Rehabilitation of the Old Naval Hospital

A Technical Report

by the

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Main (South) Facade

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Executive Summary

Introduction

The Friends of the Old Naval Hospital undertook this technical report on the restoration of the Old Naval Hospital after conversations with the property managers, the Office of Property Management of the District of Columbia (OPM), in order to provide some much needed technical background to understand the requirements for properly restoring the historic building.

The Old Naval Hospital is located at 921 Pennsylvania Ave. SE (although some would argue that the correct address should be 921 E Street SE) bordered by Pennsylvania Ave. on the north, Ninth Street on the west, E Street on the south and Tenth Street on the east. The property is surrounded by a historically significant iron fence and has two buildings on it–the Old Naval Hospital and the associated Carriage House, now occupied by the Community Action Group. This Carriage Building was not surveyed as part of this report.

The Office of Property Management (OPM) agreed that the building-specific information necessary to plan a restoration of the building is unavailable. They also agreed that information provided by this report, could serve as a basis for determining the direction the OPM should take in restoring and upgrading the building to prepare it for tenancy. The OPM also asked that the Friends take the lead in assessing the community desires as to the final uses of the building. That work is being done separately.

This report provides the basic information needed for preserving, protecting, restoring and renovating the building for adaptive reuse. The Friends formed the Technical Group in September 2001 and they met regularly into December 2001, doing an in depth technical analysis and survey of all the major exterior and interior elements of the structure.

Remarkably, much of the building is intact with original walls, doors, windows, fittings, stairs (inside and out), roof and brickwork, with most of it in restorable condition. In some cases, immediate work is required to stop further damage of a serious nature. This report provides priorities associated with first, safety and security, then damage control and triage and lastly, restoration and renovation.

The most immediate need is to assure that the runoff of water from the roof and building is channeled away from the building, since that is now causing serious mortar and brick damage and rising damp in the basement. The second most urgent need is to close off and restore the main exterior stairs leading to the E Street entrance. Thirdly, the roof needs to be repaired and repainted and missing slates replaced. Fourthly, after the first three are completed, the mortar from at least the first eight courses of bricks from the bottom, and the bricks directly behind the down spouts, need to be repointed.

The costs associated with getting these first four elements done (as triage) is approximately $150,000 to $200,000.

Cost Estimates

The next priority is the preservation of the entire exterior, not including the fence or the Carriage House. This will include windows, doors, metalwork, brickwork, painting and other stabilization work. The exterior will fall completely into the preservation area, as defined by the U. S. Secretary of Interior. The cost of this work is estimated to be approximately $800,000.

Interior restoration has been divided into types of restoration areas, again according to the standards as defined by the U. S. Secretary of Interior: Preservation; Rehabilitation and Alteration. The Preservation Area entails restoring the rooms back to the original state; the Rehabilitation Area entails repairing and upgrading the rooms, while being sensitive to original materials and design; and the Alteration Area entails areas which can be built out without the need for historical preservation, but done with a sensitivity to the overall historical importance of the structure.

The costs associated with each of these interior areas are mostly dependent on the final use(s) of the building. The costs for are estimated as follows: Restoration--$200,000, Rehabilitation--$175,000 and Alteration–$525,000. These estimates should be considered as conditional given that the final needs of a tenant are obviously not currently known.

In addition, costs for architectural work, environmental cleanup in the building, landscaping and restoration of the Carriage House is estimated to be $450,000. Lastly, the cost of completely dismantling the fence, restoring it and reassembling it on site again, is estimated to cost $1,000,000. While this fence restoration is considered last on the list of priorities due to its limited impact on the usability of the interior, it is considered critical and urgent to stabilize the fence due to its condition. The fence is a very fine, example of an iron fence from this period and one of the most significant and character defining features of the historic property.

This makes the cost of the entire project an estimated grand total of **$3,150,000**, not including the triage work which needs to be done immediately.

Preservation Zones

The final step in this study was to decide what needed to be restored to original condition and what did not. These decisions are presented here first, to give the reader a frame of reference for the rest of the technical report. The definitions of these areas are based on the standards provided by the U. S. Secretary of Interior.

The Technical Group divided the structure into zones for guiding the timing, design and build out for adaptive reuse of the building. All work on the structure, regardless of zone, must be documented both in written and drawing form and in photographic form to the Historic American Building Survey/Historic American Engineering Record (HABS/HAER) standards.

The plan for the preservation and rehabilitation is designed to restore examples of the major function rooms and the circulation areas, to renovate the other significant rooms for functional use and to allow alterations on parts that are less significant. Below are described the three levels of preservation zones for the Old Naval Hospital.

1. Restoration Areas

The circulation areas and the stairwell, designated as restoration zones, will keep these centrally used areas in period design and thus will appear as they did during the building's period of significance, in terms of the major architectural details and finishes.

The restoration zone designation ensures that the entry to the main entrance (south side) will also appear as it originally did by maintaining at a restored level, the first and second floors immediately encompassing the central entryway. The rooms chosen for restoration will provide examples of the various functional rooms from the original building with regard to the architectural detail and finishes.

2. Rehabilitation Areas

The rooms being renovated will be outside and next to the immediately critical areas of entryway, circulation and restoration example rooms. These rooms will contribute to the other rooms allowing designed access and use, while not undermining the basic design and character. These areas allow for the retention of features from periods in the building's history other than its period of significance and the limited and sensitive upgrading of systems and code-required work.

3. Alteration Areas

The spaces designated for alteration will allow for the modernization of the building and in specific cases, will allow for enhanced uses of the rooms and spaces. Areas such as closets, utility areas and those less likely to have been accessible or viewed by the general public are included to allow for greater flexibility in accommodating building systems and adaptive uses.

Chapter Four describes in greater detail, the content, extent and location of the Preservation Zones.

Chapter One: Exterior Elements

1. Introduction

Following is an element by element description of the Old Naval Hospital detailing the current conditions for each element, beginning with the exterior of the structure and including the interior spaces. Only the exterior (possibly including the building envelope and grounds) is listed on the National Register of Historic Places as historically significant.

The exterior of the structure should be completely restored to original condition. Most of the original elements are still in place or can be inferred from existing elements. Triage for safety and security purposes should be undertaken immediately to assure the safety of the building and to eliminate further damage.

Following is an element by element description of the exterior of the structure.

2. Element: Roof and Drainage

A. Description:

Current: The roof is Mansard in shape with circle head dormers. The steeper section of the roof is composed of shaped slate, and the flatter, hipped portion is of standing seamed ferrous metal that is painted. At the center of the roof is a stepped up flat area of roof between the four chimneys, known as a widow's walk. In between the chimneys on the east and west sides, are decorative iron pieces, that create railings. At the center of this area is a small structure which gives access down into the attic of the building. The door leading into this structure is off its hinges and the ventilation grill does not have a screen thus allowing pigeons to roost in the structure.

The gutters are built into the roof as an integrated component. There are holes in them as can be seen and as evidenced by the water stains in the cornice. The down spouts are totally rusted through and the drainage system from the areaways to the sewer is completely clogged.

The roof's internal structure is composed of wooden joists and boards that support the slate and metal.

The lightning rods and related lines are still extant.

Original: The original roof configuration remains with its integrated gutters. The building's ventilation system vented originally through openings at the area where the roof steps up, just below the widow's walk. The underlying structure (wood) is original and only lightly repaired over the years.

Lightning rods and related systems are still in place, but in need of repair.

Added: The centrally located penthouse structure was added sometime later and now serves not only as a covered egress to the roof, but also as the ventilation exit. It is unlikely that the standing seamed metal portion of the roof is original.

B. Condition:

Current: The slate on the roof is in generally good shape, with some replacement needed in specific areas where there has been exfoliation and cracking of the slate. Some slate shingles are missing. The seamed metal part of the roof seems watertight, but needs to be lightly scraped, repaired and painted. The interior of the roof is for the most part, totally dry and without problems, with only a few hints of leakage which need to be repaired. There have been some minor repairs to the interior structure over the years.

The small roofs over the doors on both the north and south entrances are in generally fair shape.

The widow's walk (doghouse) needs to be removed and the roof and ventilation enclosed and reconstructed according to the original design.

The gutters have pinholes as evidenced by leakage stains.

The down spouts and drainage are severely deteriorated and non-functioning.

The lightning rod system appears to be intact, but needs to be reinstalled.

Original: As above.

Added: The widow's walk 'doghouse' structure needs repair or removal. Some determination as to whether it should remain or not needs to be made. Its main function seems to be to replace the original ventilation system.

Special Considerations: None

C. Preservation Requirement:

Description: No extensive restoration is needed although the areas showing some water leakage needs to be investigated and repaired. The seamed metal roof needs to be completely cleaned and thoroughly repaired and then painted in the color of the original paint (probably a green–this must be determined by a paint analysis) with a fibrous sealant paint. For the slate part of the roof, period slate shingles must be replaced in kind.

The small roofs above the entrances on the north and south facades will also need to be repaired and restored, in accordance to the standards for the main roof.

A determination of whether to keep or dismantle the widow's walk must be made. It is probably not original, but built because the original ventilation design may not have been effective. If it is to be kept, it must be restored to period standard for the doors and ventilation and painted in the original color.

The gutters must be repaired or replaced (if necessary) to period standards. The down spouts must be replaced similarly and the drainage to the sewers opened.

Timing: Work on the drainage system must be undertaken immediately as a temporary measure to keep moisture away from the building. This consists of putting down spouts in place immediately with the outflow at least 10 feet away from the building, over the moat. This can be done with modern (eg. PCV), inexpensive materials as it will only be temporary. A rough drawing has already been presented to OPM for doing this work.

At a later date, the draining system (down spouts, gutters and pipes to sewerage), must be brought to original period by repair, restoration and/or replacement of each of the elements. The underground system must be cleaned out to clear the flow of water into the sewerage system.

The roof work should be done at an early stage in the restoration. Preliminary work on paint analysis should be started and repair of the seamed metal and repainting done at an early stage. The slate shingles which need to be replaced must be matched and therefore researched

and replaced to historic standards with care being taken to attach new shingles in a correct manner. The entire slate section must be thoroughly inspected and repaired as needed.

Special Considerations: Paint analysis must be done on the roof and for the widow's walk to determine original colors. Research on the source of the slate must be done, for spot replacement purposes.

D. Recommendation: The roof and drainage work must be done by qualified roof restoration specialists and not just a low bid roofer. The specifications must be written so that the bidder has to prove current experience and background in historic roof restoration of this period with at least five examples of similar work in the last seven years. In addition, the bird droppings and other loose materials must also be removed and screens installed to prevent bird penetration under the roof.

The roof work should be done in the first stages of restoration of the exterior. Without good water drainage, the work on the bricks, mortar, painting, windows, doors and other outside work is put in jeopardy by water damage.

All work must be documented in written form and photographed before and after restoration for archival and historical purposes by the contractor.

Blocked Vents

Inside Chimney

Roof and Dormers

Chimney and Metal Roof

2. Element: Outside Doors

A. Description:

Current: There are seven outside doors composed of four distinct types: Type A (1)–Two panel double door with rondels and sidelights which are two pairs of double-hung windows, one over the other, and transom; Type B (1)–Six panel double door with sidelights which are two double-hung windows, one over the other, and a transom; Type C (2)--Segmented arched four panel door with the top two panels glass; Type D (2)–Segmented arched casing, two panel double door with sidelights that are casement windows, and transom. One door is gone and replaced by a plank door.

Original: The Type A door (upstairs door on south elevation), Type B door (upstairs door on north elevation), Type C doors (on east and west elevations), and Type D door (basement on north elevation) are all possibly original.

Added: The replacement door is on the basement level on the northeast side.

B. Condition:

Current: The four types of (original) doors described above are all in generally restorable shape. Hardware has to be replaced and restored. The side lights are period, even though they are unusual. The lost doors will have to be researched.

Original: As noted, the great majority of the door treatments are there and in good shape.

Added: The two lost doors will have to be researched and replaced.

Special Considerations: The paint probably contains lead and thus will require special handling.

C. Preservation Requirement:

Description: Type A door needs to have some of the hardware replaced and paint scraped and repainted, as well as removal and redo of previous repairs.

Type B door also needs scraping and repainting as well as having the sidelights repaired and reglazed with replacement of glass, one hinge needs to be replaced by a reproduction of the existing hinges. Research on the light over the door needs to be done for restoration. Sidelights are double hung so weights and pulleys must be restored.

Type C door on the west elevation needs to be scraped and repainted and old repairs done correctly. New glass is required and the surround needs to be repaired. The inside condition is good. On the Type C door on the east elevation, major restoration will be required using the other Type C door as reference.

The Type D door is still there but sealed in with plywood and needs scraping and repainting and the casement windows need to be restored to working condition.

The lost door on the south elevation still has the original surround which is in need of scraping and painting, and the transom was replaced with an AC unit which needs to be removed and restored with glass. The inside is sealed with plywood. The lost door on the northeast side has the original surround which needs scraping and repainting, and some research as to whether there was a screen door there originally, is required.

Timing: The doors should be among the final work done on the exteriors since

they risk damage from other work being carried out. Work should start on the minor doors first rather than the main south elevation or north elevation doors. All elements of each door should be done at the same time (surrounds, lites, door panels, transoms, mechanical elements and the like).

Special Considerations: Paint analysis will have to be done for all doors to determine original paint. Analysis for the presence of lead will have to be undertaken.

D. Recommendation: The work should be done by restoration specialists who can research the original coatings and reproduce them and who have certified background and experience in restoring doors of this vintage. Careful restoration of the original hardware, lights, surrounds and workings (eg. weights and pulleys) and the like is critical to the restoration. Research on the replacement for the two missing doors should be done in order to put in replacement doors of the period.

All work must be documented in written form and photographed before and after restoration for archival and historical purposes by the contractor.

Type A Door

Type B Door

Type C Door

Type D Door

3. Element: Windows–Basement

A. Description:

Current: There are five types of windows in the basement:

Type 1 (11)–A window with an air conditioning unit above with a double casement below and (non-original) metal grill. Two of these have no AC unit. The casements have two pairs of five knuckle hinges and cabinet latches.

Type 2 (8)–In swing double casement windows with an arched top and exposed metal grille on the exterior. Each has two pair of two knuckle hinges which appear to be original with surface bolts. The pintles for shutters still exists on window on the northwest corner. Three of these windows have five knuckle hinges rather than two knuckle.

Type 3 (1)–Fixed plexiglass in a built-up frame with a blank panel and exposed metal grille

Type 4 (2)–Exterior pained wood louvers with fixed plexiglass on the interior.

Type 5 (1)–Window with air conditioner and blank panel and no window remaining, clad in sheet metal and deteriorated stone sill is painted.

Original: . Type 2 windows most closely resemble the original configuration and retain the most historic fabric. Type 2 windows have significant original elements including the casement sashes, hinges, shutter pintles (on one window) and surrounds. Type 1 windows retain modified casement sashes and surrounds.

Added: The air conditioning units occupy space where there were windows in the Type 1 window. Types 3 and 5 appear to be of later vintage, although there may be some original pieces left.

B. Condition:

Current: The Type 2 windows are in reasonably good shape needing only restoration. There is some original hardware which can be restored. The type 2 windows sashes need replacing with sashes similar to the extant Type 2 units. The type 3, 4 and 5 windows need to be researched and replaced.

Original: The best example of the Type 2 window is the second window in from the northwest corner. The surrounds and windows are in good shape on the original windows, needing only restoration. Hardware needs to be restored and where missing, replaced in kind.

Added: The AC units are in poor shape, but should be eliminated regardless. The Type 3, 4 and 5 windows need to be replaced.

Special Considerations: There is almost certainly lead paint hazards involved

C. Preservation Requirement:

Special Considerations: Paint analysis and hardware and window research will have to be done in some cases.

D. Recommendation: All work must be documented in written form and photographed before, during and after restoration for archival and historical purposes by the contractor.

Basement Type 2 Windows

Basement Type 3 Window

Basement Type 4 Window

4. Element: Windows (First Floor)

A. Description: Not all windows were visible for inspection at the time of the survey. Of the total windows (26) on the first floor, only (19) were viewed. The seven that were not surveyed are located at the south-west corner of the building within the locked ANC6B offices. Sidelights at entry doors are included in the door section and not considered windows as part of this section.

Current: There are two types of windows on the first floor:

Type 6 (10)–Double hung painted wood window with two lights over four with an air conditioning unit inserted into top sash. Two windows have interior metal security grills.

Type 7 (9)–Double hung painted wood window with four lights over four lights.

Original: The type 7 windows are largely intact original windows. The window at the southernmost end of the east facade represents the most intact example of original fabric including what appears to be early glass. Remaining sashes at both types are original both inside and outside. Cords and weights for most sashes are presumed to be intact.

Added: Air conditioning units replaced the upper two lights of the Type 6 windows.

B. Condition:

Current: Both type windows are in good shape. The air conditioning units are in need of replacement (or elimination).

Basement Type 2 Window

Original: The Type 6 windows are missing the top half of the upper sash where the AC unit was inserted. The lower sash is restorable while the upper sash was significantly altered. There are some muntins missing and there is inappropriate sealant on some of the windows.

Basement Type 3 Window

Inappropriate sealant was used on some windows for glazing the exterior. The wood stool is severely deteriorated and most of the windows have missing hardware, although some have the cord and weights from the double hung movement. Some windows have mismatched glass (eg. obscure or wired). Some interiors have been inappropriately stripped of paint.

Added: The air conditioning units need to be replaced (or eliminated).

Special Considerations: There is probably a lead paint hazard.

C. Preservation Requirement:

Special Considerations: Paint analysis, both interior and exterior needs to be done, with some research into the graining technique apparently used for the interior part of the windows.

D. Recommendation: All work must be documented in written form and photographed before and after restoration for archival and historical purposes by the contractor.

5. Element: Windows (Second Floor)

A. Description:

Current: There are two types of windows on the second floor:

Type 8 (10)–Full lower sash, double hung, two lights over four lights with an air conditioning unit inserted where the top two lights were, similar to the first floor (Type 6).

Type 9 (16)–Double hung, four lights over four lights, similar to the first floor (Type 7).

T

Original: Type 8 retains the original configuration. The type 8 windows are largely intact original windows. The window at the southernmost end of the east facade represents the most intact example of original fabric including what appears to be early glass. The Type 9 is the original window configuration, with the upper sash modified by the insertion of an AC unit through the upper two lights.

Added: The air conditioning units are obviously later period.

B. Condition:

Current: Type 8 windows are similar in condition to the Type 6 windows on the first floor. There is early glass in the lower sash of the window second from the left on the north elevation.

Type 9 windows are similar in condition to the Type 7 windows on the first floor. There is early glass (broken) in the second window from the right on the east elevation and five panes on the left most window on the east elevation. There is also evidence of interior shutters separately for the upper and lower sashes as indicated by the hinge recesses in the interior jambs next to the sashes.

Original: As indicated above, the major elements of the windows are original.

C. Preservation Requirement:

Special Considerations: None

D. Recommendation: All work must be documented in written form and photographed before and after restoration for archival and historical purposes by the contractor.

First Floor: Type 6 and 7 Windows

Second Floor Type 8 and 9 Windows

Third Floor: Type 10 Window

Third Floor: Type 14 Window

6. Element: Windows (Third Floor)

A. Description:

Current: There are five types of windows on the third floor, all of which are openings for the Mansard roof:

Type 10 (5)–This is the original in swing casement window with four lights and an arched top. The best examples are on the east side elevation on the northeast corner.

Type 11 (1)–Two light casement in swing arched window.

Type 12 (1)–Single light fixed arched window.

Type 13 (1)–Plexiglass arched panel over a galvanized metal panel, modified for the fire escape.

Type 14 (1)–Half round hopper fixed window with four lights. This is located over the central staircase on the north elevation.

Original: The Type 10 and Type 14 windows are the original configuration.

Added: Types 11, 12 and 13 are modified from the original and there is one opening which had an air conditioning unit (now missing) on the north elevation.

B. Condition:

Current: The Type 10 windows have open joints in the sash and are temporarily reinforced, with severely damaged stools and two with non-original five knuckle hinges. Three of them have the original two knuckle hinges and the window on the east elevation at the northeast corner has what appears to be early or original glass.

Type 11 windows have five knuckle hinges and are not watertight.

Type 12 has a single fixed plexiglass window.

Type 13 has been modified for the fire escape and is not weatherproof.

Type 14 is a fixed window with missing hardware.

Original: The Type 10 windows are original (see above under "Current").

Added: Type 11, 12, 13 and 14 have all been modified and vary in condition.

Special Considerations: There is almost certainly a lead paint hazard.

C. Preservation Requirement:

Special Considerations: A paint analysis needs to be done to determine what the original window treatment was.

D. Recommendation: All work must be documented in written form and photographed before and after restoration for archival and historical purposes by the contractor.

7. Element: Main Exterior Staircase and Portico (South Elevation)

A. Description:

Current: Original cast iron staircase, anchored to masonry underpinnings and the wood portico. Includes a simple railing on the staircase, gas lamp (missing) and gas lamp standards at the base. The porch has many (but not all) original joists, but the flooring, the end headers and pilasters are not original. The balustrade has been rebuilt using some original element.

Original: The cast iron staircase, the metal railing, the gas lamp standards, as well as the masonry underpinning of brick and the joists for the portico are all original. F.A. Schneider, the foundry which produced the fence around the property, possibly is also the original fabricator of the stairs.

Added: The flooring, pilasters and balustrade of the portico are replacements as well as the masonry parging on the bricks and some parts of the piers holding up the staircase.

B. Condition:

Current: All the cast iron pieces need to be removed and restored. Major cracks in the cast iron stringers and kick plates make the staircase unsafe for use. Most of the clips and fasteners are deteriorated. The gaslight standards are missing the topmost lamp sections. The porch floor is becoming unsafe since it and some of the joists are seriously dry rotted (although many of the joists can be salvaged). The balustrade and pilasters are also in a deteriorated condition. The masonry is also in poor condition and the parging should be removed.

Original: The cast iron all needs to be removed and restored. Most of the porch joists can be salvaged. The masonry can also be saved with proper restoration.

Added: The porch floor, pilasters and balustrades vary in condition and need to be repaired and restored.

Special Considerations: An on site analysis of the paint chips from the porch and the metal stairs was conducted. The sample from underneath the stairs was negative, but the sample from the porch tested positive for lead.

C. Preservation Requirement:

Description: The restoration of the stairs would consist of the following:

1) Label and identify all components of the stairs prior to disassembly.
2) Completely disassemble the stair case and transport it to the conservation studio.
3) Completely strip all coatings (lead positive) using hot caustic dip solution and phosphoric acid.
4) Recast all heavily damaged and/or missing risers in cast iron.
5) Fabricate new clips and points of attachments for the treads, risers, and stringers.
6) Repair by welding all cracked sections of stringers.
7) Repair by welding two sections of treads that are presently cracked.
8) Completely recoat stairs using powder coat or a paint system consisting of zinc-rich primer, epoxy mastic intermediate coat, and topcoat using aliphatic urethane.
9) Transport stairs back to the site and reinstall.
10) Provide complete documentation of the work in both written and photographic form.

The two brick piers holding the staircase must be inspected and restored and the masonry retaining wall must be rebuilt and restored to address the deteriorating mortar.

The porch deck must be removed and replaced since there is substantial wood rot in the flooring, and the original joists restored. The end header beams should be redone and the pilasters and balustrade replaced.

Special Considerations: An analysis of the paint on the metal work should determine the original colors or if the materials were painted at all. The mortar analysis needs to be assayed and used for the brick pointing.

D. Recommendation: All work must be documented in written form and photographed before, during and after restoration for archival and historical purposes by the contractor.

8. Element: Miscellaneous Metalwork (excluding south staircase, roof and property fence)

A. Description:

Current: South Facade–Down spouts and gutters are galvanized metal and cast iron, lightening rods are square copper stock ending into concrete.

West Facade–Two cast iron ducts adjacent to the door, cast iron shutter dogs on some of the basement windows, guttering and the fire escape system.

North Facade–Fine wrought iron filigree on stairs to entrance and on entrance porch, downs pouts and guttering, two cast iron boot scrapers, cast iron newels, a metal roof with raised seams over the entrance way, possibly a gas fixture over the door and the lightning rod system. Note: The fine wrought iron filigree matches the filigree on the standalone gazebo/well structure on the northeast side of the building.

East Facade–Fire ladder which terminates on the roof, guttering, a window on the first floor with iron rods, shutter hinges, two cast iron pipes on each side of the door and a possible gas light fixture over the door.

Original: South Facade--Possibly lightning rod system

West Facade–Only the cast iron shutter dogs appear to be original

North Facade–All elements named above under “Current” except for the guttering and down spouts, are original.

East Facade–Only the shutter hinges, the possible gas light fixture and the pipes on each side of the door are original.

Added: South Facade--Down spouts and guttering are probably not original.

West Facade–The fire escape ladders and guttering are not original.

North Facade–The down spouts and guttering are not original.

East Facade–The fire escape system, guttering and the window with iron rods are not original.

B. Condition:

Current: South Facade--The down spouts are nearly completely deteriorated, the

guttering has pinholes throughout. The lightning rod system seems to be intact.

West Facade–the few elements are in good shape, none needing restoration. The guttering needs repair.

North Facade–The fine wrought iron filigree is in good shape needing only light restoration, the down spouts are nearly non-existent, the guttering has pinholes, the leftmost of the two boot scrapers is damaged, the cast iron newels are in good shape needing restoration, the metal roof over the entrance needs light repair and repainting, the gas fixture needs to be researched and restored and the lightening rod system needs to be repaired and reanchored.

East Facade–The fire escape system needs to be tested for safety, the shutter hinges are broken, the possible gaslight fixture is gone, the two pipes alongside the door are in good shape and the window with iron rods.

Original: South Facade--The lightening rod system needs to be repaired and reanchored, and verification done to determine if it is in working condition.

West Facade–The shutter dogs only need cleaning and the guttering repair.

North Facade–See 'Current' above, excluding guttering and down spouts.

East Facade–The shutter hinges are broken, but the rest is in good shape.

Added: South Facade--The guttering needs to be repaired and the down spouts need to be replaced.

West Facade–The fire escape needs to be tested for safety.

North Facade–The guttering needs to be repaired and the down spouts need to be replaced.

East Facade–The guttering needs to be repaired for pinholes and the fire escape system tested and repaired.

Special Considerations: There may be a lead hazard in restoring the metalwork, although the green paint was not tested..

C. Preservation Requirement:

Special Considerations: None

D. Recommendation: All work must be documented in written form and photographed before, during and after restoration for archival and historical purposes by the contractor.

Main Exterior Staircase and Portico

Main Exterior Staircase

North Façade Staircase and Metalwork

Gazebo/Well Metalwork

9. Element: Bricks and Mortar

A. Description:

Current: The painted bricks are laid in common bond with every sixth course set as headers with quoining on the corners. Over the windows and doors are either brick arches or cast stone hoods (lintels).

Original: Nearly all bricks and mortar are original except as noted below. There could have been a thin layer of stucco over the brickworks.

Added: In a few places there is new mortar (concrete possibly) and in even fewer places there are new bricks. There are some remains of a thin stucco over brickworks in various places.

B. Condition:

Current: General–The painted brickwork is in generally good shape but with the majority of the paint peeling or off. The bottom six courses have severely eroded mortar due to water damage. Brick damage, caused by improper mortar replacement, exists in various places. In other places, moss and ivy are growing out of the joints, destroying the mortar.

South Elevation–At the basement level, there are various areas where the mortar is very soft and washed away, with moss growing in many places. Ivy is also growing up the wall. On the brick piers, mortar is missing from the bottom five courses and the bricks are coming loose. There is also some new brick and inappropriate mortar. Loose stucco can be seen on the brick under the staircase. On the first floor level, there is noticeable washing away of mortar and ivy damage. On the second floor level, there are considerable bird droppings on the projected coursing above the windows, below the cornice

West Elevation–The same general conditions as on the south elevation exist. Between the third and fourth courses there is a thin layer of (possibly) slate, to prevent rising damp. Hard concrete patching of mortar has caused the bottom two layers of brick to splall in various places, destroying the brick. At the basement level, the mortar is heavily eroded at the lower levels. Some of the patching, inappropriately using concrete, is very badly done. At the third floor level, mortar is missing from the projecting course above the windows, below the cornice.

North Elevation–There is some remains of a thin stucco over the bricks. Basement–There is a patched area of different coursing and face from the surrounding areas. Most likely, this is due to the removal of the sterilization tanks.

East Elevation–The mortar is heavily eroded at the basement level. There is also a small settlement crack at a window arch.

Original: Except for patching and replacement of inappropriate mortar and brick, everything mentioned above is original. Due to the style of the building, the traces of stucco found are possibly original.

Added: Only the inappropriate mortar and brick used in patching are added.

Special Considerations: Lead-based paint may exist. The appropriate (soft) mortar formula must be determined before any masonry rebuilding or repointing is begun. The historically appropriate finish on the masonry should be determined.

C. Preservation Requirement:

Description: The paint on the brick must be analyzed to determine if the building was originally painted. If it was then the analysis must include determining the original color of the painted brick. All the brick needs to be carefully cleaned. If it was not painted originally, this cleaning step is very critical to assure that the brick and mortar are not damaged. In either case (painted or not) using non-abrasive techniques that are consistent with careful restoration and which will not erode the brick or the mortar in any way, is mandatory.

The mortar must be analyzed for content to duplicate it at restoration levels. Next, needed repointing must be undertaken, especially at the lower six to eight courses and where the gutters and down spouts have been missing. Elimination of the poor patchwork repointing must also be done to eliminate the destructive nature of the concrete inappropriately used for mortar repair.

The work should only be done by people who have certified backgrounds and experience in historic masonry restoration.

Timing: No work on the bricks or mortar should be undertaken before the roof and the drainage problems are finally resolved. Those problems are the main cause of the damage to the bricks and mortar, causing the extreme efflorescence on the interior of the buildings walls. Since some chemicals and abrasives might be used, the masonry restoration should precede the work on the windows and doors.

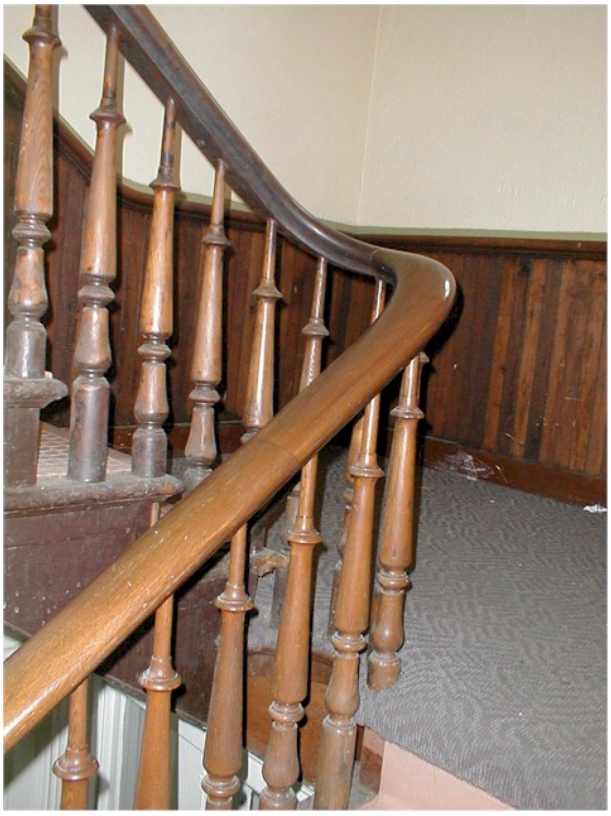
Special Considerations: Paint, mortar and possibly stucco must be analyzed to determine the original formulas.

D. Recommendation: All work must be documented in written form and photographed before, during and after restoration for archival and historical purposes by the contractor.

Brick and Mortar Water Damage

Brick and Mortar Detail

Brick and Mortar Detail



Interior Staircase

Radiator and Window Casing

Chapter Two: Interior Elements

The Technical Group did a room by room survey of the interior of the structure, detailing the original elements of the rooms, the condition of the existing elements and outlining the original working condition of most of the elements. Only general findings are discussed since many elements are common from floor to floor and room to room. How these elements are handled will be dependent first, on which designated zone it falls into and second, the final use of that particular space (room). A description of each floor, by preservation zone, is presented in Chapter Four.

1. Floors: The original floors are covered by vinyl and tile surfaces in general, and sometimes with multiple layers of such materials. The original wood floors can be seen on the third floor where there is a large opening in the wall on the southeast side (Room 305). The original floors are exposed in various other rooms also. In many cases, it appears that the original floor is in restorable condition

2. Baseboards: The original baseboards are seen in various rooms. They are two piece, with a base and a shoe. In most areas the shoe is not original and much of the base is covered with external electrical conduit. The base is also painted, but originally appeared to be grained to match the graining on the doors and windows.

3. Walls: The walls were originally smooth finished plaster and can be seen in many areas. The plaster was applied over wood lathe and made smooth with a skim coat. Paint analysis is required to determine original colors. There are many places where the original plaster is augmented with drywall and heavy paint. Paint analysis of interior plaster may result in inconclusive evidence of the color scheme(s) for the restoration period.

4. Ceilings: In many areas the original ceiling is intact, in others it is heavily damaged and in others it is lowered and drywall is in place. On the other hand, the intact portions are often in good shape and fully restorable.

5. Doors: There are various types of original interior doors and most of them are intact or only lightly damaged in general.

The doors are usually six panels with two hinges and a mortise lock and doorknob, and a transom above. They are heavily painted which covers the original graining (which appears to simulate chestnut or walnut finishes), similar to the windows. There is a spot behind a vent shaft in the extreme northeast corner of room 101 where the original graining is intact.

The trim for the doors is heavily painted, but in most cases remains intact around the doors.

The transoms for some doors still exist although most have been somehow modified or blocked. The original transom mechanism and fitting can be seen on the door in room 204 in the southwest corner. There the transom hinge (high, offset) is visible and the cleat for the cord which was used to open and close it, is still visible on the side of the door surround.

The doorknobs, mortise locks, key covers and hinges with finials which were originally

part of the door, are visible on many of the doors, although often heavily painted over. Both early ceramic and metal doorknobs can be observed on some of the doors. It has not been determined which type(s) of knob was original to the building.

6. Windows: Nearly all of the windows are original. The basement windows are a mixture of double hung and casement. On the first and second floors, windows are generally double hung four over four and the weights and pulleys seem to be often still in place. The air conditioning units usually caused the upper two lights to be removed with the rest of the window kept intact. On the third floor, the original windows appear to have swung outward from the mansard arched windows.

The window panes are mostly new although early lights can be detected in room 108 in the window facing east on the southeast corner. There are other examples of early lights still in place. The wood muntins and frames seem to be in restorable shape in almost all the windows.

The trim is also generally intact in most of the windows, although some ill-advised paint stripping and sanding was done on some of the windows.

There were probably two pairs of interior shutters in most windows as evidenced by the remains of hinge recess on the trim of the windows.

The grained paint that appears to be original is similar to the doors, appearing as if it was designed to simulate chestnut or walnut.

7. Heating/Ventilation: The heating and ventilating for the building has been modified over the years. What remains of an early system, although not necessarily original is a combination of radiant and convection piping and masonry shafts. Conjecture of this system describes it as a boiler located in the basement that circulated hot water or steam through piping located at the basement level of masonry shafts that extend to the attic level. These pipes would heat the air in the shafts and encourage natural convection of the heated air to draw air through the building and ventilate it through the central attic ventilator. Grilles in the walls (both high and low) and floors of the first and second floors would tie into this ventilation system. It was almost certainly not the only source of heat. Stoves were likely to have been located within rooms to provide radiant heating.

This system would have relied on air infiltration through door undercuts and open windows. Since this was a hospital built in the mid-nineteenth century, ventilation would have been considered important for the control of airborne diseases. This system could have been a state-of-the-art and somewhat experimental system.

It appears that cast iron radiators were added to the building in the late nineteenth century. These decorative radiators are located in many rooms on the first and second floors. There are two distinct styles of radiators, both ornamented with scrollwork however, the more elegantly proportioned radiators with simple piping and ornamental caps appear to be of an earlier vintage. These are stamped with ‘Blake & Williams, New York’ as the manufacturer.

The cast iron filigreed heating/ventilation grilles found in each room, are located on walls, both low and high, and in the floors. A survey should be done to determine the flow and function of

the various grills.

Hot water or steam radiators are found in most of the rooms. They are mostly intact, restorable and highly decorative, but heavily painted. The attic ‘staff quarters’ areas have interesting, ornamental, round radiators located at the center of each of these two large rooms. Some rooms have more modern gas heaters hung high on the walls which were installed later, with much of the pipework exposed.

The air conditioning units were also installed in the 1960's without due regard to the historical importance of the building.

8. Lighting/Electricity: Electricity was not commercially available when this building was originally constructed. Most probably interior lighting was accomplished with gas lights Further determination will require research and destructive investigation on-site. The electrification of the structure was done by attaching conduit to the baseboard, walls and ceiling, so that virtually all the system is exposed.

Lighting varies from flourescent to incandescent and is not sensitive to the design of the structure.

Electricity is also supplied by exposed conduit throughout the building for convenience outlets. Acceptable solutions for lighting must consider the period of significance and adapt new electrical fixtures with concealed cabling. Original locations and types of fixtures should closely reflect the original configuration. Many period fixtures are available that adapt a gas fixture for electricity.

Interior Door and Transom

Interior Grillwork

Mechanical Detail

North Facade

West Facade

Chapter Three: The Fence

1. Introduction

The fence surrounds the entire property and incorporates an elaborate gate system which indicates that the primary entrance to the hospital was on E St. The location of the carriage house on the Ninth Street side suggest that the gate located there served utilitarian functions such as deliveries. The breaks in the fence on Pennsylvania Ave., and on Tenth Street do not appear to be original gates because they lack the square cast iron pillars that define the gates on E Street and Ninth Street.

Additional research is necessary to determine the original design including landscaping, location of gates and the manufacturer of fence parts. The function of the fence was historically related to the architecture of the hospital. Recent changes have obscured that important link.

Complete written documentation, inventory and photographic documentation of the fence is available separately from the Friends of the Old Naval Hospital.

2. Fence Elements

The fence is composed of a number of cast and wrought iron elements:

A. Corner posts or pillars

The posts are square in cross section and are comprised of cast iron plates that are bolted together. The corners of the pillars were reinforced with angle iron. Initially each pillar had a cap. Many caps are now missing which allows entry of snow and rainwater, which in turn promote corrosion, and the formation of ice that can break the cast iron elements upon expansion. The pillars are also decorated with cast iron stars that are bolted on. The pillars are located at the corners and at the original gates. Most of the caps are now gone and many of the pillars are damaged. In some cases the cast iron plates may have been broken by the effects of water and snow accumulation on the interior and freeze/thaw cycling. In other cases the pillars may have been damaged by impact. Cast iron is relatively resistant to corrosion but is brittle in nature and easy to fracture.

B. Section Uprights

Section uprights are heavy cast iron elements that are located at the ends of each fence section. Their orientation is at a right angle to the fence. Wrought iron horizontal bars that secure the other fence elements are anchored in these uprights. As the primary fence support, these iron elements were set into sandstone blocks that served as the foundation of the fence. Holes were drilled into the stone and the iron elements were set with molten lead. Corrosion has occurred at the point of anchorage and many of the stones are cracked and the buried iron elements have been greatly reduced in size.

C. Vertical Bars (Pickets)

Between each of the section uprights in a typical fence span are 13 vertical bars. The number 13 is significant given the number of original States. The wrought iron bars are square in cross

section and consist of a bar cap that resembles the point of a pike. Each bar is comprised of a long bar and a short bar. The pike tips appear to be cast and may have been forged onto the wrought iron bar. The fusion of the two elements was not complete and the some tips have been separated from the vertical bars or are now loose. The length of some panels and the number of pickets vary at the corners and near the gates.

D. Horizontal Bars (Rails)

The vertical bars are held in place by four sets of wrought iron horizontal bars. Each set is shaped to hold the vertical pieces and are riveted together. This construction was particularly susceptible to oxide jacking, a type of corrosion that is seen frequently when wrought iron bars are joined together. Corrosion of these elements and the rivets is severe with a loss of structural integrity. Because of the slope of the ground on the Pennsylvania Avenue side, a modification has been made in the manner by which the rails are tenoned into the section uprights.

E. Compass Circles

At the bottom of each full fence section are seven cast compass circles. It is not known whether the number 7, in this case, has relevance to the seven seas.

F. Cast Iron Stars

A cast iron star is attached to the outside of the second horizontal set of bars from the top. Bolts or rivets pass through the stars, the vertical bars (pickets) and both horizontal bars (rails). The thirteen pickets and bars in a normal fence panel are intentional.

G. Fillets

Two fillets, thin strips of wrought iron, are located at the junction of each top rail and picket. These small elements terminate in a curl.

H. Points

Wrought iron points are located between each picket at the third rail from the top. These points may have been intended to discourage people from climbing the fence.

3. Paint Finish

At the present the fence is painted green as is most of the decorative ironwork. Originally the fence was probably not painted because both wrought and cast iron have a natural black finish that is relatively resistant to corrosion. The green paint has deteriorated and is in poor condition. Weather and corrosion have caused much of the paint to flake off. It is not known when the green paint was applied or whether the paint is a lead based paint. This should be determined prior to any attempt to remove the old paint film.

4. Corrosion

Most of the heavy cast iron elements are relatively stable, corrosion has been most severe between the sets of wrought iron horizontal bars that form the four rails of each fence panel. Intense galvanic corrosion in these areas has resulted in deformation and a loss of structural integrity.

5. Modifications

The most significant modification has been to the Pennsylvania Avenue side where the lower elements of the fence are now buried in concrete. Additional modifications include poor repairs which were not sympathetic to the fence design or construction. Such an insensitive repair was recently made along the Ninth Street side of the fence.

6. Losses

Over the years many of the fence elements have become detached. Many of the loose elements, which fell to the ground, have by collected by neighbors who were concerned that these pieces might be discarded or stolen.

7. Treatment Options and Priorities

At present the greatest concern is the physical integrity of the fence. Corrosion control and repainting is of secondary concern because corrosion control includes disassembly of the horizontal rails in order to address the problem of galvanic corrosion and the resulting oxide jacking. Options are:

A. Do nothing

The fence is deteriorating. If nothing is done, parts of the fence will continue to become detached and could be lost. Because of corrosion at the base of the section uprights which are seated into stone blocks with lead, the fence is in a weakened state and entire panels could fall over if struck with sufficient force.

B. Structural Stabilization

The Friends of the Old Naval Hospital has already inventoried the fence elements. Reversible techniques should be developed that would strengthen and stabilize the fence. Volunteers could accomplish this work with direction from an architectural restorationist. Detached pieces should be collected and stored for future restoration.

C. Restoration

Restoration of the fence would have to be accomplished by experienced metal workers. The restoration of the fence should be considered in conjunction with restoration plans for the hospital and the associated buildings. Restoration entails landscaping to remove the concrete along the Pennsylvania Avenue side, disassembly, fabrication of lost and broken elements, cleaning, and reassemble. This procedure would require assistance from historic architects.

8. Conclusion

The fence surrounding the Old Navy Hospital is a noteworthy example of Nineteenth Century iron work and architectural design. The relationships between the fence and the mainhospital, and that of the fence to the rest of the site, are important, so any decisions about the fence must include consideration of all elements of the site. Additional research is needed to determine who designed the fence, the significance of the design, the function of the fence, where parts were fabricated and how they were finished originally.

Chapter Four: Interior Preservation Zones

1. Definitions of Preservation Zones

The definitions noted in the Executive Summary are repeated here for emphasis. Technical definitions are meant to agree with those promulgated by the U. S. Secretary of the Interior.

The following definitions are from the Secretary of Interior Standards for Rehabilitating Historic Properties (36 CFR 68):

> *(a) Preservation means the act or process of applying measures necessary to sustain the existing form, integrity and materials of an historic property. Work, including preliminary measures to protect and stabilize the property, generally focuses upon the ongoing maintenance and repair of historic materials and features rather than extensive replacement and new construction. New exterior additions are not within the scope of this treatment; however, the limited and sensitive upgrading of mechanical, electrical and plumbing systems and other code-required work to make properties functional is appropriate within a preservation project.*
>
> *(b) Rehabilitation means the act or process of making possible an efficient compatible use for a property through repair, alterations and additions while preserving those portions or features that convey its historical, cultural or architectural values.*
>
> *(c) Restoration means the act or process of accurately depicting the form, features and character of a property as it appeared at a particular period of time by means of the removal of features from other periods in its history and reconstruction of missing features from the restoration period. The limited and sensitive upgrading of mechanical, electrical and plumbing systems and other code-required work to make properties functional is appropriate within a restoration project.*
>
> *(d) Reconstruction means the act or process of depicting, by means of new construction, the form, features and detailing of a non-surviving site, landscape, building, structure or object for the purpose of replicating its appearance at a specific period of time and in its historic location.*

The Technical Group divided the structure into three zones for guiding the timing, design and build out for adaptive reuse of the building. All work on the structure, regardless of zone, must be documented both in written and drawing form and in photographic form to the Historic American Building Survey/Historic American Engineering Record (HABS/HAER) standards. Below are described the three levels of restoration zones for the Old Naval Hospital.

A. Restoration Areas

The plan for the restoration and rehabilitation is designed to restore examples of the major function rooms and the circulation areas, to renovate the other significant rooms for functional use and to do alterations on parts that are not significant.

The circulation areas and the stairwell, designated as restoration zones, will keep these centrally used areas in period design and thus will appear as they did during the building's period of significance.

The restoration zone designation ensures that the entry to the main entrance (south side) will also appear as it originally did by maintaining at a restored level, the first and second floors immediately encompassing the central entryway. The rooms chosen for restoration will provide examples of the various functional rooms from the original building.

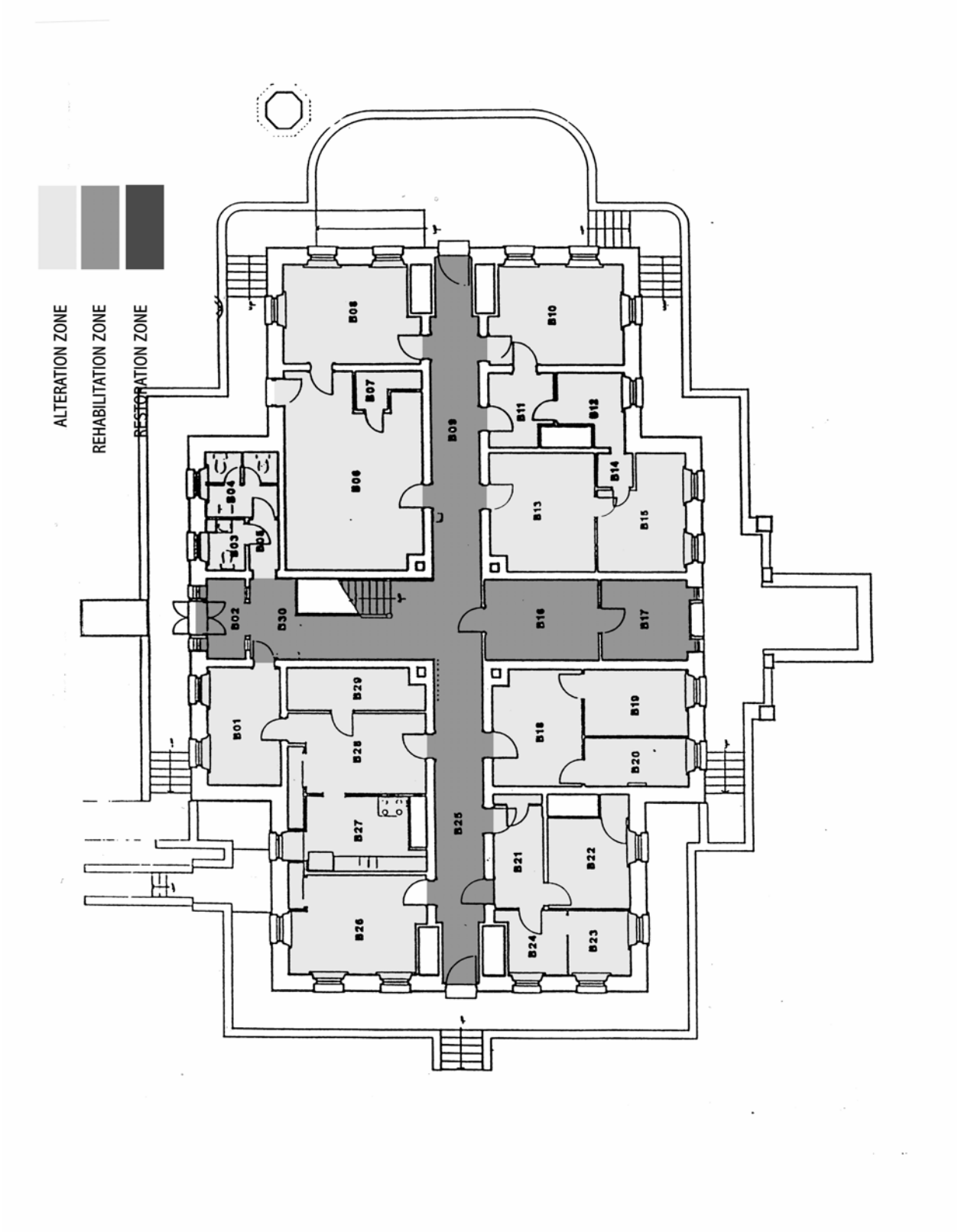
B. Rehabilitation Areas

The rooms being renovated will be outside and next to the immediately critical areas of entryway, circulation and example rooms. These rooms will contribute to the other rooms allowing designed access and use, while not undermining the basic design and character.

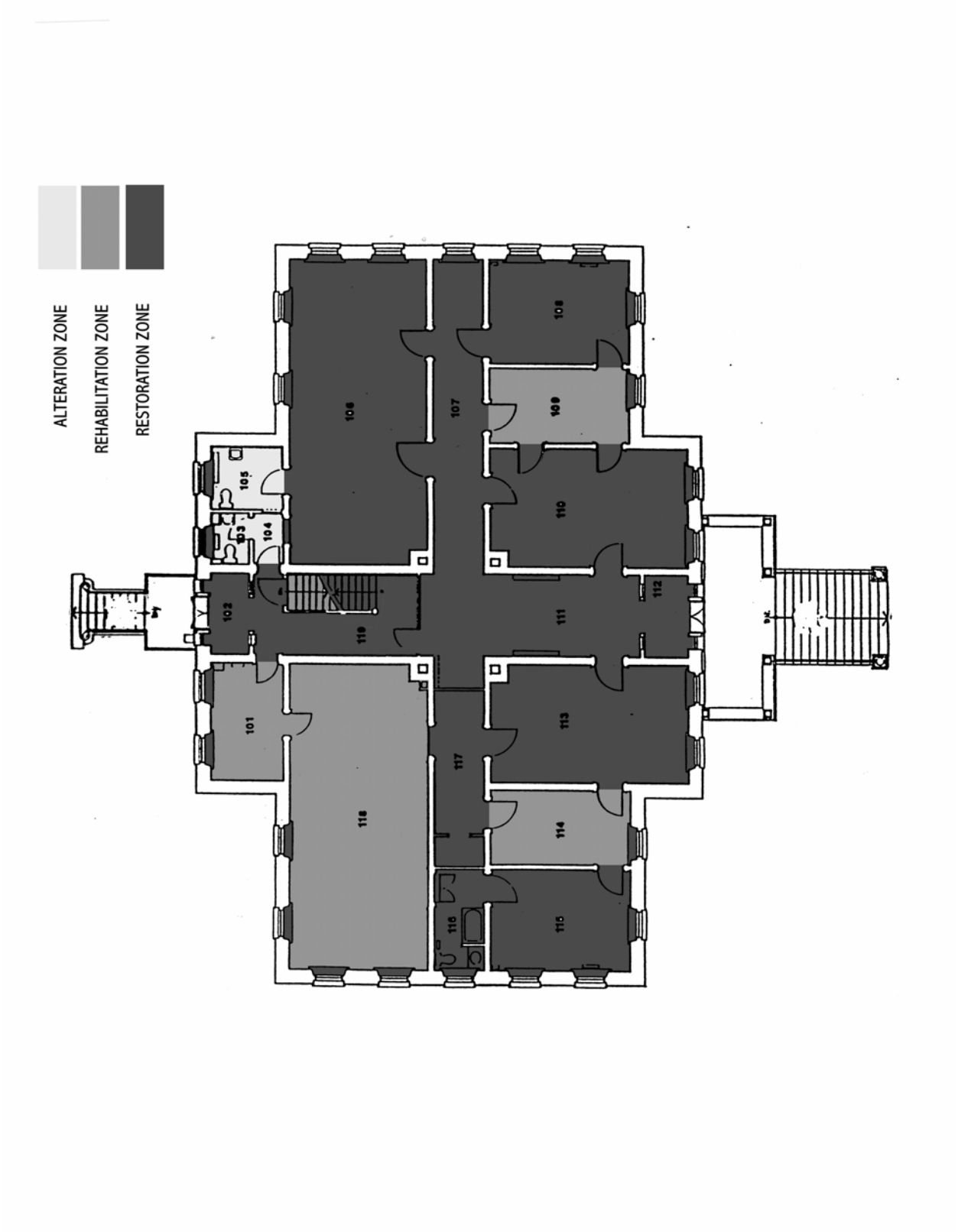
C. Alteration Areas

The spaces designated for alteration will allow for the modernization of the building and in specific cases, will allow for enhanced uses of the rooms and spaces.

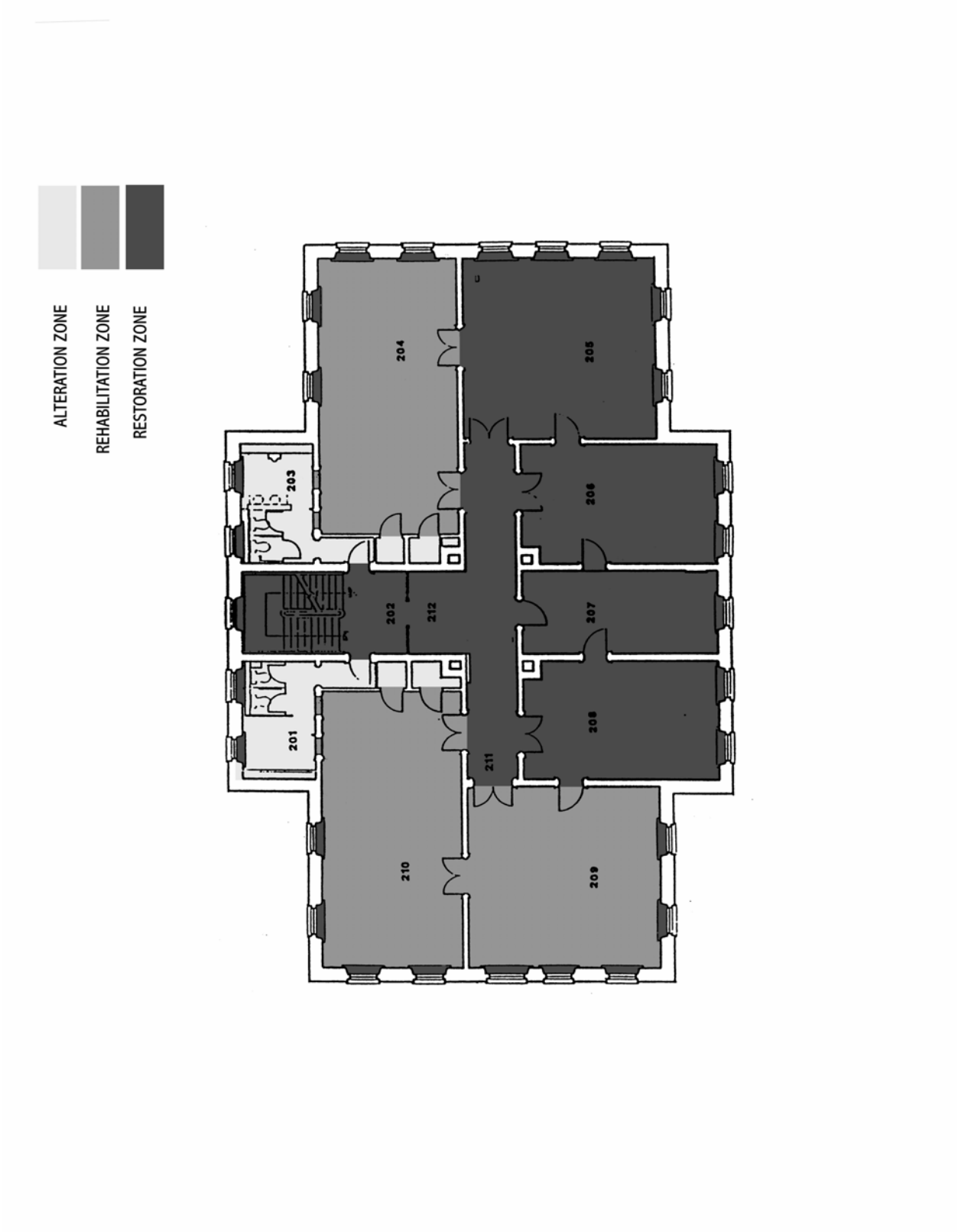
Preservation Zone Diagram (Basement)



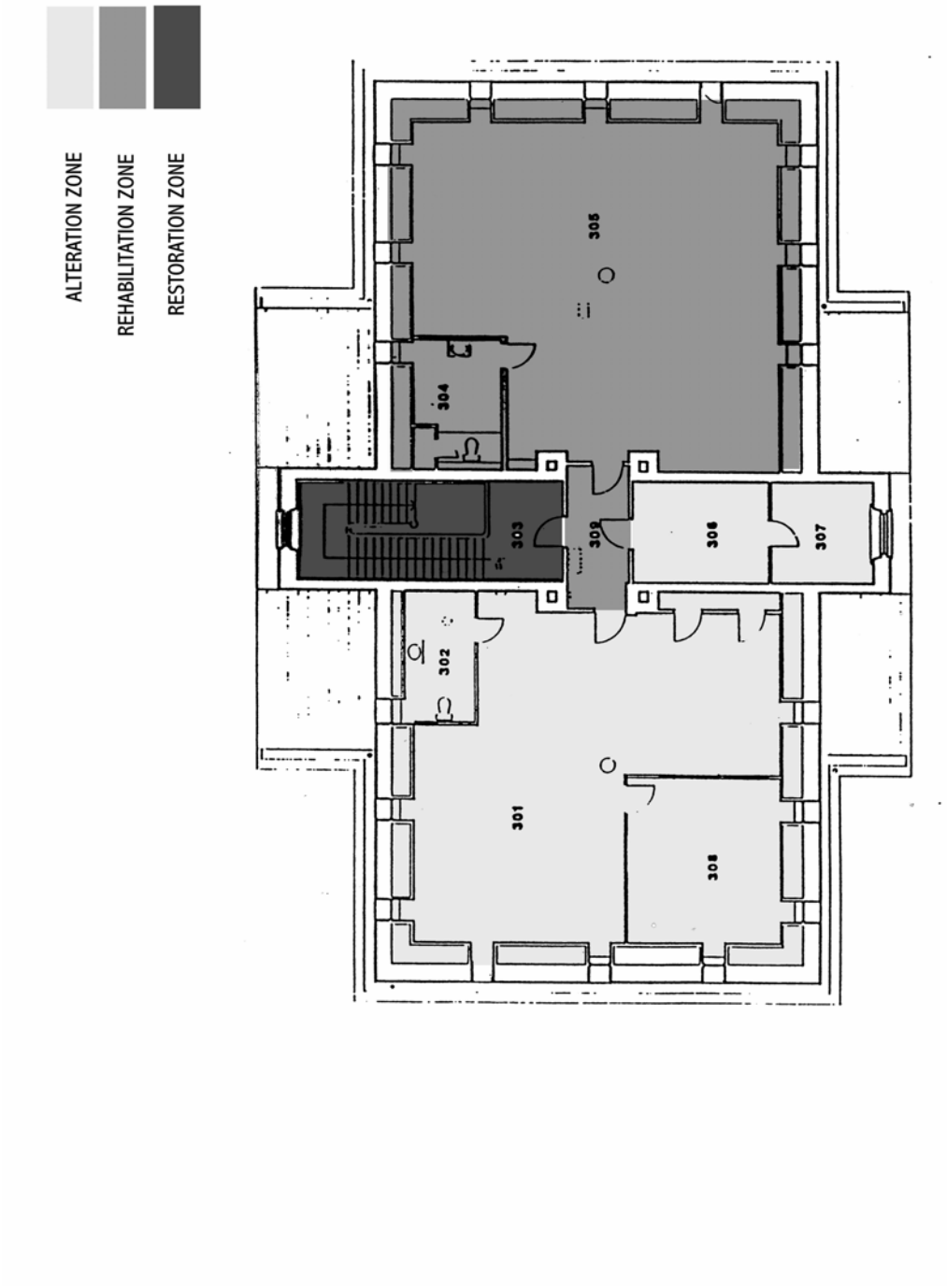
Preservation Zone Diagram (First Floor)



Preservation Zone Diagram (Second Floor)



Preservation Zone Diagram (Third Floor)



2. Preservation Zones

A. Restoration

Exterior: Restoration areas

The entire exterior is considered a restoration zone, including the fence.

Stairs and Stairwell: Restoration areas: The entire interior stairwell and stairs is considered a restoration zone, from the basement to the third floor. It appears that all the railing elements are original as are the steps and risers, which currently are covered with vinyl or carpeting.

Basement: Restoration areas

None

First Floor: Restoration areas

Entire cross circulation spaces including entry vestibules (Rooms 102, 107, 111, 112, 117 and 119)
Rooms 106, 108, 110, 113 and 115
Demolish 116 and 117 to reconstruct full cross-circulation space

Restoration areas are the circulation areas (hallways), the two rooms directly adjacent to the main (south) entrance, the two corner rooms on the southeast and southwest corners and the larger room on the northeast corner.

In these areas, special care must be taken to restore to original period, to preserve the materials and objects still extant as well as research and determine paint, plaster, window, door and trim colors and treatments and bring them back to the original standard (in accordance with the Secretary of Interior definitions). This will also require the restoration of the windows, floors, walls and ceiling, being sensitive to the original intent. Only contractors or specialists with proven skills in restoring these kinds of elements to this period, should be used for this work.

Second Floor: Restoration areas

Cross circulation spaces (Rooms 202, 211, 212 and 213)
Rooms 205, 206, 207 and 208

The hallway circulation areas and the tree smaller rooms over the main (south) entrance, are designated restoration areas. As before, original artifacts and materials which remain are to be restored to original condition and where necessary restoration of missing elements must be carried to period style. Research on paints, flooring and so forth, must be completed to determine original design and colors. Only contractors or specialists with proven skills in restoring these kinds of elements to this period, should be used for this work.

Third Floor: Restoration areas

None

B. Rehabilitation

Basement Rehabilitation areas

Circulation space including vestibules (Rooms B02, B09, B16, B17, B25 and B30)

Demolish B16 and B17 to reconstruct full cross-circulation space

Heating/Ventilation distribution system should be retained and/or documented to HABS/HAER standards

The circulation areas, defined essentially as the hallways, front door to back door and side door to side door, are listed as rehabilitation areas. These areas should be renovated considering the original look and purpose, but without strict maintenance of restoration standards. The circulation areas should enhance the usefulness of the rest of the rooms in the basement.

First Floor Rehabilitation areas

Rooms 101, 109, 114, 116 (if it retains its original configuration as a bathroom) and 118

Rehabilitation areas include all the rest of the floor except for the two bathroom facilities. These areas must take into consideration the use of original artifacts and restore such elements as the windows, doors, transoms, floors and so forth to original period, while designing into that strong, functional adaptive reuse of the building. These rooms should serve to facilitate the use of the rest of the floor.

Second Floor Rehabilitation areas

Toilet Facilities

The remainder of the floor are designated rehabilitation areas, which require the use and restoration of already existing materials such as doors, windows, walls, doorknobs, grills, transoms and the like, but allows some flexibility to enhance the adaptive usability of the floor.

Third Floor Rehabilitation areas

Rooms 304, 305 and 309

Room 305, the large room on the east side of the floor, and room 304 are designated as rehabilitation areas. Work will need to be done to restore the windows to original design and to incorporate the unique radiator into the floor plan. The floors, walls and ceilings will need to be researched to determine if they can be brought back to a period standard, which would be compatible with the adaptive reuse of the floor. The toilet can be removed.

C. Alteration

Basement Alteration areas

Rooms B01, B03-08, B10-15, B18-24 and B26-29

The rest of the rooms are designated as alteration zones, which will allow their rehabilitation in such a way as to enhance the use of the building in terms of modernizing the offices (eg. computer services, telecommunications), provision of modern electrical, HVAC, kitchen facilities and the like.

First Floor Alteration areas

Rooms 103, 104 and 105

Chimney and other concealed space

Alteration areas are the toilets (rooms 103, 104 and 105) where modern facilities should be installed while maintaining as much of the original as possible, especially considering the look from outside these rooms. Chimney and other concealed spaces can be used for wiring, heating and other similar systems

Second Floor Alteration areas

Rooms 201 and 203 and the closet and utility spaces adjacent to 204 and 210

Alteration areas are rooms the toilet facilities, which need to be modernized in a historically sensitive manner, plus the utility spaces.

Third Floor Alteration areas

Rooms 301, 302, 306, 307 and 308

All the rest of the floor is designated as alteration areas, to facilitate the adaptive reuse of the structure. Toilet facilities will need to be installed and sensitive reuse and/or design of windows, doors**,** floors, walls and ceilings is required.

Through these designations, the purpose is to retain the feeling , as well as examples, of the original structure, while building in sufficient space and design options so that the adaptive reuse of the building is enhanced Through this methodology, innovative design and use will create an atmosphere of the old building, while adapting it to modern usage and requirements.

Chapter Five: Other Considerations

Additional Technical Requirements

While this document outlines the technical aspects which need to be considered in any plan for the restoration of the Old Naval Hospital, considerable additional technical work needs to be undertaken before any construction work can begin.

First, but concurrent with addressing the environmental safety concerns outlined below, an architectural firm having extensive historical restoration experience, needs to be hired to develop the needed drawings, research materials and methods for the restoration, undertake writing the technical bid specifications and estimate the budgets for each element of the restoration. Only this will assure that the restoration will be done properly and within budget.

This will require that detailed specifications be written identifying the proper materials, techniques, testing, documenting and qualifications for prospective contractors, as well as developing a detailed budget for each aspect of the job. Without such detailed bid and job specifications written by an experienced historical restoration architectural firm, no guarantee can be made as to the quality and consistency of the final work being done on the building.

Secondly, an environmental assessment to determine precisely the presence and/or absence of hazardous material and to describe methods of disposal for any such materials, needs to be done by a professional organization experienced in doing such assessments in historically significant

buildings. This assessment needs to be high on anyone's list of priorities before any restoration can be undertaken.

Thirdly, historical research will need to be conducted for landscaping the grounds and for siting of the fence, as well as implementing the landscape plan.

Lastly, the Carriage House will also need to be researched and restored.

Process

The bidding process itself must be clearly weighted to contractors who have demonstrated significant expertise and experience in the latest techniques of historical restoration in the area they are bidding. The qualifications must be clearly stated and OPM (or their designee) must investigate, view and document clear examples of work completed by the bidder, which is comparable to the work on which the potential contractor is bidding.

This prequalification process should be clearly defined and delineated by the architectural firm hired to do the specification work mentioned above. Those procedures should be worked out and agreed upon between the firm and OPM before any bidding process is undertaken.