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Charles G. Calder House Rehabilitation Plan

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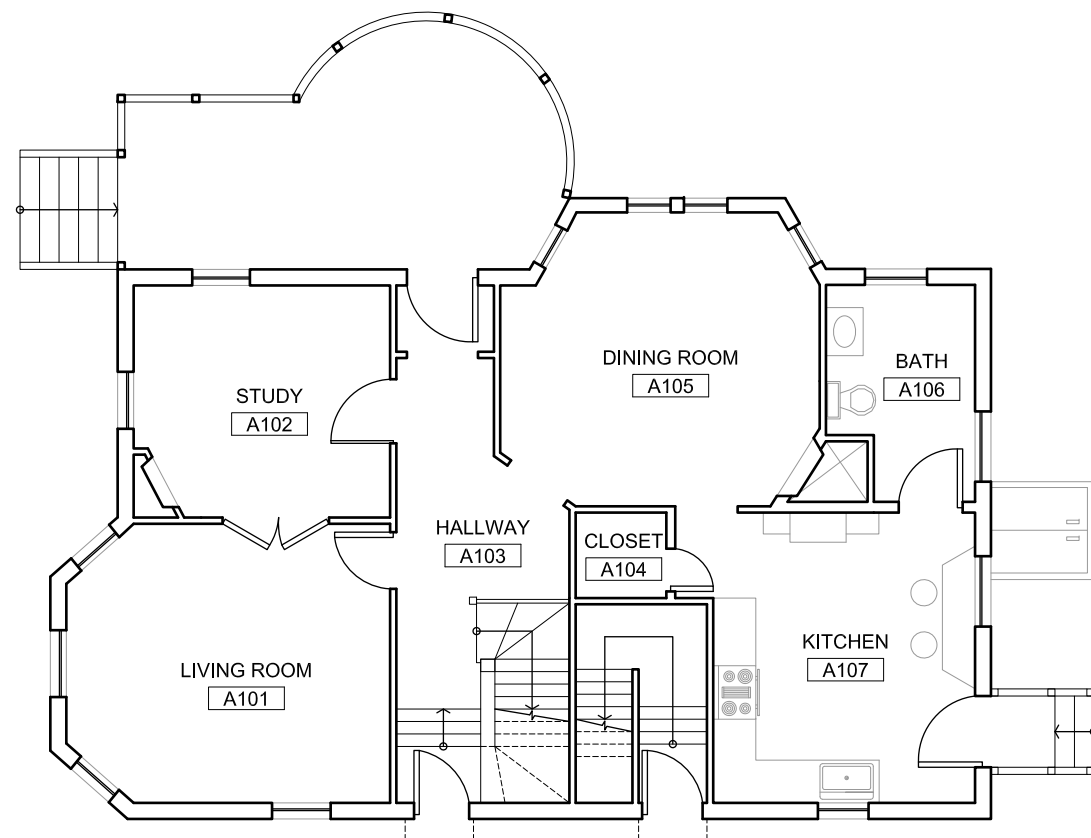
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Charles G. Calder House Rehabilitation Plan

22 Whitmarsh Street | Providence | RI

Community Partner: Providence Revolving Fund

Academic Partner: School of Architecture, Art and Historic Preservation

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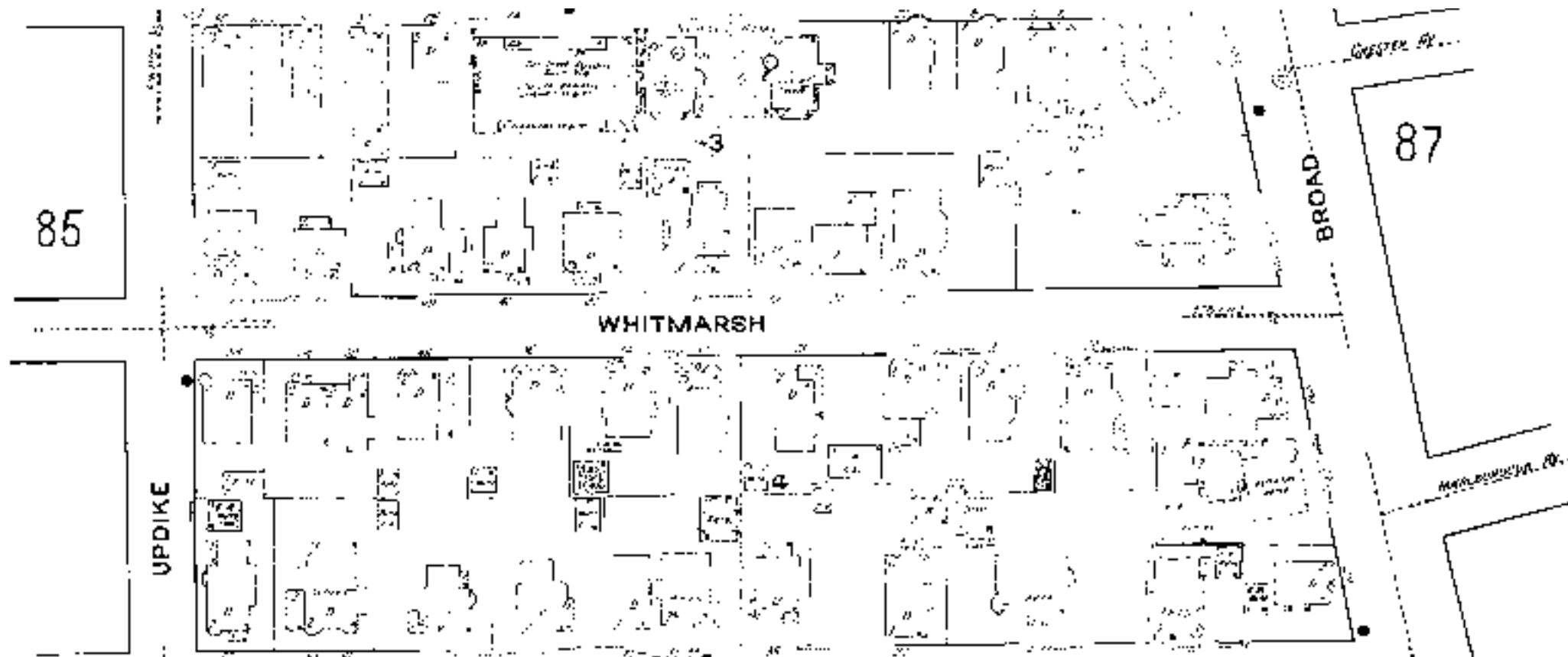


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Course: HP681L

Professor: Arnold Robinson

Student Team: Benjamin Bergenholtz | Valerie Farm | Dustin Powell

Martine Rousseau | Jonathan Shea | Alison Talbot

Introduction

Executive Summary



The Charles G. Calder House is located in the North Elmwood Historic District of Providence, a neighborhood composed primarily of houses built largely between 1860 and 1920. This particular house was built in 1886 in the Queen Anne style by Charles G. Calder, a prominent merchant who owned an artist supply store and was deeply involved in Providence’s artistic community.

The ownership of the house changed during the 2008 real estate crisis and the house was vacated by all residents. The building has been empty for some time and is currently owned by the Providence Revolving Fund, a non-profit organization with a mission to *“preserve Providence’s architectural heritage and stimulate community revitalization through advocacy, lending, technical assistance, and development in historic areas. This is accomplished by: partnering with neighborhoods and community-based organizations; retaining and developing affordable housing; collaborating with others to preserve and develop real estate; and serving as a catalyst for public*

and private investment.” The Revolving Fund plans to rehabilitate the building in keeping with its historic character.

The Roger Williams University (RWU) Community Partnerships Center (CPC) formed a project partnership with the Providence Revolving Fund in the fall of 2011 to explore rehabilitation design options and the creation of an integrated construction plan for the Charles G. Calder House. A team of students and faculty from RWU’s School of Architecture, Art and Historic Preservation analyzed the existing conditions and used their knowledge of architecture and historic preservation to prepare a rehabilitation plan to allow reuse of the building for housing while conforming to all applicable historic preservation guidelines and regulations. The project allowed the students to apply their training while receiving hands-on learning and provided project-based assistance to the Providence Revolving Fund and the Elmwood community.

Methodology

On-Site | Off-Site Research

The team’s work on the Calder House was organized around a sequence of course assignments that approximated the standard approach used by design and preservation professionals planning for the rehabilitation of an historic structure. Under the guidance of course instructor Arnold Robinson, the student team of Benjamin Bergenholtz, Valerie Fram, Dustin Powell, Martine Rousseau, Jonathan Shea and Alison Talbot completed the full assessment and rehabilitation plan.

Site Investigation and Existing Conditions Documentation: Members of the team visited the site on several occasions to sketch and measure the floor plans and elevations and to thoroughly document the interior and exterior conditions in digital photographs and notes. The results of the investigation into visible conditions of the site were used by CPC student staff member Esteban Varas to create scaled floor plans and elevations in Auto-CAD. An existing conditions report was then completed.

Historical Research: Some team members were assigned the task of researching the history of the structure through available public records, primar-

ily at the Providence City Archives and the Rhode Island Historical Society. The results of this research informed the rehabilitation design. A statement of significance and an architectural description were then completed.

Program Development: The Providence Revolving Fund participated in site visits and discussion about the future use of the building. For the purposes of the project, the rehabilitation plan accommodates a reuse of the house as a two-family dwelling, with the first two floors used by the owner and the third floor (attic unit) as a rental unit with separate entrance and systems.

Rehabilitation Plan: Based on the observed conditions and the results of the historical research, the team identified the character-defining features of the building and applicable regulations, such as the Providence Historic District Commission and building/fire codes. Then the team created a prioritized list of the rehabilitation work items and formulated the overall scope of work that would result in a rehabilitated Calder House. The project included the entire exterior and the first, second,

and third floors of the interior of the house (the basement and the surrounding grounds were not included in the plan). The final version of the plan was edited by CPC Director Arnold Robinson and CPC Graduate Assistant Christopher Winkler.

Key elements of the Rehabilitation Plan include:

- Written description of all rehabilitation work items, organized using the Construction Specifications Institute’s (CSI) MasterFormat system,
- Final rehabilitation drawings with annotations for rehabilitation work items,
- Specifications for the most important rehabilitation work items, formatted in accordance with the CSI MasterFormat protocols,
- Draft application for Federal Historic Preservation Tax Credit,
- Final Rehabilitation Plan document.



1. Students of the HP681L class present their research

History

Architectural Significance

The Calder House is located at 22 Whitmarsh Street in the Elmwood Historic District of Providence, Rhode Island. The Elmwood District is listed on the National Register of Historic Places and is also under the jurisdiction of the Providence Historic District Commission. The area was developed predominantly between 1860 and 1920 and features a broad range of Victorian and early 20th century architectural styles. The area served as an early suburb for Providence’s expanding middle and upper-middle classes. The house is located on the eastern edge of Whitmarsh Street and is close to Broad Street, a significant commercial corridor which developed in the mid-20th century.

The house was built in 1886 by Charles G. Calder, a married businessman who owned an arts supply store in Providence on Westminster Street. It is likely that Mr. Calder followed the trend of Providence’s growing middle class to move to the growing Elmwood area. Mr. Calder chose to build his house in the Queen Anne style, a fashionable deci-

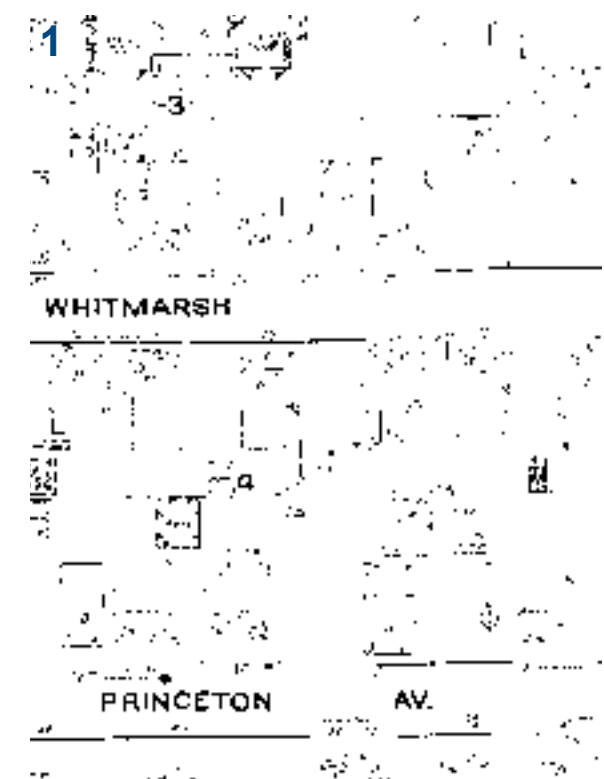
sion which lent itself to the character of the Victorian era. Mr. Calder was a member of the Providence Art Club and provided art supplies during a time when the arts flourished in Providence. It also appears Mr. Calder was not only a supplier to artists, but was also a collector and dealer in works of fine art. He was also a member of the Rhode Island Philatelic Society and was noted to have had a stamp collection “of merit.”

Little is known about subsequent residents after the Calder ownership of 22 Whitmarsh Street. The Sanborn Fire Insurance Company map of the area from 1889 shows a large semi-circular porch located on the eastern side of the house. The existing porch is of a smaller, square design; an alteration possibly made to accommodate a driveway which leads to a cinder block garage (built circa 1920) at the rear of the lot.

Major alterations were done to the interior of the house in the 2000’s shortly before the collapse of

the real estate market. The owner’s plans were to turn the house into a three unit building. While significant interior demolition took place, the work was not completed, leaving the building in poor condition. The house has remained vacant for three years and is currently owned by the Providence Revolving Fund.

The Charles G. Calder house is significant for its contribution to the overall historical context of the Elmwood Historic District and for its connection to the life of a significant figure in Providence’s artistic history. Despite its poor condition, the house maintains its architectural integrity and is an important element in the historic Whitmarsh Street fabric.



1. Sanborn Fire Insurance Company map

Existing Conditions

Exterior

Location: The building is the easternmost house on Whitmarsh Street and the first residential building encountered as one enters the neighborhood from Broad Street. To the east is a parking lot and to the west are blocks of residential structures.

Site: The house is located at the very northern edge of its lot, with only a very small (3 foot) setback from the sidewalk. There is an asphalt driveway located to the east of the house and a small alley with concrete walkway to the west. To the south of the house is a grassy yard. In the southeastern corner of the lot is a single-car garage built of cinderblock with a gable roof.

Building: The house is a two and one-half story, cross-gabled structure of wood construction. The building sits atop a brick foundation, clad in shingles and clapboard. The main entrance on the east elevation is accessed via a single-story porch. Many structural and decorative elements on both the interior and the exterior of the house have been altered or have suffered from lack of maintenance. Specific elements and their condition include:

Drainage: The main drainage system for the house is a combination wood and aluminum gutter system.

The existing aluminum gutter system appears to be in excellent condition except where missing. Further inspection is needed for the wooden gutter. There appears to be separation between the wooden components. Additionally, all downspouts are connected except for on the porch and in the northwest corner of the house.

Foundation: The primary foundation for the house is constructed of brick, which has been painted in most areas. There is minor spalling on the brick throughout the foundation, but most of the brick has been protected by the paint and is in good condition.

The mortar in many areas of the foundation is either highly deteriorated or missing. Several basement windows are missing. There is significant damage to the foundation at the northwest corner due to the missing downspout and resulting water/freezing damage.

In recent years, a partially constructed concrete block bulkhead has been added to the foundation. This has resulted in a haphazard removal and reconstruction that appears to be structurally inadequate.



- 1. South elevation
- 2. East elevation
- 3. Brick foundation

Roof: The main roof of the house is sheathed in asphalt shingles, appears to have been recently installed, and is in sound condition. The porch roof is constructed of wood sheathing and has asphalt shingling over earlier wooden shingles. The porch roof's fascia and soffit are badly rotted leaving the rafter ends exposed.

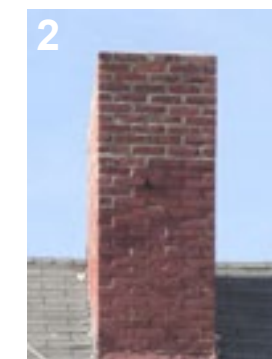
Chimneys: Two chimneys are located at the north and south ends of the roof ridge. The southern chimney has been painted red and improperly repointed. The mortar is deteriorated and is in need of being repointed. Many of the bricks are no longer in line with the coursing of the rest of the bricks, and associated flashing is warped and partially painted. The northern chimney exhibits two campaigns of inferior mortar repointing, the lead flashing is warped, and the entire chimney is coated in a layer of red paint.

Exterior Walls: The exterior walls are clad with three different materials: clapboard, cedar shingles, and vertical aluminum siding (in weatherboard pattern). The clapboard is restricted to the first floor level. While many of the clapboards are in sound

condition, the non-galvanized screws used to install them are rusting, especially below windows. Some of the clapboard is splitting and experiencing rot around the fasteners due to water saturation on the western side of the house.

On the southern elevation of the house a "ghost" of a previous addition (with subsequent replacement clapboard) is evident. Additionally, some of the clapboard has been removed due to the addition of the bulkhead. Wooden corner boards, band boards, and the water table are in relatively good condition except for the area in the building's northwest corner where a missing downspout is saturating this area.

The top one and half stories of the house are clad in cedar shingles. The dominant shingles are coursed, staggered, and saw-tooth in style at the second floor level. Courses of staggered shingles are on the top half-story. Courses of saw-tooth shingles accent the bottom rows on both stories. On the eastern elevation the polygon bay is clad in shingles.



- 1. East elevation
- 2. North chimney and south chimney
- 3. Shingle siding

In general, the shingles are in relatively good condition. Damage is limited to single or missing shingles. Shabby appearance is mostly due to a lack of paint. The shingles in the worst condition are above the porch, where water has been splashing back onto the lower rows of shingles, and the eastern bay, where exposure has caused the shingles to warp.

Porch: While the house originally had a large semi-circular porch located on the eastern side of the house, at some point this appears to have been removed and the existing porch added. The existing porch is of a smaller, square design with a clapboard skirt, square columns and a simple shed roof. The porch roof is in poor condition, with no functional gutters or downspouts. The deck is in fair condition and the lattice-work skirting below the porch at the foundation level is in good condition.

Exterior Doors: There are four doorways on the exterior of the house, and all of them are on the first story. The one door on the east wall and two on the west are in relatively good condition for their age. The eastern door is the main way of ingress/egress. It needs minor repairs, to be refinished, and to have its glass replaced. The two western doors are cur-

rently secured shut with nails and have no hardware. They have been protected by bracketed shed roofs. The door on the southern wall is boarded up and missing much of its framing. There is a possibility that it was not originally a door but actually a window. Further investigation is required.

Windows: The building has a total of thirty-eight windows, of which thirteen are missing sash and boarded up with plywood. There are seven basement windows in total and all are missing and the openings are boarded with plywood. Several window sash on the first, second and third floors are missing and the openings boarded with plywood. The remaining sash are undecorated, vinyl replacements in fair to poor condition, however most window framing is in relatively good condition.

A photograph from the mid-1970s shows that the windows for the first, second and third floors were originally wood sash with multiple panes in the upper sash and single panes in the lower sash. This was a typical configuration for a house designed in the Queen Anne style.



- 1. Northwest corner
- 2. East elevation porch
- 3. Photo from 1970's

Existing Conditions cont.

Interior

Floors: The conditions of the floors vary from moderately good to fair throughout the house. The floors are heavily scuffed and removal of the original heating system, including the radiators, has resulted in holes in both the floors and ceilings. The addition and removal of interior walls, as well as carpeting and floor tiles, has resulted in a confusing layering of floor boards and floor treatments. Most of the damage is cosmetic (not structural) and therefore most of the floors will only require patching, sanding, cleaning and refinishing. Some floors will require complete installation of new flooring layers over existing sub-flooring.

Ceilings: The ceilings of all three floors are in good condition. Ceiling plaster that was in poor condition has already been removed throughout or marked for removal, as is the case on the third floor. Certain ceilings do require patching and refinishing but not removal. The most prevalent damage has been caused by the removal of wall plaster and framing, which has resulted in cracking and deterioration at the wall-ceiling junctures. Due to moisture, exposure, and lack of climate control, the paint is failing on many ceilings.

Interior Walls: The interior walls of the house are in poor condition. Much of the plaster has been removed as well as the lathe in many locations. Where the plaster is still present it is cracked or has been damaged due to the removal of the radiator system, the installation of the electric system, and the movement of other interior walls. Due to moisture, exposure, and lack of climate control, the paint is failing on many walls.

Interior Staircases: There are two stairwells that are intended to allow the residents of the first and second floors to have a separate entrance from the residents of the third floor. The main stairwell (the northernmost) connecting the first and second floors has flat panel wainscoting, spool-turned balusters, simple banisters, and decorative newel posts. The design of the wainscoting and newel cap are similar to the first-floor fireplace mantels. The southern stairwell that leads to the third floor has beadboard wainscoting and has solid interior walls instead of a banister-baluster layout.

Interior Doors: The openings for the interior doors are in different states of repair: in some areas

all frames and trim are completely missing, in some locations framing has been installed and in other areas original materials are still intact. Multiple displaced doors and trim elements were found in the first-floor dining room.

Fireplaces and Mantles: There are three fireplaces, two on the first floor and one on the second floor. The two on the first floor are in excellent condition, except for the study fireplace surround which is missing its glazing above the mantle. The fireplace on the second floor is in poor condition. Its mantel and tile surround are existing but have been damaged and removed. The wall surrounding the fireplace and chimney has also been removed.

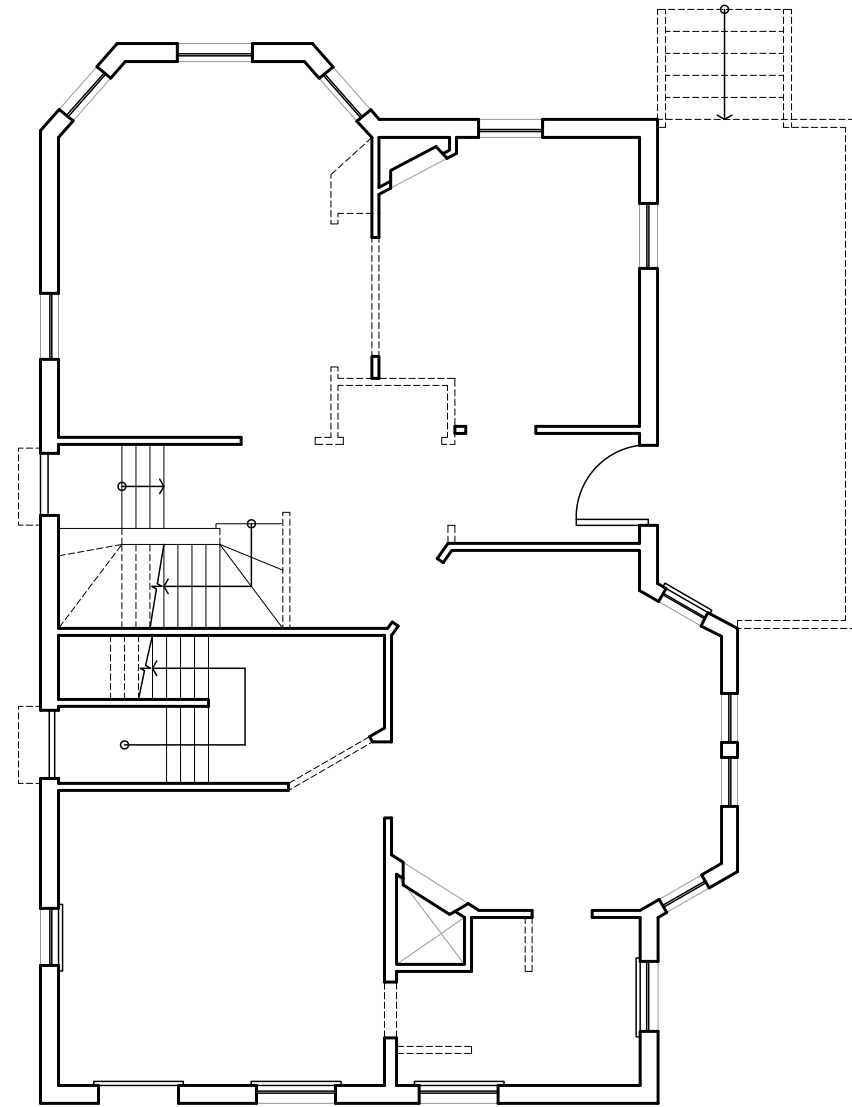
Systems: During the recent alternations to the house, the electrical system was removed in most of the rooms that also had the plaster and lathe removed. The waste system is intact and runs to the basement from every floor but does not attach to any fixtures as all toilets, sinks and showers have been removed. There is no heating or cooling system in the house at this time.



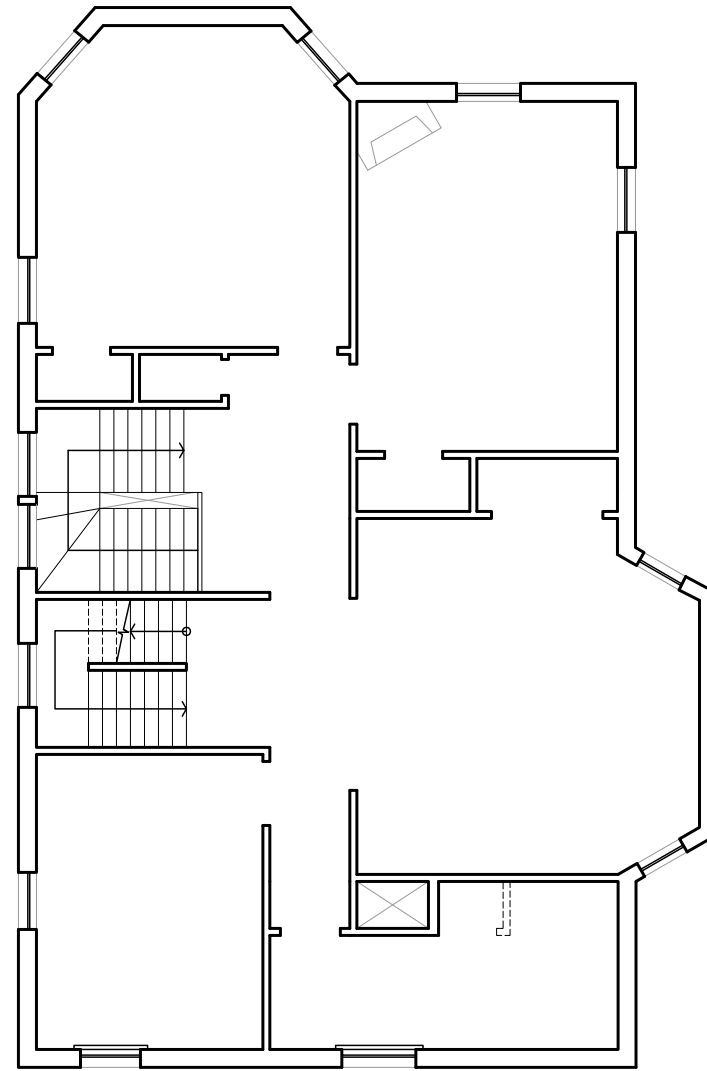
1. Interior bedroom ceiling



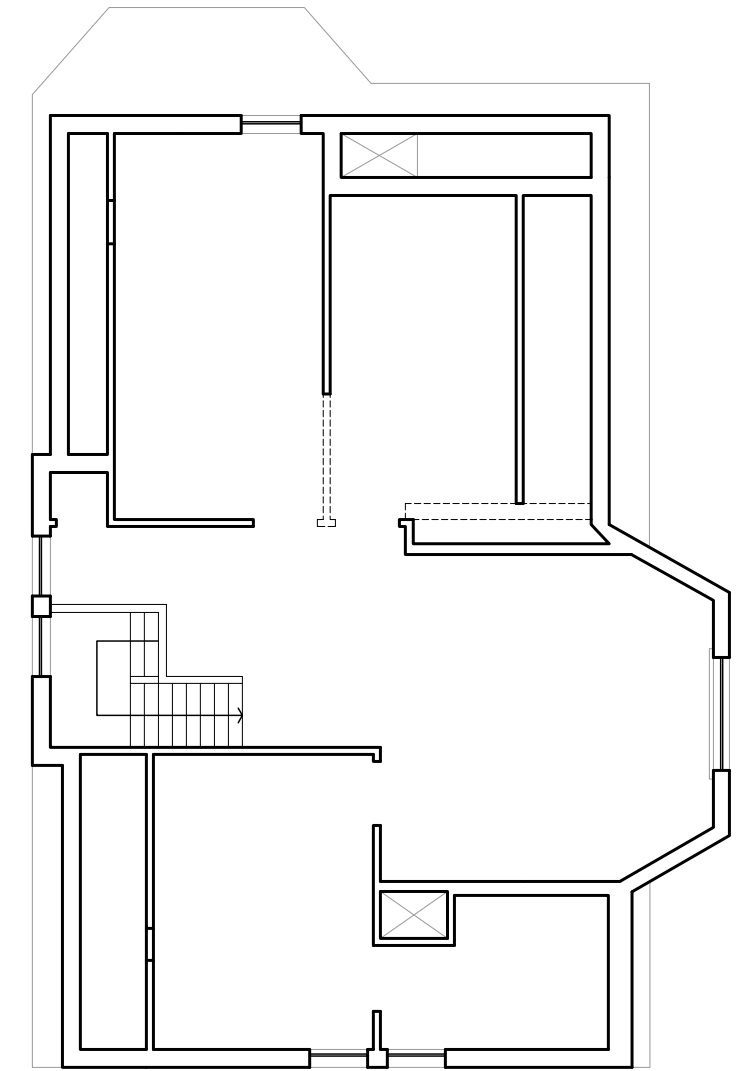
2. Interior floor condition



Level 1



Level 2



Level 3

----- | c. 2008 Wall

Existing Floor Plans

Scale 1/8" : 1'-0"



Existing Elevations

Scale 1/8" : 1'-0"

Rehabilitation Plan

Interior Scope of Work

Selective Interior Demolition: Remove all new construction to re-open and restore original layout to the first floor (reference demolition plans).

Removal and Salvage of Historic Construction Materials: Take an inventory of current historic finish casework and determine if feasible to re-install when appropriate.

Historic Treatment of Decorative Metal: Reassemble and gently clean cast iron with appropriate chemicals. Paint with appropriate paint.

Finish Carpentry Restoration: Patch painted finish work where necessary. On the main staircase, repair panels with similar wood. Reattach spindles and rail on second floor. Using existing evidence found at the site as a guide, new trim of similar proportions and design will be added to the structure's interiors to replace missing materials.

Architectural Woodwork Cleaning: Gently clean all finish woodwork with TSP per manufacturer's instructions. Sand woodwork where painted to a smooth finish. Remove wax build-up on stained surfaces and polish stained woodwork with wax.

Miscellaneous Rough Carpentry: Rebuild walls and doorframe openings (reference proposed plans) within current code guidelines.

Flooring Restoration: Floors will be gently cleaned with an appropriate cleaner to remove wax build-up and dirt. Losses in the flooring will be patched with the same type of wood and stained to match existing floor color. Floors will be waxed and buffed.

Interior Painting: Upon completion and proper drying time of new plaster, sand all walls to an even smooth surface and apply base coat followed by Linen White paint by Benjamin Moore (flat) on all wall surfaces. Ceilings are all to be painted a flat Ceiling White by Benjamin Moore. Woodwork that has been painted in the past (not stained) is all to receive semi-gloss Bright White paint by Benjamin Moore. No less than two coats throughout on all painted surfaces.

Lime-Based Plastering: Thoroughly soak existing lath before applying new base coat of plaster, repair all holes to existing plaster. Complete with new finish-coat over existing plaster and new blueboard to create overall even uninterrupted surface. Com-

plete the same on all ceilings.

Backing Boards and Underlayment: All walls without plaster work shall have blueboard installed using manufacturer's instructions and proper screws. Maintain existing woodwork's reveals.

Mortar-Bed Ceramic Tiling: Subfloors in the two kitchens and three bathrooms shall be tiled with ceramic tiles.

Sheet Carpeting: All flooring in bedrooms and hallways on the second-floor shall be cleaned with appropriate floor cleaners per the manufacturer's instructions. Prime residential sheet carpeting shall be selected and installed on top of a bonded urethane foam pad. Colors and texture shall be approved prior to installation. On the third floor, all existing flooring shall be cleaned with appropriate floor cleaners per the manufacturers' instructions. Prime residential sheet carpeting shall be selected and installed on top of a bonded urethane foam pad throughout the third floor excluding kitchen and bathroom.

Rehabilitation Plan cont.

Exterior Scope of Work

Unit Masonry Restoration: Bricks will be gently brushed and cleaned. Joints will be repaired to match existing mortar where mortar has eroded or cracked. Deteriorated bricks or bricks with cracks of greater than 1/2" will be replaced with bricks of similar size and color.

Refractory Brick Masonry: Old mortar will be removed to a minimum depth of 2 to 2-1/2 times the width of the joint to ensure an adequate bond and to prevent mortar "pop outs." Any loose or disintegrated mortar beyond the minimum depth will also be removed. New mortar for repointing will be compatible to the existing mortar and condition of the bricks. New mortar will match color of existing. Chimneys will be re-lined.

Wood Floor Decking: Replace wood floor decking and stairs on front porch with 3" wide hardwood spaces not more than 1/16" apart.

Exterior Finish Carpentry: Replace front stairs per architectural plans.

Exterior Architectural Woodwork: Using existing evidence found at the site as a guide, new trim of similar proportions and design will be added to the structure's exterior.

Blown Insulation: Apply fiberglass blow insulation throughout structure (walls and ceilings and on all three floors) using a blow machine approved for such application. All insulations must meet the

minimum R-value required by the state and or city and be approved for residential use.

Asphalt Roof Shingles: Replace asphalt shingles on the porch roof to match the main roof in style and color.

Wood Siding: Areas of failure greater than three inches will be identified, removed, and replaced with in-kind material. Decorative shingles (featuring saw-tooth design) which are curling or missing will be removed and replaced with in-kind material and of the same design feature. Nails currently protruding to the surface will be sunk and screws added shall be removed and replaced with correct exterior siding nails. Areas of failure of less than three inches will be patched with substrate material per manufacturer's instructions.

Manufactured Gutters and Downspouts: All gutters and downspouts currently on the structure shall be removed and discarded. New gutters and downspouts of aluminum shall be installed where appropriate.

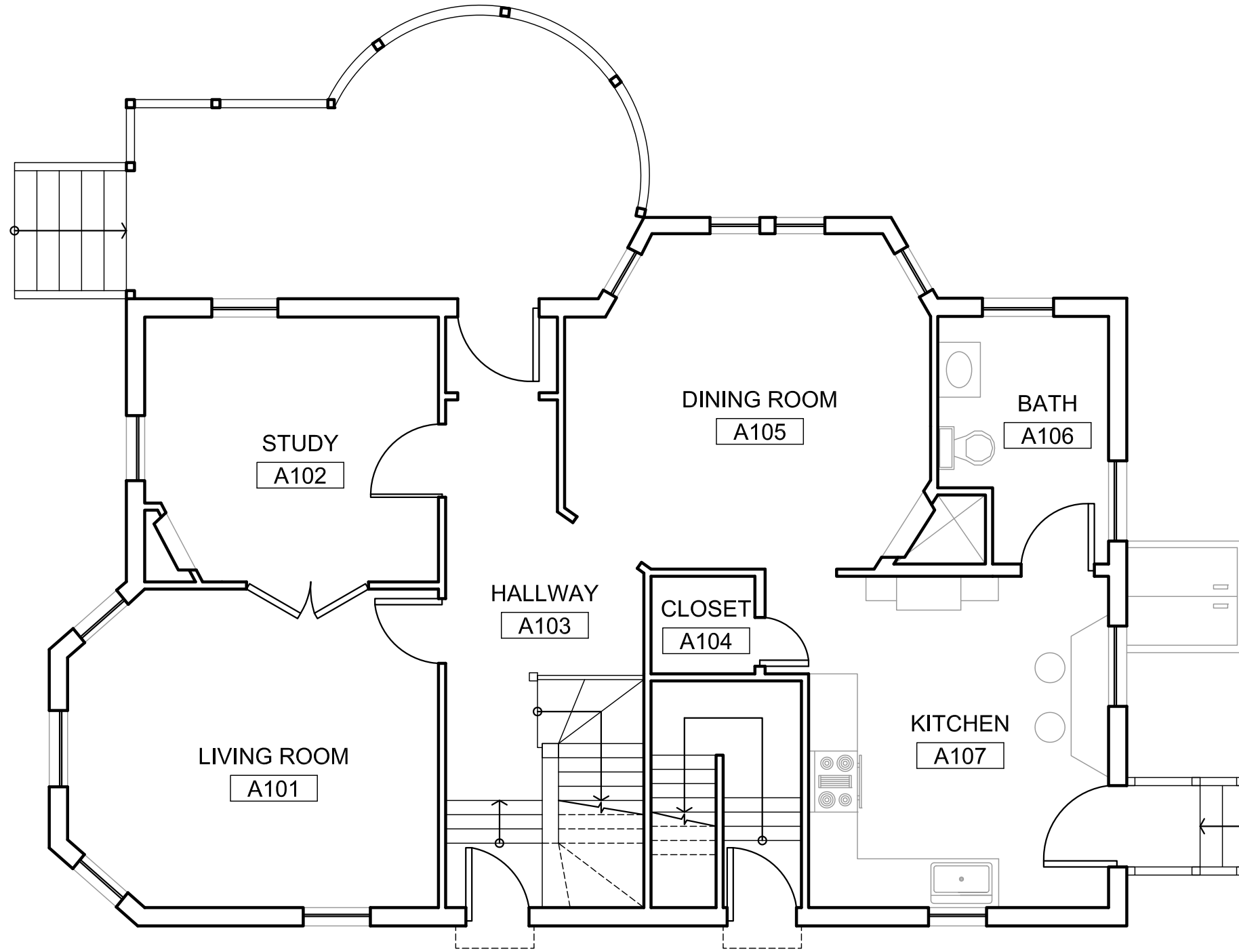
Operation and Maintenance of Metal-Framed Skylights: Remove existing skylight and replace with new skylight of the same size as the old. Skylight shall be as energy efficient as possible and operable.

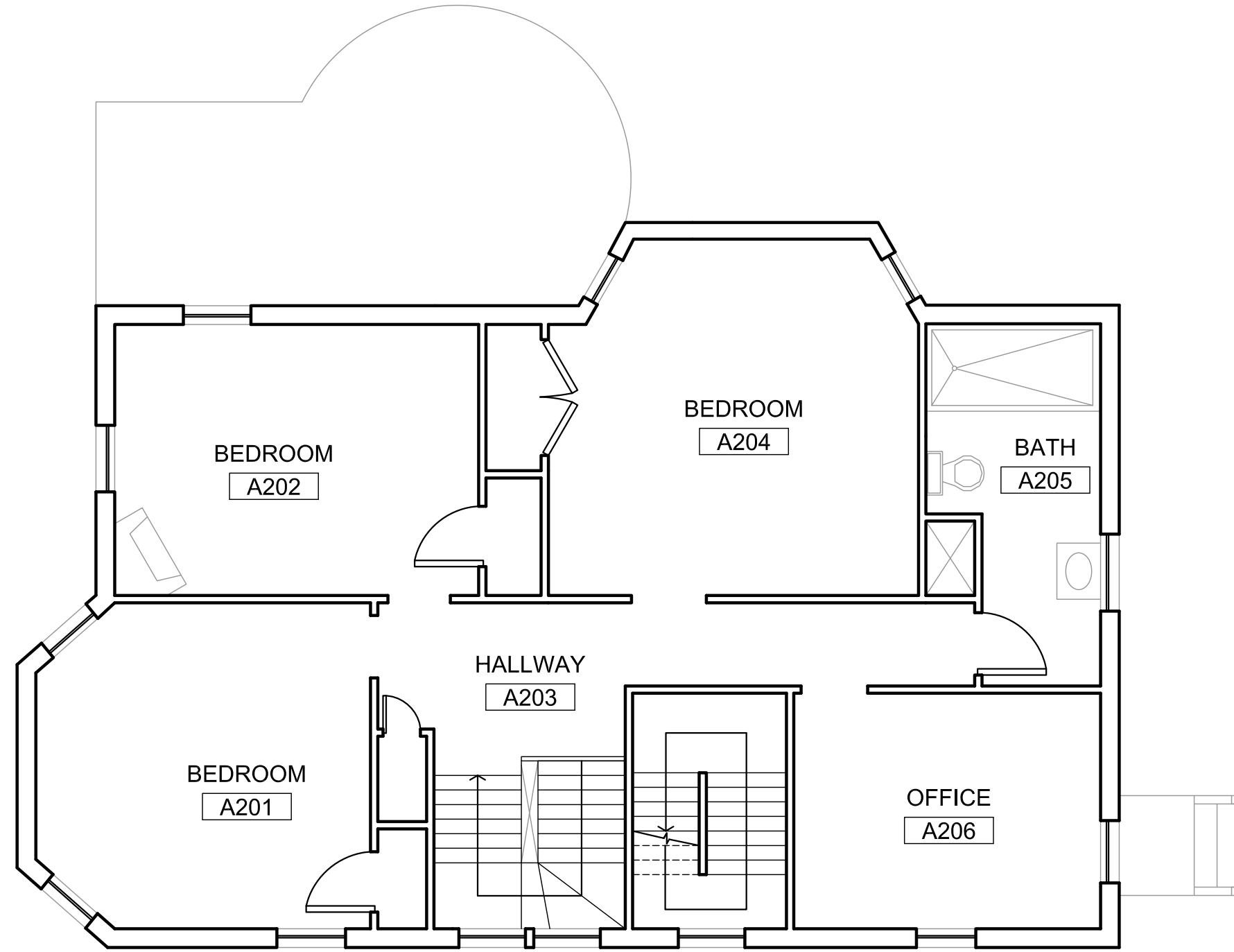
Wood Doors: The front door will be removed, washed, scraped, sanded, repainted or stained, and

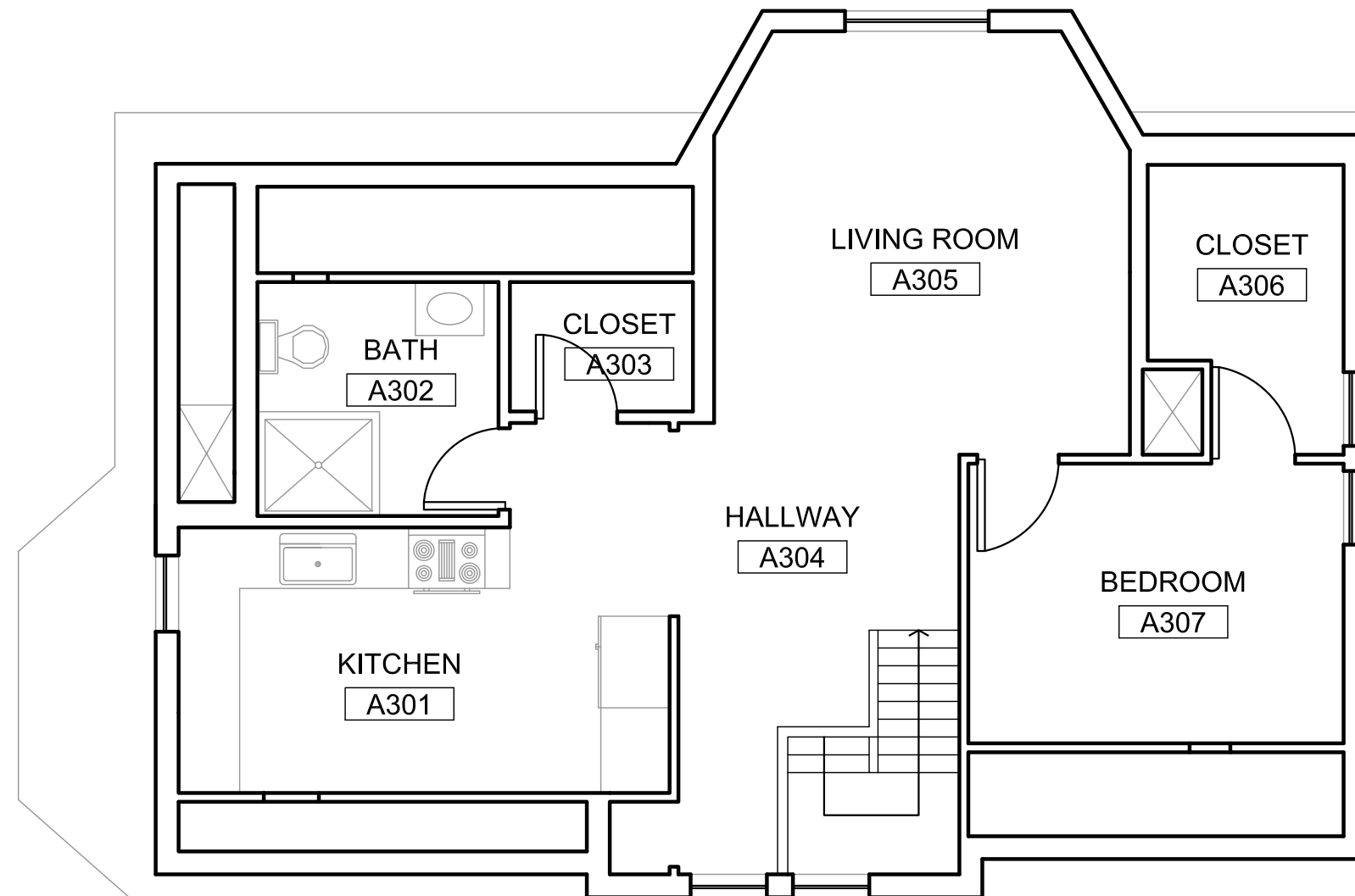
rehung. The missing window from the front door will be added (plate glass). Original front door hardware will be cleaned, polished, and made operable or if this is not feasibly, appropriate hardware shall be selected and installed. Using the front door and existing doors found at the site as a guide, all new wood doors of similar proportions and design will be manufactured and added to the structure's interior and three exterior doors (excluding the original front).

Metal-Clad Wood Windows: All original patterns of the openings and their sizes (1886) will remain the same. All existing windows shall be removed and replaced with six-over-one sash metal-clad wood windows and will match selected and approved proportions of the frame and sash; configuration of window panes and muntin profiles. All replacement windows will be made as energy efficient as possible by the use of appropriate weather stripping to reduce air infiltration.

Exterior Painting: Siding will be washed to remove dirt with a diluted bleach mixture and then scraped and sanded. A primer will be added to the prepared siding per manufacturer's instructions. Not less than two coats of finish paint shall be added after the primer has dried. Colors not exceeding five different colors shall be selected and approved prior to application.







Conclusions

Final Remarks

This report is the culmination of a semesters worth of work of the students, faculty and staff involved in the RWU Community Partnerships Center. The process and work products will hopefully inform the work of the Providence Revolving Fund as it moves forward with the rehabilitation of the Charles G. Calder House. The process has also pro-

vided the students of RWU, in particular the team of students from HP681L who led this project (Benjamin Bergeholtz, Valerie Fram, Dustin Powell, Martine Rousseau, Jonathan Shea and Alison Talbot) with a valuable experience in the historic rehabilitation process, furthering their training as historic preservationists and architects.



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