lead. Proper care should be taken during removal.
    - It is essential that the original glass be retained and re-used rather than "broken out" during restoration.
    - Once wood windows and doors are restored, they must be maintained.
        - Windows should be painted every 5-7 years.
        - Putty should be maintained every 5-7 years.
        - Caulk should be replaced every 14 years (or more, depending on exposure).
        - Putty may have to be fully replaced about every 20 years.
        - Epoxy repairs to re-stabilize windows may have to be performed about every 15-20 years.

Short-Term
- The north elevation first-floor window needs to be removed and restored as soon as possible to prevent failure.
- The east elevation door should be removed and repaired to prevent racking.

Mid Term
- Both the east and west elevation storm doors should be prepared and painted.
- All windows and doors should be reviewed and maintained.
    - All deteriorated caulk and putty should be removed and replaced.
    - All wood surfaces should be prepared, primed and painted with high-quality paint.

Long-Term
- The historic porch and railing should be replicated based upon historic photographs.
- The concrete steps and ramp should be removed, and the porch design should be reconfigured to include ADA accessibility.

## Roof / Gutter / Downspouts / Belvedere

**Description of Conditions**

**Roof and Gutter**
- The main roof on the Caretaker's house is a hipped roof with engaged east and west gables.
    - The hipped roof has a built-in gutter; the gables have no gutter.
    - The entire roof system is standing-seam sheet metal, painted. The metal is probably tin (**Photo C-26**).
        - General wear of the painted surfaces as led to rust staining.
- In the mid-1970s the entire roof surface was replaced, at the same time as the cornice work.
    - By that time the original belvedere (**Photo C-01**) had been removed.
    - The roof surface was removed down to the wood deck. Some sheathing was replaced (**Photo C-27**).
    - It appears that building paper was installed over the deck, over which the new tin roof was installed (**Photo C-28**).
- The gutter is built into the roof assembly.
    - The gutter, like the adjacent roof, is painted sheet metal (probably tin).
    - While the roof is standing-seam, the gutter has flat lap seams that have been soldered multiple times and caulked.

**Photo C-26**: View of the Caretaker's House roof, as taken from the third floor of the Mansion.

**Photo C-27**: 1970s view of the Caretaker's House roof after the existing roofing material had been removed and the wood roof sheathing exposed. Lighter areas are where sheathing was replaced

**Photo C-28**: 1970s view of the new roof and newly reconstructed belvedere

- General roof and gutter observations:
    - During our period of investigation, RMA board member and local contractor Dave Rabideau provided a boom lift for our closer investigation. Mr. Rabideau took the following detailed photographs of deterioration at the roof and gutter assembly:
        - While the sloped surfaces of the roof are standing-seam (a generally durable means of roofing) the sheet metal "pans" (each sheet of metal) terminate in a flat "lap seam" that is just tack welded every few inches (**Photo C-29**).
            - As long as water flows down and over the lapped seams, this can work.
            - If water and ice get backed up in the gutter, moisture can flow up and into the roof system (called "ice damming") because the seams are open (**Photo C-30**).
                - Unfortunately, sealing the joints with solder does not work for tin roofs (as it would with copper).
                - Past "band-aid" repairs have been made with what appears to be caulk and paint.
        - The integral gutters are comprised of sheet metal that is also lap-seamed and tack welded (**Photo C-31**). The photo shows how frequently these seams occur.
            - In a properly detailed copper roof, the flat seams would be bent over twice and then "sweated" with solder to make them waterproof.
        - **Photo C-32** clearly explains why the Caretaker's House is experiencing localized gutter fascia board rot. Nearby gutter seams are open and allowing water entry.

**Downspouts**

- There are two downspouts serving the gutter system: one on the north elevation and one on the south elevation.
    - The downspouts are round, approximately 4" in diameter, and appear to be of galvanized sheet metal, painted.
    - No deterioration to the masonry or cornice adjacent to the downspouts was noted.
    - The downspout leaders terminate at grade; they are not tied to a sub-surface drain tile system.

**Belvedere**

- A roof cupola, or belvedere, was reconstructed in the mid-1970s, presumably based upon historic photographs.
    - The new belvedere replicates quite well the form of the original cupola.
    - The structure is wood, with a wood cornice, paired brackets and two double-hung windows on each elevation.
    - The roof of the belvedere appears to be painted sheet metal.

  - The belvedere rests on a rectangular base that is fully flashed into the roof system.
- The wood elements appear in fair condition; they are experiencing loss of paint due to weathering in some areas (**Photo C-33**).
  - The windows appear stable but should be maintained.

**Roof / Gutter / Downspouts Recommendations**

General

- The roof system installed in the 1970s was not of the highest quality of materials or detailing.
  - Because it is tin rather than copper, solder repairs are not possible.
  - Another means of open-seam protection will have to be devised.

Short-Term

- The gutter open seams should be addressed as part of the wood gutter fascia repair work.
  - There is no use repairing the rotted wood if water entry continues.
  - A short-term solution would be to caulk the open seams with a caulk intended for painted metal that matches the adjacent roof surface in color.
    - These caulk joints would have to be reviewed at close range approximately every three years to ensure they remain sealed.
      - Movement in the system may cause them to rip open regularly.
    - A sheet metal roofing contractor experienced with historic roofs should inspect the roof system and make a recommendation. There may be some form of sticky-back elastomeric patch that could be installed over the seams that would provide a more permanent "band aid." The problem would be to get the patch to match in color so the roof doesn't look patchy.

Mid-Term

- The entire roof surface should be painted.
  - Corrosion should be removed prior to properly preparing, priming and painting.
- The Belvedere wood surfaces should be prepared, primed and painted.

Long-Term

- The sheet metal roof and gutter system should be removed and replaced with a standing seam copper roof with properly detailed flat seam gutters.

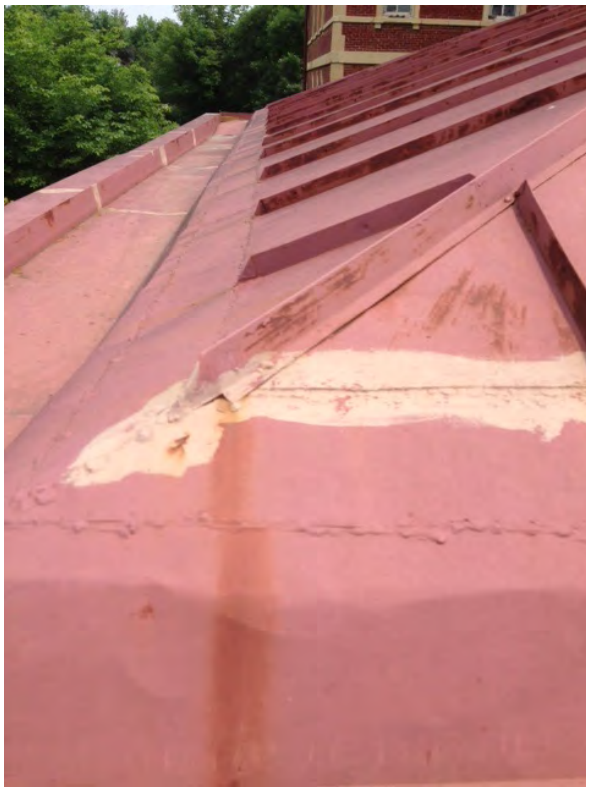

**Photo C-29**: Current detail view of the standing seam roof where it meets the lapped seam gutter. Note the rust staining and past caulk/paint "band aid" repairs.

**Photo C-30**: Detail view showing how the lapped seam roofing was only "tacked" in place, leaving gaps where water can enter if the gutters become filled with water or ice.

**Photo C-31**: View looking down the length of the built-in Caretaker's House gutters. Note the number of seams, which have the potential to be open, allowing water to enter and deteriorate the wood cornice below.

**Photo C-32**: Very informative photograph, showing open seams in the metal gutter immediately above severely deteriorated gutter fascia boards.

**Photo C-33**: Current view of the belvedere, which is in stable condition. The painted wood should be maintained and painted on a regular basis to prevent deterioration.

**END CARETAKER'S COTTAGE**

# Physical Analysis – Mansion Exterior

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# Exterior Condition Assessment

The Reddick Mansion, constructed in 1856, is a solid masonry bearing wall structure comprised of two stories plus attic over a raised basement. The main body of the building is constructed of a deep red brick with limestone trim and window surrounds. The raised basement is constructed of limestone. The front entry portico, grand stair and flanking window bays on the south façade are also constructed of limestone. Painted wood railings surmount the entry portico and window bays. A two-story painted wood porch spans between two window bays on the east façade. Limestone arches at grade support the porch. All windows and doors are painted wood. A large decorative cornice surrounds the fourth floor, and is comprised of wood framing, cast iron brackets and terra cotta ornamentation. The hip roof is presently covered with sheet rubber roofing, and encloses an unfinished attic. The five original chimneys have been capped and no longer exist. A copper and sheet metal gutter system is hung off the roof perimeter, with downspouts leading to grade in two locations.

Each building material/element will be discussed separately, with conditions noted first and recommendations noted afterwards.

## Brick

**Description of Conditions**

- A higher quality brick was used on the south and east facades, set in tighter joints than the other two facades (**Photo E-1**).
- A somewhat lesser-quality brick was utilized on the north and west facades, and is set in wider joints (**Photo E-2**).
- The brick is in generally excellent condition.
    - Isolated open joints were noted.
    - An inappropriate mortar patch was noted on the north façade where a brick was missing or had spalled (scaled off).
    - The north and west elevations appear to have been repointed in their entirety (likely in 1986, according to RMA files). The mortar appears to contain Portland cement, which is inappropriate for use on mid-19th-century brick (**Photo E-3**).
        - In the Midwest it is atypical to see Portland cement in mortar prior to the 1910s or 1920s. Mid-19th-century mortar was lime-based. It is appropriate to re-point 19th-century buildings with either lime-based mortar or mortar containing a lime and Portland cement mixture in a soft Type N mixture.
        - The mortar joints do not appear to have been properly ground out prior to repointing. Therefore the Portland cement-based mortar is just sitting atop the existing mortar. A full repointing would include grinding out approximately 3/4" of the original mortar prior to installing the repointing mortar.

**Photo E-1**: View of painted brick beneath south façade entry portico. Note the tight mortar joints and how both the brick and mortar were once over-painted.

**Photo E-2**: View of brick that was exposed when the c. 1920s chimney was removed from the west façade. We see remnants of past repointing as well as several different layers of red paint over the brick.

**Photo E-3**: Brick on the north and west elevations has been over-pointed in the past with an inappropriate Portland cement-based mortar, as shown to the left.

  - Isolated efflorescence (salt deposits) were noted, mainly below the limestone string courses at the second and third stories. This just indicates that water travels through the stone course. The staining might also denote run-off of deteriorated paint particles. The stone was once painted (**Photo E-4**).
  - Although the joints are pointed with a Portland cement-based mortar we see no ill effects at this time. Ill effects might include spalling brick faces or cracked brick adjacent to the mortar joints.
- The brick surfaces were once painted. At least two types of paint coatings were observed.
  - Much of the brick beneath the south entry portico retains its paint coating. This area should be preserved to retain remnants of the coating for future observation (**Photo E-1**).
  - Brick on the west façade, where the c.1920s chimney was removed, displays several layers of paint and earlier repointing (**Photo E-2**).
    - The reason for over-painting the brick is not known. There is no necessity to paint brick other than for obtaining a uniform appearance. Perhaps in the late 19th and early 20th century the Library Board thought they could achieve greater longevity of their pointed mortar joints by painting the façade. We do not recommend painting the masonry.
- A brick chimney was constructed on the west elevation in 1925 to support a new heating plant. The chimney is depicted in the 1975 Sprague photo (**Photo E-5**).
  - In 2011, a lightning strike resulted in the disassembly and removal of the chimney.
  - The original brick behind the former chimney appears in stable condition.
  - The cornice was reconstructed in the area where the former chimney penetrated the roof.
- Brick is coated with plaster parging in the Boiler Room. Where parge is failing, brick appears to be severely deteriorating in some locations. The parge coat should be removed to expose brick, repointed and possibly coated with a water repellent (to prevent flaking).

**Brick Recommendations**

General

- The brick is stable and not in need of repointing at this time. The masonry walls are so thick that the more worn joints on the north and west facades do not appear to be allowing water entry at this time.
- Missing or damaged brick should be replaced in-kind rather than the open area filled with mortar.
- The brick and stone surfaces should not receive any water-repellent coatings.

Short-Term

- A spot repointing should be undertaken on all four elevations at isolated areas of open joints (estimated to be 10% of the façade in various locations).

- A mortar analysis should be conducted prior to future repointing, to match the original mortar in mix, color, texture and joint profile.

Mid-Term

- The parge coat should be removed and the exposed brick walls repointed in the Boiler Room.
  - A mortar analysis should be conducted to identify an appropriate mortar. If too hard a mortar is utilized, it will deteriorate the stone.
  - 20% of the brick may need to be replaced.
  - A breathable water repellent will likely be necessary on the interior walls, solely to prevent powdering of the brick. Water repellents should not be used on exterior-facing masonry walls.

Long-Term

- In a large restoration campaign the following should be undertaken:
  - The entire building could be repointed with appropriate mortar. North and west facades are the first priority; south and east facades are second priority.

**Photo E-4**: Efflorescence was noted beneath the limestone stringcourses. This is likely because water enters the wall above the stringcourse and seeps down. It is not particularly of concern.

**Photo E-5**: View of the west elevation, taken by Sprague for his 1975 report, showing the c. 1920s chimney. The chimney was disassembled after being struck by lightening.

## Limestone

**Description of Conditions**

- The limestone utilized at the Reddick Mansion is said to have been from the Joliet, IL quarries, shipped to Ottawa via the Illinois and Michigan Canal.[1] This is entirely possible, but the stone at Reddick exhibits a dark staining in some locations that is indicative of a bituminous content that is not characteristic of Joliet/Lemont Limestone. The original quarry source of the limestone is not recorded in historic records known to us at this time.
    - Due to the large size of the stones, it is likely that they were quarried at an established quarry (rather than a small local quarry).
    - Also, because of their size, they were quarried early in the quarry's history, because typically as time went on the quality of stone remaining in quarries lessened, and larger units became more rare. This is also supported by the early date of construction (1856).
- The limestone on the Reddick Mansion is in overall fair to good condition. It is weathering naturally, which appears like deterioration to some observers.
    - The limestone at Reddick often has a variegated appearance, is mottled or has bituminous staining (**Photo E-6**). This coloration does no harm.
    - There are various degrees of weathering of the stone. The surface is often flaking, which is a natural form of weathering for this stone (**Photo E-7**).
        - The stone at the base of the building is approximately 20" thick; limestone utilized as trim in the upper areas of the building is likely 4"-8" thick. Minor surface loss has no effect on the stability of the stone.
        - A good mason can re-surface the stone by removing loose material back to sound stone.
    - There are two areas of damage to the stone on the east elevation that are worthy of note:
        - Rust staining and localized cracking was noted where the fire escape iron railing was fastened to the limestone. Rusting fasteners caused damage to the stone (**Photo E-8**).
        - The stone pilaster supporting the south end of the porch assembly appears to have fractured through time and has lost some surface material. This stone should be removed and replaced in the near to mid-future (**Photo E-9**).
- The limestone was patched in numerous locations with an inappropriate mortar patch material (**Photo E-10**).
    - The patch material appears to have been installed post-1975, as the patches do not appear in the Sprague photos.
    - RMA receipts indicate that the building underwent repointing (and possibly patching) in 1986.
    - The patches appear to be Portland cement-based, and do not match the original stone in color, texture or hardness.

**Photo E-6**: Bituminous staining is apparent on some of the limestone at Reddick Mansion. It is inherent in the stone and does no harm.

**Photo E-7**: Example of flaking limestone. This is a natural form of weathering, and while somewhat unsightly, is no cause for alarm.

**Photo E-8**: Rust staining and limestone cracking at the Bedroom Level, east elevation, where the fire escape railings were once attached.

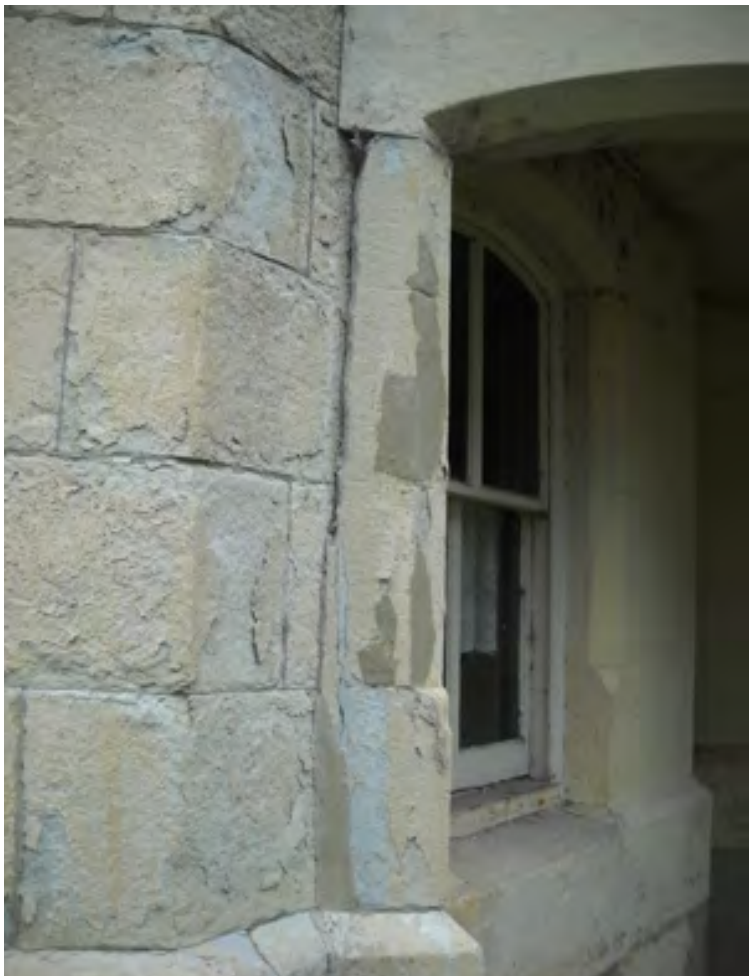

**Photo E-9**: Cracked stone comprising the north support of the east porch, at the Lower Floor level.

**Photo E-10**: View of previously patched limestone with inappropriate patch material.

        - The patches are fortunately stable. We did not see unusually deteriorated stone adjacent to patches, which would have been expected. This is likely due to the fact that the stone is stable, and the patches are thin. It would do more damage to the stone to remove the patches rather than to let them weather away on their own.
            - In a large exterior restoration campaign the patches could be removed, and the stone surfaces re-worked by a mason.
        - The patches should be monitored to ensure they are not causing adjacent stone to crack or spall.
    - Large areas of limestone are spalling at the base of the building. We noted from historic photographs that the ground surface has been raised around the perimeter of the building over the last 40 years.
        - **Photo E-11,** taken by Dr. Paul Sprague during his 1975 assessment, shows an area of at least 6" at the base of the building that is now covered by soil (compare with **Photo E-12**).
        - We noted that patching has occurred near the base of the building that is different in color and consistency from stone patching found elsewhere. Here, it is clearly Portland cement based (due to grey coloration) and is contributing to damage by trapping moisture and causing the natural stone around it to crack and spall (**Photo E-13 and E-14).**
            - The patch material should be removed at the base of the building to prevent further damage.
- The limestone was set with very tight joints, often referred to as "butter joints."
    - Most of the joints are tight, but in some areas, particularly at the string courses, open joints were noted (**Photo E-15).**
- The limestone has been painted in the past; several generations of over-painting were observed.
    - The Library minutes indicated that in 1950 the exterior stonework was given a "coat of a concrete like mixture called Armor Coat."
        - If the limestone trim was coated with Armor Coat it has mostly worn off by now, which is good. Coatings like this can trap moisture.
    - Like the brick, it is not known why the limestone was painted or coated. Most likely the Library Board wished to create a uniform appearance to the building to masque the bituminous staining. They may also have been wishing to mask the surface flaking.
    - The limestone raised basement beneath the porch on the east elevation retains its painted coating because this area was protected from the elements. This may be the Armor Coat referred to previously, or a later paint coating (**Photo E-16**).
    - There is no need to paint limestone, and in fact it can trap moisture and be damaging to the stone.

**Photo E-11**: Detail view from 1975 photograph taken by Dr. Sprague, showing a step of at least 6" beneath the north elevation doors.

**Photo E-12**: View of north elevation doors in 2013. Door open directly onto the concrete sidewalk.

**Photo E-13**: Inappropriate Portland cement-based patch material at the base of the building.

**Photo E-14**: Spalled stone at the base of the building due to the rise of grade as well as pressure from the Portland cement patches above.

**Photo E-15**: Open joint in the limestone strong course can allow water into the wall system.

- The front steps, entry portico and flanking window bays are constructed of limestone.
    - The support walls on either side of the entry steps have seen a lot of damage over time, likely due to water infiltration and undoubtedly from de-icing salt use on the front steps during the Library period (**Photo E-17**).
        - De-icing salts can be highly destructive to natural stone. When liquefied, the salt travels into the porous stone. As it dries the crystals re-form, exerting pressure on the stone pores and creating fractures in the stone.
        - Several stones on the side walls have been coated with patch material.
        - One patch location above and to the left of the entry to the Museum appears loose and should be removed (**Photo E-18**).
        - Open joints were noted in the side walls, particularly in the knee walls flanking the stairs.

**Photo E-16**: The stone raised foundation beneath the porch overhang on the east elevation retains its painted surface because the area is protected. The stone is stable.

**Photo E-17**: The knee walls on either side of the main entry stair have many open joints, and the stone is deteriorated.

**Photo E-18**: There has been a fair amount of stone patching around the Lower Level main entry to the Museum. We noted one stone above and to the left of the entry that looks like it may spall. This loose stone should be removed.

- The steps and upper landing have been coated with what appears to be a rubberized textured coating (**Photo E-19**).
  - Coatings of this type may protect the stone surface, but also trap moisture beneath the coating and contribute to stone deterioration.
  - It is nearly impossible to remove these coatings without severe measures such as sandblasting or chiseling.
  - Historic photographs indicate that the treads originally overhung the risers somewhat (**Photo E-20)** (from the Bowman Photo showing house with wooden fence). Either the overhang was chiseled back, or the spaces beneath the overhanging tread were patched, but the overhang is no longer visible.
  - Mid-century photographs depict the stairs prior to installation of the rubberized coating. It appears that the steps were patched and possibly coated with concrete.
    - It is safe to assume that the limestone steps had deteriorated over time due to wear and to de-icing salts. Patching with

Portland cement products is not an appropriate repair method for natural limestone.

- The stone at the limestone window bays flanking the entry portico appears in stable condition, with the exception of the cornice stone, which is hidden by the attached gutters (**Photo E-21**).
    - This damage may have been due to overflowing water from the flat roofs prior to installation of the gutters.
    - It may be desirable, in a large-scale restoration project, to re-build these cornices with appropriate patching mortar.
- The interior face of the stone foundation is exposed in the Boiler Room, and should be repointed.
- The mortar joints on the interior face of the stone foundation in the basement crawl space are deteriorated and need repointing.

**Photo E-19**: The front entry steps are limestone, although they are covered with a durable rubberized coating system. This system may keep the water out, but it also traps the moisture in.

**Photo E-20**: Detail view from an early photograph shows how the treads once had a "lip" that overhung the risers.

**Photo E-21:** The stone is deteriorated and chipping at the top of the window bays on the South elevation, behind the gutter.

**Limestone Recommendations**

General

- Existing coatings on the limestone should be allowed to wear off naturally.
    - Loose flaking of limestone and paint surfaces can be removed using a soft natural bristle brush.
- The brick and stone surfaces should not receive any water repellent coatings.
- Existing patches should be allowed to wear down naturally.

Short-Term

- Open joints in the limestone string courses should be repointed.
    - Mortar analysis should be conducted prior to future repointing, to match the original mortar in mix, color, texture and joint profile.
- The damaged stone at the south end of the porch support on the east elevation should be replaced with a stone to match in terms of type and bedding planes.
    - Limestone is no longer quarried in the Joliet/Lemont area. A fairly good matching stone can be obtained from the Halquist quarry in Sussex, WI.
- The spalling stone over the south Lower Level door should be removed.
- The spalled stone at the base of the building around the perimeter should be removed and temporarily repaired by re-adhering the largest spalled pieces back to the base stone and patching open areas. The grade around the building should be lowered and tapered away from the foundation. See also Long-Term recommendations below.

Mid-Term

- The exposed interior face of the foundation wall at the crawl space and Boiler Room should be repointed.
    - A mortar analysis should be conducted to identify an appropriate mortar. If too hard a mortar is utilized, it will deteriorate the stone.

Long-Term

- In a large-scale exterior restoration program the following should be undertaken:
    - The limestone butter joints should be repointed using a lime-based mortar.

        - A mortar analysis should be conducted prior to future repointing, to match the original mortar in mix, color, texture and joint profile.
    - The previous patches should be removed.
    - Where the stone surface has worn away (or been chipped away from previous patching campaigns), and there are holes (as in **Photo E-8**) or cracks, one of two options should be undertaken:
        - Option 1: the surface may be patched using Jahn stone patch material or similar which matches the stone in color, texture and hardness.
        - Option 2: a skilled stonemason may be employed to re-tool the stone surface.
    - Where ¼" or more of stone has deteriorated or spalled from the surface, one of three options can be undertaken:
        - Option 1: the surface may be patched using Jahn stone patch material or similar which matches the stone in color, texture and hardness.
        - Option 2: a skilled stonemason may be employed to re-tool the stone surface.
        - Option 3: for deeper spalls measuring ½" or more, the stone surface may be tooled back to a uniform depth, and a 1" limestone veneer may be installed to the face of the stone, with care being taken to match the stone type and bedding planes.
    - The limestone entry stair knee walls and steps are in fair to poor condition.
        - It is wise that the public is not allowed to enter the building via the steps.
        - The knee walls have lost a fair amount of mortar between the building stones (as observed from the storage closet beneath the stairs), and have received a good amount of patching. However, they do not appear to have buckled or displaced.
        - The steps themselves have undergone irreparable "repairs."
        - We do not think that either the rubberized coating or the cementitious patches/coating over the original stone steps can be removed without further damage to the structure.
        - In a larger restoration plan the sidewalls would be disassembled at least to where the stone steps engage the wall. The steps could be replaced with either new limestone steps (which would eventually wear just as these have), or possibly cast stone steps that would replicate the limestone in color and somewhat in texture. Granite steps would provide the greatest longevity, but it would be difficult if not impossible to identify a granite that would match the adjacent limestone. We would also be concerned about the differential expansion characteristics of granite vs. limestone and the possible damage that could be done to the limestone side walls.
        - In the mid-term, the knee walls of the step assembly (both inside and out) should be repointed with an appropriate mortar.
        - All of the options presented above are very costly. In the short- to mid-term, it is wisest to prevent the public from climbing the stairs.

## Cornice

### Description of Conditions

- An ornate cornice surmounts the building (**Photo E-22**). It is of wood construction with the exception of decorative cast-iron brackets and terra cotta trim elements.
- The painted wood fascia, soffit and associated trim elements are in very good condition considering their age, although they are in need of painting.
    - The areas nearest the bottom of the cornice assembly are in greater need of painting, as they receive more weathering exposure than the protected areas under the deep-hanging eave.
    - Lunette attic windows are set within the fascia (**Photo E-23**).
        - Alternating between the windows are similarly-shaped lunettes that are filled with solid wood panels.
        - Painted terra cotta rosettes are placed within the center of these solid lunettes
            - A similar rosette was found in the garden. It is very similar in style but not identical to those on the building and may have been a sample that was discarded (**Photo E-24**).
        - Smaller rosettes are positioned in the upper fascia.
- Cast heavy-gauge steel brackets are positioned between each lunette. The brackets are paired toward the outer edges of the roofline (**Photo E-25**).
    - Brackets are constructed in three pieces: face and two sides; the overlapping seams are apparent (**Photo E-26**).
    - The Library minutes indicated that in 1929 the brackets were "made safe by removing the old, short iron screws and replacing them with longer brass screws."
    - The BCA 2011 Capital Needs Assessment states that in the mid-1970s the cornice and soffit were scraped and painted. At that time they discovered that one of the cast-iron supports was loose and the piece of wood it was bolted to was replaced and the support was refastened to it.
    - Some rust is exhibited; they appear in excellent condition for their age.
        - In many areas where paint is peeling, the exposed metal is grey – suggesting that it was galvanized or lead-dipped.
    - Even though the brackets are in good condition for their age, exposed corrosion and peeling paint indicate deferred maintenance, and they should be attended to in order to extend their serviceable life.

**Photo E-22**: Overall view of the cornice.

**Photo E-23**: View of the alternating lunette windows and solid areas with ornamentation.

**Photo E-24**: This terra cotta ornament was found in the garden. It is not exactly like those found on the building, but it is very similar in style and may have been a rejected sample.

**Photo E-25**: View of the paired brackets on the cornice at the corners.

**Photo E-26**: Detail view of the cast-iron cornice brackets. They were constructed in three pieces—two sides and a front. The seams are visible, as is surface rusting beneath the deteriorated paint coating.

**Cornice Recommendations**

Mid-Term

- For general maintenance, the iron brackets should be prepared and painted.
    - The loose paint should be scraped.
    - The corroded areas should be wire-brushed to white metal and primed with rust-prohibitive primer, and then painted with two coats of long-lasting paint.
        - In a larger exterior restoration campaign, the brackets should be completely stripped of paint, the corrosion removed, and then they should be primed and painted with high-quality rust-prohibitive metal primer and paint such as Tnemec.
- The fascia, windows and surrounds should be prepared, primed and painted.
    - All surfaces, particularly window sills, should be cleaned prior to painting.

## Gutter / Downspout

**Description of Conditions**

- The gutter is built into the cornice (**Photo E-27**).
    - Approximately half of the gutter system appears to be copper (older); the other half appears to be sheet metal, possibly aluminum (newer). The gutters are painted on the exterior surface; their metal is exposed on the trough face (See Photo E-53).[2]
        - The BCA 2011 Capital Needs Assessment reported that a gutter was installed in 2003.
- There are three gutter/downspouts on the south elevation, serving the flat roofs of the entry portico and two adjacent window bay roofs (**Photo E-28**).
- Surprisingly there are only two downspouts that lead from the roof to grade.
    - The gutter system must be well-sloped to lead properly to the downspouts.
    - No deterioration to the masonry or cornice beneath the gutter system was noted.
- The downspouts are round, approximately 4" in diameter and appear to be galvanized sheet metal, painted. These were probably installed in 1953 per the Librarian's annual report.
    - There was little to no water damage at the walls adjacent to the downspouts.
    - This indicates that the gutters/downspouts are clear of debris, probably because there are no nearby trees to clog the drains.
    - The north and west downspouts drain at grade onto concrete blocks (**Photo E-29**).
        - It is probably to the building's benefit that the downspouts do not lead to a sub-surface drain line—antiquated or broken drain tiles can lead to water infiltration in the basement.
        - Some water infiltration was noted in the Boiler Room, against the west elevation.
            - It was noted that the downspout leader terminated quite close to the foundation wall in that location.

**Photo E-27**: View of the underside of the cornice gutter system (See **Photo E-53** for the top side).

**Photo E-28**: General view of the south elevation, showing the entry portico and two flanking window bays. Independent gutter systems and downspouts serve each shallow roof.

**Photo E-29**: The downspouts terminate near the base of the building at concrete splash blocks. Longer leaders should be provided; the splash blocks should be retained at the end of the leaders.

**Gutter / Downspout Recommendations**

Short-Term

- The leaders at the base of all downspouts should be extended, to lead the water as far away from the basement as possible.
    - It is recommended that the leaders extend 3-4 feet from the base of the wall. Concrete blocks should then be placed at the end of the leaders.

Maintenance

- Clear the gutters and downspouts once per year and ensure there are no holes or splits in the downspouts.
    - This can be done by pouring water down the downspouts from the roof gutter to ensure the water runs freely.

## Porches and Wood Railings

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**Description of Conditions**

**East Porch:**

- On the east elevation a two-story wood porch sits atop a stone arch support (**Photo E-30**).
    - The exposed surfaces of the porch assembly are in fair to poor condition.
        - The wood is in need of paint, but considering the age of the structure the wood itself is in very good condition.
        - The longevity of this wood is most likely due to the fact that it is old-growth wood. All efforts should be made to retain as much original wood material as possible, rather than replace it.

**Photo E-30**: General view of the east elevation two-story porch.

- The porch was modified in 1913, when openings were made at the Main and Bedroom floor level porch floors to allow for the installation of an iron fire escape.
  - The fire escape assembly was removed in 2011, and the openings in the porch floors were enclosed.
    - The porch floor enclosures are poor, and should be considered temporary (**Photos E-31 and E-32**).
- The porch roofs are covered with rubberized roll-roofing (i.e. EPDM). Their condition is discussed in the Roofing section.
- Wood spindle railings are mounted at the Main and Bedroom floor levels.
  - The spindles themselves are in fair condition, but their bases are generally deteriorated.
    - Ottawa High School shop students reproduced the majority of these spindles in the 1970s. Two photos from the Brookman collection show the railing conditions before and after repair in the 1970s (**Photos E-33 and E-34**).

**Photo E-31**: View of the underside of the porch floor, as seen looking up from the Main Level/2nd Floor. The wood framed opening indicates where the fire escape opening was located.

**Photo E-32**: View of the underside of the porch floor, as seen looking up from the Lower Level. The wood-framed opening indicates where the fire escape opening was located.

**Photo E-33**: 1970s photograph from the Brookman collection, showing how deteriorated the original wood rail spindles were at that time. Some of these were modified; some were replaced at that time.

**Photo E-34**: 1970s photograph from the Brookman collection, showing the east elevation porch rail. We are fortunate to have this photo, as it shows original spindles with new blocks (left, still painted) and replacement spindles (right, unpainted).

- The bottom horizontal member on the Bedroom Level floor railing has failed due to rot (**Photo E-35**). Reportedly, this was from air conditioner condensate, which was drained against the railing, promoting rot.
- The handrail at both levels is covered with painted, galvanized sheet metal.
    - The paint surface has worn, as has the galvanizing in some areas, due to the loss of protection from the paint (**Photo E-36**).

- Historic photos, although black and white, indicate that all exterior wood including the porches, rails, window and cornice were of a similar hue that appears to have been lighter than the adjacent limestone.
    - It is difficult to discern what the original paint finish was on the porch, as it has worn and been repainted over time.
    - Because the cornice is in such good condition, paint for all exterior wood should be based upon samples found on the cornice.

**Photo E-35**: The bottom member of the porch railing at the Bedroom Level/3rd Fl. has completely rotted due to excessive moisture from a condensate tube.

**Photo E-36**: View looking down on the railing, showing the galvanized sheet metal cap that was placed over the top of the rail. This helps protect the wood rail, but it has not been painted and is starting to rust.

**East Porch Recommendations**

Short-Term

- The exposed wood porch structure should be scraped and painted in order to protect the wood from further damage owing to UV exposure.
- Small openings in the porch structure should be closed so birds and animals will not nest within.

Mid-Term

- The entire east porch should be stripped, sanded, primed and painted with two coats of high-quality exterior paint.
- The former openings on the floors of the Main and Bedroom Floor levels of the porch need to be properly enclosed.
    - The porch ceiling enclosure on both levels should be removed in the areas adjacent to the former openings, so that the joist configuration can be reviewed by a structural engineer for rot as well as for stability.
        - We assume the joists immediately flanking the opening, and those which were cut in order to make the openings, will need to be either replaced or "sistered" (doubled-up).
        - The ceilings can then be reconstructed on the underside of both porches—original detailing and as much original material as possible should be utilized.
- The porch railings should be repaired: rotted blocks at the base of the spindles should be replaced, and the railings reconstructed with a new bottom rail.
    - A detail should be developed which will separate the bottom of the spindles from the horizontal rail slightly in order to allow drainage (and prevent rot). The bottom portion of the spindles should be soaked in epoxy to help prevent water absorption.
- The top metal cap should be removed to inspect the top rail.
    - After appropriate repairs are made, a similar cap can be installed to protect the rail.

**South Porch Railings:**

- Shallow exterior porches are formed on the south elevation at the Bedroom Floor level over the entry portico and the flanking window bays.
    - The roof of these porches is covered with rubberized roll roofing (to be discussed in the Roofing section).
    - Painted wood railings extend around these porches.
        - Reportedly, these wood rails were entirely fabricated in the 1970s by Ottawa High School shop students, based upon existing rails on the east porch.
        - The porch rails are missing in the 1975 Sprague photos. It is not known when they were removed.
    - The newer rails:
        - Are somewhat deteriorated at the base due to water.
        - Seem to be a good replica of the original.

- Are covered with painted aluminum on the top rails, to protect from water damage.

**South Porch Railing Recommendations**

Short-Term

- The bottom rail should be reviewed and repaired/sealed to prevent further moisture damage.

Mid-Term

- Deteriorated spindles or other railing elements should be repaired or replaced; rotted blocks at the base of the spindles should be replaced, and repairs made to the bottom rail.
- The top cap should be removed to inspect the top rail.
  - After appropriate repairs are made, a similar cap can be installed to protect the rail.
- The south porch railings should be stripped, sanded, primed and painted with two coats of high-quality exterior paint.

## Wood Windows and Exterior Doors

**Description of Conditions**

**Windows**

- There are nine types of windows found at the Reddick Mansion. They are all painted wood.
  - Lower Level / 1st Fl:
    - Double-hung, shallow arch two-over-two (20).
    - Split double-hung, shallow arch, one-over-one (1).
    - Round fixed-pane oculus windows beneath the entry stair (2).
  - Main Level / 2nd Fl:
    - Double-hung, tall round arch three-over-six (raises into wall cavity) (21).
    - Note: one original window was converted to a fire escape door on the east elevation. The top portion of the window remains over the modified door (1).
  - Bedroom Level / 3rd Fl:
    - Double-hung, shallow arch four-over-six (raises into wall cavity) (7).
    - Double-hung, shallow arch four-over-four (17).
    - Note: one double-hung four-over-four window was converted to a fire escape door on the east elevation. The top portion of the window remains over the modified door (1).
  - Servants' Level / 4th Fl.:
    - Single-hung (raises into wall cavity) single-pane two-light lunette (24).

- Overall observation about windows:
  - Lower Level/1st Fl. windows are in fair to poor condition.
    - The sills are typically covered with an iron sill guard, which may have been an early 20th century way of covering over rotting sills. They are now corroding beneath peeling paint (**Photo E-37**).
    - The worst deterioration is seen at the sill and the lower rail of the bottom sash.
    - Loose or missing glazing putty is seen on 30% of these windows.
  - Main Level/2nd Fl. windows are in fair to poor condition.
    - The sills and lower rail of the bottom sash are often covered with epoxy-saturated fabric (a past repair, year unknown), which is now peeling off (**Photo E-38**).
    - The worst deterioration is typically seen at the sill and the lower rail of the bottom sash.
    - Peeling paint is seen on 50% of these windows.
    - Loose or missing glazing putty is seen on 50% of these windows.
      - Note: the condition varies from window to window. Reportedly the windows serving the Southwest Parlor were restored in the 1990s. These windows are weather-worn but not as severely deteriorated (**Photos E-39 and E-40).**
  - Bedroom Level/3rd Fl. windows are in very poor condition.
    - The sills and lower rail of the bottom sash are often covered with epoxy-saturated fabric (a past repair), which is now peeling off.
    - The worst deterioration is seen at the sill and the lower rail of the bottom sash, but at this level both sashes are in extremely poor condition, with much peeling paint and missing glazing putty. The severity of the condition varies by building elevation, due to exposure and weather. (**Photos E-41 and E-42).**
    - Peeling paint is seen on 100% of these windows.
    - Loose or missing glazing putty is seen on 100% of these windows.
  - Servants' Level/4th Fl. lunette windows are in fair condition.
    - Because these windows are protected by the overhanging eave, they are in fair condition.
    - The sills exhibit deterioration.
    - The sashes are in stable condition.
    - The glazing putty is dried and cracked but stable.
- Detailed observations. For illustrative purposes we will show conditions found on the Bedroom Level/3rd Floor, south facing windows.
  - These south-facing windows are in deplorable condition.
  - The paint is severely cracked, crazed and peeling (**Photo E-43**).
  - Past attempts at repair using epoxy and fabric have failed, and are now peeling or have peeled (**Photo E-44**).
  - Glazing putty is cracked, loose, and the majority of it is entirely missing (**Photo E-45**).
  - The only thing holding the glazing into the frame are severely corroding glazing points, which cannot be relied upon (**Photo E-46**).

**Photo E-37**: The Lower Level/1st Fl. windows have their sills covered with iron sheet metal. They are severely corroding.

**Photo E-38**: Many window sills and bottom sash rails were repaired in the mid-20th century using epoxy-soaked fabric. This fabric is now failing and peeling off. Epoxy repair techniques for wood have since become more developed.

**Photo E-39**: View of Main Level/2nd Fl. Double-hung windows. They are in fair condition overall.

**Photo E-40**: View looking down at the bottom rail and sill of Main Level/2nd Fl. Double-hung windows. These sills are stable.

**Photo E-41**: View of typical Bedroom Level/3rd Fl. double-hung window. The paint, caulking and glazing putty on these windows is severely deteriorated.

**Photo E-42**: View of another Bedroom Level window on a less-exposed elevation that is in fair to poor condition. The upper sash (more protected) is in better condition than the lower sash (where water collects).

**Photo E-43**: View of a walk-through double-hung window over the entry portico on the south elevation. These windows are severely deteriorated.

**Photo E-44**: Location where past epoxy repair fabric has pulled off the bottom window rail, exposing the wood. These patches have failed.

**Photo E-45**: In this window, ALL the glazing putty from the center mullion has cracked, broken and is gone. This leaves the glass precariously positioned.

**Photo E-46**: Often-found condition of missing glazing putty and severely peeling paint on a window mullion. Although the wood looks deteriorated, proper window restoration should bring it back to operable condition.

**Photo E-47**: This view was taken from a pre-1865 photograph of the Mansion (photo taken by Bowman), showing a solid front door panel.

- Existing interior storm glazing system:
  - The RMA files included a receipt from Jordan Hardware Co. for 3x6 Plexiglas, 4x8 Plexiglas, metal sash strips and corners, which appear to be supplies for fabricating the interior storms, dated 11.2.81 for $3,818.80 and signed by A.L. Perkins (RMA files).
  - The interior glazing system installed by the RMA is doing little to improve the thermal quality of these windows. They have actually exacerbated interior deterioration by trapping humidity within the two panes of glass. This system should be removed and eliminated during a restoration project.
  - These aluminum interior storm sashes may be helping to hold the original wood window sash in place and keep them from racking— they should not be removed until the sash are to be restored.

**Exterior Doors**

- There are five exterior door types found at the Reddick Mansion. They are all painted wood.
  - Lower Level/1st Fl:
    - South elevation entry door: modern four-light panel door.
    - North elevation east entry door: modern six-light panel door with solid transom.
    - North elevation west entry door: possible original or early four-light panel door with two-light transom. This door has a four-panel screen door.
  - Main Level/2nd Fl.:
    - South main entry: "Palladian style" double door entry. Each panel door has a single arched light. Doors topped by lunette transoms and flanked by single sidelights.
      - Note that historic photos indicate that the entry doors did not originally have glass lites.
    - East fire escape exit: modern single-light panel door (as shown in Photo E-48).
  - Bedroom Level/3rd Fl.:
    - East fire escape exit: modern single-light panel door (same as Main Level).

- Overall observations
  - Fire escape doors:
    - The two fire escape doors on the east elevation are not original to the property.
    - In a full restoration the fire escape doors would be removed and windows fabricated and installed to replicate the originals.
  - South and north elevation entry doors at Lower Level/1st Fl.
    - These doors are in fair to good condition.
    - With continued maintenance and painting they should continue to be serviceable.

- Main Level/2nd Floor entry door: This door was fabricated in the 1970s to replicate the original door assembly.
  - The door and sidelights appear in excellent condition, and are protected from the weather by the entry portico.
  - With continued maintenance and exterior painting they should continue to be serviceable.
  - The original exterior set of doors were probably solid wood, with inset panels and raised trim, as seen in this detail photograph from a pre-1865 photograph (**Photo E-47**).

- Detailed observations. For illustrative purposes we will show conditions found on the Bedroom Level/3rd Floor east-facing fire escape door.
  - The interior surface of this door is in fair condition.
  - The exterior face of this door is in poor condition. The paint is severely peeling (**Photo E-48**).
  - The sill is peeling, and open wood grain is visible (**Photo E-49**).

**Photo E-48**: Bedroom Level fire escape exit door on the east elevation. Due to lack of maintenance, the paint coatings on this door have failed and are peeling.

**Photo E-49**:
Deteriorated sill at east elevation fire escape door.

- Note that full "Window and Exterior Trim Restoration" documents were prepared by Basalay, Cary & Alstadt Architects, Lt. of Ottawa, IL in May 2011.
    - These documents propose work that is in keeping with the Secretary of the Interior's Standards for Restoration and are still relevant to the building.
        - They propose retaining, rather than replacing, the windows.
        - They propose retaining and reusing all original glass.
        - They propose restoration and weather-stripping of the window sash and frames.

**Wood Windows and Exterior Doors Recommendations**

General

- Important notes regarding window and door restoration of historic properties:
    - Only wet methods of paint removal should be utilized on these windows, rather than grinding or heat methods of paint removal.
        - The mullions in these windows are extremely small, as typical of the time period, and grinding or chiseling paint can mar or destroy them.
        - Heat methods of paint removal are never recommended for buildings of this age.
    - Because maintenance work was undertaken in the mid-20th century, there is likelihood that there may be asbestos in the caulk. Proper care should be taken during removal.
    - Because of the age of this building, it is probable that early layers of paint contain lead. Proper care should be taken during removal.
    - It is essential that the original glass be retained and re-used rather than "broken out" during restoration.
    - The perimeter of all windows and doors should be retrofitted with appropriate weather stripping to decrease air infiltration.

- We do not recommend that storm windows be fabricated and installed at this time.
- Once wood windows and doors are restored, they must be maintained.
  - Windows should be painted every 5-7 years.
  - Putty should be maintained very 5-7 years.
  - Caulk should be replaced every 14 years (or more, depending on exposure).
  - Putty may have to be fully replaced about every 20 years.
  - Epoxy repairs to re-stabilize windows may have to be performed about every 15-20 years.

Short-Term

- The Bedroom Level windows are in extremely poor condition, reaching the point of failure in several locations.
  - Immediate action should be taken to address the south-facing windows, as they are easily accessible from the porch roofs.
    - To stabilize these windows, the loose putty should be removed, and glazing compound should be installed to set the glass in place.
    - These windows can be stripped in place using wet methods (paint stripper).
    - The windows can then be prepared, primed and painted.
      - Note: this should not be considered a full restoration—this is solely for stabilization.
    - As an alternative, these six windows could be used as a pilot restoration program. Based on time, materials and restoration methods, a more precise budget for large-scale restoration can be obtained after restoring these six windows.
  - The Window and Exterior Trim Restoration project should be undertaken as a first priority.
    - If the project needs to be phased, the Bedroom Level windows are of highest priority, followed by Main Level windows that have not been restored within the last 10 years.
    - Third priority are the Lower Level windows (although because these are at grade they can be easily maintained).
    - The Servants' Level lunette windows can be addressed with the cornice work if necessary.

## Main Roof and Porch Roofs

### Description of Conditions

**Main Roof**

- The roof atop the Mansion is comprised of a flat portion that is covered with a rolled rubberized roofing membrane (EPDM or similar), with shallow hipped roof areas covered with grey asphalt shingles. This roofing system was installed as part of a

city project around the year 2000. The new skylight and hatch entry were installed in 2012.
    - The BCA Capital Needs Assessment states that the current roof was installed c. 2000.
    - Repairs to this roof were brought on by a lightning strike in Summer 2011 that damaged the east elevation chimney, leading to its disassembly.
    - At that time, a modern skylight and a modern roof hatch were installed.
        - There had originally been a skylight over the main staircase, which had been roofed over.
- The existing roof appears in very good condition (**Photo E-50**).
    - The transition between the flat and hipped portions of the roof is in the form of a metal cleat (**Photo E-51**).
        - The BCA Capital Needs Assessment states that evidence of water damage was found in the attic in nearby locations to these joints, suggesting that separating joints may be allowing water to infiltrate the building. The roof has since been repaired.
    - A modern skylight is positioned on the roof, and is properly flashed around the perimeter (**Photo E-52**).
    - A modern hinged access door is positioned adjacent to the skylight, and is accessed via the attic. It, too, is properly flashed around its perimeter.
    - From the roof, one can see the copper perimeter gutters. They appear clear at this time (**Photo E-53**).

**Photo E-50**: View of the rolled rubber (EPDM) roof surface on the flat portion of the roof, and trey asphalt shingles on the hipped portion of the roof. These roof surfaces are new.

**Photo E-51**: View of the termination bar at the perimeter of the EPDM where it meets the asphalt shingles.

**Photo E-52**: View of the roof hatch and new skylight positioned on the flat portion of the roof.

**Photo E-53**: View looking down into the copper gutters.

- Based on Library minutes, the original roof (or at least the existing roof post-1888) was painted tin, probably standing seam (although it could have been flat seam).
    - The Library Board undertook several repair/painting campaigns throughout its history:
        - In 1907 the paint on the tin roofs was "burned off" and repainted.
        - There were leaks in 1915, and the roof needed repairing.
        - In 1929 repairs to the roof were necessary, and they decided to tear down the five original chimneys.
        - In 1943 the Library Board authorized to have the roof of the library painted (this indicates that the roof was still painted tin).
        - In 1953 the Library's annual report noted that a new roof had been installed along with new cornices, gutters and downspouts (It is more likely that repairs were made to the cornice rather than it actually being "new").
- There were originally five chimneys that served the Reddick Mansion:
    - One that served the Lower and Main Levels' Southeast Parlors and the Southeast Bedroom.
    - One that served the Lower and Main Levels' Southwest Parlors and the Southwest Bedroom.
    - One that served the Lower Level's center west room (possibly kitchen), the Main Level's Center West Parlor, and the Center West Bedroom.
    - One that served the Lower and Main Levels' Center East Parlors and the Center East Bedroom.
    - One that served the Lower Level's northeast room (possibly kitchen), the Main Level Dining Room and the Northeast Bedroom.
- In 1929 it was determined that the chimneys were in bad shape, and it was decided to repair the one in use and to tear down those that were no longer of any use.
    - The chimney to remain was the new one that was constructed in 1925 against the exterior wall on the west elevation.
        - The Library lowered the Boiler Room floor in 1925 to accommodate a new heating plant, and constructed the new exterior new chimney that year.

**Porch Roofs**

- The roofs over the south elevation entry portico and flanking window bays, as well as the east elevation porch roofs, are also covered with a rubberized roll roofing (EPDM or other) (**Photo E-54**).
    - According to RMA records, the two bay windows and entry on the south side were covered with ". 060 gauge black EPDM rubber roofing and flashing" in 1990.
    - According to RMA records, in 1986 the east elevation porch roofs received a fully adhered .060 gauge single-ply rubber membrane over the existing roof surface. The bid reads "Install water cut-off sealing mastic and aluminum termination bar along walls, outside edge, railing posts and stairway opening; fully adhere ½ inch thick asphaltic walkway surface over new rubber membrane from top of stairs to doorway. $1,308 each stair landing." A handwritten note states "approved 2.13.87; completed 3.2.87."

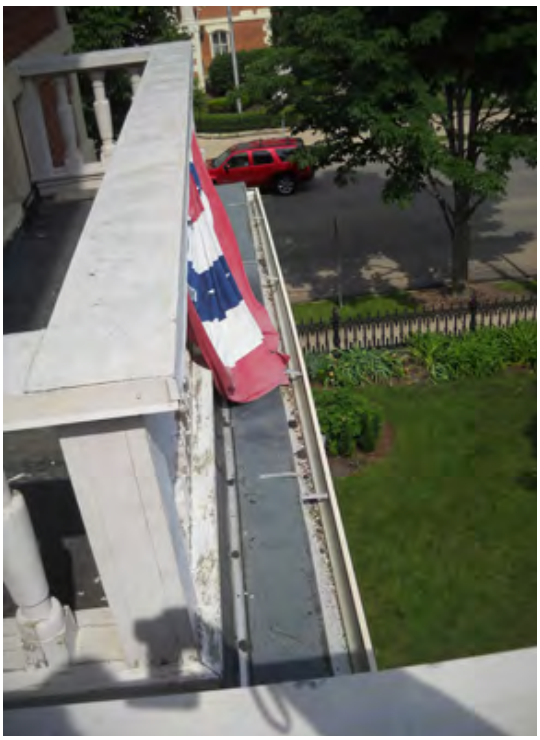

**Photo E-54**: View of the EPDM rolled rubber roofing on the east window bay roof, south elevation. The termination bars are visible just beneath the railing. Note also that the top of the rail is covered with sheet metal to protect it.

- The south elevation porch roofs appear in stable condition. No obvious breaches in the system were noted. No interior leaking was noted.
    - The roof is 23 years old. EPDM-type roofs have a long service life and are appropriate for use on flat roofs. Until there is a breach in the system, these surfaces can remain in place.
        - They should be replaced in 10-15 years, at which point all past roof surfaces should be removed down to the deck, and a new rubberized roof system installed.
- The east elevation porch roofs appear stable at this time, but are nearing the end of their serviceable life.
    - The roof is 27 years old. EPDM-type roofs have a long service life and are appropriate for use on flat roofs, but these roofs, particularly the roof at the Bedroom level/3rd floor, have seen heavy weathering (**Photo E-55**).
        - In addition, the Bedroom Level roof has a condensing unit and condensation drainage pipe installed above it, which may contribute to deterioration.
    - The Main Level/2nd Floor porch roof is covered loosely with plywood, likely from when the fire escapes were removed in 2011 (**Photo E-56**).
    - No leaking was noted on the ceilings of either east porch roof.

**Photo E-55**: A condensing unit is positioned on the Bedroom Level porch roof. The roof surface at this level has experienced greater sun exposure and weathering than the porch floor below.

**Photo E-56**: The porch floor at the Main Level/2nd Fl. may have been more protected, but it is now covered with sheets of plywood. The former fire escape opening was in the upper left portion of the photograph.

**Main Roof and Porch Roof Recommendations**

Short-Term

- The main roof is stable at this time.
- The source of water infiltration near the skylight should be immediately checked and resolved. The decayed wood should be checked and mold/fungus fumigated.

Mid-Term

- The south porch roofs are stable at this time. Plan for their removal and replacement in 10-15 years.
- The east porch roofs are in fair condition at this time. Plan for their removal and replacement (and the associated porch floor's modification/repair to enclose the former fire escape opening) in 5-10 years.
- It is appropriate to use an EPDM rubberized sheet roofing for these flat roofs. If installed properly and reviewed by the product manufacturer you can receive up to a 15-year guarantee on a system of this type.

Long-Term

- Plans should be made to replace the main roof system in 20-25 years.

**END EXTERIOR CONDITION ASSESSMENT**

[1] Two pages of handwritten notes on the backside of the building's specifications indicate that the stone came from two different quarries. Joliet (lime)stone was used for: 40 long ashlars, 48 short ashlars, 11 long quoins, 10 short quoins, 7 window sills, 14 shields, 55 pieces of string course and various other pieces. Another page indicates that Athens stone was used for the principal story, for quoins between belts and string course, for the chamber story, for 28 single shields, 3 double shields, 9 window sills, 4 pieces for sills to double windows of south and east elevation, 17 window caps, 14 stones for belt course and 34 ft for bay window cornice as well as other misc. stones. The Joliet quarries were located in the city of Joliet. The Athens quarries were closer to Lemont, Il but both quarries produced the same stone – however some variations may have occurred. Why two quarry sources? Perhaps the Joliet quarry alone could not supply that much stone, or perhaps the same person owned two quarries.

[2] The RMA indicated that in 2012 new copper gutters were installed.

# Physical Analysis – Mansion Interior

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# Interior Condition Assessment

## Lower Level / First Floor

Please note: the nomenclature throughout this report will refer to the Mansion floors primarily as the Lower, Main, Bedroom and Servant's Levels. However, throughout history, the floors have been referred to in a variety of manners:

| | | | | |
|---|---|---|---|---|
| Lower Level | = | First Floor | = | Basement |
| Main Level | = | Second Floor | = | Principal Story |
| Bedroom Level | = | Third Floor | = | Chambers Story |
| Servants' Level | = | Fourth Floor | | |
| Attic | = | Attic | | |

**Changes Through Time**

- The Mansion was opened as the Reddick Library in September of 1888. At that time the following changes were made to accommodate the new use:
  - A steam heating (radiator) system was installed starting in May 1888.
  - Water closets (toilets) were installed (we assume on the Lower Level).
- In 1906, the Lower Level was renovated and repaired for the new Janitor.
- In 1912, a bathroom was installed for the Janitor.
- In 1917, the Lower Level was remodeled into a Juvenile Department by architect Jason Richardson, and constructed by Sinnott Brothers.
  - Linoleum was ordered to cover the floors of the Juvenile Department.
- In 1923, changes in construction of the Lower Level Library department were made under the supervision of architect Jason Richardson, including the integration of steel beam supports.
  - We assume that at this time large openings were made in the following bearing walls:
    - West and north walls of the Southeast Room.
    - West and north walls of the Center East Room.
    - East wall of the Southwest Room.
- Library minutes indicate that the women's toilet in the Lower Level was overhauled and a new fixture installed in 1924.
- In 1925, the floors in the Boiler Room and Coal Room were lowered, and a heavy cement floor laid in each.
- In 1925, a new boiler and heating plant was installed.
- In 1928, a bid was accepted to "restore the walls, ceiling and woodwork of the lower three floors including the hall." We assume this means painting.
- In 1938, painters were contracted to redecorate the interior of the Library and renew the floor covering on the Main Level. Work was undertaken on the Lower Level, Main Level and Bedroom Level, as well as the exterior of the doors.
- The 1944 annual Librarian's report noted that the building had been rewired.
- In 1951, bids were obtained for redecorating the Lower Level

- In 1953, it was necessary to rearrange some of the furnace pipes and re-lath and plaster the ceilings of the Boiler and Coal Rooms.
- In 1953, the Children's Department was re-wired and new fluorescent fixtures were installed.
- In 1953, major structural repairs to the building had begun with the addition of three steel beams supported by pillars to reinforce the west side of the main floor. The Children's Department was closed for three weeks to complete the project.
- New vinyl floor covering was installed in the Children's Department in 1954.
- The Lower Level currently serves as the RMA office (Southwest Room(s)), Gift Shop (Southeast Room), conference room/lecture space (Center East and Northeast Rooms) and kitchen (Northwest Room). The center west space continues to serve as the Boiler Room.
- In 1963, the furnace stoker was replaced with gas.
- In 1963, the coal bin in the northwest corner was modified. A new floor was installed to create a workroom (the current kitchen).
- In 1966, the open stairwell between the Lower Level and Main Level were enclosed.
- In 1975, the conversion of the heating system from gas to oil was finished.
- In 1998-9, Fredericks, Basalay & Cary Architects remodeled the Lower Level for use as the Ottawa Visitor's Bureau.
    - At that time the partitions were installed to subdivide the Southwest Room.

**Room LL 100: Vestibule**

- **Current Use:** Currently Museum entry is via a door on the west side of the main entry stairs on the south elevation of the Mansion.
    - The door is modern, and leads to a small vestibule.
- **Walls and Ceiling:** The ceiling and walls are plaster.
- **Trim:** The base trim and door casings are original.
- **Doors:** A wood door with flanking sidelights is positioned within a framed arched opening on the north wall of the vestibule (**Photo LL-1**).
        - The trim on the door is original, and is Domestic Trim #2 - Formal.
    - An original wood door positioned on the south wall leads to a storeroom beneath the front stairs (**Photo LL-2**).

**Room LL 100a: Storage Beneath Front Stairs**

- **Current Use:** The area beneath the main entry stairs on the south elevation is used for storage of miscellaneous items. The underside of the stone steps is exposed (**Photo LL-3**).
    - A rusting steel post supports one of the steps. The date of this repair is unknown.
- **Walls:** It is interesting to note the solid masonry construction of the side walls that support the entry stairs (**Photo LL-4**).
- **Miscellaneous Details:** This space is unheated.

**Photo LL-1**: Original wood door leading from the Vestibule to the Central Hall.

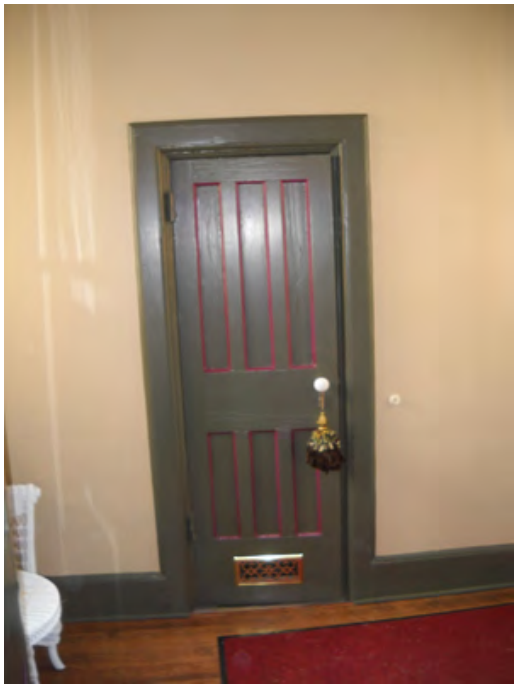

**Photo LL-2**: Original door leading from the Vestibule to the storage space beneath the front steps.

**Photo LL-3**: The underside of the stone steps is visible from the storage space beneath.

**Room LL 101 and 101a: Central Hall**

- **Current Use:** A north-south Central Hall leads to all rooms except for the Boiler Room.
- **Original Use:** This space always served as a hall, or passage.
- **RMA Era:** This space and the adjacent conference rooms/office were renovated in 1998 by Fredericks, Basalay & Cary Architects.
    - At that time the column supports to the east and west of the entry vestibule were clad with wood to appear as Doric columns (**Photos LL-5 and LL-6**).
    - Previously, the north wall of this room contained the "Restore-a-Brick" mural (**Photo LL-7**).
- **Walls and Ceiling:** The walls and ceiling are plaster (or skim-coated drywall) with the exception of a painted plywood ceiling panel toward the south end.
    - Radiator pipes are left exposed at the ceiling level.
- **Lighting:** There is modern lighting throughout (**Photo LL-8**).
- **Trim:** The base trim is modern.
    - The door trim to the Southwest, Southeast, and Center East Rooms is modern.
    - Domestic Trim #2 - Formal is found on the following doors:
        - The door/sidelight opening on the south wall.
        - The door leading to the Kitchen Hall.
        - The door leading to the Ladies Room.
        - The door to the closet beneath the stairs.
    - Domestic Trim #1 - Informal can be found on the following doors:
        - All doors leading from the Kitchen hall to adjacent rooms.
        - The door leading to the Northeast Room from the Central Hall (this is an anomaly, as adjacent doors have the more formal trim).
- **Flooring:** The floor is carpeted.

**Room LL 101b: Closet Beneath Stairs**

- **Configuration:** A closet is positioned beneath the stairs. It is original.
- **Walls:** The walls are painted plaster.
- **Door:** The closet is accessed by a cased opening with a glazed door and transom (**Photo LL-9**).
- **Trim:** The trim on this cased opening on the hall side is Formal Trim (profile #4), similar to that found on the Main Floor. It is original.
    - The trim on the closet side is Domestic Trim #1 - Informal (profile #1). It is original.
- **Flooring:** The floor is painted wood (although worn).
- **Crawlspace:** A portion of the floor lifts up to provide access to a crawlspace beneath the building.
- **Storage Space:** A small door at the back of the closet leads to a small angular storage space (**Photo LL-10**).
    - The paint finishes in this space appear to be original. It looks like a glaze was applied over the paint to give a more durable finish. This was probably how the other Lower Level plaster surfaces were treated.

**Photo LL-5**: View of the Central Hall, looking south toward the Entry Vestibule.


**Photo LL-6**: Modifications were made to the office space in the southwest corner in 1998.

**Photo LL-7**: 1970s-80s view of the southwest office and the "Restore-a-Brick" mural before the office partitions were installed.

**Photo LL-8**: View looking northward in the Central Hall.

**Photo LL-9**: View in to the closet located beneath the servants' stair.

- **Window:** A small arched window is positioned in the west wall (**Photo LL-11**).
  - This window is unlike any others found at the Mansion and was intended to "borrow" natural light from the adjacent service hall.
  - It is cased with Domestic Trim #1- Informal Profile Type #1, Domestic Informal.
- **Chair Rail:** A "chair rail" runs along the east and west walls and supports hooks and towel racks. It is also Domestic Trim #1 - Informal.

**Room LL 101c: Stairs to Main Floor**

- **Configuration and History:** An enclosed stairway leads from the Central Hall up to the Main Level.
  - The closet portion beneath the stair was always enclosed.
  - The south and east walls and door of the enclosure were added in 1966 for fire protection.
    - The stair likely had a wood railing and balusters similar to that found on the stairway leading from the Bedroom Level up to the Servants' Level.
    - A curved slot adjacent to the stair rail allowed light down to the Lower Level from the skylight. A remnant of that former opening can be seen on the ceiling (**Photo LL-12**).
- **Walls:** The stair enclosure is painted drywall.
- **Trim:** The baseboard running up the stairs against the west wall within the stairwell is original formal baseboard.

**Room LL 102: Servants' Dining / Gift Store**

- **Current Use:** The Southeast Room on the Lower Level is now used as a Gift Store.
- **Original Use:** It is thought that this room was originally used as the Servants' Dining Hall, or as a sitting room for the servants. A storage closet containing the family's china and glassware was adjacent to it.[1]
  - The trim in this room is more formal than in the other Lower Level rooms and is Domestic Trim Type #2: Formal
  - Some have speculated, that this room was used by the Reddick family as an informal dining room. [2]
    - We think is unlikely that a well-to-do family of the mid- to late-19th c. would utilize the servant's level for informal dining.
    - However, the wood trim found in the Central hall and this room on the lower level are more formal than the typical domestic trim, indicating that the architect intended these spaces as serving a more formal purpose and possibly assumed that the Reddick family might enter these spaces more frequently than the true service areas.
  - Handwritten notes on the backside of the specifications indicate that this room had 2 doors. Presumably one to the Central Hall and one to an adjacent pantry.
- **Masonry Wall Opening:** The masonry bearing wall between this room and the Central Hall measures 27".
  - A large opening was cut into the bearing wall in 1923.

**Photo LL-10**: A small door is positioned within the closet beneath the stairs. It leads to additional shelved storage.

**Photo LL-11**: A small arched window punctuates the west wall of the closet beneath the stairs.

**Photo LL-12**: A curved opening in the ceiling allowed light to filter down to the Lower Level from the skylight. It is now plastered and boarded up.

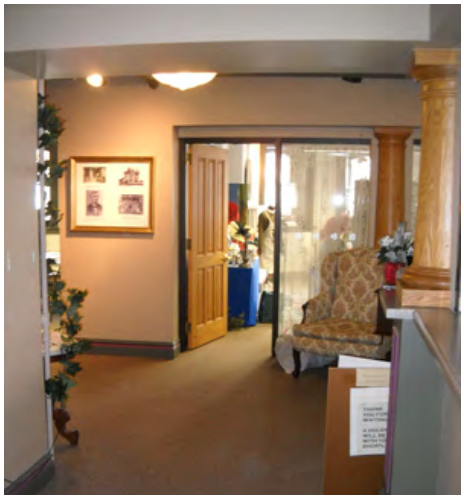

**Photo LL-13**: View toward the Gift Shop door on the east wall of the Central Hall.

**Photo LL-14**: General view of the southeast Servant's Dining Room that now serves as a Gift Store.

**Photo LL-14**: The radiators on the Lower Level are all placed upon wooden boxed enclosures to enable them to drain condensate properly.

  - It is believed a steel beam supports the opening. It is supported approximately mid-span by a column.
  - The opening is now filled with a glass storefront and in-swinging door (**Photo LL-13**).
    - This work was completed as part of the 1998 Fredericks, Basalay & Cary Architects work.
- **North Wall Opening:** The north wall between this and the adjacent room was revised in 1923 to create a large opening.
  - An accordion partition fills the opening now.
- **Walls:** The walls are painted plaster; the floor is carpeted.
- **Door:** The door trim and base trim are modern. The door is modern.
- **Trim:** The window trim found here is Domestic Trim #2 - Formal (profile #2). It is original (**Photo LL-14**).
  - It has the same profile as that found on the Bedroom Level in the Northwest Room (a.k.a. "Wet Room").
  - The profile of the trim on the south-facing windows (which are paired) is narrower in width but has the same profile as that found on the east-facing windows. It is profile #3.
- **Miscellaneous Details:**
  - Original capped gas pipes are present to either side of the window bay on the south elevation.
    - The eastern gas pipe retains its original pressed metal "rose" plate.
    - We suspect there may have been gas pipes positioned on the east angled walls, to either side of the center window, but they were cut back and covered with plaster. (Similar capped gas pipes were found in the Northeast Room).
  - A capped gas pipe is present in the center of the room, mounted on the ceiling.
  - A radiator is positioned on the north wall to the far east near the windows.

Like other radiators in the Lower Level, the radiator is raised above the floor and sits atop a wooden box enclosure (**Photo LL-15**).

**Room LL 103: Center East Room / Conference Room**

- **Current/Original Use:** The Center East Room on the Lower Level is currently used as a conference room.
  - It is thought that originally this room was subdivided, but the configuration is unknown.
    - Escutcheon plates that were noted on the radiator steam pipes indicate that there may have been a north-south partition positioned approximately 5 feet west of the east exterior wall which hints at there having been a north-south partition there. (**Photo LL-16**) However, the Inventories taken after Reddick's death suggest otherwise.

- We speculate that the room may have been subdivided in such a way as depicted in **Diagram 1.**

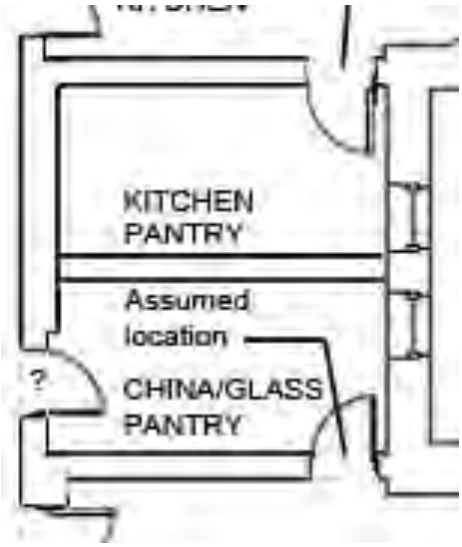


**Diagram 1**: Possible plan configuration of Center East Room on the Lower Level. The northernmost room would have served as the Kitchen Store Room; the Southern room as the linen and china/glassware pantry.

- **Wall Opening:** Both the north and south wall openings were widened in 1923 for Library use. Accordion doors now fill the openings.
- **Walls:** The walls are painted plaster.
  - The masonry bearing wall between this room and the Central Hall measures 14" at the south end at the door, then steps outward to 21".
- **Door:** The door and trim are modern.
- **Trim:** The two windows positioned on the east wall have their original trim, which is Domestic Trim #1 - Informal (profile #1) (**Photo LL-17**).
  - The base trim is modern.
- **Flooring:** The floor is carpeted.
- **Miscellaneous Details:** A capped gas pipe is present on the ceiling, centered between the windows but in close proximity to the east exterior wall.
  - The capped gas pipe indicates that a ceiling fixture would have been centered within a narrow north-south corridor.
  - We note that there are no gas pipes visible to either side of the windows (as is found elsewhere on the Lower Level).

**Room LL 104: Northeast Room / Conference Room**

- **Configuration and History:** The Northeast Corner Room was remodeled in 1998 to form a general conference room/meeting area. It is connected to the Center East Room by accordion doors.
  - Marks on the wall suggest there may have been a door opening toward the north end of the west wall.
    - This position would be identical to the now-blocked door that led from the Kitchen Hall to the now-Men's Room.

- **Original Use**: Based upon the inventory taken after Reddick's death, and upon handwritten notes on the back of the original carpenter's specifications, this room originally served as the kitchen.[3]
    - The original Kitchen configuration and cabinetry was somewhat described in the original specifications.[4]
    - There were both a store room and a pantry located adjacent to this room per the inventories taken after Reddick's death.
- **Walls:** The walls are painted plaster.
    - The masonry bearing wall between this room and the Central Hall measures 15".
- **Doors:** The door to this room is modern; the trim is original (Domestic Trim #1 - Informal).
    - A door leading to the exterior is positioned on the north wall.
        - The door has an interior glazed storm.
        - The exterior out-swinging door has six panes of glass in its upper half.
- **Trim:** The three windows positioned on the east wall have their original trim, which is Domestic Trim #1 - Informal (profile #1) (**Photo LL-18**).
    - The base trim is modern.
- **Flooring:** the floor is carpeted.
- **Miscellaneous Details:**
    - Capped gas pipes are positioned on the east angled walls, to either side of the center window.
        - The southern gas pipe retains its original pressed metal "rose" plate.
        - A capped gas pipe is present on the ceiling, centered in the room.
    - A radiator is positioned on the east wall beneath the center window. It sits on a raised wooden box enclosure.

**Photo LL-16**: Two escutcheon plates on the horizontal pipe shown here lead us to believe there may have been a partition in this location.

**Photo LL-17**: General view of the Center East Room, showing the windows on the east elevation.

**Photo LL-18**: View of the Northeast Room, showing the windows on the east bay elevation.

**Room LL 105 and 105a: Southwest Room / Reception and Office**

- **Configuration and History:** The Southwest Corner Room was reconfigured in 1998 to form an open reception desk, semi-private office and seating area off the Central Hall (**Photo LL-19**). Prior to that time the room was open, without partitions as shown in a c. 1970s Brookman photo (**Photo LL-7**).
- **Original Use:** We believe this room originally served as the Laundry[5]
- **Wall Opening and Steel Beams:** A large opening was cut into the masonry bearing wall that once formed the east wall of this room.
    - The bearing wall measures 27" thick (as seen from a remaining stub wall).
    - Additional beams extend north-south across the window bay and east-west over the north office wall.
        - Steel beams were installed above this room in 1923, over the bearing wall opening.

        - The Librarian's annual report in 1953 noted that major structural repairs to the building had begun with the addition of three steel beams supported by pillars to reinforce the west side of the Main Level. The Children's Department was closed for three weeks to complete the project.
- **Previous Door:** Evidence on the Boiler Room side of the north wall suggests that there may have been a door leading from it to this room.
- **Walls:** The walls are painted plaster.
    - According to an email from George Cary, RMA Board member and architect who completed the Lower Level restoration in 1988, the paint colors utilized during that restoration are:
        - Beige: Benjamin Moore #1075.
        - Bronze: Benjamin Moore #1561.
        - Plum: Benjamin Moore #1357.
- **Flooring:** The floor is carpeted.
- **Door:** The door and trim are modern.
- **Trim:** The two windows on the south elevation have their original trim, which is Domestic Trim #1 - Informal (profile #1) (**Photo LL-20**).
    - The three windows on the west wall also retain their original trim, which is Domestic Trim #1 - Informal (profile #1).
    - The base trim is modern.
- **Miscellaneous Details:**
    - Original capped gas pipes are present to either side of the window bay on the south elevation.
        - No other gas fittings were visible in this room. We suspect they may be positioned on the west angled walls, to either side of the center window, but were cut back and covered with plaster. (Similar capped gas pipes were found in the Northeast Room).
        - No gas fittings were noted on the ceiling. It also may have been covered during the renovations to this space.
    - A radiator is positioned on the north wall. It sits on a raised wooden box enclosure.
        - An exposed hot water pipe, covered with insulation, is positioned to the east of the radiator. The hazardous materials survey identified that insulation as asbestos-containing.

**Room LL 106: Center West Room / Boiler Room and LL 106a: Coal Room**

- **Current Use:** The Center West Room serves now as the Boiler/Furnace Room.
- **Original Use:** The original use of this room has not been confirmed. It may have served as the Scullery.[6]
    - Evidence of the room's original configuration:
        - Remnants of the original window framing exist on the west wall (**Photo LL-21**). This indicates that the room was at one time a finished room like the others on the Lower Level.
        - The door and opening on the north wall, east end, are original (**Photo LL-22**).

**Photo LL-19**: View of the office space in the southwest corner.

**Photo LL-20**: Two windows are positioned on the south wall of the Southwest Room.

**Photo LL-21**: The windows in the now-Boiler Room were framed out like other windows on the Lower Level.

        - A simply framed wood stair leads from the Boiler Room floor to the current Kitchen Hall level (**Photo LL-23**).
    - A bricked-in arched opening exists at the west end of the north wall (**Photo LL-24**). A much smaller opening at the floor leads to a crawl space beneath the Kitchen, thought to have served as the Coal Room.
    - Evidence suggests there may have been a door on the east wall that led to the Central Hall.
    - Evidence suggests there may have been a door on the south wall that led to the Southwest Room (**Photo LL-25**).
- **Library Era:** It is thought that the Center West Room served as a boiler room starting in 1888 when the Library Board commissioned Haxton Steam Heating Co. to install the steam heating system.
- **Floor Lowered:** The floor level of this room was originally at the same level as the other Lower Level rooms.
    - The floor was lowered in 1925, as recorded in the Sept. 4, 1925 Library report: "The committee also deemed it advisable to lower the floor in the boiler room and coal room and to lay a heavy cement floor in each including a floor drain in the boiler room. Mr. Cole will do this for $190."
- **Walls:** The walls of this room are brick, coated with unpainted plaster. Several generations of plaster are apparent.
    - The place where the stone foundation steps out from the brick bearing walls is visible, even though all surfaces are coated with plaster (**Photo LL-26**).

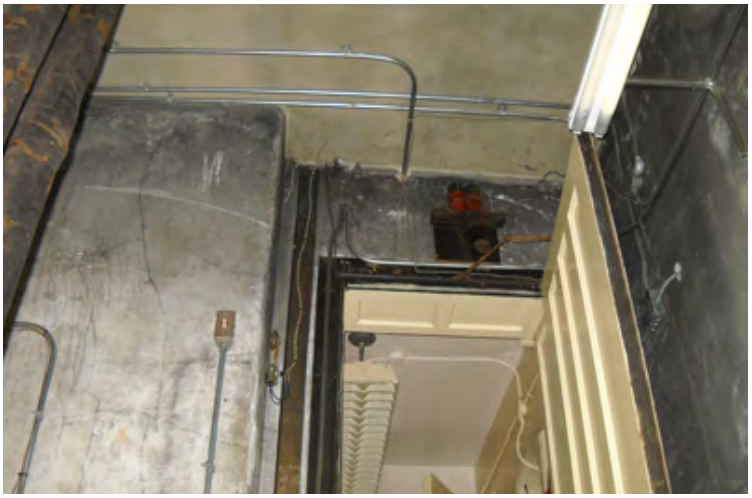

**Photo LL-22**: View of the door opening to the Kitchen Hall from the Boiler Room. Some antiquated alarm equipment is mounted above the door.

**Photo LL-23**: Stairs lead from the Boiler Room floor to the Main Level.

**Photo LL-24**: View of the bricked-in arched opening at the west end of the north wall.

**Photo LL-25**: A vertical seam in the exposed brick to the right in the picture suggests there may have been a door opening here once. This photo was taken at the west end of the south wall in the Boiler Room.

**Photo LL-26**: A ledge is formed where the foundation wall steps out, where it transitions from brick (above) to stone (below).

**Photo LL-27**: Two vent locations are positioned on the north wall chimneystack. The lower opening is for a former boiler. The upper opening, now a clean-out, was probably originally a vent opening for a stove.

- The Library minutes from March 31, 1953 read: "In the boiler room it was necessary to rearrange some of the furnace pipes and re-lath and plaster the ceilings of the boiler and coal rooms."
- Some have questioned why there are two vent locations to the north elevation chimney stack (**Photo LL-27**). The upper opening is now a clean-out, but it looks like the rectangular fixture is attached to a formerly round opening. This probably served as the vent for a stove when the floor level was higher. The lower round opening is from a former furnace flue prior to 1925.
  - The existing chimney was torn down, and a new one constructed (against the building's west façade, adjacent to this room) in 1925.
- The west wall of this room is covered in horizontal boards below the windowsill level (**Photo LL-28**). A tool bench is constructed against this wall.
  - What appears to be a cast-iron water pump is positioned in the southwest corner (**Photo LL-29**). It is thought that water was pumped from the cistern (reportedly positioned in the west side yard) up to the holding tank on the Servants' Level / 4th Floor.

- **Coal Storage Room:** The former Coal Storage Room is positioned north of the Boiler Room and is accessed through a small opening at floor level.
  - Between 1925 and 1963 the Coal Room (now Kitchen) in the northwest corner was a floor-and-a-half high.
    - Library minutes from April 9, 1963 read: "Remodeling of the coal bin for a work room was discussed. It is a floor and a half high. A new floor to support the weight is necessary as well as heat and lights. The contents of the present work room would be moved to this room and the present work room would become the Children's room."
    - Library minutes from July 2, 1963 read: "Remodeling of the coal bin will require putting in a wooden floor of 2x8 at the first floor level. Will heat the room with a small gas burner. Lighting and painting will be required (June 20) Contract awarded to Kerste & Son for $1,598 for the above work."
  - The space beneath the present kitchen is now a crawl space (**Photo LL-30**).
  - The configuration of the original coal bin will be discussed below in the Kitchen section.

**Photo LL-28**: View toward the southwest corner of the Boiler Room, showing the water pump location.

**Photo LL-29**: Closer view of the water pump handle.

**Photo LL-30**: View looking northward into the crawl space beneath the now-Kitchen. This space, before the kitchen floor was constructed, served as the coal room.

**Room LL 107: Northwest Room / Kitchen**

- **Current Use:** The Northwest Room on the Lower Level now serves as a Kitchen. The Kitchen dates from 1977, soon after the RMA took possession. It is serviceable but dated (**Photo LL-31**).
- **Original Configuration:** The original configuration of the Northwest Room is very difficult to discern. Even its use as a coal room is difficult to comprehend, particularly when there is no exterior coal chute visible.
    - Coal may have been carried in the back door and deposited in the adjacent Coal Room.
    - A piece of anthracite coal was found in the crawl space beneath the Kitchen.
- **Wall Opening:** A large opening was punched in the east wall to the Kitchen Hall in 1977 to create a pass-through.
- **Walls:** The walls are drywall that appears to have been applied over existing plaster and possibly window trim.
    - Two windows on the west elevation are cased with modern trim but have the same configuration as the typical Lower Level windows. Their original trim may be underneath the drywall.
- **Door and Trim:** A door at the north end of the east wall leads to the Kitchen Hall.
    - The door and trim are original (**Photo LL-32**).
        - The original trim - Domestic Trim #1 - Informal (profile #1) is covered over with modern trim. This detail leads us to believe that the window trim may be covered over as well.
- **Flooring:** The floor is vinyl sheet flooring; the walls are painted drywall; the ceiling is painted plaster or drywall.
    - An encased east-west running beam runs across the center of the room.
    - We believe the presence of this c.1920s beam may have led Sprague to assume this space was originally two rooms in his 1975 report.

**Room LL 108: Kitchen Hall**

- **Configuration:** A north-south oriented service hall leads from the back door on the north elevation to the Boiler Room door on its south elevation (**Photos LL-33 and Ll-34**). A door on the west elevation leads to the Kitchen. A door at the north end of the east elevation is now blocked. It once led to what is now the Men's Room. A second door on the east elevation leads to the Central Hall.
- **Service Stair:** A steep service stair was once positioned against the west wall, and led from this level up to the Main Level/2nd Fl. **Diagram 2** shows the assumed configuration.
    - A 1970s photograph shows markings on the wall where the stair was located (**Photo LL-35**). The stair most likely looked like the stair leading from the Bedroom Level up to the Servants' Level.
- D**oors:** All doors have original Domestic Trim #1 – Informal (profile #1).
    - The Kitchen door, Boiler Room door and door to the Central Hall are all original doors.
    - The door to the Central Hall has what appears to be a masonite panel applied.

- **Trim:** Original wood wainscoting and cap trim can be found on the north and east elevations of this room.
    - It is possible that all rooms on the Lower Level had similar wainscoting originally. Similar wainscot can be found in the nearby Women's Room.

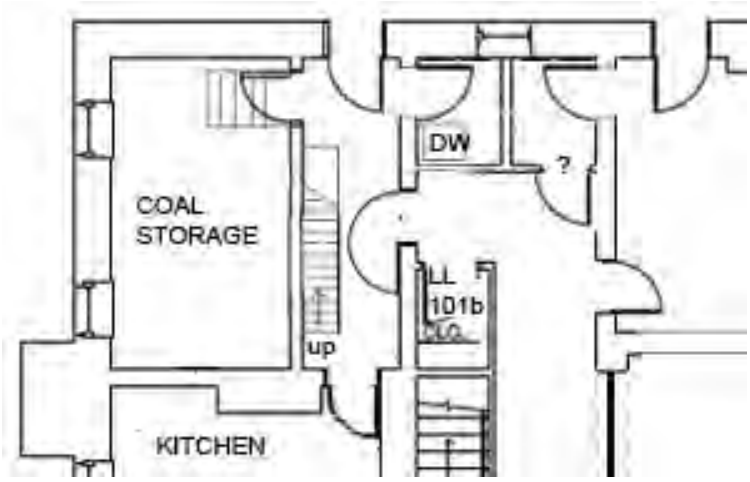


**Diagram 2:** speculated configuration of the Kitchen Hall stair.

**Room LL 109: North Room Left / Men's Room and Room LL 110: North Room Right / Women's Room**

- **Current Configuration:** Two small bathrooms are located at the north end of the Central Hall.
    - The right, Women's Room has an original door and trim (Formal Trim (profile #4).
    - The left, Men's Room has atypical trim for the house, likely installed during the early Library period.
- **Original Configuration**: These two rooms were probably a single room that served as Kitchen storage and held the Dumb Waiter. There appear to have been three doors to this space, which is unusual for such a small space.
- **Window:** An atypical vertically split window is positioned in the north exterior wall, and serves both rooms.
    - Because of the thick center mullion of this window, which must have been added when the partition between the two bathrooms was installed.
- **Doors:** The left, Men's Room was once entered via a door in its west wall, from the adjacent Kitchen Hall.
    - The right, Women's room was once entered via a door in its east wall, from the adjacent Northeast Room.
        - Curiously, the door in the south elevation has original trim. Either this room had three doors (unlikely for so small a room) or the trim was moved from another location.
- **Trim:** The right, Women's Room has what appears to be original wood wainscoting and cap trim (similar to that found in the Kitchen Hall) (**Photo LL-36**).
    - Both rooms have been renovated several times; the built-in sinks and counters are not thought to be original to the house.

- The Men's Room is now modernized, but a c. 1970s Brookman photo shows it in its earlier condition (**Photo LL-37**).

- There was insufficient evidence for us to establish the original configuration or use of the space that now houses the Mens and Womens restrooms.

**Photo LL-31**: General view of the existing kitchen in the northwest corner.

**Photo LL-32**: the kitchen door retains it original Domestic trim, but it has been covered with supplemental trim.

**Photo LL-33**: View looking north toward the Kitchen Hall door to the exterior.

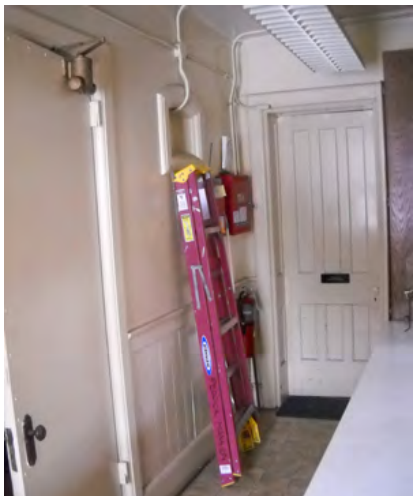

**Photo LL-34**: Kitchen Hall view looking south toward the Boiler Room door.

**Photo LL-35**: This c. 1970s photograph from the Brookman collection shows a workman demolishing the west hall wall for the pass-through, but distinct lines can be seen in the plaster (enhanced here) that show where the original servant's stair stringer was.

**Photo LL-36**: c. 1970s view of the Men's Room before it was refurbished.

**Photo LL-37**: c. 1970s view of the Ladies Room before it was painted and refurbished.

**General Comments and Recommendations**

- The condition of the Lower Level is generally very good.
  - The space has been renovated into useful adaptive-use space.
  - It is to the benefit of the RMA to utilize these rooms as they have been used—as office, lecture and meeting spaces.
- The kitchen was originally positioned in the Northeast corner.
  - There is little historic evidence left in this room, so it cannot be restored for interpretation
  - Cabinets and countertops could be chosen and a configuration created that somewhat follows the description in the specifications. (see Endnote #4)
  - A catering kitchen could be constructed in the northeast room, utilizing historic styled cabinets to give a somewhat period appearance.
- It would be possible to "restore" the Southeast Room for interpretation as a Servant's Dining Room.
    - We do not recommend that the space be interpreted in such a way that suggests that the Reddick Family members spent time in or dined on the Lower Level.
  - If the Southeast Room were to be restored, the glazed partition would have to be removed (or encased in drywall), and a solid wall with reproduction door and frame installed. Period furniture would have to be obtained and curated.
  - Too little is known about the other Lower Level Rooms to accurately interpret them in any realistic way.
    - It is not recommended that history be "made up" to fabricate a 19th-century kitchen in any of the available rooms.
- We do not recommend that the other rooms on the Lower Level be restored for historic interpretation, with the exception of one room:

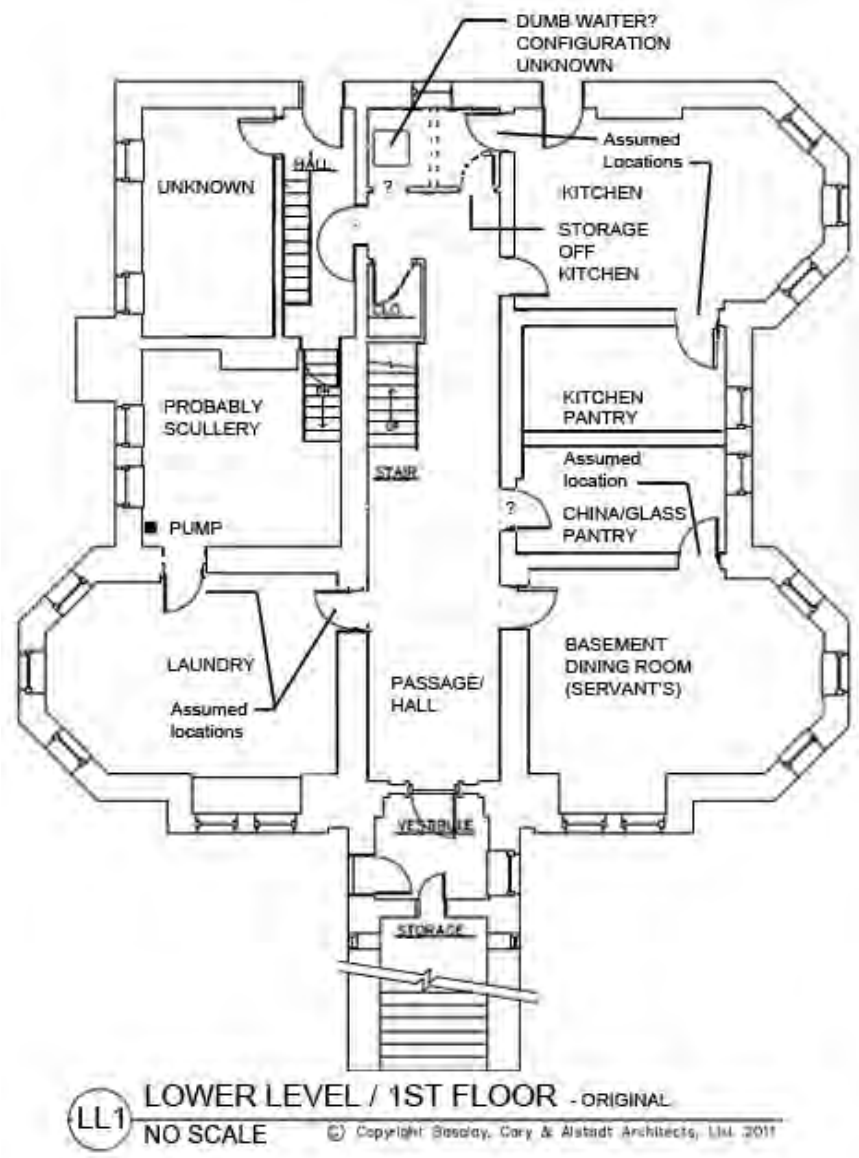


**Diagram 3**: Illustration showing our teams' believed original configuration of the Lower Level based upon physical evidence, handwritten notes on the back-side of the original specifications, and from information in the inventory taken after Reddick's death.

[1] Both the inventory taken after Reddick's Death and the inventory listing property entitled to Eliza Funk Reddick (hereafter referred to as "the inventories") list the room being filled with furniture that suggests dining and sitting room use: a plate mirror, 7 cane chairs, a rocking chair, a large easy chair and an extension chair, an extention table, drop leaf table, drop leaf stand, carpet, oil cloth and an old rocking chair. The inventories also discuss a Pantry off this room containing table cloths, towels, glass ware, fruit and wine goblets, vases, a dozen dishes of all kinds, a set of china dishes, a set of stone ware, a teapot and coffee pot, knives, forks and carvers and miscellaneous other items.

[2] RMA board member Steve Meyers related the following information: "Many of us think that the Reddicks took their regular daily meals in the southeast room on the Lower Level and that they reserved the formal dining room for guest dinners. That does not mean that the servants ate with them. The servants most likely ate in the kitchen. It was probably the forerunner of what we call a breakfast room now… Eating

upstairs for every meal would have been quite a production even with the dumbwaiter. And the family was only three people so I think that room was the "casual" family dining room… "

[3] The backside of page 11 of the specifications contains handwritten notes regarding the amount of trim required for the various Lower Level rooms. Through their descriptions and the terms used for each space it appears that, at least at the time of construction, the Lower Level Rooms were:

- Basement Dining Room – southeast corner
- Laundry – southwest corner
- Kitchen – northeast corner

Our reasoning is based upon the following, gleaned from the handwritten notes:

- The Dining Room, Laundry and Kitchen were each described as needing 80 ft. of base trim, indicating that they were similar/equal in size.
- The "architrave" trim marked "A" was to be used on 3 octagon (their term for the angled window bays) windows and 1 bay window in one room that we assume was the Southeast Servant's Dining Room. Similar "architrave" trim was to be used on 1 window on the Main Level and 2 windows on the Bedroom Level. This correlates with our findings that the Domestic Trim Type #2: Formal was found on the Lower Level Southeast Room, the Main Level Northwest Room and the Bedroom Level Northwest Room.
- Further down in the document they list those rooms to receive "architrave" for the basement story. The Laundry is listed as having 3 octagon windows and one bay (pointing to the Southwest Room as only it and the Southeast room have window bays). The Kitchen was said to have 3 windows (they do not use the term octagon, but it is the only other room with 3 windows), suggesting the Kitchen was in the northeast corner.
- This leaves the Scullery, which is listed as needing 36 ft. of basement trim, the same amount required for the Passage (hall). This was probably either the room in the northwest corner of the Lower Level or the Center West room. (The inventory suggests that the Center West room was the Cellar).

[4] The specifications read: Prepare and fit up all closets and pantries store rooms as follows – Basement kitchen closets shelved three feet from floor to ceiling – Pantries to be fitted with shelves, drawers, closets under sink, strips & hooks as may be desired – in kitchen fit up a dresser with a hard wood top 1 *** thick 2 ft 10 in from floor with a row of drawers. Shelf & doors under dresser 3 feet broad by length of pier, to have shelves _____ wall 12 inches deep and enclosed with doors and fastenings &c. Kitchen pantry to have a bin filled up for flour & other necessities. Store Rooms to have shelves against all walls & divided up to ceiling with bins for vegetables – under – Parlor story – fit up pantry with shelves, drawers &c. Dumb Waiter from kitchen to Dining Room. Pantry above to be constructed & fitted up in most approved manner."

[5] See description in endnote #2. Both inventories show the room was filled with miscellaneous items: a plate mirror, sewing machine, 5 cane chairs, 1 hair upholstered lounge and rocking chair, an extension table and cover, thermometer, carpet gas fixtures and one table and stool. The inventories also indicate there was a closet in this room that contained three grape (?) knives, a window brush, 12 books and various sundries.

[6] The inventories list a room called the "Wash Room" which contained a wringer and W. Machine, 200 lbs. of flour and an old stove and fixtures. The list also describes a room called the Celler which contained dozens of quarts of fruit and jars, 36 gallon stone ware, canned corn, pork, 100 lb. sugar, 80 gal. vinegar, and lard. It is not clear whether they are talking about the Center West room or the Northwest Room.

**END LOWER LEVEL**

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## Main Level / Second Floor

**Changes Through Time**

- The Mansion was opened as the Reddick Library in September of 1888. At that time the following changes were made to accommodate the new use:
    - Stoves were initially purchased for general heating in 1887, before the Library was officially opened.
    - A steam heating (radiator) system was installed starting in May 1888.
    - A telephone was installed in 1887.
    - Bookcases were fabricated and other general improvements undertaken by Sanders Bros. carpenters.
    - Cork flooring, purchased from Marshall Field & Co., was installed on the Library floor in 1902.
- Gas lighting continued within the building until at least 1904, when the Library minutes indicated a need to purchase new gas burners for the lights.
    - The building was wired for electricity in 1908, with "a snap switch to each light, 13 pendant light instead of cord, with old lamps attached and 12 cord lights for the stack room with old burners attached." This indicates that some pendant electrical lights were new, and other older gas fixtures were modified to accommodate electrical.
- It was decided in 1910 to remove some of the books from the Main Level to the Bedroom Level/Third Floor, and to investigate the matter of having a Juvenile Department on the Bedroom Level. Oral tradition holds that the early librarians lived on the Bedroom Level prior to that time.
- New linoleum was installed in the Front Hall in 1911. Presumably the cork installed in 1902 either wore out quickly or was only installed in the parlors.
- In 1912, a bid was submitted by Sanders Bros. for removing the librarian's desk and putting a square arch on the west side of the Hall, between the foot of the stairs and the first door. The installation included a partition for protecting the bookcases and their contents, as well as closing the doors opening off the hall, and protecting the cases in the hall.
- In 1915, the walls and ceiling of the Main Level of the library were painted. The woodwork was prepared and repainted.
    - At that time, the lighting fixtures in the book stacks were changed from gas to electric, and new fixtures were purchased.
- In 1923, architect Jason Richardson provided a report describing changes made to the Main Level prior to that time. The exact date of these changes is not recorded in Library minutes but are thought to have occurred between 1888 and 1894:
    - Stairs removed that led from the Main Level to the Bedroom Level.
    - Partitions removed in the northwest corner to create one large room. A large arched opening created.
    - The opening enlarged between the Southwest Parlor/Library and Center West Parlors.
    - The Center West Parlor fireplace bricked up.

- In 1928, a bid was accepted to "restore the walls, ceiling and woodwork of the lower three floors including the hall." We assume this means painting.
- In 1938, painters were contracted to redecorate the interior of the Library and renew the floor covering on the Main Level. Work was undertaken on the Lower Level, Main Level, and Bedroom Level, as well as the exterior of the doors.
- The 1944 annual Librarian's Report noted that the building had been rewired, and a fluorescent light placed over the charging desk.
- In 1948, Willcox Paint was given the order to wash the walls and paint as specified.
- In 1948, a Library Board meeting was adjourned to the Main Level to see the temporary trial lights in the stack and reference rooms. The Librarian suggested that six fluorescent light fixtures with louvers be installed in the three reading rooms on the east side of the second floor, two light fixtures to a room. Mr. McMahon maintained that one light per room without louvers was sufficient.
- In 1951, bids were obtained for redecorating the Lower Level only (the Main and Bedroom Level floors and ceilings were to be washed and one coat of paint applied).
- In 1952, it was recommended that 35 new light fixtures be installed on the Lower Level, and 18 new fixtures be installed on the Main Level.
- In 1953, major structural repairs to the building had begun with the addition of three steel beams supported by pillars to reinforce the west side of the Main Level. The Children's Department was closed for three weeks to complete the project.
- Considerable changes were made to the Main Level/2nd Fl. in 1961:
    - The main entrance was remodeled by August Kerste & Son.
    - The circulation desk was moved closer to the entrance, and an office was built at the end of the hall.
    - The west wall of the Southeast Parlor was removed to accommodate the new reference desk. The fireplace was removed with it.
    - The main floor was redecorated.
- In 1971, architect Earl Gerding reported that the sagging stairway in the lobby could be corrected by installing tie-rods.
- In 1976, the opening in the west wall leading to the Center West Parlor was enclosed.
- In 1978, the Central Hall and three East Parlors were painted and the woodwork grained. At that time, the two front doors and two vestibule doors were fabricated and installed by Kerste & Sons.
- In 1981-2, interior storm windows were fabricated by RMA board members, and installed on all Main Level and Bedroom Level windows. The units are constructed from Plexiglas in aluminum frames, and are screwed to the inner face of the window sash.

**Room M 200: Entry Vestibule**

- **Current Configuration:** An Entry Vestibule is positioned at the south end of the Central Hall. It is comprised of two sets of double doors, flanked by sidelights (**Photo M-1**).
- **Library Era:** This original feature was altered considerably during the Library years.

  - In 1961 the exterior paired doors were removed and replaced with an aluminum double-wall Vestibule (**Photo M-2**).
    - This was undertaken in order to install a service desk in the east wall of the Central Hall, just inside the front door.
  - It is not known whether the inner door/sidelight assembly was removed in 1961 or before that time.
- **1978 Restoration:** In 1978, the Reddick Museum restored the Vestibule to its original configuration. From the RMA files:
  - "The vestibule wall was reinstalled in February 1978 by August Kerste & Son, Building Contractor, 406 West Main Street, Ottawa, Illinois. (John Kerste present owner)."
  - "New front doors and vestibule doors were fabricated by Clyde Kerste following the original carpenter specifications for the building and some old photographs of the front entrance. All the wood trim for the new wall was also made by Clyde Kerste, brother of John."
- **Walls:** The walls are now painted a light tan color.
  - Per our paint sampling and analysis, the walls were originally painted with a faux wood grain.
- **Ceiling and Cornice:** The decorative plaster ceiling and cornice in this room can be described as follows:
  - The cornice is comprised of smooth plaster banding.
  - The ceiling center medallion is generally round, with rectangular "tracery."
    - Refer to the *Plaster Comparison Sheets* (**Appendix B**).
  - The ceiling and cornice are now painted white.
    - Per our paint sampling and analysis, the raised ornament and cornice were originally painted with a faux wood grain.
    - This faux wood grain and the painted wainscoting in the Central Hallway were likely meant to be aesthetically similar.
- **Trim:** The trim surrounding the new door assembly matches Formal Trim Profile #12, which is not original trim, but was milled to match the original Formal Profile #11.
  - Refer to the *Trim Profile Comparison Sheets* (**Appendix A**).
- **Doors:** The front doors were fabricated based upon historic photographs with one notable exception: the original doors were solid rail doors with no glass lites. Oral tradition states that the original doors were sold to a farmer who used them in his home west of town.
  - It appears the door frame and adjacent sidelights are original.
  - The entire inner door and sidelight assembly was reconstructed (**Photos M-3 and M-4**).
  - The glass in the new doors was etched with a cloverleaf design, harkening to Mr. Reddick's Scots-Irish roots.
  - Oral history tells us that one of the sets of inner doors (probably the inner set) had etched glass depicting two deer stags.

**Photo M-1**: Current view of the Entry Vestibule.

**Photo M-2**: This photograph was taken of the Front Entry Vestibule in 1976 before it was removed. The structure was constructed in 1961.

**Photo M-3**: This photo was taken in 1978 during the reconstruction of the inner Vestibule doors.

**Photo M-4**: Another photo from the late 1970s, showing the outer and inner door frames just after construction.

**Photo M-5**: This photograph was taken in 1978 when the pier mirror was moved to the Entry Vestibule, but just before the inner doors were constructed.

**Photo M-6**: A view of the Central Hall when the building still served as the Reddick Library. Note the linoleum floors, and the built-in librarian's office at the north end of the stairs. Also visible is the formerly framed opening at the base of the stairs.

- **Mirror:** Prior to installation of the inner Vestibule doors, a tall pier mirror was moved from the Southeast Parlor and mounted on the west Vestibule wall (**Photo M-5**).
    - The pier mirror was positioned against the center bay window on the east wall of the Parlor. It had been painted during the Library period, but was re-gilded as part of the 1978 restoration.
    - Per RMA records, the following notation was placed behind the mirror when it was moved into the Vestibule:
        - "On February 7, 1978, August Kerste & Sons… moved this mirror from the east window of the southeast room on this floor to the west wall of the vestibule area. At the original location a business card was found indicating that the mirror had been installed by Lowe Brothers, Rock Island, Illinois on April 7, 1875."

**Room M 201 Central Hall**

- **Library Era:** Several significant changes were made to the Central Hall during the Library period:
    - In 1912, a large square-arch framed opening was cut in the west wall of the Hall between it and the adjacent Center West Parlor. This opening was positioned between the base of the stairs and the door to the Southwest Parlor/Library (**Photo M-6**).
        - This opening remained until 1976, when the wall was reconstructed and a new door and frame installed (**Photo M-7**).
        - A photograph from the late 1970s shows how, after the opening at the base of the stairs was enclosed again, a portion of the wall mural was exposed at the base of the stairs (**Photo M-8**).
    - In 1961, a large framed opening was made between the Central Hall and the Southeast Parlor (**Photo M-9**).
        - At that time, the fireplace and door to the Southeast Parlor were removed.
        - The wall was reconstructed in 1976 by Kerste & Son, and a replica fireplace mantle was installed (**Photo M-10**).
- **1978 Restoration:** In 1978 the Central Hall and three East Parlors were painted, and the woodwork grained. At that time:
    - The floor covering was removed and replaced.
    - The mid-century light fixtures were removed and the wiring modified.
    - Seven reproduction chandeliers were commissioned.
    - Two front doors and two Vestibule doors were fabricated and installed by Kerste & Sons.
    - The Central Hall was to have been painted with Benjamin Moore Powell Buff, but they actually used Devoe A12 (tan), according to RMA minutes.
- **Walls:** A painted decorative wainscot (referred to as "the mural") was originally painted around the entire Lower Level Central Hall, and carried up the stairs to the Main Level. From evidence we found, the painted wainscot continued around the Bedroom Level / 3rd Floor Central Hall as well.

- A remnant of that mural exists on the east wall of the Central Hall, across from the staircase.
  - This portion of wainscot was protected by bookcases during the Library period, and was re-discovered when the bookcases were removed (**Photo M-11**).
  - The wainscot mural incorporates wood graining and trompe l'oeil painting to replicate wood carving. (**Photos M-12 and M-13).**

**Photo M-7**: This view was taken just after the RMA took possession of the building. The bookcases against the east wall had been removed, and the opening at the base of the stairs was enclosed. This photo was taken c.1976.

**Photo M-8**: This photo from the mid-1970s shows the area at the base of the stairs once the opening was enclosed with drywall. A small patch of mural (at right) was still visible when the wood trim was removed. This is evidence that the mural continued up the stairs.


**Photo M-9**: 1960s photograph of librarians standing at the new desk, positioned in a large opening that was made by removing the wall between the Southeast Parlor and the Central Hall.

**Photo M-10**: This photo from 1977 shows how framing was installed to reconstruct the wall between the Southeast Parlor and the Central Hall.

**Photo M-11**: This is a 1970s view of the faux painted wainscot in the Central Hall, showing how library bookcases had protected the mural from being painted over.

**Photo M-12**: Detail view of the faux finish on the painted mural.

**Photo M-13**: Another detail view of the mural.

**Photo M-14**: During our investigation in Spring 2013, a section of original mural was uncovered behind the grandfather clock. Overpainting was removed using solvents.

- In 1976, Edward Syrek, art professor from Northern Illinois University, restored the mural on the east wall in the Main Hall.
- During our investigation, a portion of the mural was uncovered on the west wall behind the grandfather clock (**Photo M-14**).

- The room is now painted a light creamy tan color.
  - Per our paint sampling and analysis, the original color on the upper walls was a light grayish tan, Munsell 2.5Y-5Y 7/2.

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**Decorative Plaster Discussion**

- **Main Level Plaster:** The ceilings in the formal rooms on the Main Level (including the Central Hall, formal Parlors and Dining Room), as well as those in the Bedroom Level's Central Hall and bedrooms, are comprised of highly decorative plaster.
- **Room-by-Room Comparisons:** A discussion of the general configuration of the plaster ceilings is mentioned in each room description in this report.
  - *Appendix B: Plaster Comparison Sheets* provides a side-by-side comparison of each of the formal room decorative plaster ceilings.
- **Importance of Reddick Mansion Plasterwork:** Chicago Architectural Historian Rolf Achilles kindly provided us with his opinion of these unique elements:

> "While several mansions in the Italianate style have an ornate plaster assemblage in the center of the living or dining room ceiling through which a chandelier hangs, none, to my knowledge, has an original assemblage of plaster forms as complicated, intricate and plentiful as survives on the ceilings of the Reddick mansion in Ottawa, Illinois.
>
> As a result, the Reddick's interior is a bravura example of plaster workers thoroughly familiar with the style of the day. Yet, the origin of the craftsmen remains unknown. That they might have been Italian is an assumption that may have originated with the identification of Italian marble for the mantles.
>
> Given that the architects of the Reddick, William B. Olmsted and Peter A. Nicholson were from Chicago, the artisans commissioned with the interior work, including the plasterwork, may have been a firm familiar to them from Chicago. Based on Chicago City Directory listings, marble yards and decorator firms with English, German and Italian principles were common at the time of the Reddick's construction, and masons, sculptors and craftsmen, with English, German and Italian names are listed, with English and German names dominant.
>
> As a result of this association in the mid-1850s, and more importantly, the subsequent multi-generational preservation of this work makes the Reddick's elaborate plaster composition unique in

the Midwest and certainly worthy of careful preservation for future generations. "

Rolf Achilles, 30 July 2013

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- **Ceiling and Cornice:** In late 1990, a section of decorative plaster ceiling fell to the right of the stairs in the Central Hall, and was repaired by Luczak Brothers plasterers (**Photo M-15**).
    - The decorative plaster ceiling and cornice in the Central Hall can be described as follows:
        - The cornice is comprised of smooth plaster banding.
        - The ceiling is comprised of raised plaster tracery, somewhat emulating gothic raised ribs that, when they intersect, are marked by a raised plaster "boss'." Decorative plaster medallions are positioned linearly along the long hall. The central medallion is the most decorative, and is generally a rotated square. Chandeliers hang from round medallions.
            - Refer to the *Plaster Comparison Sheets* (**Appendix B**).
        - The ceiling and cornice are now painted white.
            - Per our paint sampling and analysis, the original color of the raised ornament was off-white, Munsell 2.5Y 8.5/2. The flat areas of the ceiling were a light tan, Munsell 7.5YR 8/2 – 7/2, which is slightly different than the field color in the adjacent parlors.
- **Chandeliers:** In 1981, new chandeliers were installed in the Central Hallway. They were fabricated from Metro Lighting in New York City.
    - Some time after 1981, the bottom "teardrop" portion of the turned brass chandeliers were stolen.
- **Trim:** The trim surrounding the original doors match Formal trim Profile #11, which is original to the building.
        - Refer to the *Trim Profile Comparison Sheets* (**Appendix A**).
        - The original doorways in the Central Hall are:
            - The two doors leading to the Dining Room.
            - The one door leading to the Center East Room.
            - The one door leading to the Northeast Room.
            - The doorway leading to the Southwest Room/Library.
- **Flooring:** New carpeting was installed in the Central Hall and stairway in 1993. It was chosen from the library of Ulster carpets, a manufacturer of Axminster carpets located in Northern Ireland.
- **Dumb Waiter:** During the Library period, the section of the Central Hall north of the main staircase was partitioned off for a Librarian's office (c. 1961).
    - It is thought that there may have been a dumb waiter located in the hall on the west wall just north of the door leading to the Northwest Room.
        - We are only aware of a photograph taken in 1979 of the area (**Photo M-16**).
        - If/when the carpet is lifted in this area, further investigation of the floorboards should be undertaken. It seems odd that a dumb waiter

would have been positioned against the wall with no other "butler's pantry" function in that area.

- We did note that the door trim on the north door leading to the Dining Room from the Central Hall has trim unlike any other trim in the Central Hall.
  - The trim appears to be the domestic type trim, with added trim to make it more formal.
  - This unusual trim type may indicate that there was originally a more domestic use at the north end of the Central Hall, suggesting a built-in passage or Butler's Pantry. The configuration of such a space is not known at this time—it is only speculated.[1]

**Room M 201a: Stairs**

- **Configuration and History:** The hall stairs lead to a landing at the north end of the building, and then continue southward to the Bedroom Level/3rd Fl. (**Photo M-17)**.
  - In 1978, as part of the Central Hall and East Parlor restoration project, the stairs, newel post, railing and balusters were stripped and refinished (**Photo M-18**).
  - Per the original carpenter's specifications, the railing was to be of St. Domingo mahogany. The rail was to terminate in a turned mahogany rosette.
- **Settlement:** The stairs have settled somewhat unevenly.
  - In 1971, architect Earl Gerding reported that the sagging stairway in the lobby could be corrected by installing tie-rods.
  - Our team reviewed the stairs and concur that the settlement is negligible, and that the wall that was constructed beneath the stairs in the 1960s to create an enclosed stairwell now helps support the stair structure.

**Room M 202: Southeast Parlor / Exhibit**

- **Current/Original Use:** The Southeast Parlor now serves as a permanent exhibit space (**Photo M-19**).
  - It most likely originally served as the Reddick Family's Formal Parlor, and is depicted in funeral photographs taken in the late 1880s by Ottawa photographer William Emory Bowman, who lived and worked in this area from 1857 to 1910.[1]
    - One photograph (**Bowman M-20**) was taken upon the death of Mrs. Eliza Collins Reddick on July 5, 1883. The view is toward the east wall, to the west of the center window (with a tall pier mirror) in the window bay.
    - Another photograph (**Bowman M-21**) is a view looking northward toward the Center Parlor and Dining Room. This image was taken upon the death of William Reddick two years later, in March, 1885. Note the large pot-bellied stove in the foreground.

[1] http://www.mywebtimes.com/archives/ottawa/print_display.php?id=373638 accessed July, 2013


THE DAILY TIMES, OTTAWA, ILL. Thursday, May 16, 1991 11

AREA

By JoANN HUSTIS/The Daily Times

**THIS CHANDELIER** and carved plaster sunburst will be removed after a section of ceiling fell at Reddick Mansion Tuesday.

**Photo M-15**: This newspaper clipping from 1991 shows the area of plaster that had delaminated from the Central Hall ceiling.

**Photo M-16**: This photograph was among the collection held by the RMA. Its caption read that it was taken in 1979 and showed evidence of the dumb waiter located in the Hall, on the west wall just north of the door leading to the Northwest room.

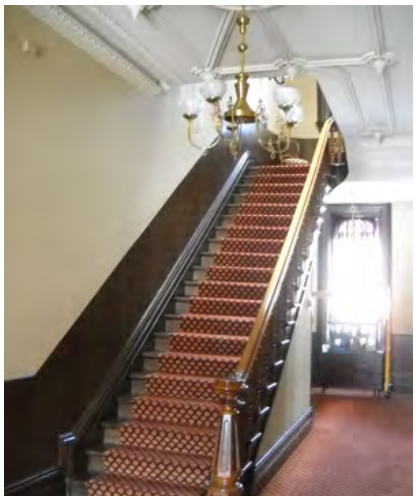

**Photo M-17**: Overall view of the Central Hall looking northward.

**Photo M-18**: 1978 view of workmen stripping the finish off of the railing and balusters.

**Photo M-19**: Current view of the Southeast Parlor, facing the 1970s installation of the marble fireplace surround and wall.

**Photo M-20**: This historic photograph was taken by Ottawa photographer William Bowman in 1883, upon the death of Mrs. Eliza Collins Reddick. The funerary memorial is positioned to the left of the pier mirror that was once placed in front of the center bay window in the Southeast Parlor.

**Photo M-21**: Historic photo taken by Bowman in 1885, upon the death of William Reddick. The photo was taken from the Southeast Parlor looking north through the Center East Parlor toward the Dining Room.

- **Library Era:** This room served as a reading room during the Library Years until after 1961, when the west wall leading to the Central Hall was removed and a circulation desk installed, in order to be closer to the entrance. Before this time, it could have been used as a reference room or for book storage.
- **RMA Era:** When the RMA took possession of the property, one of their first endeavors was to return this space to its original configuration.
    - In 1976, the wall and fireplace were reconstructed between the Southeast Parlor and the Central Hall. A new mantle and fireplace hearth were fabricated by Murphy Marble Co. in Chicago and installed by Kerste & Son (**Photos M-22 and M-23**).
        - According to RMA records, the fireplace parts had been stored on an upper floor and were replaced by John Kerste. The mantel and hearth were missing and had to be purchased new from a stone firm in Chicago.
    - In 1978, the Entry Vestibule was also being restored. It was decided to move the large pier mirror from the Southeast Parlor and place it in the Entry Vestibule.
        - The mirror was originally positioned on the east wall, in front of the center window in the window bay (**Photo M-24**).
        - Once the mirror was removed, original grained and faux-painted wainscoting was exposed beneath the window (**Photo M-25).**
        - At that time, a business card was found behind the mirror. The card was from the Lowe Brothers, "Gilders and manufacturers of French Plate Pier and Mantel Mirrors and Ornamental Window Cornices," doing business in Rock Island, IL (**Photo M-26**). The backside of the card read: "We put up this glass and … cornices April 7th, 1875, Lowe Bros."
            - The fact that the mirror was installed in 1875 leads us to the supposition that there may have been a redecorating campaign by the Reddick family in 1875.
    - A modern 12-arm chandelier hangs from the ceiling in the center of the room. It was fabricated in New York and installed in 1981 (**Photo M-27**).
        - The existing fixture is a reasonable historic reproduction, but does not match exactly the fixture shown in the 1885 photograph (**Photo M-28**).
- **Walls:** The room is now painted a light golden yellow color.
    - Per our paint sampling and analysis, the original color was a light grayish tan, Munsell 2.5Y-5Y 7/2.
    - As part of the 1978 restoration, the room was painted Benjamin Moore Adams Gold (they actually used Devoe B32 Cream Color per RMA notes).
- **Ceiling and Cornice:** The decorative plaster ceiling and cornice in this room can be described as follows:
    - The cornice is comprised of paired brackets with additional decorative work.

**Photo M-22**: 1970s view of the newly constructed west wall of the Southeast Parlor.

**Photo M-23**: 1970s view of the salvaged elements of the marble fireplace surround before re-installation.


**Photo M-24**: 1970s view of the Pier Mirror when it was positioned over the center window in the Southeast Parlor window bay. Note how the entire room including the mirror frame had been painted institutional blue during the Library era.

**Photo M-25**: When the pier mirror was removed, original faux graining was exposed in the spandrel panel and window frame of the center window.

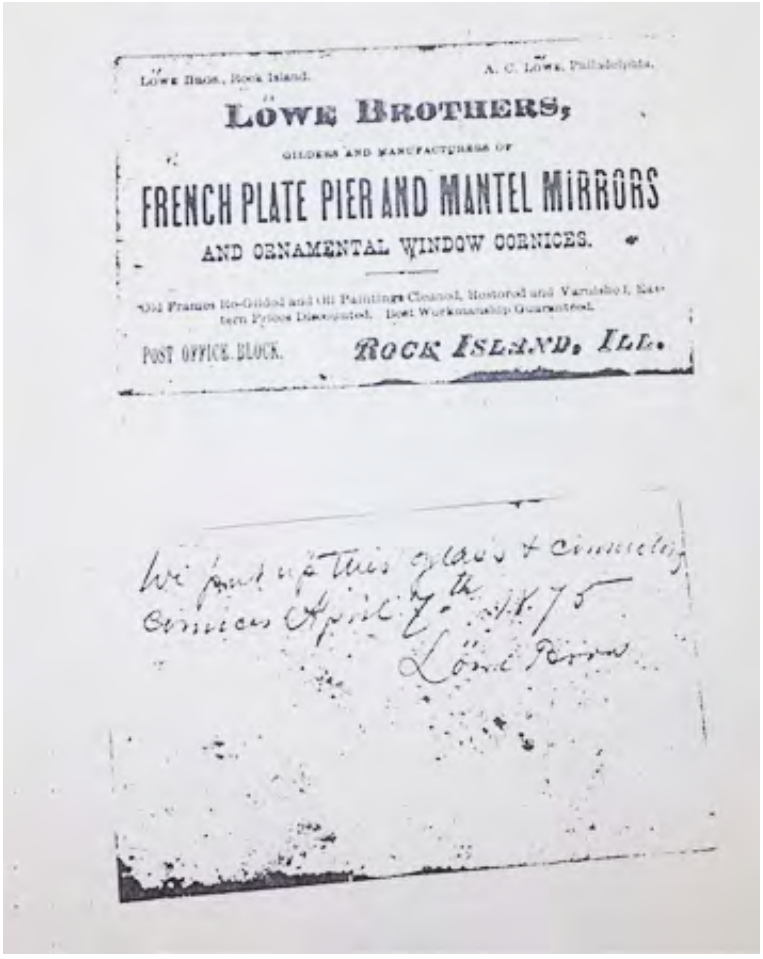


**Photo M-26**: Images of both sides of the calling card found behind the pier mirror.

- The ceiling center medallion is generally round, with two medium-sized round nodules to the east and west of the center round, creating an oval effect. The ceiling "tracery" is curved in this room, a motif this is not found in any other room. This gives a somewhat more feminine feeling to this parlor ceiling than to the others, possibly denoting that it was considered either the formal parlor, or the ladies' parlor. Perhaps this was why Mrs. Reddick's funeral memorial was set up in this room.
  - Refer to the *Plaster Comparison Sheets* (**Appendix B**).
- The ceiling and cornice are now painted white.
  - Per our paint sampling and analysis, the original color of the raised ornament was off-white, Munsell 2.5Y 8.5/2. The flat areas of the ceiling were a light grayish tan, Munsell 2.5Y-5Y 7/2.

- **Trim and Doors:** The trim and doors in this room are faux grained.
  - The coloration of graining is dark on light; the doors are dark (and still retain their original faux graining). See the Painted Trim Summary discussion.
  - The trim surrounding the non-original door to the Central Hall matches Formal Trim Profile #12, which is a replica trim.
    - Refer to the *Trim Profile Comparison Sheets* (**Appendix A**).
- **Miscellaneous Details:**
  - Picture hanging "fobs" are positioned near the cornice at the top of the wall in three locations:
    - On the north wall, centered between the sliding doors and the east window bay.
    - On the south wall, between the south-facing window bay and the east window bay.
    - On the west wall over the fireplace.
      - These fob locations indicate where the family originally hung framed photographs or paintings. They are original to the building.
  - The curtains are depicted in a 1987 newspaper article discussing the Sesquicentennial (**Photo M-29**). Because they appear so similar to the Dining Room curtains, we assume they were also installed in 1983.
  - A ventilation grille is positioned high on the wall, at the far east end of the north wall.

**Room M 203: Center East Parlor / Exhibit**

- **Current/Original Use:** The Center East Parlor now serves as a permanent exhibit space (**Photo M-30**).
  - It most likely originally served as the Reddick Family's Informal, or Family Parlor, which is often the case for the "secondary" parlor closest to the Dining Room.
    - The Center East Parlor is depicted in the funeral photographs taken by Ottawa photographer William Emory Bowman in March 1885, after the death of William Reddick (**Photo M-31**).

**Photo M-27**: View of the modern chandelier fabricated for the Southeast Parlor. All the first floor chandeliers are similarly designed. Unfortunately, vandals stole some of the lowest brass elements from some of the Central Hall chandeliers in the 1980s.

**Photo M-28**: Detail view from one of the Bowman photographs, showing what the original chandeliers looked like.


**Photo M-29**: This 1987 newspaper clipping depicts the Parlor curtains that are believed to have been installed in 1983.

**Photo M-30**: Current view of the Center East Parlor, looking southward.


**Photo M-31**: Historic Bowman photograph from 1885 showing the Center East Parlor with a funerary memorial for Wm. Reddick.

**Photo M-32**: This rare early library photograph shows the Center East Parlor when the walls were lined with bookshelves, and reading desks were positioned in the center of the room.

- **Library Era:** During the Library era the Center East Parlor served as a reading room. We are fortunate to have two period photographs that depict this space:
    - **Photo M-32** shows the parlor in the early days of the Library. Note that the wood trim has not yet been painted, and that electric pendant lights are hanging over the reading desk.
    - **Photo M-33** was taken by author Paul Sprague in 1975, as part of his feasibility study. The room served as a reading room at that time as well.
- **Construction of Fire Escape:** In 1913, a fire escape was constructed on the east side of the building at the wood porch. At that time, the southernmost window in the east wall of the Center Parlor was converted into a doorway, and a glazed door with panic hardware was installed in order to access the exterior fire escape.
- **RMA Era:** In 1975, after the RMA took over the management of the building, this and the adjacent Dining Room were modified to serve as United Fund offices.
- **Restoration:** In 1978, the Center Parlor and Southeast Parlor and Dining Room were restored for use as exhibit space.
    - The room is now painted a light golden yellow color.
        - Per our paint sampling and analysis, the original color was a light grayish tan, Munsell 2.5Y-5Y 7/2.
        - According to RMA files, in 1978 the RMA chose Devoe B32 (cream color) for painting this room, although handwritten notes indicate that Adams Gold by Benjamin Moore was used.
    - The wood trim in this room, which had been painted white during the later Library years, was re-grained to match the original finish.
        - The coloration of the graining on the trim is dark on light, while the doors retain their original faux graining, which is dark. See the Painted Trim Summary discussion.
        - The trim surrounding the original doors and windows match Formal Trim Profile #12, which is original to the building.
            - Refer to the *Trim Profile Comparison Sheets* (**Appendix A**).
            - All the door and window trim in this room is original (the door to the porch is not original; see below).
- **Ceiling and Cornice:** The decorative plaster ceiling and cornice in this room can be described as follows:
    - The cornice is comprised of paired brackets with additional decorative work.
    - The ceiling center medallion is generally round with four round nodules springing off its edges. The ceiling "tracery" is square in this room, with raised ornament in the corners. The "square" is segmented into four quadrants, similar to the ceiling ornament in the adjacent Dining Room.
        - Refer to the *Plaster Comparison Sheets* (**Appendix B**).
    - The ceiling and cornice are now painted white.
        - Per our paint sampling and analysis, the original color of the raised ornament was off-white, Munsell 2.5Y 8.5/2. The flat areas of the ceiling were a light grayish tan, Munsell 2.5Y-5Y 7/2.
    - Interestingly, all but one of the picture hanging "fobs" were removed.

        - The remaining fob is positioned on the north wall between the sliding doors and the east wall.
        - We suspect that originally there was a similarly-placed fob on the south wall, and one over the fireplace on the west wall.
        - The Museum has within its collection one of these original hanging fobs, which had a porcelain face (**Photo M-34**).
- **Chandelier:** A ten-arm electrical chandelier hangs from the ceiling in the center of this room.
    - Historic photos show that there was originally a chandelier in this location.
- **Curtains:** In 2000, curtains were fabricated for the "north parlor room" (Center East Parlor) by Interiors Unlimited in Ottawa (**Photo M-35**).
- **Miscellaneous details:**
    - A ventilation grille is positioned high on the wall at the far north end of the east wall.

**Room M 204: Northeast Dining Room / Exhibit**

- **Original Use:** The Northeast Room always served as the formal Dining Room. (**Photo M-36**)
    - It is depicted in the 1885 Bowman photograph, in the distance beyond the Center East Parlor.
- **Library Era:** During the Library period, this room also served as book storage and reference room. Bookshelves lined the west wall, in front of both doors that led to the Central Hall.
- **RMA Era:** In 1975, this space and the adjacent Center East Parlor were modified to serve as United Fund offices.
- **Restoration:** Three years later, in 1978, the two East Parlors and Dining Room were restored for use as exhibit space.
    - The room is now painted a medium forest green color.
        - Per our paint sampling and analysis, the original color was a light grayish tan, Munsell 2.5Y-5Y 7/2 but was soon after painted with a light green, Munsell 2.5GY 8/2.
    - A c. 1970s photograph shows how, when the bookshelves were removed, the original wall surface and doors were exposed (**Photo M-37**).
        - Fortunately, the original graining remained on the two hidden doors and their trim, as well as on the pocket doors.
    - A bid was let to Kerste & Son for quite a bit of Main Level restoration work, including regraining the painted-over wood trim in the three parlors.
    - On the west wall, the faux graining on the doors and trim is original to approximately ¾ height. Above that, where the library had painted the trim white, the decorative painters filled in with faux graining to match the original.
- **Walls:** The walls are painted plaster.
    - The walls are now painted a dark forest green (no information about manufacturer or color was available).
    - During the 1978 restoration work, the room was painted Benjamin Moore Adams Gold (but they actually used Devoe A45 per RMA notes).

**Photo M-33**: This photograph was taken by Dr. Paul Sprague as part of his 1975 investigation in preparation for a feasibility study. It shows the Center East Parlor in the latter years of library operation.

**Photo M-34**: From the RMA collection: a close-up view of one of the picture-hanging "fobs" that are positioned throughout the formal rooms in the house. They were located in the plaster walls, close to the cornice, in strategic locations for hanging framed artwork.

**Photo M-35**: Current view of the Center East Parlor.

**Photo M-36**: Current view of the Northeast Dining Room.

**Photo M-37**: This 1970s photograph depicts the west wall of the Dining Room after the bookcases were removed. Note how the upper door frames were painted the institutional blue color of the adjacent wall surfaces, but the bookcases protected the original graining below.

*Reddick plaster falls*

Aging plaster fell from a ceiling at Reddick Mansion Monday, apparently because of the sheer weight of years, and Mansion restoration volunteers were to contact state experts today on the condition of the rest of the plaster in the building. The mansion was built in the 1858s by the late William Reddick of Ottawa who deeded it to the city in his will. (Daily Times photo)

12-7-81

**Photo M-38**: Newspaper clipping from 1981 depicting the plaster damage in the southwest corner of the Dining Room.

- **Ceiling and Cornice:** The decorative plaster ceiling and cornice in this room can be described as follows:
    - The cornice is comprised of paired brackets with additional decorative work.
    - The ceiling center medallion is generally round with two medium-sized round nodules to the east and west of the center round, creating an oval effect. The ceiling "tracery" is square in this room, with raised corner ornament. The "square" is segmented into four quadrants, similar to the ceiling ornament in the adjacent Center East Parlor.
        - Refer to the *Plaster Comparison Sheets* (**Appendix B**).
    - The ceiling and cornice are now painted white.
        - Per our paint sampling and analysis, the original color of the raised ornament was off-white, Munsell 2.5Y 8.5/2. The flat areas of the ceiling were a light grayish tan, Munsell 2.5Y-5Y 7/2 but were soon after painted with a light green, Munsell 2.5GY 8/2.
    - In 1982, a section of ceiling plaster fell in the southwest corner of the Dining Room, and was repaired by Luczak Brothers plasterers (**Photo M-38**).
- **Trim:** The trim surrounding the original windows and doors match Formal Trim Profile #11, which is original to the building.
    - Refer to the *Trim Profile Comparison Sheets* (**Appendix A**).
- **Gas fixtures:** Former gas fixture outlets are positioned on two walls in this room.
    - Two capped gas pipes are positioned on the west wall at 59 ½ inches above the floor (This is typical for all remaining capped gas pipes). They are positioned to the left of the north door and to the right of the south door.
    - An electrical outlet is positioned on the east wall, to the left of the center window. Due to its height (which matches the gas pipes on the south wall), we assume this was a former gas pipe location.
        - There is no gas pipe existing to the right of the center window.
    - We assume there were gas-lit wall sconces located at these gas pipe locations.
        - Based on this evidence in the Dining Room, and the position of capped gas pipes in the Lower Level, we assume the following:
            - There were probably two gas fixtures to either side of the windows on the east wall of the Center East Parlor.
            - There were probably two gas fixtures to either side of the center window in the east window bay in the Southeast Parlor.
            - There may also have been two gas fixtures to either side of the south wall window bay in the Southeast Parlor.
    - A ten-arm electrical chandelier hangs from the ceiling in the center of the room.
        - Historic photos show that there was originally a chandelier in this location.
- **Screen:** A tempered glass screen and railing were put across the south door leading from the Dining room to the Hall in 1983, to prevent visitors from walking into the newly restored room.

- **Window Dressings:** In 1983, window dressings (lambrequins) were made for each of the five windows.
- **Miscellaneous Details:**
    - An original painted porcelain call-button / ringer is positioned near the center of the west wall (**Photo M-39**).
        - It is interesting to note that the motif painted on the porcelain call-button is the same as is found on several original porcelain doorknobs.
            - Original white porcelain doorknobs and keyhole covers can be found in the three east parlors (**Photo M-40**).
    - Another interesting detail was noted in this room.
        - During the 1978-9 restoration, a lead water pipe was found under the floor at the west corner of the fireplace in the Dining Room. Speculation at that time was that the original kitchen was located directly below (**Photo M-41**).
            - We were unable to see this piping first hand. We think it is unlikely that running water was brought to the East Parlors from the water source on the east side of the house.
            - It is thought that these lead pipes brought water down to the Lower Level Kitchen from the water storage tank on the Servant's Level.
    - A ventilation grille is positioned high on the wall, at the far east end of the north wall.
    - Picture hanging "fobs" are positioned near the cornice at the top of the wall in three locations:
        - On the north wall, centered between the fireplace and the east window bay.
        - On south wall between the sliding doors and the east window bay.
        - On the south wall between the sliding doors and the west wall.

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**Faux Graining Discussion**

- **Faux Graining on the Main Level:** The Main Level base and door trim in the three east and two west parlors, as well as the swinging and sliding doors leading to them, were originally faux grained. Similarly, the Central Hall door and base trim, the main stair base trim, and the Bedroom Level base and door trim were grained in a similar fashion to the formal Main Level parlors.
    - Most of the original trim was painted white during the later Library years.
    - Photographic evidence suggests that the grained trim was left exposed at least until the early 20th century.
    - Because the sliding pocket doors were pushed all the way in to their wall pockets during the Library period, they were protected and remain as pure examples of the original faux graining.
    - When the pier mirror was removed from the center window in the east window bay of the Southeast Parlor, the original graining was exposed on the window trim and spandrel beneath the window (**Photo M-42**).

**Photo M-39**: Detail view from the 1970s of the "call button" on the west wall of the Dining Room.

**Photo M-40**: Detail view of the typical Main Floor formal doorknobs and keyhole covers. Some doorknobs still retain their stenciled golden decoration. Others have either been replaced with plain white knobs or the pattern has worn off.

**Photo M-41**: Photograph taken during the 1978-9 restoration, showing a lead water pipe found under the floor at the west corner of the Dining Room fireplace.

**Photo M-42**: Original faux wood graining on the spandrel panel beneath the center window in the Southeast Parlor window.

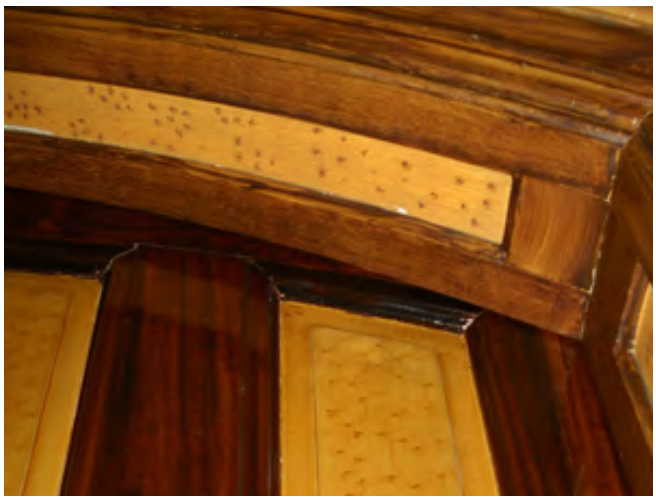

**Photo M-43**: This view shows original birds-eye maple graining on the door (below) and replicated graining on the door frame, completed for the 1970s restoration.

**Photo M-44**: 1970s view of the painting craftsman applying his technique to the birds-eye maple graining.

        - The original dark wood graining is wonderfully "mannerist" in its application, giving the appearance of dark wood, but with graining that is almost cartoonish, yet masterfully applied.
        - The typical light wood graining is intended to resemble light maple and is realistic in approach. The original light wood graining in the Dining Room is intended to resemble birds-eye maple, and has small dark "knot" patterning. The replicated faux birds-eye was nicely done, but not nearly as sophisticated as the original (**Photo M-43**).
    - When the bookcases were removed from the west wall in the Dining Room, the original faux grained door trim, base trim and doors were exposed.
- **1978 Replication**: Using these original grained surfaces as a basis for their work, a team of painters employed by Kerste & Son re-grained the over-painted Main Level trim in the Central Hall, Entrance Vestibule, two East Parlors and Dining Room in 1978.
    - This work was very skillfully undertaken (**Photo M-44**).
- **Door Frames:** The original approach toward door frame graining varies from room to room.
    - The doorframe graining in the Southeast and Center East Parlors is "dark over light," meaning that the center portion of the heavy door trim is dark, flanked by lighter graining.
    - The door frame graining in the Dining Room is "light over dark," meaning that the center portion of the heavy door trim is light, flanked by darker graining.
    - **Photo M-45** shows the difference in these graining patterns.
    - The door frames in the Central Hall are all grained solid dark, with no variation in color.
    - Based on our paint sampling and investigation, the door frames in the Southwest Parlor/Library and Center West Parlor were grained similarly to the Southeast and Center East Parlors.
- **Doors:** The doors in various rooms are also grained differently.
    - The original sliding doors between the Southeast Parlor and the Center East Parlor are solid dark-grained (**Photo M-46**).
    - The door to that room is also solid dark-grained, but the door is not original and was grained in the 1970s.
    - We believe that the south-facing window bay in the Southeast Parlor originally had sliding doors.
        - We did not remove the trim to see if those doors were still in the pockets, but we did remove the trim in the Southwest Parlor/Library, and the pockets were there, but the doors were missing.
    - As in the Southeast Parlor, the sliding doors facing the Center East Parlor and the door to the Central Hall are all grained solid dark.
    - The doors in the Dining Room are treated differently than other doors in the sequence of rooms.

- The Dining Room side of the sliding doors are treated with "light on dark" meaning that the stiles and rails are grained dark, while the center panels are grained light (see Photo M-43).
- The same coloration is true for the two doors leading to the Central Hall from the Dining Room (**Photo M-47**).

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**Room M 205 Southwest Parlor / Original Library / Event Space**

- **Current/Original Use:** The Southwest Parlor/Library now serves as event space (**Photo M-48**).
  - It is believed to have served as William Reddick's Library, based upon references to it in the inventory of possessions taken after his death. It is thought that in the last years of Reddick's life he occupied only the Main Level. Period newspaper accounts state that he passed away in his Library.
    - The door and window trim in this room was faux grained, as was found in the East Parlors (it is now painted white).
      - Our paint analysis indicated that the wood trim was stripped and re-painted either in the 1970s or 80s. A very small remnant of the original wood graining was found on the frame to the window bay.
    - The decorative plaster ceiling is much simpler here than in the East Parlors. The cornice motif coordinates with the adjacent Center West Parlor.
- **Library Era:** A rare early photograph exists from the Library era (**Photo M-49**), which depicts a woman seated at a roll-top desk in the southwest corner of the room.
  - A hanging ceiling pendant is depicted in the photo as well.
  - The photo shows that the shutters were utilized in the early years, and that the trim had not yet been painted over.
  - It also shows that the window trim was dark—probably denoting graining.
    - The graining appears to be solid, not multi-colored as in the East Parlors.
- **Archway:** In architect Richardson's report of 1923, he states that the wall between the Southwest Parlor/Library and the adjacent Center West Parlor was opened up and an arched opening created prior to that time; likely 1888-90. (**Photo M-50**). The original specifications indicate there was a single door between the two rooms.
- **Steel Reinforcements:** In 1953, the Librarian's annual report noted that major structural repairs to the building had begun with the addition of three steel beams supported by pillars to reinforce the west side of the Main Level.
  - An RMA archive photo depicts workmen undertaking work on the floor in what appears to be the Southwest Parlor/Library (**Photo M-51**).
- **RMA Era:** In 1975, once the RMA took over management of the building, this space was modified to serve the Chamber of Commerce.
  - An RMA photograph from 1980 depicts the space at that time. Note that a temporary partition filled the large arched opening on the north wall (**Photo M-52**).

**Photo M-45**: Excellent comparison of the two faux graining techniques used in the front parlors: The Southeast and Center East Parlors are grained with "dark on light" (shown at left) and the Dining Room is grained "light on dark," as shown on the right.

**Photo M-46**: Because the Library had pushed the original sliding doors back into their pockets, the original graining was preserved and remains to this day as an excellent example of the technique.

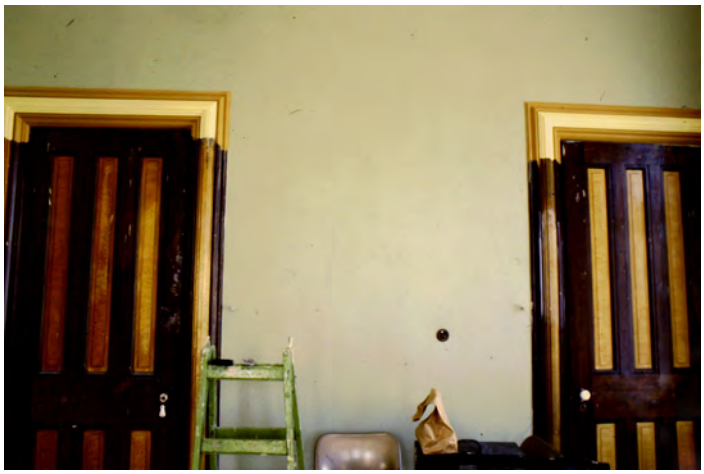

**Photo M-47**: View from the 1970s restoration showing how the tops of the door trim in the Dining room were prepared prior to final graining.

**Photo M-48**: Current view of the Southwest Parlor.

**Photo M-49**: Historic view from the Library period depicting an early librarian sitting at her desk in the southwest corner of the Southwest Parlor.

- **Walls**: The Southwest Parlor/Library is now painted a light tan color.
  - Per our paint sampling and analysis, the original color was a tan, Munsell 7.5YR 8/4.
- **Ceiling and Cornice:** The decorative plaster ceiling and cornice in this room can be described as follows:
  - The cornice is comprised of smooth plaster banding with equally spaced applied plaster medallions.
    - At this time, the medallions are painted a medium tan, and the plaster behind is painted white.
  - The ceiling center medallion is generally diamond shaped. It is similar, if not identical, to the diamond-shaped medallions found in several family bedrooms. We believe that the plaster "tracery" framework (which exists in the adjacent Center West Parlor) is missing and was removed at some point, perhaps due to plaster damage.
    - The use of the diamond-shaped center medallion and rectangular framed tracery (missing now but thought to have existed), which are similar to the plaster motifs on the Bedroom Level/3rd Fl. bedroom ceilings, denotes that the Center West Parlor and Southwest Parlor/Library were less formal spaces and were likely utilized only by family.
    - Refer to the *Plaster Comparison Sheets* (**Appendix B**).
  - The flat areas of the ceiling are now painted the same light tan as the walls.
    - Per our paint sampling and analysis, the original color of the raised ornament was off-white, Munsell 2.5Y 8.5/2. The flat areas of the ceiling were a light grayish tan, Munsell 2.5Y-5Y 7/2. The cove areas of the cornice (those areas behind the applied medallions) had a light reddish brown accent, Munsell 7.5R 6/4.
- **Chandelier:** The chandelier in this room is not original to the house (to our knowledge) but actually more closely resembles the East Parlor chandeliers depicted in the 1880 Bowman photographs.
  - Interestingly, the chandelier appears in the 1980 Chamber of Commerce photograph.
- **Doors:** The door to the room from the Central Hall is not original and is not in keeping with the historic space. It should be replaced.
  - During our investigation, a piece of trim was removed from the arched opening leading to the north wall window bay (**Photo M-53**).
    - It appears that there were originally sliding pocket doors in this opening, but unfortunately the doors are missing (at least in the west pocket, which was the only one we opened).[2]
- **Trim:** The trim surrounding the original windows and south bay window match Formal Trim Profile #11, which is original to the building.
  - Refer to the *Trim Profile Comparison Sheets* (**Appendix A**).
- **Flooring:** A modern wood floor has been installed that runs between this and the adjacent east event spaces.
- **Fireplace:** The room retains its original marble fireplace and mantel.

- **Miscellaneous Details:**
  - A capped gas line with original pressed-metal wall plate remains on the south wall to the west of the window bay.
    - This suggests that gas wall sconces were originally placed to either side of the windows, probably both on the south and west walls.
    - The height of the capped gas is the same as that found in the Dining Room.
  - Four picture hanging fobs were found near the cornice at the top of the wall in this room.
    - Two on the south wall on either side of the window bay.
    - Two immediately opposite on the north wall.
  - A ventilation grille is positioned high on the wall at the far west end of the north wall.

**Room M 106: Center West Room / Event Space**

- **Current/Original Use:** The original use of the Center West Parlor is not known, other than that it was adjacent to Reddick's Library in the Southwest Parlor. It may have been used as his office. The inventory taken after his death lists bedroom furniture in this space. It is that that in the last years of his life Reddick occupied the Main Level. The Center West Room now serves as event space (**Photo M-54**).
- **Library Era:** The fireplace mantle and surround, once positioned on the north wall, were removed during the later Library period.
  - An early Library photo exists (**Photo M-55**) that gives us much information about how this space was used, and how the library shelving was most likely set up throughout the building.
    - Note that the marble mantel was still located on the north wall when this photo was taken.
    - Note also how the pendant lighting extended down from the ceiling to light the aisles between the bookshelves.
    - We can see that the door trim was dark, probably denoting graining.
      - The graining appears to be solid, not multi-colored as in the East Parlors.
- **Opening to Southwest Parlor/Library:** The south wall of this room was opened prior to 1923, and a large arched opening created.
  - Based on the carpenter's specifications written notes a single door was placed in the south wall, leading to the Library.
- **RMA Era:** In 1975, once the RMA took over management of the building, this space was modified to serve the Chamber of Commerce.
  - An RMA photograph from 1980 depicts the space at that time (**Photo M-56**).
- **Walls:** The Center West Parlor is now painted a light tan color.
  - Per our paint sampling and analysis, the original wall color was a tan, Munsell 7.5YR 8/4.

**Photo M-50**: Current view into the Southwest Parlor.

**Photo M-51**: We think this photo dates from 1953, when major structural repair were made to add structural beams beneath the Southwest Parlor floor.

**Photo M-52**: 1980 view of the Southwest Parlor, when it served as an office for the Chamber of Commerce.

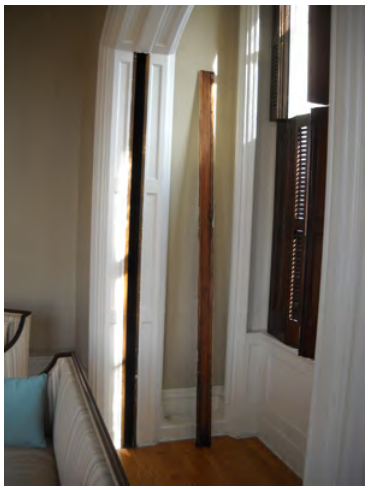

**Photo M-53**: A piece of trim was removed from the recessed bay window jamb to expose a door pocket. Unfortunately the door was missing. We do not know if other window bay doors are present in their pockets or not.

**Photo M-54**: Current view into the Center West Parlor/Library. Note the large arched opening between the two parlors (not original).

**Photo M-55**: Historic view from the Library period, depicting the shelving stacks positioned in the Center West Parlor.

**Photo M-56**: 1980 photograph of the Center West Parlor when it was being rented by the Chamber of Commerce.

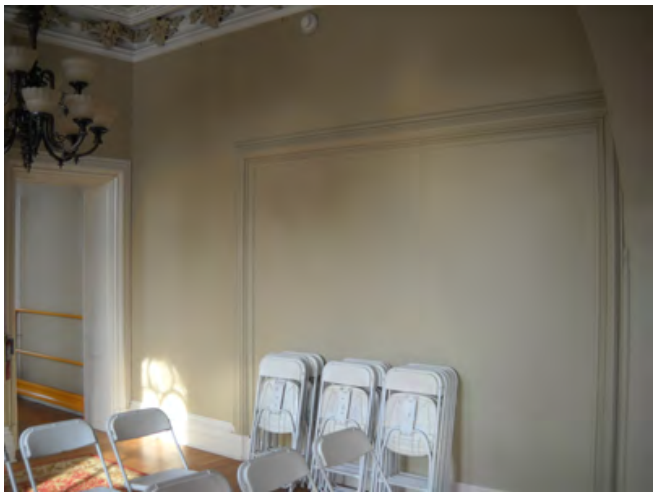

**Photo M-57**: Current view of the east wall in the Center West Parlor. The former opening is framed with trim that replicates the formal trim in the house.

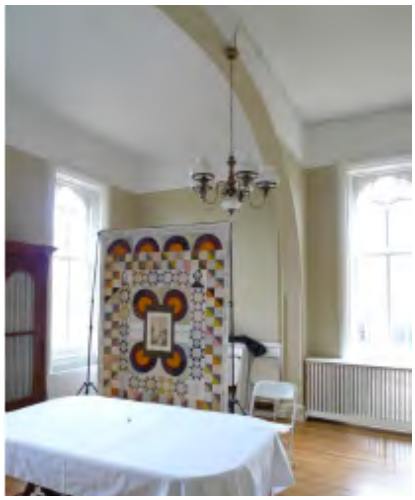

**Photo M-58**: Current view of the Northwest room. Note the large arched opening. There once was a solid wall in its place. The staircase from the Lower Level would have terminated near the window depicted on the right side of this photo.

- **Ceiling and Cornice:** The decorative plaster ceiling and cornice in this room can be described as follows:
    - The cornice is comprised of smooth plaster banding with equally-spaced applied plaster medallions.
        - At this time the medallions are painted a medium tan, and the plaster behind is painted white.
    - The ceiling center medallion is generally round. A raised plaster "tracery" framework creates a rectangle on the ceiling, with scalloped corners. This framework resembles that found on the ceilings of the family bedrooms.
        - The use of the diamond-shaped center medallion and rectangular framed tracery, which are similar to the plaster motifs on the Bedroom Level/3rd Fl. bedroom ceilings denotes that the Center West Parlor and Southwest Parlor/Library were less formal spaces, and were likely utilized only by family.
        - Refer to the *Plaster Comparison Sheets* (**Appendix B**).
    - The flat areas of the ceiling are now painted the same light tan as the walls, but the center medallion and ceiling tracery are painted white.
        - Per our paint sampling and analysis, the original color of the raised ornament was off-white, Munsell 2.5Y 8.5/2. The flat areas of the ceiling were a light green, Munsell 2.5GY 8/2. This layer appears prior to the library redecoration and is the same color that was used for the Dining Room ceiling.
        - The cove areas of the cornice (those areas behind the applied medallions) had a light reddish brown accent, Munsell 7.5R 6/4.
- **Doors to Central Hall:** There is presently no real door opening that leads from the Central Hall to this room.
    - A door and frame exist on the west side of the Central Hall, indicating the location of a once existing door to the Central West Parlor.
    - The entire east wall of the Center West Parlor is now solid.
    - There had formerly been a large opening in the east wall of this room, leading to the Central Hall, that was made in 1912 as part of Library upgrades. It was enclosed again later.
        - Interestingly, on the east wall of this room, the former large opening is framed out with painted trim that appears to be the same as the formal trim found throughout the Main Level (**Photo M-57**).
        - The door and opening to the central hall should be restored.
- **Other Doors:** Two door openings exist on the north wall, but neither have their original doors.
    - The left opening is thought to have led to the service rooms to the north.
    - The right opening is thought to have been added.[3]
- **Trim:** The wood door and window trim and baseboard are now painted white.
    - All the door and window trim was stripped and repainted either in the 1970s or 1980s. No area contained any historic finish.
        - Based upon other areas in the house, the wood trim likely had a painted wood grain finish originally.

  - The trim surrounding the original windows and the two north door openings match Formal Trim Profile #11, which is original to the building.
    - Refer to the *Trim Profile Comparison Sheets* (**Appendix A**).
- **Flooring:** A modern wood floor has been installed that runs continuously through all the west rooms.
- **Miscellaneous Details:**
  - A capped gas line exists on the west wall to the north of the paired windows.
    - An electrical outlet is positioned on the west wall to the south of the paired windows. This was likely originally a gas line that was wired for electric.
    - It is safe to say that gas wall sconces were once positioned on either side of the windows.
  - Four picture hanging fobs were found near the cornice at the top of the wall in this room.
    - One is located on the west wall, to the north of the paired windows. This suggests there may have been one to the south of the paired windows as well.
    - Two are located on the east wall – one directly across from that on the west wall, toward the north end of the east wall. The other is positioned more toward the center of the east wall.
    - One is located on the chimneybreast.
  - A ventilation grille is positioned high on the wall at the far north end of the west wall.

**Room M 107: Northwest Service Area / Event Support Space**

- **Current:** The Northwest Room on the Main Level serves as a general purpose space, mainly for setup of catering for events held in the Southwest and Center West rooms (**Photo M-58**).
- **Original Use:** The inventory taken after Reddick's death refers to a Bathroom in this corner of the building but does not mention another room (that contained possessions to be inventoried. We think the space was originally subdivided,
    - Diagram 3 shows the presumed configuration based on the evidence we found,[4] although little evidence of the original configuration could be discerned (**Diagram # 3, below**).[5]

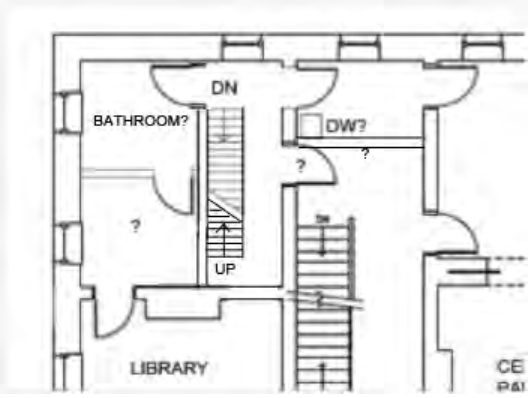


**Diagram 3**: Possible configuration of original floor plan in northwest corner, Main Level.

        - We know that a service stair once existed in the space, because evidence of the stair was clearly found on the Lower Level immediately below.
            - The stairs were removed prior to 1923 renovations, probably in two phases: 1888 and 1894.[6]
        - We also know that a door existed at the north end of the east wall, due to cracks in the plaster. This door would have been directly across from the Dining Room door and would have served as a servant's entrance to the Dining Room.
    - The window and door trim found in this space is a considered formal domestic trim (Profile #9).
        - Interestingly, the same trim was found on the Bedroom Level in the northwest "Wet" Room, and on the Lower Level in the Southeast Room that is thought to have been the Servants' Dining Room.
        - The door positioned on the east wall is not original. The trim is formal domestic, but curiously, on the room side, it runs straight down to the floor; elsewhere throughout the house the door trim terminates at a block, or plinth, at the same height of the baseboard.
- **Partitions:** A large masonry partition originally ran north-south through the space. It was removed prior to 1923, and a large arched opening was created.
    - Some cracking was noted on the west wall, between the two windows that indicate to us that a partition may have been positioned against that wall.
        - The door locations are suppositions.
- **Walls:** The Northwest Room is now painted a light tan color.
    - Per our paint sampling and analysis, the original wall color was a light grayish tan, Munsell 2.5Y – 5Y 7/2.
- **Ceiling:** The ceiling in this room is plain plaster, not decorative, and there is no plaster cornice. At this time the ceiling is painted white.
    - Paint sampling and analysis in this space was inconclusive, as all of the ceiling surfaces have been replastered.
- **Trim:** All the wood door and window trim and baseboards are now painted white.
    - A sample was taken from the large window on the north elevation, indicating that that window frame was grained.
    - We assume the remaining trim was not grained, as this was a domestic space.
    - The trim surrounding the windows on the west wall of this room match Domestic Trim Type 2, Profile #9, which is original to the building and matches the trim profiles in the Northwest Room on the Bedroom Level.
    - The trim surrounding the door to the Central Hall and the window on the north wall is Modified Domestic Type 1, profile #10.
        - Refer to the *Trim Profile Comparison Sheets* (**Appendix A**).
- **Flooring:** A modern wood floor is installed in this and the adjacent two West Parlors.

- **Miscellaneous Details:**
  - No picture hanging fobs were found in this space.
  - Interestingly, it appears the windows in this space never had shutters. This would hold true for their being domestic spaces.
  - No ventilation grille is found in this room.

**General Comments and Recommendations**

- **Overall Condition:** The Main Level/Second Floor of the Reddick Mansion is in good condition overall.
  - The Central Hall and three East Parlors were restored in 1976-1978 and are serving as exhibit space. Paint surfaces have been renewed since then.
    - A paint analysis was undertaken by David Arborgast from samples obtained by the RMA. His results were utilized to establish the exiting room colors. His findings vary somewhat with our own.
    - Our sampling and analysis found that the wall colors were originally much lighter than they are now, and that the ceilings were somewhat polychrome, in varying shades of very light grey or tan and white.
    - The existing décor (paint, curtains, carpet) in the three East Parlors is appropriate for the period. In a future restoration campaign the RMA may wish to revise the parlor paint colors, which may lead to some modification in the curtain and upholstery selections.
    - The fire escape door in the Center West Parlor should be removed and a replica of the original window installed.
  - The three West Parlors were redecorated in the 1980s and repainted in 2010.
    - No paint analysis was undertaken for these rooms prior to our team's involvement.
    - Our sampling and analysis found that the original wall colors were quite similar to the original colors utilized for the East Parlors and Central Hall. The ceilings were also somewhat polychrome, in shades of light grey or tan and white.
    - Currently the cornice medallions in both the Southwest and Center West Parlors are painted the same medium tan as the walls. The ceiling is also painted the darker color. Dark paint on the ceiling and portions of the cornice is inappropriate for this time period.
    - We recommend that during the next painting campaign, the Southwest and Center West Parlors be returned to their original painting schemes, based upon our paint analysis findings.
      - Unfortunately the window and door trim in these rooms was stripped, so their original grained appearance cannot be easily obtained.
      - In a larger restoration project the graining can be returned.
    - We take no issue with the three West Rooms continuing to serve as multi-purpose meeting and event space. Their restoration and interpretation would be speculative at best, and the existing large area serves a purpose for the RMA—to obtain rental income.

- The wood floors running through the three West Parlors are inappropriate for the building's period, but serve well for the adapted use as event space.
  - Historically the parlors did have wood floors, but they were covered with carpets.
  - The light oak color of the floors is not appropriate for the time period. It would help for general interpretation if the floor were stained a darker color more in keeping with the grained wood found in the east parlors (or from a sample of the original flooring, when viewed by pulling up some of the carpeting in the Central Hall).
- The Central Hall and Entry Vestibule retain their original decorative plaster ceilings and a section of the faux painted wainscot mural.
  - The building's historic interpretation would be enhanced by replicating the wainscot mural around the entire Central Hall and up the stairs to the Bedroom Level (and throughout the Bedroom Level's Central Hall as well).
    - It would be possible to photographically reproduce the existing mural and create laser printed wallpaper to replicate the design.
  - To gain the full effect, the Entry Vestibule walls and ceiling should be grained (possibly with the same wallpaper technique on the walls) at the same time.
- The stairs between the Lower Level and the Main Level were enclosed in the 1960s, following fire department recommendations.
  - This enclosure does not really affect the overall interpretation of the Main Level. The enclosure does not need to be reversed.
    - In retaining the enclosure, the slot in the floor between the Lower and Main levels will be forever lost.
    - The partition beneath the stairs has helped to stabilize any "listing" of the stairs unevenly.
- The Servants' Stairs from the Main Level to the Bedroom Level were removed early on in the Library period. Returning the stairs to their original location is not advised. The stairs were originally very steep, and would not meet current code standards for exiting.
- The plaster in the three East Parlors is in excellent condition. We understand that repairs were undertaken within the last few years.
- The plaster walls in the three West Parlors is in good condition, but the ceilings exhibit cracking in some areas.
  - The Southwest and the Center West Parlors exhibit ceiling cracking on either side of the arched partition separating the two rooms.
  - The Southwest Parlor ceiling exhibits north-south expansion cracks in several locations, most particularly where the west bay window begins.
    - A skilled plastering company should "sound' the ceiling (with a rubber tipped hammer) in the Southwest Parlor to ensure that sections of plaster are not delaminated from the lath, which could result in sections of the ceiling falling.

- If it is desired that an elevator be installed in the building to allow for visitor access to the upper floors, the northwest corner of the Northwest Room would be the most appropriate location for such a lift.

**END MAIN LEVEL**

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[1] The original carpenter specifications refer to the dumb waiter and its adjacency to the Dining Room in the section describing closets: "Parlor story – fit up pantry with shelves, drawers &c. Dumb Waiter from kitchen to Dining Room. Pantry above to be constructed & fitted up in most Approved manner." This *may* suggest that there was a partition at the end of the Central Hall creating a "butler's pantry" in which there was a dumb waiter that travelled from the kitchen pantry (where the restrooms are now) up to the Main Level. This has not been confirmed with physical evidence, but may be in the future if destructive investigation is undertaken.

[2] Event though pocket doors in front of the parlor windows is listed in the Carpenter's Specifications, it is possible tat Mr. Reddick opted not to install them. Perhaps the tracks were installed yet the doors were not.

[3] Note that the east door in the north wall is not present in photo M-55. We think, based upon the perspective represented in the photo that the door frame is obscured by the large bookshelves. We found that the trim on the Center West Room side of the door opening had a historic profile, but the trim could have been re-used from another location. The date of installation for this door is undetermined.

[4] Two cracks were found in the west wall between the two windows that suggest there was once a partition in that location.

[5] The carpenter's notes in the specifications indicate that the Main Level was to receive 9 doors at 3'-2" wide and 8'-0" tall, and 4 doors that measured 2'-8" wide and 7'-6" high. The smaller doors are presumably service area doors, and are illustrated in Diagram 3 in a possible configuration.

[6] In 1888 major work inside the library includes paying a George C. Reix for a railing that may have been to go around the opening to the servant's stairs leading from the Main Level to the Lower Level when the portion of stairs leading up to the Bedroom Level were removed. A few years later, in 1894, the lower servants staircase from the Lower Level to the Main Level was enclosed because of complaints of odors coming from the kitchen on the Lower Level.

## Bedroom Level / Third Floor

**Changes Through Time**

- The Mansion was opened as the Reddick Library in September of 1888. At that time, the following changes were made to accommodate the new use:
  - Water was piped to the Bedroom Level for a water closet in 1897.
- It was decided in 1910 to remove some of the books from the Main Level to the Bedroom Level/Third Floor, and to investigate the matter of having a Juvenile Department on the Bedroom Level. Oral tradition holds that the early librarians lived on the Bedroom Level prior to that time.
- In 1912-13, the Bedroom Level was remodeled to create a Juvenile Department and a historical museum for the LaSalle Co. Historical Museum, as well as a general assembly and lecture room. Architect Jason Richardson submitted plans and specifications.
  - An assembly room was created across the front of the building by removing walls and combining the Southeast Bedroom, Central South Hall and Southwest Bedroom.
  - The Juvenile Department and the Historical Museum must have occupied one or more of the following spaces (it is unknown which):
    - The Center West and Northwest Rooms housed the Museum
    - The Center East and Northeast Rooms housed the Juvenile Dept.
  - At that time, a combination Balopticon and moving picture machine were installed in the Assembly Room.
- In c. 1912 the following changes were made to the Bedroom Level, as stated in architect Richardson's 1923 report. We assume these include:
  - The wall between the Center East Room and Northeast Room was opened (it was re-closed in 1966), as noted in Sprague's 1975 diagram.
  - The closets and the east wall of the Center West Room were removed. The chimney on the north wall was also removed.
  - The partition separating the existing northwest "Wet Room" in half was removed.
- Two mantels were sold in 1915-16. Presumably these were the mantels from Southeast and Southwest Bedrooms.
  - One was sold to John Hazlitt on May 15, 1915.
  - One was sold to Roy E. Gedney in 1916.
- The Juvenile Department must have been popular (Library minutes indicate that approximately 200-300 children were attending the moving picture shows in the Library on Saturday afternoons), because by 1917 plans were being made to remodel the basement into a Juvenile Department.
  - In 1917, the Juvenile Department on the Bedroom Level was used for expanded stack space.
- In 1921, it was reported that the Library was running out of stack room. A proposed solution was the removal of the Museum, to accommodate the overflow of bound magazines and newspapers.

- By 1924-1925, the Museum space on the Bedroom Level was being cleared of exhibits, and the space gradually reclaimed for Library use. We assume the Museum occupied the Northwest and Center West Bedrooms.
    - The Museum use must have continued on the Bedroom Level, as the Library minutes report in 1944 that there were still 301 items in the Museum.
- In 1925, radiators were installed in the Newspaper Room (Southwest Room) and in the Toilet Room.
- In 1928, a bid was accepted to "restore the walls, ceiling and woodwork of the lower three floors including the hall." We assume this means painting.
- In 1938, painters were contracted to redecorate the interior of the Library and renew the floor covering on the Main Level. Work was undertaken on the Lower, Main and Bedroom Levels, as well as the exterior of the doors.
- The 1944 annual Librarian's report noted that the building had been rewired.
- In 1948, Willcox Paint was given order to wash the walls and paint where specified.
- The Librarian's report for 1948 noted that the steel newspaper files were moved from the attic to the Bedroom Level and placed in the east half of the room that was formerly the Auditorium. The west half of the room was being arranged to make an "Illinois Room."
- In 1951, bids were obtained for redecorating the first floor (sic) only (Main Level and Bedroom Level floors and ceiling were to be washed and one coat of paint applied).
- In 1952, it was recommended that 35 new light fixtures be installed in the Lower Level and 18 new fixtures be installed in the Main Level.
- Considerable changes were made to the Main Level in 1961, and additional repairs were made to the Bedroom Level / 3rd Fl.:
    - A new room, used for reference and study, was opened to the public along the front of the Bedroom Level.
    - The Bedroom Level became the location of the Young Adult book collection.
    - Vinyl asbestos flooring was installed.
- The State Fire Marshall required that two doors be installed on the Main and Bedroom Levels in 1964.
- In 1966, a fire partition and door were installed at the head of the stairs.
- In 1981-2, interior storm windows were fabricated by RMA board members, and installed on all Main Level and Bedroom Level windows. The units were constructed from Plexiglas in aluminum frames, and were screwed to the inner face of the window sashes.
- In 1976, the partitions were reconstructed in the Assembly Room, returning the front of the Bedroom Level to its original configuration as two bedrooms and a central hall.
- In 1986, general repairs and redecorating/painting were undertaken in the Chamber of Commerce offices and the United Fund office (presumably the Southeast and Southwest Bedrooms).

**Room BR 301: Central Hall**

NOTE: The Bedroom Level/Third Floor Central Hall is currently separated into three distinct parts: the North Stair Hall, the Central Hall and the Central Hall South. The North Stair Hall and Central Hall will be discussed together.

**North Stair Hall**

- **Current/Original Appearance:** The North Stair Hall retains many of its original features, including grained wood trim (**Photo BR-1**). Where the north wall meets the sidewalls, the corners are curved.
    - The faux wood-painted wainscot is carried up the stairs, around the north stair hall and throughout the Bedroom Level's Central Hall.
- **Library Era:** Library records indicate that a gas fixture was placed at the head of the stairs in 1897. The existing fixture remains in place. A detail photo of the gas pipe fitting (now converted to electric) shows how the gas fittings throughout the house were probably configured at one time (**Photo BR-2**).
    - A modern drywall partition was constructed just south of the door leading to the Northeast Bedroom in 1966. This wall and fire-rated door were installed upon direction from the State Fire Marshall.
        - Unfortunately, a portion of the original balusters were removed in order to install the wall (**Photo BR-3**).
- **Ceiling and Cornice:** Originally, when the Central Hall was continuous, the decorative plaster cornice and simple raised plaster ceiling trim carried throughout. They are now interrupted by the newer partitions.
    - The 1966 partition literally cut the ceiling trim, but the ceiling trim was modified nicely when the southern partition was installed (discussed later).
- **Skylight:** A skylight is positioned over the staircase in the North Stair Hall.
    - The skylight had been covered over since 1961 (per the Sprague report), but was re-glazed later (year unknown). (**Photo BR-4**).
    - The existing glass in the laylight beneath the skylight is clear and is believed to be Plexiglas or lexan. It would most probably have been frosted to prevent a view of the servants' space from the family Bedroom Level (and vice versa).[1]
    - Retaining the clear glass laylight will aid interpretation, since Museum visitors will not be allowed to view the Servants' Level (unless another means of exit is provided).
- **Door:** The Northeast Bedroom door is positioned at the head of the stairs.
    - We find it interesting that the bedroom door is recessed, and that the corners are curved where the hall walls form the recess. This is not found anywhere else on the Bedroom Level (**Photo BR-5**).
        - Perhaps this room was intended as a guest bedroom, as it was treated a bit differently than the other bedrooms.
- **Railing and Balusters:** The entire stair railing and balusters were stripped and refinished in the mid- to late 1970s (**Photo BR-6**).

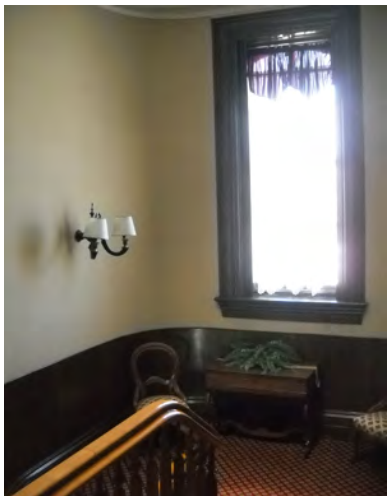

**Photo BR-1**: Current view of the north end of the Center Stair Hall.

**Photo BR-2**: Detail view of the former gas pipe fitting that was converted to electric.

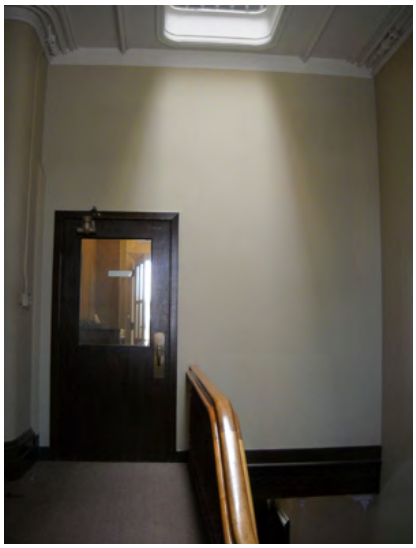

**Photo BR-3**: Current view of the fire-rated wall separating the North Central Hall from the rest of the Central Hall.

**Photo BR-4**: Photograph from post-1966, showing the covered skylight.

**Photo BR-5**: Current view looking up toward the laylight (with skylight above) in the ceiling over the main staircase. Note how the walls and cornice curve in at the door entry of the Northeast Bedroom.

**Photo BR-6**: 1970s photograph showing workmen refinishing the stair railing and balustrade.

- Interestingly, the balusters appear to have been stained dark to match the stair stringer, but a current photograph shows that the balusters have faded and appear lighter than the original stringer (which does not appear to have been stripped) (**Photo BR-7**).

**Central Hall**

- **Current/Original Appearance:** The Central Hall, as discussed earlier, was originally a large continuous space.
  - The existing space is now separated on the north by the fire partition and on the south by a large framed double-door opening (**Photo BR-8**).
    - The two half-glazed doors with glazed transom were installed in 1912-13 when the Southeast and Southwest Bedrooms and a section of the Central Hall were combined to create one large Assembly Room.
    - The door trim for this opening was very nicely matched to the original formal trim used elsewhere throughout the Bedroom Level.
    - The decorative plasterwork and cornices were very nicely modified to make the ceiling appear as though the partition had always been there.
- **Walls:** The Central Hall is now painted a medium tan color.
    - Per our paint sampling and analysis, the original color was a Light Greyish Tan Munsell 2.5Y – 5Y 7/2; the lower walls had a painted wood grain finish probably matching that found on the Lower Level.
  - The decorative plaster ceiling and cornice in this room can be described as follows:
    - The cornice is comprised of smooth plaster banding with equally-spaced applied plaster bound acanthus leaves.
    - The ceiling center medallion is generally round-shaped and contains a floral motif. The same medallion is used in the Center West Dressing Room. A raised plaster "tracery" framework creates a rectangle on the ceiling, with scalloped corners. This framework tracery is found in all the bedrooms.
    - Refer to the *Plaster Ceiling Comparison Sheets* (**Appendix B**).
      - The ceiling and decorative plaster are now painted white.
    - Per our paint sampling and analysis, the original color of the raised ornament was off-white, Munsell 2.5Y 8.5/2. The flat areas of the ceiling were a light tan, Munsell 7.5YR 8/2 – 8/4.
- **Chandelier:** A modern chandelier hangs from the center ceiling medallion. It is a pleasant fixture but does not accurately represent the style of fixture that would have hung here historically.
  - It is impossible to know, but the Bedroom Level fixtures may have been in the same style as the chandelier pictured in the 1885 Bowman photograph of the Center East Parlor on the Main Level, but with fewer arms.
- **Doors and Trim:** There are three framed doorways that lead from the Central Hall to adjacent spaces.

- All three door openings retain their original door trim: Formal profile #7. The trim is now painted white, but was originally grained.
- Refer to the *Trim Profile Comparison Sheets* (**Appendix A**).
- The doors to the Center East and Center West Bedrooms are original.
    - It is thought that the door on the west wall led to a large closet, rather than directly into the Center West Bedroom. (See Diagram 4 in the discussion of the Center West Dressing Room).

**Room BR 301a: Central Hall South**

- **Current/ Original Use:** Originally, the area that comprises the Central Hall South was used much as it is now, as a sitting room which was typical for the era.
    - The space is now painted a rich golden color matching the paint finish in the adjacent Southeast Bedroom (**Photo BR-9**).
    - The wood trim in this space is painted white with a blue highlight band.
        - The blue banding is not appropriate for this or any historic period. The trim should be painted white in the interim before it is grained in a larger restoration program.
- **Conversion to Auditorium:** In 1912-13, the east and west walls of this room were demolished in order to combine the three rooms into a large auditorium space.
    - The double-doors and trim leading to the Central Hall date from 1916-1918 and are not original to the building.
        - In a larger restoration program, this wall and door assembly should be removed. The trim should be retained, as it more closely matches the original door and window trim than does the trim from the 1976 renovations. It should be labeled and stored in the attic for possible future use.
- **1976 Refurbishment:** In 1976, this space and the adjacent Southeast Bedroom were refurbished into Congressman Tom Corcoran's office. An existing photo that dates from 1980 shows the space when it was being used this way (**Photo BR-10**).
    - The east and west walls of this room and doorways leading to the adjacent bedrooms must have been reconstructed between 1976 and 1978, along with the restoration work undertaken on the Main Level. There is not much written documentation about this work other than RMA files that state Congressman Corcoran's office was refurbished by Kerste & Son in 1976.
- **Walls and Ceilings:** The original walls, trim and ceiling finishes are the same as those supplied in the previous discussion for the Central Hall.
- **Trim:** The original Bedroom Level wood trim is Formal Profile #7. It closely matches the Main Level Formal Profile #11.
    - The replicated 1976 wood trim is Formal Profile #8. It somewhat matches the original trim, but is not as refined, and the center portion is too wide.
        - Refer to the *Trim Profile Comparison Sheets* (**Appendix A**).

**Photo BR-7**: Current view of the stair railing and nearby stringer skirting. Note the difference in color. We believe the decorative skirting retains its original finish.

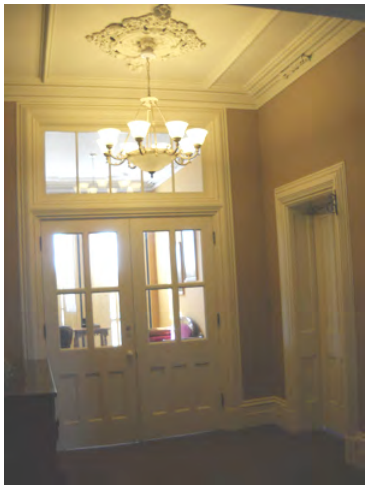

**Photo BR-8**: Current view of the 1912 partition with glazed doors and transom, looking south from the Central Hall.

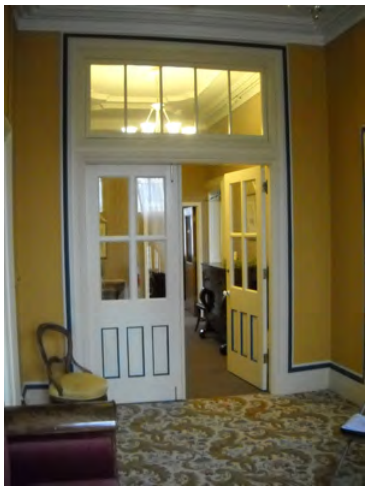

**Photo BR-9**: Current view of the c. 1912 partition, looking north from the southern portion of the Central Hall.

**Room BR 302: Southeast Bedroom / Bedroom Exhibit**

- **Current/Original Use:** The Southeast Bedroom is now used as exhibit space (**Photo BR-11**).
  - We assume this room was originally Mr. Reddick's bedroom.
  - A door on the north wall originally led to a closet.
- **Library Era:** During the earliest Library years, between 1888 and approximately 1910, only the Main Level was used for Library purposes.
  - Three rooms on the east side of the Bedroom level were rented to Mr. Nash, husband of Mrs. Nash who served as the Librarian.
- **1912-13 Remodel:** In 1912-13 the Bedroom Level was remodeled to create a Juvenile Department and a space for the LaSalle Co. Historical Museum, as well as a general assembly and lecture room. Architect Jason Richardson submitted plans and specifications.
  - An Assembly Room was created across the front of the building by removing walls and combining the Southeast Bedroom, Center South Hall, and Southwest Bedroom.
  - The Juvenile Department and the Historical Museum must have occupied one or more of the following spaces (it is unknown which):
    - The Center West and Northwest Rooms were the Museum
    - The Center East and Northeast Rooms were the Juvenile Dept.
  - At that time, a combination Balopticon and moving picture machine was installed in the Assembly Room.
- **Sale of Mantels:** Two mantels were sold in 1915-16. Presumably these were the mantels from Southeast and Southwest Bedrooms.
  - One was sold to John Hazlitt on May 15, 1915.
  - One was sold to Roy E. Gedney in 1916.
- **1976 Restoration:** In 1976 the partitions were reconstructed in the Assembly Room, returning the front of the Bedroom Level to its original configuration as two bedrooms and a central hall.
  - An RMA photograph shows the Assembly Room before the partitions were reconstructed (**Photo BR-12**).
  - At that time, a marble fireplace surround and mantel were returned to the west wall, but the original chimney build-out was not reconstructed.
  - In 1976, this space and the adjacent Center South Hall were refurbished into Congressman Corcoran's office (**Photo BR-13**).
- **Walls:** The Southeast Bedroom is now painted a rich golden color.
  - Per our paint sampling and analysis, the original color of the walls was a light grayish tan, Munsell 2.5Y – 5Y 7/2.
- **Ceiling and Cornice:** The decorative plaster ceiling and cornice in this room can be described as follows:
  - The cornice is comprised of smooth plaster banding.
  - The ceiling center medallion is generally diamond-shaped. It is similar, if not identical, to the diamond-shaped medallions found in the Southwest Parlor on the Main Level.
    - Refer to the *Plaster Ceiling Comparison Sheets* (**Appendix B**).

**Photo BR-10**: This photograph from 1980 shows the south end of the Central Hall when it was being used as a reception room for Congressman Tom Corcoran's office.

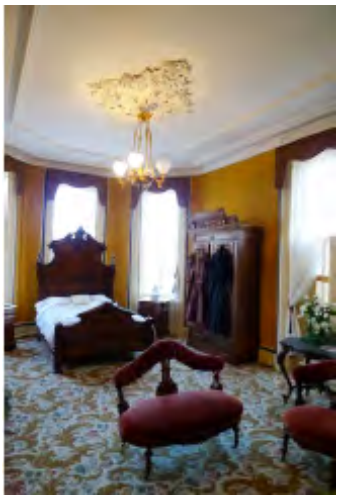

**Photo BR-11**: Current view of the Southeast Bedroom, which is being used as exhibit space.

**Photo BR-12**: This rare view from a c. 1976 photograph shows when the three south rooms on the Bedroom Level were combined to create one large Assembly Room. The partitions were reconstructed in 1976.

  - The flat areas of the ceiling are now painted white.
  - Per our paint sampling and analysis, the original color of the raised ornament and field were all off-white, Munsell 2.5Y 8.5/2. This is one of the few rooms where the ceiling plain and ornamental areas were all painted white.
- **Chandelier:** A reproduction chandelier hangs from the ceiling. It is not original to the building.
- **Trim:** The trim was originally grained, but is now painted white.
  - Original Formal Trim, Profile # 7 was found on the windows and the door frame on the north wall.
  - Non-original replicated Formal Trim, Profile #8 was found on the door leading to the Central Hall.
    - Refer to the *Trim Profile Comparison Sheets (***Appendix A**).
- **Miscellaneous details:**
  - Picture hanging "fobs" are positioned near the cornice at the top of the wall in four locations in this room.
    - On three locations on the north wall: to the left of the original door, above the door, and to the right of the door toward the east end.
    - On the south wall toward the east end.
  - We found no record of when the window dressings were fabricated or when the carpeting was installed, but we assume it was in the 1980s.
  - An original ventilation grille is positioned on the wall at the far east end of the north wall.
    - Two modern ventilation grilles are positioned on the north wall—a low one to the left of the center door and a high one to the right of it. These are tied to the A/C unit that serves the three East Rooms on the Bedroom Level. The date of this installation is unknown.
  - A capped gas pipe fitting was positioned on the east wall, to the left of the center window. We assume there was originally a similar fitting to the right of the window as well.

**Room BR 303: Center East Bedroom / Library Exhibit**

- **Current Use:** The Center East Bedroom currently serves as a somewhat interpreted space, but has not been restored to any particular era or display (**Photo BR-14**).
  - Several original Library bookshelves are positioned in the southeast corner.
  - A wood desk is positioned in the middle of the room; the origin of this desk, and whether it has significance to the Library era, is unknown.
  - An air conditioning unit is positioned in the northeast corner. It serves the three East Bedroom spaces.
- **Original Use:** Little is known about the original use of this room other than that it was a bedroom.
  - It is not clear whether it was Elizabeth Funk Reddick's bedroom or not, but it would have been a very small room for a family member
  - This room served as a bedroom; possibly a guest bedroom.
  - The north wall of this bedroom was opened c. 1912.

        - The opening is now filled with a drywall partition. There is a modern door in the partition that leads to the Northeast Bedroom. Neither the door nor the wall is original.
    - A bulkhead is positioned near the ceiling on the south wall (**Photo BR-15**).
        - This build-out represents where the south wall of this room was originally located. We assume the wall was removed before 1923 to make the space larger and more useable for library purposes.
        - We assume there was a door positioned on the south wall that led to a closet. The exact location of the door is not known.
- **Walls:** The Center East Bedroom is now painted a tan color.
    - Per our paint sampling and analysis, the original color was a tan, Munsell 7.5YR 8/4
- **Ceiling and Cornice:** The decorative plaster ceiling and cornice in this room can be described as follows:
    - The cornice is comprised of smooth plaster banding.
    - The ceiling center medallion is generally square in shape.
        - Refer to the *Plaster Ceiling Comparison Sheets* (**Appendix B**).
    - The ceiling is now painted white.
        - Per our paint sampling and analysis, the original color of the raised ornament was off-white, Munsell 2.5Y 8.5/2. The flat areas of the ceiling were a light tan, Munsell 7.5YR 8/2 – 8/4.
- **Lighting:** A modern fluorescent light fixture hangs from the ceiling.
- **Doors:** The doors to the Central Hall and to the adjacent Southeast Bedroom are original and exemplify the typical Bedroom Level doors (**Photo BR-16**).
    - The hardware on this door is original. (**Photo BR-17**) The knob and rose are porcelain, the keyhole cover is porcelain over cast metal, and the round room lock is probably brass (now painted).
- **Trim:** The trim was originally grained but is now painted white.
    - All the window and door trim in this room is original Formal, Profile # 7.
    - This and other rooms throughout the Bedroom Level still retain their original baseboard. **Photo BR-18** illustrates this typical trim type.
        - Refer to the *Trim Profile Comparison Sheets* (**Appendix A**).
- **Miscellaneous Details:**
    - In 1913, a fire escape was constructed on the east side of the building at the wood porch. At that time, the southernmost window in the east wall of the Center East Bedroom was converted into a doorway, and a glazed door with panic hardware was installed in order to access the exterior fire escape.
    - No picture hanging fobs were noted in this room.
    - No capped gas fittings were noted in this room.
    - An original marble fireplace with mantel is positioned on the west wall.

**Photo BR-13**: 1980 view of the Southeast Bedroom, when it was being used as the office for Representative Corcoran.

**Photo BR-14**: Current view of the Center East Bedroom, looking northward toward the A/C unit.

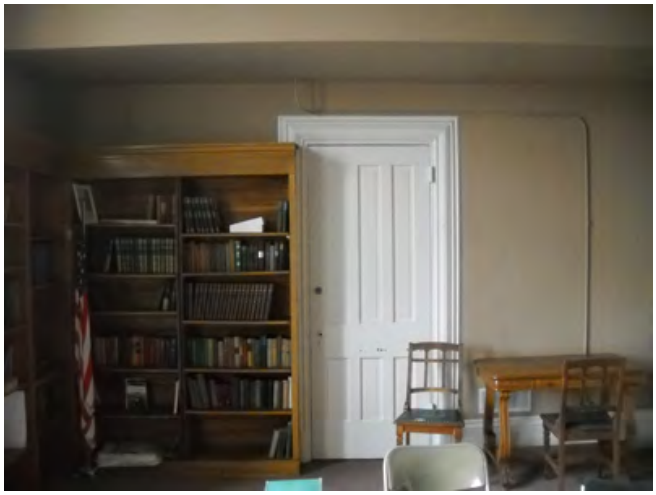

**Photo BR-15**: Current view looking toward the south wall of the Center East Bedroom, showing the bulkhead that represents where the original room partition was. We assume that closets occupied the space between the two bedrooms.

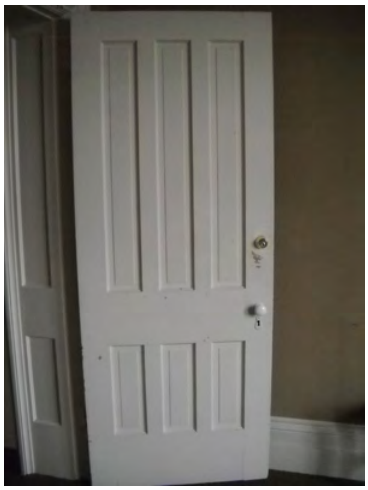

**Photo BR-16**: Current view of a typical Bedroom Level door. These doors are original, but would have been faux wood grained, together with their door surrounds and trim.

**Photo BR-17**: Detail view of the original doorknob, keyhole cover and round lock on one of the bedroom doors. Many of these original elements remain intact.

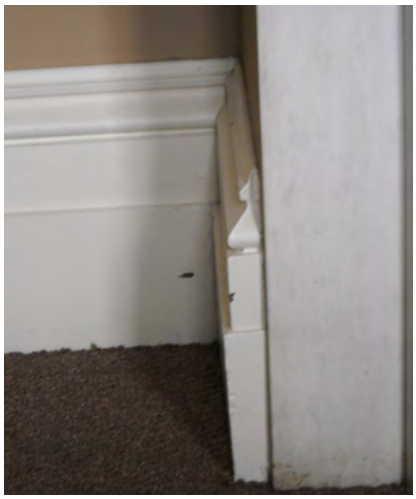

**Photo BR-18**: Current photo showing the typical Bedroom Level baseboard configuration.

**Room BR 304: Northeast Bedroom / Office**

- **Current/Original Use:** The Northeast Bedroom now serves as an office for the Campfire Girls Headquarters (**Photo BR-19**).
  - It has served this purpose since 1978.
  - It had formerly served the United Fund.
  - We think this room originally served as Elizabeth Funk Reddick's room.
- **Historic Integrity:** Of all the Bedroom Level/3rd Fl. bedrooms, the Northeast Bedroom retains the most original details.
  - It is the only bedroom to have retained its original closets, although the closets in this room are much shallower than the assumed closets in the Southeast and Southwest Bedrooms.
    - Hooks lined the perimeter of the northernmost closet, which was typical for 19th c. closets (**Photo BR-20**).
- **Walls:** The Northeast Bedroom is now painted a medium tan color.
  - Per our paint sampling and analysis, the original color was a Light Greyish Tan Munsell 2.5Y – 5Y 7/2 (same as the ceiling field).
- **Ceiling and Cornice:** The decorative plaster ceiling and cornice in this room can be described as follows:
  - The cornice is comprised of smooth plaster banding.
  - The ceiling center medallion is generally diamond-shaped.
    - Refer to the *Plaster Ceiling Comparison Sheets* (**Appendix B**).
  - The ceiling is now painted white.
  - Per our paint sampling and analysis, the original color of the raised ornament and cornice was off-white, Munsell 2.5Y 8.5/2. The flat areas of the ceiling were a light grayish tan, Munsell 2.5Y-5Y 7/2 (the same as the walls in the Central Hall, and matching the walls in this room).
- **Trim:** The trim was originally grained, but is now painted white.
  - Original trim Formal, Profile # 7 was found on the all windows and doors in this room.
    - Refer to the *Trim Profile Comparison Sheets* (**Appendix A**).
  - The exterior face of the door to the hall, as well as the trim around the door on the hall side, are all original graining, and should be used as a sample, should the rest of the bedroom doors and trim be grained in the future (**Photo BR-21**).
- **Miscellaneous details:**
  - Two capped gas fittings were positioned to either side of the center window on the east wall.
  - An original marble fireplace with mantel is positioned on the north wall.
  - In 1952, it was recommended that 35 new light fixtures be installed in the first floor (Main Level) and 18 new fixtures be installed in the second floor (Bedroom Level). It appears that one of these fluorescent mid-century fixtures remains in this bedroom.
  - A historic ventilation grille is positioned near the cornice at the east end of the north wall (**Photo BR-22**).
- **Storm Windows:** The original wood double-hung windows in this room, as well as most of the rooms throughout the Bedroom Level, have had aluminum "storm

windows" screwed directly to the sash. Some windows have the storms screwed to both the upper and the lower sashes; others to only one sash or the other (**Photo BR-23**).

- In 1981-2 interior storm windows were fabricated by RMA board members, and installed on all Main Level and Bedroom Level windows. The units are constructed from Plexiglas in aluminum frames.
- These storms have accelerated deterioration to the interior side of the sash, due to trapped condensation.
- Due to the poor condition of most window sash, the screwed-on storms are most likely the only thing holding them together at this time.

**Room BR 305: Southwest Bedroom / Undefined**

- **Original Use:** The Southwest Bedroom likely served originally as Mrs. Eliza Collins Reddick's bedroom (**Photo BR-24**).
  - We think this because of the slightly different way in which the ceiling and cornice were painted (utilizing a light yellowish tan accent color), which is unlike any other room in the house.
  - We also think this room was Mrs. Reddick's because of its connection to the North Center Room, which we thing was a dressing room or sitting room.
- **Library Era:** This and the adjacent Center West Bedroom likely served as the LaSalle County Historical Museum space from 1912 through about 1924.
  - In 1912-13, the east wall of this room was demolished in order to combine the three south rooms into a large Auditorium space.
  - We know that stacks were installed in this room at one time, because additional structure was added in the attic above this room to support the heavy load (probably in 1952, based on Library minutes).
- **RMA Era:** In 1976, the Auditorium space was again subdivided into bedrooms and this room was prepared as an office for the United Fund Conference Room (**Photo BR-25**).
- **Walls:** The Southeast Bedroom is now painted a light tan color.
  - Per our paint sampling and analysis, the original color was a light tan, Munsell 7.5YR 8/2-8/4.
- **Ceiling and Cornice:** The decorative plaster ceiling and cornice in this room can be described as follows:
  - The cornice is comprised of smooth plaster banding.
  - The ceiling center medallion is generally diamond shaped.
    - Refer to the *Plaster Ceiling Comparison Sheets* (**Appendix B**).
  - The flat areas of the ceiling are now painted white.
    - Per our paint sampling and analysis, the raised ornament and inner ceiling field were off-white Munsell 2.5Y 8.5/2; the outer field of the ceiling was light tan, Munsell 7.5YR 8/2-8/4; the cove areas of the cornice had a yellowish tan accent Munsell 10Y 7/2.
      - Note that this is the only room where the raised ornament and center portion of the field were the same color, and the outer field was the light tan.

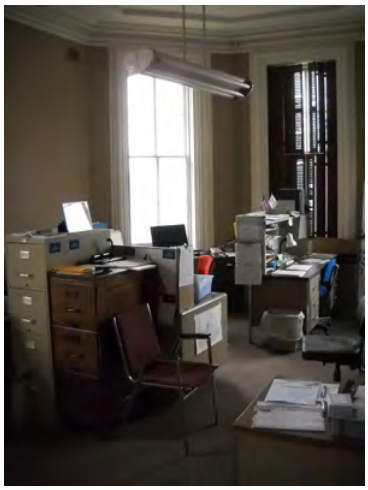

**Photo BR-19**: Current view of the Northeast Bedroom that has been used as the Headquarters Office for the Campfire Girls since 1978.

**Photo BR-20**: Original hooks remain in the westernmost closet in the Northeast Bedroom. Clothes were hung on hooks rather than on clothes rods in the 19th century.

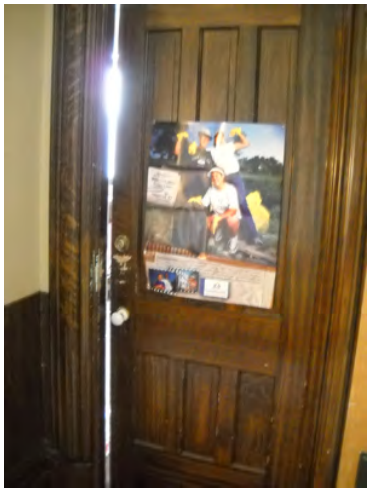

**Photo BR-21**: Current view of the door leading to the Northeast Bedroom (now Campfire Girls office). Note the original graining on the door and trim—all the doors on the Bedroom Level would have been treated in this way originally.

**Photo BR-22**: Typical view of the ventilation grilles located near the ceiling on the Main Floor Level and Bedroom Level Level.

**Photo BR-23**: Detail view of the storm windows installed against the original window sash in 1981. These storms have accelerated the deterioration of the sash.

**Photo BR-24**: Current view of the Southwest Bedroom.

    - Also in this room, the cove area was tinted with a yellowish tan accent color, unlike any other room in the house.
- **Door:** The door on the north wall is not original to this house.
- **Trim:** The trim was originally grained, but is now painted white.
    - Original Formal Trim, Profile # 7 was found on the windows and the door frame on the north wall.
    - Non-original replicated Formal Trim, Profile #8 was found on the door leading to the Central Hall.
        - Refer to the *Trim Profile Comparison Sheets* (**Appendix A**).
- **Miscellaneous Details:**
    - Picture-hanging "fobs" were positioned on the upper walls near the cornice on the north wall in two locations, and on south wall in the southeast corner.
    - Two capped gas fittings are positioned on either side of the center window on the west wall.
    - An original ventilation grille is positioned at the west end of the north wall.
    - Three modern fluorescent light fixtures hang from the ceiling. They are not original. A chandelier likely extended down from the center medallion.

**Room BR 306: Center West Sitting or Dressing Room / Undefined**

- **Original Use:** The original use of the Center West Room is not known, but we suspect that it was used as either a sitting room or dressing room for Mrs. Reddick.
    - The east wall was originally positioned further west, but was removed prior to 1923 to enlarge the space (**Photo BR-26**).
    - It originally housed a deep closet (**Diagram 4**).
        - We do not know if there was a door from the bedroom to the closet.

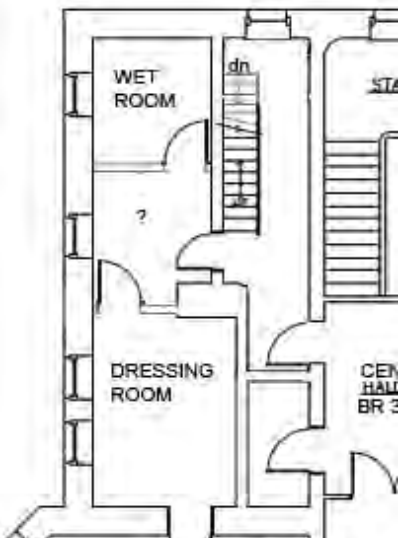


**Diagram 4**: Plan view of possible configuration of Center West and Northwest rooms on the Bedroom Level

- **Library Era:** This and the adjacent Northwest Bedroom likely served as the LaSalle County Historical Museum space from 1912 through about 1924.

- **Early Remodelling:** Prior to 1923 changes were made to the Bedroom Level:
  - Opening the wall between this and the Northeast Room.
  - Removing the closets and the east wall.
  - Removing the fireplace on the north wall.
- **Library Era:** This space was likely used as an office and storage when the Library occupied the building.
- **RMA Era:** In 1978, a partition wall was reinstalled between this room and the Northwest Room.
  - The room had formerly served the LaSalle County Regional Planning and was refurbished for the United Fund offices (**Photo BR-27)**, and served as a reception office.
- **Walls:** The Center West Bedroom is now painted a light tan color.
  - Per our paint sampling and analysis, the original color was a light grayish tan, Munsell 2.5Y – 5Y 7/2.
- **Ceiling and Cornice:** The decorative plaster ceiling and cornice in this room can be described as follows:
  - The cornice is comprised of smooth plaster banding.
  - The ceiling center medallion is generally round-shaped, and matches the medallion in the Central Hall.
    - Refer to the *Plaster Ceiling Comparison Sheets* (**Appendix B**).
  - The ceiling is now painted white.
    - Per our paint sampling and analysis, The entire ceiling, including the cornice and ornament, was off-white Munsell 2.5Y 8.5/2.
- **Trim:** The trim was originally grained, but is now painted white.
  - Original Formal Trim, Profile # 7 was found on the windows and the door frame on the south wall.
  - It appears that the trim on the door on the east wall is replica trim. If this was a closet, there would not have been formal trim on the inside of the frame. It is likely this trim was re-used from elsewhere.
    - Refer to the *Trim Profile Comparison Sheets* (**Appendix A**).
- **Miscellaneous Details:**
  - A picture-hanging fob is positioned on the south wall, east of the doorway.
  - A ventilation grille is positioned at the north end of the west wall.
  - A modern fluorescent light fixture hangs from the center ceiling medallion.
  - Two capped gas fittings were found in this room, flanking the windows on the west wall.

**Room BR 307: Northwest "Wet Room" / Undefined**

- **Original Use:** The Northwest Room on the Bedroom Level is thought to have served as a "Wet Room" originally (**Photo BR-28**). The original specifications refer to it as a Bath Room.[2]
  - A water storage tank was positioned in the Servants' Level room immediately above.
  - Pipes in a cavity in the north wall that extend from the attic down through the Bedroom and Main Levels, presumably to the Lower Level (**Photo BR-29**).

**Photo BR-25**: This view from 1980 shows the Southwest Bedroom when it was being used as a conference room for the United Fund offices.

**Photo BR-26**: Current view of the south wall of the Center West Dressing Room. The door on the left originally led to a deep closet which ran across the west side of the room.

**Photo BR-27**: 1980s view of the Center West Dressing Room when it served as offices for the United Fund.

**Photo BR-28**: Current view of the Northwest Room.

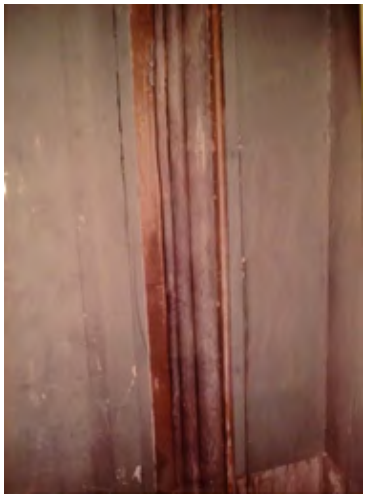

**Photo BR-29**: Photograph from 1976 depicting the shaft built into the north wall that contains lead water pipes.

**Photo BR-30**: Current view of the Servants' Stairs leading to the Servants' Level/Fourth Floor. Note the toilet room constructed beneath the stairs.

  - We do not know what the configuration was of this "Wet Room." It may simply have been a sink with spigot that enabled servants to fill washing bowls, or a small tub for use by the family for bathing.
  - We found no evidence to suggest that there was indoor plumbing.
  - **Diagram 4** shows a possible layout for the Wet Room area.
- **Library Era:** The Library minutes indicate that a partition separating the existing Northwest Wet Room in half was removed prior to 1923. We have assumed the wall and door locations in the plan diagram.
- **Walls and Ceiling:**
  - No historic paint finishes remain on the ceiling.
  - A heavy dirt layer could be seen over sealed plaster on the walls, prior to any paint being applied. This means that plaster remained exposed for some time prior to being painted.
  - The north wall has been entirely replastered.
- **Trim:** The wood trim had a clear finish, followed by an off-white paint Munsell 2.5Y 9/2.
  - The original finish was likely a clear coat that was exposed for a period of time prior to being painted.

**Room BR 308: Servants' Hall**

- **Current/Original Use:** A secondary Servants' Hall is positioned to the west of the main staircase (**Photo BR-30**).
  - The hall houses a steep staircase that leads to the servants' quarters on the Servants' Level/Fourth Floor.
  - A small Toilet Room is positioned beneath the stairs.
  - Originally, the toilet room was not there, and an equally steep staircase ran from the Main Level up to this floor— most likely immediately beneath the existing staircase.
- **Walls and Ceiling:**
  - The paint on the ceiling was a light grayish tan, Munsell 2.5Y – 5Y 7/2.
  - The walls were a light grayish tan, Munsell 2.5Y – 5Y 7/2.
- **Trim:** No sign of painted wood graining was found on the door trim.
  - The trim on the door leading to the Northwest Room is typical Domestic Profile Type #1.
    - Refer to the *Trim Profile Comparison Sheets* (**Appendix A**).
- **Stairs:** The original color on the risers and treads was an orangey tan, Munsell 10YR 6/6. The stringers were an off-white Munsell 2.5Y 8/2. The balusters were stained with a clear sealant (**Photo BR-31**).
- **Storage Space:** A small storage space with trimmed-out door is located beneath the stairs (**Photo BR-32**).
  - The door trim is typical Domestic, and the door appears in the same style as the original bedroom doors.
  - The conundrum is that this door and storage space couldn't have been located here if there was a staircase immediately beneath this stair, leading to the floor below, since there wouldn't have been enough head room.

  - Unfortunately, without removing all of the modern floor surfaces and tearing into plaster wall surfaces, there is no way to determine what the exact configuration was of the missing staircase.
- **Restroom:** A simple beadboard partition and swinging door are positioned at the north end of the Servant's Hall. A small restroom is located within.

**Room BR 309: Restroom / Former Stairs to Main Floor**

- **Current Configuration:** A small restroom is positioned at the north end of the Servant's Hall (**Photo BR-33**)
- **Library Era:** According to the Library minutes, water was piped to the Bedroom Level for a water closet in 1897.
  - A radiator was installed in this room in 1925.
- **Closet:** A small closet was constructed with beadboard on the south wall of the toilet room, immediately beneath the staircase.
  - Once the bottom shelf was popped out, it was possible to view the exposed wood floor and some original domestic base trim in the space.
  - A capped plumbing pipe (probably water supply) was positioned in the northeast corner of the compartment (**Photo BR-34**)
  - Unfortunately this compartment only further leads to confusion— this entire area (the Bathroom and Closet floor) would not have existed originally when the servants' stair to the Main Level was positioned here.

**Photo BR-31**: Current view of the Servants' Stair treads, balusters and stringer skirting.

**Photo BR-32**: A storage closet was constructed beneath the Servants' Stairs

**Photo BR-33**: Current view of the Toilet Room located beneath the Servants' Stairs. This space would originally have been a landing for the Servants' Stairs that came up from the Main Level.

**Photo BR-34**: This view shows the floor of a cupboard in the toilet room, showing a capped water pipe (lower left).

**General Comments and Recommendations for the Bedroom Level**

- **Overall Condition:** The Bedroom Level/Third Floor of the Reddick Mansion is in good condition overall.
    - The Central Hall and Southeast Bedroom were restored in the c. 1980s and are serving as exhibit space.
        - Our paint sampling and analysis found that the wall colors were originally much lighter than they are now, and that the ceilings were somewhat polychrome, in varying shades of very light grey or tan and white.
        - The existing décor (curtains, carpet) in the South Central Hall and Southeast Bedroom is appropriate for the period.
        - The paint scheme, however, is not appropriate for the period, particularly the blue highlighting on the door and window trim.
            - The blue highlighting on all trim on this floor level should be painted out with the creamy white color on the adjacent trim.
        - In a future restoration campaign, the RMA may wish to revise the room paint colors.
    - The Center East Bedroom is not currently being interpreted.
        - Interpreting it will be difficult until the mechanical unit is removed.
        - The fire escape door should be removed, and a replica of the original window installed.
        - It would be possible to interpret this room to the Reddick Library period.
            - Original Library shelving remains in this room, and can be set up in a way to aid interpretation.
            - If Library interpretation is chosen, then a later paint scheme, dating to just after the Reddick period, should be chosen.
    - The Northeast Bedroom is currently being used as an office, but could easily be restored to bedroom interpretation.
        - Because we think this was Elizabeth Funk Reddick's room, it could be interpreted as a child or a young woman's room.
    - The Southwest Bedroom and adjacent Center West Sitting/Dressing Room could be restored to the original Reddick period, and interpreted as a Ladies' Room and Parlor.
        - Furniture would have to be obtained and curated.
        - Carpeting, curtains, etc., and an overall decorative scheme based upon the original paint colors would have to be established.
    - So little is known about the Northwest Wet Room that it should not be interpreted as such unless conclusive evidence is found in the future regarding its configuration and original use.
        - The room should continue to be used for storage and other RMA needs.
    - Since the fire escape has been removed from the east side of the building, the Museum must work with the fire department to ensure that visitors can safely exit the Bedroom Level. Currently there is only one means of egress.

Often exceptions are made in historic house museums if sufficient exiting signage is installed.

- We suggest that the RMA negotiate with the fire department to have the fire partition removed from the Central Hall, now that the building no longer serves as a library.
  - If it is necessary to retain the fire-rated wall, then a glazed partition should be considered so that a more realistic interpretation can be made in the space.

- In a restoration campaign, the large double-door partition at the south end of the Central Hall should be removed, and the plaster ceiling restored to its original configuration.
  - The presence of these doors makes interpretation of the Bedroom Level space confusing.
- If it is desired that an elevator be installed in the building to allow for visitor access to the upper floors, the northwest corner of the building would be the most appropriate location for such a lift.

**END BEDROOM LEVEL**

[1] A former library patron who was visiting the Museum related that as a child he recalls laying on the floor in the Lower Level near the center hall staircase and looking up toward the skylight which, as he recalls, was multi-colored.

[2] RMA board member Steve Meyers related that the architectural specifications listed that a commode, bathtub and water closet be framed out. We were unable to find this reference, but defer to Mr. Meyers' long experience with the building.

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## Servants' Level / Fourth Floor

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**Changes Through Time**

- A long Central Hall connects the five Servants' Bedrooms on the Servants' Level.
    - Most of the original, or at least early, paint finishes remain on the trim, walls and ceiling in the rooms on this floor.
- It is thought that during the Library period the Servants' Level was used for general storage.
    - There are no mentions of the Servants' Level/Fourth Floor in the Library minutes prior to 1922 or after 1929.
- In 1922, the Librarian stated in the Library minutes that Emil Deich and his men had promised to paint another room in the attic for the Camp Fire Girls.
    - Since there is only one decorated room on this level, we assume the Southeast Bedroom was decorated prior to 1922.
- In 1925, a radiator was installed in the Campfire Girls room on the Servants' Level.
- In 1929, the Library minutes indicate that all books on music were transferred to the third floor (Bedroom Level), shelving was built in the attic (Servants' Level) hallway, and the collection of war books was moved from the third floor to the attic.

**Room S 401: Central Hall**

- **Configuration:** The Central Hall runs north-south the entire length of the Servants' Level (**Photo SL-1**).
- **Skylight:** A skylight is positioned in the ceiling at the north end of the hall.
    - The skylight was sealed in 1961, per the 1975 Sprague diagram.
    - The skylight was re-opened in 2012 when the roof was replaced.
- **Floor light:** A glass panel is positioned in the floor, centered beneath the skylight. Its role is to let light down through the building over the main stairwell.
    - The railings around the sealed floor light were in poor condition when the RMA took possession of the building in the mid-1970s (**Photo SL-2**).
        - In 1983, RMA records indicate that the Board approved use of spindles for the railing around the skylight, to be stained to match the main stair railing.
    - The roof skylight was installed in 2012.
        - At that time, the walls and trim on the north half of the Central Hall were painted in neutral tan colors.
    - The south end of the Central Hall remains unpainted and retains its original colors (**Photo SL-3**).
- **Walls:** The central hall plaster walls were originally painted a yellowish tan color matching Munsell 10Y 7/2.
- **Ceiling:** All the ceilings on the Servants' Level were originally painted a Yellowish Tan matching Munsell 10Y 7/2.
- T**rim:** All the Servants' Level wood trim was originally painted light tan, Munsell 7.5 YR 8/2 – 7/2.

**Photo SL-1**: Current view of the Central Hall, facing north.

**Photo SL-2**: Photograph from the 1970s, showing the skylight railing in disrepair, and the skylight boxed over.

**Photo SL-3**: The south end of the Central Hall remains much as it was originally, with the exception of surface-applied conduit.

- **Flooring:** The floor is exposed painted wood, covered in some areas with linoleum sheeting and in other areas with very old cork flooring.
    - This cork flooring is probably left over from when the Library installed it in 1902.

**Room S 402: Southeast Bedroom / Campfire Office / Storage**

- **Original Use:** The inventories taken after Reddick's death indicated that this room served as a bedroom.
- **Current Use:** The Southeast Bedroom is now used for general storage.
- **Library Era:** The room was used during the Library period as a meeting room for the Campfire Girls, starting in about 1922 (**Photo SL-4**).
    - At about that time, the Library minutes state that a man named Emil Deich and his men had promised to paint another room in the attic for the Camp Fire Girls. Presumably he painted the forest motif in the Southeast Bedroom.
- **Walls:** The Southeast Bedroom walls were originally painted a light green, matching Munsell 10GY – 7.5 GH 7/2. The campfire scenes were painted over the original painted walls.
- **Ceiling:** All the ceilings on the Servants' Level were originally painted a Yellowish Tan matching Munsell 10Y 7/2.
- **Trim:** All the Servants' Level wood trim was originally painted light tan 7.5 YR 8/2 – 7/2.
- **Flooring:** The floor is exposed painted wood.
- **Miscellaneous Details:**
    - An early electrical light is mounted on the ceiling (**Photo SL-5**). It likely dates from 1908, when, per the Library minutes, a proposal was obtained from the Electric Light Co. recommending re-wiring the building entirely new, with a snap switch to each light.
    - The Servants' Level has been re-wired with surface applied conduit and junction boxes. The year of installation is not known but it appears to be late 20th or early 21st century. Fire/smoke detectors are present in these rooms.
    - Parts of a double-bowl marble-topped sink are stored in the closet of this room. (**Photo SL-6**).These parts may or may not be from this building.

**Room S 403: Center East Bedroom / Storage**

- **Original Use:** The inventories taken after Reddick's death indicated that this room served as a storeroom.
- **Current Use:** The Center East Bedroom is empty at this time. (**Photo SL-7**)
- **Doors:** The doors in this room and throughout the Servants' Level are original to the house, and were painted to coordinate with the room's paint finishes.
    - The original doorknob and lock sets were rim-locks with porcelain burl knobs (**Photo SL-8**)
- **Walls:** The Center East Bedroom originally had a light green on the walls matching Munsell 10GY – 7.5 GH 7/2
- **Ceiling:** All the ceilings on the Servants' Level were originally painted a Yellowish Tan matching Munsell 10Y 7/2.
- **Lighting:** An early electrical light is mounted on the ceiling.

**Photo SL-4**: Current view of the Southeast bedroom, with the Campfire Girls mural that was painted c. 1922.

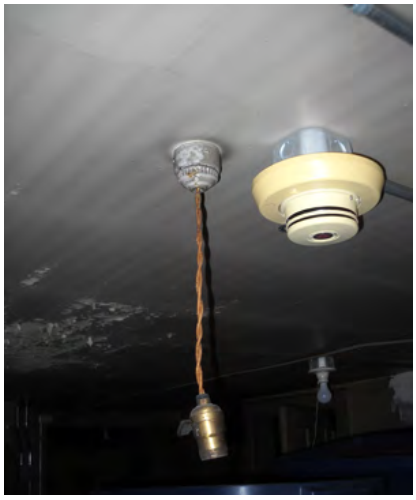

**Photo SL-5**: Early electrical hanging light fixtures can be found in most of the Servants' Level bedrooms.

**Photo SL-6**: Parts of an old double-bowl sink were found in the closet in the Southeast Bedroom.

**Trim:** All the Servants' Level wood trim was originally painted light tan 7.5 YR 8/2 – 7/2.

- **Flooring:** The floor is exposed painted wood.
    - Electrical conduit runs over the floor surfaces to provide modern electrical service to the Bedroom Level rooms.

**Room S 404: Northeast Laundry Drying Room / Storage**

- **Current Use:** The Northeast Room is currently used for general storage (**Photo SL-9**).
- **Original Use:** It originally served as a multipurpose space.
    - Unlike other rooms on this floor, a painted wood rail is attached around the perimeter of this room at about ¾ height. The rail has hooks spaced periodically upon it (**Photo SL-10**).
    - We speculate that this room was used during the winter months as a drying room. Ropes would have been strung across the room, supported by the hooks, and the clothes and sheets, etc. hung to dry out.
    - This room may also have been used for general family storage
- **Walls:** The Northeast room originally had a light tan on the walls matching Munsell 10YR 8/2.
- **Ceiling:** All the ceilings on the Servants' Level were originally painted a Yellowish Tan matching Munsell 10Y 7/2.
- **Lighting:** An early electrical light is mounted on the ceiling.
- **Trim:** All the Servants' Level wood trim was originally painted light tan 7.5 YR 8/2 – 7/2.
- **Flooring:** The floor is exposed painted wood.
    - Electrical conduit runs over the floor surfaces to provide modern electrical service to the Bedroom Level rooms.

**Room S 405: Southwest Bedroom / Storage**

- **Original Use:** The inventories taken after Reddick's death indicated that this room served as a bedroom.
- **Current Use:** The Southwest Room is now used for general storage.
- **Truss:** A large wooden king post truss is positioned toward the west end of the room (**Photo SL-11**).
    - The structure rests upon the floor, but the ends of the structure are engaged within the exterior masonry wall (**Photo SL-12**).
    - The truss was installed in 1961 to help "hang" shelving that was installed in the Auditorium space on the Bedroom Level.
- **W**alls: The southwest room originally had a light yellowish tan matching Munsell 5Y 7/2.
- **Ceiling:** All the ceilings on the Servants' Level were originally painted a Yellowish Tan matching Munsell 10Y 7/2.
- **Lighting:** An early electrical light is mounted on the ceiling.
- **Trim:** Servants' Level wood trim was originally painted light tan 7.5 YR 8/2 – 7/2.
- **Flooring:** The floor is exposed painted wood.
    - Electrical conduit runs over the floor surfaces to provide modern electrical service to the Bedroom Level rooms.

**Photo SL-7**: Current view of the Center East Bedroom.

**Photo SL-8**: Servants' Level typical doorknobs and rim locks can be found on the original doors.

**Photo SL-9**: Current view of the Northeast Bedroom.

**Photo SL-10**: The Northeast Bedroom is lined with a wood nailer strip, on which hooks are equally spaced.

**Photo SL-11**: Current view of the Southwest Bedroom showing the king-post truss that helped support the load of bookshelves on the floor below.

**Photo SL-12**: Detail view of where the truss ends are engaged in the brick masonry wall.

**Room S 406: Center West Bedroom / Storage**

- **Current/Original Use.** The Center West Bedroom is currently used for general storage (**Photo SL-13**).
    - The room was originally a servant's bedroom.
        - Based on the fact that this is the only room that is painted a pink color, it was probably a woman's room. However, in the late 19th/early 20th centuries, pink was not used exclusively for females. Nevertheless, the fact that this one room is painted differently from the others suggests that it may have been the main housekeeper's room.
- **Walls:** The Center West Bedroom originally had a reddish tan on the walls matching Munsell 2.5YR 8/4 – 7/4.
- **Ceiling:** All the ceilings on the Servants' Level were originally painted a Yellowish Tan matching Munsell 10Y 7/2.
- **Lighting:** An early electrical light is mounted on the ceiling.
- **Trim:** All the Servants' Level wood trim was originally painted light tan 7.5 YR 8/2 – 7/2.
- **Flooring:** The floor is exposed painted wood.
    - Electrical conduit runs over the floor surfaces to provide modern electrical service to the Bedroom Level rooms.

**Room S 407: Northwest Tank Storage Room / Undefined**

- **Current/ Original Use:** An unfinished room is located in the northwest corner of the Servants' Level (**Photo SL-14**).
    - It originally housed a lead water storage tank.
        - According to Library minutes, the tank was removed by the Library in 1902, and proceeds from the sale of the lead were $37.00.
        - The minutes also note that repairs were being made on city water pipes. Presumably the building was receiving piped water from the city, making the water storage system obsolete.
        - An opening in the floor in the northeast corner shows cut-off lead pipes. This is the same pipe line that continues down through the Bedroom Level "wet room" to the Lower Level in a shaft within the exterior wall (**Photo SL-15**).
        - Marks can be seen on the walls and floor, giving an approximation of where the water tank must have sat (**Photo SL-16**).
- **Walls:** The walls of this room are raw rough-coat plaster, unpainted. They were never painted.
- **Ceiling:** All the ceilings on the Servants' Level were originally painted a Yellowish Tan matching Munsell 10Y 7/2.
- **Trim:** All the Servants' Level wood trim was originally painted light tan 7.5 YR 8/2 – 7/2.
- **Flooring:** The floor is exposed painted wood.
    - Electrical conduit runs over the floor surfaces to provide modern electrical service to the Bedroom Level rooms.

**Room S 408: Stairs down to Bedroom Level and S 408a Stairs up to Attic**

- **Configuration:** The Servants' Stairs located at the north end of the Bedroom Level continue up to the Servant's level. They switch southward at a landing against the north wall (**Photo SL-17**).
    - A modern fire partition and door are positioned at the top of the stairs. This dates from 1966.
    - One door on the west wall of the Stair Hall leads to the Northwest Tank Storage Room.
    - A second doorway on the east wall leads to the Central Hall.
    - A very steep stairwell against the south wall leads up to the attic (**Photo SL-18**).
- **Walls:** The walls of the stairwell are a yellowish tan matching Munsell 10Y 7/2.
- **Stairs:** The risers and treads were originally light tan 7.5YR 8/2 – 7/2; the stringers were originally off-white 2.5Y 8/2.
- **Ceiling:** All the ceilings on the Servants' Level were originally painted a Yellowish Tan matching Munsell 10Y 7/2.
- **Trim:** All the Servants' Level wood trim was originally painted light tan 7.5 YR 8/2 – 7/2.
- **Flooring:** The floor is exposed painted wood.

**General Comments and Recommendations for the Servants' Level**

- The Servants' Level/Fourth Floor of the Reddick Mansion is in generally poor condition.
    - It is fortunate that many of the original paint finishes still exist, which give an idea of how the space might originally have been used, and what the color palette was for service areas.
    - Obviously, the existing exposed original paint finishes are lead-based, and should be cleaned and encapsulated (coated) with modern paint, where possible.
- Much—if not all—of the plaster in the rooms on the Servants' Level is cracked and failing.
    - An exception is the north end of the Central Hall, where plaster repair and painting was undertaken so that the view up through the skylight from the Stair Hall would not be to deteriorated finishes.
- The Servants' Level will likely be used for placement of mechanical equipment, should central air be introduced into the building.
    - The floorboards can be lifted to provide re-wiring to the Bedroom Level fixtures, if required.
- We propose no use for the attic spaces other than for general storage and for mechanical equipment.
- Due to the nature of the flaking lead-based original paint, either the plaster surfaces should be covered with drywall, or plaster repair and repainting should be undertaken throughout.

**Photo SL-13**: The Center West Bedroom was painted a light pink color, causing us to assume a female servant once occupied the space.

**Photo SL-14**: The Northwest Room once housed a large lead storage tank.

**Photo SL-15**: Capped lead water pipes were noted in the northeast corner of the room.

**Photo SL-16**: Marks on the walls and floor indicate where the lead water tank was originally positioned. Also pictured are pieces of what is thought to have been the original Balopticon machine (used for viewing moving picture shows during the Library period).

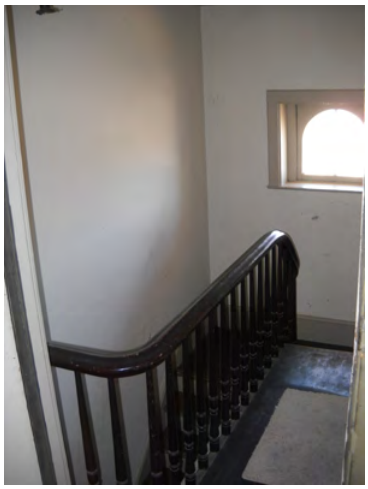

**Photo SL-17**: Current view of the Servants' Stair landing at the Fourth Floor.

**Photo SL-18**: A steep stair continues up from the Servants' Level to the Attic.

**END SERVANT'S LEVEL**

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**Reddick Mansion Historic Structure Report**

# Historic Finishes Report

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**Anthony Kartsonas, of Historic Surfaces LLC**

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**EXECUTIVE SUMMARY**

This study was undertaken as part of the Reddick Mansion Historic Structure Report. The main purpose of this study is to understand and determine the appearance of the primary interior spaces and exterior painted surfaces at the Reddick Mansion in Ottawa, IL during the time that William Reddick and his family occupied the house (1858 – 1887). The goal of the study was to:

- Determine the original colors of the painted interior plaster and wood trim
- Explore for any signs of painted decoration and the extent of painted wood graining
- Determine the original type of finish on the interior woodwork
- Determine the original type of finish and colors used for the exterior wood trim
- Determine if any of the exterior masonry surfaces were originally painted

To obtain the information for this finish study, on-site investigations, paint microscopy and laboratory analysis were implemented. On-site investigations were completed by Anthony Kartsonas of Historic Surfaces LLC between February and June 2013. Over 200 paint samples were extracted to determine the original color of the painted plaster and wood surfaces. They were taken from the most representative elements in the all of the 25 rooms on the Main, Bedroom, and Servant's levels. The samples were examined using a Leica large field stereo zoom microscope illuminated with a fiber optic ring light adjusted to daylight. The findings listed in the report are the earliest or most historic complete campaigns as discovered in the microscopy and site examinations. The earliest layers were then matched to the Munsell Color System which measures color in three attributes; hue, value, and chroma. Exposure windows were also created in a few select areas to search for signs of any surface decoration such as stenciling or painted wood graining. In addition to the site condition examinations, selected paint samples were examined by Conservation Scientist, Richard Wolbers at the Winterthur Conservation Lab for further analysis to determine the type/medium of the paint finishes on the plaster.

During the initial site examination and microscopy many of the samples on the main floor were seen to have rich, dark Victorian era colors and accents with gold metallic paint as part of the layering sequence. Upon closer examination these darker colors appear as the second and sometimes third layer/scheme of decoration. The earliest one to two layers were more subdued lighter colors of off-whites and tans. This posed a problem in trying to determine if these darker colors were completed during Reddick's time in the house. No archival records existed on the extent of painting Reddick may have completed in his lifetime and what the City of Ottawa did to redecorate the interiors before opening to the public in September 1888.

Further research in the Museum's Archives and at the Ottawa Public Library revealed a few important things. The first is a series of archival photos from William Reddick's funeral in 1885. In one of the photos a portion of the east parlor ceilings can be seen where it is clear that the color or value of the ceiling is the same and does not appear to have any signs of polychrome painting or gold metallic finishes (Figure 1). The second item discovered is a photo of the center west parlor early on in the library period (late 19$^{th}$ century) where dark valued colors and surface embellishment like the polychrome painting and gold metallic finishes are clearly seen (Figure 2).

**Figures 1 & 2**: The photo above is a view into the SE Parlor during William Reddick's funeral in 1885. Aside from the painted wood grain on the door surround, no other type of painted decoration could be seen. The photo below is from the Center west Parlor early during the library period where the crown molding is clearly polychromed and has embellishments such as metallic finishes. Source: Ottawa Public Library Archives

Some time was spent reviewing newspaper articles close to the time of the City acquiring the Mansion and it opening as a library to see if any description of the interiors could be found. No specific information was given about the Mansion however during the period of September 1887 and October 1888 two churches within two blocks of the Mansion were redecorated. This means that the capable painters and decorators were in the area working at the time of the library opening. Lastly, some samples were intentionally extracted from areas that could have heavy soiling. Soiling or dirt layers in between paint help to determine different schemes and show if a paint layer was exposed for a long period of time. A heavy soot layer could be seen in these samples between the subdued colors and the richer colors. I believe that all this information leads the author to think that the interior had a lighter palette with very little variation in color and/or value and that the darker colors and accents were completed during the opening of the Library. So the efforts of the study were to document the earlier layers and none of the later period decoration.

**Interior Finish Findings**

Main Level

The main level is clearly the most ornate portion of the house. It still retains small remnants of original painted decoration with the wood graining in the main hallway and east parlors. This floor has also had significant renovation and restoration work which most was completed in 1970's and the east parlors again after 2000. Fortunately most of the plaster is original with just multiple layers of later paint. This allowed access to good paint samples, which have all the layering sequencing and history.

As mentioned, dark and rich colors could be seen as part of the sequence history of many of the areas on the Main floor. The darker palette was found as being the second scheme likely completed when the Mansion was being converted into the library. The colors used in the second scheme are dark greens, blue, reddish browns and dark tans with accents of gold metallic paints. The colors of the second scheme were consistently found in most of the Main floor rooms, which was the original portion of the Library. The archival photo from the Library period shows the value contrast in the colors with the gold accents.

The earlier lighter palette is believed to be the original. The same off-white could be seen on virtually all the ceiling ornament and cornice in all the rooms. On some of the ceilings the field areas and the recessed coves of the cornice are accented with a similar value color but altering in hue with different Tan colors some of which were yellowish or reddish. These tan colors could have been added a little after the original painting but was likely done while the Reddick family was in the home. This type of subtle polychromy was typically done to help accentuate raised ornament. Most the walls in the rooms were either a Reddish or Yellowish Tan except for the NE and CW Parlors which have a Light Green color. The change from the Yellowish to Reddish Tans may indicate rooms that were meant as parlors for the women versus men of the house. The only other type of surface decoration discovered was more of the painted faux graining. An exposure on the lower wall in the Main Hallway revealed a trompe l'oeil wood grained panel similar to the exposed original on the east elevation. The graining continues down the entire hallway and up the stairs. The entire entrance foyer originally had a graining on all the plaster surfaces and wood trim including the upper wall and ceiling.

Bedroom Level

The Bedroom level is still ornate. Even though no historic finishes remain exposed, most of the colors and decorations found in the main level continue upstairs. All the ceiling ornament and cornice are the same off-white with some field areas having accent colors of Light tans. Similar to the Main Level the change from Yellowish to Reddish Tans may indicate the rooms occupied by William and the women of the home. The painted wood graining was discovered on the lower walls/wainscot of the hallway and on all of the wood trim in the hallways and bedrooms.

Servant's Level

The painted finishes on the Servant's level are the most intact historic finishes since it was the least utilized and altered floor in the house. In some areas the original finish remains exposed and in most other areas only has one subsequent campaign on top, completed very early on. Since this was the least used floor there are numerous cracks in the plaster and areas of flaking paint. Listed below are the original finshes discovered in each room of the Servant's Floor.

The specific color findings an comments for each area are listed beow.

**Room 200 / Main Level - Foyer**

Ceiling and Cornice

| | |
|---|---|
| Substrate: Plaster | Finish: Paint |
| Notes: The ceiling and cornice retains most of the original plasterwork. It is in good condition. | |
| Original Finish: The original finish on both the raised ornament and flat areas is painted faux wood grain. | |

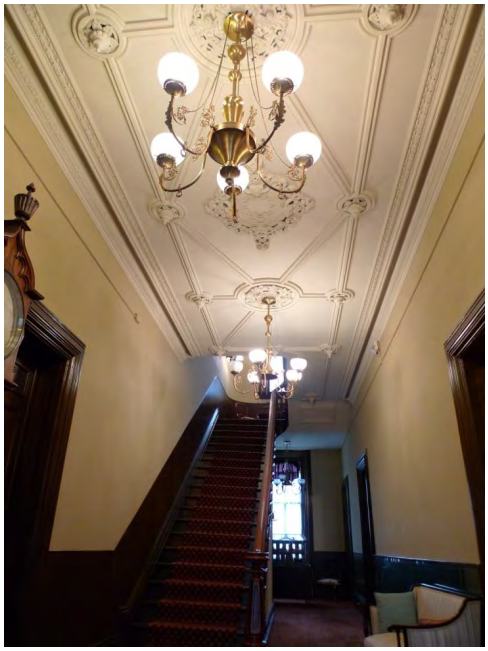
Walls

| | |
|---|---|
| Substrate: Plaster | Finish: Paint |
| Notes: Minor areas of the walls were repaired during the 1970's restoration mostly on the west elevation. It has been repainted but shows signs of flaking paint and loose skim coat so it is in fair condition. | |
| Original Finish: The original finish on both the upper and lower wall is painted faux wood grain. Very small exposures were completed to verify the findings but were not large enough to identify the species of wood being emulated. | |

Wood Trim

| | |
|---|---|
| Substrate: Wood | Finish: Paint / Faux Wood grain |
| Notes: None of the original painted wood graining exists. All trim was repainted during the 1970's restoration with faux wood grain. | |
| Original Finish: The original finish on the wood trim is painted faux wood grain. | |

**Room 201 & 201a / Main Level - Hallway**



Ceiling and Cornice

| Substrate: Plaster | Finish: Paint |
|---|---|
| Notes: The ceiling and cornice retains most of the original plasterwork. It is apparent that some repairs have been done to the flat areas and ornament in the center portion of the ceiling, some of which was done poorly. It has been repainted and is in fair condition. | |
| Original Finish: The raised ornament is an Off-White, Munsell 2.5Y 8.5/2<br>The field or flat areas of the ceiling are a Light Tan, Munsell 7.5YR 8/2 – 7/2 | |

Walls

| Substrate: Plaster | Finish: Paint |
|---|---|
| Notes: Many areas of the walls were repaired during the 1970's restoration while two sections on the east and west elevations were completely re-plastered. On the east elevation a section of the original painted wood grain wainscot exists. All remaining areas were covered over with a printed contact paper that has a wood grain pattern. The remaining walls were repainted and are in fair condition. | |
| Original Finish: The original color on the upper wall is a Light Greyish Tan, Munsell 2.5Y – 5Y 7/2<br>The lower walls have a painted wood grain finish. | |

Wood Trim

| Substrate: Wood | Finish: Paint / Faux Wood grain |
|---|---|
| Notes: Only one door on the east elevation (to NE Parlor) has the original painted wood graining while the remaining doors and wood trim were stripped and re-painted with a faux wood grain during the 1970's restoration. | |
| Original Finish: The original finish on the wood trim is painted faux wood grain. | |

**Room 202 / Main Level - SE Parlor**

Ceiling and Cornice

| | |
|---|---|
| Substrate: Plaster | Finish: Paint |
| Notes: The ceiling and cornice retains most of the original plasterwork. It was repainted and is in good condition. | |
| Original Finish: The raised ornament is an Off-White, Munsell 2.5Y 8.5/2<br>The field or flat areas of the ceiling are a Light Greyish Tan, Munsell 2.5Y – 5Y 7/2 | |

Walls

| | |
|---|---|
| Substrate: Plaster | Finish: Paint |
| Notes: Many areas of the walls were repaired during the 1970's restoration while two sections on the south and west elevations were completely re-plastered. It was repainted and is in good condition. | |
| Original Finish: The original color is a Light Greyish Tan, Munsell 2.5Y – 5Y 7/2 | |

Wood Trim

| | |
|---|---|
| Substrate: Wood | Finish: Paint / Faux Wood grain |
| Notes: Much of the original painted wood graining still exists on the doors and panel below the east window and is in good condition. The remaining windows, trim, and baseboard were repainted during the 1970's restoration. | |
| Original Finish: The original finish on the wood trim is painted faux wood grain. | |

**Room 203 / Main Level - CE Parlor**

Ceiling and Cornice

| | |
|---|---|
| Substrate: Plaster | Finish: Paint |
| Notes: The ceiling and cornice retains most of the original plasterwork. It was repainted and is in good condition. | |
| Original Finish: The raised ornament is an Off-White, Munsell 2.5Y 8.5/2<br>The field or flat areas of the ceiling are a Light Greyish Tan, Munsell 2.5Y – 5Y 7/2 | |

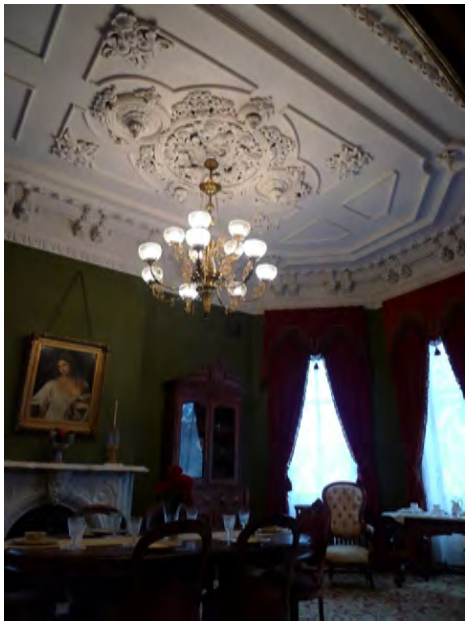
Walls

| | |
|---|---|
| Substrate: Plaster | Finish: Paint |
| Notes: The walls appear to have little previous repairs except for the west wall around the fireplace. The south elevation does show some flaking paint and loose skim coat. It was repainted and is in good to fair condition. | |
| Original Finish: The original color is a Light Greyish Tan, Munsell 2.5Y – 5Y 7/2 | |

Wood Trim

| | |
|---|---|
| Substrate: Wood | Finish: Paint / Faux Wood grain |
| Notes: The original painted wood graining still exists on the pocket doors and is in good condition. The remaining doors, windows, trim, and baseboard were repainted during the 1970's restoration. | |
| Original Finish: The original finish on the wood trim is painted faux wood grain. | |

**Room 204 / Main Level - NE Parlor**



Ceiling and Cornice

| Substrate: Plaster | Finish: Paint |
|---|---|
| Notes: The ceiling and cornice retains most of the original plasterwork. It was repainted and is in good condition. | |
| Original Finish: The raised ornament is an Off-White, Munsell 2.5Y 8.5/2<br>The field or flat areas of the ceiling are a Light Greyish Tan, Munsell 2.5Y – 5Y 7/2 but a secondary scheme immediately followed of a Light Green, Munsell 2.5GY 8/2. This layer appears prior to the library redecoration so was likely completed during Reddick's time in the house. | |

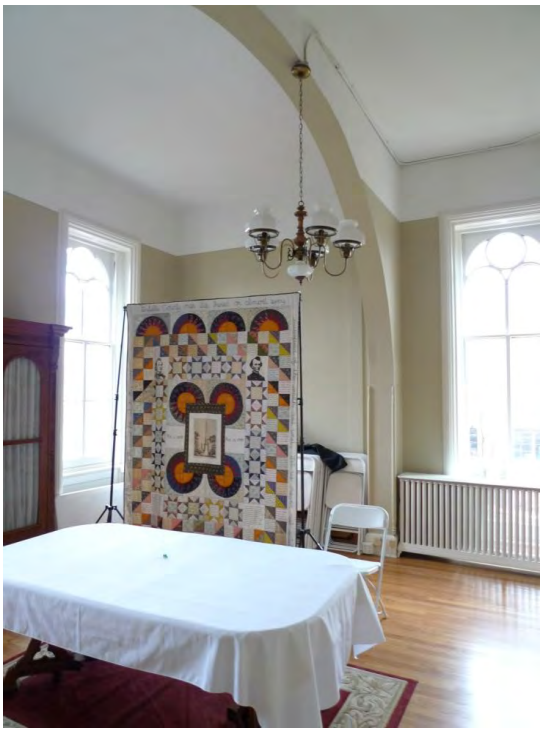
Walls

| Substrate: Plaster | Finish: Paint |
|---|---|
| Notes: The walls appear to have little previous repairs except for the west wall around the fireplace. The south elevation does show some flaking paint and loose skim coat. It was repainted and is in good to fair condition. | |
| Original Finish: The original color is a Light Greyish Tan, Munsell 2.5Y – 5Y 7/2 but a secondary scheme immediately followed of a Light Green, Munsell 2.5GY 8/2. This layer appears prior to the library redecoration so was likely completed during Reddick's time in the house. | |

Wood Trim

| Substrate: Wood | Finish: Paint / Faux Wood grain |
|---|---|
| Notes: The original painted wood graining still exists on the pocket doors, the interior sides of the two doors to the hallway and lower portion of the door trim. The remaining doors, windows, trim, and baseboard were repainted during the 1970's restoration. | |
| Original Finish: The original finish on the wood trim is painted faux wood grain. | |

**Room 207 (formerly 205) / Main Level - NW (Possibly Kitchen)**



Ceiling and Cornice

| | |
|---|---|
| Substrate: Plaster | Finish: Paint |
| Notes: The ceiling contains no historic plaster and was likely redone in the 1970's and possibly painted again in the 1980's. The condition of the ceiling is fair because there are some areas of flaking paint and loose skim coat. | |
| Original Finish: No historic paint exists | |

Walls

| | |
|---|---|
| Substrate: Plaster | Finish: Paint |
| Notes: Some areas of the walls may have been repaired during the 1970's restoration and possibly again in the 1980's when more paint work occurred. The condition of the walls is poor because of numerous large cracks, which are loose, flaking paint and loose skim coat. | |
| Original Finish: The original color on the wall is a Light Greyish Tan, Munsell 2.5Y – 5Y 7/2 | |

Wood Trim

| | |
|---|---|
| Substrate: Wood | Finish: Paint |
| Notes: All the doors and wood trim were stripped and re-painted either in the 1970's or 80's. On one of the wall corner wood turnings the painted wood grain could be seen under the subsequent paint. | |
| Original Finish: Since the only one wood element had a remnant of the painted faux wood grain, it is believed that the remaining wood trim also had the painted wood grain finish originally. | |

**Room 206 / Main Level - CW Parlor**

Ceiling and Cornice

| Substrate: Plaster | Finish: Paint |
|---|---|
| Notes: The ceiling and cornice retains most of the original plasterwork and was last repainted in the 1980's. The condition of the ceiling is fair because there are some areas of flaking paint and loose skim coat. | |
| Original Finish: The raised ornament is an Off-White, Munsell 2.5Y 8.5/2<br>The field or flat areas of the ceiling are a Light Green, Munsell 2.5GY 8/2. This layer appears prior to the library redecoration so was likely completed during Reddick's time in the house. The cove areas of the cornice have Light Reddish Brown accent, Munsell 7.5R 6/4. | |

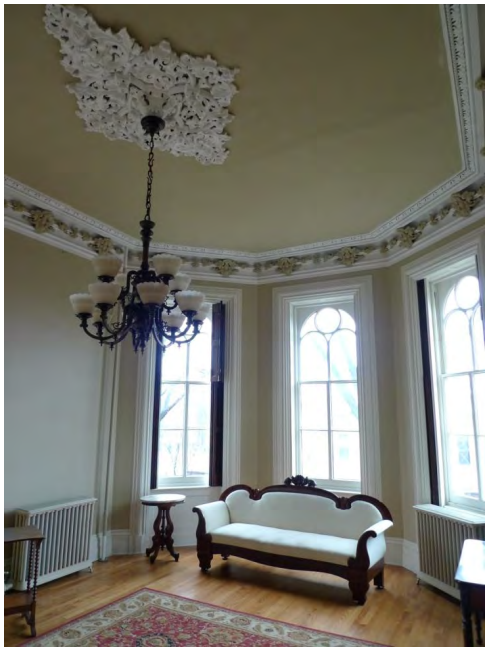
Walls

| Substrate: Plaster | Finish: Paint |
|---|---|
| Notes: Some areas of the walls, especially on the east elevation were repaired during the 1970's restoration and possibly again in the 1980's when more paint work occurred. The condition of the walls is poor to fair because of some cracks on the plaster, which are loose, flaking paint and loose skim coat. | |
| Original Finish: The original color on the wall is a Tan, Munsell 7.5YR 8/4. | |

Wood Trim

| Substrate: Wood | Finish: Paint |
|---|---|
| Notes: All the doors and wood trim were stripped and re-painted either in the 1970's or 80's. No area contained any historic finish. | |
| Original Finish: No historic finishes remain however based on the other areas the wood trim likely had a painted wood grain finish originally. | |

**Room 205 (formerly 207 )/ Main Level - SW Parlor**



Ceiling and Cornice

| Substrate: Plaster | Finish: Paint |
|---|---|
| Notes: The ceiling and cornice retains most of the original plasterwork and was last repainted in the 1980's. The condition of the ceiling is poor because there are many areas of flaking paint and loose skim coat. Also, there is a section of plaster on the west side, which has partially collapsed causing some planar distortion. | |
| Original Finish: The raised ornament is an Off-White, Munsell 2.5Y 8.5/2<br>The field or flat areas of the ceiling are a Light Greyish Tan, Munsell 2.5Y – 5Y 7/2. The cove areas of the cornice have Light Reddish Brown accent, Munsell 7.5R 6/4. | |

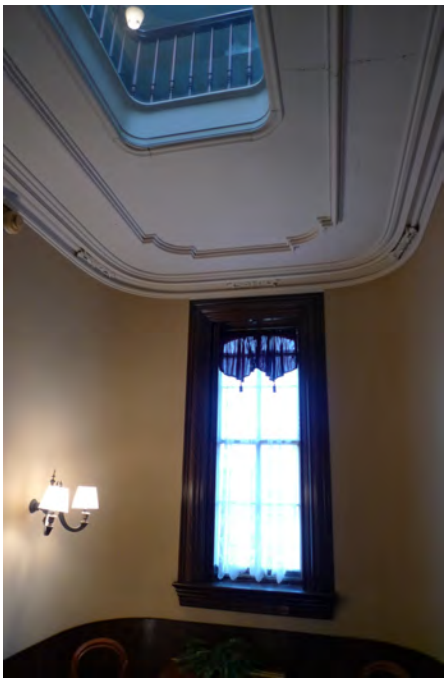
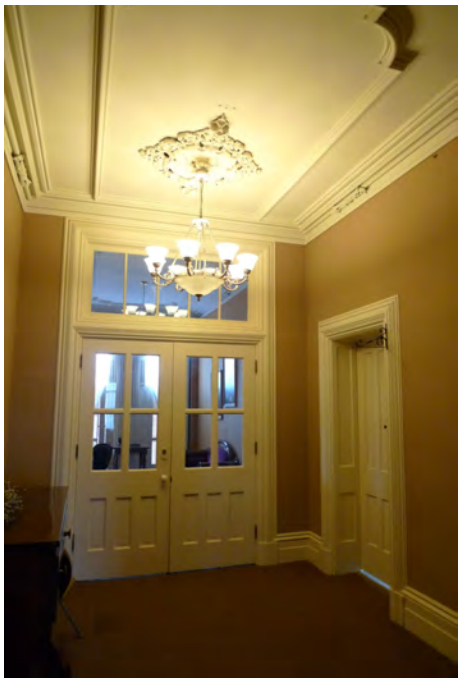
Walls

| Substrate: Plaster | Finish: Paint |
|---|---|
| Notes: Some areas of the walls, especially on the east elevation were repaired during the 1970's restoration and possibly again in the 1980's when more paint work occurred. The condition of the walls is poor because there are many areas of flaking paint and loose skim coat. | |
| Original Finish: The original color on the wall is a Tan, Munsell 7.5YR 8/4. | |

Wood Trim

| Substrate: Wood | Finish: Paint |
|---|---|
| Notes: All the doors and wood trim were stripped and re-painted either in the 1970's or 80's. A very small remnant of the painted wood graining was found on the frame to the window bay. No other area contained any historic finish. | |
| Original Finish: Since the only one wood element had a remnant of the painted faux wood grain, it is believed that the remaining wood trim also had the painted wood grain finish originally. | |

**Room 301 (formerly 300) / Bedroom Level - Stair Hallway**

Ceiling and Cornice

| Substrate: Plaster | Finish: Paint |
|---|---|
| Notes: The ceiling and cornice retains most of the original plasterwork. It was repainted in recent times and is in good condition. | |
| Original Finish: The raised ornament is an Off-White, Munsell 2.5Y 8.5/2<br>The field or flat areas of the ceiling are a Light Tan, Munsell 7.5YR 8/2 – 8/4 | |

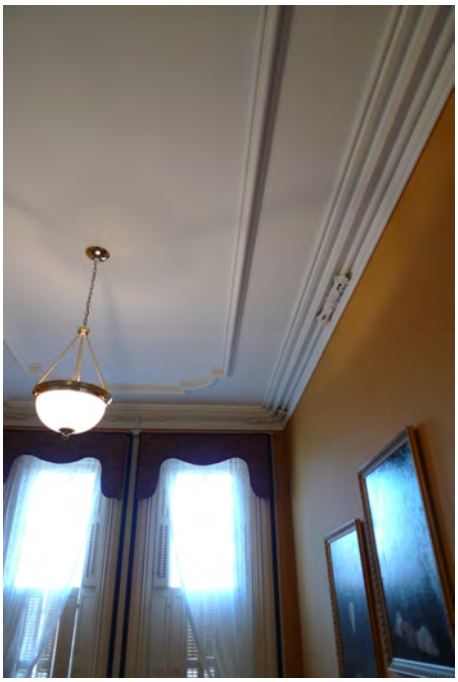
Walls

| Substrate: Plaster | Finish: Paint |
|---|---|
| Notes: Most of the wall plaster is original with very little repair / alteration. It was repainted in recent times and is in good condition. No remnants of the original painted wood grain wainscot is exposed however a ghost of the wainscot could be seen through the subsequent paint layers. Also, small exposures were done to verify the existence of the painted wood grain. | |
| Original Finish: The original color on the upper wall is a Light Greyish Tan, Munsell 2.5Y – 5Y 7/2<br>The lower walls have a painted wood grain finish. | |

Wood Trim

| Substrate: Wood | Finish: Paint |
|---|---|
| Notes: None of the original painted wood graining remains exposed. All trim was repainted during the 1970's restoration and possibly later but minute exposures and sampling verified the painted wood grain. | |
| Original Finish: The original finish on the wood trim is painted faux wood grain. | |

**Room 301a (formerly 301) / Bedroom Level - South Hallway**



Ceiling and Cornice

| | |
|---|---|
| Substrate: Plaster | Finish: Paint |
| Notes: The ceiling and cornice retains most of the original plasterwork. It was repainted in recent times and is in good condition. | |
| Original Finish: The raised ornament is an Off-White, Munsell 2.5Y 8.5/2<br>The field or flat areas of the ceiling are a Light Tan, Munsell 7.5YR 8/2 – 8/4 | |

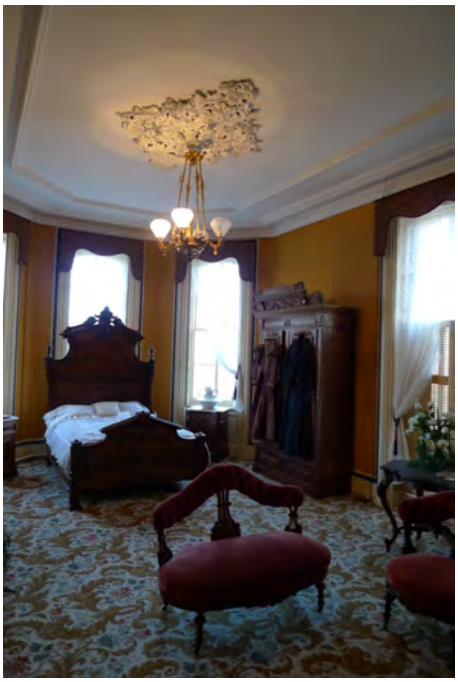
Walls

| | |
|---|---|
| Substrate: Plaster | Finish: Paint |
| Notes: Most of the walls are have been replastered and not original. It was repainted in recent times and is in good condition. No remnants of the original painted wood grain wainscot is exposed however a ghost of the wainscot could be seen through the subsequent paint layers on the small remaining section of original plaster on the north elevation. | |
| Original Finish: The original color on the upper wall is a Light Greyish Tan, Munsell 2.5Y – 5Y 7/2<br>The lower walls have a painted wood grain finish. | |

Wood Trim

| | |
|---|---|
| Substrate: Wood | Finish: Paint |
| Notes: The doors and most of the trim are not original. It was likely replaced/restored during the 1970's restoration. | |
| Original Finish: No historic finishes remain however based on the other areas the wood trim likely had a painted wood grain finish originally. | |

**Room 302 / Bedroom Level - SE Bedroom**



Ceiling and Cornice

| | |
|---|---|
| Substrate: Plaster | Finish: Paint |
| Notes: The ceiling and cornice retains most of the original plasterwork. It was repainted in recent times and is in good condition. | |
| Original Finish: The entire ceiling including the cornice and ornament is an Off-White, Munsell 2.5Y 8.5/2 | |

Walls

| | |
|---|---|
| Substrate: Plaster | Finish: Paint |
| Notes: The walls were repaired during the 1970's restoration; most of the west elevation was completely re-plastered. It was repainted in recent times and is in good condition. | |
| Original Finish: The original color is a Light Greyish Tan, Munsell 2.5Y – 5Y 7/2 | |

Wood Trim

| | |
|---|---|
| Substrate: Wood | Finish: Paint |
| Notes: The door on the west elevation is not original. None of the original painted wood graining remains exposed. All trim was repainted during the 1970's restoration and possibly later but minute exposures and sampling verified the painted wood grain. | |
| Original Finish: The original finish on the wood trim is painted faux wood grain. | |

**Room 303 / Bedroom Level - CE Bedroom**

Ceiling and Cornice

| Substrate: Plaster | Finish: Paint |
|---|---|
| Notes: The ceiling and cornice retains most of the original plasterwork however the ceiling plane was altered with the addition of a bulkhead ceiling on the southern end. It was repainted in recent times and is in good condition. | |
| Original Finish: The raised ornament is an Off-White, Munsell 2.5Y 8.5/2<br>The field or flat areas of the ceiling are a Light Tan, Munsell 7.5YR 8/2 – 8/4 | |

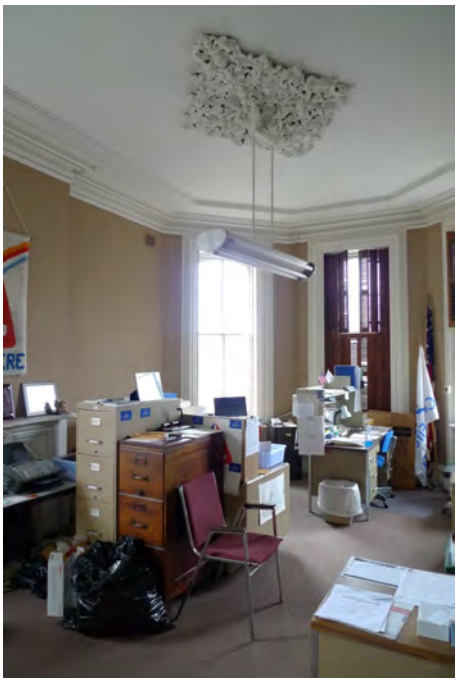
Walls

| Substrate: Plaster | Finish: Paint |
|---|---|
| Notes: The walls were repaired during the 1970's restoration; most of the north elevation was completely re-plastered. It was repainted in recent times and is in fair condition. | |
| Original Finish: The original color is a Light Tan, Munsell 7.5YR 8/2 – 8/4 | |

Wood Trim

| Substrate: Wood | Finish: Paint |
|---|---|
| Notes: The windows on the east elevation were altered to incorporate the exit doors. None of the original painted wood graining remains exposed. All trim was repainted during the 1970's restoration and possibly later but minute exposures and sampling verified the painted wood grain. | |
| Original Finish: The original finish on the wood trim is painted faux wood grain. | |

**Room 304 / Bedroom Level - NE Bedroom**



Ceiling and Cornice

| | |
|---|---|
| Substrate: Plaster | Finish: Paint |
| Notes: The ceiling and cornice retains most of the original plasterwork. It was repainted in recent times and is in fair condition. | |
| Original Finish: The raised ornament is an Off-White, Munsell 2.5Y 8.5/2<br>The field or flat areas of the ceiling are a Light Greyish Tan, Munsell 2.5Y – 5Y 7/2 | |

Walls

| | |
|---|---|
| Substrate: Plaster | Finish: Paint |
| Notes: The walls were repaired during the 1970's restoration; most of the south elevation was completely re-plastered. It was repainted in recent times and is in fair condition. | |
| Original Finish: The original color is a Light Greyish Tan, Munsell 2.5Y – 5Y 7/2 | |

Wood Trim

| | |
|---|---|
| Substrate: Wood | Finish: Paint |
| Notes: None of the original painted wood graining remains exposed. All trim was repainted during the 1970's restoration and possibly later but minute exposures and sampling verified the painted wood grain. This room still retains its original closets. A sample was taken from the floorboard to be examined. | |
| Original Finish: The original finish on the wood trim is painted faux wood grain. Wood floor has a clear sealant that may be resinous but was soft similar to wax. | |

**Room 308 (formerly 305) / Bedroom Level - Servants Stair**

Ceiling and Cornice

| | |
|---|---|
| Substrate: Plaster | Finish: Paint |
| Notes: The ceiling and cornice retains most of the original plasterwork. It was repainted in recent times and is in fair condition. | |
| Original Finish: The field or flat areas of the ceiling are a Light Greyish Tan, Munsell 2.5Y – 5Y 7/2 | |

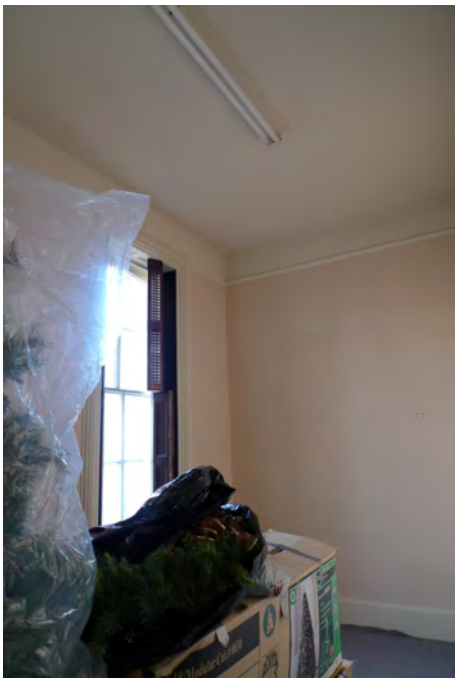
Walls

| | |
|---|---|
| Substrate: Plaster | Finish: Paint |
| Notes: Most of the wall plaster is original with some signs of previous repair / alteration. It was repainted in recent times and is fair condition. | |
| Original Finish: The original color is a Light Greyish Tan, Munsell 2.5Y – 5Y 7/2 | |

Wood Trim

| | |
|---|---|
| Substrate: Wood | Finish: Paint |
| Notes: All trim was repainted during the 1970's restoration and possibly later. The finishes show signs of wear and are in fair condition. No sign of the painted wood graining could be found. | |
| Original Finish: The original color on the risers and tread is an Orangish Tan, Munsell 10YR 6/6. The stringers appear to be an Off-white, Munsell 2.5Y 8/2. The balusters have a stain and clear sealant. | |

**Room 307 / Bedroom Level - NW Room**



Ceiling and Cornice

| | |
|---|---|
| Substrate: Plaster | Finish: Paint |
| Notes: The ceiling contains no historic plaster and was likely replastered in the 1970's and possibly painted again in the 1980's. | |
| Original Finish: No historic paint exists | |

Walls

| | |
|---|---|
| Substrate: Plaster | Finish: Paint |
| Notes: Some areas of the walls may have been repaired during the 1970's restoration and possibly again in the 1980's when more paint work occurred. The north wall has been replastered. The condition of the walls is fair. | |
| Original Finish: A heavy dirt layer could be seen on sealed plaster prior to any paint meaning that the plaster remained exposed for some time prior to being painted. | |

Wood Trim

| | |
|---|---|
| Substrate: Wood | Finish: Paint |
| Notes: All trim was repainted during the 1970's restoration and possibly later. The finishes show signs of wear and are in fair condition. No sign of the painted wood graining could be found. | |
| Original Finish: The initial layer on the wood is a clear finish followed by an Off-white paint, Munsell 2.5Y 9/2. Considering the thickness of the clear sealant is was likely the original finish and was exposed for a period of time prior to being painted. | |

**Room 306 (formerly 308) / Bedroom Level - CW Bedroom**

Ceiling and Cornice

| | |
|---|---|
| Substrate: Plaster | Finish: Paint |
| Notes: The ceiling and cornice retains most of the original plasterwork. It was repainted in recent times and is in fair condition. | |
| Original Finish: The entire ceiling including the cornice and ornament is an Off-White, Munsell 2.5Y 8.5/2 | |

Walls

| | |
|---|---|
| Substrate: Plaster | Finish: Paint |
| Notes: The walls were repaired during the 1970's restoration and some alterations were made on the east elevation. It was repainted in recent times and is in fair condition. | |
| Original Finish: The original color is a Light Greyish Tan, Munsell 2.5Y – 5Y 7/2 | |

Wood Trim

| | |
|---|---|
| Substrate: Wood | Finish: Paint |
| Notes: The door on the south elevation is not original. None of the original painted wood graining remains exposed. All trim was repainted during the 1970's restoration and possibly later but minute exposures and sampling verified the painted wood graining. | |
| Original Finish: The original finish on the wood trim is painted faux wood grain. | |

**Room 305 (formerly 309) / Bedroom Level - SW Bedroom**

Ceiling and Cornice

| Substrate: Plaster | Finish: Paint |
|---|---|
| Notes: The ceiling and cornice retains most of the original plasterwork. It was repainted in recent times and is in good condition. | |
| Original Finish: The raised ornament and inner ceiling field are an Off-White, Munsell 2.5Y 8.5/2<br>The outer field of the ceiling is a Light Tan, Munsell 7.5YR 8/2 – 8/4<br>The cove areas of the cornice have Yellowish Tan accent, Munsell 10Y 7/2. | |

Walls

| Substrate: Plaster | Finish: Paint |
|---|---|
| Notes: The walls were repaired during the 1970's restoration; most of the east elevation was completely re-plastered. It was repainted in recent times and is in fair condition. | |
| Original Finish: The original color is a Light Tan, Munsell 7.5YR 8/2 – 8/4 | |

Wood Trim

| Substrate: Wood | Finish: Paint |
|---|---|
| Notes: Both doors on the north and east elevations are not original. None of the original painted wood graining remains exposed. All trim was repainted during the 1970's restoration and possibly later but minute exposures and sampling verified the painted wood grain. | |
| Original Finish: The original finish on the wood trim is painted faux wood grain. | |

**Rooms 400 to 408 / Servant's Level - Finish Schedule**

Listed below are the earliest colors discovered in the principal rooms on the Servant's level.

| Room | Ceiling | Wall | Trim |
|---|---|---|---|
| Room 408 / Rear Stair<br>(formerly 400) | Yellowish Tan<br>10Y 7/2 | Yellowish Tan<br>10Y 7/2 | Riser and Tread / Lt. Tan<br>7.5YR 8/2 – 7/2<br>Stringer / Off-white<br>2.5Y 8/2 |
| Room 401 | Yellowish Tan<br>10Y 7/2 | Yellowish Tan<br>10Y 7/2 | Light Tan<br>7.5YR 8/2 – 7/2 |
| Room 402 | Yellowish Tan<br>10Y 7/2 | Light Green<br>10GY – 7.5GY 7/2 | Light Tan<br>7.5YR 8/2 – 7/2 |
| Room 403 | Yellowish Tan<br>10Y 7/2 | Light Green<br>10GY – 7.5GY 7/2 | Light Tan<br>7.5YR 8/2 – 7/2 |
| Room 404 | Yellowish Tan<br>10Y 7/2 | Light Tan<br>10YR 8/2 | Light Tan<br>7.5YR 8/2 – 7/2 |
| Room 407<br>(formerly 405) | Raw Plaster | Raw Plaster | Light Tan<br>7.5YR 8/2 – 7/2 |
| Room 406 | Yellowish Tan<br>10Y 7/2 – 8/2 | Reddish Tan<br>2.5YR 8/4 – 7/4 | Light Tan<br>7.5YR 8/2 – 7/2 |
| Room 405<br>(formerly 407) | Yellowish Tan<br>10Y 7/2 | Lt. Yellowish Tan<br>5Y 7/2 | Light Tan<br>7.5YR 8/2 – 8/4 |

Exterior

Select samples of the exterior wood trim and masonry surfaces were extracted by Anne Sullivan to be examined. On a few of the window trim and eaves sample remnants of an Off-White layer were seen as the earliest color, Munsell 10YR 8/2 – 9/2. This color may have been chosen to emulate the color of the limestone. It is likely that this is the original color but some additional examinations may be required to confirm this.

On most of the masonry samples there are multiple layers of paint. There did not appear to be a heavy dirt layer prior to painting, which may mean that the limestone was painted early on, maybe during the Library period when other work was being done on the mansion. A sample from a block (quioning) on the window surround had the same Off-White (10YR 8/2) color as wood trim but appears to possibly be a water-based paint. Further analysis and testing would need to be done to confirm this.

**Munsell Match Chart**

The following is a chart with matches to the Munsell Notations in the closest corresponding Benjamin Moore Color.

| Munsell Notation | Benjamin Moore Color # | Benjamin Moore Color Name | Benjamin Moore Color Swatch *** |
|---|---|---|---|
| 2.5Y 9/2 | #956 | Palace White | |
| 2.5Y 8.5/2 | #957 | Papaya | |
| 2.5Y – 5Y 7/2 | #1517 | Mosaic Tile | |
| 2.5GY 8/2 | HC 116 | Guilford Green | |
| 7.5R 6/4 | #1188 | Palmetto Pink | |
| 7.5YR 8/4 | #108 | Desert View | |
| 10YR 6/6 | HC 41` | Richmond Gold | |
| 10Y 7/2 | #1502 | Cheyenne Green | |
| 7.5YR 7/2 | #1018 | Shabby Chic | |
| 10YR 8/2 | #1038 | Everlasting | |
| 2.5YR 8/4 – 7/4 | #052 | Conch Shell | |
| 10GY – 7.5GY 7/2 | #466 | Garden Path | |

*** Please note that color swatches included for reference only. Actual colors may vary. Obtain actual paint samples to determine exact coloration.

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**Reddick Mansion Historic Structure Report**

# Structural Analysis

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**The Structural Shop Ltd.**

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## SECTION 1 – SCOPE

At the request of Sullivan Preservation, The Structural Shop, Ltd. was contracted to perform an interior structural inspection of the building at 100 West Lafayette Street, Ottawa, Illinois. The scope was to place special emphasis on the review and verification of existing structural system, and whether the system has been compromised or is in need of supplemental support or revision for current and proposed use.

Visual Non-Invasive Inspection:

1.) Inspect the foundation system and the ground floor support system.
2.) Inspect any portion of the first floor framing that is visible and its support system. We were to document the floor construction for the purpose of performing calculations to determine the floor load capacity of the floor system.
3.) Inspect any portion of the second floor framing that is visible and its support system. We were to document the floor construction for the purpose of performing calculations to determine the floor load capacity of the floor system.
4.) Inspect any portion of the third floor framing that is visible and its support system. We were to document the floor construction for the purpose of performing calculations to determine the floor load capacity of the floor system.
5.) Inspect the attic and roof framing and document their condition.
6.) Inspect the interior bearing system and note any distress from an improper or noncontiguous structural system.
7.) Recommend any additional investigations to more fully determine the structural integrity of the building.

This report will contain the findings of the inspection. Any recommendations for repair work should be performed in the timeline outlined in each item of the report.

## SECTION 2 - BUILDING LAYOUT/OVERVIEW

The building was constructed in 1858 in an Italianate style. It is a three story load bearing brick masonry structure. The foundations are constructed of limestone under all of the brick masonry walls. The interior load bearing lines are the continuous walls on either side of the center hall and the main partitions between major rooms. These load bearing walls were originally constructed of brick masonry walls with limestone foundations. The Lower Level / first floor is constructed of wood framing over a crawlspace. The Main Level / second floor is the main entry level, then there is the Bedroom Level / third floor, and a Servant's Level / fourth floor. The third floor is not highly visible from the exterior however there are small windows within the cornice that are the windows of the third floor.

Past renovations for the building's use as a library had resulted in large openings in several of the brick masonry bearing walls. The masonry above these openings is suspected to be supported by steel beams. A few of these large openings have since been filled in with wood framing in an effort to reconstruct the original room layout. Many of the past building renovations have been documented in the old Library meeting minutes from their board of directors. In 2009, David Mumper prepared a document that has complied all of the known meeting minutes, related to the Mansion, entitled, "Notes Gleaned from the Minutes of the Reddick Library Board of Directors". This document has been referenced heavily as the only source that provides clues to the past work that was performed as the building was slowly renovated to meet the needs of the growing library.

The first floor framing consists of rough sawn 2x10 lumber spaced at 16 inches on center. The actual joist sizes vary due to the nature of being rough sawn; however the smallest typical joist is still 1¾"x 9½". The joists in the hall span east-west, bearing on two interior limestone foundations, which also support the brick masonry above (Photo 1). Where original chimneys were removed, the framing was replaced with nominal 2x10's @ 16" o.c. Information from past renovations dates this lumber circa 1960's. This occurs between the two south chimneys that were removed (Photo 2). The joists in the rooms east and west of the main hall span north-south, bearing on interior limestone foundations, which also support the brick masonry above.

The second floor framing consists of rough sawn 2x10 lumber spaced at 16 inches on center and maintain the same bearing lines as the first floor. Our visual inspection of the actual joists was limited due to the existing finishes covering all of the second floor joists. We were able to determine the joist spacing using an infrared thermal imaging camera. The depth of the joists was determined by measuring the depth of the floor structure at stair openings and subtracting the thicknesses of the finishes. Past renovations have removed large portions of the masonry bearing walls between the center west parlor and the center hall (1912); between the southwest and center west parlors (1923); and between the southeast parlor and center hall (1961). Steel beams were added at the south end of the east and west hall walls, supported by steel columns at the first floor. Historic information provided in the meeting minutes suggests that this work was done when the fireplace was removed in 1961 (Photos 3&4). The west side of the second floor was reinforced with three steel beams and steel columns in 1953. This work is primarily hidden with finishes currently; however in the boiler room there is a plaster soffit at the ceiling which may be one of the beams.

The third floor framing consists of rough sawn 2x10 lumber spaced at 16 inches on center and maintain the same bearing lines as the second floor. Our visual inspection of the actual joists was limited due to the existing finishes covering all of the second floor joists. We were able to determine the joist spacing using an infrared thermal imaging camera. The depth of the joists was determined by measuring the depth of the floor structure at stair openings and subtracting the thicknesses of the finishes. Past renovations removed large portions of the masonry bearing walls between the southwest bedroom and center hall, and between the southeast bedroom and the center hall (1912). Historic information provided in the Minutes of the Library Board of Directors suggests that the masonry walls were removed and re-supported with steel beams (Photo 5). None of this information was able to be visually verified. Drawings for this work that had been performed was mentioned in the minutes, however there is no known existence of these drawings.

Fourth floor framing consists of rough sawn 2x8 lumber spaced at 16 inches on center. Our visual inspection of the actual joists was limited due to the existing finishes covering all of the third floor joists. We were able to determine the joist spacing and depth through a small hole in the flooring within the center hall space. Based on the typical layout of framing on the first and second floors, we have concluded the third floor would be framed in similar fashion, maintaining the same bearing lines as the first and second floor joists. Based on the age of the finishes within the fourth floor, there has been very little modification to the main structural components. The only alteration noted was a wood truss style support system built within the fourth floor in the southwest corner bedroom to provide, presumably, additional support of books.

The roof is a hipped style with a flat roof over the central area. Three of the four corners of the building have three sided bay projections with the roof over these areas also hipped. Generally, the roof is framed in a conventional manner with rafter, valleys, ridge beams, and ceiling joists. The roof rafters are parallel to the slope of the roof at all areas. The ceiling joists are also parallel to the rafters which create a tied roof system. The perimeter edge of the flat roof has a rough sawn 3x10 wood beam that helps support the sloped rafters and the flat rafters. The typical roof rafter is a rough sawn 2x6 lumber. The typical ceiling joist is rough sawn 2x8 lumber. The actual size of each member varies considerably (Photo 6).

The exterior façade, exterior walls, and exterior porches have not been evaluated by The Structural Shop. They were under the purview of Sullivan Preservation and are discussed in their Exterior Condition Assessment Report.

## SECTION 3 – OBSERVATIONS

**Foundation and First Floor Framing**
We did not access the crawlspace to perform a hands-on evaluation of the foundation. Photos gathered by other members of the inspection team along with accounts of the condition were used to make our evaluation.

The foundation of the building is resting on an unknown quality of sand or sandy silt soil. There are no outward signs of settlement cracking in the exterior masonry walls so we can conclude that the underlying soil has provided good bearing for the foundation and if there has been any settlement, it must have occurred uniformly.

Photographs of the crawlspace indicate some the framing of the first floor has been altered for the installation of plumbing at the north end of the building. The altered framing has temporary jacks holding up the joists. The jack is simply resting on the floor of the crawlspace (Photo 7). The typical bearing condition of the floor joists at the foundation walls is comprised of a wood sill plate on the limestone foundation wall. In many locations there are wood shims between the joist and sill plate (Photo 1). It is unknown if these shims are original or if they were added later. New floor joists were added at the south end of the building where the chimney and masonry walls were removed in the 1961. These joists bear on a piece of wood block, on top of a loose brick, which rests upon the limestone bearing wall (Photo 2).

We performed calculations on the floor joists using a typical size joist which was 2" x 10" and presumed to be Douglas Fir North based on historical data and other houses of similar age. From this information, the Lower Level / first floor live load capacity has been determined to be 50 pounds per square foot at the living areas and 160 pounds per square foot for the center hall. As part of the analysis we used the actual weight of the floor system with an additional 5 pounds per square foot for the floor finish and mechanicals, for a total of 20 pound per square foot of dead load.

The calculated load capacity should not be used as the actual capacity of the current floor system. This is only the capacity of the joists. Past renovations that removed the chimneys and replaced some of the framing with beams of a different span and configuration may have compromised the overall capacity. Additionally, there are several modifications that were performed when various plumbing was installed (Photo 8). Further investigations into the past renovations would be necessary to determine the capacity of the overall floor system, which may vary from room to room based on the past work. The calculated load capacity of the joists conforms with residential loads and business office loads. Museum loading is typically twice as much as the current capacity. Since the building is an historic structure, the code allows these structures to operate with a lower capacity than required if the occupancy is limited and controlled.

The limestone foundation walls were constructed with thin slabs of limestone set in mortar beds between stones. With time and moisture the mortar has deteriorated and is falling out of the joints between the stones on the interior face of the foundation. The remaining mortar in the joints is very loose and the consistency of powdery sand. There is some efflorescence on the stone around the mortar joints in most areas on the perimeter walls. Brick above the limestone is decaying somewhat at the perimeter walls and is caused by excessive moisture penetrating the wall. The performance of

the foundation to this point is fair. The only visible part of the foundation is the interior side within the crawlspace. Based on the degree of decay, the mortar and brick masonry are in poor condition. Since the source of the decay is from moisture infiltration from the exterior, the remainder of the foundation is suspected to be in a similar condition, only with less mortar washout. If the foundation is allowed to continue decaying, we expect the rate of decay to accelerate to a point where excessive loss of mortar leads to shifting of the stones. This will lead to a redistribution of load and result in cracking of the brick walls that are supported by the stone foundation.

The west foundation wall is exposed in the boiler room and old coal storage room under the current kitchen space. The brick walls both above the below grade here have been covered with a plaster parging. Typically a parge coat is used as an interior finish to help prevent moisture from penetrating through the foundation. Much of the parge coat has crumbled and fallen off the brick wall, as a result of stopping the moisture at the interior surface of the brick and breaking the bond of the parge coat to the brick. There is also a very significant amount of efflorescence on the remaining brick. Some areas have piles of deteriorated brick dust from the decay of the wall (Photos 11&12).

The front entry stair structure was not assessed as a part of this report.

**Second Floor Framing**

The second (main) floor framing is supported by the existing masonry bearing walls and presumably by steel beams where existing chimneys and walls were removed, as has been stated in historical information. Since the second floor framing could not be visually inspected, the performance of the floor and flatness are used as indicators of structural deficiencies. The past use of the floor as a library may be a good indicator of the strength of the floor as proof that it can carry a considerable amount of weight. But supporting all that weight may have caused damage to the floor system that remains covered by the floor and ceiling finishes. The only area with a noticeable slope is near the central stair. This is typical of wood framed floors with inadequately sized supporting members around the stair opening (Photo 13). This can be repaired by reframing the header at the top of the stair with a new engineered wood beam or by altering the existing wood beam and add a new steel plate to the beam.

Historical information suggests that steel beams were added under the floor to increase the capacity for use as a library in 1953. According to this information three steel beams and 'pillars' were used to reinforce the west side of the main floor. Plaster soffits within the ceiling of the boiler room would appear to be one of the beams mentioned. It is unknown if there are additional steel beams within the floor or there were just a few beams added under the wood floor joists (Photo 14).

We performed calculations on the floor joists using a typical size joist which was 2" x 10" and presumed to be Douglas Fir North based on historical data and other houses of similar age. From this information, the second floor live load capacity has been determined to be 50 pounds per square foot at the living areas and 160 pounds per square foot for the main hall. As part of the analysis we used the actual weight of the floor system with an additional 5 pounds per square foot for the floor finish and mechanicals, for a total of 20 pound per square foot of dead load.

The calculated load capacity should not be used as the actual capacity of the current floor system. This is only the capacity of the joists. Past renovations that have replaced headers of doorways or replaced bearing walls with beams may have compromised the overall capacity. Further investigations into the past renovations would be necessary to determine the capacity of the overall floor system, which may vary from room to room based on the past work. The calculated load capacity of the joists conforms with residential loads and business office loads. Museum loading is typically twice as much as the current capacity. Since the building is an historic structure, the code allows these structures to operate with a lower capacity than required if the occupancy is limited and controlled.

**Third Floor Framing**

The framing for the third (bedroom) floor was not visible. However, based on the measured data from the ground floor and first floor, coupled with the first floor structural layout, the floor system should be the same as the first level.

As with the first floor, the past use of the floor as a library may be a good indicator of the strength of the floor as proof that it can carry a considerable amount of weight. Supporting all that weight may have caused damage to the floor system that remains covered by the floor and ceiling finishes. Even though the decorative ceiling finishes and trim do not appear cracked or disturbed, there could be some hidden damage. The only area with a noticeable slope is at the top of the central stair. This is typical of wood framed floors with inadequately sized supporting members around the stair opening. This opening is particularly prone to sagging due to its configuration where the top landing is floating over the stair opening. This can be repaired by reframing the header at the top of the stair with a new engineered wood beam or by altering the existing wood beam and add a new steel plate to the beam.

In historic information, there is mention of filling in an existing stair that lead to the second floor. Our investigations coupled with this information places the stair in the northwest room on the opposite side of the wall from the main stair. How this area was filled in is not known.

We performed calculations on the floor joists using a typical size joist which was 2" x 10" and presumed to be Douglas Fir North based on historical data and other houses of similar age. From this information, the first floor live load capacity has been determined to be 50 pounds per square foot at the living areas and 160 pounds per square foot for the main hall. As part of the analysis we used the actual weight of the floor system with an additional 5 pounds per square foot for the floor finish and mechanicals, for a total of 20 pound per square foot of dead load.

The calculated loads should not be used as the actual capacity of the current floor system. This is only the capacity of the joists. Past renovations that have filled in stair openings, created new doorways, or replaced bearing walls with beams may have compromised the overall capacity. Further investigations into the past renovations would be necessary to determine the capacity of the overall floor system, which may vary from room to room based on the past work. The calculated load capacity of the joists conforms with residential loads and business office loads. Museum loading is typically twice as much as the current capacity. Since the building is an historic structure, the code allows these structures to operate with a lower capacity than required if the occupancy is limited and controlled.

**Fourth Floor Framing**

As it was with the second and third floors, the framing for the fourth (servant's level) floor was not visible. We were able to determine the joist spacing and depth through a small hole in the flooring within the main hall space. The original wood sub flooring was mostly exposed throughout the rooms. This coupled with the typical layout of framing on the first and second floors, we have concluded the third floor would be framed in similar fashion, maintaining the same bearing lines as the first and second floor joists.

Much of this floor appears to be original or unchanged for the majority of the structure's existence. The only historically documented work was removing the masonry walls at the line of the third floor and replacing them with beams. There are remnants of a load distribution truss in the south west room that was presumably used to hang additional weight on the second floor. Historical information dates this to the late 1960's and the lumber type and dimensions agree with that time period.

We performed calculations on the floor joists using a typical size joist which was 2" x 8" and presumed to be Douglas Fir North based on historical data and other houses of similar age. From this information, the third floor live load capacity has been determined to be 30 pounds per square foot at the perimeter rooms and 106 pounds per square foot for the main hall. As part of the analysis we used the actual weight of the floor system with an additional 5 pounds per square foot for the floor finish and mechanicals, for a total of 20 pound per square foot of dead load. The calculated load capacity of the joists conforms to residential attic storage loads. High density storage on shelves, racks, or other systems typically require more than four times the current capacity. Since the building is an historic structure, the code allows these structures to operate with a lower capacity than required for new buildings. Storage on this floor should be considered incidental and not high capacity.

The calculated load capacity at this floor is likely to be very close to the actual capacity of the current floor system overall. Past renovations were limited in scope and appear to have only undergone one set of changes. The electrical conduit seen throughout the third floor looks to have been installed in a manner that minimizes the impact on structural members. All of the conduits are surface mounted with very few conduit actually penetrating joists or studs. Further investigations into the past renovations would ultimately be necessary to determine the actual capacity of the overall floor system.

**Attic and Roof Framing**

The condition of the roof and attic structure was in good condition. Only a few small isolated areas had old water damage in the form of staining on the sheathing and a few joists (Photo 15). There appears to be [illegible] water damage occurring adjacent to the skylight on the east attic side at the ceiling joists. This water damage has begun the decay the wood (Photo 16). This area should be remedied and the decay occurring on the wood in the vicinity should be killed to prevent further damage.

All of the existing chimneys were either removed entirely or just removed below the roof level. By doing this, the entire roof structure has been very well kept and the roof has very little damage from the elements. A few joists on the west side of the roof have a previous repair. The repair consists of three joists with double 2x6 joists sistered and thru bolted. The purpose of the repair is unknown (Photo 17).

The roof structure appears to be nearly unchanged with only the exceptions of infilling the old chimney penetrations. No distress was noted in the rafter or ceiling joist members. Part of the longevity of the roof structure can be attributed to the maintenance of the roof covering and the continual use of the building. Another very important issue is the lack of insulation in the ceiling of the attic (Photo 18). By not having insulation, the heat of the building has been escaping into the attic and warming the roof during the winter months. This has likely prevented large accumulations of snow and ice to form, thus preventing excessive loads on the roof and ice damming which can greatly impact the integrity of the roof. An analysis of the roof structure has not been performed since the roof has performed very well over the last 150 years. If the ceiling of the attic or roof were to be insulated, a full structural analysis would be necessary to verify the roof compliance to the current code. Our experience is that the roof would require substantial reinforcement if this were the case.

## SECTION 4 – CONCLUSION

Overall the building is in good condition considering its age. Most of the items noted meet or exceeded any code in 1858 and most meet the code as of today for use as a residence. In any case as long as the use of the building does not change, the building needs only to comply with the code at the time of construction. Further, if the code changes, the building does not need to brought up to the new code unless a substantial renovation or a change of use requires it. Historically the use did change from residence to library and there were some modifications made, but the modifications were primarily bearing wall removals and not complete restructuring of the joists. In the current condition, the floor joists do not meet the building code requirements for a museum loading. However, historic buildings are not required to meet the current building code prescribed loads if the use of the space can be controlled so that the number of occupants does not exceed the actual floor capacities.

No significant structural items were found in our inspection that need to have immediate repair. For longevity, a comprehensive maintenance program should be continued to substantially increase the life of the building structure. This comprehensive program involves any measure required to maintain a watertight building. The biggest caused of damage in masonry structures stems from water infiltration. The second largest cause stems from inappropriate modifications to the structure and finally the third largest is pestilence such as termites etc. Proper maintenance ie. Painting, caulking, cleaning, tuckpointing, etc will insure the usefulness of the building for many years to come.

### Maintenance and Repairs

A brief summary of the maintenance items that should be addressed, along with a time frame for completion, are as follows:

1. Clean out crawlspace under the ground floor to create a level surface. Consider installing a vapor barrier system to minimize humidity and odor from exposed ground. This should be completed within the next 10 years.

2. Grind and tuckpoint the stone foundation within the crawlspace to prevent further loss of mortar between stones. Further loss of mortar may compromise the foundation and cause settlement. Settlement of the foundations will be detrimental to the exterior façade as well as the interior floors and walls. This should be completed within the next 10 years.

3. Provide proper bearing for floor joists within crawlspace where joists are currently bearing on loosely stacked brick or wood blocks. This would require temporary support of the joists while brickwork is laid under the joist. This should be completed during or after the foundation tuckpointing repair work, within the next 12 years.

4. Grind and tuckpoint the stone foundation wall and brick exterior wall within the boiler room and under the current kitchen. The interior wythe of brick may require removal and replacement within the boiler room due to extreme decay. This should be completed within the next 10 years. We recommend it be performed

concurrently with the foundation work within the crawlspace.

5. To extend the longevity of the interior tuckpointing of the crawlspace and boiler room foundation walls we recommend waterproofing the exterior side of the foundation wall. This would involve excavating along the perimeter of the building to expose the foundation. Then the stone would be ground and tuckpointed. Once the stone work is in good condition, a liquid applied waterproofing membrane can be installed. This is an optional repair; however it will greatly extend the lifespan of the foundation.

6. Annual inspections of the attic space for water infiltration and pest / rodent intrusion should be performed. This will help to prevent major damage that can otherwise be overlooked until it becomes evident in the lower levels of the building.

7. Monthly inspections of the downspouts and annual inspections of the gutters should be performed to keep the water shed from the roof away from the masonry façade and foundation of the building. Much of the masonry distress in the foundation wall can be attributed to downspout failures or improper shedding of roof water.

**Further Investigations**

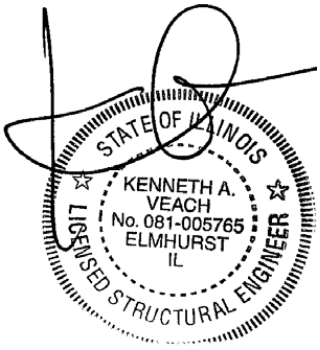
A comprehensive floor load capacity determination for the building could not be made from our non-invasive visual inspections, as there have been many alterations to the structural system in the past. If the use of the building were to be changed from residential or limited access museum to a public space or assembly use, the floors for these new uses would require a comprehensive invasive structural study and analysis. This would involve making inspection openings in the floors and walls where past modifications have been performed to document and measure the new structural members and their connections. Inspection openings can be made as small as 6 inches in diameter to narrow down where larger openings would be needed. In any case, increasing the load capacity of the floors to different use would involve adding new joists to all of the existing joists where the load capacity needs to be increased.

Typically a museum would require a higher floor load capacity than the home currently has. Since the building is an historic structure, the code allows these structures to operate with a lower capacity than required if the occupancy is limited and controlled. This appears to be the current use of the building, particularly during our visit.

If there are any questions with regard to this letter or if we can be of further service to you in any way, please do not hesitate to contact our office.

Sincerely,

THE STRUCTURAL SHOP, LTD.




Kenneth A. Veach
Licensed Structural Engineer
State of Illinois

PHOTOGRAPH 1
Reddick Mansion Structural Evaluation
100 W. Lafayette St., Ottawa, Illinois

PHOTOGRAPH 2
Reddick Mansion Structural Evaluation
100 W. Lafayette St., Ottawa, Illinois

PHOTOGRAPH 3
Reddick Mansion Structural Evaluation
100 W. Lafayette St., Ottawa, Illinois


PHOTOGRAPH 4
Reddick Mansion Structural Evaluation
100 W. Lafayette St., Ottawa, Illinois

PHOTOGRAPH 5
Reddick Mansion Structural Evaluation
100 W. Lafayette St., Ottawa, Illinois

PHOTOGRAPH 6
Reddick Mansion Structural Evaluation
100 W. Lafayette St., Ottawa, Illinois

PHOTOGRAPH 7
Reddick Mansion Structural Evaluation
100 W. Lafayette St., Ottawa, Illinois

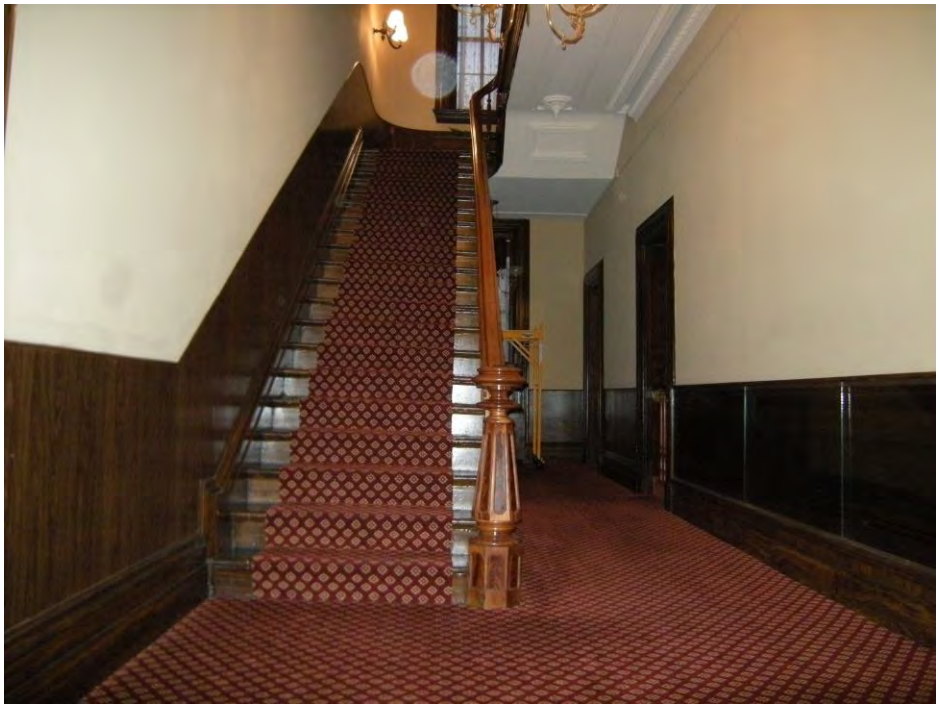
PHOTOGRAPH 8
Reddick Mansion Structural Evaluation
100 W. Lafayette St., Ottawa, Illinois

PHOTOGRAPH 9
Reddick Mansion Structural Evaluation
100 W. Lafayette St., Ottawa, Illinois

PHOTOGRAPH 10
Reddick Mansion Structural Evaluation
100 W. Lafayette St., Ottawa, Illinois

PHOTOGRAPH 11
Reddick Mansion Structural Evaluation
100 W. Lafayette St., Ottawa, Illinois

PHOTOGRAPH 12
Reddick Mansion Structural Evaluation
100 W. Lafayette St., Ottawa, Illinois



PHOTOGRAPH 13
Reddick Mansion Structural Evaluation
100 W. Lafayette St., Ottawa, Illinois

PHOTOGRAPH 14
Reddick Mansion Structural Evaluation
100 W. Lafayette St., Ottawa, Illinois

PHOTOGRAPH 15
Reddick Mansion Structural Evaluation
100 W. Lafayette St., Ottawa, Illinois

PHOTOGRAPH 16
Reddick Mansion Structural Evaluation
100 W. Lafayette St., Ottawa, Illinois

PHOTOGRAPH 17
Reddick Mansion Structural Evaluation
100 W. Lafayette St., Ottawa, Illinois

PHOTOGRAPH 18
Reddick Mansion Structural Evaluation
100 W. Lafayette St., Ottawa, Illinois

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# Reddick Mansion

**Ottawa, Illinois**

## Historic Structure Report & HVAC Feasibility Study

## Mechanical Consultant Report

**Prepared by:**

**Architectural Consulting Engineers**
**837 Hayes Avenue**
**Oak Park, Illinois 60302**

**August 10, 2013**

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## Graphics



## Appendices

**Executive Summary**

As part of a part of a team led by Sullivan Preservation, Architectural Consulting Engineers (ACE) participated as the mechanical consultant, assisting in the evaluation of existing mechanical, electrical and plumbing systems including electric service capacity, and existing building envelope performance at the Reddick Mansion. The intent of this process is to conduct an environmental survey to plan for improvements to the Mansion's environment, including a feasibility study to provide a new air conditioning system.

We have found that the existing systems, while old, are still functioning. There are a limited number of items that should be corrected to improve the operation and reliability of the systems. There is a desire however to install a comprehensive HVAC system into this building to replace the existing and recently demolished systems. We have determined that it is quite feasible to add this HVAC system into the structure; however we recommend that roof insulation be added and window maintenance be completed in order to reduce the overall required system size. In fact we see an approximate 10% to 20% reduction in system capacity required by making these envelope improvements.

Our findings from our energy study suggest that the Ground Source Heat Pump (GSHP) is an excellent solution to both reduce the Reddick Mansion annual utility bill, but also reduce the Source Energy usage at the power plant – which ultimately means a reduction in carbon and other pollutants. Additionally, given the prominent location and beautiful grounds, a GSHP offers a cooling solution that does not require any exterior equipment that would be aesthetically challenging to conceal and would also cause noise and additional maintenance concerns.

This energy study is quite typical of the results we have found when comparing these types of systems. The GSHP system, without any benefit of tax credits or incentives, and using the current very low natural gas costs, consistently produces enough differential savings to offer a simple payback of about 10 years depending on the final design. If grants or other incentive programs can be accessed, this payback will obviously be reduced even further. The GSHP also offers a reduction in energy consumption over time that will help stabilize the monthly expenses of the Mansions, reduce the carbon footprint, and help set an example of how a historic property can contribute to improvements in our local and global environment, and still be a cost effective solution.

**General**

The house was built in 1858 and the Reddicks lived there until the mid-1880's. Mrs. Reddick died in 1883 followed by Mr. Reddick in 1885. It was at this time that the building was willed to the City of Ottawa to be used as a library. Unfortunately there are no surviving drawings from the time that the Reddicks lived there although the household inventory from Mr. Reddick's Will helped to identify how most of the rooms in the house were used.

After the library took possession of the building, there were some records kept. Many of these records have been summarized by David Mumper in 2009 in the document provided by the Reddick Mansion Association, "Notes gleaned from the minutes of the Reddick Library Board of Directors". Mr. Mumper also created a new typed copy of "Notes prepared April 4, 1978 regarding the Reddick Mansion" with some supplemental revision to coincide with information discovered at a later date. Additionally, in 1975, "History, Significance, and Feasibility for Adaptive Use of the William Reddick Mansion" was prepared for the National Trust for Historic Preservation and the Ottawa Silica Company Foundation by Paul E. Sprague Ph.D and William B. Dring, AIA. This document also provides many details of the building at the end of the Library era of ownership.

In addition to the reports and notes listed above, in 2011 a Capital Needs Assessment was prepared by Basalay, Cary & Alstadt Architects, Ltd., including a HVAC System Assessment by KJWW Engineering which was included as an Appendix.

Since there are no drawings of the original layout available, interpretation of the building construction and systems infrastructure provide a supplement to the written documentation that is available to help guide us in understanding how the building and systems were installed and operated.

**Building Envelope & Embedded Historic Mechanical/Electrical Systems - Description**

The Reddick Mansion is of solid masonry construction with four full floors above grade: Lower (service) level - 1st floor; Main level -2nd floor; Bedroom level - 3rd floor; Servants quarters - 4th floor; and Attic. A sloped roof pitches up on all sides to a flat roof at the center of the roof area creating a walkable attic space that is accessed through stairs from the third floor. The sloped portion of the roof has asphalt shingles while the flat roof is a rubber membrane. There is a large double-pane fixed skylight that replaced a historic skylight in the same location serving the third floor area and backlighting a large laylight on the third floor main stair hall.

The exterior walls are stone and brick with an interior plaster finish on all floors. Where visible in the crawlspace, we observed a stone foundation wall around the perimeter of the exterior walls. There is a masonry bearing wall on either side of the main hallway of the building extending into the crawlspace with brick foundation walls. We assume that the exterior wall structure consists of the exterior masonry, a small air space and plaster lathe interior. While this wall is not thermally insulated, it is a high-mass construction which adds a substantial thermal buffer. This type of construction aids in maintaining a reasonably slow response time to outside temperature changes. It also has a high water capacitance which gives the structure protection from bulk water leakage since the structure can absorb large amounts of moisture before reaching a saturation point that could cause damage or allow for biological growth.

Windows are wood frame double-hung, single-pane style with no storms on the first, second and third floors. Fourth floor windows are currently fixed panes which we assume could originally be opened as an awning, hopper or casement to allow for ventilation. The windows are in various stages of disrepair and appear to be very loose fitting which undoubtedly allows for excessive infiltration.

Window in Disrepair Allows Excessive Infiltration

Window Fitted with Plexi-Glass Fixed Interior Storm Pane

Many windows in the non-tour spaces had been fitted with plastic sheeting on the inside as a make-shift storm to help combat this condition. It is highly desirable to reduce the infiltration that occurs at

windows in disrepair. Infiltration contributes to the heating and cooling load, a sense of draftiness that is often uncomfortable, localized thermal conditioning issues, and a potential for moisture degradation due to air entrained vapor condensation on cold surfaces. Remediation of the deficient windows can be handled in a variety of ways and are discussed in the architectural portion of this HSR.

We did not note any visible thermal insulation in the building including the exterior walls, attic floor or roof deck except there is sawdust attic floor insulation in the floor joists over the water storage tank room. The lack of thermal insulation, especially in the attic floor has had a positive effect on the stability and integrity of the wooden structure. The energy moving through the structure, while expensive to purchase, does provide for a constant drying effect of the building materials which helps prevent or minimize dry rot that might otherwise occur if materials got wet and failed to dry. Given high energy costs, leaving the building attic area uninsulated is not a good long term solution although careful consideration must be given to adding thermal insulation and vapor barriers to historic buildings so that implementation does not have unintended undesirable consequences. See later sections of this report for recommendations on thermal insulation improvements.

No Insulation in Roof or Floor Joists - Attic

Insulation in Floor Joists Over Water Tank Room - Attic

There is a partially recessed basement at the current boiler room and a partially accessible crawlspace below the balance of the first floor including a tall crawlspace with concrete floor below the current kitchen. According to “Notes gleaned from the minutes of the Reddick Library Board of Directors” prepared by David Mumper, 2009, this area was originally not a recessed space – or at least not as low as it currently is, but was lowered in 1925 to allow for the installation of a larger coal-fired steam boiler and the adjacent space was lowered for a larger coal storage room. We speculate, which is supported by the notes compiled by David Mumper that the room currently used as a boiler room was the original kitchen. We also speculate that the adjacent room that houses the existing kitchen was possibly a laundry area or pantry. The second and third floor spaces above these two rooms are noted on floor plans that have been annotated with items listed in the household inventory accompanying Mr. Reddick’s Will, as being bath rooms. The original elevated water tank occupied the area above on the

fourth floor – making this entire quadrant of the building a “wet zone” lending support for this speculation.

Indoor plumbing was not particularly common at the time this building was constructed but it was sometimes installed in homes of this quality. The system typically consisted of a local water supply such as a rain collection cistern and/or a water well, an elevated water storage tank, distribution piping for the water (usually lead pipe), some type of water heater, and a sewer drainage pipe that would extend to a local cesspool or public disposal system. The water closet or privy was often located at the lowest level with basins and bathing facilities on the upper floors although again it was not unheard of for there to be water closets on the upper floors.

According to the Ken Brookman, former janitor in 1975 when the Library moved from the building and the city of Ottawa took ownership, in an interview on February 21, 2013, there were two cut stone constructed cistern tanks (or a single tank with an interior divider) located just to the west of the existing boiler room and kitchen. Water from these tanks would have been pumped with a manual pump up to the 4th floor storage tank to allow for gravity-fed water to the “wet zone” of the house. A hand operated pump and feeder pipe from the cistern can still be seen in the boiler room on the west wall. The feeder pipe from the cistern enters the basement below the existing kitchen and is routed along the wall to the hand operated pump. Given that the elevated water tank was removed in 1902 and the boiler room floor was lowered in 1925, this may or may not be the original hand pump used to fill the elevated tank.

Abandoned Hand Pump on Wall – Boiler Room

The cisterns were most likely filled with storm water drained from the roof through gutters and downspouts. One of these tanks was filled with sand when discovered in the late 1970's and the other had standing water. Per Mr. Brookman, the water filled tank was subsequently filled with sand at that time as a safety measure.

In our survey of the crawlspace, we did discover an abandoned sewer pipe heading from a point on the first floor just south of the existing bathrooms to the east where it eventually goes below grade. The age of this piping is unknown but the construction techniques and pipe condition are definitely consistent with the 1800's so it is possible that this piping was the original sewer leaving the building. Since the building sits on a corner bounded by streets to the south and east, the direction of flow to the east would tend to indicate that the sewer went to a public conveyance rather than a local cesspool. We do know based on Library records that in 1888, water closets were installed but it is not clear if they were replacements of existing, supplements to toilets already installed or if the system was new. The Library records indicate a series of plumbing improvements through the years, adding additional facilities for the janitor, removal of the elevated tank in 1902, etc.

While the water tank on the fourth floor was removed in the early 1900's, the lead fill and distribution piping is still concealed in the north wall in the northwest corner of the building. This piping can be seen in room that formerly housed the water tank.

Abandoned Sanitary Piping - Crawlspace

Lead Fill and Distribution Pipes in Former Water Tank Room – 4th Floor

The building was originally heated with coal fireplaces in each room on the first, second, and third floors. There is evidence of stove flue connections on the fourth floor servant's chambers. All chimneys have been removed from the building back into the attic area as well as some of the original fireplaces in areas renovated when the building was owned and operated as a library.

There is discussion in the library records of natural gas piping and stoves being installed in 1887. In the next year, 1888, a coal fired steam heating system which included a steam boiler, cast iron radiators and the associated steam and condensate piping was installed although it is not clear whether this was to

supplement or replace the gas stoves. This steam system was installed as a one-pipe steam system where a single pipe was installed to each radiator allowing steam to flow into and condensate to flow out of the radiator during use. The radiators on the first floor are installed as two-pipe style with separate steam and condensate pipes connected to the radiators although it is not 100% clear why this was necessary.

Steam distribution piping is routed through the building at the ceiling of the first floor. The system is divided into north and south zones. Two zone pipes extend east out the boiler room then one is routed around the perimeter of the building to the south while the other is routed to the north. Branch piping is then extended up to serve radiators on the floors above and down to serve the first floor radiators.

We would note that the steam piping installed on the first floor help give us clues to the form and function of this level, despite not having any drawings to work from. Plugged tees in the radiator piping may indicate where radiator branch piping may have been removed. Additionally, like a footprint left in wet cement, pipe escutcheon plates that are typically installed at a wall penetration but now are just located seemingly haphazard on a pipe in the middle of a room help to illustrate where an original wall likely was located.

Zone Piping Looking East on 1st floor – Zone Pipe on Right turns for South Zone and Zone Pipe on Left turns for North Zone. Escutcheon Plates on Pipe Illustrate Possible Location of Demolished Wall on 1st floor

Escutcheon Plate on Pipe at Wall in Normal Location

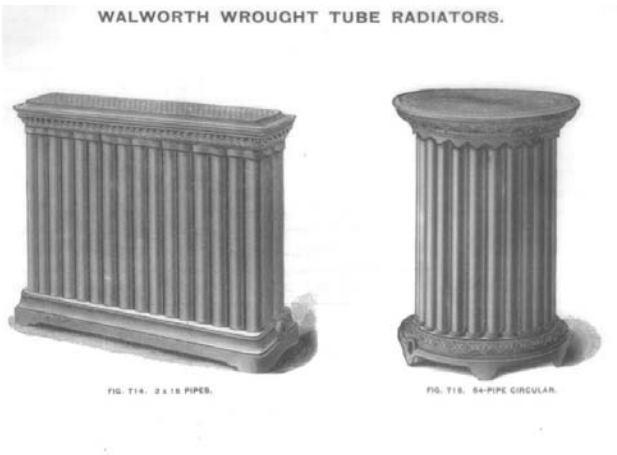
The majority of radiators installed in this building, first through third floors, are decorative wrought iron direct style units, similar to the Walworth Wrought Tube Radiators. These units are somewhat unique, although at the time of installation they seemed to be in wide use. They consist of a cast base to which wrought iron tubes are extended up to cast u-bend fittings and another pipe is extended back to the cast iron base. Multiple tubes were aligned in a grid pattern which when flooded with steam created a hot mass that would radiate heat to the room in which installed. A matching decorative cast top cover would often be used to create a finished top surface. The building has a variety of size radiators in order

to better match the thermal load requirements of each space. Less decorative cast iron sectional radiators are installed in the 4th floor Servants Quarters, and third floor bathroom.

Wrought Tube Radiator – Second Floor

Wrought Tube Radiator – First Floor


Wrought Iron Direct Radiator, excerpt of page 320, "Heat: Science and Philosophy of its Production and Application to the Warming and Ventilation of Buildings", John H. Mills, circa 1890

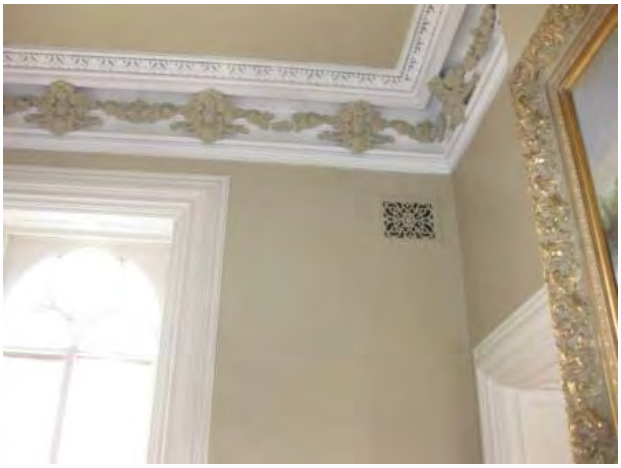



Walworth Wrought Tube Radiator, excerpt from Catalog, circa 1890

There are ventilation openings high on the wall in most rooms on the first and second floors. We speculate that there were originally openings on the first floor level as well that have sense been covered during renovation of these areas. These openings are complete with what was originally an operable damper behind the decorative wall grate: pull chains could be pulled to open or close these dampers to help regulate air movement. We inspected the shaft behind these openings using a flexible

borescope. This inspection showed that the wall opening was connected to a vertical shaft that extended up and down from each wall opening, further supporting our assumption that there were additional openings on the first floor. We assume that these shafts continued up into the attic which would likely have had some form of ventilation opening – which has long since been removed from the building. In our investigation we did note cool air movement out of the opening. Since it was heating season we assume the air was infiltrating out of the attic. Historically, these types of wall ventilation openings were used in a variety of ways ranging from providing combustion air to the coal fireplaces to providing for ventilation in conjunction with the operable windows to relieve the space of impure air during summer and winter. This was common practice in buildings dating from as far back as the 1850's.

Wall Vent Opening – Star in Center was Connected to Chain Operators to Allow for Opening and Closing Operable Damper Installed Behind Vent Face (Typical)



Typical Wall Vent Opening

There is also extensive discussion of gas lighting fixtures being added or replaced in the Library records from 1897 through 1915. It is not clear from these records when the gas lighting system was permanently removed from service. Gas lighting was common in the mid to late 1800's, and gas distribution was an available product from the Ottawa gas works in 1848 so it is reasonably assumed that the house was initially built with this feature since the gas piping is concealed within wall and ceiling spaces.

The building was initially electrified in 1889 with the addition of 14 light fixtures. The records indicate a series of electrical improvements through the years adding light fixtures, including a full rewiring of the lighting and addition of snap switches in 1908 in order to eliminate a concern for fire. There is extensive knob & tube wiring in the attic which according to staff is abandoned. This type of wiring is consistent with work done in the early 1900's. Among other work performed through the years, according to the library records the electric service wires were placed underground in 1925.

Since the building was electrified after the library took possession of the building in 1886, none of the light fixtures present would date to the original construction. There are however numerous light fixtures still installed in the 4th floor areas that have been abandoned in place and which could easily date back to the early 1900's when the building seemed to have been broadly wired for lighting over the course of a couple decades.

Knob & Tube Wiring in Attic

Knob & Tube Wiring in Attic

Abandoned Hanging Fixture in Attic

Chandelier Fixture on Second Floor

**Current Mechanical/Electrical Systems Description and Assessment**

As noted above, the building was originally heated with coal fireplaces and stoves. Once the Library took over in 1886, the heating was quickly switched to gas stoves, and then starting with the installation in 1888 of the steam heating system, multiple generations of coal fired steam boilers. In 1963 the furnace coal stoker was converted to a natural gas burner and then due to a national fuel emergency,

this boiler – or possibly a replacement boiler - was converted to fuel oil. Since the existing boiler is gas-fired, it is not clear when the boiler system was switched back to natural gas but it was likely during the tenure of the Reddick Mansion Association since they came into possession of the building just three years after the boiler was converted to be oil fired.

The current heating plant is reported to have been installed in 2001 and consists of a Weil-McLain, Model ECH-125-PIN, Series 3, natural gas fired, cast iron steam boiler rated for 550,000 Btuh gas input and 440,000 Btuh heat output making it 80% efficient. The flue gases are exhausted through a forced draft system through the sidewall of the boiler room. The system is controlled with a programmable thermostat located on the north end of the second floor stair hall. The steam condensate from the radiators is collected by a condensate receiver which collects, stores and pumps the liquid back into the boiler for reuse. This unit is a Hoffman Boiler Feed Series VBF, Model number VBFS-E, rated for 15 GPM at 20 PSI pump pressure.

Existing Natural Gas Boiler


Existing Condensate Receiver


Boiler Flue Forced Draft Fan, Abandoned Ducts From Demolished Grade-Mounted HVAC Unit on Left


Boiler Forced Flue Vent Cap on Left, Combustion Air Louver on Right, Abandoned HVAC Ducts Penetrating Window Opening in Center

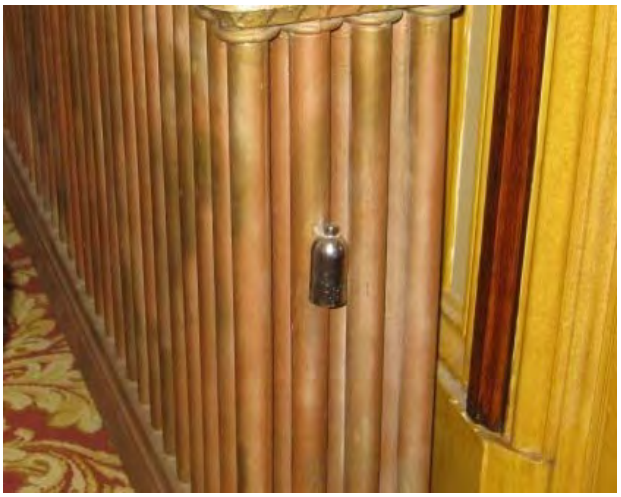
A combustion air louver and automatic damper provides for combustion air when the boiler is operating. The boiler seems to be in good working condition and is suitable for the current purpose. Condensate recovery systems generally have more severe duty since the condensate is often quite basic resulting in deterioration of the system components. The system installed seems to be functional and operational at this time but should be monitored for any failures. At that time the unit should be repaired or replaced as needed.

The steam distribution system and radiators seem to be the same as originally installed in 1888. There is evidence of some modifications to the system through the years where radiators have been removed or replaced, but in general the system seems to remain largely as originally installed. Assuming this is the original piping, this makes the system 125 years old and it has long since surpassed its expected useful life. The condensate piping in particular could be prone to failure since the condensate is often quite damaging to the materials and equipment that handle it. There are also automatic vents on the radiators and at high points in the piping system that requires periodic service or replacement.

Since the steam and condensate piping system is generally exposed, any leakage that might result from failed pipes of fittings should be easily and quickly identified so there is limited risk of significant damage to the building should a leak occur. The exception to this is the condensate piping located in the crawlspace which is relatively inaccessible. Leaks in this piping could go undetected for some period of time. Fortunately the crawlspace has a sand fill so any moisture leaking from the system would be absorbed.

If this system is retained in service the automatic vents should be systematically reviewed and repaired or replaced to ensure they are operating properly. Additionally, the piping system should be monitored for leaks and repaired on an on-going basis with the understanding that the older the system gets the more likely components and materials will fail.

High Point Automatic Air Vent in Boiler Room



Bullet Style Automatic Air Vent on Radiator

At some point after transfer of ownership from the library to the Reddick Mansion Association, two additional HVAC systems were installed in the building.

A forced air furnace with matching condensing unit, which according to the date code on the equipment was manufactured in 1988, was installed to serve the three east rooms on the third floor. The furnace, which is a gas fired high efficient furnace (Carrier Model 58SX060-CC-1 Series 150), is rated for 66,000 Btuh gas input and an approximate output capacity of 60,000 Btuh. The furnace sits in a corner of Office 303 where ductwork is extended along the ceiling north to serve Office 304 and south to serve Exhibit 302. The ductwork is exposed in Office 302 and is complete with duct mounted air devices to condition this space while wall registers are mounted in the other two spaces served so there is no visible ductwork in these areas. Return air for the furnace is from a wall grille in Office 304 and a duct mounted grille at the unit for Office 303. Return for Exhibit 302 is provided through a transfer duct and grilles between Exhibit 302 & Office 303. The 2" PVC flue and air intake pipes are routed through the adjacent exterior wall where they are painted to match the color of the brick in order to minimize their appearance.

Furnace in Office 303

Furnace Flue, Intake and Refrigerant Piping – Painted to Match Adjacent Wall

Condensate from the furnace and air conditioning coil is directed through the exterior wall where it is allowed to drain to grade off of the balcony. Refrigerant piping between the furnace coil and the remote condensing unit is routed through the exterior wall and down to the balcony mounted unit. Piping is also painted to match the brick. The condensing unit sits on the balcony just to the east of Office 303. The unit is a Carrier, Model 38EH036300 and is rated for 36,000 Btuh (3 Tons). The system is controlled by a programmable thermostat located in Office 304.

While still operational, with a 1988 manufacture date the furnace and condensing unit have exceeded the expected useful life of 15 to 18 years. We would expect on-going and increased maintenance costs in order to keep these units operational. Additionally, the furnace is not enclosed in a code compliant fire rated room.

Gas Pipe & Condensate Drain for Furnace in Adjacent Office 303

Condensing Unit for Furnace in Office 303

The second HVAC system added to the building was a grade mounted package air conditioning unit located just to the west of the boiler room. This unit served the first floor spaces through a horizontal duct discharge arrangement with the ductwork being routed through an existing window opening into the boiler room. From this point it was routed across the boiler room ceiling to the east and south to serve the adjacent spaces with either wall mounted grilles or exposed ducts with duct mounted grilles. This unit was damaged and apparently rendered inoperable when bricks fell from the external mounted boiler chimney after a lightning strike. The unit was eventually removed and the associated ducts through the window opening were capped.

Duct from Demolished Air Conditioner at Boiler Room

Duct in First Floor Main Hall

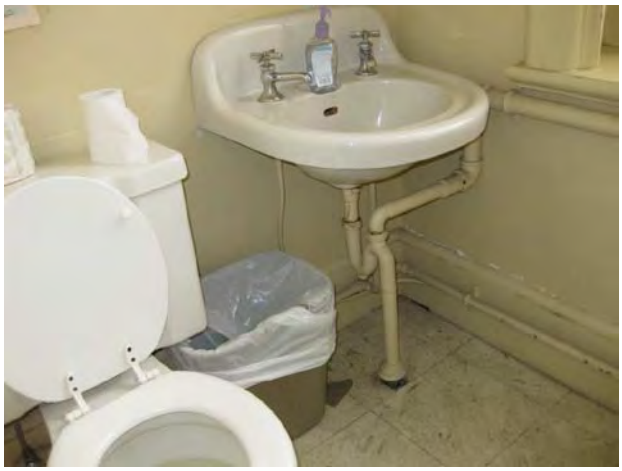
Duct in Boiler Room penetrating Main Hall Wall

Duct in First Floor Main Hall

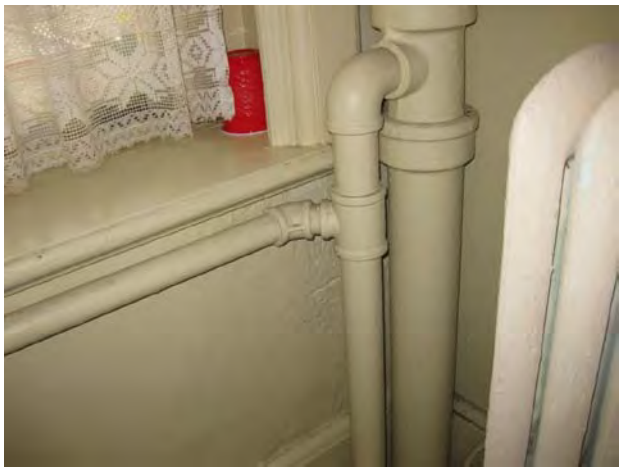
The two first floor toilet rooms are fitted with ceiling mounted exhaust fans controlled with a local switch. These fans discharge through a blocked up window opening on the north façade. The balance of ventilation for the building is achieved through the use of operable windows although many of these windows are currently inoperable or isolated with internally mounted temporary fixed storm panes.

Exhaust Fan Discharge from First Floor Toilet Rooms

The current plumbing in the building is still confined to the northwest quadrant and consists of two toilet rooms, a kitchen sink and boiler room drain on the first floor and a small toilet room on the third floor. The cast iron sanitary main stack is routed exposed in the northeast corner of the rear exit hallway next to the back door. The schedule 40 PVC sanitary sewer leaves the building through the crawlspace to the west towards the alley. All of this piping appears to be in good condition and since it is generally exposed any leaks will be easy to detect and repair.



Third Floor Toilet Room



Sanitary and Vent Stack at Third Floor

PVC Sanitary Routed to West Through Crawlspace and Black Steel Gas Main Entering at North Wall of Crawlspace, Routed South to Boiler Room

Cast Iron Sanitary Stack at Galvanized Domestic Water up to Third Floor at Back Door Hall

The schedule 40 black steel gas service enters the building in the crawlspace on the north side of the building with the gas meter located in the boiler room.

Domestic water is routed to the in the crawlspace to the first floor fixtures and is routed to the third floor toilet room parallel to the sanitary stack. Water piping is a mixture of galvanized and copper piping and given the limited uses in the building seems to be acceptable. There are locations where the dis-

similar metals are in contact which is resulting in galvanic corrosion. Additionally, the galvanized piping will eventually corrode on the interior, especially in the hot water piping, which will slowly cause the water flow to diminish. As the galvanized pipes fail or if the flow reduces to the point of dysfunction, new copper piping should be installed to replace it.

There is a 30-gallon electric water heater that was installed when the current kitchen was created in the northeast corner of the building above what was the coal room. This water heater is located in the boiler room. The water heater appears to be functional but it has definitely reached the end of its expected useful life.

Electric Water Heater in Boiler Room

The existing 120-208 volt, three-phase, 60 Hz, 200 amp electric service is fed underground from the utility transformer in the alley to the west of the property. There is a meter pedestal on the west side of the boiler room and a surface conduit is extended through the wall to the main panel in the boiler room.

The main panel is a 200 amp, three phase service rated panel with a 200 amp main circuit breaker and 42 breaker spaces. This panel is overloaded with circuit breakers since many six individual breaker spaces have sub-divided 20 amp circuit breakers. There is a 100 amp two-pole circuit breaker for a sub-panel located in the Chamber Office on the third floor. There is also a 60 amp, three pole circuit breaker for the demolished grade mounted rooftop unit that is not is use but the balance of breaker spaces are used.

Underground Electric Service at West Side of Building with Surface Conduit Feeding Main Panel and Surface Conduit Up Side of Building to Serve Re-Purposed Fuse Box Floor

Sub-Panel on Second Floor

Main Service Panel – 200 Amp, 120-208 Volt, Three Phase

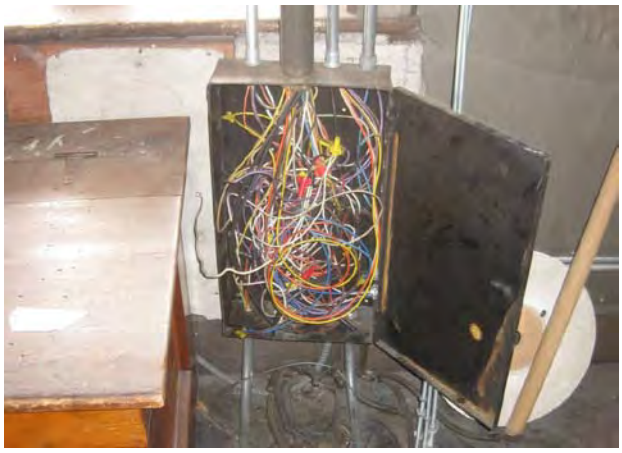
Second Service Panel – 100 Amp, 120-208 Volt, Single-Phase

There is a second panel in the boiler room. This panel is a 20 circuit, 100 amp, single-phase panel with a 100 amp main circuit breaker. It appears this panel may be tapped into the main as a feed-through which effectively increases the service size capacity entering the building to something closer to 300 amps. This panel is also fully loaded with no spare circuits available.

The sub-panel on the second floor is a 12 circuit, 120-208 volt, single-phase panel and is currently fully loaded with circuit breakers although many of the noted uses in the panel legend are not currently being used in this area.

As the building has been updated electrically, abandoned fuse boxes have been reused as pull and junction boxes for the new wiring. While this is common practice when upgrading an old wiring system, the wiring in this case seems to have been accomplished a bit chaotically and an opportunity to label circuit wiring at these boxes was not done. This would have facilitated any future repair or renovation work since circuits would have been identified making it much easier to make modifications.

Main Service Panel – 200 Amp, 120-208 Volt, Three Phase



Re-Purposed Fuse Box on Fourth Floor

The wiring in the building has generally been upgraded and seems to be typically modern type thermoplastic covered conductors pulled in conduit. Conduit is typically concealed except in the boiler room, crawlspace, attic and fourth floor. The fourth floor currently functions for general storage so this could be an acceptable installation. If the fourth floor is to be upgraded into tour space or restored in any fashion, this surface conduit would need to be removed and lighting and receptacles would need to be fed from the attic above.

Most if not all receptacles are grounded, making this installation reasonably safe for the building and staff. Lighting is varied ranging from decorative chandeliers and fixtures on the second and third floor tour spaces to fluorescent strip fixtures in areas yet to be renovated. In the fourth floor areas lighting is typically exposed incandescent.

The panels are probably the items that need the most work in order to maintain a safe and functional system. These panels are maxed out with circuit breakers and in some cases appear to be overloaded –

although the actual electric load may not be over the panel capacity depending on how the circuits are being used. The issue is mainly that it could be overloaded under certain circumstances so this condition should be corrected. We also feel that better labeling and identification of circuits at pull boxes and other areas of access will better facilitate future work.

There is a supervised fire alarm system installed throughout the building with smoke and heat detectors mounted in most, if not all areas. These detectors are connected to a Fire Alarm Panel (Simplex 4006 Series). Smoke detectors in the system look to be a mixture of new and older models. Since detectors have a useful life of between five and ten years, many of these detectors have likely reached the end of their useful life.


Fire Alarm Panel

Smoke Detector

**Assessment Methodology for Mechanical Systems and Building Envelope**

The mechanical system assessment is driven by the need to understand the type of system installed, how it operates, and how it actually performs with regard to the environmental needs of the structure and collections. We look to identify system deficiencies for opportunities to improve performance and system efficiency and also to reduce the risk of damage to the building or collections due to direct failures of the mechanical systems such as fluid leaks or indirect failures such as poor controls which increase infiltration losses at the flue. We also look for understanding of how the existing system might be altered, improved or replaced, in order to attain (or approximate) the ultimate goal environmental conditions. We are paying special attention to energy efficient options in regards to system improvements in order to help reduce the cost to operate the facility as well as provide an example of a sustainable approach to environmental management within a historic structure.

Environmental management is a holistic issue, so the status of the building envelope is of high importance to evaluation of the mechanical systems. The building itself in its simplest form can be described as a three-dimensional network of interconnecting areas – not only rooms connected by hallways and stairwells, but also rooms connected to chases and joist cavities connected to crawlspaces and attics connected to chimneys and utility shafts, etc. These interconnections allow environmental conditions that exist in one area of a building to be transported to other areas via differences in building pressures, building temperatures, and vapor pressures. Better understanding of the envelope construction and deficiencies helps to inform our understanding of likely areas of concern as they relate to environmental management. We are then in a stronger position to know how a new mechanical system might benefit the building and how it might be installed.

- Factors such as the type of window, wall, roof, and basement construction can heavily influence the thermal loading of a building.
- The presence of thermal insulation can influence the potential thermal load by reducing the heat gain and heat loss through the structure. However, if this insulation is an add-on feature and has not been installed properly taking into account the water vapor diffusion and dew point temperature, other unintended, undesirable consequences can result such as condensation within the building structure, biological growth, and building fabric and collection deterioration.
- Bulk water infiltration potential must be looked at closely as this issue can result in severe structural damage as well as have serious implications for maintaining a controlled environment.
- Points of potential air infiltration are always looked at closely as well. Untreated exterior air infiltrating into a building is not only a draft noticeable by building occupants and an additional thermal load for the mechanical system but also poses the risk of causing structural damage and biological growth issues due to the water vapor transport that also occurs when the air is introduced. Dust, dirt and pollutants are brought into the structure without the benefit of filtering which can then be deposited on the building structure and collections causing unsightliness and potential collections deterioration.
- Shafts such as chimneys and mechanical flues can contribute to air infiltration issues due to the buoyancy effect of warm air rising. While a necessary element of most structures, control of these openings when not in use is of interest.

**Envelope and Systems Improvement Discussion & Recommendations**

<u>General:</u>

In this section we will discuss the various envelope and mechanical/electrical system improvements we feel are required in order to:

- Correct any health and safety deficiencies discovered during our assessment
- Correct any general deficiencies discovered during our assessment

- Improve the operating efficiencies of the building and systems
- Enhance the environmental conditions of the house to facilitate an improved environment for the building structure, any historical collections, staff and guests visiting the building

Envelope - Discussion & Recommendations

As a matter of good practice we recommend that all reasonable measures be made to provide a better thermal envelope and to reduce water and air infiltration to a minimum. This process will reduce the HVAC system capacity requirements, reduce unwanted drafts, and decrease the possibility of biological growth and deterioration of building fabric and collections contained in the building or archival storage spaces.

This building has had limited window and façade restoration. The condition of the window sashes and frames in many locations is quite poor and is contributing to excessive infiltration. Some window repair work is recommended in order to improve their condition and function. We recommend that at a minimum the operable sashes be fitted with improved weather-stripping to reduce the amount of outside unconditioned air that leaks through them into the interior space. While other improvements such as new storm windows would certainly provide even better performance, we do not necessarily feel this level of intervention is required in order to achieve satisfactory results. We also would not recommend replacement of the existing window unless the entire original material was destroyed, and we did not note any windows with this level of deterioration.

Similar to the windows, all exterior doors should be evaluated for air and water infiltration and suitable remediation should occur such as improved weather-stripping and door gaskets.

Wall insulation is not a viable option given the masonry construction, but since the roof and attic are uninsulated, a new insulation system at the roof joist level would greatly improve the building thermal performance, reduce infiltration at the roof level, and improve operating conditions for the mechanical systems that may be located in the attic. We recommend application of insulation to the underside of the roof deck between the roof joists in order to capture the volume of the attic into the conditioned volume of the building. This is important since any new equipment or systems locate into this space would be subject to severe temperature extremes if the insulation were placed at the attic floor level. While a spray foam system applied directly to the underside of the roof deck would provide the best thermal and infiltration control, this system sticks to the surface to which it is applied and so is therefore not easily removed without damaging the underlying surface. Since this is a historic structure we would not want to apply a non-reversible system. A rigid foam board system applied between the roof joists would be more effective and durable than fiberglass batt insulation and at the same time will be a reversible installation. This insulation must be carefully introduced into the building system to ensure that moisture trapped within the building or building materials can migrate out of the building.

Proposed Mechanical/Electrical Systems Improvements – Description, Discussion & Recommendation

The plumbing systems in this building are in aging but essentially functional condition. The recommended improvements are as follows:

- While the water heater is very old, if it is still operational there is no need to replace it until it has failed although there may be some benefit to do this in conjunction with other broader system improvements.
    - The tank water heater is electric, so assuming the replacement heater also uses electric as the source there is no improved efficiency in operation.
    - Since the unit is located in the boiler room, if the tanks should fail and start to leak water would be directed to the local drain in the boiler room, so it is reasonable to assume no major damage would result from this failure.
    - There are other possible sources for heating the domestic hot water:
        - Installation of a natural gas water heater would allow for reduced operating costs but would require a flue or horizontal flue gas discharge through the exterior wall of the boiler room which complicate our desire to simply the utility area on the side of the boiler room exterior wall.
        - Installation of local on-demand water heaters at each plumbing fixture would have the advantage of eliminating stand-by tank thermal losses and would reduce the time needed to get hot water to each fixture thus lessening water use and improving function for the staff and guests. This solution would require the addition of an electric circuit for each heater added as well as the cost of the on-demand heater. The heaters would also need to be concealed below the fixture served.
    - We recommend replacing the existing water heater with a new water heater once the existing water heater has failed and no longer operates.
- Domestic water piping is in functional condition but will deteriorate over time due to galvanic corrosion at connections of dis-similar metals and also inside the galvanized pipe due to the effect of oxygenated water.
    - We recommend the installation of di-electric couplings or di-electric unions at the junction of steel and copper pipes to eliminate galvanic corrosion.
    - We recommend replacing water piping when in sections leaks occur or when the performance of the water flow through the pipes reaches an unacceptable level. New cold and hot water piping should be insulated to conserve energy and eliminate condensation.
- Sanitary and vent piping is typically cast iron or PVC which are both extremely durable materials. Unless a leak occurs, we have no recommendation for these systems. In the event of a leak, then the pipe should be repaired or replaced as needed.
- Plumbing fixtures are in working order and should be maintained through standard maintenance practices, repairing p-traps, toilet fill systems and faucets on an as needed basis.

The electrical systems are marginally adequate if no new HVAC system is added to the building although there are areas where improvements could be made to enhance safety, and facilitate future work. These items should be attended to regardless of improvements that may be required with a new HVAC system. If a new HVAC system is added then a new electric service will also be required. The work that is recommended or required is as follows:

- All existing panels are either fully loaded or in some cases overloaded with multiple split circuit breakers resulting in a lack of any spare circuit breaker capacity.
    - We recommend that a new 30 circuit, 100 amp, three-phase sub-panel be added to the main service panel and all split-type 20 amp circuit breakers be removed and these circuits shifted to the new panel. This panel's 3-pole circuit breaker in the existing service panel can be installed in place of the 60 amp circuit breaker currently unused.
        - This corrective action would not necessarily be needed if a new larger service is installed. See discussion below for how this work could be avoided in that case.
- We recommend that all existing abandoned panel boxes that are currently functioning as junction or pull boxes should have circuits traced and labeled. This improvement would serve to facilitate any future work related to the electric distribution system as well as improving safety for anyone having to access these boxes.
- We noted in our survey of the crawlspace, fourth floor and attic that there were many instances of missing covers for junction and pull boxes. This is a code violation and a potential safety issue that should be corrected.
    - We recommend that a comprehensive effort be undertaken to identify and correct all instances of open or uncovered electrical junction or pull boxes throughout the building including the attic, crawlspace and fourth floor.
- We recommend that the fire alarm system be reviewed and any obsolete detectors should be replaced on an as needed basis.
- Depending on the direction determined for the HVAC system, a new larger electric service may be required.
    - For any broad air conditioning of the Mansion, a new 400 amp, 120-208 volt, three-phase underground service would be recommended.
    - This work will require a new 400 amp main distribution panel from which existing panels will be sub-fed.
        - At that time we would recommend cleaning up the existing panels so that they do not contain any split breakers. Ideally a few spare circuit breakers would also be made available in order to facilitate future expansion. Even after adding circuit breakers for the new HVAC system, additional circuit breaker spaces should be available in the new main distribution panel so it is likely that no other sub-panels would be needed.

The mechanical system improvements need to focus on the creation of a system that can better manage interior temperatures year round to provide a better indoor climate for staff, guests and more importantly, better control of interior humidity levels in a narrower band than is currently achieved to improve the climate for the historic materials and any sensitive collections.

There are several factors that enter into the discussion of adding a new HVAC system for this building: What are the achievable environmental goals for this building, what are the planned uses of the building, and is there a desire or need to maintain the existing radiation system in the building.

**Environmental Management Goals – Discussion**

When evaluating the environmental management goals best suited for this building and building fabric and the type of HVAC system likely to achieve them, we turn to the ASHRAE Applications Handbook, Chapter 21 Museums, Libraries, and Archives. Per Table 4 (Figure 1 below), Classification of the Climate Control Potential in Buildings, this building can be classified as between: Class III - Uninsulated masonry, framed and sided walls, single glazed windows; and Class IV - Heavy masonry with plaster walls, heavy walls, tight construction, and storm windows. While these don't exactly describe this building, they seem to closely approximate it better than the other class descriptions. The typical level of climate control we would expect to achieve in this building is partial control, with a basic HVAC system.



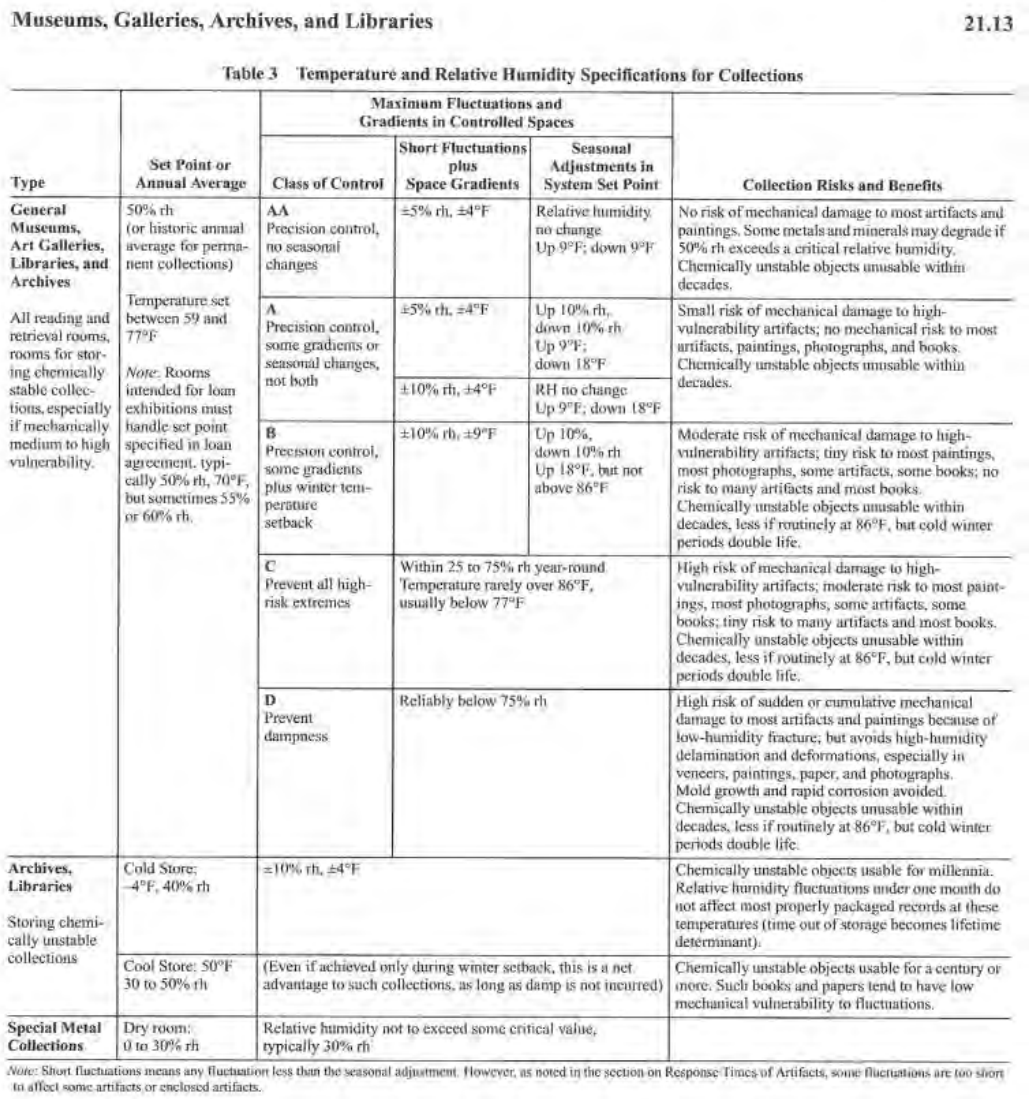
Table 4 Classification of Climate Control Potential in Buildings

| Category of Control | Building Class | Typical Building Construction | Typical Type of Building | Typical Building Use | System Used | Practical Limit of Climate Control | Class of Control Possible |
|---|---|---|---|---|---|---|---|
| Uncontrolled | I | Open structure | Privy, stocks, bridge, sawmill, well | No occupancy, open to viewers all year. | No system. | None | D (if benign climate) |
| | II | Sheathed post and beam | Cabins, barns, sheds, silos, icehouse | No occupancy. Special event access. | Exhaust fans, open windows, supply fans, attic venting. No heat. | Ventilation | C (if benign climate)<br>D (unless damp climate) |
| Partial control | III | Uninsulated masonry, framed and sided walls, single-glazed windows | Boat, train, lighthouse, rough frame house, forge | Summer tour use. Closed to public in winter. No occupancy. | Low-level heat, summer exhaust ventilation, humidistatic heating for winter control. | Heating, ventilating | C (if benign climate)<br>D (unless hot, damp climate) |
| | IV | Heavy masonry or composite walls with plaster. Tight construction; storm windows | Finished house, church, meeting house, store, inn, some office buildings | Staff in isolated rooms, gift shop. Walk-through visitors only. Limited occupancy. No winter use. | Ducted low-level heat. Summer cooling, on/off control, DX cooling, some humidification. Reheat capability. | Basic HVAC | B (if benign climate)<br>C (if mild winter)<br>D |
| Climate controlled | V | Insulated structures, double glazing, vapor retardant, double doors | Purpose-built museums, research libraries, galleries, exhibits, storage rooms | Education groups. Good open public facility. Unlimited occupancy. | Ducted heat, cooling, reheat, and humidification with control dead band. | Climate control, often with seasonal drift | AA (if mild winters)<br>A<br>B |
| | VI | Metal wall construction, interior rooms with sealed walls and controlled occupancy | Vaults, storage rooms, cases | No occupancy. Access by appointment. | Special heating, cooling, and humidity control with precision constant stability control. | Special constant environments | AA<br>A<br>Cool<br>Cold<br>Dry |

*Source*: Adapted from Conrad (1995).

Figure 1 – ASHRAE Chapter 21 Museums, Galleries, Archives and Libraries, Table 4

Looking at Table 3 in Chapter 21 (Figure 2 below), we see that typical levels of control achievable in a basic HVAC system are listed as Class B, C & D. Typically we would want to limit the extreme temperature and humidity swings and do our best to control the rate of change when possible.



Museums, Galleries, Archives, and Libraries 21.13

Table 3 Temperature and Relative Humidity Specifications for Collections

| Type | Set Point or Annual Average | Maximum Fluctuations and Gradients in Controlled Spaces: Class of Control | Short Fluctuations plus Space Gradients | Seasonal Adjustments in System Set Point | Collection Risks and Benefits |
|---|---|---|---|---|---|
| **General Museums, Art Galleries, Libraries, and Archives**<br><br>All reading and retrieval rooms, rooms for storing chemically stable collections, especially if mechanically medium to high vulnerability. | 50% rh (or historic annual average for permanent collections)<br><br>Temperature set between 59 and 77°F<br><br>*Note:* Rooms intended for loan exhibitions must handle set point specified in loan agreement, typically 50% rh, 70°F, but sometimes 55% or 60% rh. | **AA**<br>Precision control, no seasonal changes | ±5% rh, ±4°F | Relative humidity no change<br>Up 9°F; down 9°F | No risk of mechanical damage to most artifacts and paintings. Some metals and minerals may degrade if 50% rh exceeds a critical relative humidity. Chemically unstable objects unusable within decades. |
| | | **A**<br>Precision control, some gradients or seasonal changes, not both | ±5% rh, ±4°F | Up 10% rh, down 10% rh<br>Up 9°F; down 18°F | Small risk of mechanical damage to high-vulnerability artifacts; no mechanical risk to most artifacts, paintings, photographs, and books. Chemically unstable objects unusable within decades. |
| | | | ±10% rh, ±4°F | RH no change<br>Up 9°F; down 18°F | |
| | | **B**<br>Precision control, some gradients plus winter temperature setback | ±10% rh, ±9°F | Up 10%, down 10% rh<br>Up 18°F, but not above 86°F | Moderate risk of mechanical damage to high-vulnerability artifacts; tiny risk to most paintings, most photographs, some artifacts, some books; no risk to many artifacts and most books. Chemically unstable objects unusable within decades, less if routinely at 86°F, but cold winter periods double life. |
| | | **C**<br>Prevent all high-risk extremes | Within 25 to 75% rh year-round. Temperature rarely over 86°F, usually below 77°F | | High risk of mechanical damage to high-vulnerability artifacts; moderate risk to most paintings, most photographs, some artifacts, some books; tiny risk to many artifacts and most books. Chemically unstable objects unusable within decades, less if routinely at 86°F, but cold winter periods double life. |
| | | **D**<br>Prevent dampness | Reliably below 75% rh | | High risk of sudden or cumulative mechanical damage to most artifacts and paintings because of low-humidity fracture, but avoids high-humidity delamination and deformations, especially in veneers, paintings, paper, and photographs. Mold growth and rapid corrosion avoided. Chemically unstable objects unusable within decades, less if routinely at 86°F, but cold winter periods double life. |
| **Archives, Libraries**<br><br>Storing chemically unstable collections | Cold Store: −4°F, 40% rh | ±10% rh, ±4°F | | | Chemically unstable objects usable for millennia. Relative humidity fluctuations under one month do not affect most properly packaged records at these temperatures (time out of storage becomes lifetime determinant). |
| | Cool Store: 50°F 30 to 50% rh | (Even if achieved only during winter setback, this is a net advantage to such collections, as long as damp is not incurred) | | | Chemically unstable objects usable for a century or more. Such books and papers tend to have low mechanical vulnerability to fluctuations. |
| **Special Metal Collections** | Dry room: 0 to 30% rh | Relative humidity not to exceed some critical value, typically 30% rh | | | |

*Note:* Short fluctuations means any fluctuation less than the seasonal adjustment. However, as noted in the section on Response Times of Artifacts, some fluctuations are too short to affect some artifacts or enclosed artifacts.

Figure 2 – ASHRAE Chapter 21 Museums, Galleries, Archives and Libraries, Table 3

Class B control looks to achieve a **seasonal** maximum ±10% RH and +18°F up in temperature, but not exceeding 86°F, and down in temperature as required to maintain RH, and provide tolerably warm temperature levels for staff and guests. Short fluctuations **(daily)** in a Class B control scheme would provide for a ±10% RH and ±9°F.

As the building currently exists, Class B control will be difficult to achieve in many areas of the building. The main challenge is represented by the uninsulated masonry construction and single-paned glass, which are unlikely to be changed. Additionally, less than optimal infiltration control make tight humidity control a very difficult proposition.

Class C control looks to prevent all high-risk extremes by controlling relative humidity within 25 to 75% year-round with temperatures rarely exceeding 86°F and usually below 77°F. This level of control seems more feasible and reasonable given the building construction, climate, and general uses of the building although we believe some effort should be made to push the system control closer to Class B in order to better preserve the building fabric and any sensitive artifacts.

Whether or not to eliminate the existing radiators is a multi-faceted question.

- If there is a restoration goal to return the interior of the Mansion to a condition consistent with a pre-1886 time period before the radiators were installed, then a strong argument can be made to remove these radiators and install a less intrusive modern replacement system.
- A reasonable argument can also be made that these radiators have been installed for 125 years of the 150 year history of the building, so they have a place in any restoration effort where their presence can be interpreted as non-original but historic none the less.
- Last, a question of whether the radiators serve a unique function within the maintenance of the building environment.

The first two questions have more to do with recommendations made by the architect and the goals of Reddick Mansion Association although I believe the last questions should weigh heavily into that decision.

Radiator heat is commonly installed at the perimeter of a building near the window and door openings, which indeed is the case at the Reddick Mansion. This was done historically because these openings are often drafty due to air leakage around the interface between the frame and the masonry. There is another positive effect of this historic location for the radiant heat however that was probably just a happy coincidence: window and door openings often allow moisture into the structure of the building which these radiators help to dry out. The benefit to the drying effect is that any moisture that gets into the structure will quickly dry out. Building materials do not inherently have any issue getting wet then dry again, but degrade relatively quickly if allowed to get wet and stay wet for an extended period of time. So this drying effect is indeed a unique function of the hot radiator that is very difficult if not impossible to recreate with a forced air system.

Therefore, it is our recommendation that the existing radiators be retained and operational, not only for their unique design and longevity within the historic structure, but also to serve the same function in any new system as they currently serve: the improved drying of the building materials to assist in their long term preservation.

Maintaining of the radiators in a building does not always mean maintaining the source of heat which in this case is steam. Many radiators are adaptable to being converted to hot water as the source, which would typically be provided through a pumped two-pipe distribution system. Unfortunately it does not seem that the wrought-tube radiator design lends itself to a hot water conversion so in the case of the Reddick Mansion radiators, maintaining the historic radiators as we are suggesting means that a steam

distribution system must also be maintained. The steam piping system could either remain as currently installed to minimize the cost of construction or it could be replaced to provide for better zoning of the building as well as improvements in the layout on the first floor finished spaces.

The best alternative piping distribution system for the steam radiator system would be a downfeed system. In this piping layout, a large steam riser would be routed up to the attic where it would be routed around the perimeter of the building and branch pipes would drop at each radiator group to serve the radiators below. The condensate would then flow from the one-pipe radiators and be pushed by the steam flowing down to be collected in the crawlspace by a new condensate piping system. This layout would have the benefit of eliminating or minimizing the piping that would be required at the ceiling of the first floor. There would be some alteration of the piping that currently feeds the radiators but this would be relatively minor. The main riser from the boiler to the attic would have to be installed, but given the areas in the northwest quadrant of the building have largely been altered already; it would see an easy task to find an inconspicuous location make this vertical rise.

There is a desire on the part of the Reddick Mansion Association to add air conditioning to the building in an effort to improve the environment for the long term maintenance of the collections and building fabric, and also for the comfort of the staff and guests to the building. In order to be more effective in simultaneously maintaining the temperature and relative humidity of the interior space and come reasonably close to achieving a Class B level of control, a system capable of simultaneous cooling and heating must be installed. If however the intention is to primarily control for human comfort (i.e., temperature set point on the thermostat) and reap whatever benefits result in humidity control which is more akin to a Class C level of control, then a system capable of cooling only, or non-simultaneous cooling and heating, could be installed.

There are many possible system choices that could be considered to achieve the desired environmental management goals, some of which achieve tighter control through all seasons and some which achieve primarily comfort control with some ancillary control of relative humidity. For the purposes of this report we are limiting this discussion to systems that provide exceptional energy efficient operation, cost effective installations, or that strike an excellent balance between operational cost and installation cost.

One system that we are not including in this discussion that we know has been considered by the Reddick Mansion Association is the small duct, high velocity system. These systems are commonly used in existing buildings where it is challenging to get reasonable air distribution. After reviewing the building we feel that a traditional sheet metal system installation is entirely feasible and will provide a more cost effective installation. Additionally, the standard system can be more flexible in zoning, sizing, and configuration than a small duct, high velocity system.

**Air Distribution:**

In all cases we will consider, in order to achieve a reasonable level of air distribution and zoning, we recommend that we use the boiler room to locate air handlers that will serve the first and second floors using ducts routed at the first floor ceiling, and the attic to locate air handlers that will serve the third and fourth floors. One of the additional benefits of maintaining the radiators for heating is that we don't have to worry about perfect air distribution to keep the out walls warm, which is virtually impossible in a historic structure assuming we are trying to minimize the aesthetic effect of the system on the building.

For the lower floors, ductwork would be routed from the boiler room as tight to the ceiling as possible. Ideally we would use multiple systems to achieve broad zone and operational control, with additional zoning created within a system as needed with zone dampers. Given the space use and layout, I would see four zones minimum on these two floors: first floor – east & west, and second floor – east & west.

For the upper floors, the main duct would be routed in the attic and would serve the fourth floor directly with ceiling mounted air devices fed from zoned branch ducts above. The third floor would be served from the attic duct mains using closets on the fourth floor to get to the fourth floor, floor level where we will use the north-south oriented floor joists to get to appropriate locations to serve spaces on the third floor, preferably into closets so we can use sidewall air devices and avoid the decorative plaster ceilings. A similar zoning strategy to the lower level systems could be employed here as well although the attic does afford more opportunity for zoning since there is generous space for ductwork and systems.

**Cooling (& Heating) Systems**:

All systems under consideration can provide both heating and cooling, although some of these systems can be cooling only in order to reduce installation costs. A cooling only system will rely solely on the existing steam radiant system, in one form or the other, to heat the building. The major benefit of this system choice is eliminating the need for providing a local heat source at the system air handling unit thus reducing installation cost. The major disadvantage of this system is the limited ability to control area temperature while also controlling space relative humidity.

A system capable of heating and cooling where we plan to use the system to simultaneously control space temperature and relative humidity must be configured to cool the air down first to remove moisture from the air then be able to be reheated in case the space temperature satisfies before space humidity. This reheat process keeps the space from getting overcooled as we try to remove more humidity. The major benefit of this system choice is the improved environmental control. The major disadvantages of this approach are usually increased installation cost and sometimes increased operating costs depending on the system.

We are not considering any gas-fired furnace options in this report. This type of unit would require finding a location for a flue discharge for each and every air handling unit. That issue coupled with the

idea of installing gas-fired equipment throughout the building makes this an unacceptable alternative for this historic building. We are also not considering steam coils or a steam to hot water heat exchanger since the decreased efficiency and cost of installation do not make this a reasonable approach to create the desired heating source. Lastly, we are not considering direct electric duct heaters due to the high cost of operation.

Heat sources being considered for the air handlers are hot water produced by local high efficient boilers, which would only require one flue discharge for the boiler room units and another for the attic units, but which would be capable of serving multiple air handlers, and heat pumps which do not require any open flame.

For consistency, the alternative numbering below is provided to be consistent with the numbering in the energy model presented at the end of this report.

**Alternative 1 – This represents the existing systems installed in the building**

**Alternative 2 – Standard Split Type Air Conditioning Unit with Air Cooled Condensing Unit:**

- This system uses an air handling unit to blow air across a coil to produce the cooling effect. In order to fit through the existing building openings, relatively small blower coil units would deliver air to main ducts which would be routed out from the air handling unit as described in the air distribution section above. The cooling coil would be connected to a remote condensing unit with a refrigerant line set. This condensing unit would be typically grade mounted and could be located either locally near the building or at a suitable remote location that could be appropriately concealed. Remotely locating the equipment will add cost to the installation. Winter time humidification would be provided by a duct mounted humidifier. A control system would be provided to sense the zone temperature and humidity and adjust the equipment operation as needed.
- If it is desired to provide for simultaneous temperature and summer humidity control (de-humidification) as discussed above, then a hot water heating coil would be required after the cooling coil to provide this function. Hot water would be provided from a small high efficient boiler mounted either in the attic or in the boiler room.
    - Advantages:
        - Increased control of the space relative humidity without sacrificing control of the space temperature.
    - Disadvantages:
        - Increased cost to install due to adding local boiler plant, hot water pump and piping, and more sophisticated controls.
        - Increased cost to operate due to sometimes needing to use new energy to cool and dehumidify the air then use more new energy to reheat the air to control temperature.

- Finding a reasonable location for the remote condensing units where the noise and aesthetic will not be an issue. Remotely locating these units will add considerable installation costs and will add somewhat to the operational costs.

**Alternative 3 – Standard Split Type Heat Pump Unit with Air Cooled Heat Pump Unit:**

- If that level of simultaneous heating and cooling is not required, then a standard air-cooled split type heat pump unit can be installed. In heat pump operation, a reversing valve in the refrigerant circuit switches to allow the same coil to be used for heating as was used for cooling. The air cooled heat pump is not generally capable of simultaneous control of temperature and humidity. This system uses an air handling unit to blow air across a coil to produce the cooling or cooling effect depending on the season. In order to fit through the existing building openings, relatively small blower coil units would deliver air to main ducts which would be routed out from the air handling unit as described in the air distribution section above. The coil would be connected to a remote heat pump unit with a refrigerant line set. This heat pump unit would be typically grade mounted and could be located either locally near the building or at a suitable remote location that could be appropriately concealed. Remotely locating the equipment will add cost to the installation. Winter time humidification would be provided by a duct mounted humidifier. A control system would be provided to sense the zone temperature and humidity and adjust the equipment operation as needed.

    - Advantages:
        - Decreased installation cost when compared to Alternative 2 due to no requirement for a local boiler plant, hot water pump and piping, and more sophisticated controls.
        - Decreased operating costs when compared to Alternative 2 because there is never any simultaneous operation of both heating and cooling equipment.
    - Disadvantages:
        - Decreased control of the space relative humidity – especially in the shoulder seasons (spring and fall).
        - Finding a reasonable location for the remote condensing units where the noise and aesthetic will not be an issue. Remotely locating these units will add considerable installation costs and will add somewhat to the operational costs.

**Alternative 4 – Ground-Source Heat Pump (GSHP) Unit:**

- This system uses an air handling unit to blow air across a coil to produce the cooling, heating or reheat effect depending on the season and zone set point. This air handling unit is one part of a self-contained water cooled heat pump unit. This system will allow for simultaneous control of temperature and humidity without the added energy consumption of traditional reheat systems since heat that would normally be rejected is instead redirected into the supply air stream as required to allow for dehumidification without over-cooling the space. In order to fit through the existing building openings, relatively small heat pump units would deliver air to main ducts

which would be routed out from the air handling unit as described in the air distribution section above. The heat pumps would be served by a new insulated piping system routed through the building from the basement. A variable speed pump would minimize circulation of this fluid to an as needed basis further reducing energy consumption. Winter time humidification would be provided by a duct mounted humidifier. A control system would be provided to sense the zone temperature and humidity and adjust the equipment operation as needed.

- In order to achieve the maximum efficiency of operation and eliminate the need for exterior equipment, we propose that the interior piping be connected to an exterior below grade ground-loop heat exchanger, creating a closed loop ground-source heat pump (GSHP) system. The loop heat exchanger could be installed in the existing yard area next to and behind the Mansion in a deep vertical arrangement.
- GSHP systems achieve the highest level of overall system energy efficiency available at the present time primarily due to the very stable earth temperature. The system exchanges energy with this stable temperature earth mass – rejecting heat in the summer and absorbing heat in the winter. The work of the refrigerant, compressor and heat exchangers then translates this energy transfer into a cooling effect or a heating effect, within the building air handling units. System efficiencies twice that of conventional gas-fired heating and electric cooling systems are very achievable.
- An added bonus in a GSHP system is the free domestic water heating that takes place when the system is operating in cooling mode and the very inexpensive hot water production when in heating mode. Supplemental water heaters are still required since there is no heat output when the GSHP system is not conditioning the building, but there are significant savings available whenever the system is running.

    - Advantages:
        - Increased control of the space relative humidity without sacrificing control of the space temperature.
        - Decreased operating costs when compared to Alternative 2 and 3 due to higher efficiencies and there is never any simultaneous operation of both heating and cooling equipment in order to provide reheat.
        - Since there is no visible equipment or materials outside the building there is no noise or aesthetic concern with this installation.
        - No need for any new gas-fired equipment in the building.
        - Decreased cost for domestic hot water production than Alternate 2 and 3.
        - Decreased cost to maintain since there is less equipment and no outside equipment.
        - Longer life expectancy of equipment.
    - Disadvantages:
        - Increased cost to install due to loop field installation. Note - This will be a modest cost increase when compared to Alternative 2 which includes new boilers and hot water heating components. This cost increase is mitigated over time due to decreased cost to operate.

Building and System Energy Study Discussion

As part of this report we have performed a thermal load analysis of the building envelope and HVAC systems as they currently exist, comparing our model operational costs to previous utility bills in order to validate model accuracy.

With a valid thermal building and system model in place (represented as Alternate 1), we then created three alternate new HVAC systems, where in each of them we changed the envelope to represent the building with roof insulation and decreased infiltration due to improvements to the windows and doors. The alternate HVAC systems represent the three alternate systems discussed in this report: Alternate 2: Standard Air Conditioning System with Reheat; Alternate 3: Standard Air Conditioning System, No Reheat; and Alternate 4: a GSHP system with Reheat. This allows us to compare operational costs across the existing and proposed system.

CAVEAT: One very important point is to note that the current building is not fully air conditioned, and no attempt is currently made to simultaneously control the building for temperature and humidity. This is important because both of these control strategies cause an increase in energy consumption, particularly in conventional systems.

For the existing building, without any thermal improvements, our thermal load analysis predicted a 29.6 ton cooling load and a 404 Mbh heating load.

The cooling number stands alone as there is no comprehensive cooling system in the building, although it is roughly equivalent to the existing system capacity if we assume the 7.5 ton demolished HVAC unit for the first floor represents what the load would be on each floor giving us a total of approximately 30 tons under that scenario. The heating load predicted is somewhat lower than the total capacity of the boiler, but this is expected as most installed mechanical systems exceed the thermal load of the building in order to insure adequate output on severe weather days.

When we modeled the building with the recommended thermal insulation at the roof and reductions in infiltration due to weather-stripping at the windows and doors, we see about a 10% to 20% reduction in the system capacity required even after we added forced ventilation into the first floor conference room spaces – which we would recommend and would likely be required by code.

Instead of introducing the lighting and receptacle loads into the building thermal envelope, we instead introduced them as a metered electrical consumption. This allowed us to roughly equate the metered totals on the respective gas and electric bills to the estimated output of our model.

The results were quite close and consistent with what we would expect. We unfortunately did not have a full year including all months for gas or electric, but our monthly usage tracked reasonably close and our estimated annual totals were also reasonably close.

Our **Alternative 1** is the model of the existing system including the gas fired steam boiler, window air conditioning units and 3$^{rd}$ floor furnace and air conditioner (although we assumed the steam radiators provided the heat to this 3$^{rd}$ floor area). Utility rates have been taken from the RMA actual utility bills.

Our **Alternative 2** models a standard air conditioning system with hot water reheat as previously described. This type of unit is capable of simultaneous control of temperature and relative humidity (assumed at a maximum 60%). New humidifiers have also been assumed for winter humidification to recommended levels (35%). Utility rates have been taken from the RMA actual utility bills.

Our **Alternative 3** models a standard air conditioning system without reheat as previously described. This type of unit is capable of control of temperature. New humidifiers have also been assumed for winter humidification to recommended levels (35%). Utility rates have been taken from the RMA actual utility bills.

Our **Alternative 4** models a ground-source heat pump (GSHP) system throughout the building. This type of system is capable of simultaneous control of temperature and humidity (assumed at a maximum 60%), through the use of hot gas reheat. In a normal system, this feature is a penalty energy-wise, but in the GSHP system we are using waste heat that would otherwise be rejected into the ground-loop heat exchanger. New humidifiers are assumed for winter humidification to recommended levels (35%). Utility rates have been taken from the RMA actual utility bills.

Our findings are consistent with our expectations and experience with GSHP systems when compared to conventional HVAC systems.

Our energy model predicts that the GSHP system will operate for about the same cost as the current system ($9,000/year) despite the fact that the current system has almost no cooling and does not control for humidity at all.

When compared to a standard air conditioning system with reheat, we see an annual savings using the GSHP system of about $2,500.00.

When compared to a standard air conditioning system without reheat capability, we see an annual savings of about $2,000.00 when using the GSHP system.

What are not included in these savings estimates are the reduced cost of annual maintenance and the longer life expectancy of the GSHP system over the conventional systems. Additionally, the intangible savings are also not monetarily accounted for. These include no visible of noisy equipment on the grounds, the reduction in CO2 and other greenhouse gases, and the reduced energy footprint of the building which has an energy consumption of about 1/3 what the current building system is consuming.

This energy study is quite typical of the results we have found when comparing these types of systems. The GSHP system, without any benefit of tax credits or incentives, and using the current very low natural gas costs, consistently produces enough differential savings to offer a simple payback of about 7 to 10 years depending on the final design. If grants or other incentive programs can be accessed, this payback will obviously be reduced even further. The GSHP also offers a reduction in energy consumption over time that will help stabilize the monthly expenses of the Mansions, reduce the carbon footprint, and help set an example of how a historic property can contribute to improvements in our local and global environment, and still be a cost effective solution.

# Appendices

Appendix 1 – Energy Study – Energy Cost Budget/PRM Summary

# Energy Cost Budget / PRM Summary

By ARCHITECTURAL CONSULTING ENGINEERS

| Project Name: Reddick Mansion | Date: July 01, 2013 |
|---|---|
| City: Ottawa, IL | Weather Data: Rockford, Illinois |

Note: The percentage displayed for the "Proposed/ Base %" column of the base case is actually the percentage of the total energy consumption.

* Denotes the base alternative for the ECB study.

| | | * Alt-1 Existing | | | Alt-2 AC with Reheat - Roof Insu | | | Alt-3 AC No Reheat - Roof Insul- | | | Alt-4 GSHP with Reheat - Roof I | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Energy 10^6 Btu/yr | Proposed / Base % | Peak kBtuh | Energy 10^6 Btu/yr | Proposed / Base % | Peak kBtuh | Energy 10^6 Btu/yr | Proposed / Base % | Peak kBtuh | Energy 10^6 Btu/yr | Proposed / Base % | Peak kBtuh |
| **Lighting - Conditioned** | Electricity | 108.0 | 13 | 42 | 108.0 | 100 | 42 | 108.0 | 100 | 42 | 108.0 | 100 | 42 |
| **Space Heating** | Electricity | 15.8 | 2 | 3 | 29.3 | 185 | 4 | 20.2 | 127 | 3 | 92.7 | 585 | 87 |
| | Gas | 652.6 | 80 | 428 | 538.6 | 83 | 582 | 513.5 | 79 | 506 | 4.4 | 1 | 50 |
| **Space Cooling** | Electricity | 17.3 | 2 | 33 | 57.3 | 331 | 114 | 55.5 | 321 | 113 | 19.5 | 112 | 17 |
| **Pumps** | Electricity | 0.0 | 0 | 0 | 0.0 | 0 | 0 | 0.0 | 0 | 0 | 21.7 | 0 | 3 |
| **Heat Rejection** | Electricity | 2.3 | 0 | 4 | 7.7 | 332 | 14 | 7.5 | 322 | 14 | 0.0 | 0 | 0 |
| **Fans - Conditioned** | Electricity | 21.0 | 3 | 7 | 57.5 | 273 | 12 | 57.7 | 274 | 12 | 57.7 | 274 | 12 |
| **Total Building Consumption** | | **817.1** | | | **798.3** | | | **762.4** | | | **303.9** | | |

| | | * Alt-1 Existing | Alt-2 AC with Reheat - Roof Insu | Alt-3 AC No Reheat - Roof Insul | Alt-4 GSHP with Reheat - Roof I |
|---|---|---|---|---|---|
| **Total** | **Number of hours heating load not met** | | | | |
| | **Number of hours cooling load not m** | | | | |

| | * Alt-1 Existing | | Alt-2 AC with Reheat - Roof Insu | | Alt-3 AC No Reheat - Roof Insul | | Alt-4 GSHP with Reheat - Roof I | |
|---|---|---|---|---|---|---|---|---|
| | Energy 10^6 Btu/yr | Cost/yr $/yr | Energy 10^6 Btu/yr | Cost/yr $/yr | Energy 10^6 Btu/yr | Cost/yr $/yr | Energy 10^6 Btu/yr | Cost/yr $/yr |
| **Electricity** | 164.5 | 4,820 | 259.7 | 7,609 | 248.9 | 7,292 | 299.6 | 8,777 |
| **Gas** | 652.6 | 4,242 | 538.6 | 3,501 | 513.5 | 3,338 | 4.4 | 28 |
| **Total** | **817** | **9,062** | **798** | **11,110** | **762** | **10,630** | **304** | **8,806** |


# LIMITED PRE-RENOVATION ASBESTOS SURVEY REPORT

## THE REDDICK MANSION
## 100 WEST LAFAYETTE STREET
## OTTAWA, IL 61350

**Cardno ATC Project Number 11.44726.0001 (11001)**

**Prepared for:**

Mrs. Diane Sanders
President
Reddick Mansion Association
100 West Lafayette Street
Ottawa, IL 61350

**Submitted Through:**

Ms. Anna T. Sullivan AIA
Sullivan Preservation
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June 17, 2013

June 17, 2013

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**Submitted Through:**

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3520 North Lakeshore Drive, 4N
Chicago, IL 60657
ASullivan@SullivanPreservation.com

**Re: Limited Pre-Renovation Asbestos Survey Report**
**Reddick Mansion**
**100 West Lafayette Street, Ottawa, IL 61350**
Cardno ATC Project Number 11.44726.0001 (11001)

Dear Mrs. Sanders:

In accordance with Cardno ATC Proposal Number 11-2013-0098R1, dated May 20, 2013, Cardno ATC is pleased to submit the attached Limited Pre-Renovation Asbestos Survey Report for the above-referenced site. This report includes the procedures and methodologies followed, analytical laboratory results, and applicable conclusions and recommendations.

Cardno ATC appreciates the opportunity to perform these services for the Reddick Mansion Association and we look forward to working with you in the future. In the meantime if you have questions or comments regarding the information in this report or if we can be of further assistance please do not hesitate to contact the Cardno ATC Oakbrook Terrace, Illinois office at (630) 916-7272.

Sincerely,
**Cardno ATC**

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**LIMITED PRE-RENVOATION ASBESTOS SURVEY REPORT**
Reddick Mansion
100 West Lafayette Street
Ottawa, IL 61350
ATC Project Number 11.44726.0001 (11001)

## 1.0 PURPOSE AND SCOPE OF SERVICES

The purpose of this project was to conduct a Limited Pre-Renovation Asbestos Survey of building materials that will be impacted by the planned renovations at the Reddick Mansion located at 100 West Lafayette in Ottawa, Illinois, hereinafter referred to as the site. The survey was conducted in general accordance with Cardno ATC written Proposal Number 11-2013-0098R1, dated May 20, 2013.

The following activities were conducted:

- Assess the suspect Asbestos Containing Building Materials (ACBMs) within the accessible planned renovation areas of the building. Destructive investigation was not conducted.
- Assess the present condition and quantify identified assessable ACBMs.

## 2.0 GENERAL SITE CONDITIONS

The Reddick Mansion located at 100 West Lafayette Street in Ottawa, Illinois is a historic landmark constructed before the civil war. The mansion consists of four (4) levels. The mansion is constructed of brick with a pitched roof and is approximately 14,000 square feet in size.

The interior walls consisted of painted plaster. The ceilings consisted of plaster. The floors consisted of tacked-down and glued carpet, 9’’x 9’’ vinyl floor tile, 12’’x 12’’ vinyl floor tile, cork flooring, vinyl sheet flooring, hardwood, plywood, and concrete. The heating system consisted of a boiler located in the basement which supplied radiators on the floors above. Cardno ATC observed the majority of the heating system piping to be un-insulated. However, asbestos-containing insulation and mudded fittings were observed to be present in the boiler room and lower level area. Representative photographs are included in Appendix C.

## 3.0 REGULATORY STANDARDS

### 3.1 Asbestos Regulations

The Occupational Safety and Health Administration (OSHA) and the United States Environmental Protection Agency (USEPA) regulate airborne levels of asbestos fibers. These governmental agencies have promulgated standards for permissible airborne concentrations of asbestos fibers and specific requirements for repair and abatement. The laws are designed to protect the worker (OSHA) and the general environment (USEPA). In addition, each state may have adopted its own requirements, which may be more stringent than those called for by OSHA or the USEPA.

OSHA established an asbestos general industry standard in 1971, primarily directed toward industrial applications (29 CFR 1910.1001). In response to the growing asbestos abatement industry and the additional concern regarding asbestos exposure, a standard for the construction industry (29 CFR 1926.58) became effective on July 21, 1986. These standards specifically outline asbestos removal procedures, respirator selection and fit testing, air sampling, the analysis of asbestos air samples, and employee protection from exposure to airborne asbestos fibers. The standards include a time-weighted average (TWA) permissible exposure limit (PEL) of 0.2 fibers per cubic centimeter of air (f/cc), and a short-term excursion limit of 1.0 f/cc. Concentrations above these levels require specific employer-initiated activities such as instituting a respiratory protection program and medical surveillance for exposed employees.

OSHA changed these standards in October of 1994 to include the reduction of the PEL for an 8-hour TWA to 0.1 f/cc in its revised construction industry standard of 29 CFR 1926.1101 and the revised general industry standard 29 CFR 1910.1001. These revisions also specify that building owners are now required to communicate to employees, subcontractors, and tenants the location and quantity of asbestos-containing materials (ACBMs) identified in this survey.

The USEPA has also published a "visible emissions" standard under the National Emission Standard for Hazardous Air Pollutants (NESHAP, 40 CFR 61.140). The standard also regulates specific procedures for notification for renovation and demolition projects, and land disposal of ACBMs.

Local regulations pertaining to asbestos abatement in Ottawa, Illinois include LaSalle County ordinances, the Illinois Environmental Protection Agency (IEPA) NESHAP, and the IDPH Subpart D – *General Abatement Requirements for Commercial and Public Buildings* guidelines. An IDPH-licensed asbestos inspector is required to perform the inspection to verify materials affected by the renovation or demolition. Affected materials must be abated prior to the initiation of renovation/demolition activities by an IDPH-licensed abatement contractor utilizing the proper engineering controls. Notification to the IDPH and IEPA is required prior to demolition and prior to renovation when friable ACBMs and Category I and Category II non-friable ACBMs (are removed in friable state) in excess of 160 square feet or 260 linear feet are to be abated. The IDPH and IEPA must be notified at least ten working days in advance of performing asbestos abatement. The IDPH must be notified at least two working days in advance of performing asbestos abatement when friable and non-friable ACBMs in excess of three square feet or three linear feet and up to 160 square feet or 260 linear feet.

## 4.0 LIMITED ASBESTOS-CONTAINING MATERIAL SURVEY

On June 5, 2013, Cardno ATC representative Mr. Andrew Nilson, Illinois Department of Public Health (IDPH)-licensed asbestos building inspector (IDPH asbestos license #100-08668), conducted the survey of the Reddick Mansion. Inspector accreditations are provided in Appendix B.

The mansion was visually inspected for the presence of building materials that are suspected to contain asbestos. Bulk samples of identified suspect ACBMs were collected and placed into individual containers for transport to a National Voluntary Lab Accreditation Program (NVLAP)/American Industrial Hygiene Association (AIHA)-accredited laboratory for analysis. Materials visibly identified as non-asbestos (fibrous glass, foam rubber, wood, etc.) were not sampled. The asbestos survey consisted of three basic procedures: 1) conducting a visual inspection of the structure; 2) identifying homogeneous areas (HAs) of suspect surfacing, thermal system insulation, and miscellaneous materials; and 3) sampling accessible, friable and non-friable suspect materials, which were planned for impact during proposed renovation work.

### 4.1 Homogeneous Areas (HAs)

Prior to collecting any samples, HAs were identified and listed to develop a sampling strategy. A homogeneous sampling area can be described as one or more areas of material that are similar in appearance and texture and that have the same installation date and function. The actual number of samples collected from each homogeneous sampling area may vary, based on the type of material and the professional judgment of the inspector.

### 4.2 Hazard Assessment Factors

From the list of suspect homogeneous materials, a physical assessment was performed for each material on the list. A physical assessment includes evaluating the condition, assessing

the potential for disturbance, and determining the friability of each material. Friability is a term used to describe the ease in which a building material inherently lends itself to disturbance. By definition, "friable" materials are those that can be crumbled or reduced to powder by hand pressure when dry. Each material on the list was further classified into one of three categories, which have specific sampling requirements for each category.

- Surfacing Materials: Refers to spray-applied or troweled surfaces such as plaster ceilings and walls, fireproofing, textured paints, textured plasters, and spray-applied acoustical surfaces.
- Thermal System Insulation: Refers to insulation used to inhibit heat gain or loss on pipes, boilers, tanks, ducts, and various other building components.
- Miscellaneous Materials: Refers to friable and non-friable products and materials that do not fit in any of the above two categories such as resilient floor covering, baseboards, mastics, adhesives, roofing material, caulking, glazing, and siding. This category also contains wallboard and ceiling tile.

All confirmed ACBMs were then assessed by their condition as good (intact/undamaged), fair (damaged), or poor (significantly damaged) per Title 40 Code of Federal Regulations Part 763. Material with localized significant damage was also assessed as poor when observed.

### 4.3 Sampling Strategy

The asbestos inspection was conducted in general accordance with the USEPA NESHAP requirements. Sample collection depends on the category that the HA falls into and the amount of material present, as follows:

| AHERA GUIDELINES FOR DETERMINING THE NUMBER OF SAMPLES TO TAKE | | |
|---|---|---|
| **HA CATEGORY** | **HA SIZE** | **SAMPLES REQUIRED** |
| Surfacing Materials | <1,000 SF | 3 |
| | 1,000-5,000 SF | 5 |
| | >5,000 SF | 7 |
| Thermal System Insulation | No Stipulation | 3 |
| Miscellaneous Materials | No Stipulation | Per AHERA, these materials must be sampled "in a manner sufficient to determine whether or not they contain asbestos" typically 3 samples based upon inspector judgment. |

If the analytical results indicated that all the samples collected per HA did not contain asbestos, then the HA (material) would be considered a non-ACBM. However, if the analytical results of one or more of the samples collected per HA indicate that asbestos is present in quantities of greater than 1 percent asbestos by weight (as defined by EPA), all of the HA (material) would be treated as an ACBM regardless of any other analytical results. Material, which can visually be determined to be non-asbestos (i.e., fibrous glass, foam rubber, etc.) by the accredited inspector are not required to be sampled.

Miscellaneous materials require adequately representative sampling, which is typically done by collecting from three samples per material. Inspectors typically rely on other survey observations such as the condition, friability, and quantity of material to determine what would be a sufficient amount of samples to accurately evaluate the presence or absence of asbestos content.

Actual collection of a bulk asbestos sample involves physically removing a small piece of material and placing it in a marked, airtight container. Sample containers are marked with a unique identification number, which is also noted in the field notes.

## 4.4 Suspect Asbestos-Containing Material

A total of fifty-five (55) bulk asbestos samples were collected and submitted to the laboratory for analysis by Polarized Light Microscopy (PLM). A summary of identified, accessible suspect, **confirmed ACBMs** is presented in the following Table 1:

**TABLE 1: BULK SAMPLING RESULTS**
**Reddick Mansion**
**100 West Lafayette Street, Ottawa, IL**
**Samples Collected on June 5, 2013**

| Material (Classification) | Location of Material | Condition | Friable Yes/No | Quantity (NESHAP Category) | Asbestos Content by PLM Analysis |
|---|---|---|---|---|---|
| Window Glazing Compound (M) | Exterior Windows | Poor | No | N/A | ND |
| Window Caulk (M) | Exterior Windows | Poor | No | N/A | ND |
| **Pipe Insulation (T)** | **Ground Level** | **Good** | **Yes** | **10 l.f. (RACM)** | **1-5% Chrysotile 5-10% Amosite** |
| **Pipe Insulation (T)** | **Boiler Room** | **Poor** | **Yes** | **60 l.f. (RACM)** | **5-10% Chrysotile** |
| **Pipe Fitting Insulation (T)** | **Boiler Room** | **Poor** | **Yes** | **3 l.f. (RACM)** | **5-10% Chrysotile** |
| Yellow Carpet Glue (M) | Ground Level | Good | No | N/A | ND |
| Plaster (S) | Throughout | Good | No | N/A | ND |
| Tar Paper (M) | Under Plywood on the Ground Level | Good | No | N/A | ND |
| **Exterior Door Caulk (M)** | **Exterior** | **Good** | **No** | **Approx. 300 lf (Cat. I)** | **1–5 % Chrysotile** |
| Brick Coating (M) | Exterior | Fair | No | N/A | ND |
| **9''x 9'' Green Floor Tile (M) and Associated Black Mastic (M)** | **Second Floor (Under Carpet on a Wood Substrate)** | **Good** | **No** | **Approx. 1,900 s.f. (Cat. I)** | **Tile-5-10% Chrysotile Mastic-ND** |

| TABLE 1: BULK SAMPLING RESULTS<br>Reddick Mansion<br>100 West Lafayette Street, Ottawa, IL<br>Samples Collected on June 5, 2013 | | | | | |
|---|---|---|---|---|---|
| **Material (Classification)** | **Location of Material** | **Condition** | **Friable Yes/No** | **Quantity (NESHAP Category)** | **Asbestos Content by PLM Analysis** |
| Yellow Glue and Black Mastic Mix (M) | Second Floor (Under Carpet on a Wood Substrate) | Good | No | N/A | ND |
| Cork Flooring with Canvas Backing (M) | Third Floor (Nailed Down) | Poor | Yes | N/A | ND |
| Brown Stair Tread (M) | Stairwell Third Floor (Nailed Down) | Good | No | N/A | ND |
| Black Stair Tread (M) | Third Floor Landing (Nailed Down) | Good | No | N/A | ND |
| **Cement-Like Board (M)** | **Stockpiled on 3rd Floor and In Boiler Room** | **Good** | **No** | **Approx. 200 s.f. (Cat. I)** | **20-25% Chrysotile** |
| **12''x 12'' White Floor Tile (M)** | **2nd Floor Restroom Top Layer (9''x 9'' Green Floor Tile Beneath)** | **Good** | **No** | **25 s.f. (Cat. I)** | **PACM*** |
| **6'' Maroon Baseboard (M) and Associated Glue (M)** | **2nd Floor Hallway** | **Good** | **No** | **10 l.f. (Cat. I)** | **PACM*** |
| **Wall Panel Glue (M)** | **Ground Floor-Kitchen Backsplash and Surround** | **Good** | **No** | **200 s.f. (Cat. I)** | **PACM*** |
| **Brown Square Pattern Sheet Flooring (M)** | **Ground Floor Kitchen and Restrooms** | **Good** | **No** | **500 s.f. (Cat. I)** | **PACM*** |
| **Roof Field (M)** | **Exterior Roof and Landing Areas** | **Good** | **No** | **4,000 s.f. (Cat. I)** | **PACM*** |
| **Roof Flashing (M)** | **Exterior Roof and Landing Areas** | **Good** | **No** | **1,000 s.f. (Cat. I)** | **PACM*** |

| TABLE 1: BULK SAMPLING RESULTS<br>Reddick Mansion<br>100 West Lafayette Street, Ottawa, IL<br>Samples Collected on June 5, 2013 | | | | | |
|---|---|---|---|---|---|
| **Material (Classification)** | **Location of Material** | **Condition** | **Friable Yes/No** | **Quantity (NESHAP Category)** | **Asbestos Content by PLM Analysis** |
| **Decorative Plaster (S)** | **Ceilings and Crown Molding- Floors 1 and 2** | **Good** | **No** | **1,500 s.f. (RACM)** | **PACM*** |
| **Drywall (M)** | **3rd Floor Ceiling (No Tape or Joint Compound)** | **Good** | **No** | **100 s.f. (RACM)** | **PACM*** |
| s.f. = square feet, l.f.= linear feet, ND = Non Detected, N/A= Not Applicable, M= Miscellaneous, S= Surfacing, RACM = Regulated Asbestos Containing Material, PACM* = Presumed Asbestos Containing Material, Not Sampled In Order To Avoid Damage To The Material Due to the Materials Aesthetic Appearance, Location , Reported Newer Installation Date, and/or Functional Integrity as per client directive. | | | | | |

Samples of suspect materials that were accessible but not planned for any proposed renovation activities was not conducted at the direction of client representative.

Cardno ATC's inspector did not conduct a destructive investigation within the building. Hence, additional suspect asbestos containing materials may be present in areas not surveyed, inaccessible, concealed spaces (such as subsurface/below grade cavities, spaces between wall/ceiling/floor/door cavities, bathroom/plumbing wet chases, suspect electrical wiring/panel systems, inside mechanical system components, etc.). If maintenance, renovation or demolition activities make these above noted areas or equipment accessible, or if the accessible suspect ACBMs that were not sampled during this limited sampling event are planned for future impact, Cardno ATC recommends that an assessment of these spaces/materials be conducted at that time by accredited personnel to identify and confirm the presence or absence of additional ACBMs by bulk sampling and laboratory analysis. Until then, all such unidentified materials should be treated as Presumed Asbestos Containing Materials (PACM) in accordance with 29 CFR 1926.1101 and 1910.1001.

## 4.5 Laboratory Analytical Results

The bulk samples collected during this survey were analyzed by Stat Analysis Corporation (STAT) located in Chicago, Illinois. STAT is accredited under the National Institute of Standards and Technology's (NIST) National Voluntary Laboratory Accreditation Program (NVLAP) number 101202-0. The bulk samples were analyzed by Polarized Light Microscopy (PLM).

Any material that contains greater than 1 percent asbestos by PLM is considered an ACBM and must be handled according OSHA, EPA, and applicable state and local regulations. Copies of the laboratory analytical report and corresponding chain-of-custody are included in Appendix A. Results are reported in percent asbestos by volume and indicate the types of asbestos. Other common non-asbestos components may also be noted on the analytical reports. Laboratory accreditations are provided in Appendix B.

For Friable materials, when the amount of asbestos in the sample material is reported as "None-Detected" by PLM analysis, no further verification of the sample results by Point Counting Methodology is recommended. For friable materials, when the amount of asbestos in the sample material is reported at less than 10 percent by PLM analysis, the client may either assume the amount to be greater than 1 percent and treat the material as an asbestos containing material or require further verification of the amount by Point Counting Method to prevent the possibility of "False-Positives" reported by PLM and avoid unnecessary abatement work.

For non-friable organically bound (NOB) materials such as vinyl/asphaltic floor tiles, floor sheeting, roofing materials etc., where small, thin asbestos fibers have been milled into the binder matrix, when the amount of asbestos in the sample material is reported as "Non-Detected" by PLM analysis, due to the difficulty in analyzing such small, thin asbestos fibers in resinously bound materials by PLM analysis, EPA/IDPH recommend that these

types of materials, which were reported as non-ACBMs by PLM, be analyzed using and Transmission electron microscopy (TEM) analysis.

## 5.0 RECOMMENDATIONS

### 5.1 Asbestos Recommendations

The results of the limited survey conducted on June 5, 2013, of the Reddick Mansion located at 100 West Lafayette Street in Ottawa, Illinois, indicate that there are confirmed ACBMs, PACMs, and possibly concealed suspect ACBMs in the building. The following recommendations are applicable:

The known and suspect ACBMs/PACMs should be maintained under a written Asbestos O&M plan by appropriately trained personnel until maintenance, renovation and/or demolition needs require their removal or if their condition deteriorates. Contractors and employees working in this building should be made aware of the locations of the known ACBMs/PACMs and of the possibility that concealed ACBMs may be found during maintenance, renovation and demolition. They should be advised not to disturb known or suspect ACBMs without owner approval.

Additional suspect asbestos containing materials may be present on site in areas not included in the planned renovation work or in inaccessible or concealed spaces (such as subsurface/below grade cavities, spaces between wall/ceiling/floor/door cavities, bathroom/plumbing wet chases, suspect electrical wiring/panel systems, inside mechanical system components, etc.). If maintenance, renovation or demolition activities make these above noted areas or equipment accessible, or if the accessible suspect ACBMs that were not sampled during this limited sampling event are planned for future impact, Cardno ATC recommends that an assessment of these spaces/materials be conducted at that time by accredited personnel to identify and confirm the presence or absence of additional ACBMs by bulk sampling and laboratory analysis. Until then, all such unidentified materials should be treated as PACM in accordance with 29 CFR 1926.1101 and 1910.1001.

ACBMs which may be impacted by the planned renovation activities must be abated prior to the initiation of renovation/demolition activities by an IDPH-licensed abatement contractor in accordance with USEPA, IDPH, OSHA and local county requirements.

The manufacture and import of miscellaneous ACBMs, such as vinyl floorings, mastics, drywall and roofing materials which may contain asbestos have not been prohibited by the EPA. As a result, any future replacement materials should be checked for the presence of asbestos prior to installation. Replacement materials may be checked for the presence of asbestos by referring to product labels, Material Safety Data Sheets (MSDS) and by bulk sampling/ lab analysis.

## 6.0 ASSUMPTIONS AND LIMITATIONS

The results, findings, conclusions, and recommendations expressed in the report are based only on conditions that were noted during Cardno ATC's limited non-destructive survey of the Reddick Mansion located at 100 West Lafayette Street in Ottawa, Illinois.

Cardno ATC selection of sample locations and frequency of sampling was based on Cardno ATC observations and the assumption that like materials in the same area are homogeneous in content. Cardno ATC did not conduct a destructive investigation as part of this survey. Hence, additional suspect ACBMs may be present on site in inaccessible or concealed spaces (such as subsurface/below grade cavities, spaces between wall/ceiling/floor/door cavities, bathroom/plumbing wet chases, suspect electrical wiring/panel systems, inside mechanical system components, etc.). that were not investigated in this non-destructive investigation. Reasonable effort is made by Cardno ATC personnel to locate and sample materials representative of the site structure. However, for any facility, the existence of unique or concealed materials or debris not observed by Cardno ATC is a possibility. Cardno ATC does not warrant, guarantee or profess to have the ability to locate or identify all concealed hazardous materials at the facility.

The report is designed to aid the Reddick Mansion Association in understanding the extent of such issues as they pertain to the management of such materials during renovation. **Under <u>no</u> circumstances is the report to be utilized as a bidding document or as a project specification document since it does not have all the components required to serve as Project Design document or an Abatement Workplan.**

Our professional services have been performed, our findings obtained, and our conclusions and recommendations prepared in accordance with customary principles and practices in the fields of environmental science and engineering. This statement is in lieu of other statements either expressed or implied. This report does not warrant against future operations or conditions, nor does it warrant against operations or conditions present of a type or at a location not investigated.

# APPENDIX A

# LABORATORY ANALYTICAL RESULTS

**STAT Analysis Corporation**
*2242 West Harrison St., Suite 200, Chicago, IL 60612-3766*
*Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com*

NVLAP®
NVLAP Lab Code 101202-0

# ASBESTOS ANALYSIS BY POLARIZED LIGHT MICROSCOPY

Method: EPA-600/M4-82-020

Cardno ATC
1815 S. Meyers Road, Suite 670
Oakbrook Terrace, IL 60181
Phone: (630) 916-7272
Fax: (630) 916-7013

| | | | |
|---|---|---|---|
| Reference: | 11.44726.0001 | Date Received: | 06/10/2013 |
| Location: | 100 West Lafayette, Ottawa, IL | Date Analyzed: | 06/14/2013 |
| Batch No.: | 307218 | Date Reported: | 06/14/2013 |
| Customer No.: | 125 | Turn Around Time: | 5 Days |

| Laboratory Sample | Customer Sample Number | Asbestos Components (%) | Non-Asbestos Components (%) |
|---|---|---|---|
| 307218001 | 605-01 | ND | Binder 99-100% |
| 307218002 | 605-02 | ND | Binder 99-100% |
| 307218003 | 605-03 | ND | Binder 99-100% |
| 307218004 | 605-04 | ND | Binder 99-100% |
| 307218005 | 605-05 | ND | Binder 99-100% |
| 307218006 | 605-06 | ND | Binder 99-100% |
| 307218007 | 605-07 | Chrysotile 1-5%<br>Amosite 5-10% | Binder 85-90% |
| 307218008 | 605-08 | Chrysotile 1-5%<br>Amosite 5-10% | Binder 85-90% |
| 307218009 | 605-09 | Chrysotile 1-5%<br>Amosite 5-10% | Binder 85-90% |
| 307218010 | 605-10 | Chrysotile 5-10% | Binder 90-95% |
| 307218011 | 605-11 | Chrysotile 5-10% | Binder 90-95% |
| 307218012 | 605-12 | Chrysotile 5-10% | Binder 90-95% |
| 307218013 | 605-13 | Chrysotile 5-10% | Binder 90-95% |
| 307218014 | 605-14 | Chrysotile 5-10% | Binder 90-95% |
| 307218015 | 605-15 | Chrysotile 5-10% | Binder 90-95% |
| 307218016 | 605-16 | ND | Binder 99-100% |

ND = Asbestos Not Detected (Not Present) NA = Not Analyzed NS = Not Submitted

Components of inhomogeneous samples are analyzed per our Standard Operating Procedure, or per customer request.

The use of the NVLAP logo does not imply endorsement by NVLAP or any agency of the US Government.



Analyzed by Name: Henry Robateau / Microscopist



Date: 06/14/2013

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Reference: 11.44726.0001
Location: 100 West Lafayette, Ottawa, IL
Batch No.: 307218
Customer No.: 125

Date Received: 06/10/2013
Date Analyzed: 06/14/2013
Date Reported: 06/14/2013
Turn Around Time: 5 Days

| Laboratory Sample | Customer Sample Number | Asbestos Components (%) | Non-Asbestos Components (%) |
|---|---|---|---|
| 307218017 | 605-17 | ND | Binder 99-100% |
| 307218018 | 605-18 | ND | Binder 99-100% |
| 307218019 | 605-19 | ND | Binder 90-95%<br>Other 5-10% |
| 307218020 | 605-20 | ND | Binder 90-95%<br>Other 5-10% |
| 307218021 | 605-21 | ND | Binder 90-95%<br>Other 5-10% |
| 307218022 | 605-22 | ND | Binder 90-95%<br>Other 5-10% |
| 307218023 | 605-23 | ND | Binder 90-95%<br>Other 5-10% |
| 307218024 | 605-24 | ND | Binder 90-95%<br>Other 5-10% |
| 307218025 | 605-25 | ND | Binder 90-95%<br>Other 5-10% |
| 307218026 | 605-26 | ND | Cellulose 80-85%<br>Binder 15-20% |
| 307218027 | 605-27 | ND | Cellulose 80-85%<br>Binder 15-20% |

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Analyzed by Name: Henry Robateau / Microscopist



Date: 06/14/2013

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Phone: (630) 916-7272
Fax: (630) 916-7013

Reference: 11.44726.0001
Location: 100 West Lafayette, Ottawa, IL
Batch No.: 307218
Customer No.: 125

Date Received: 06/10/2013
Date Analyzed: 06/14/2013
Date Reported: 06/14/2013
Turn Around Time: 5 Days

| Laboratory Sample | Customer Sample Number | Asbestos Components (%) | Non-Asbestos Components (%) |
|---|---|---|---|
| 307218028 | 605-28 | ND | Cellulose 80-85%<br>Binder 15-20% |
| 307218029 | 605-29 | Chrysotile 1-5% | Binder 95-99% |
| 307218030 | 605-30 | Chrysotile 1-5% | Binder 95-99% |
| 307218031 | 605-31 | Chrysotile 1-5% | Binder 95-99% |
| 307218032 | 605-32 | ND | Binder 90-95%<br>Other 5-10% |
| 307218033 | 605-33 | ND | Binder 90-95%<br>Other 5-10% |
| 307218034 | 605-34 | ND | Binder 90-95%<br>Other 5-10% |
| 307218035 | 605-35 | Chrysotile 5-10% | Binder 90-95% |
| 307218036 | 605-36M | ND | Binder 99-100% |
| 307218037 | 605-37 | Chrysotile 5-10% | Binder 90-95% |
| 307218038 | 605-38M | ND | Binder 99-100% |
| 307218039 | 605-39 | Chrysotile 5-10% | Binder 90-95% |
| 307218040 | 605-40M | ND | Binder 99-100% |
| 307218041 | 605-41 | ND | Binder 99-100% |
| 307218042 | 605-42 | ND | Binder 99-100% |

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Components of inhomogeneous samples are analyzed per our Standard Operating Procedure, or per customer request.

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Analyzed by Name: Henry Robateau / Microscopist



Date: 06/14/2013

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|---|---|---|---|
| Reference: | 11.44726.0001 | Date Received: | 06/10/2013 |
| Location: | 100 West Lafayette, Ottawa, IL | Date Analyzed: | 06/14/2013 |
| Batch No.: | 307218 | Date Reported: | 06/14/2013 |
| Customer No.: | 125 | Turn Around Time: | 5 Days |

| Laboratory Sample | Customer Sample Number | Asbestos Components (%) | Non-Asbestos Components (%) |
|---|---|---|---|
| 307218043 | 605-43 | ND | Binder 99-100% |
| 307218044 | 605-44 | ND | Cellulose 80-85%<br>Binder 15-20% |
| 307218045 | 605-45 | ND | Cellulose 80-85%<br>Binder 15-20% |
| 307218046 | 605-46 | ND | Cellulose 80-85%<br>Binder 15-20% |
| 307218047 | 605-47 | ND | Cellulose 80-85%<br>Binder 15-20% |
| 307218048 | 605-48 | ND | Cellulose 80-85%<br>Binder 15-20% |
| 307218049 | 605-49 | ND | Cellulose 80-85%<br>Binder 15-20% |
| 307218050 | 605-50 | ND | Binder 99-100% |
| 307218051 | 605-51 | ND | Binder 99-100% |
| 307218052 | 605-52 | ND | Binder 99-100% |
| 307218053 | 605-53 | Chrysotile 20-25% | Binder 75-80% |
| 307218054 | 605-54 | Chrysotile 20-25% | Binder 75-80% |
| 307218055 | 605-55 | Chrysotile 20-25% | Binder 75-80% |

ND = Asbestos Not Detected (Not Present) NA = Not Analyzed NS = Not Submitted

Components of inhomogeneous samples are analyzed per our Standard Operating Procedure, or per customer request.

The use of the NVLAP logo does not imply endorsement by NVLAP or any agency of the US Government.



Analyzed by Name: Henry Robateau / Microscopist Date: 06/14/2013

# Polarized Light Microscopy Sample Record and Chain of Custody 307218

| | | | | | |
|---|---|---|---|---|---|
| **Project Name:** | Reddick Mansion | **Project No.:** | 11.44726.0001 | **Page** | 1 Of 3 |
| **Project Address:** | 100 West Lafayette, Ottawa, IL | **Inspector Name:** | A. Nilson | **Date:** | 06/05/13 |

| Sample # | Type | HA | Material Description | Sample and Material Location | Quantity | Condition | Asbestos Content |
|---|---|---|---|---|---|---|---|
| 605-01<br>-02<br>-03 | Surf.<br>TSI<br>(Misc) | 1 | WINDOW GLAZING | -EXTERIOR WINDOWS<br>- GROUND<br>- 1ST<br>- 2ND | | FAIR | |
| 605-04<br>-05<br>-06 | Surf.<br>TSI<br>(Misc.) | 2 | WINDOW CAULK | ↓ | | ↓ | |
| 605-07<br>-08<br>-09 | Surf.<br>(TSI)<br>Misc. | 3 | PIPE INSULATION | GROUND FLOOR - "MAG"<br>CHECK-IN/FRONT DESK | 10 L.F. | GOOD | |
| 605-10<br>-11<br>-12 | Surf.<br>(TSI)<br>Misc. | 4 | PIPE INSULATION | BOILER ROOM PIPING<br>PAPER WRAP | 60 L.F. | POOR | |
| 605-13<br>-14<br>-15 | Surf.<br>(TSI)<br>Misc. | 5 | PIPE FITTING INSULATION | BOILER ROOM PIPING | 3 L.F. | POOR | |
| 605-16<br>-17<br>-18 | Surf.<br>TSI<br>(Misc.) | 6 | YELLOW CARPET GWE | GROUND FLOOR - OVER PLYWOOD | | GOOD | |
| 605-19<br>-20<br>-21 | (Surf.)<br>TSI<br>Misc. | 7 | PLASTER | WALLS/CEILINGS THROUGHOUT<br>- GROUND<br>- GROUND<br>- 1ST | | GOOD | |

**Relinquished by:** Andrew Nilson **Date:** 06/07/13

**Received by:** Drop Off **Date:** 6/10/13 8:30

**Send results to:** andrew.nilson@cardno.com, ~~Stop at First Positive~~

**TAT requested:** 48 hour 3 Day (5 DAY) Other: 1 Day

Cardno ATC
Shaping the Future
419 Eisenhower Lane South
Lombard, Illinois 60148
Phone: 630-916-7272
Fax: 630-916-7013

# Polarized Light Microscopy Sample Record and Chain of Custody

307218

| | | | | | |
|---|---|---|---|---|---|
| **Project Name:** | Reddick Mansion | **Project No.:** | 11.44726.0001 | **Page** | 2 Of 3 |
| **Project Address:** | 100 West Lafayette, Ottawa, IL | **Inspector Name:** | A. Nilson | **Date:** | 06/05/13 |

| Sample # | Type | HA | Material Description | Sample and Material Location | Quantity | Condition | Asbestos Content |
|---|---|---|---|---|---|---|---|
| 605-23<br>-23<br>-24<br>-25 | (Surf.)<br>TSI<br>Misc. | 7 | PLASTER | -1ST<br>-2ND<br>-2ND<br>-3RD | | GOOD | |
| 605-26<br>-27<br>-28 | Surf.<br>TSI<br>(Misc.) | 8 | TAR PAPER | UNDER PLYWOOD<br>-GROUND FLOOR | | GOOD | |
| 605-29<br>-30<br>-31 | Surf.<br>TSI<br>(Misc.) | 9 | EXTERIOR DOOR CAULK | EXTERIOR DOORS | 140 S.F. | FAIR | |
| 605-32<br>-33<br>-34 | Surf.<br>TSI<br>(Misc.) | 10 | EXTERIOR BRICK COATING | EXTERIOR | | FAIR | |
| 605-35<br>-36m<br>-37 | Surf.<br>TSI<br>(Misc.) | 11 | 9"X9" GREEN FLOOR TILE W/ BLACK MASTIC | 2ND FLOOR (UNDER CARPET) | | GOOD | |
| -38m<br>-39<br>-40m | Surf.<br>TSI<br>(Misc.) | 11 | ↓ | ↓ | | ↓ | |
| 605-41<br>-42<br>-43 | Surf.<br>TSI<br>(Misc.) | 12 | YELLOW GWE/ BLACK MASTIC MIX | 2ND FLOOR (UNDER CARPET) | | | |

**Relinquished by:** Andrew Nilson **Date:** 06/07/13

**Received by:** DropBX **Date:** 6/10/13 8:30

**Send results to:** andrew.nilson@cardno.com, ~~Stop at First Positive~~

**TAT requested:** 48 hour 3 Day (5 DAY) Other: 1 Day

Cardno ATC
Shaping the Future
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# Polarized Light Microscopy Sample Record and Chain of Custody 307218

| | | | | | |
|---|---|---|---|---|---|
| **Project Name:** | Reddick Mansion | **Project No.:** | 11.44726.0001 | **Page** | 3 Of 3 |
| **Project Address:** | 100 West Lafayette, Ottawa, IL | **Inspector Name:** | A. Nilson | **Date:** | 06/05/13 |

| Sample # | Type | HA | Material Description | Sample and Material Location | Quantity | Condition | Asbestos Content |
|---|---|---|---|---|---|---|---|
| 605-44 -45 -46 | Surf. TSI (Misc.) | 13 | CORK FLOORING W/ CANVAS BACKING | NAILED DOWN THIRD FLOOR | 300 S.F. | POOR | |
| 605-47 -48 -49 | Surf. TSI (Misc.) | 14 | BROWN WOOD-LIKE STAIR TREAD | STAIRS TO 3RD FLOOR NAILED DOWN | 30 S.F. | GOOD | |
| 605-50 -51 -52 | Surf. TSI (Misc.) | 15 | BLACK STAIR TREAD W/CANVAS BACKING | STAIRS TO 3RD FLOOR NAILED DOWN | 20 S.F. | GOOD | |
| 605-53 -54 -55 | Surf. TSI (Misc.) | 16 | TRANSITE BOARD | 3RD FLOOR - STOCKPILED GROUND FLOOR - BOILER RM | | FAIR | |
| | Surf. TSI Misc. | | | | | | |
| | Surf. TSI Misc. | | | | | | |
| | Surf. TSI Misc. | | | | | | |

**Relinquished by:** [signature] **Date:** 06/07/13

**Received by:** DropBox **Date:** 6/10/13 830

**Send results to:** andrew.nilson@cardno.com, ~~Stop at First Positive~~

**TAT requested:** 48 hour 3 Day 5 DAY Other: 1 Day

Cardno ATC
Shaping the Future
419 Eisenhower Lane South
Lombard, Illinois 60148
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Fax: 630-916-7013

# APPENDIX B

# INSPECTOR AND LABORATORY ACCREDITATIONS

Illinois Department of
PUBLIC HEALTH

Pat Quinn, Governor
LaMar Hasbrouck, MD, MPH, Director

525-535 West Jefferson Street • Springfield, Illinois 62761-0001 • www.idph.state.il.us

4/26/2013

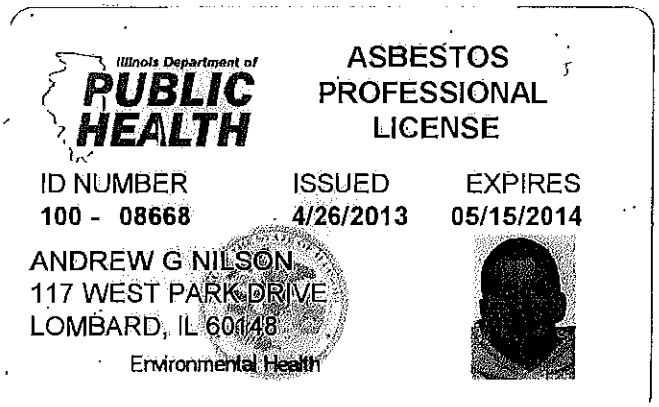
ANDREW G NILSON
117 WEST PARK DRIVE
LOMBARD, IL 60148

ASBESTOS PROFESSIONAL LICENSE ID NUMBER: 08668

Enclosed is your Asbestos Professional License that expires 05/15/2014

| | CERTIFICATE EXPIRATION DATE |
|---|---|
| INSPECTOR | 10/10/2013 |
| MANAGEMENT PLANNER | 4/23/2014 |
| PROJECT MANAGER | 11/2/2013 |
| AIR SAMPLING PROFESSIONAL | |

If you have any questions or need further assistance, contact the Asbestos Program at (217)782-3517 or fax (217)785-5897.
Our WEB address is http://www.idph.state.il.us/envhealth/ehhome.htm



# Occupational Training & Supply, Inc.

7233 Adams Street • Willowbrook, IL 60527 • (630) 655-3900

# Andy Nilson

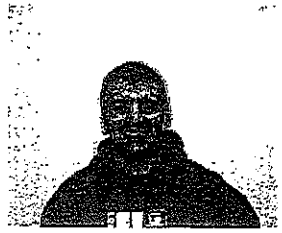
**has successfully completed the 4 hour Asbestos Building Inspector Refresher Course** and has passed the competency exam with a minimum score of 70%. This course is accredited by the **Illinois Department of Public Health** and the **Indiana Department of Environmental Management** for purposes of accreditation in accordance with EPA 40 CFR763, Asbestos Hazard Emergency Response Act (AHERA) and TSCA Title II. This training course complies with the requirements of TSCA Title II and is accredited by the state of **Wisconsin Department of Health Services** under CH.DHS159, Wisconsin Administration Code.

## *Asbestos Abatement Building Inspector Refresher*

*Certificate: BIRWI1210101793*

*Location: 12304 75th Street Kenosha, WI 53142*
*Course Date: 10/10/2012*
*Examination Date: 10/10/2012*
*Expiration Date: 10/10/2013*

*Issue Date:10/10/2012*



*Kathy DeSalvo, Director*

2012

**UNITED STATES DEPARTMENT OF COMMERCE**
**National Institute of Standards and Technology**
Gaithersburg, Maryland 20899

May 31, 2012

Dr. Lory Littlefield
HI-TEK Environmental, Inc. dba.
STAT Analysis Corporation
2242 W. Harrison
Chicago, IL 60612

NVLAP Lab Code: 101202-0

Dear Dr. Littlefield:

I am pleased to inform you that continuing accreditation for specific test methods in Bulk Asbestos Fiber Analysis (PLM) is granted to your organization under the National Voluntary Laboratory Accreditation Program (NVLAP). This accreditation is effective until June 30, 2013, provided that your organization continues to comply with accreditation requirements contained in the NVLAP Procedures.

Your Certificate of Accreditation is enclosed along with a statement of your Scope of Accreditation. You may reproduce these documents in their entirety and announce your organization's accreditation status using the NVLAP symbol and/or term in business publications, the trade press, and other business-oriented literature. Accreditation does not relieve your organization from observing and complying with any applicable existing laws and/or regulations.

We are pleased to have you participate in NVLAP and look forward to your continued association with this program. If you have any questions concerning your NVLAP accreditation, please direct them to Hazel M. Richmond, Program Manager, Laboratory Accreditation Program, National Institute of Standards and Technology, 100 Bureau Dr. Stop 2140, Gaithersburg, MD 20899-2140; (301) 975-4016.

Sincerely,

Warren R. Merkel, Chief
Laboratory Accreditation Program

Enclosure(s)

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

# Certificate of Accreditation to ISO/IEC 17025:2005

**NVLAP LAB CODE: 101202-0**

## STAT Analysis Corporation
Chicago, IL

*is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:*

## BULK ASBESTOS FIBER ANALYSIS

*This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).*

2012-07-01 through 2013-06-30
*Effective dates*

*For the National Institute of Standards and Technology*

NVLAP-01C (REV. 2009-01-28)

National Voluntary Laboratory Accreditation Program

# SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

**STAT Analysis Corporation**
STAT Analysis Corporation
2242 W. Harrison
Chicago, IL 60612
Dr. Lory Littlefield
Phone: 312-733-0551 Fax: 312-733-2386
E-Mail: LLittlefield@STATAnalysis.com
URL: http://www.STATAnalysis.com

**BULK ASBESTOS FIBER ANALYSIS (PLM)** **NVLAP LAB CODE 101202-0**

| *NVLAP Code* | *Designation / Description* |
|---|---|
| 18/A01 | EPA-600/M4-82-020: Interim Method for the Determination of Asbestos in Bulk Insulation Samples |

2012-07-01 through 2013-06-30
*Effective dates*

*For the National Institute of Standards and Technology*



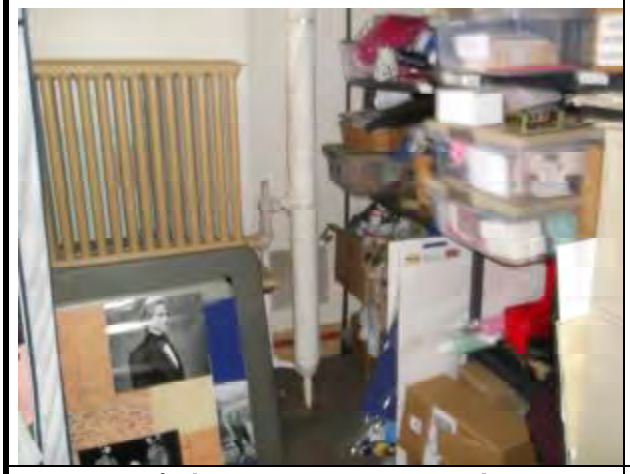
NVLAP-01S (REV. 2005-05-19)

# APPENDIX C

# REPRESENTATIVE PICTURES

1. View of the Reddick Mansion located at 100 West Lafayette Street in Ottawa, Illinois.

2. View of asbestos containing pipe insulation and fittings located in the boiler room.



3. View of asbestos containing pipe insulation located on the southwest portion of the ground floor.

4. View of asbestos containing 9''x 9'' green floor tile located under carpet throughout the east half of the second floor.

5. View of asbestos containing 9''x 9'' green floor tile located underneath 12''x 12'' white floor tile in the second floor restroom.

6. View of asbestos containing transite located on the third floor.

*Photographs taken by Andrew Nilson 6/05/13*

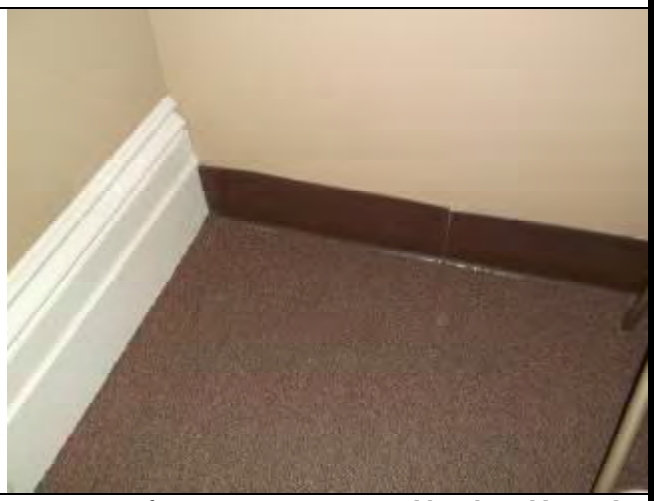
7. View of asbestos containing door caulk located on the exterior door frames.

8. View of Presumed Asbestos Containing Materials (PACM), roof field and flashing materials located on the landings and roof areas.

9. View of PACM decorative plaster located on the ceilings on the first and second floor.

10. View of PACM vinyl sheet flooring located on the ground floor.

11. View of PACM kitchen backsplash glue located on the ground floor.



12. View of PACM 6'' maroon vinyl baseboard located on the second floor.

*Photographs taken by Andrew Nilson 6/05/13*

# Cost Study

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**PRIORITY KEY**

**Maintenance & Repair: Immediate need; ongoing maintenance**
**Alternate 1: Large Scale Restoration**
**Priority 1: First year: Design fees for Construction Documents**
**Priority 2: Following year: Large scale restoration**
**Alternate 2: Phased Restoration**
**Priority 1: 6-10 years - short term (assume 5 year fundraising effort)**
**Priority 2: 11-15 years - mid-term**
**Priority 3: 15-20 years - long term**

| | | | | | | MAINTENANCE | ALTERNATE 1: LARGE SCALE RESTORATION | | ALTERNATE 2: PHASED RESTORATION | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ITEM | QUANTITY | UNIT | UNIT COST | COST SUB-TOTAL | Maintenance & Repair | PHASE 1: Plan/Design | PHASE 2: 1-5 yrs Restoration | PRIORITY 1: 6-10 yrs | PRIORITY 2: 11-15 yrs | PRIORITY 3: 15-20 yrs |
| **SITE** | | | | | | | | | | | |
| Parking Lot NW corner of site | | | | | | | | | | | |
| | Parking Lot Asphalt | 720 | sf | 7 | 5,040 | 5,040 | | | | | |
| | Striping | 154 | lf | 1 | 154 | 154 | | | | | |
| | Accessible Parking Signage | 1 | ea | 500 | 500 | 500 | | | | | |
| | Concrete Pad | 180 | sf | 25 | 4,500 | 4,500 | | | 4,500 | 4,500 | 4,500 |
| | | | | | | **10,194** | | | **4,500** | **4,500** | **4,500** |
| Various Site Improvements | | | | | | | | | | | |
| | Stain/Seal Sidewalk | 2500 | sf | 2 | 5,000 | 5,000 | | | | | |
| | Site Lighting | 4 | ea | 800 | 3,200 | 3,200 | | | | | |
| | Site Sign | 0 | 0 | 0 | 1,500 | | | | | 1,500 | |
| | Landscaping | 0 | 0 | 0 | 0 | | | | | | |
| | | | | | | **8,200** | | | **0** | **1,500** | **0** |
| Iron Fence and Retaning Wall | | | | | | | | | | | |
| | Reset Stones in Stone Wall | 5 | ea | 500 | 2,500 | | | 2,500 | 2,500 | | |
| | Clean/Paint Fence | 325 | lf | 50 | 16,250 | | | 16,250 | 16,250 | | |
| | | | | | | | | **18,750** | **18,750** | **0** | **0** |
| Brick Wall, west side of site | | | | | | | | | | | |
| | Reset Stone Cap | 10 | ea | 500 | 5,000 | | | 5,000 | 5,000 | | |
| | Tuckpoint/replace bricks | 1850 | sf | 15 | 27,750 | | | 27,750 | 27,750 | | |
| | Design Fees for restoration specs (12%) | | | | 3,500 | | 3,500 | | 3,500 | | |
| | | | | | | | **3,500** | **32,750** | **36,250** | **0** | **0** |
| Re-grade soil around Mansion perimeter | | | | | | | | | | | |
| | Re-grade to drain away from fndtn | | | | 7,000 | | | 7,000 | 7,000 | | |
| | Landscape related to regrading | | | | 3,000 | | | 3,000 | 3,000 | | |
| | Design Fees | | | | 1,200 | | 1,200 | | 1,200 | | |
| | | | | | | 0 | 1,200 | 10,000 | 11,200 | 0 | 0 |
| | | | | | **SUBTOTAL: SITE** | **18,394** | **4,700** | **61,500** | **70,700** | **6,000** | **4,500** |

| | ITEM | QUANTITY | UNIT | UNIT COST | COST SUB-TOTAL | MAINTENANCE | ALTERNATE 1: LARGE SCALE RESTORATION | | ALTERNATE 2: PHASED RESTORATION | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Maintenance & Repair | PHASE 1: Plan/Design | PHASE 2: 1-5 yrs Restoration | PRIORITY 1: 6-10 yrs | PRIORITY 2: 11-15 yrs | PRIORITY 3: 15-20 yrs |
| **MANSION EXTERIOR** | | | | | | | | | | | |
| **Foundation Repairs** | | | | | | | | | | | |
| | Dampproof exerior face of Foundation | 236 | lf | 200 | 47,200 | | | | | | 47,200 |
| | Perimeter fndtn drain and Storm Line | 150 | lf | 100 | 15,000 | | | | | | 15,000 |
| | Extend downspout leaders away from fndtn | 75 | ea | 3 | 225 | 225 | | | | | |
| | Repoint exposed interior foundation wall | | unit | | 8,500 | | | | 2 | 8,500 | |
| | Install perimeter beam for proper joist bearing | | | | 15,000 | | | | | 15,000 | |
| | Clear crawlspace, even out and install vapor barrier | | | | 10,000 | | | | | 10,000 | |
| | Architectural fees for specs/const observ (12%) | | | | 10,500 | | | | | 10,500 | |
| | | | | | | **225** | | | | **44,000** | **62,200** |
| **Masonry** | | | | | | | | | | | |
| | **Short Term** | | | | | | | | | | |
| | Remove spalling stone over S. entry door | | | | 100 | 100 | | | | | |
| | Spot repointing est 10% of exterior, misc. | | | | 5,500 | | | 5,500 | 5,500 | | |
| | Repoint joints in limestone string courses | | | | 2,000 | | | 2,000 | 2,000 | | |
| | Mortar Analysis | | | | 500 | | | 500 | 500 | | |
| | Replace spalled or missing bricks | 500 | ea | 10 | 5,000 | | | 5,000 | 5,000 | | |
| | Replace damaged stone, S. end of E. porch | | | | 2,500 | | | 2,500 | 2,500 | | |
| | Architectural fees for specs/const observ (est) | | | | 3,500 | | 3,500 | | 3,500 | | |
| | | | | | | **100** | **3,500** | **15,500** | **19,000** | | |
| | **Mid-Term** | | | | | | | | | | |
| | Remove parging and repoint Boiler Room brick | | | | 5,000 | | | 5,000 | 2 | 5,000 | |
| | Apply water repellent coat to Boiler Rm brick | | | | 3,000 | | | 3,000 | 2 | 3,000 | |
| | Readhere large spalled stone at base and patch-repair as required | 150 | lf | 100 | 15,000 | | | 15,000 | 2 | 15,000 | |
| | Architectural fees for specs/const observ (12%) | | | | 2,500 | | 2,500 | | | 2,500 | |
| | | | | | | | **2,500** | **23,000** | | **25,500** | |
| | **Long-Term** | | | | | | | | | | |
| | Repoint entire building w/ appropriate mortar | 7000 | sf | 12 | 84,000 | | | 91,000 | | | 91,000 |
| | Remove all limestone patches and repair | | | | 45,000 | | | 45,000 | | | 45,000 |
| | Tool back stone at base and install stone veneer | | | | 50,000 | | | 50,000 | | | 50,000 |
| | Architectural fees for specs/const observ (est) | | | | 20,000 | | 20,000 | | | | 20,000 |
| | | | | | | | **20,000** | **186,000** | | | **206,000** |
| **Entry Steps South Elevation** | | | | | | | | | | | |
| | **Short Term** | | | | | | | | | | |
| | Repoint exterior and interior face of knee walls | 1000 | sf | 8 | 8,000 | | | 8,000 | 8,000 | | |
| | Replace Front Steps Handrails | 40 | lf | 100 | 4,000 | | | 4,000 | 4,000 | | |
| | **Mid Term** | | | | | | | | | | |
| | monitor the condition of the steps joints | | | | 0 | | | | | | |
| | **Long Term** | | | | | | | | | | |
| | Step replacement | | allow | | 150,000 | | | 150,000 | | 150,000 | |
| | Disassemble top of knee wall | | | | | | | | | | |
| | replace steps with new cast stone steps | | | | | | | | | | |
| | reassemble knee wall and flash at copings | | | | | | | | | | |
| | Architectural fees for specs/const observ (est) | | | | 13,000 | | 13,000 | | 13,000 | | |
| | | | | | | | **13,000** | **162,000** | **25,000** | **150,000** | |
| **Roof** | | | | | | | | | | | |
| | **Mid Term** | | | | | | | | | | |
| | Metal Coping | 160 | lf | 25 | 4,000 | | | | 2 | 4,000 | |
| | | | | | | | | | | **4,000** | |
| | **Long Term** | | | | | | | | | | |
| | Replace Membrane Roof | 1575 | sf | 6 | 9,450 | | | | | | 9,450 |
| | Replace Asphalt Roof Shingles | 2150 | sf | 4 | 8,600 | | | | | | 8,600 |
| | Replace wood Decking as required | 128 | sf | 15 | 1,920 | | | | | | 1,920 |
| | Architectural fees for specs/const observ (est) | | | | 1,500 | | | | | | 1,500 |
| | | | | | | | | | | | **21,470** |

| | | | | | | MAINTENANCE | ALTERNATE 1: LARGE SCALE RESTORATION | | | ALTERNATE 2: PHASED RESTORATION | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ITEM | QUANTITY | UNIT | UNIT COST | COST SUB-TOTAL | Maintenance & Repair | PHASE 1: Plan/Design | PHASE 2: 1-5 yrs Restoration | | PRIORITY 1: 6-10 yrs | PRIORITY 2: 11-15 yrs | PRIORITY 3: 15-20 yrs |
| | | | | | | | | | | | | |
| **Cornice, Gutters, Downspouts** | | | | | | | | | | | | |
| | **Cornice** | | | | | | | | | | | |
| | Wire brush, prime, paint brackets | | | | 35,000 | | | 35,000 | 2 | 35,000 | | |
| | Prepare prime and paint all wood at cornice | | | | 10,000 | | | 10,000 | 2 | 10,000 | | |
| | Maintenance re-painting | | | | 2,500 | | | | | | 2,500 | 2,500 |
| | Architectural fees for specs/const observ (est) | | | | 5,500 | | 5,500 | | | 5,500 | | |
| | | | | | | | **5,500** | **45,000** | | **50,500** | **2,500** | **2,500** |
| | **Repairs to gutter / downspouts** | | | | | | | | | | | |
| | Galvanized Downspout | 90 | lf | 25 | 2,250 | | | 2,250 | | | 2,250 | |
| | Non-copper Gutter/Downspout Restoration | 105 | lf | 200 | 21,000 | | | 21,000 | | | 21,000 | |
| | Clear once per year | 5 | ea | 350 | 1,750 | 1,750 | | | 2 | 1,750 | 1,750 | 1,750 |
| | spot repairs as required | 1 | ea | 2500 | 2,500 | 2,500 | | | 2 | 2,500 | 2,500 | 2,500 |
| | | | | | | **4,250** | | **23,250** | | **4,250** | **27,500** | **4,250** |
| | | | | | | | | | | | | |
| **Window and Door Restoration** | | | | | | | | | | | | |
| | **Lower Level Windows** | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | S | 4 | | 2500 | 10,000 | | 10,000 | | | 10,000 | | |
| | S. Vestibule | 2 | | 1200 | 2,400 | | | 2,400 | | 2,400 | | |
| | E | 8 | | 2500 | 20,000 | | | 20,000 | | 20,000 | | |
| | N | 1 | | 2500 | 2,500 | | | 2,500 | | 2,500 | | |
| | W | 7 | | 2500 | 17,500 | | | 17,500 | | 17,500 | | |
| | **Main Level Windows** | | | | | | | | | | | |
| | S | 4 | | 3000 | 12,000 | | 12,000 | | | 12,000 | | |
| | E | 7 | | 3000 | 21,000 | | | 21,000 | | 21,000 | | |
| | E. new window at fire esca;e | 1 | | 6000 | 6,000 | | | 6,000 | 2 | 6,000 | | |
| | N | 3 | | 3000 | 9,000 | | | 9,000 | | 9,000 | | |
| | W | 7 | | 3000 | 21,000 | | | 21,000 | | 21,000 | | |
| | **Bedroom Level Windows** | | | | | | | | | | | |
| | S | 6 | ea | 4100 | 24,600 | 24,600 | | | | 24,600 | | |
| | E | 7 | | 4100 | 28,700 | | | 28,700 | | 28,700 | | |
| | E. new window at fire esca;e | 1 | | 6000 | 6,000 | | | 6,000 | 2 | 6,000 | | |
| | N | 3 | | 4100 | 12,300 | | | 12,300 | | 12,300 | | |
| | W | 7 | | 4100 | 28,700 | | | 28,700 | | 28,700 | | |
| | **Servant's Level Windows** | | | | | | | | | | | |
| | S | 5 | | 1200 | 6,000 | | | 6,000 | | 6,000 | | |
| | E | 8 | | 1200 | 9,600 | | | 9,600 | | 9,600 | | |
| | N | 3 | | 1200 | 3,600 | | | 3,600 | | 3,600 | | |
| | W | 7 | | 1200 | 8,400 | | | 8,400 | | 8,400 | | |
| | | | | | | | | | | | | |
| | Architectura / Proj Mgt fees for specs (est) | | | | 8,000 | | 8,000 | | | 8,000 | | |
| | | | | | | | | | | | | |
| | **Exterior Door Restoration** | | | | | | | | | | | |
| | Restore and weatherstrip | 3 | ea | 3000 | 9,000 | | | 9,000 | | 9,000 | | |
| | | | | | | | | | | | | |
| | **Door & Window Maintenance** | | | | | | | | | | | |
| | paint, caulk, minor repairs | | | | 7,500 | 7,500 | | | 2 | | 7,500 | 7,500 |
| | | | | | | | | | | | | |
| | | | | | | **32,100** | **30,000** | **211,700** | | **266,300** | **7,500** | **7,500** |

| | ITEM | QUANTITY | UNIT | UNIT COST | COST SUB-TOTAL | MAINTENANCE Maintenance & Repair | ALTERNATE 1: LARGE SCALE RESTORATION PHASE 1: Plan/Design | ALTERNATE 1: LARGE SCALE RESTORATION PHASE 2: 1-5 yrs Restoration | ALTERNATE 2: PHASED RESTORATION PRIORITY 1: 6-10 yrs | ALTERNATE 2: PHASED RESTORATION PRIORITY 2: 11-15 yrs | ALTERNATE 2: PHASED RESTORATION PRIORITY 3: 15-20 yrs |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Porches and Wood Balconies** | | | | | | | | | | | |
| | | | | | | | | | | | |
| | **East Porch (2 balconies)** | | | | | | | | | | |
| | Short Term | | | | | | | | | | |
| | repair small openings to prevent vermin | | | | 3,500 | 3,500 | | | 3,500 | | |
| | Strip, prime and paint wood | | | | 22,000 | | | 22,000 | 22,000 | | |
| | Floor restructure and repairs to rails | | | | 15,000 | | | 15,000 | 15,000 | | |
| | Railing repairs | | | | 6,000 | | | 6,000 | 6,000 | | |
| | Replace EPDM Roofing | 2 | ea | 7500 | 15,000 | | | 15,000 | 15,000 | | |
| | Architectural fees for specs/const observ (est) | | | | 4,500 | | 4,500 | | 4,500 | | |
| | | | | | | **3,500** | **4,500** | **58,000** | **66,000** | | |
| | | | | | | | | | | | |
| | **South Balconies (3 tot)** | | | | | | | | | | |
| | Short Term | | | | 0 | | | | | | |
| | Maintenance to bottom rail | | | | 500 | 500 | | | 500 | | |
| | Mid-Term | | | | | | | | | | |
| | Repair / replace deteriorated railing elements | | | | 3,000 | | | 3,000 | | 3,000 | |
| | Strip prime and paint | | | | 2,000 | | | 2,000 | | 2,000 | |
| | Long Term | | | | | | | | | | |
| | Replace EPDM roofing | 3 | ea | 6500 | 19,500 | | | 19,500 | | | 19,500 |
| | Architectural fees for specs/const observ (est) | | | | 1,500 | | 1,500 | | | | 1,500 |
| | | | | | | **500** | **1,500** | **24,500** | **500** | **5,000** | **21,000** |
| | | | | | **SUBTOTAL: MANSION EXTERIOR** | **40,675** | **80,500** | **748,950** | **431,550** | **266,000** | **324,920** |

| | ITEM | QUANTITY | UNIT | UNIT COST | COST SUB-TOTAL | MAINTENANCE Maintenance & Repair | ALTERNATE 1: LARGE SCALE RESTORATION PHASE 1: Plan/Design | ALTERNATE 1: LARGE SCALE RESTORATION PHASE 2: 1-5 yrs Restoration | ALTERNATE 2: PHASED RESTORATION PRIORITY 1: 6-10 yrs | ALTERNATE 2: PHASED RESTORATION PRIORITY 2: 11-15 yrs | ALTERNATE 2: PHASED RESTORATION PRIORITY 3: 15-20 yrs |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **MANSION MECHANICAL / ELECTRICAL / PLUMBING** | | | | | | | | | | | |
| | | | | | | | | | | | |
| **Mechanical** | | | | | | | | | | | |
| | **From Capital Needs Assessment** | | | | | | | | | | |
| | Boiler | 0 | ea | | 0 | | | | | | |
| | Radiators | 0 | ea | | 0 | | | | | | |
| | Self Contained A/C Unit | 1 | ea | 15000 | 15,000 | | | | | | |
| | Window A/C Units | 6 | ea | 1000 | 6,000 | | | | | | |
| | Residntial A/C Condenser | 1 | ea | 7000 | 7,000 | | | | | | |
| | Water Heater | 1 | ea | 2500 | 2,500 | | | | | | |
| | Hot and Cold Water Distribution | 0 | 0 | 0 | 0 | | | | | | |
| | | | | | | | | | | | |
| | **Alternate 4 (Recommended) Ground Source Heat Pump** | | allow | | 230,000 | | | 230,000 | 230,000 | | |
| | Mechanical Engineering professional fees | | | | 20,000 | | 20,000 | | 20,000 | | |
| | Architectural fees for integration (est) | | | | 12,000 | | 12,000 | | 12,000 | | |
| | Associated Construction and Plaster Repair | | allow | | 35,000 | | | 35,000 | 35,000 | | |
| | | | | | | | | | | | |
| | **Alternate 2: Standard split type AC with air cooled condnsing unit with hot water reheat coils and local direct vent high efficiency hot water boilers** | | allow | | 210,000 | | | | | | |
| | Mechanical Engineering professional fees | | | | 20,000 | | | | | | |
| | Architectural fees for integration (est) | | | | 12,000 | | | | | | |
| | | | | | | | | | | | |
| | Insulation (associated w/HVAC) | | | | | | | | | | |
| | Insulation with vapor barrier to attic roof | 4500 | sf | 3.5 | 15,750 | | | 15,750 | 15,750 | | |
| | | | | | | | **32,000** | **280,750** | **312,750** | | |

| | ITEM | QUANTITY | UNIT | UNIT COST | COST SUB-TOTAL | MAINTENANCE Maintenance & Repair | ALTERNATE 1: LARGE SCALE RESTORATION PHASE 1: Plan/Design | ALTERNATE 1: LARGE SCALE RESTORATION PHASE 2: 1-5 yrs Restoration | ALTERNATE 2: PHASED RESTORATION PRIORITY 1: 6-10 yrs | ALTERNATE 2: PHASED RESTORATION PRIORITY 2: 11-15 yrs | ALTERNATE 2: PHASED RESTORATION PRIORITY 3: 15-20 yrs |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Electric** | | | | | | | | | | | |
| | Dielectic Connections | 25 | ea | 150 | 3,750 | 3,750 | | | | | |
| | Electrical Wiring | 0 | 0 | 0 | 0 | | | | | | |
| | Upgrade Electrical Service | 1 | ea | 5500 | 5,500 | | | 5,500 | 5,500 | | |
| | Remove Conduit, Rewire 4th Floor | 2900 | sf | 12 | 34,800 | | | 34,800 | | 34,800 | |
| | GFCI Outlets | 4 | ea | | 250 | 250 | | | 250 | | |
| | Professinal Fees (est) | | | | 3,500 | | 3,500 | | | 3,500 | |
| | | | | | | **4,000** | **3,500** | **40,300** | **5,750** | **38,300** | |
| | | | | | | | | | | | |
| **Plumbing** | | | | | | | | | | | |
| | Sanitary Waste and Vent System | | alllow | | 7,500 | | | 7,500 | 2,500 | 2,500 | 2,500 |
| | | | | | | | | **7,500** | **2,500** | **2,500** | **2,500** |
| | | | | | | | | | | | |
| **Fire Protection** | | | | | | | | | | | |
| | Fire Alarm Panel | 1 | ea | 6000 | 6,000 | | | 6,000 | 6,000 | | |
| | Smoke Detectors | 29 | ea | 100 | 2,900 | | | 2,900 | 2,900 | | |
| | | | | | | | | **8,900** | **8,900** | | |
| | **SUBTOTAL: MANSION MECHANICAL / ELECTRICAL / PLUMBING** | | | | | **4,000** | **35,500** | **337,450** | **329,900** | **40,800** | **2,500** |

| | ITEM | QUANTITY | UNIT | UNIT COST | COST SUB-TOTAL | MAINTENANCE Maintenance & Repair | ALTERNATE 1: LARGE SCALE RESTORATION PHASE 1: Plan/Design | ALTERNATE 1: LARGE SCALE RESTORATION PHASE 2: 1-5 yrs Restoration | ALTERNATE 2: PHASED RESTORATION PRIORITY 1: 6-10 yrs | ALTERNATE 2: PHASED RESTORATION PRIORITY 2: 11-15 yrs | ALTERNATE 2: PHASED RESTORATION PRIORITY 3: 15-20 yrs |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **MANSION STRUCTURAL** | | | | | | | | | | | |
| | | | | | | | | | | | |
| **Structural** | | | | | | | | | | | |
| | Structural Modifications for HVAC | | | | | | | | | | |
| | to attic joists for HVAC eqip dead load | | allow | | 25,000 | | | 25,000 | 25,000 | | |
| | Structural Engineering Fees 12% | | | | 3,000 | | 3,000 | | 3,000 | | |
| | | | | | | | | | | | |
| | Structural Modifications for insulation | | | | | | | | | | |
| | to rafters for insulated roof snow dead load | | allow | | 35,000 | | | 35,000 | 35,000 | | |
| | Structural Engineering Fees 12% | | | | 4,200 | | 4,200 | | 4,200 | | |
| | **SUBTOTAL: MANSION STRUCTURAL (RELATED TO HVAC)** | | | | | | **7,200** | **60,000** | **67,200** | | |

| | | | | | | MAINTENANCE | ALTERNATE 1: LARGE SCALE RESTORATION | | ALTERNATE 2: PHASED RESTORATION | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ITEM | QUANTITY | UNIT | UNIT COST | COST SUB-TOTAL | Maintenance & Repair | PHASE 1: Plan/Design | PHASE 2: 1-5 yrs Restoration | PRIORITY 1: 6-10 yrs | PRIORITY 2: 11-15 yrs | PRIORITY 3: 15-20 yrs |
| **MANSION INTERIOR** | | | | | | | | | | | |
| | | | | | | | | | | | |
| **Lower Level / First Floor** | | | | | | | | | | | |
| | Maintenance for Lower Level | | | | | | | | | | |
| | Ground Floor Hall Carpet | 380 | sf | 4 | 1,520 | | | 1,520 | | 1,520 | |
| | Ground Floor Office Carpet | 315 | sf | 4 | 1,260 | | | 1,260 | | 1,260 | |
| | Ground Floor Conference Room Carpet | 995 | sf | 4 | 3,980 | | | 3,980 | | 3,980 | |
| | Repair Wall at Ground Floor | 1 | allow | 3500 | 3,500 | | | 3,500 | 3,500 | | |
| | Ground Floor Stair Handrail Upgrades | 38 | lf | 25 | 950 | | | 950 | 950 | | |
| | | | | | | | | | | | |
| | Move Kitchen / historicaly compatible cabinets | | | | | | | | | | |
| | Remodel Kitchen | 175 | sf | 200 | 55,000 | | | 55,000 | | 55,000 | |
| | Design fees | | allow | | 6,000 | | 6,000 | | | 6,000 | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | New Elevator / Accessible Toilet NW corner | | | | | | | | | | |
| | Elevator | 1 | allow | 150000 | 150,000 | | | 150,000 | | | 150,000 |
| | Accessible Bathroom | 1 | allow | 25000 | 25,000 | | | 25000 | | | 25000 |
| | New drinking fountain + plumbing | 1 | allow | 3500 | 3,500 | | | 3,500 | | | 3,500 |
| | | | | | | | | | | | |
| | Design fees, const. observation | | allow | | 16,000 | | 16,000 | | | | 16,000 |
| | | | | **Lower Level / First Fl. Subtotal** | | | **22,000** | **244,710** | **4,450** | **67,760** | **194,500** |
| | | | | | | | | | | | |
| **Main Level / Second Floor** | | | | | | | | | | | |
| **Vestibule** | | | | | | | | | | | |
| | Replace Carpet | 75 | sf | 65 | 4,875 | | | 4,875 | 4,875 | | |
| | Grain Ceiling | 90 | sf | 100 | 9,000 | | | 9,000 | 9,000 | | |
| | Grain Walls | 225 | sf | 100 | 22,500 | | | 22,500 | 22,500 | | |
| | | | | | | | | | | | |
| **Central Hall** | | | | | | | | | | | |
| | Repair Main Floor Chandeliers | 2 | ea | 500 | 1,000 | | | 1,000 | 1,000 | | |
| | Repalce Carpet | 500 | | 65 | 32,500 | | | 32,500 | 32,500 | | |
| | Ceiling plaser repair and paint per historic | 600 | | 7 | 4,200 | | | 4,200 | 4,200 | | |
| | Walls plaster repair and paint per historic | 750 | sf | 4.5 | 3,375 | | | 3,375 | 3,375 | | |
| | Restore exisitng mural | | allow | | 25,000 | | | 25,000 | 25,000 | | |
| | Install new reproduction "mural" wainscotting | 400 | lf | 60 | 24,000 | | | 24,000 | 24,000 | | |
| | | | | | | | | | | | |
| **SE Parlor** | | | | | | | | | | | |
| | Repalce Carpet | 400 | sf | 50 | 20,000 | | | 20,000 | | | 20,000 |
| | Ceiling plaser repair and paint per historic | 440 | sf | 7 | 3,080 | | | 3,080 | | 3,080 | |
| | Walls plaster repair and paint per historic | 875 | sf | 4.5 | 3,938 | | | 3,938 | | 3,938 | |
| | | | | | | | | | | | |
| **Center East Parlor** | | | | | | | | | | | |
| | Repalce Carpet | 300 | | 65 | 19,500 | | | 19,500 | | | 19,500 |
| | Ceiling plaser repair and paint per historic | 360 | | 7 | 2,520 | | | 2,520 | | 2,520 | |
| | Walls plaster repair and paint per historic | 700 | | 4.5 | 3,150 | | | 3,150 | | 3,150 | |
| | | | | | | | | | | | |
| **Dining Room** | | | | | | | | | | | |
| | Replace Carpet | 375 | | 65 | 24,375 | | | 24,375 | | | 24,375 |
| | Ceiling plaser repair and paint per historic | 450 | | 7 | 3,150 | | | 3,150 | | 3,150 | |
| | Walls plaster repair and paint per historic | 925 | | 4.5 | 4,163 | | | 4,163 | | 4,163 | |
| | | | | | | | | | | | |
| **SW Parlor** | | | | | | | | | | | |
| | Refinish wood floor - darker stain | 400 | | 3.5 | 1,400 | | | 1,400 | | 1,400 | |
| | Ceiling plaser repair and paint per historic | 510 | | 7 | 3,570 | | | 3,570 | | 3,570 | |
| | Walls plaster repair and paint per historic | 900 | | 4.5 | 4,050 | | | 4,050 | | 4,050 | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

| | | | | | | MAINTENANCE | ALTERNATE 1: LARGE SCALE RESTORATION | | ALTERNATE 2: PHASED RESTORATION | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ITEM | QUANTITY | UNIT | UNIT COST | COST SUB-TOTAL | Maintenance & Repair | PHASE 1: Plan/Design | PHASE 2: 1-5 yrs Restoration | PRIORITY 1: 6-10 yrs | PRIORITY 2: 11-15 yrs | PRIORITY 3: 15-20 yrs |
| **West Center Parlor** | | | | | | | | | | | |
| | Refinish wood floor - darker stain | 275 | | 3.5 | 963 | | | 963 | | 963 | |
| | Ceiling plaser repair and paint per historic | 330 | | 7 | 2,310 | | | 2,310 | | 2,310 | |
| | Walls plaster repair and paint per historic | 600 | | 4.5 | 2,700 | | | 2,700 | | 2,700 | |
| | | | | | | | | | | | |
| **Northwest Service Area** | | | | | | | | | | | |
| | Refinish wood floor - darker stain | 275 | | 3.5 | 963 | | | 963 | | 963 | |
| | Ceiling plaser repair and paint per historic | 330 | | 7 | 2,310 | | | 2,310 | | 2,310 | |
| | Walls plaster repair and paint per historic | 600 | | 4.5 | 2,700 | | | 2,700 | | 2,700 | |
| | **Alternate for Consideration** | | | | | | | | | | |
| | Buildout for Elevator | | allow | | 10,000 | | | 10,000 | | | 10,000 |
| | | | | | | | | | | | |
| | Design fees, const. observation | | | | | | 21,000 | | 11,500 | 3,600 | 5,500 |
| | | | | **Main Level/ Second Fl. Subt.** | | | **21,000** | **241,290** | **137,950** | **44,565** | **79,375** |
| | | | | | | | | | | | |
| **Bedroom Level / Third Floor** | | | | | | | | | | | |
| | | | | | | | | | | | |
| **Central Hall** | | | | | | | | | | | |
| | Appropriate Chandeliers | 3 | ea | 1500 | 4,500 | | | 4,500 | 4,500 | | |
| | Repalce Carpet | 500 | sf | 65 | 32,500 | | | 32,500 | 32,500 | | |
| | Ceiling plaser repair and paint per historic | 600 | sf | 7 | 4,200 | | | 4,200 | 4,200 | | |
| | Walls plaster repair and paint per historic | 750 | sf | 4.5 | 3,375 | | | 3,375 | 3,375 | | |
| | Install new "mural" wainscotting | 400 | lf | 500 | 200,000 | | | 200,000 | 200,000 | | |
| | Grain door trim center hall and touch up | 50 | sf | 100 | 5,000 | | | 5,000 | 5,000 | | |
| | Remove double door and transom partition | 1 | allow | 3000 | 3,000 | | | 3,000 | 3,000 | | |
| | associated plaster repair | | allow | | 1,500 | | | 1,500 | 1,500 | | |
| | Remove fire rated partition & new rail to match | 1 | allow | 2000 | 2,000 | | | 2,000 | 2,000 | | |
| | re-craft missing wood stair rail | 1 | allow | 4000 | 4,000 | | | 4,000 | 4,000 | | |
| | New period laylight in Skylight opening | 1 | ea | 5000 | 5,000 | | | 5,000 | | | 5,000 |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| **SE Bedroom - Mr. Reddick** | | | | | | | | | | | |
| | Appropriate Chandelier | 1 | ea | 1500 | 1,500 | | | 1,500 | | | 1,500 |
| | Repalce Carpet | 400 | sf | 65 | 26,000 | | | 26,000 | | | 26,000 |
| | Ceiling plaser repair and paint per historic | 440 | sf | 7 | 3,080 | | | 3,080 | | 3,080 | |
| | Walls plaster repair and paint per historic | 875 | sf | 4.5 | 3,938 | | | 3,938 | | 3,938 | |
| | Grain Trim per historic | 80 | sf | 100 | 8,000 | | | 8,000 | | 8,000 | |
| | | | | | | | | | | | |
| **Center East Bedroom - Library Interpretation** | | | | | | | | | | | |
| | Appropriate Chandelier | 1 | ea | 1500 | 1,500 | | | 1,500 | | 1,500 | |
| | Repalce Carpet | 300 | sf | 65 | 19,500 | | | 19,500 | | 19,500 | |
| | Ceiling plaser repair and paint per historic | 360 | sf | 7 | 2,520 | | | 2,520 | | 2,520 | |
| | Walls plaster repair and paint per historic | 700 | sf | 4.5 | 3,150 | | | 3,150 | | 3,150 | |
| | Grain Trim per historic | 80 | sf | 100 | 8,000 | | | 8,000 | | 8,000 | |
| | | | | | | | | | | | |
| **NE Bedroom - Elizabeth Funk Reddick Bedroom** | | | | | | | | | | | |
| | Appropriate Chandelier | 1 | ea | 1500 | 1,500 | | | 1,500 | | 1,500 | |
| | Replace Carpet | 375 | sf | 65 | 24,375 | | | 24,375 | | 24,375 | |
| | Ceiling plaser repair and paint per historic | 450 | sf | 7 | 3,150 | | | 3,150 | | 3,150 | |
| | Walls plaster repair and paint per historic | 925 | sf | 4.5 | 4,163 | | | 4,163 | | 4,163 | |
| | Grain Trim per historic | 100 | sf | 100 | 10,000 | | | 10,000 | | 10,000 | |
| | Furniture allowance | | | | 10,000 | | | 10,000 | | | |
| | | | | | | | | | | | |
| **SW Bedroom - Mrs. Eliza Reddick Bedroom** | | | | | | | | | | | |
| | Appropriate Chandelier | 1 | ea | 1500 | 1,500 | | | 1,500 | | | 1,500 |
| | Replace Carpet | 400 | sf | 65 | 26,000 | | | 26,000 | | | 26,000 |
| | Ceiling plaser repair and paint per historic | 510 | sf | 7 | 3,570 | | | 3,570 | | | 3,570 |
| | Walls plaster repair and paint per historic | 900 | sf | 4.5 | 4,050 | | | 4,050 | | | 4,050 |
| | Grain Trim per historic | 80 | sf | 100 | 8,000 | | | 8,000 | | | 8,000 |
| | Furniture allowance | | | | 10,000 | | | 10,000 | | | 10,000 |

| | ITEM | QUANTITY | UNIT | UNIT COST | COST SUB-TOTAL | MAINTENANCE | ALTERNATE 1: LARGE SCALE RESTORATION | | ALTERNATE 2: PHASED RESTORATION | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Maintenance & Repair | PHASE 1: Plan/Design | PHASE 2: 1-5 yrs Restoration | PRIORITY 1: 6-10 yrs | PRIORITY 2: 11-15 yrs | PRIORITY 3: 15-20 yrs |
| **West Center Dressing Room - Mrs. Eliza Reddick** | | | | | | | | | | | |
| | Appropriate Chandelier | 1 | ea | 1500 | 1,500 | | | 1,500 | | | 1,500 |
| | Replace Carpet | 275 | sf | 65 | 17,875 | | | 17,875 | | | 17,875 |
| | Ceiling plaser repair and paint per historic | 330 | sf | 7 | 2,310 | | | 2,310 | | | 2,310 |
| | Walls plaster repair and paint per historic | 725 | sf | 4.5 | 3,263 | | | 3,263 | | | 3,263 |
| | Grain Trim per historic | 60 | sf | 100 | 6,000 | | | 6,000 | | | 6,000 |
| | Furniture allowance | | | | 7,500 | | | 7,500 | | | 7,500 |
| | | | | | | | | | | | |
| **Northwest Service Area** | | | | | | | | | | | |
| | Electrical Fixtures that fit within period | 4 | ea | 400 | 1,600 | | | 1,600 | | | 1,600 |
| | Replace with wood floor - darker stain | 275 | sf | 5.5 | 1,513 | | | 1,513 | | | 1,513 |
| | Ceiling plaser repair and paint per historic | 330 | sf | 7 | 2,310 | | | 2,310 | | | 2,310 |
| | Paint walls per historic | 600 | sf | 4.5 | 2,700 | | | 2,700 | | | 2,700 |
| | **Alternate for Consideration** | | | | | | | | | | |
| | Buildout for Elevator | | allow | | 10,000 | | | 10,000 | | | 10,000 |
| | | | | | | | | | | | |
| **Restroom under stairs** | | | | | | | | | | | |
| | Updat fixtures | | allow | | 500 | | | 500 | | | 500 |
| | update floor | 25 | sf | 20 | 500 | | | 500 | | | 500 |
| | Paint | 225 | sf | 3 | 675 | | | 675 | | | 675 |
| | lighting | 1 | ea | 800 | 800 | | | 800 | | | 800 |
| | | | | | | | | | | | |
| **Servant's Hallway** | | | | | | | | | | | |
| | Refinish wood floor - darker stain | 120 | sf | | 20,000 | | | 20,000 | | | 20,000 |
| | Ceiling plaser repair and paint per historic | 120 | sf | 7 | 840 | | | 840 | | | 840 |
| | Paint walls per historic | 600 | sf | 4.5 | 2,700 | | | 2,700 | | | 2,700 |
| | Paint stairs and treads | | allow | | 1,500 | | | 1,500 | | | 1,500 |
| | | | | | | | | | | | |
| | Design Fees | | | | | | 47,500 | | 23,500 | 8,500 | 15,500 |
| | | | | **Bedroom Level / 3rd Fl Subtotal** | | | **47,500** | **532,655** | **283,575** | **101,375** | **185,205** |
| | | | | | | | | | | | |
| **Servant's Level / Fourth Floor** | | | | | | | | | | | |
| | | | | | | | | | | | |
| | Repair/Paint Third Floor Walls | 4960 | ea | 4 | 19,840 | | | 19,840 | | | 19,840 |
| | Ceiling plaser repair and paint per historic | 2240 | ea | 4 | 8,960 | | | 8,960 | | | 8,960 |
| | Refinish Third Floor Wood Flooring | 2240 | ea | 20 | 44,800 | | | 44,800 | | | 44,800 |
| | Third Floor Lights | 10 | ea | 800 | 8,000 | | | 8,000 | | | 8,000 |
| | | | | | | | | | | | |
| | Design Fees | | | | | | 7,500 | | | | 7,500 |
| | | | | **Servant's Level/4th Fl Subtotal** | | | **7,500** | **81,600** | | | **89,100** |
| | | | | **SUBTOTAL: MANSION INTERIOR** | | **0** | **98,000** | **1,107,255** | **432,975** | **213,700** | **548,180** |

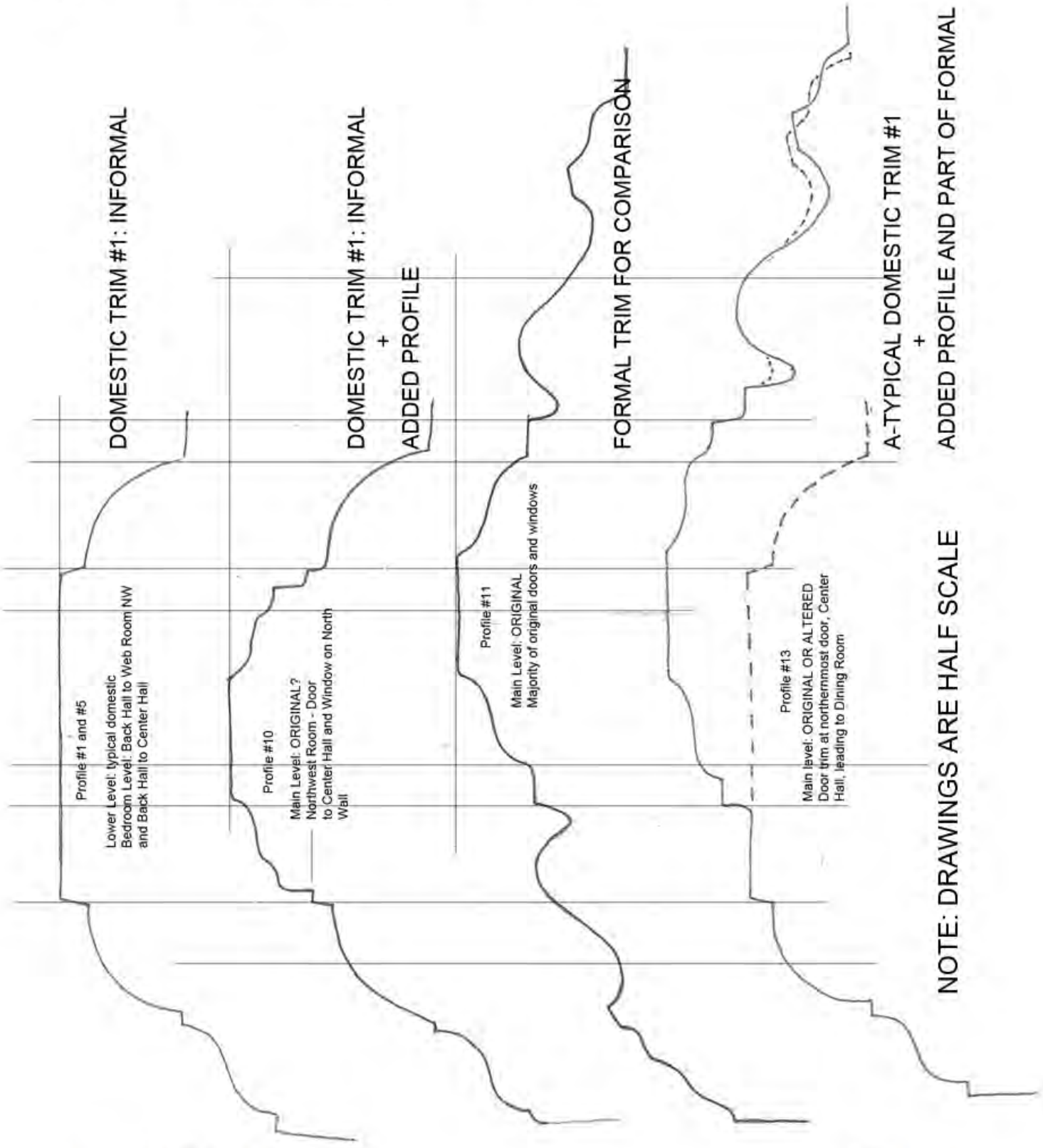
| | | | | | | MAINTENANCE | ALTERNATE 1: LARGE SCALE RESTORATION | | ALTERNATE 2: PHASED RESTORATION | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ITEM | QUANTITY | UNIT | UNIT COST | COST SUB-TOTAL | Maintenance & Repair | PHASE 1: Plan/Design | PHASE 2: 1-5 yrs Restoration | PRIORITY 1: 6-10 yrs | PRIORITY 2: 11-15 yrs | PRIORITY 3: 15-20 yrs |
| **CARETAKER'S HOUSE EXTERIOR** | | | | | | | | | | | |
| | | | | | | | | | | | |
| **Masonry** | | | | | | | | | | | |
| | **Short Term** | | | | | | | | | | |
| | Spot repointing est 10% of exterior | | allow | | 8,500 | 8,500 | | | | | |
| | Mortar Analysis | | allow | | 500 | 500 | | 500 | | | |
| | Strip paint off limestone; consolidate/repellent | | allow | | 6,500 | | | 6,500 | 6,500 | | |
| | Paint brick sills | | allow | | 1,500 | | | 1,500 | 1,500 | | |
| | **Mid-Term** | | | | | | | | | | |
| | Repoint entire building w/ appropriate mortar | | allow | | 45,000 | | | 45,000 | | 45,000 | |
| | Replace inappropriate bricks w/brick to match | | allow | | 8,500 | | | 8,500 | | 8,500 | |
| | Remove and replace severely deter. Limest. | | allow | | 15,000 | | | 15,000 | | 15,000 | |
| | | | | | | | | | | | |
| **Soffit and Exterior Wood** | | | | | | | | | | | |
| | Repair holes in soffit, secure loose boards, paint | | allow | | 10,000 | 10,000 | | 10,000 | | | |
| | Review at close range & make spot repairs | | allow | | 5,000 | | | | 5,000 | | |
| | Prepare and paint Belvedere wood | | allow | | 15,000 | | | 15,000 | 15,000 | | |
| | Prepare and paint entire soffit/fascia | | allow | | 20,000 | | | 20,000 | 20,000 | | |
| | | | | | | | | | | | |
| **Roof / Gutters / Downspouts** | | | | | | | | | | | |
| | Seal gutter open seams | | allow | | 8,500 | 8,500 | | | | | |
| | Paint entire roof | | allow | | 20,000 | | | 20,000 | 20,000 | | |
| | Replace sheet metal roof and gutter system | | allow | | 18,000 | | | 18,000 | | | 18,000 |
| | | | | | | | | | | | |
| **Windows and Doors** | | | | | | | | | | | |
| | **Short Term** | | | | | | | | | | |
| | Repair window on north elevation | | allow | | 1,500 | 1,500 | | | | | |
| | Repair door on east elevation | | allow | | 1,500 | 1,500 | | | | | |
| | paint east and west el. Doors | | allow | | 500 | 500 | | | | | |
| | **Mid Term** | | | | | | | | | | |
| | All wndws and doors: caulk & putty; prep & paint | | allow | | 15,000 | | | 15,000 | 15,000 | | |
| | **Long Term** | | | | | | | | | | |
| | replicate historic porch & railing | | allow | | 40,000 | | | 40,000 | | | 40,000 |
| | remove concrete steps & ramp; reconfig for ADA | | allow | | 50,000 | | | 50,000 | | | 50,000 |
| | | | | | SUBTOTAL | 31,000 | | 265,000 | 83,000 | 68,500 | 108,000 |
| | Design Fees (9%) specs and const observation | | | | | 2,790 | **24,000** | | 7,470 | 6,165 | 9,720 |
| | | | | | | **33,790** | **24,000** | **265,000** | **90,470** | **74,665** | **117,720** |
| | | | | | **SUBTOTAL: CARETAKER'S HOUSE EXTERIOR** | **33,790** | **24,000** | **265,000** | **90,470** | **74,665** | **117,720** |

**SUMMARY**

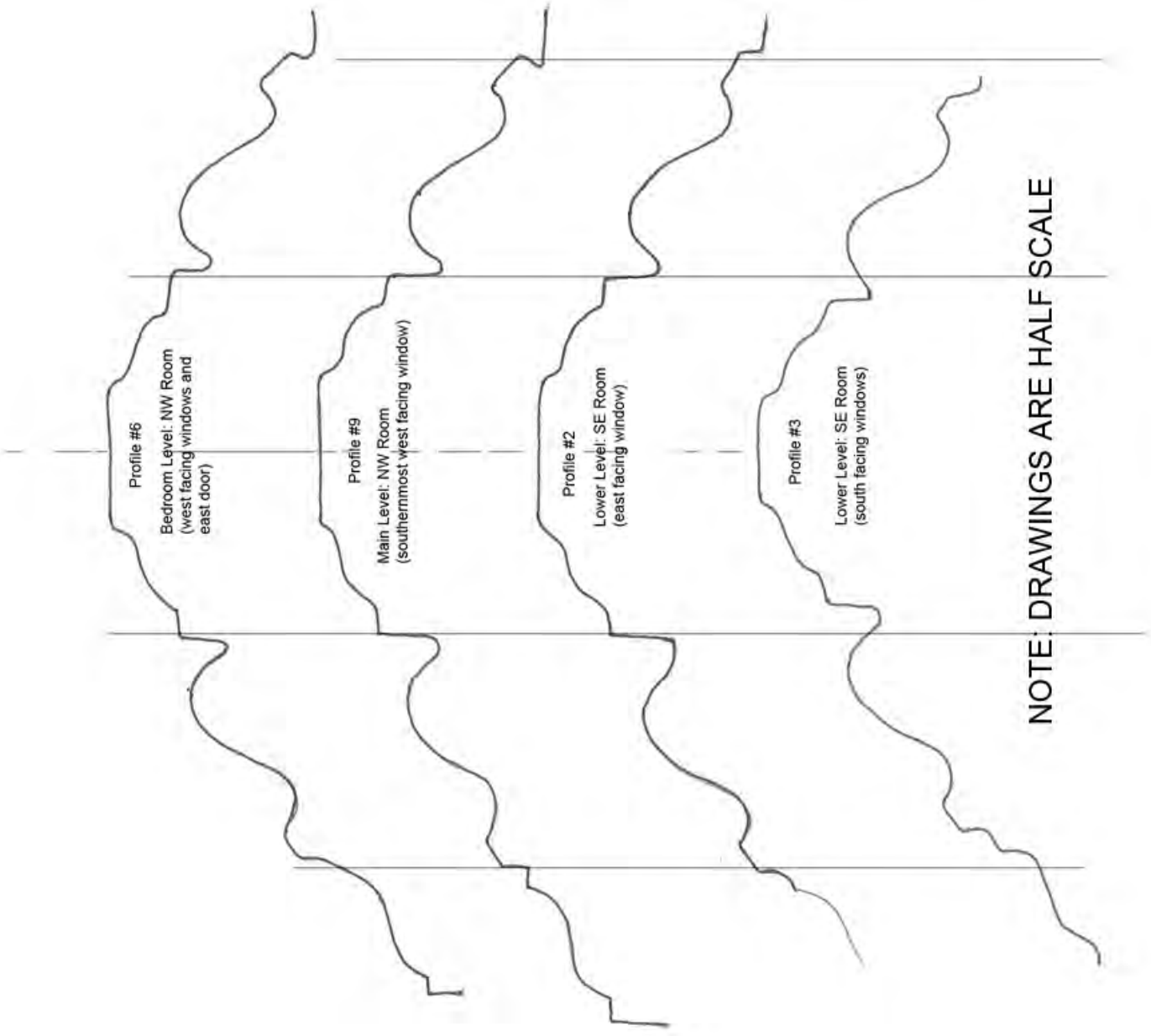
| | ITEM | QUANTITY | UNIT | UNIT COST | COST SUB-TOTAL | MAINTENANCE: Maintenance & Repair | ALTERNATE 1: LARGE SCALE RESTORATION: PHASE 1: Plan/Design | ALTERNATE 1: LARGE SCALE RESTORATION: PHASE 2: 1-5 yrs Restoration | ALTERNATE 2: PHASED RESTORATION: PRIORITY 1: 6-10 yrs | ALTERNATE 2: PHASED RESTORATION: PRIORITY 2: 11-15 yrs | ALTERNATE 2: PHASED RESTORATION: PRIORITY 3: 15-20 yrs |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | **SUBTOTAL: MANSION EXTERIOR** | | | | | **40,675** | **80,500** | **748,950** | **431,550** | **266,000** | **324,920** |
| | **SUBTOTAL: MANSION MECHANICAL / ELECTRICAL / PLUMBING** | | | | | **4,000** | **35,500** | **337,450** | **329,900** | **40,800** | **2,500** |
| | **SUBTOTAL: MANSION STRUCTURAL (RELATED TO HVAC)** | | | | | **0** | **7,200** | **60,000** | **67,200** | **0** | **0** |
| | **SUBTOTAL: MANSION INTERIOR** | | | | | **0** | **98,000** | **1,107,255** | **432,975** | **213,700** | **548,180** |
| | **SUBTOTAL: MANSION EXTERIOR AND INTERIOR** | | | | | **44,675** | **221,200** | **2,253,655** | **1,261,625** | **520,500** | **875,600** |
| | General Conditions / Bond / Insurance (9%) | | | | | 4,021 | 19,908 | 202,829 | 113,546 | 46,845 | 78,804 |
| | Subtotal | | | | | 48,696 | 241,108 | 2,456,484 | 1,375,171 | 567,345 | 954,404 |
| | Contractor's Fee (5%) | | | | | 2,435 | 12,055 | 122,824 | 68,759 | 28,367 | 47,720 |
| | Subtotal | | | | | 51,131 | 253,163 | 2,579,308 | 1,443,930 | 595,712 | 1,002,124 |
| | Design Contingency (5%) | | | | | 2,557 | 12,658 | 128,965 | 72,196 | 29,786 | 50,106 |
| | Total estimated bid price | | | | | **53,687** | **265,822** | **2,708,274** | **1,516,126** | **625,498** | **1,052,230** |
| | Construction Contingency (8%) | | | | | 4,295 | 21,266 | 216,662 | 121,290 | 50,040 | 84,178 |
| | MANSION TOTAL EST. CONST. COST (2013 $$) | | | | | **57,982** | **287,087** | **2,924,935** | **1,637,416** | **675,538** | **1,136,409** |
| | **SUBTOTAL: CARETAKER'S HOUSE EXTERIOR** | | | | | **33,790** | **24,000** | **265,000** | **90,470** | **74,665** | **117,720** |
| | General Conditions / Bond / Insurance (9%) | | | | | 3,041 | 2,160 | 23,850 | 8,142 | 6,720 | 10,595 |
| | Subtotal | | | | | 36,831 | 26,160 | 288,850 | 98,612 | 81,385 | 128,315 |
| | Contractor's Fee (5%) | | | | | 1,842 | 1,308 | 14,443 | 4,931 | 4,069 | 6,416 |
| | Subtotal | | | | | 38,673 | 27,468 | 303,293 | 103,543 | 85,454 | 134,731 |
| | Design Contingency (5%) | | | | | 1,934 | 1,373 | 15,165 | 5,177 | 4,273 | 6,737 |
| | Total estimated bid price | | | | | **40,606** | **28,841** | **318,457** | **108,720** | **89,727** | **141,467** |
| | Construction Contingency (8%) | | | | | 3,249 | 2,307 | 25,477 | 8,698 | 7,178 | 11,317 |
| | CARETAKER'S TOTAL EST. CONST. COST (2013 $$) | | | | | **43,855** | **31,149** | **343,934** | **117,418** | **96,905** | **152,784** |
| | **SUBTOTAL: SITE** | | | | | **18,394** | **4,700** | **61,500** | **70,700** | **6,000** | **4,500** |
| | General Conditions / Bond / Insurance (9%) | | | | | 1,655 | 423 | 5,535 | 6,363 | 540 | 405 |
| | Subtotal | | | | | 20,049 | 5,123 | 67,035 | 77,063 | 6,540 | 4,905 |
| | Contractor's Fee (5%) | | | | | 1,002 | 256 | 3,352 | 3,853 | 327 | 245 |
| | Subtotal | | | | | 21,052 | 5,379 | 70,387 | 80,916 | 6,867 | 5,150 |
| | Design Contingency (5%) | | | | | 1,053 | 269 | 3,519 | 4,046 | 343 | 258 |
| | Total estimated bid price | | | | | **22,105** | **5,648** | **73,906** | **84,962** | **7,210** | **5,408** |
| | Construction Contingency (8%) | | | | | 1,768 | 452 | 5,912 | 6,797 | 577 | 433 |
| | SITE TOTAL EST. CONST. COST (2013 $$) | | | | | **23,873** | **6,100** | **79,819** | **91,759** | **7,787** | **5,840** |
| | TOTAL PROJECT EST. CONST. COST (2013 $$) | | | | | **125,710** | **324,336** | **3,348,688** | **1,846,593** | **780,230** | **1,295,034** |

# Appendix A: Trim Profile Comparison Sheets

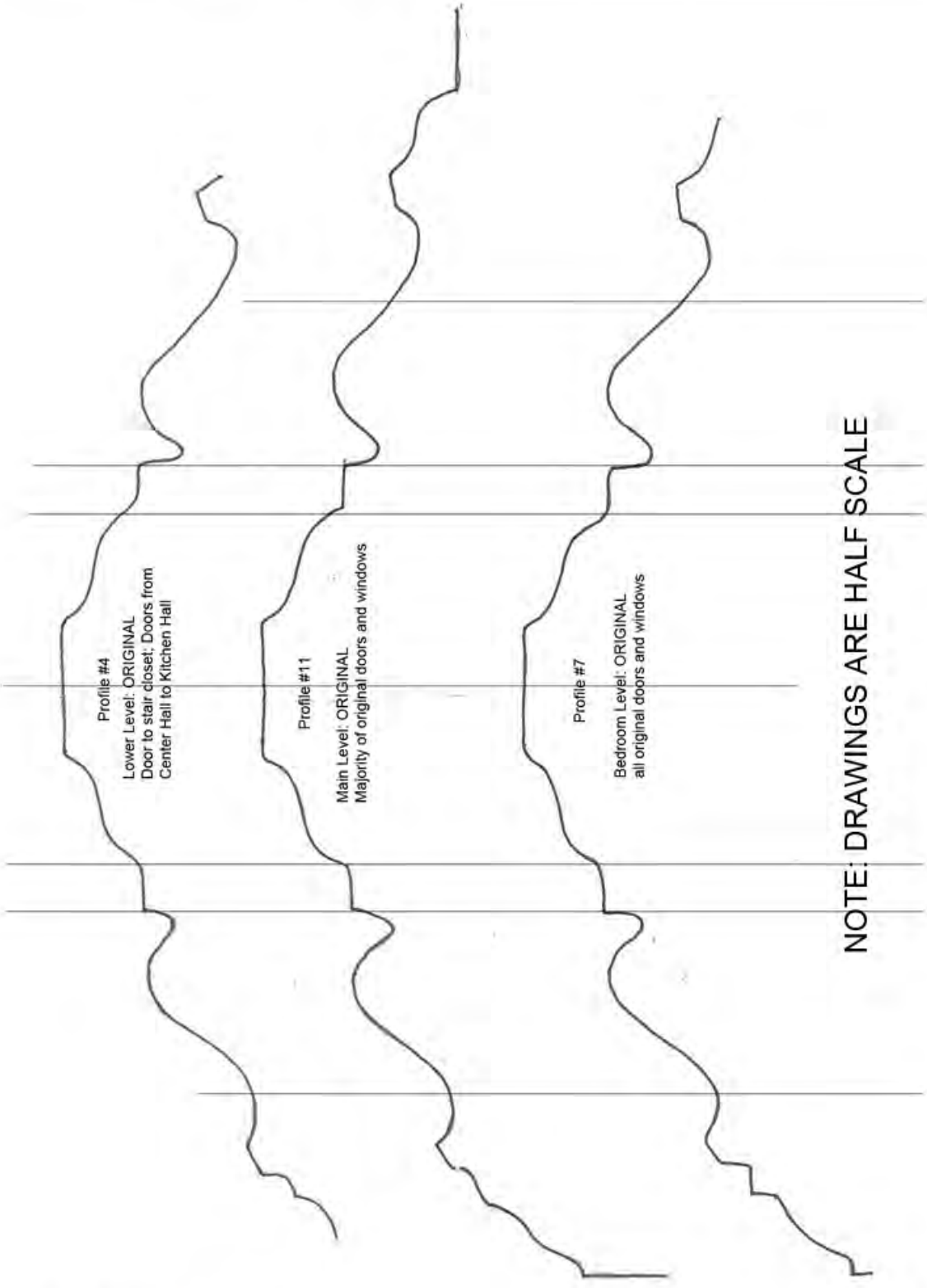
## Domestic Trim Type #1: Informal Variations



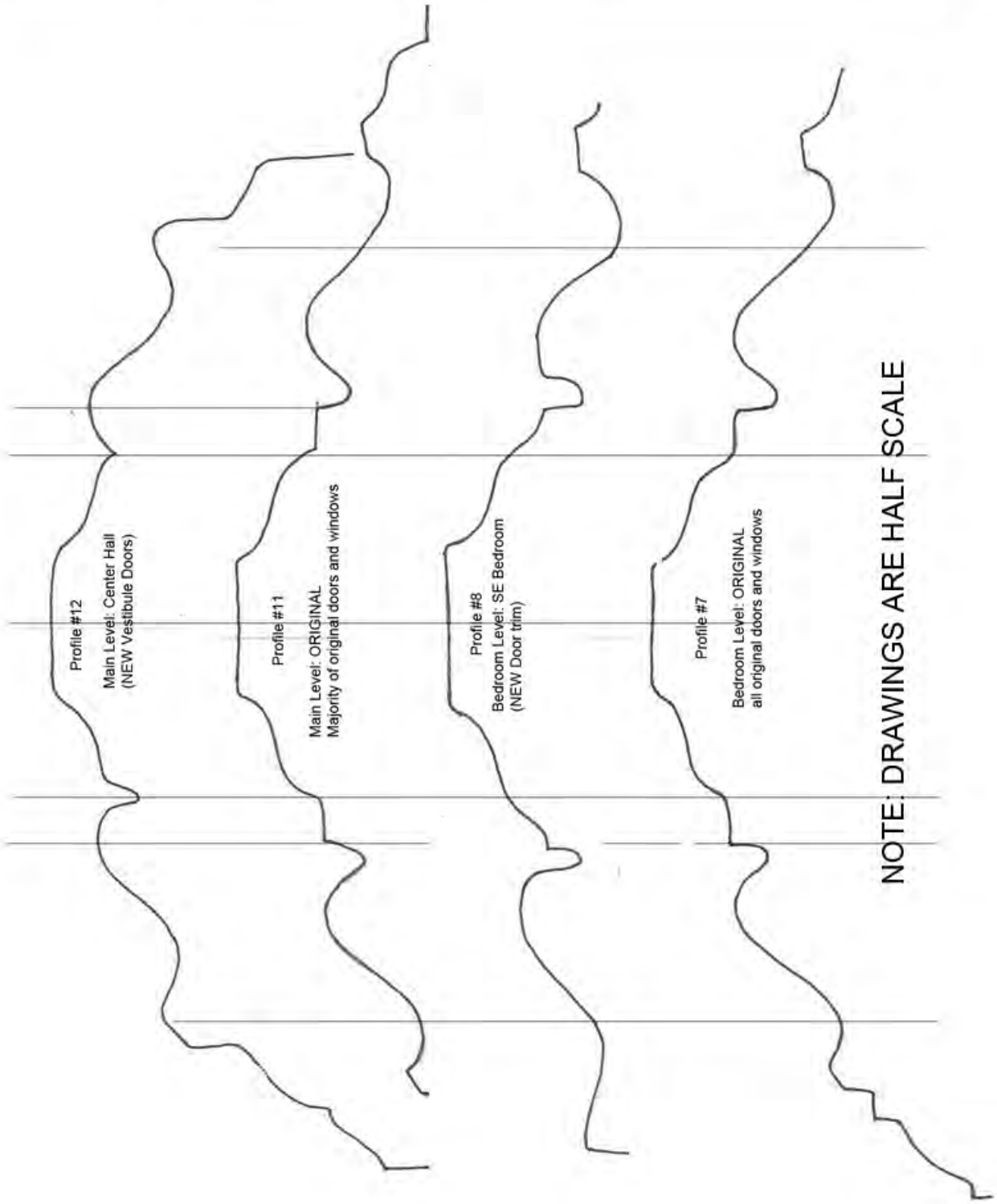
## Domestic Trim Type #2: Formal Variations



## Formal Trim (Original): Variations



## Formal Trim (20th c. Replication) : Variations



# Appendix B: Plaster Ceiling Comparison Sheets

**Photo PL 01:** Decorative plaster ceiling in Entry Foyer M200

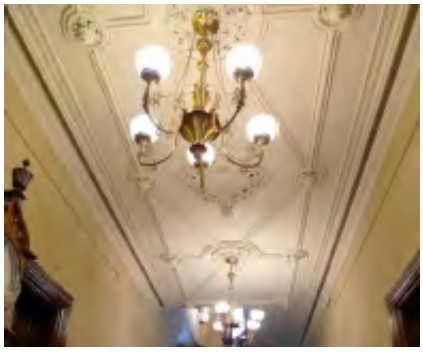


**Photo PL 02**: Decorative plaster ceiling in Central Hall M201

**Photo PL 03**: Decorative plaster ceiling in Southeast Parlor M202

**Photo PL 04**: Decorative plaster ceiling in Center East Parlor M203

**Photo PL 05**: Decorative plaster ceiling in Northeast Dining Room M204

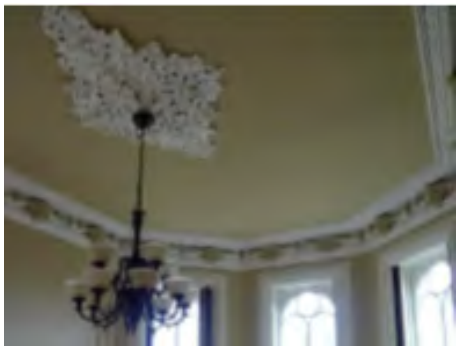


**Photo PL 06**: Decorative plaster ceiling in Southwest Parlor M205

**Photo PL 07**: Decorative plaster ceiling in Center West Parlor M206

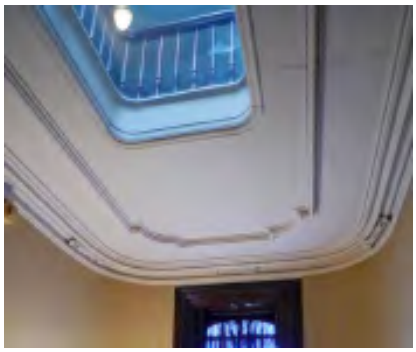


**Photo PL 08**: Decorative plaster ceiling in North Center Hall BR301

**Photo PL 09**: Decorative plaster ceiling in Center Hall BR 301

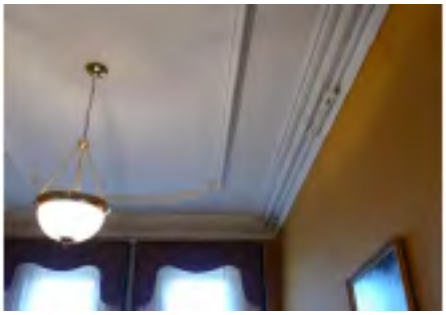


**Photo PL 10**: Decorative plaster ceiling in South Center Hall BR 301a

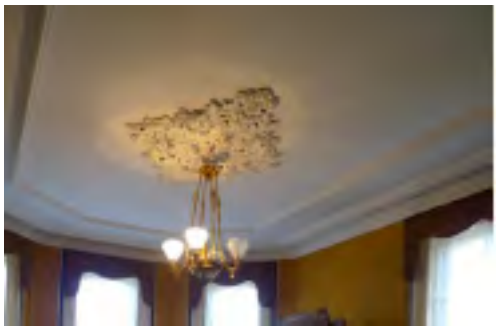


**Photo PL 11**: Decorative plaster ceiling in Southeast Bedroom BR 302

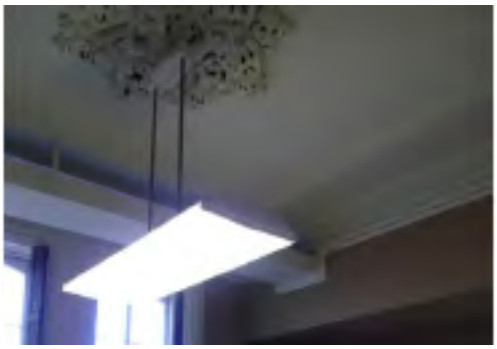


**Photo PL 12**: Decorative plaster ceiling in Center East Bedroom BR 303

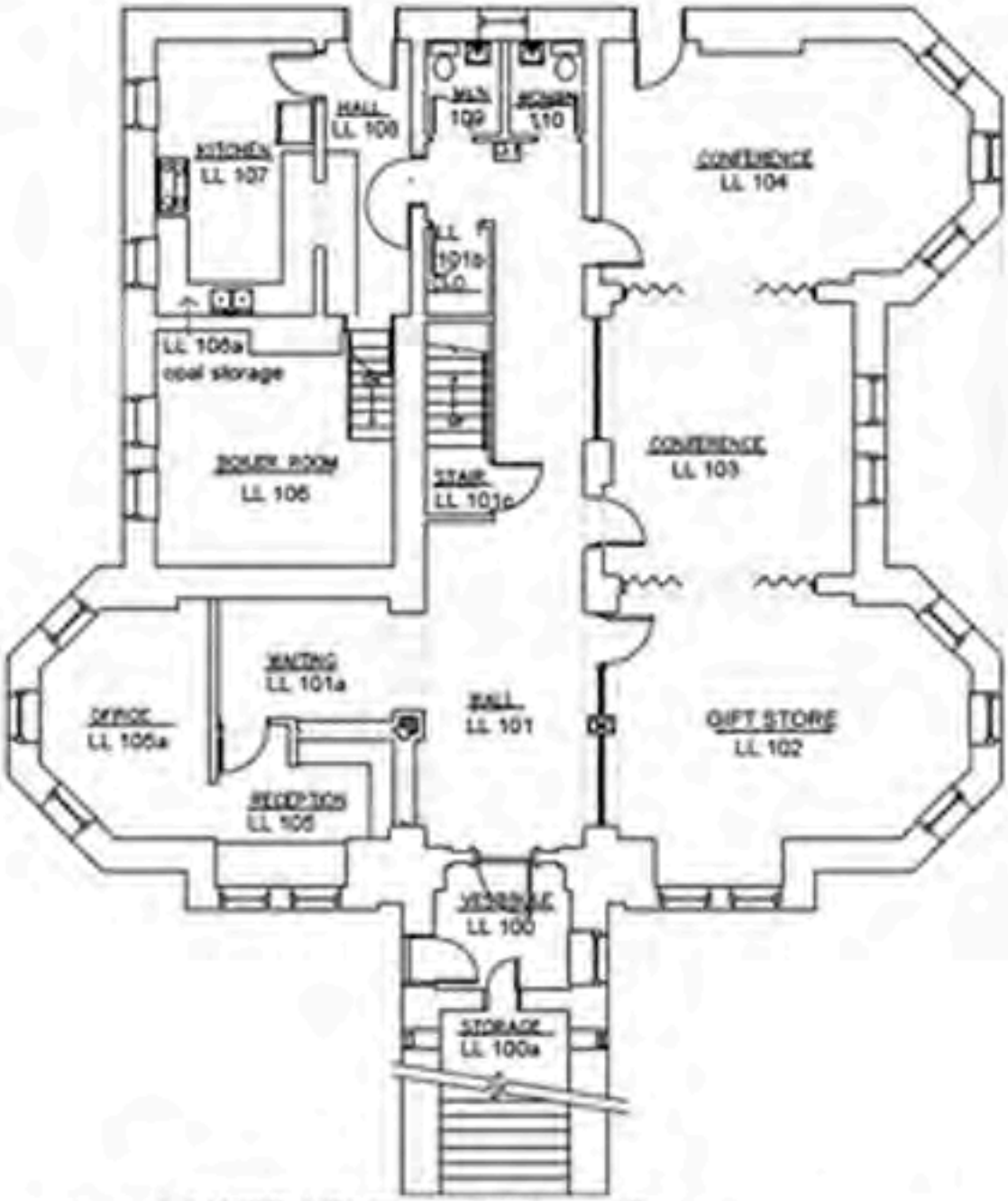
**Photo PL 13**: Decorative plaster ceiling in Northeast Bedroom BR 304

**Photo PL 14**: Decorative plaster ceiling in Southwest Bedroom BR 305

**Photo PL 15**: Decorative plaster ceiling in Center West Dressing Room BR 306

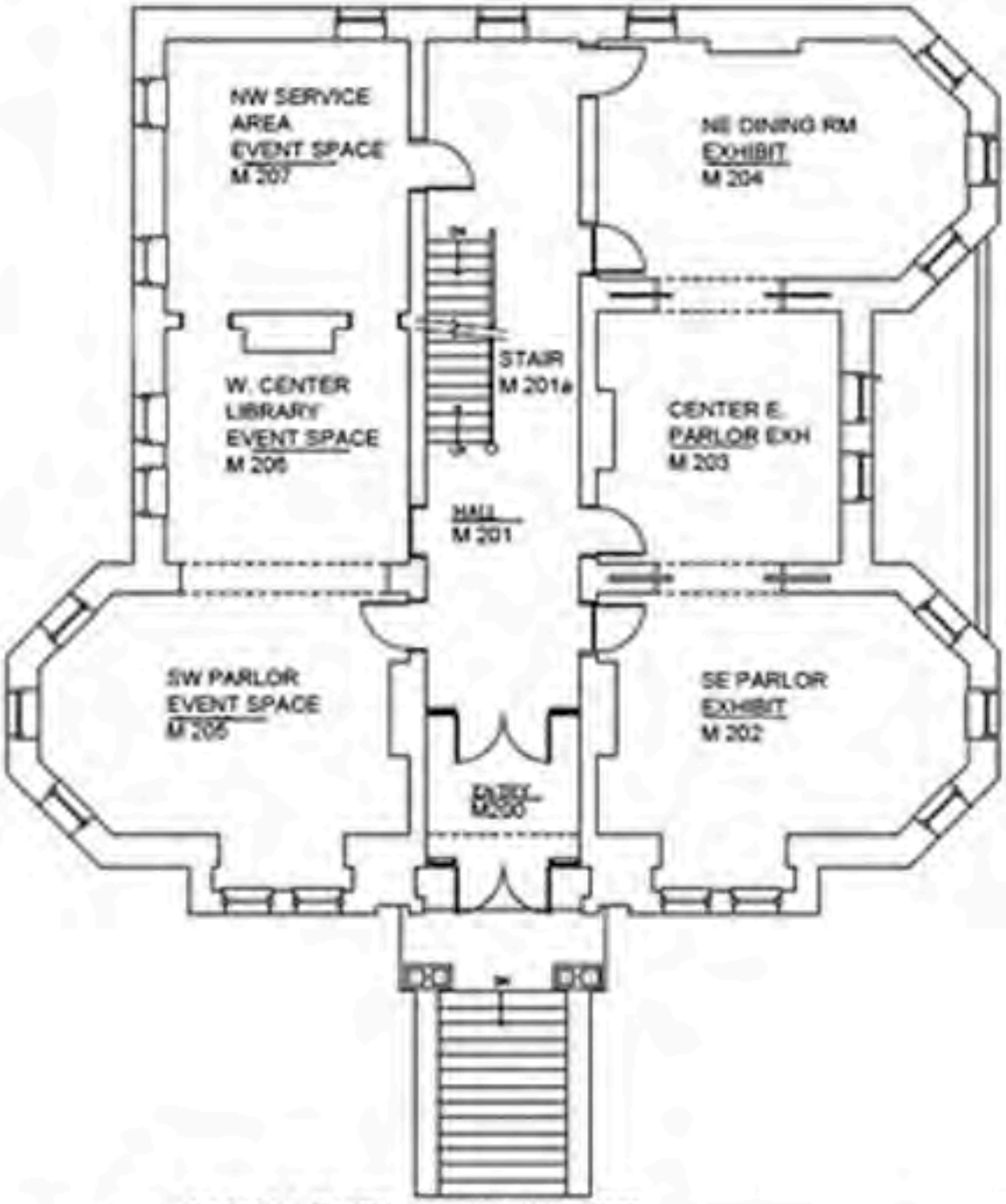
# Appendix C: Mansion Floor Plans

## Lower Level / First Floor Plan

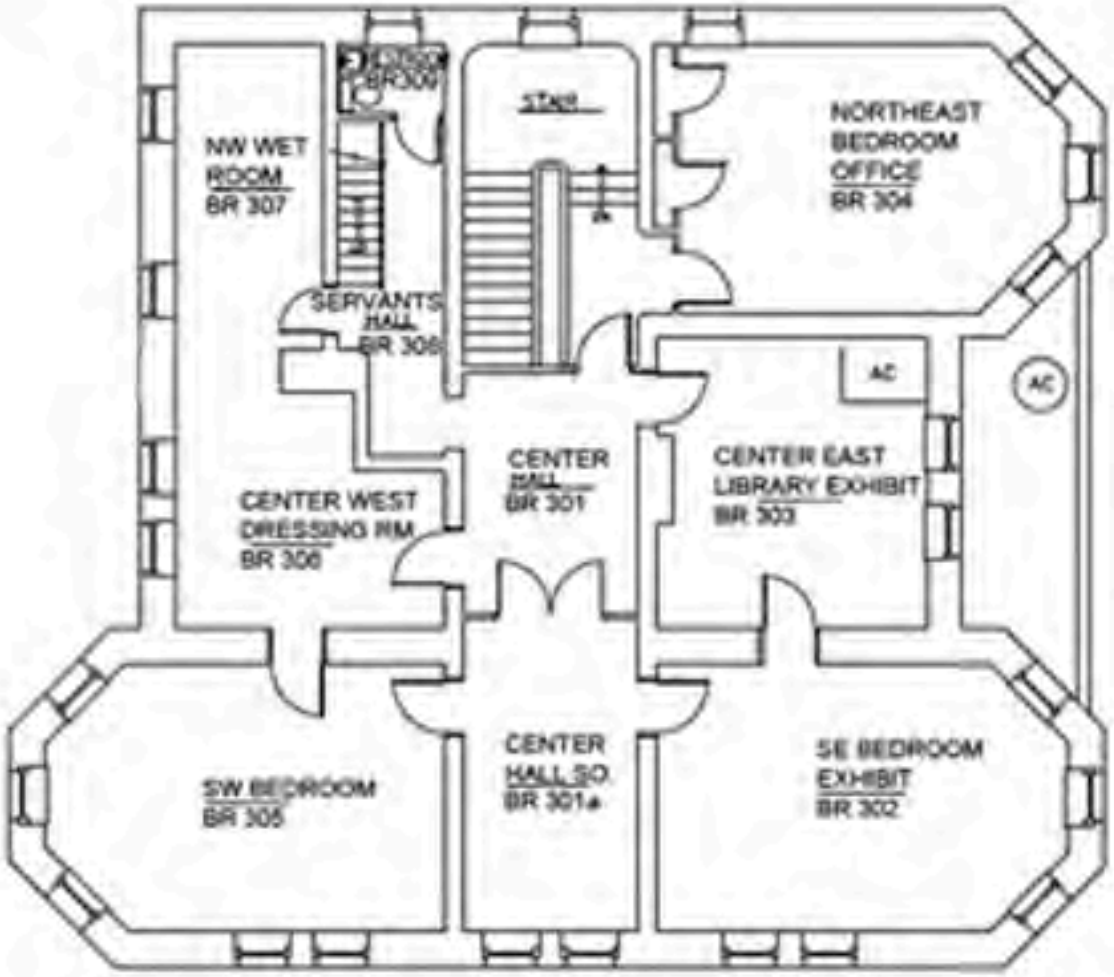



LL1 LOWER LEVEL / 1ST FLOOR
NO SCALE

## Main Level / Second Floor Plan

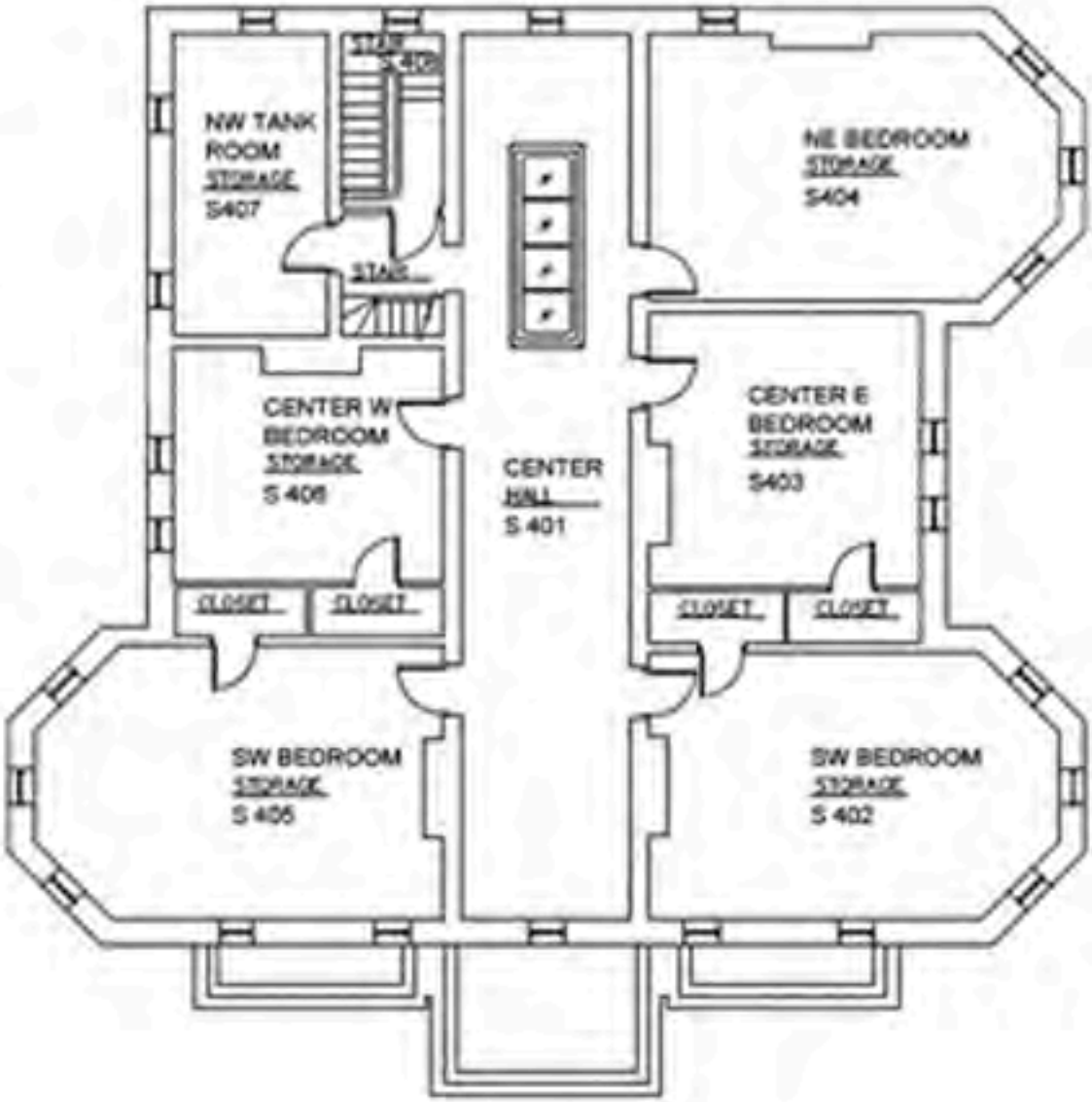


## Bedroom Level / Third Floor Plan




BR3 BEDROOM LEVEL / 3RD FLOOR
NO SCALE 

## Servant's Level / Fourth Floor Plan




S4 SERVANT'S LEVEL - 4TH FLOOR

NO SCALE 

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- Contest for Sheriff of La Salle County, Illinois: article found in Ottawa Free Trader, 31 July 1840
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- Mrs. Eliza Reddick Obituary - Ottawa Free Trader, 14 Jul 1883, Pg. 5
- Miss Elizabeth Burrier Funk Petition for Name Change - County Court Document, 13 Mar 1884
- Signature of William Reddick from his Will, 21 Jun 1884, Pg. 14 (Image)
- Will of William Reddick, 21 Jun 1884
- Cover Sheet of William Reddick Funeral Program, 11 Mar 1885
- Annotated Copy of Probated Will of William Reddick, 17 Mar 1885
- William Reddick Obituary - Ottawa Free Trader, 21 Mar 1885, Pg. 2 (Original Page Layout)
- William Reddick Obituary - Ottawa Free Trader, 21 Mar 1885, Pg. 2 (Single Column Layout)
- William Reddick Obituary - Ottawa Free Trader, 21 Mar 1885, Pg. 2 CLICK IMAGE ITEM -
- Inventory of Real Estate, William Reddick Estate Probate, 1885
- Inventory of Personal Property, William Reddick Estate Probate, 1885
- Inventory of Notes and Accounts Due the Estate of William Reddick, Probate 1885
- Supplementary Inventory of Notes and Accounts Due the Estate of William Reddick, Probate 1885
- Supplementary Inventory of Real and Personal Property, William Reddick Probate, 1885
- Inventory of Property Entitled to Miss Elizabeth Funk Reddick, WR Probate, 1885
- Inventory of Property Bequeathed and Transferred to Miss Elizabeth Funk Reddick, WR Probate, 1885
- Photo of Elizabeth Funk Reddick in Front of Reddick Mansion (Image)
- Miss Elizabeth Funk Reddick Obituary - Ottawa Free Trader, 26 Feb 1887, Pg. 5
- Miss Elizabeth Funk Reddick Probate, 1887 - Statement of Cash Assets, 19 May 1887
- Miss Elizabeth Funk Reddick Probate, 1887 - Statement of Real Estate Assets
- Miss Elizabeth Funk Reddick Probate, 1887 - Statement of Personal Property

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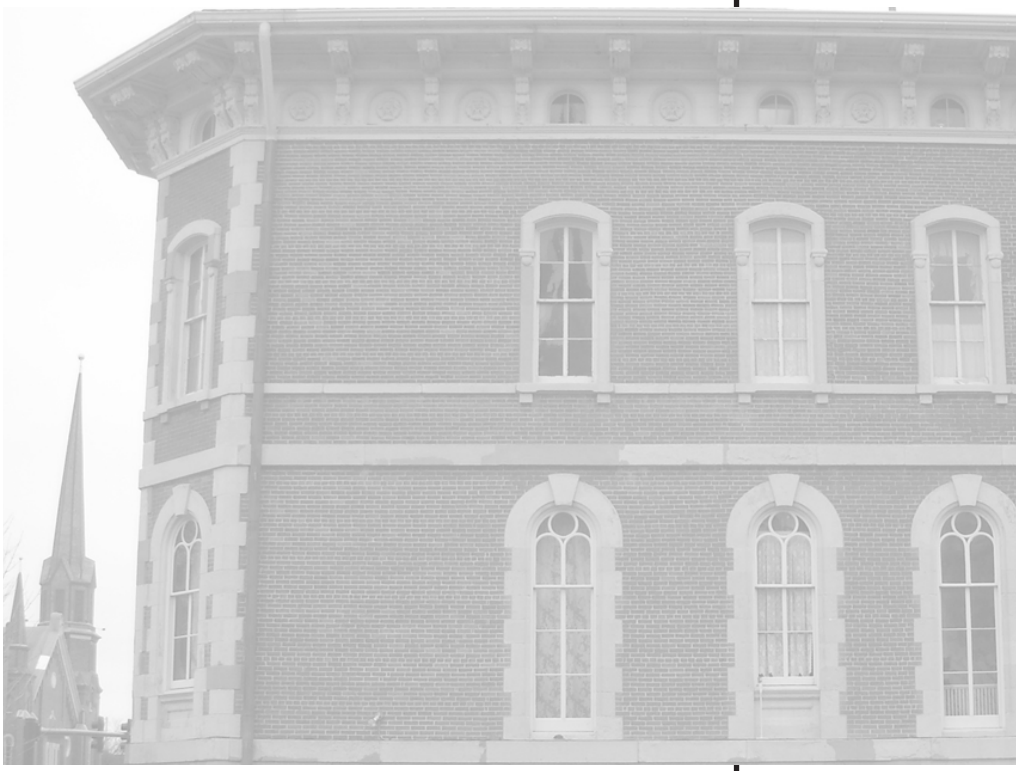
# REDDICK MANSION ASSOCIATION



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