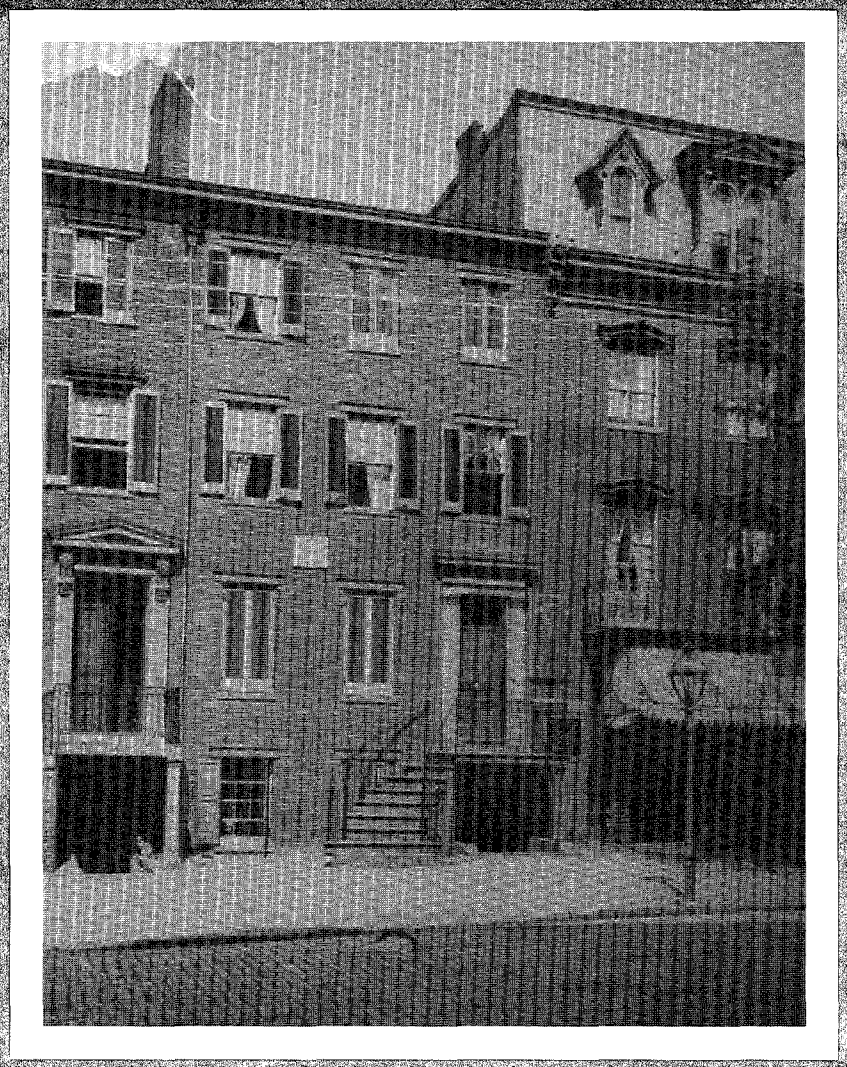
National Park Service
U.S. Department of the Interior

Fords Theatre National Historic Site
Washington, District of Columbia

William A. Petersen House
House Where Lincoln Died



Historic Structure Report

804 / D-28

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Executive Summary

The Developmental History that comprises Part 1 of this Historic Structure Report (HSR) for the Petersen House, known as the "House Where Lincoln Died," is a scholarly documentation of the evolution of the historic structure, concentrating on its major character-defining features, spaces, and elements. This focused study of the development of the historic property, as evidenced in its extant built fabric, is paired with a comprehensive physical examination of the property to assess existing conditions and compliance with modern building codes.

Previously, there have been extensive academic studies and reports on various aspects of Petersen House, prepared by scholars over the period of many years, and these continue to serve as vital documents on the property. The principal objective in undertaking this HSR is, by contract with the National Park Service, to conduct a thorough (not exhaustive) documentary research effort and to consolidate newly uncovered and previously known information pertinent to the structure's physical history for comparison with physical clues. Thus, the Historical Background and Chronology of Development and Use within this report, both inform and support the condition assessment of the structure and work recommendations presented for consideration.

The survey information within this historic structure report (2001-2002) represents a fixed snapshot in time, due to ever changing conditions. Some of the work recommendations within this report have been implemented by recent construction (2002-2003) as part of a rehabilitation project targeting mechanical and electrical systems within the house. The assessment of physical condition of the property takes into account work proposed under this upgrade project, and drawings for this project are included in the Appendix of this report as a reference. Note that the drawings will not represent actual as-built conditions upon completion of the project. Actual work performed under this separate contract must be verified, before assumptions are made.

Therefore, the goal of the team preparing this historic structure report is to provide National Park Service staff at all levels a streamlined resource of information to aid in making informed, managerial decisions for care of the physical property, while considering the comfort and safety of the visitor's experience.

Part 2: Treatment and Use and Part 3: Record of Treatment, subsequent sections of the traditional Historic Structure Report format, are not within the scope of this project.

Administrative Data

Administrative Data

Name:	Petersen House - House Where Lincoln Died
Park:	Ford's Theatre National Historic Site (FTNHS)
LCS# 046408	connecting Ford's Theatre (Park alpha: FOTH) with Petersen House (Park alpha: PEHO) Park Code: 804
Address:	516 Tenth Street, NW Washington, DC
Management Category:	Must be preserved and maintained
General Management Plan:	No
Development Concept Plan:	No
Current Uses:	Basement Floor – Storage and Utilities First Floor – Museum Second Floor – Offices and Storage Third Floor - Storage
Average annual visitation:	2000 = 1,164,176; 2001 = 1,223,540 (FTNHS totals)

Administrative Background

The row-house located at 516 Tenth Street, NW, run by the Petersen family as a boarding house, gained national attention on the evening of April 14, 1865, when President Abraham Lincoln died there after being shot while attending a performance at Ford's Theatre, just across Tenth Street. After this fateful night, the then, boarding house and the Petersen family would never be the same. The house immediately became a shrine to the slain president, with visitors wishing to gain entrance to see the Death Bed (with "bloody pillow") or to get a remembrance of him, such as a wallpaper scrap. After the frustrated Petersen heirs sold the house to the Schade family for a decade-long ownership, with eventual occupation by the Memorial Association of DC, the house left private hands. Due to the recognition of the house as significant to the nation, the "House Where Lincoln Died" was purchased by the U.S. Government in 1896, and opened to the public as a museum of Lincolniana. The building, as the death place of the great president, was a logical choice for commemoration of his life.

After thirty years of maintenance under various federal departments, the property was transferred to the National Park Service in 1933, who took over managerial responsibilities following the first restoration of the house to its original appearance on the night of Lincoln's death. This is the first occasion when the house could properly be considered a house museum. The house continues to be restored to its appearance at the period of significance: April 14-15, 1865.

Combination of two significant properties into one Historic Site

As these two properties are intrinsically linked by this one tragic, historic event, the Ford's Theatre National Historic Site includes both Ford's Theatre (511 Tenth Street, NW) and Petersen House (516 Tenth Street, NW). Today, the National Park Service manages the two properties as one site (Park Alpha: FOTH, Park Code: 804). Cultural Resource Specialists with National Capital Parks – Central provide additional support in meeting federally mandated historic preservation responsibilities, stipulated under the National Historic Preservation Act of 1966, as amended.

Petersen House is listed in the following:

District of Columbia Inventory of Historic Sites (11/8/64)
National Register of Historic Places (10/15/66)*
Ford's Theatre National Historic Site (10/15/66), contributing structure
Pennsylvania Avenue National Historic Site, contributing structure

*No background data on the property exists in the files of the DC Historic Preservation Office.

Future Property Management

It is advised that a Development Concept Plan for the Petersen House be planned and implemented for the historic property. A clear direction for the future must be visualized by park management in order to balance a responsible preservation strategy with enhancement of the visitor experience. Recent work has been undertaken to the property without benefit of this level of strategic planning and coordination.

Thus, due to the historic significance of the property and its protection under federally mandated historic preservation legislation, all work items and treatments recommended within this Historic Structure Report shall be carried out in a manner sensitive to the preservation of historic fabric, in adherence to The Secretary of the Interior's Standards for the Treatment of Historic Properties for Restoration.

Project Team

National Park Service

Contracting		
Contracting Officer's Technical Representative/ Chief Historical Architect:	**Rebecca Stevens**	National Capital Region
and Assistant Architect:	**Susan Long**	National Capital Region
Contracting Officer:	**Tom McConnell**	National Capital Region
Contracting Specialist:	**Linda Hook**	National Capital Region
On Site		
Park Site Manager Acting:	**Claudia Anderson**	Ford's Theatre N. H. S.
(Former):	**(Suzanne Kelley)**	
Project Assistant:	**vacant**	Ford's Theatre N. H. S.
Maintenance Foreman:	**Ron Hawkins**	Ford's Theatre N. H. S.
Cultural Resources		
Chief:	**Stephen Lorenzetti**	National Capital Parks-Central
Specialist:	**Lori McConnell**	National Capital Parks-Central
Superintendent:	**Arnold Goldstein**	National Capital Parks-Central
Chief, Division of Maintenance:	**Sean Kennealy**	National Capital Parks-Central

Project Team

Consultants for the Project

Architect:	**architrave p.c., architects**	420 10th Street, S.E.
principal-in-charge -	Robert A. Weinstein	Washington, D.C. 20003
project architect -	Marianne M. Graham, AIA	(202) 544-1640
Architectural History:	**Robinson & Associates, Inc.**	1909 Q Street, N.W.
principal historian -	Judith H. Robinson	Suite 300
associate investigator -	Sophie Cantell	Washington, D.C. 20009
		(202) 234-2333
Structural:	**McMullan & Associates, Inc.**	8381 Old Courthouse Road
project engineer -	David E. Linton, PE	Suite 350
		Vienna, Virginia 22182
		(703) 556-0651
Mechanical, Electrical & Plumbing:	**JVP Engineers, P.C.**	4200 Wisconsin Ave., N.W.
project engineer -	Michael Boerger	Suite 15
		Washington, D.C. 20016
		(202) 362-3001
Fire Protection/Life Safety:	**Gage-Babcock & Associates**	5175 Parkstone Drive
project engineers -	Isa Y. Saah, PE-Life Safety	Suite 130
	Mike Pilgrim-Security	Chantilly, Virginia 20151
		(703) 263-7110
Environmental:	**MEC^x, L.L.C.** (Formerly Mantech Environmental Corporation)	
principal investigator -	Mark D'Ascenzo	9189 Red Branch Road
project investigator -	Dana Gates	Columbia, Maryland 21045
		(410) 772-3300

Abbreviations

Property and Management History:

CRM	Cultural Resource Management
D.C.	District of Columbia
HWLD	House Where Lincoln Died
HPTC	Historic Preservation Training Center
FOTH	Ford's Theatre (park alpha)
FTNHS	Ford's Theatre National Historic Site
HABS	Historic American Buildings Survey
HSR	Historic Structure(s) Report
NPS-NACC or NACC	National Park Service – National Capital Parks - Central
NARA	National Archives and Records Administration
NHPA	National Historic Preservation Act of 1966 as amended
NPS	National Park Service
NPS-NCR or NCR	National Park Service – National Capital Region
NRHP	National Register of Historic Places
PEHO	Petersen House (park alpha)
RG	Record Group (National Archives)
SHPO	State Historic Preservation Officer

Physical Investigation, Code Compliance and Treatment:

ACM	Asbestos-Containing Materials
ADA	The Americans with Disabilities Act – Guidelines for Accessibility
AFF	Height above finished floor (or ground plane)
AIA	American Institute of Architects
AIHA	American Industrial Hygiene Association

BOCA	Building Officials & Code Administrators – publishes National Building Code
BOMA	Building Owners and Managers Association International
CFR	Code of Federal Regulations
CCTV	Closed-Circuit Television
DCCC	District of Columbia Construction Codes
EMSL	EMSL Analytical Laboratories, Inc.
EPA	Environmental Protection Agency
EX	Existing
IBC	International Building Code
LBP	Lead Based Paint
NA or N/A	Not applicable
NAD	No Asbestos Detected
NESHAP	National Emission Standards for Hazardous Air Pollutants
NFPA	National Fire Protection Association – publishes Life Safety Codes
NVLAP	National Voluntary Laboratory Accreditation Program
oc	on-center (measurement between regularly spaced elements)
OSHA	Occupational Safety and Health Administration
PE	Professional Engineer
PLM	Polarized Light Microscopy
psf	Pounds per square foot
RACM	Regulated Asbestos-Containing Material
SF	Square Foot
SOG	Slab on Grade
TCLP	Toxicity Characteristic Leaching Procedure
UFAS	Uniform Federal Accessibility Standard
XRF	X-Ray Fluorescence

Methodology

Property and Management History:

Site Visits
Key project team members from architrave p.c., architects and Robinson & Associates, Inc. conducted multiple site visits from project inception to present date (November 2001-February 2002) to photograph the property, become familiar with its historic characteristics, and to identify and record the building's significant features. New clues, uncovered within the documentary history from the sources below, were directly compared to extant physical evidence to produce new insights into the development and use of the property over time.

Review and Re-evaluation of Existing Documentation and Archival Material
We consulted legislation involving the Ford's Theatre and the Petersen House. Of great use, were Annual Reports submitted by all custodial governmental agencies responsible for the Petersen House from 1898 to 1959 (now maintained by the NPS-NACC) -these reports documented all work carried out on the Petersen House during a century of governmental ownership. Invaluable texts included, among others, George J. Olszewski's *House Where Lincoln Died: Furnishing Study*, Gary Scott's article entitled "A Photograph and Artist's Renderings: Keys to the Restoration of a National Landmark," and Matthew R. Virta's *Archeology at the Petersen House: Unearthing an Alternate History*. Other historical documents and drawings provided by NPS-NCR in scanned, electronic format gave vital information, including measured drawings of the house conducted in 1905, 1932 and 1957, and a full set of construction/ restoration drawings and photographs of the 1959 rehabilitation.

Research at Primary Repositories including National Archives, Library of Congress, Martin Luther King, Jr. Library and the Historical Society of Washington
We consulted the D.C. Building Permits on file at the National Archives and found Permit # 1640, dated December 5, 1878, in which the Schade family wished to make an addition to the rear of the house. It appears as though this is the first uncovering of this document, since there is no reference to it in any of previous documentary reports consulted.

Photographic and Miscellaneous Research
We reviewed photographic archives in files maintained by the National Park Service on site (FTNHS) and the HABS and Civil War collection at the Library of Congress. We consulted files at Robinson & Associates, including research on the Petersen House gathered for firm's on-going work on the new nomination of the Pennsylvania Avenue National Historic Site.

Physical Investigation and Treatment:

Site Visits
Key project team members from architrave p.c., architects, McMullan & Associates, Inc. (Stuctural), JVP Engineers, P.C. (MEP), Gage-Babcock & Associates, Inc. (Fire Protection/Life Safety/Security) and MEC^{x} (Hazardous Materials) conducted multiple site visits from project inception to present date (November 2001-September 2002) to become familiar with its physical fabric and building systems. A separate accessibility and security review was conducted in August, 2002. We have also held interviews with NPS regional and park staff, including maintenance personnel and house museum docents.

Review of Existing Documentation and Archival Material
We consulted historic documents provided by NPS-NCR in scanned, electronic format, including measured drawings of the house conducted in 1905, 1932 and 1957, drawings for miscellaneous fire alarm system and heating system upgrades throughout the 20th century, and a full set of construction/restoration drawings for the 1959 rehabilitation. Archival drawings and photographs that are used for illustrations within the body of this report are titled "Figure," and are numbered consecutively throughout the report.

Graphic and Photographic Documentation/Examination of Fabric and Systems
We photographed the property, recorded existing conditions in drawing format, and identified potentially critical deficiencies. Existing condition photographs that are used for reference images within the body of this report are titled "Photo," and are numbered consecutively throughout the report according to discipline (AR-Architecture; MEP-Mechanical, Electrical, Plumbing; LS-Life Safety).

Physical/Laboratory Analysis of Building Components
We conducted physical investigations of hidden structural components and otherwise concealed conditions (by cutting and patching observation openings) and tested physical fabric for potential hazardous materials such as asbestos and lead in paint. Multiple hazardous material investigations and paint analyses of both interior wood and plaster surfaces and exterior wood have been conducted previous to this historic structure report, the results of which have been considered by our project team during this evaluation.

Construction Documents for Mechanical/Electrical Rehabilitation Project
In evaluating code compliance issues and recommending treatments for deficiencies, the drawings and specifications for this project were used as a reference, and are included in the Appendix. All work represented by these documents must be verified in the field, as some elements were excluded.

Further Recommendations for Research:

In searching for new archival sources and in re-evaluating existing documentation, new conclusions about the building's construction history resulted; for example, the discovery of a building permit from the National Archives supported physical evidence that the extant Rear Ell of the Petersen House was constructed in two phases. The section furthest from the main block of the house was found to date to the 1870s, so it was not present during the period of significance for the historic property: April 14-15, 1865. This explains later confusion when 20th c. historians have attempted to compare the layout of the house as described in historic accounts to the contemporary condition, even after the 1958 demolition of the c.1899 coal shed.

Other puzzling discoveries and unsolved mysteries include:

- Why was an intricately patterned wallpaper found concealed behind the cove of the pressed metal ceiling in what has been identified historically as the kitchen (Room 12)? This raises the question of how and where the Petersens lived in the house before and after occupation by boarders, and where was the kitchen in 1865, when it's facilities were used to care for the failing Lincoln.
- What was the 1863-early 1870s appearance of the reconstructed Rear Ell without the west portion added. Was there a sleeping porch above or covered porch below?
- What was the structure along the west perimeter at the rear alley that is represented on the 1888 Sanborn map, and was it present in 1865?
- What was the original stair configuration from the first floor rear porch down to grade before and after the construction of the Rear Ell, with the likelihood that there were no stairs at all?
- What was the function and appearance of the rear yard area upon initial construction and in 1865?

To find the answers to these questions, research would have to include an exhaustive documentary search paired with an invasive physical probe of the building's structure and an extensive archaeological effort.

In summary, it is believed that all key reliable sources have been consulted for purposes of the HSR and no important recommendations for further research are made as part of this study. However, there is extensive interest in, and academic documentation for a subject as important as President Lincoln and his assassination. New or previously undiscovered resources could clearly continue to be uncovered. The social history of the property, relatively unexplored for this report, could be the subject of further investigations. The story of how this tragic event affected the Petersen family is worth telling.

Summary of Treatment Recommendations

Challenges for Facility Management

The adoption of an overall management concept plan with specific objectives is essential in establishing a framework for making informed, goal-based decisions regarding the deficiencies and recommendations outlined below. The classification and use of enclosed building area within this historic property must be determined, specifically the rooms and entire floors that are not restored for public visitation. It is hard to allow empty space to remain underutilized when the park including Ford's Theatre has an overwhelming need for storage. However, the stressed 19th c. structural frame, lack of mechanical ventilation or air conditioning, and undersized fire suppression system do not support the use of this property for storage.

Summary of recommended facility management objectives:

1) Design the flow of a limited number of visitors through the building that is most efficient and meaningful to the historic significance of the house, and then, work to minimize barriers and other health and safety risks along the path, while maximizing opportunities for interpretation.
2) Determine and implement the least invasive means of controlling environmental conditions of the entire house - to provide curatorial standards in restoration zones, to foster comfort for staff and visitors through improved ventilation and insulation, and to limit conditions threatening the building fabric such as growth of moisture induced bacteria caused by rising damp or water intrusion in back areas.
3) Immediately restore original wood windows and related elements that are currently threatened by neglect. Develop routine inspection and maintenance program for all exterior elements that are subject to harsh conditions within an urban setting.
4) Limit loading of the structural frame by removing heavy items from upper floors, and remove all storage in areas with inadequate fire suppression.

Following is a summary of recommendations for treatment, arranged by discipline and degree of severity of related deficiency*:
(D = deficiency, R = recommendation)

* Refer to Parts 1E and 1F in this HSR for an in-depth analysis of issues and further evaluation of this list of recommendations.

Architecture and Structure-Exterior

East Elevation of main house block at Tenth Street: This face of the house presents the first significant image to the passing public and park visitors alike, and although the best maintained of the house, it currently requires steps to preserve historic materials and improve interpretation through historic authenticity.

Threatened historic building fabric:

D Original wood elements are adversely affected by exposure to sun and moisture due to moderate failure of paint coating.

R Perform lead paint abatement (see hazardous materials), repair deterioration, prime and paint wood windows, hoods, cornice and shutters (reinstall 1 set at basement level). Treat windows as complete units, inside and out, and check for functional hardware.

D Pointing mortar at masonry wall has deteriorated at area of copper collector near the cornice line and near sidewalk/grade level.

R Repoint using soft mortar mix, appropriate to mid-19th century.

Historic authenticity and integrity:

D Storage shelves and boxes visible through metal security screens secured to basement window interiors are visually intrusive to pedestrians.

R1 Alter use of Room 10 to exclude storage or secure basement level shutters in closed position, to improve appearance of house by pedestrians. Note that one set of shutters has been temporarily removed and stored off site.

R2 Consider leaving Third Floor level shutters in closed position to protect windows, and limit heat loss and gain. This floor should only be used for light storage.

D Cast iron railing has several missing spindles and footscraper is totally missing from granite base.

R Replicate missing elements from historic documentation and replace.

West Elevation of main house block and South and West Elevations of rear ell at yard/garden: These rear portions of the house are not currently seen directly by visitors, and thus, have been allowed to deteriorate to unacceptable levels.

Threatened historic building fabric:

D Original wood elements are rapidly deteriorating from exposure to sun and moisture due to severe failure of paint coating.

R Perform lead paint abatement (see hazardous materials), repair deterioration, prime and paint wood windows, doors and trim. Replace

all cracked or broken glass panes and reglaze prior to paint application. Treat windows and doors as complete units, inside and out, and check for functional hardware.

D Pointing mortar at masonry walls of rear ell has deteriorated at numerous locations near grade level.
R Repoint using soft mortar mix, appropriate to mid-19th century.

D Gutter system of adjoining building over roof of rear ell has periodically become clogged with debris, allowing water to spill on adjacent flat roof and enter masonry party wall. This gutter was installed by the NPS to correct the major water infiltration that damaged the Death Room prior to the 1978-80 restoration.
R Perform routine inspection, clean-out debris and evaluate the condition of all gutters and downspouts.

Historic authenticity and integrity:

D The ground floor areaway, under the rear porch, is frequently used as a storage zone, which is an inappropriate location to stockpile items from Ford's Theatre. Note that this area was scheduled for enclosure as part of the mechanical and electrical upgrade project, 2001-2002, a situation that further stresses the historic inaccuracies that have prevailed at the rear of the house and yard/garden.
R1 Remove all stored items to improve appearance of house to visitors, whether or not the porch stairs are utilized for visitor circulation.
R2 Undertake study to determine historically appropriate appearance of a functional yard or courtyard for privately owned row house used both for boarding and family use at time of Lincoln's death. Develop plan, and take steps to implement.
R3 Evaluate impacts to historic resource and management of property if c.1870s rear ell extension were removed to reflect actual appearance and use of house on April 14-15, 1865.
Positive impact: Demolition of this extraneous section may reveal clues of the 1865 configuration through allowing further physical investigation and site archaeology.
Negative impact: Demolition of this post-1865 building section removes ability to rehabilitate for modernized support facilities for use by park staff, including bathroom, without impacting historic fabric.

Architecture and Structure-Interior

Basement level of main house block and rear ell: Intrusion of moisture is threatening structural damage to below-ground masonry, eroding mortar joints, and disintegrating finished plaster where plaster is applied directly to masonry substrate. The condition can seasonally raise the interior relative humidity, increasing the deterioration of stored records and artifacts, and creating unacceptable air quality due to the rapid growth of bacteria and mold.

Threatened historic building fabric:

- D Evidence of past moisture damage in masonry walls of main house and severe rising damp within 1870s portion of rear ell walls requires investigation before appropriate permanent corrective action is determined and steps taken to reverse condition and repair.
- R1 Remove all storage from suspect areas, and relocate to dry area.
- R2 Monitor condition at problem areas in preparation of investigation.
- R3 Introduce positive air flow through ventilation and dehumidification to promote dry and healthy conditions prior to permanent treatment.
- R4 Perform routine maintenance including regular cleaning of interior walls. Aggressively clean locations where mold and mildew are evident.
- R5 If garden plants are watered around perimeter of building, use a drip watering system instead of a sprinkler that typically forces water in direct contact with the masonry wall.
- R6 Continue program to treat and control termite infestation that is encouraged by these moist conditions.
- R7 Perform testing and comprehensive investigation by professionals to determine reason for problem and design potential solutions. Undertake corrective action prior to repairing or replacing failed plaster.
- R8 Repair damaged finishes following treatment. In rehabilitation zones, replace failed plaster with drywall on furring (where plaster is directly applied directly to masonry wall). This will allow the masonry to breathe.

Environmental control:

- D Room 12 (former kitchen under Death Room) is improperly used for storage. This room is within significant portion of house related to Lincoln's death, fire suppression is not adequately sized to protect contents and molding surfaces indicate moisture and lack of positive air flow.
- R1 Introduce positive air flow through ventilation and dehumidification.
- R2 Limit storage to well organized/packaged, lightweight items that are not highly flammable.

Interpretation and Use:

D Room 12 (former kitchen under Death Room) is within historically significant portion of the house, but its historic flooring has been replaced with modern materials and its appearance has been altered extensively with exposed pipes, and conduits along the ceiling.

R It is not feasible to restore this room to its 1865 appearance due to lack of documentation and extent of modern intrusions. However, consider this interior space as the potential location for a passive interpretative display for the public if circulation passes by this location as planned. This room could be accessed by visitors in wheelchairs, unable to mount the house stairs, if the alley easement were a ramped surface. A video and/or permanent display would serve to expand the story of the night of Lincoln's assassination to include the devastating effects that this historic event brought upon the Petersen family.

First Floor level of main house block and rear ell at exhibit spaces:

There are no serious issues beyond continued monitoring of environmental conditions for preservation of finishes, furnishings and artifacts and impact of public visitation. From structural analysis, group sizes for visitors entering the house museum should be no larger than 28 people. This limitation is based upon all members on the group congregating in a single room or area of the house. The park is currently limiting visitors to 15-20 maximum.

First Floor level of rear ell at non-exhibit spaces:

Environmental control:

D Windows are single-pane, and with severe deterioration, units are performing poorly in terms of heat loss/gain and air infiltration.

R Install interior storm window units designed for historic properties. Non-operative panels are the least intrusive if operation is not required regularly for ventilation.

Historic authenticity and integrity:

D AC window unit is visually incompatible to overall historic elevation, even positioned in the post-1865 portion of the rear ell.

R If the AC unit is actively used to manage the humidity within the rear ell, then its placement may be warranted. If not, then remove unit and restore window to historic condition.

Second and Third Floor levels of main house block (non-exhibit spaces):
The 2 upper levels of the house should remain restricted from public use and in no case should the uppers floors be used for storage. Due to infrequent use, maintain a cyclical inspection program to identify potential problems.

Threatened historic building fabric:

D Structural settlement has caused vertical cracking in plaster at the east/west partition, both floors.
R Add solid wood blocking between the discontinuous ends of the wall studs at each floor level.

D There is excessive floor deflection adjacent to the fireplace hearth in Room 302.
R Perform further physical investigation by opening the ceiling/floor at the location of the header to joist connection adjacent to the hearth. Examine the condition of the joist and evaluate the capacity of the first continuous joist adjacent to the hearth before performing remedial work.

D Upper floors are used inappropriately for storage. Structural framing may be structurally deficient to support the live load capacities associated with stored materials and fire suppression is inadequate.
R Limit storage to well organized/packaged, lightweight items that are not highly flammable.

D Existing plaster ceiling at the Second floor stair landing is cracked.
R Remove a strip of plaster in the area to examine and assess the ceiling system. Develop a remedial solution based upon the findings.

Environmental control:

D Windows are single-pane, and with severe deterioration, units are performing poorly in terms of heat loss/gain and air infiltration.
R1 Install interior storm window units designed for historic properties. Non-operative panels are the least intrusive if operation is not required regularly for ventilation, but this depends on use and overall approach to environmental management.
R2 At the third level where no occupation is likely beyond light storage, install non fading black-faced insulation boards covering the window openings to the inside of the window unit.

Historic authenticity and integrity:

D Window treatments (i.e. shades and curtains) are visible from the street.
R Ensure that treatment is appropriate to a private boarding house in 1865 (period of significance), and maintain in good, clean condition.

Attic of main house block:

Threatened historic building fabric:

D Existing roof truss located immediately to the south of the attic hatch is missing all web members.

R Reinstall members to match the existing trusses in order to restore the structural capacity of the truss.

Environmental control:

D Management of inside air temperature within the building is difficult to control in extreme cold and hot periods. The build-up of heat within the attic in the summer months and the heat loss in the winter adds to this problem.

R1 Provide blanket insulation between ceiling joists (for Third floor) in attic.

R2 Introduce mechanical means of ventilating hot air from attic, without impacting the roof system, as proposed by mechanical upgrade project.

Mechanical System

The installation of a whole house ducted air conditioning system was eliminated from the mechanical upgrade project within the value engineering process.

R Conduct a study to further investigate the replacement of the old window unit at the landing above the restored First Floor area with an efficient modern alternative, to both manage air temperatures for comfort and conservation.

Electrical System

R Remove all excess wiring that is no longer utilized and secure all remaining raceways.

R Instigate routine inspections to include the tightening of loose conduits, replacement of loose and worn-out wiring devices, and replacement of missing or burned-out light bulbs.

R Verify that the fire alarm system meets ADA guidelines following completion of the electrical upgrade project.

Plumbing

Currently, the necessary public toilet facilities, including accessible facilities, are provided across the street at Ford's Theatre. NPS justifies this by defining the two buildings as a single facility, and the fact that visitors are within the Petersen House approximately ten to fifteen minutes. Providing the required plumbing facilities in the Petersen House would require extensive modifications and significant impact on the historic structure and is not recommended.

A single, unisex toilet is available to park staff on the basement level of the Rear Ell, accessible directly from the garden. If this noncontributing building section (constructed post-1865) were removed in the future, this toilet would be eliminated, and the question of sensitively locating an alternative restroom for staff would need to be addressed.

Fire Protection and Life Safety

R Verify that all exit signs are internally or externally illuminated while the building is occupied.
R Remove storage from all rooms that is in excess of sprinkler system design loads, including Room 12.
R Remove all obstructions from the path of egress such as furniture, storage or equipment.
R Install a self-closing door on the Boiler Room or fit existing door with closer mechanism.
R Maintain a monthly inspection program for portable fire extinguishers.
R Inspect building to ensure that all fire alarm wiring is concealed in conduit.

Security System

R Replace existing outdated system with an updated monitoring panel.
R Remove existing abandoned in place security related wiring.
R Provide additional monitoring by CCTV cameras with pan-tilt-zoom capabilities.
R Add monitoring capabilities at the Boiler Room door and motion detectors throughout the second floor.
R Run all security alarm and future CCTV wiring in conduit.
R Integrate the alarm annunciation system with the proposed CCTV system.
R Provide both local annunciation and remote monitoring (both at Ford's Theatre and at the US Park Police Dispatch Center).

Abatement and Management of Hazardous Materials

The areas inspected and sampled during the asbestos and lead paint surveys indicated that asbestos-containing materials and lead-based painted components are present and could possibly be disturbed during future renovation projects at the Petersen House.

The five recommended response actions to the positive identification of an ACM-Asbestos Containing Material or lead-based paint are:

Removal, enclosure, encapsulation, repair or
Monitoring with an operations and maintenance program (O&M)

Result of Material Testing at Petersen House:

Positive Asbestos Survey Results

- ACM identified-pipe insulation at Room 202, found in good condition at undisturbed location

R Periodically monitor the pipe insulation material at Room 202 by implementing an O&M program. Post warning labels on RACM material.

R If the material is to be disturbed by renovations then it is required to be properly removed by trained personnel using abatement techniques acceptable to OSHA and the USEPA, and be disposed of as asbestos waste.

Positive Lead Based Paint Survey Results

- Basement Level Main House – wood floor, doors, windows and stairs; plaster walls
- Basement Level Rear Ell – tin ceiling; wood doors, windows and stairs; plaster walls and ceiling
- Porch – windows, railing
- First Floor Main House (restoration area) – wood doors, windows and stairs; plaster walls
- First Floor Rear Ell (beyond death room) – wood doors, windows; plaster walls
- Second and Third Floors Main House – wood floor, doors, windows and stairs; plaster walls, fireplace mantels, radiators

R Second and third floors both contain plaster wall surfaces with peeling paint – develop an abatement plan for these surfaces.

R Manage in-place the remaining paint surfaces, so that the painted surfaces containing lead remain in good condition and do not become chipped or flaked.

R If any painted surfaces containing lead will be disturbed in conjunction with a future renovation project, hire a licensed lead abatement contractor in accordance with OSHA's Lead in Construction regulations, 29 Code of Federal Regulations (CFR) 1926.62, to perform the work.

PART 1: DEVELOPMENTAL HISTORY

A. Historical Background

A. Historical Background

Overview

The Petersen House is a handsome Greek Revival row house which fits neatly within the traditional definitions of the city of Washington's nineteenth-century character (Figure 1). Originally constructed in 1849, it served as William Petersen's family residence, his boarding house, and possibly his shop. A modest remnant of the old downtown, it has survived the development that has changed much of the face of the nineteenth-century city.

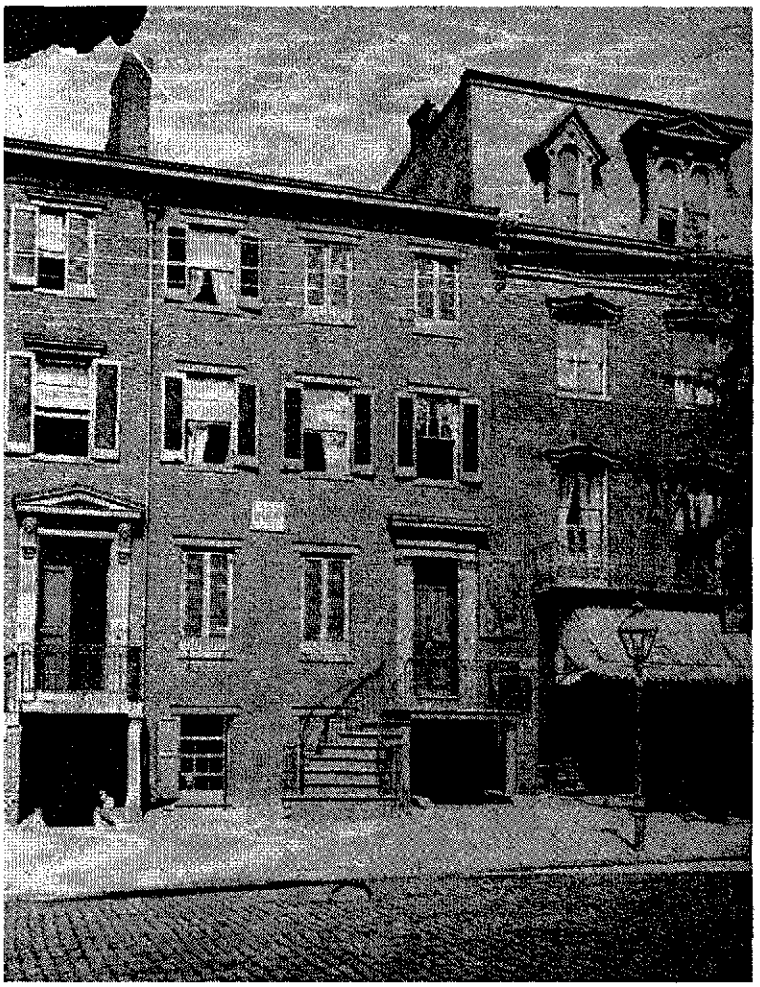

Figure 1 View of primary (east) facade of Petersen House, circa 1883 (NPS-NCR Collection – FTNHS).

A major reason for the longevity of the Petersen House is its singular importance as the location of the death of President Abraham Lincoln in April of 1865 following his fatal injury at Ford's Theatre across the street. As a result of its historical association with Lincoln and its resulting significance, in 1896 the house

became one of the first house museums to be purchased and operated by the federal government. In fact, in 1937 the site was described as ". . . a shrine more than national in its significance, dedicated to one of the wisest and gentlest of men."[1]

The sheer respect paid Lincoln after his death has elevated the Petersen House to a memorial to the President, and given the property its commemorative focus. Visitors to the Petersen House and Ford's Theatre, collectively operated as the Ford's Theatre National Historic Site by the National Park Service since 1966, witness both the location of Lincoln's assassination in the theatre and the room in which he perished in Petersen's house. The exterior and the first-floor furniture and interior have all been restored to the defined period of significance – April 14-15, 1865 – as closely as possible. It should be pointed out that the house has been altered from its original and/or early appearance, with late-nineteenth-century additions removed, and some materials having been abrasively cleaned or replaced in an attempt to restore the building.

Purchase of the Land and Construction of the House

Following the creation of streets and squares within Major Pierre Charles L'Enfant's Plan for the capital city in 1791 and Andrew Ellicott's completion and implementation of the plan, former farms and tracts of land were divided up for sale to encourage development. David Burnes owned one such tract, and he sold his holding to the United States government in 1791.[2] Square 347, the future site of the Petersen House was created at this time out of land sold by Burnes (Figure 2). In exchange for selling their land, owners like Burnes were given a percentage of lots. Lot 14, the southern half of which became the Petersen House, was not one of these lots and as a result was put up for public auction by the Federal Commissioners.

Along with Lots 1, 2, 5, 6, 9, 10, and 13, Lot 14 was briefly owned by James Greenleaf of Massachusetts from 1793 to 1797. His intended use was not known, and the lots were again put up for auction in 1798, at which time Lot 14 was purchased by Milesius Thomas Kirk of Georgetown. The property changed hands many times before it was purchased by Petersen. Lot 14 was subdivided in 1844 (originally the lot was 50 feet along the street and 100 feet deep, but it

[1] Federal Writers' Project, Works Progress Administration, *Washington City and Capital* (Washington, D.C.: Government Printing Office, 1937), 424.

[2] Matthew R. Virta, *Archeology at the Petersen House: Unearthing an Alternate History* (Washington, D.C.: Regional Archeology Program, National Park Service, National Capital Region, 1991), 7.

was divided into two 25-foot-wide lots. On February 5, 1849, the southern half of the lot was deeded to William Petersen for $850 by Abner H. and Mary Ann Young.[3]

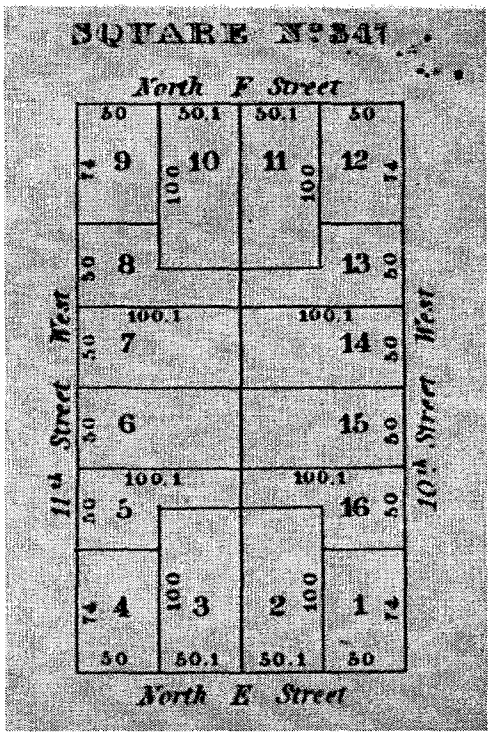

Figure 2 Plan of Square 347, date unknown (Virta, A6).

The south half of Lot 14 was empty when Petersen purchased it; in fact, no building had yet been constructed on the site and only refuse from nearby houses had been placed there. By 1841, Square 347 was quite densely built up, containing 25 structures, including 3 shops, 13 brick and 9 wood frame dwellings.[4] Thus when Petersen bought his empty lot it must have been one of the only available lots in the area. William Petersen constructed the three-story-plus-basement, brick row house on the lot in 1849. As stated previously, the building exhibits Greek Revival characteristics, such as a brownstone stoop (curved in this instance), a wood entablature around the door, and classically inspired lintels and sills.

William Petersen and his wife Anna were both born in Germany in 1816 and 1819, respectively. They immigrated to the United States in 1841 and settled in Washington. The Petersens most likely were attracted to this neighborhood of

[3] Virta, D6.

[4] Ibid, 11.

Washington for its reputation as an enclave for German immigrants; this had been true since the 1840s and is evident in the Germanic surnames listed in city directories for this area in this period. Petersen was a tailor by profession and almost immediately he opened a tailor shop on Louisiana Avenue. Although Petersen may have moved his business to Tenth Street once the house was complete, no records exist to prove the truth of this assertion.[5]

As soon as the house was constructed, the Petersens began to take in boarders, including some Congressmen, as revealed in various city directories.[6] By 1858, the Petersens added two more children to their family, which raised the total number of children to six. Archeological excavations carried out by the Regional Archeology Program of the National Park Service assert that an addition was constructed at the rear of the house in 1858. It is believed that its construction might have been an attempt to alleviate the crowding in the house from the large family and the boarders.[7]

Archeological evidence also reveals that a fire occurred in 1863 in this rear addition, probably due to a fire in the kitchen, which was believed to be located there. Tax assessment records indicate that the addition was promptly rebuilt in the same configuration since the ell was re-assessed at the same value as before the fire.[8] Archeological excavations show that small changes were made in the rebuilding of the ell, such as the inclusion of a wood floor instead of brick laid in a herringbone pattern – which would have raised the floor level by over one foot, removing the original step down into the kitchen.[9] In addition, the kitchen was for the first time separated from the house by a paved corridor, to prevent future fires from damaging the main block of the house.

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[5] Historian George Olszewski lists the 1865 address of Petersen's business as 442 8th Street, West. Olszewski concludes that, at most, Petersen carried out minor repairs in the front room of the basement.

[6] Virta, 12.

[7] Ibid.

[8] Tax assessment records list the value of the house at $3400 from 1858 to 1863; an additional entry is made in 1863 for $3400. Virta concludes from this information that the ell was burned in 1863 and rebuilt as before and thus was reassessed at the same value.

[9] Virta, 22.

Context of the Petersen House During the Civil War

During the Civil War, the city of Washington was burgeoning with the industry of war and was heavily occupied by Union Troops. Many public buildings were given over to wartime uses, and the presence of troops affected even the quiet small residential and commercial streets such as Tenth Street. At the time that Ford's Theatre and the Petersen House became tragic focal points during the war, Tenth Street was primarily lined with small-scale row houses and modest wooden structures. A post-1863 photograph of Tenth Street (Figure 3) depicts the streetscape containing Ford's Theatre, across from the house belonging to the Petersen family. The remnants of unpretentious wood-frame buildings remain, but stand dominated by the mid-19th century classically detailed masonry construction of Ford's Theatre and later infill houses and commercial structures exhibiting Victorian detailing.

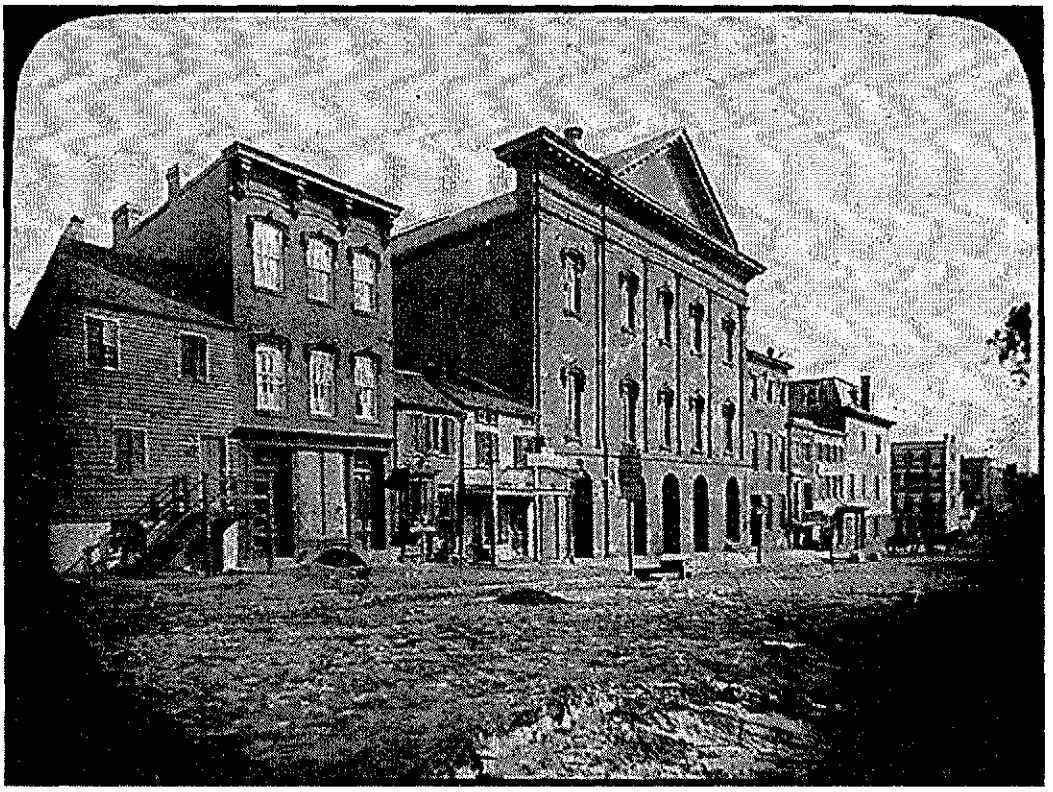

Figure 3 Ford's Theatre-Tenth Street, NW, after 1863; photographer unknown (National Archives, Still Picture Branch, War and Conflict Number 260)

A circa 1870 aerial view of the city, shows the contrast between the grand public buildings lining major avenues and the small-scale residential and commercial character of the city in which the row house was the predominant residential building type. (See Figure 4, on which the approximate location of Petersen House and Ford's Theatre is indicated.)

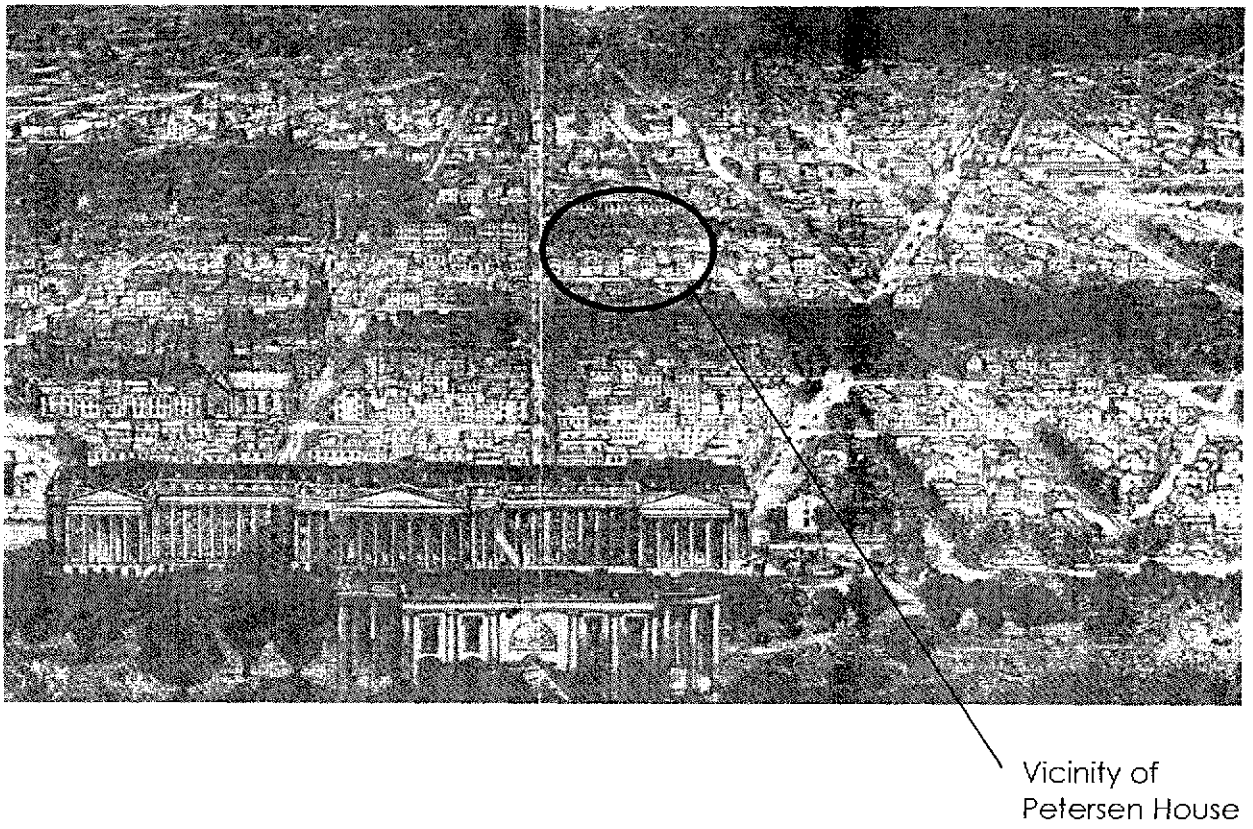

Figure 4 Aerial view (looking East) of Washington immediately following the Civil War, circa 1870, with The White House and Treasury Building in the foreground.
(Original in Library of Congress. Reproduced in Richard M. Lee, Mr. Lincoln's City (McLean, VA: EPM Publications, Inc., 1981), 116-17).

The Death of President Lincoln

The evening of April 14, 1865, proved to be a most fateful one for President Lincoln. As planned, the Lincoln party attended the production of the British comedy *Our American Cousin* at Ford's Theatre. Lincoln was a dedicated fan of the theatre and frequented both Ford's and Boyd's theatres often. On this particular evening, the president and his wife, Mary Todd Lincoln, arrived late and walked through the theatre to ". . . a cheering welcome, the acting ceased temporarily out of respect to the entering Presidential party. Many in the audience rose to their feet in enthusiasm and vociferously cheered, while looking around."[10] The couple made their way to their box which they were sharing with friends Major Henry Rathbone and Miss Clara Harris.

[10] Charles A. Leale, M.D., "Lincoln's Last Hours," p. 3, quoted in Vera Craig, *Furnishing Plan: House Where Lincoln Died (Petersen House), Washington, D.C., (1976)*, np.

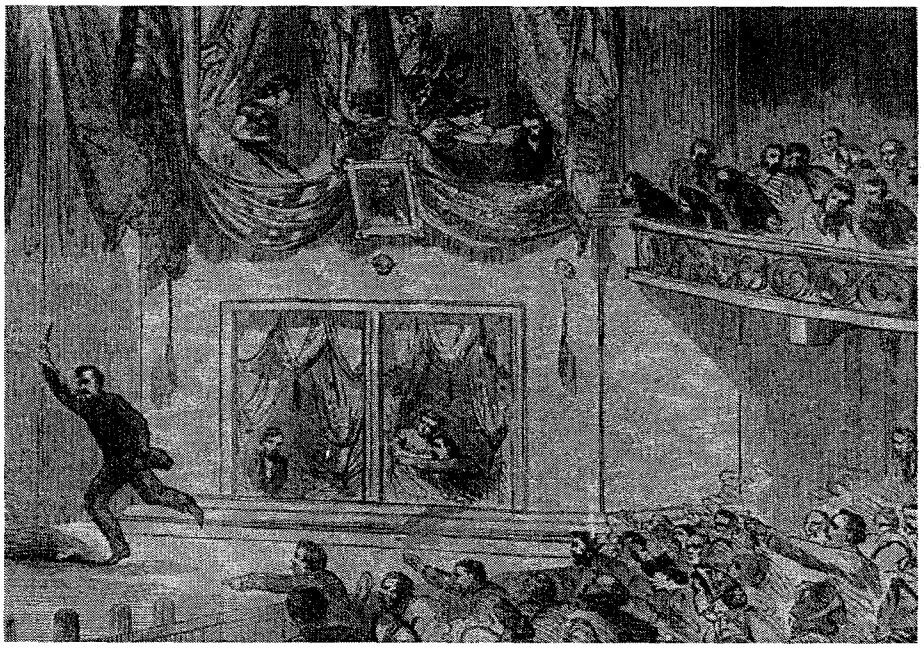

Figure 5 April 27, 1865, Harper's Weekly sketch of Booth fleeing the stage, by Alfred Waud (NPS-NCR Collection – FTNHS).

One Charles A. Leale, M.D., was in the audience that night. The following is Dr. Leale's account of what happened when John Wilkes Booth stormed the door and entered into Lincoln's box (Figure 5):

> . . . suddenly, the report of a pistol was heard, and a short time after I saw a man [John Wilkes Booth] in mid-air leaping from the President's box to the stage, brandishing in his hand a drawn dagger. His spur caught in the American flag festooned in front of the box, causing him to stumble when he struck the stage, and he fell on his hands and knees. He quickly regained the erect posture and hopped across the stage, flourishing his dagger . . .[11]

Dr. Leale was the first medical person to reach the wounded President:

> As I looked at the President, he appeared to be dead. His eyes were closed and his head had fallen forward. He was being held upright in his chair by Mrs. Lincoln, who was weeping bitterly. From his crouched down

[11] Ibid.

> sitting posture it was evident that Mrs. Lincoln had instantly sprung to his aid after he had been wounded and had kept him from tumbling to the floor.[12]

Leale suggested that the main priority was to remove Lincoln from the theatre to a place where he could rest and receive treatment. Leale believed that taking the wounded president to a hospital or back to the White House would be too damaging to his fragile condition. Therefore, the president was carried out of Ford's Theatre and taken into the small house owned by William Petersen. Accounts vary on why Lincoln was carried to this house; one account states that a man stood at the entry with a candle guiding them in, and another states that the house directly across from the theatre had no lights on so the next closest house was the Petersen House. An image of the house that fateful night is illustrated in Figure 6, below. As the undated engraving shows, military guards hold back the concerned crowds that assembled in front of the house to which the President was taken. This image also depicts the brick row houses that flanked the house and the picturesque nature of the tree-lined streetscape.



Figure 6 Undated engraving of Street scene outside Petersen's door, night of April 14, 1865; artist unknown (NPS-NCR Collection – FTNHS).

[12] Ibid.

Gideon Welles, Secretary of the Navy wrote in his diary on April 18, 1865, about the arrangement within the Petersen House on the eve of Lincoln's death:

> We entered by ascending a flight of steps above the basement and passing through a long hall to the rear [where] the President lay extended on a bed breathing heavily. Several surgeons were present, at least six, I should think more. Among them I was glad to observe Dr. Hall, who, however soon left. I inquired of Dr. H. [as I entered] the true condition of the President. He [replied the President] was dead to all intents, although he might live three hours or longer.[13]



Figure 7 Image of Lincoln in Death Room, by Ritchie (NPS-NCR Collection – FTNHS).

Gideon Welles further described how Lincoln's tall figure lay diagonally across the small bed in the rear bedroom (Figure 7). Dr. Robert King Stone, the Lincolns' family physician, arrived at the house and took charge of treating the president's head wound. For the rest of the night, Mary Todd Lincoln was in a state of distress hoping that her husband would come out of his coma.

[13] Gideon Welles, quoted in Vera Craig, np.



Figure 8 1892 stereograph of Double Parlor, where the search for Booth was planned (NPS-NCR Collection FTNHS).

Meanwhile, several men including the Attorney General and Secretary of War sat in the bedroom of the first-floor boarders (or back parlor) and started to plan the search for the assassin, who at this point was known to be John Wilkes Booth, a disgruntled actor with Confederate sympathies (Figure 8). Furthermore, the cabinet members (all of whom attended the president that evening, except for Seward who was already bedridden with severe injuries from a carriage accident when he was attacked that same evening by one of Booth's collaborators) discussed the inevitable replacement of Lincoln by Vice-President Johnson. At 7:22 on the morning of April 15, Lincoln died. It is traditionally reported that upon hearing this news, Edwin Stanton spoke the now prophetic words, "Now he belongs to the ages."[14]

[14] David Herbert Donald, *Lincoln* (New York: Touchstone, 1996), 599.

Commemoration

Grief overcame the city of Washington and the nation when news of Lincoln's death circulated on the morning of April 15, 1865. Most buildings in downtown Washington were draped in black crepe as the local residents mourned the death of their leader. The Petersen House, as the site of his death, became a shrine and a memorial to the great man. Immediately following his death, "curiosity seekers" stripped the room, "cutting up the carpet, curtains, and blood-stained sheets."[15] In an entry to her diary on Easter Sunday, 1865, Louisa Petersen wrote that "People have torn up the carpets in the hallway . . ."[16] Further, in a letter to his sister Ida, William Clark, the boarder who resided in the room where Lincoln died, wrote that "Since the death of our President hundreds daily call at the house to gain admission into my room."[17] Clark continued, "Everybody has a great desire to obtain some memento from my room so that whoever comes in has to be closely watched for fear they will steal something."[18]

Images of the room were made shortly after Lincoln's death to preserve the memory. On the morning of Lincoln's death, a photograph of the bed was taken by Julius Ulke, a boarder in the Petersen House and a professional photographer (Figure 9). Taken immediately after Lincoln's body was removed to the White House, Ulke was able to capture the haunting image of a blood-stained pillow. An April 1865 edition of *Frank Leslie's Illustrated Newspaper* included a drawing of the room by newspaper staffer Albert Berghaus, from a visit and from descriptions (Figure 19). In a May 6, 1865, issue of *Harper's Weekly*, a wood engraving of the room by Alfred Waud appears (Figure 20). This image is particularly helpful in determining how the room looked because it was based upon a sketch that Waud completed from viewing the room after the death rather than based upon a description given him by those present (see Figure 43 in Part 1C). These images serve to memorialize the visual appearance of the modest surroundings of Lincoln's death place, but also provide modern-day scholars with important evidence to assist in interpretation and restoration.

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[15] Gary Scott, "A Photograph and Artist's Renderings: Keys to the Restoration of a National Landmark," *Nineteenth Century* Vol. 6, no. 3 (Autumn 1980): 58.

[16] Louisa Petersen, Diary Entry, Easter Sunday 1865, quoted in Craig, 19.

[17] Letter from William Clark to his sister Ida, 19 April 1865, quoted in Craig, np.

[18] Ibid.

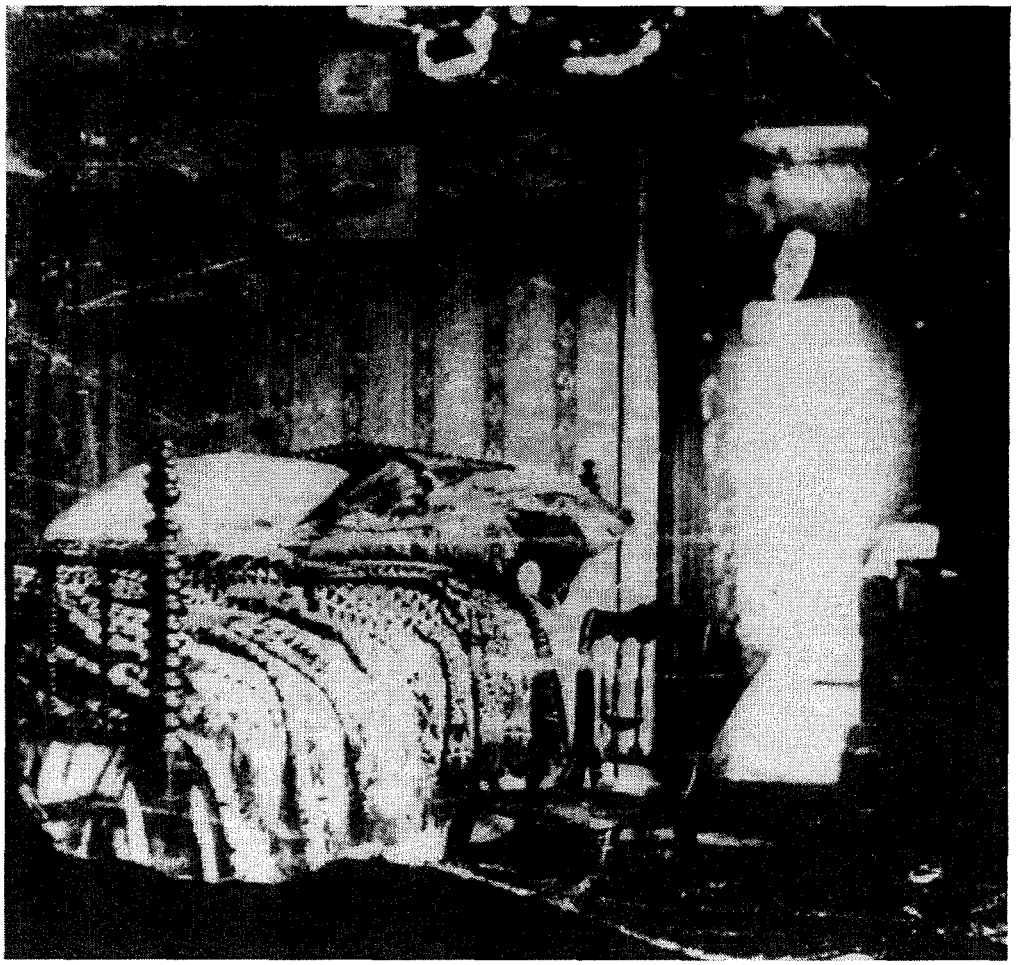

Figure 9 April 15, 1865, photograph of the death bed by Julius Ulke (NPS-NCR Collection – FTNHS).

Congress started the efforts to memorialize the house in 1880 when Congressman H. D. Sayers of Texas proposed the purchase of the Petersen House and two neighboring buildings. In 1883, a marble plaque (no longer extant) was placed on its east facade between the first and second floors. In 1923, a new bronze plaque was placed at eye level between the basement and first floors so that visitors, who often complained of the height of the earlier marble plaque, could more easily read the new plaque's memorial inscription (Figure 10). Installed by the Washington Citizens Committee and still in place today, the plaque reads:

ABRAHAM LINCOLN
DIED IN THIS HOUSE
APRIL 15, 1865 AT 7:22 A.M.
PURCHASED BY
THE UNITED STATES
IN 1896

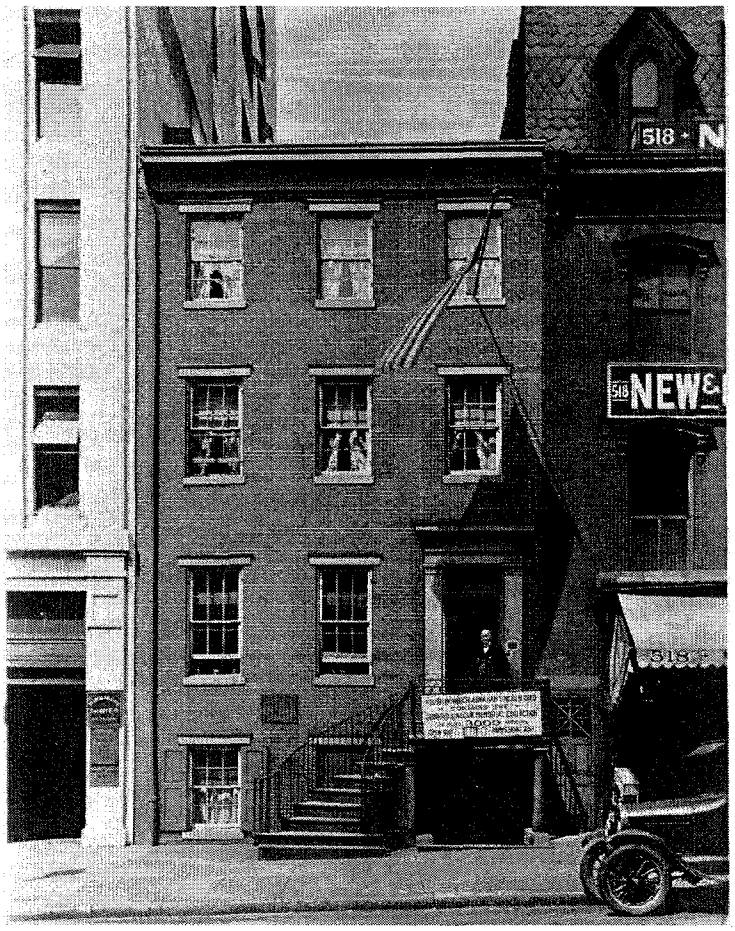

Figure 10 Circa 1925 photograph of east elevation during Oldroyd Museum period. The bronze plaque is present between the basement and first floor (NPS-NCR Collection – FTNHS).

The purchase of the Petersen House by the U.S. government on June 29, 1896, at a cost of $30,000, shows the wide support for commemorating the house. The appropriation, dated June 11, 1896, included an additional $1,000 for repairs.[19] Run by the Army Corps of Engineers, the Petersen House became the "first historic house obtained by the Federal government for museum purposes."[20] It was from the Schade family, owners of the house since 1878, that the government bought the house. The Petersen heirs had sold the house to Louis and Anne Schade for $4,500 some years after the death of both parents.[21]

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[19] National Capital Planning Commission, *Downtown Urban Renewal Area Landmarks* (Washington, D.C.: NCPC and District of Columbia Redevelopment Land Agency, 1970), 16.

[20] Scott, 58.

[21] National Capital Planning Commission, 15.

William Petersen died from an overdose of Laudanum on June 18, 1871, and Anna Petersen died on October 18, 1871. Neither of the Petersens had drafted a will. The furniture from the house was sold by auction at the end of October 1871.

Louis Schade was the editor of the *Washington Sentinel*, and he subsequently moved the office of his newspaper into the front room of the basement (where it is believed Petersen may have had his tailor shop). In 1893, the Schades moved out of the house on Tenth Street, supposedly discontent with the number of visitors desiring to see the death room.[22] The house was subsequently leased by the Memorial Association of the District of Columbia, a group formed by Congress on March 18, 1892. At some point between 1892 and 1896, the Memorial Association allowed O. H. Oldroyd, a collector of Lincoln memorabilia, to occupy the Petersen House rent-free. The exact start of Oldroyd's occupancy is unknown. Files held by the National Park Service state that Oldroyd moved into the house as early as 1893, but no documentary proof supports this date. The first written reference to Oldroyd's unique arrangement was made in June of 1898 by General John M. Wilson, Chief of Engineers who wrote that Oldroyd "is occupying [the house] free of rent and acting as temporary custodian without pay."[23] Congress purchased Oldroyd's Lincoln Memorial Collection for $50,000 on May 30, 1926.[24] Oldroyd ran a small museum in the house where he displayed his collection of Lincoln memorabilia. Oldroyd's collection was deemed to be "of little practical value" by the Smithsonian;[25] as a result, it was moved from the house to the Ford's Theatre in 1932.

From 1898 to 1917, the house had been under the jurisdiction of the War Department, with Colonel Theodore A. Bingham of the U.S. Army Corps of Engineers as the Officer in Charge. During this period, in 1905, measurements were taken of the house for measured drawings; in essence, this action showed that the government wanted to preserve the building's architectural form for its associations with Lincoln's death. This governmental interest in honoring Lincoln

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[22] George, J. Olszewski, *House Where Lincoln Died: Furnishing Study* (Washington, D.C.: Division of History, Office of Archeology & Historic Preservation, National Park Service, Department of Interior, April 15, 1967), 30.

[23] Sara B. Chase, "A Brief Study of Historic Exterior Paint on Windows," *Design Development Report: Ford's Theatre and Petersen House* (Alexandria, VA: John Milner Associates, Inc., 6 August 2001), 4.

[24] National Capital Planning Commission, 16.

[25] Scott, 59.

was further extended by plans for the purchase of adjacent properties in order to create an urban park around the Petersen House. The house was under the auspices of the Director of Public Buildings and Public Parks of the National Capital from 1917 to 1933. In 1933, jurisdiction over the Petersen House was transferred to the National Park Service. In 1966, the District of Columbia's Downtown Progress Association funded the District Department of Highway's repaving of the sidewalk in front of the house in a brick herringbone pattern. The ultimate goal of the Downtown Progress Association was to close off Tenth Street to vehicular traffic and to create "Lincoln Center." These projects never came into fruition, but as concepts they show the government and public commitment to honor Lincoln. Within this time of federal historical awareness and public interest, the National Historic Preservation Act of 1966 (Public Law 89-665) created the National Register of Historic Places on October 15, 1966 as a means to further federal recognition and protection of historic properties with local, state and national significance. The federally held historic building known as the House Where Lincoln Died was immediately listed in the Register, but heightened recognition was gained by the property with the joining of Petersen House with Ford's Theatre to form the Ford's Theatre National Historic Site, also in 1966.

Additions and Renovations to the House

In 1871-72, during the Petersen heirs' ownership of the house, historian Olszewski states that a bathroom was added to the second floor in the northernmost bay. Olszewski based the 1871-72 date of the construction of the bathroom to vouchers paid for work.[26] One of the vouchers is dated November 17, 1871, and lists plumbing work for $150 carried out by Tim O. Noonan; this voucher most likely represents the bathroom added to the second floor.[27] This bathroom was removed in 1959, and a replacement window was installed in the location of the original opening.

Physical evidence of a visible seam on the exterior of the addition and a thick masonry wall on the interior reveal that the two-bay-wide west portion of the ell addition was not constructed at the same time as the 1863 rear ell (Figure 11). This addition has two possible dates. It may date from 1871-72 when the property's tax assessments increased in value from $2,965 to $6,965.[28] The significant increase in value from 1871 to 1872 is puzzling since the only existing

[26] Olszewski, 54.

[27] Ibid, 67.

[28] Ibid, 96.

records (found in Olszewski's text) for that period are for the construction of the bathroom addition. The addition may date to a December 5, 1878, permit filed by Schade immediately following his purchase of the house. The permit requests permission to "build a two-story brick back building with tin roof" at a cost of $250.[29] Due to this conflicting evidence, the west portion of the rear ell is dated to the 1870s rather than a specific year. The first Sanborn Map (dated 1888) of the city block (Square 347)containing the house indicates that a one-story, most likely frame structure with a shingle roof occupied the location of the 1899-1900 masonry addition built by the government (See Figure 32 in Part 1B).

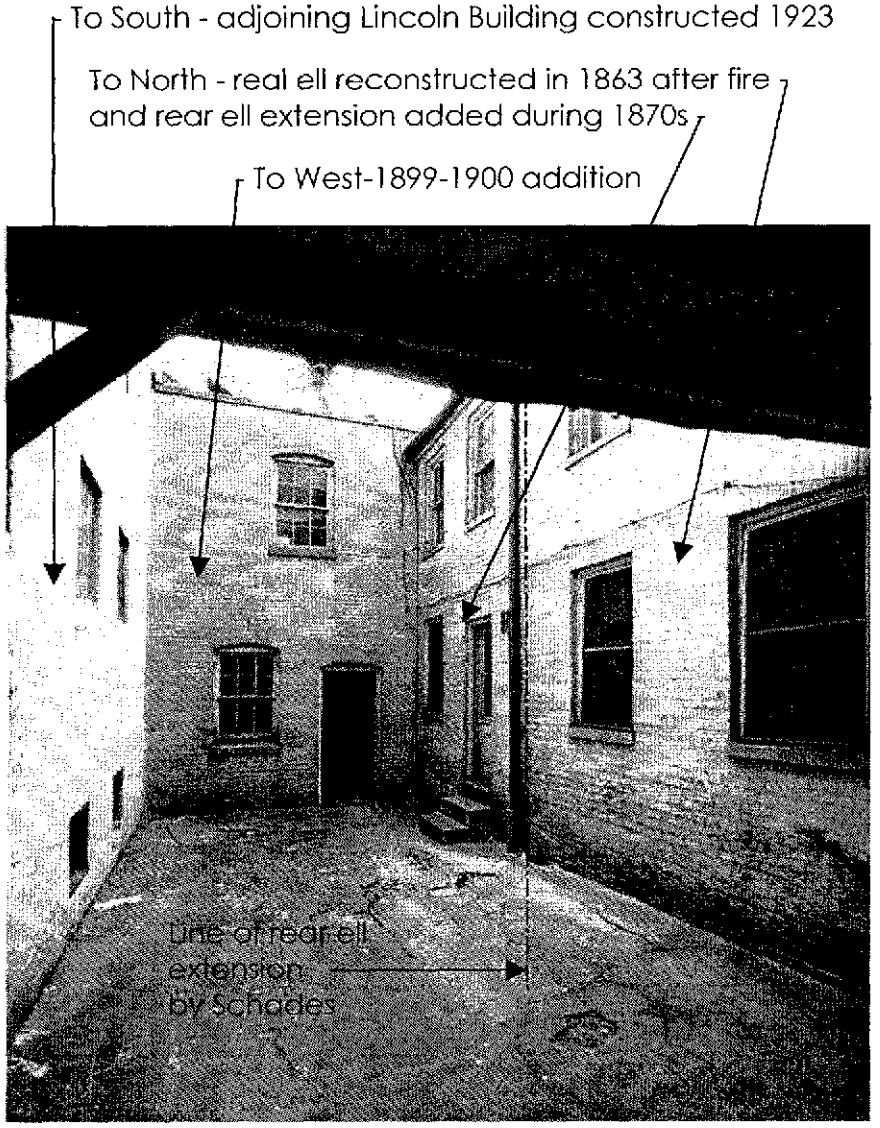

Figure 11 1958 photograph of the rear ell, from left to right : 1899-1900 addition, 1870s addition, and 1863 addition (NPS-NCR Collection – FTNHS).

[29] Permit #1640, 1878, on file at NARA.

When Schade sold the house to the government in October of 1896, the deed stated that use of a narrow passageway on the north side of the house (within the Petersen lot) was granted in perpetuity to the U.S. government. The easement was originally an alleyway. The alley had long been associated with the Petersen House rather than the 1873 building to the north, even though a portion of that building was constructed above the alley.

On March 3, 1899, Congress appropriated $3,833.50 for the repair of the house, and the work was completed by June 30, 1900. The house was "thoroughly overhauled and put in good repair, repapered, repainted, furnished with steam heat, a waterproof course inserted in the walls of the main building."[30] During this work, a brick addition was constructed at the rear of the ell addition and stretching back to the west garden wall (Figure 11). The two-story addition, according to a July 8, 1899, plan was to house a fuel shed and storeroom on the ground floor and a library on the second floor.[31] This addition was removed during the 1959 restoration of the house.

In 1932, a group of five patriotic ladies' societies, under the leadership of Lt. Col. U. S. Grant, 3rd, attempted to restore the interior of the house to its appearance on the day of Lincoln's death. It was during this restoration effort that the first reproduction of "original" wallpaper was made. As part of the restoration, the Department of Public Buildings and Public Parks of the National Capital replaced the rear wall of the death room [which had been removed during the Oldroyd Museum period]. The rear wall door was placed flush with the exterior wall, but the May 6, 1865, sketch by Waud from *Harper's Weekly* shows that the door actually was located "several inches away from the exterior wall instead of flush with it, and the door should have opened into the room instead of out of it."[32] The placement of the rear wall door was corrected during the 1979-80 NPS restoration of the house.

The first major renovation of the Petersen House, however, commenced in 1959 under the Mission 66 program of the National Park Service under Contract No. 14-10-028-1607 (Figure 12). Mission 66 was a ten-year initiative of the National Park Service – starting in 1955 – to upgrade facilities, to improve resource management, and to construct visitors' centers in all the national parks in time for the 50th anniversary.

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[30] NPS-NCR Collection – Ford's Theatre National Historic Site, Annual Work Report submitted by War Department: Army Corps of Engineers.

[31] Olszewski incorrectly dates this addition to 1871-72.

[32] Scott, 60.



Figure 12 February 1959 photograph of the east elevation during the restoration. The stoop and shutters have been removed, and the brickfront is undergoing sandblasting (NPS-NCR Collection – FTNHS).

of the NPS in 1966. Ford's Theatre was also restored under the Mission 66 program for the Civil War Centennial celebration, so it is apparent that the project funded work at places of national historic interest in addition to traditional National Parks. A great deal of the restoration work at the Petersen House was on the exterior of the house. Paint was removed from the building by sandblasting the brick front, waterproofed, and repointed (Figure 12). (Previously the building had been maintained by painting the front with red paint and penciling in mortar joints with white paint; the earliest reference to this method is June 1905.) The brownstone stoop was replaced due to extensive deterioration, as were the shutters, basement door, and easement passageway door (Figure 13). The windows and doorway on the east elevation were painted white with green shutters, and were criticized as "giving the house a phony Federal look."[33]

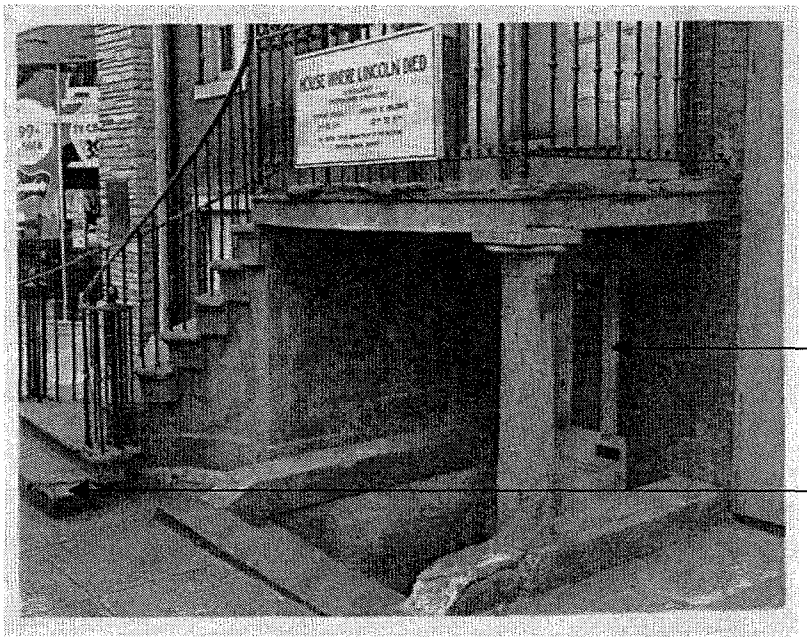

Figure 13 1953 Abbie Rowe photograph of deteriorating brownstone stoop prior to rehabilitation effort. The metal railing was salvaged, repaired and reinstalled after reconstruction of stoop.

The 1871-72 bathroom and 1899-1900 rear addition were both removed (Figures 14 & 15). The rear porch was rebuilt and stairs were constructed to aid in the flow of visitors to the basement exit. Many interior spaces, especially in the basement and third floor, were replastered. Repairs were made to floorboards, stairs and windows. On July 4, 1959, Secretary of the Interior, Fred A. Seaton, reopened the newly restored Petersen House to the public at an official ceremony (Figures 16, 17 & 18).

[33] Ibid, 59.

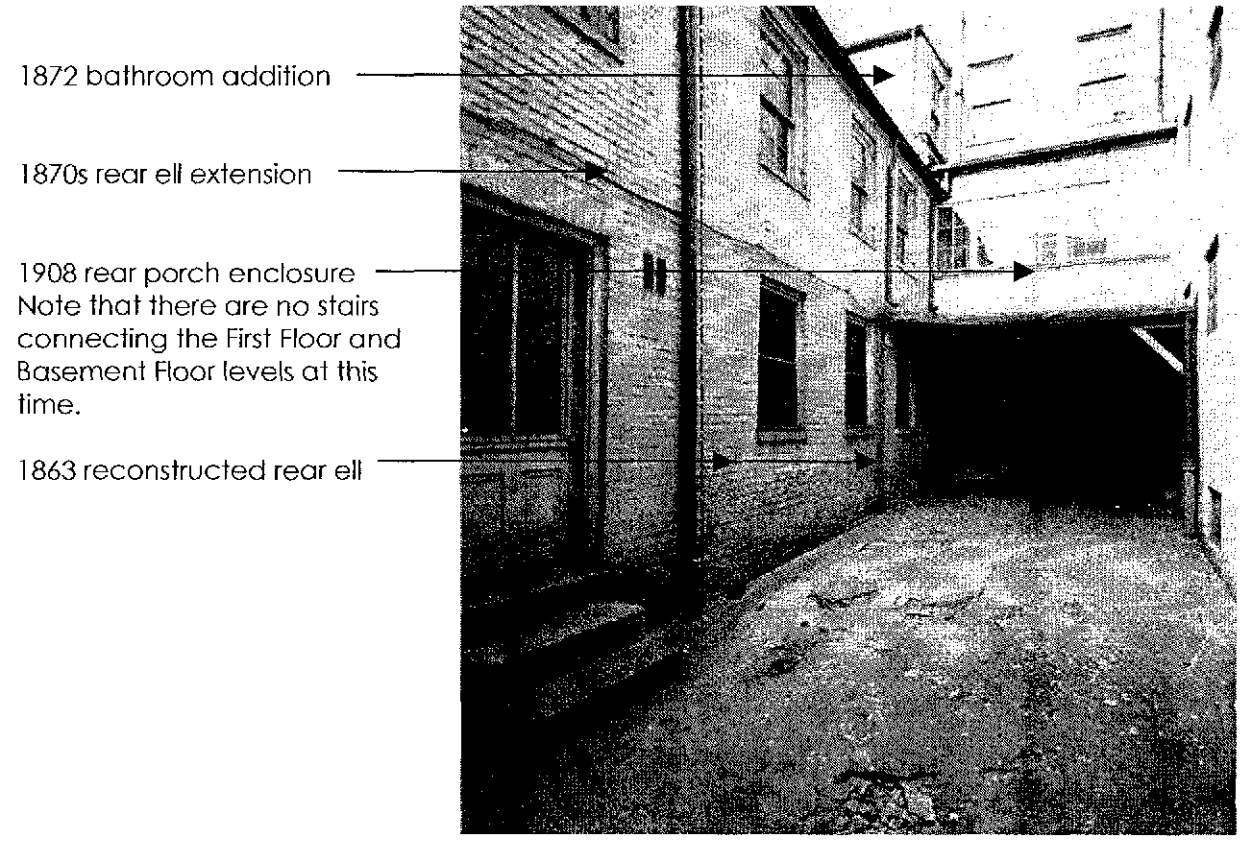

Figure 14 1958 Abbie Rowe photograph of 1908 porch enclosure and bathroom addition prior to their demolition, and rear ell in left foreground (NPS-NCR Collection – FTNHS).

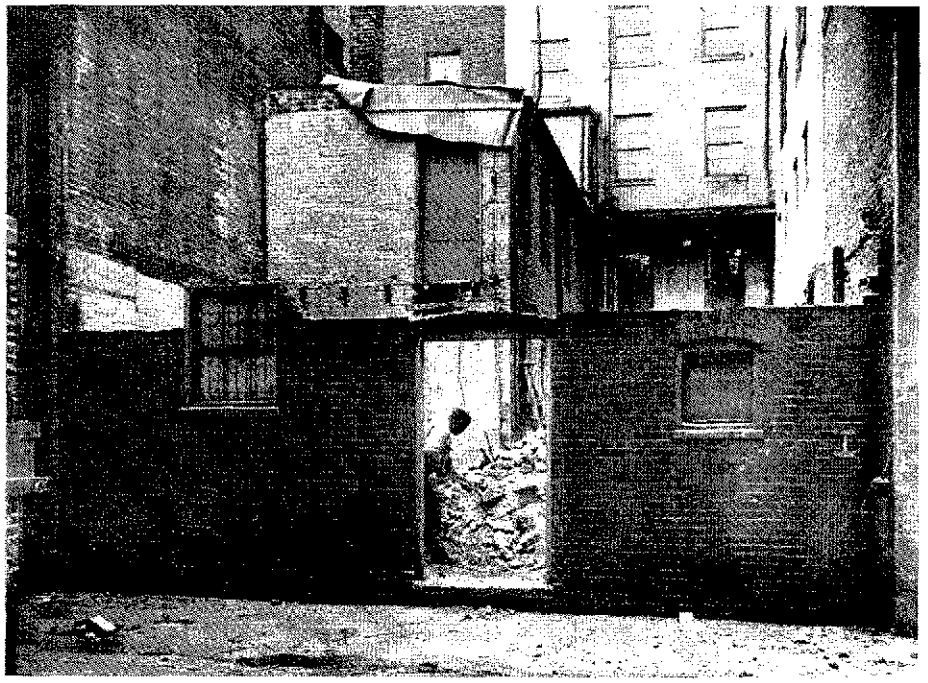

Figure 15 1958 photograph of west elevation during demolition of 1899-1900 addition and 1908 porch (NPS-NCR Collection – FTNHS).

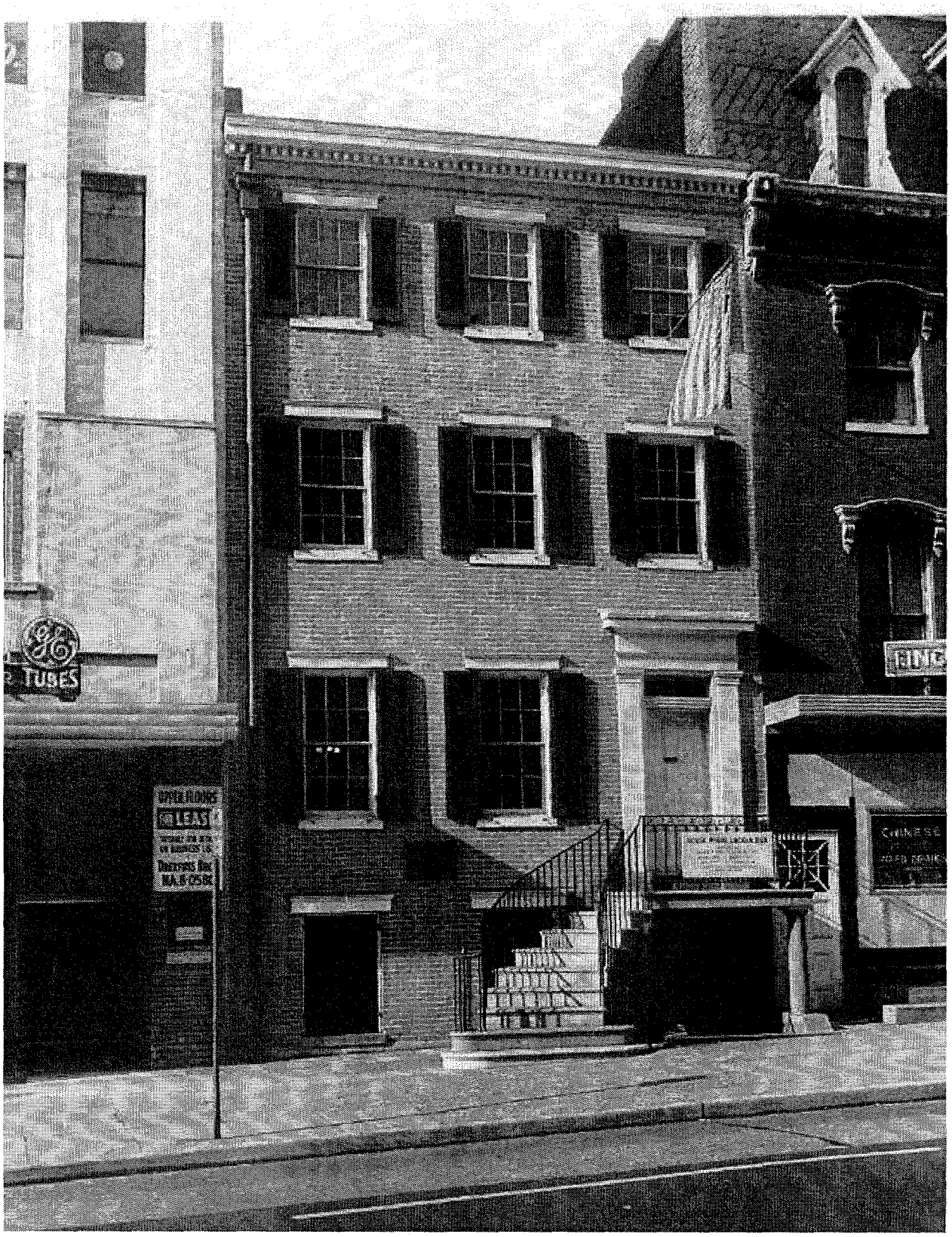

Figure 16 December 3, 1959, photograph of the primary (east) elevation after the rehabilitation (NPS-NCR Collection – FTNHS).

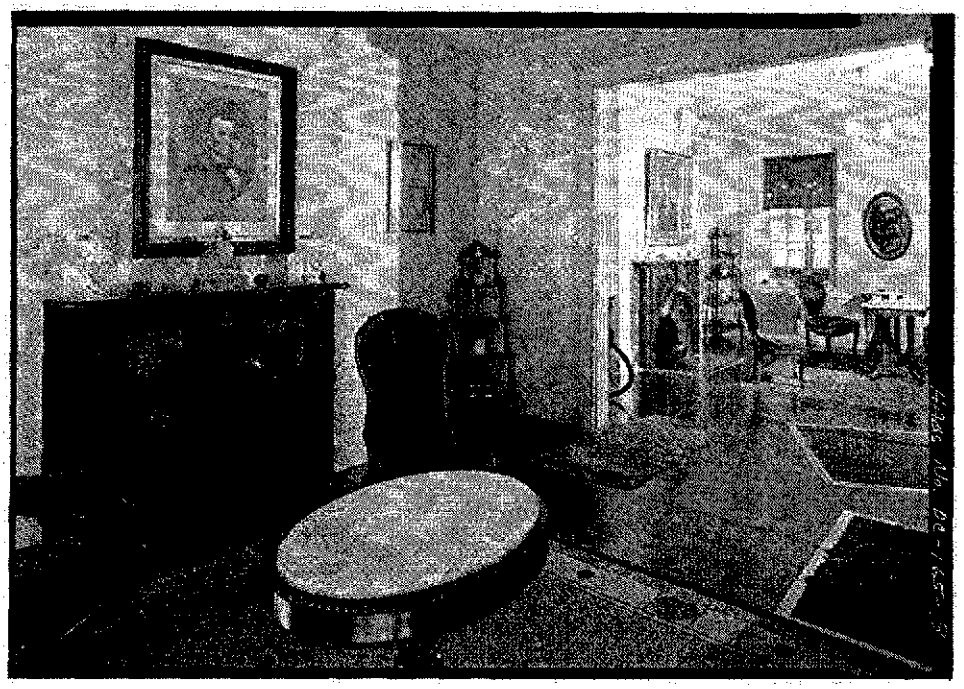

Figure 17 1968 Historic American Buildings Survey(HABS) photograph of the First Floor parlors after the 1959 rehabilitation (Library of Congress, Prints and Photographs Division).



Figure 18 1968 Historic American Buildings Survey(HABS) photograph of the Death Room after the 1959 rehabilitation (Library of Congress, Prints and Photographs Division).

In 1978, the need for substantial repairs to the death room interior was caused by water seepage through the roof above, damaging the plaster and wallpaper of the north wall and ceiling. In comparison with the 1959 work, there was a greater desire to make the restoration more accurate (to the boarding house's 1865 appearance). From 1978-80, the house museum was again closed to the public and restored by the National Park Service, under the direction of historian Gary Scott (NPS-NCR), who took special interest in the property and the project. The goal of depicting the actual appearance of the house during the finite time that Lincoln lay mortally wounded in the rear bedroom, required information gained through both scientific and historic research not yet undertaken. For the exterior, paint analysis was carried out on the window trim and doors; the results concluded that there were many layers of Victorian green under the top layers of white paint. The third layer of green was chosen as the approximate 1865 color. An 1880s photograph indicated that the door had originally been stained and that the shutters were the same color as the trim, so these corrections were made.

For the interior finishes and furnishings, the study of drawings and photographs produced during and immediately after the tragic event by photographers and illustrators supplemented the analysis of material evidence, which was minimal. "The Lincoln deathbed scene was a favorite of Victorian illustrators, but most were fanciful with too many dignitaries crowded around the bed."[34] However, illustrators Albert Berghaus and Alfred Waud, both visited the house and made sketches of the death room immediately after the assassination and Lincoln's death. "Appearing with this [Berghaus's] wood engraving (Figure 18) was an affidavit signed by most of the boarders of the Petersen house, attesting to its authenticity. One of Waud's published works, detailed the furnishing of the death room, the wallpaper, the carpets, and figures huddled around the bed of the dying President (Figure 19). These two engravings complemented a yet unpublished sketch of the rear wall by Waud, now in the Library of Congress, (see Figure 43 in Part IC), and all were used in the restoration."[35] (NPS staff reports that the sketch was later published as Plate 120 in *American Interiors*, "From Colonial Times to the late Victorians" by Harold L. Peterson, New York: Charles Scribners & Sons, 1971.)

First, the roof drainage problems were addressed by adding a new gutter and extended wall-mounted downspout to direct water from the roof of the tall main block of the adjacent building towards the rear alley, away from the flat roof that abuts the north wall of the Petersen House rear ell. This was a

[34] Ibid, 60.

[35] Ibid, 60.



Figure 19 Wood engraving of Albert Berghaus's drawing of the room where Lincoln died, which appeared in Frank Leslie's Illustrated Newspaper, April 29, 1865.

(Note that this image appeared in the Nineteenth Century magazine (Autumn 1980 edition) article entitled "Photograph and Artist's Renderings: Keys to the Restoration of a National Landmark," but was incorrectly labeled as the Waud engraving pictured below.)

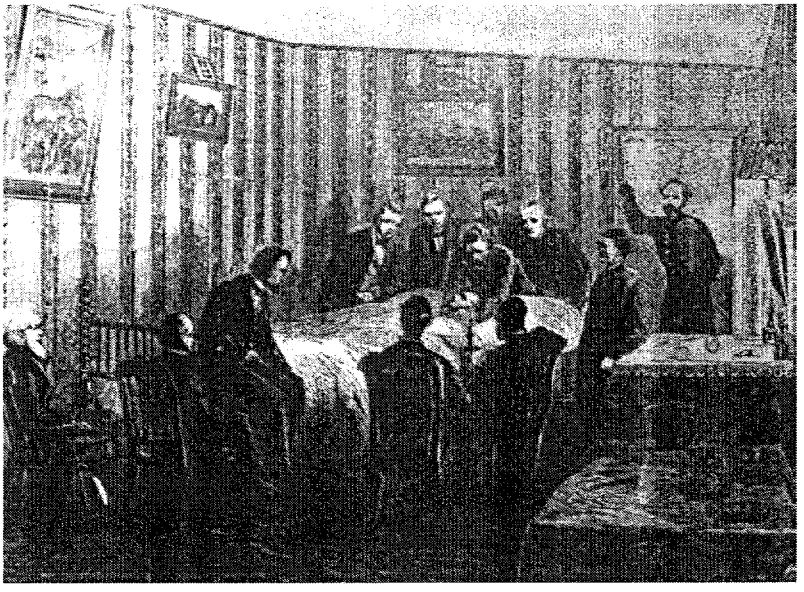

Figure 20 Wood engraving of Alfred Waud's drawing of the room where Lincoln died, which appeared in Harper's Weekly, May 6, 1865.

(Note that this image appeared in the Nineteenth Century magazine (Autumn 1980 edition) article entitled "Photograph and Artist's Renderings: Keys to the Restoration of a National Landmark," but was incorrectly labeled as the Berghaus engraving pictured above.)

cooperative effort between the National Park Service and the ownership of the other building in that all of the improvements fell on private property.

On the interior, the 1932 inaccurate replacement of the rear wall door of the death room was altered to appear as represented in the Waud sketch. The door was correctly placed 18 inches from the exterior wall, and an 1849 door from the third floor replaced the reproduction door from 1932.[36] Then, interior finishes were replicated and period lighting obtained based upon the published illustrations and the previously mentioned Ulke photograph and Waud sketch. This collective evidence was pieced together for the death room, with matching wallpaper reproduced by Scalamandre and an S-shaped gaslight bracket fabricated to match the Waud sketch. Besides the death room, the balance of the historic interior is based on conjecture. Wallpaper and carpet patterns, authentic to the period, were selected for the hall and front and rear parlors due to lack of physical or documentary evidence. A set of 1850 gasoliers for the parlors and a period pear-shaped single hanging fixture for the hallway, were found to replace the circa 1890 fixtures that hung in the house previously. Period antiques resembling the originals were used instead of reproductions, and personal toilet articles were collected by the Park Service Furnishings Office at Harpers Ferry to match those seen in the Waud and Berghaus drawings of the death room.[37]

Today, the main house remains essentially unchanged since this final restoration effort, with one exception. In June 1994, a fire broke out in the Lincoln Building, an office building south of the Petersen House. To ventilate the burning building, fire fighters broke windows in the upper floors. The glass broke into heavy shards and punctured the metal roof on the Petersen House below, causing significant damage. An inspection from the attic followed, revealing puncture holes between wood deck boards. With leaks occurring in numerous locations during periods of rain, it was essential that the roof be replaced in its entirety. The replacement roof was designed using a modern metal roof system to match the visual qualities of the damaged 1914 painted tin batten roof, and was replaced in 1995. The garden was left in bad condition for several years after the fire until it was improved circa 1998 to its current state, according to NPS sources.

The following series of photographs represent the state of the property during and after the 1978-1980 restoration (Figures 21 through 31). All photographs are from collections at National Park Service-National Capital Region Headquarters, held in property specific files.

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[36] Ibid, 60.

[37] Ibid, 61.



Figure 21 Streetscape, c.1980, after restoration.

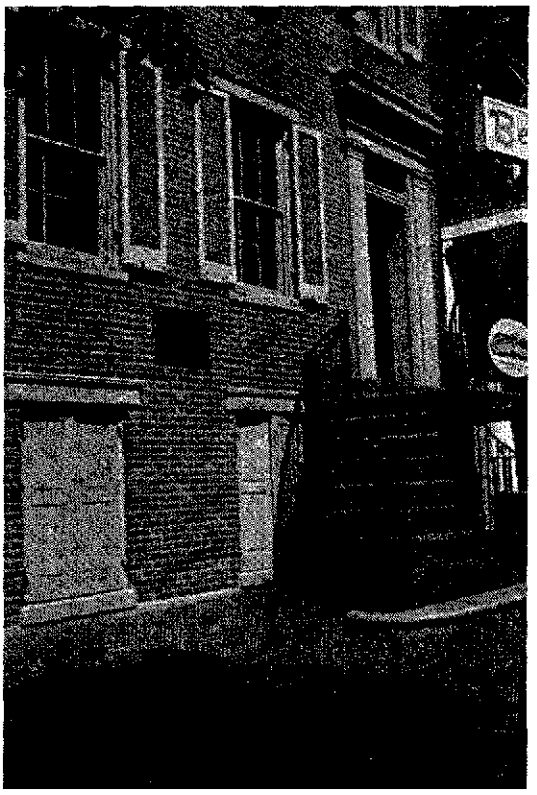


Figure 22 Front Facade after restoring the historic paint color scheme to shutters/door.



Figure 23 Front Hall during restoration before installation of wallpaper and carpeting.

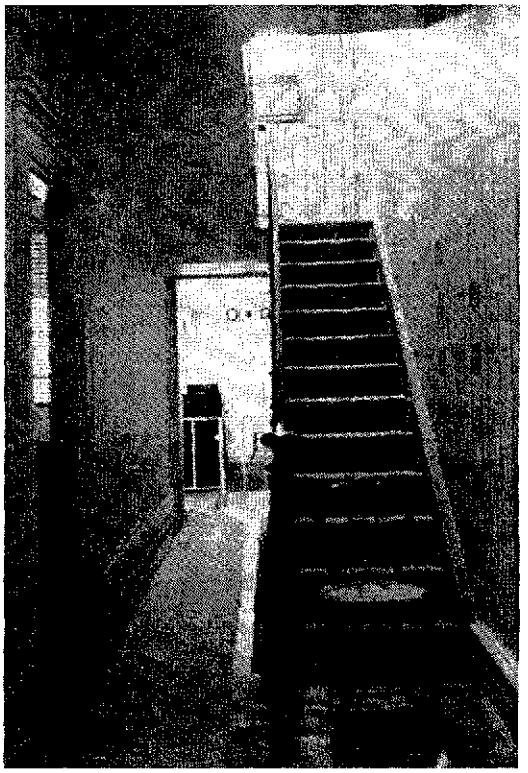


Figure 24 Front Hall during restoration.

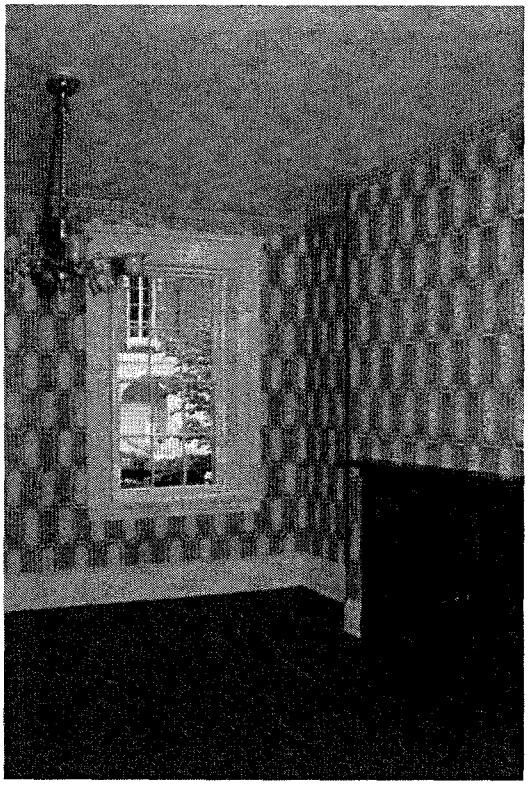


Figure 25 Front Parlour during work.

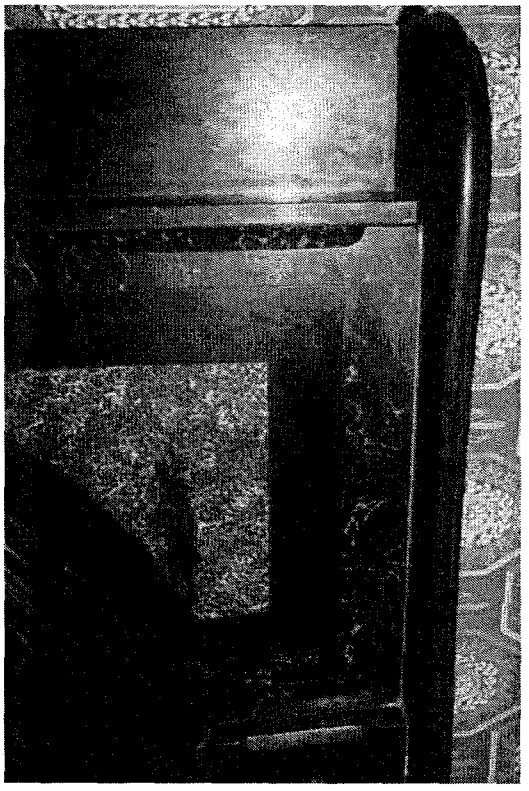


Figure 26 Detail of marble Mantle.

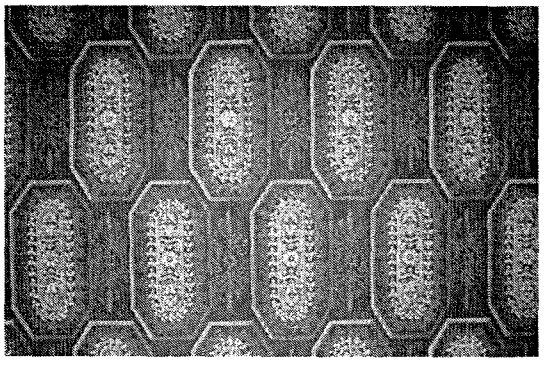


Figure 27 Detail view of Period Wallpaper by Scalamandre (of conjectural pattern).



Figure 28 National Park Service Furnishings Office at Harpers Ferry collected furnishings and personal items similar to those seen in the Waud and Berghaus drawings of the death room, such as those displayed here in the Front Parlour.[38]

[38] Ibid, 61.

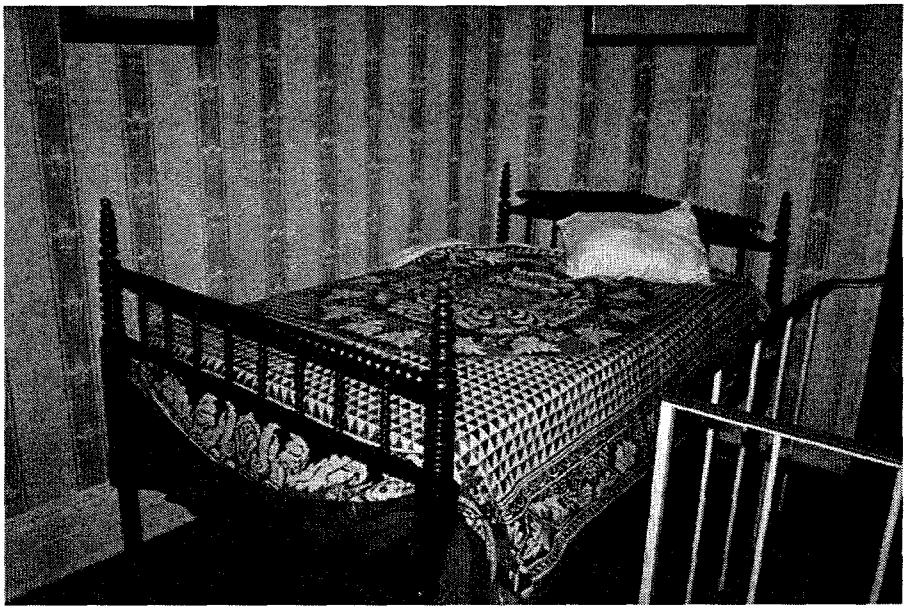


Figure 29 Restored wallpaper in death room was recreated by Scalamandre from written historic accounts, the Ulke photograph and the Berghaus and Waud engravings. The guard rail is shown prior to installation of glass screen.

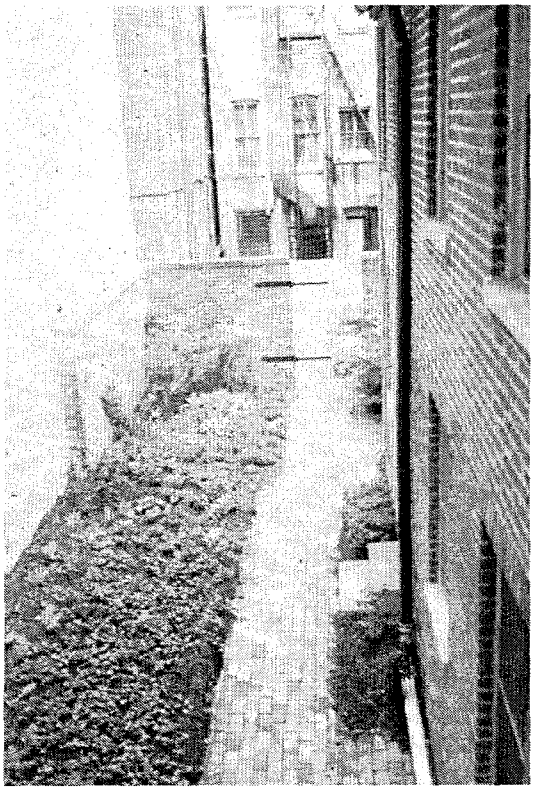


Figure 30 View of garden from rear porch upon exiting the death room door.

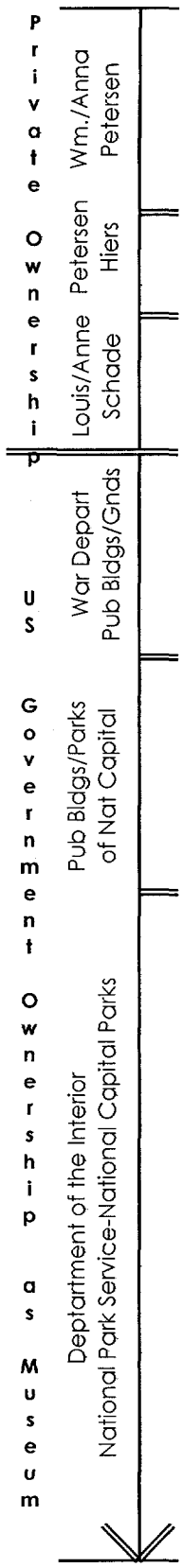


Figure 31 Front Entrance with museum sign. Visitors currently retrace steps through First Floor and exit main doorway.

PART 1: DEVELOPMENTAL HISTORY

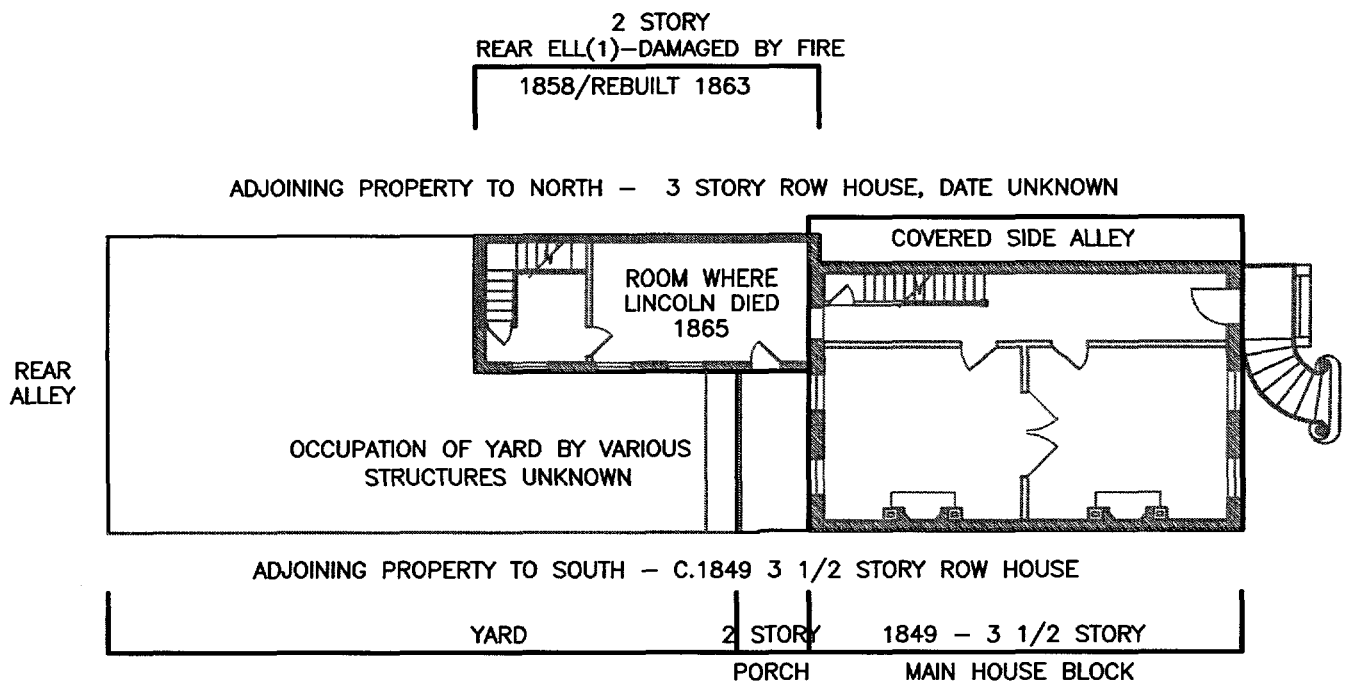
B. Chronology of Development and Use

Timeline: Summary of Chronology - Development and Use

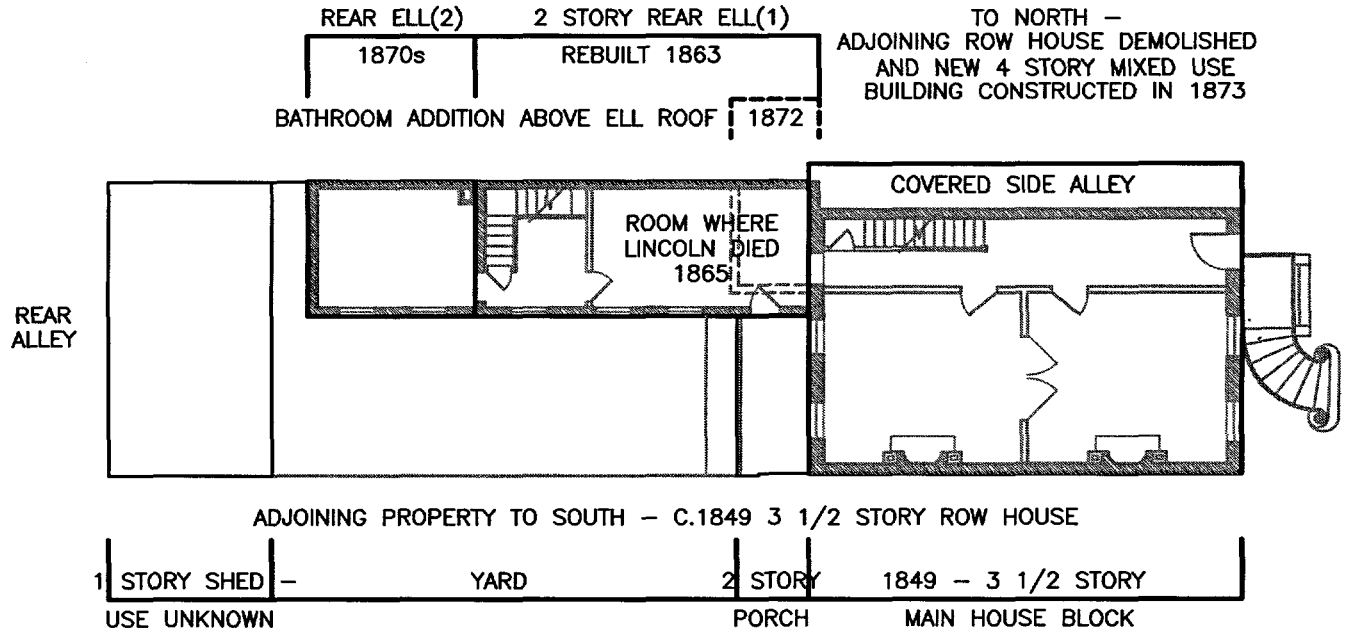


1850	1849	Construction of 3 1/2 story Main House Block by Wm. Petersen
	1858	Construction of Rear Addition - Ell (1)
	1863	Fire in Rear Ell and Reconstruction of Ell by Wm. Petersen
	1865	President Lincoln's Death in Rear Bedroom, April 14-15, 1865
	1871	Death of Petersens-Sale and Removal of items from House
	1872	Bathroom addition over Death Room by Petersen heirs (D'59)
	1878	Louis and Anne Schade purchase House for $4,500
	1870s	Construction of 2 story rear addition to Ell (2) with plumbing
	1883	First memorialization of House with marble plaque
	1893	Schades leave House/Leased by Memorial Association of DC
	1896	US Government purchases House as first "House Museum"
	1899	Major repairs and modernization to House undertaken
1900	1900	Addition of 2 story Rear Wing-Coal Shed and Store Room (D'59)
	1905-6	Measured Drawings/Int. and Exter. Cosmetic Improvements
	1908	Enclosure of First Flr. Level Back Porch-wood/glass partition
	1914	Original slate roof on Main House replaced with tin roofing
	1922	New steam boiler installed
	1923	New bronze memorial plaque placed on front façade
	1932	Olydroyd Collection removed to Lincoln Museum (Ford's Th.)
	1932	Measured Drawings show existing conditions-Floor Plans only
	1932	First effort to restore House to appearance at Lincoln's death
	1933	House transferred to Dept. of Interior-National Park Service
	1937	Fire Detection/Alarm System installed (also 1949, 51 and 1978)
	1945	Furnace converted from coal to fuel burning
1950	1953	New Heating System-Gas boiler/baseboard radiators added
	1957	Measured Drawings show existing conditions before Rehabil.
	1958-9	Major Rehabilitation of House to "period"-Closed to public (Façade and brownstone steps restored/new Porch Enclosure)
	1959	Garden Development Plan by August Hanson implemented
	1963	Historic Furnishings Study written by Olzsewski
	1966	Petersen House listed on the National Register of Historic Places
	1977	Recordation by Historic American Building Survey (HABS)
	1976	Furnishings Plan by Vera Craig-NPS Historian/approved '79
	1978	Paint Analysis-Interior Finishes/Motion Detection System installed
	1978-80	Restoration of House for historic accuracy-based on evidence
	1980	Roof Drainage from 518 Tenth St. onto Rear Ell corrected
	1985	Termite Infestation of Floor in Old Kitchen of Rear Ell found
	1986	Archeology performed under Kitchen-Floor/Supports Rebuilt
	1994	Reconstruction of Rear Garden Masonry Wall and Wood Gate
	1995	Replacement of damaged metal Roof/Garden refurbished
2000	2000-03	Condition assessment of House-mech/elec/safety upgrades

Construction related Events Historic Events

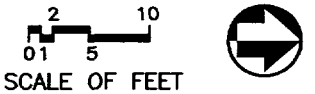


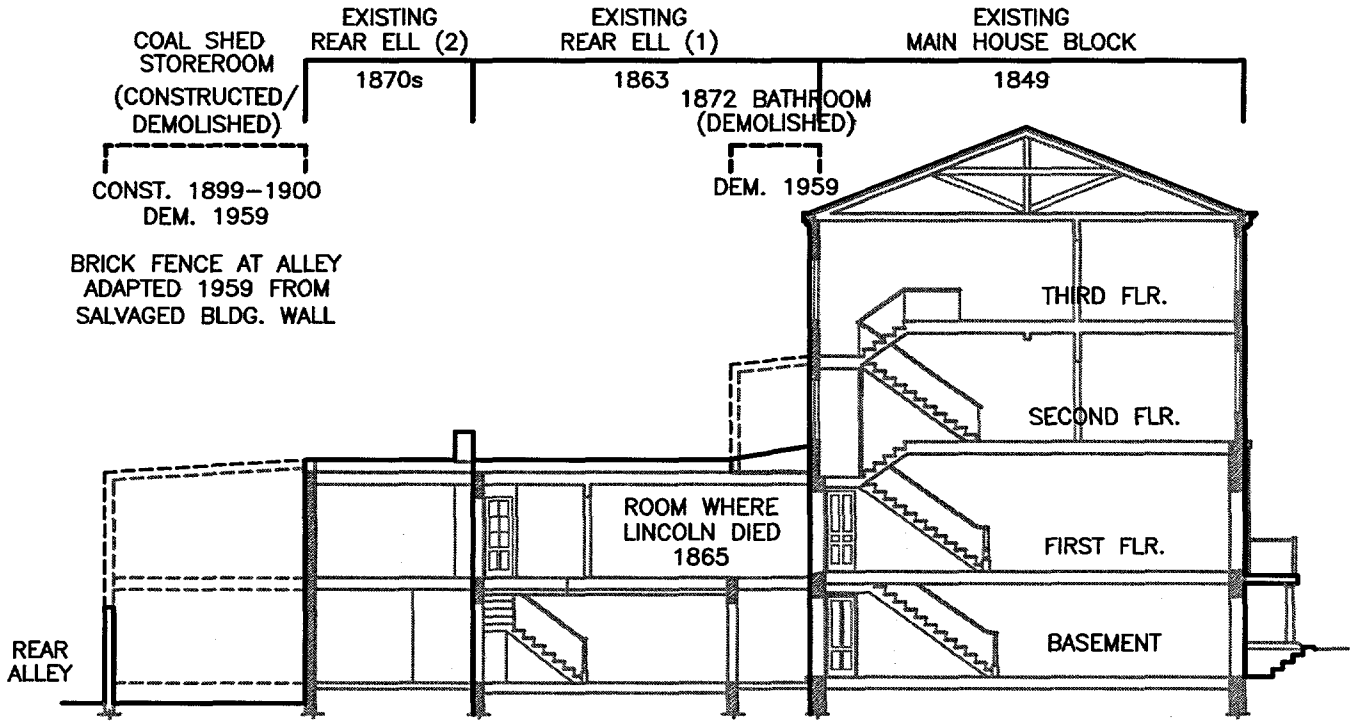
1865 BUILDING PLAN AT LINCOLN'S DEATH (FROM OLDROYD)
PETERSEN OWNERSHIP: 1849–1878



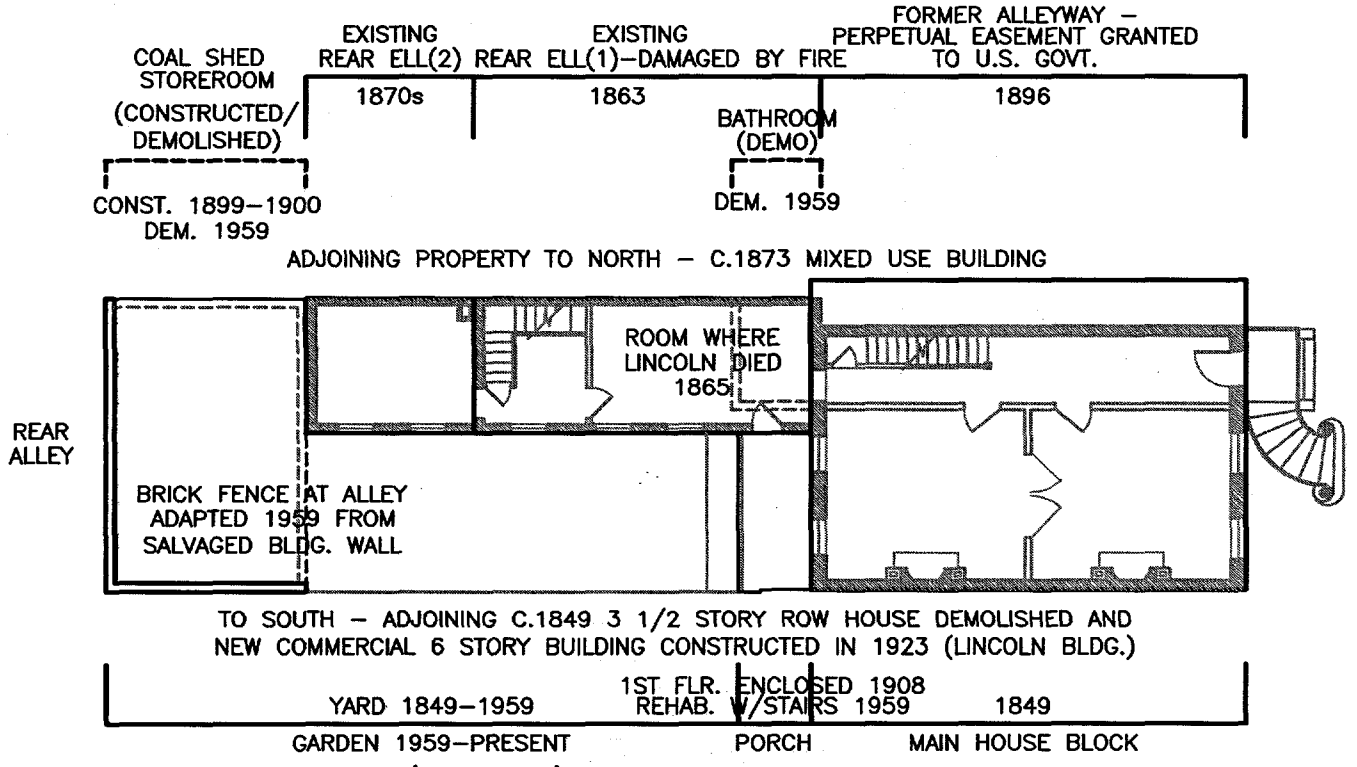
1888 BUILDING PLAN (FROM SANBORN MAP)
SCHADE OWNERSHIP: 1878–1896

PETERSEN HOUSE
DEVELOPMENT OF PROPERTY UNDER PRIVATE OWNERSHIP





BUILDING SECTION (EXTANT)



BUILDING PLAN (EXTANT)

PETERSEN HOUSE
DEVELOPMENT OF PROPERTY UNDER GOVT. OWNERSHIP

2 10
0 1 5
SCALE OF FEET

B. Chronology of Development and Use

Written Construction Chronology

The following time line presents the construction chronology of the Petersen House from 1849 to 1998. **Entries relating directly to the construction and alteration of the house appear in bold type.** While not the focus of this project, information about other site elements found in the process of researching the house is included here as well.

February 5, 1849	**William Petersen, a German immigrant, purchases the south half of Lot 14 in Square 347 from Abner H. and Mary Ann Young for $850** (Liber J.A.S. 2 1849 - Deedbook, quoted in Virta, 12).
1849	Tax records on file at the National Archives show that **Petersen had a three-story brick house constructed on his lot "indicating that Petersen built the main block of the house that same year"** (NARA RG 351 Entry 47, quoted in Virta, 12). The house was the first to be built on the south half of Lot 14 (Virta, 10).
1850	When the house was constructed and the family moved in, the Petersens began to take in boarders, including some Congressmen, as revealed in various City Directories (Virta, 12). In addition, it is Olszewski reported that Petersen operated his tailor business out of the front room in the basement [although no record has proved that he did] (Olzsewski, 7).
1858	By 1858, the Petersens added two more children to their family, which raised the total of children to six. **Excavations reveal that an addition was constructed at the rear of the house in 1858 [no further detail available].** It is believed that its construction might have been an attempt to alleviate the crowding in the house from the large family and boarders (Virta, 12).
1863	**A fire, possibly started in what has been identified as the basement kitchen of the addition, damaged the rear ell.** It was "customary at this time to have the kitchen located in an addition at the rear of the main

block of the house," and the kitchen would have been a likely place for a fire to start. Tax Assessments indicate that **the addition was promptly rebuilt in the same configuration since the ell was re-assessed at the same value as before the fire. Further, it is clear that the foundation walls of all but the east wall of the room were rebuilt.** Archeological excavations show that **small changes were made in the rebuilding of the ell, such as the inclusion of a wood floor instead of brick laid in a herringbone pattern, which would have raised the floor level by over one foot removing the original step down into the kitchen. In addition, the kitchen was separated from the house by a paved corridor. Analysis from the excavation also shows that some of the bricks were removed from the debris of the burned ell and reused in the construction of the foundation walls of the new addition** (Virta, 21-22).

April 14, 1865

At around ten o'clock on the evening of April 14th, a wounded President Lincoln was taken into the boarding house owned by Petersen to receive treatment. He was placed diagonally on a bed in a small bedroom in the rear of the house.

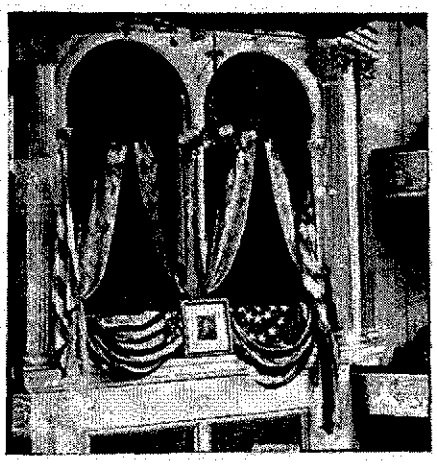
April 15, 1865

At 7:22 a.m, Lincoln was declared dead.

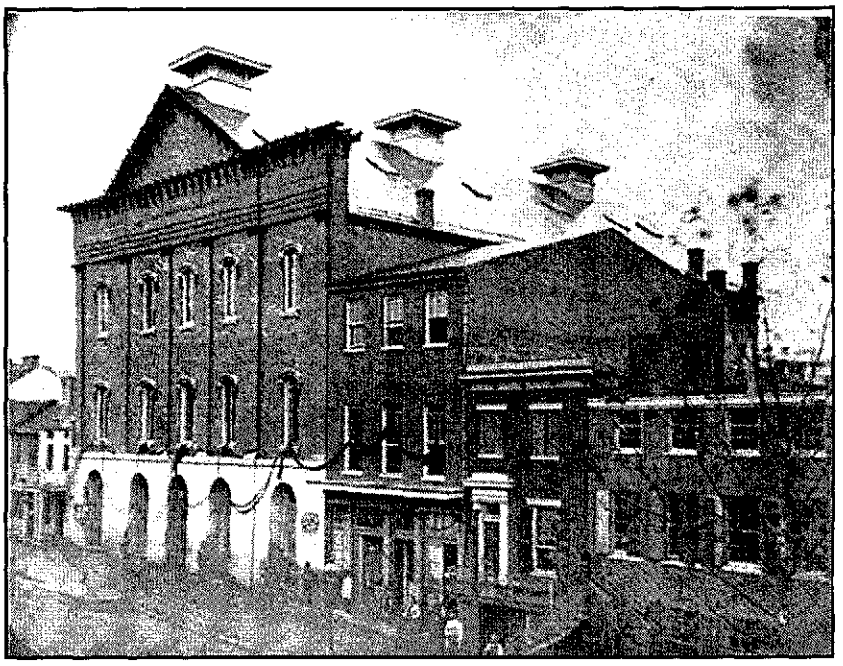
[Shortly after Lincoln's death, a photograph of the bed was taken by Julius Ulke, a boarder in the Petersen House and a professional photographer. *Frank Leslie's Illustrated Newspaper* included a drawing of the room by Albert Berghaus. In a May 6, 1865 issue of *Harper's Weekly*, a wood engraving of the room appears by Alfred Waud. This image is particularly helpful in reconstructing how the room looked because it was based upon a sketch that Waud completed from viewing the room after the death rather than based upon a description given him by those present.]

June 18, 1871

William Petersen died from an overdose of Laudanum.



President Lincoln's Box at Ford's Theatre following the assassination – April 1865



Figures 32 and 33 Ford's Theatre in the aftermath of President Lincoln's assassination. The theatre has guards posted at the entrance and crepe draped from the windows, April 1865. (Library of Congress – Collection of Civil War photographs)



Figure 34 President Lincoln's funeral procession on Pennsylvania Avenue, April 19, 1865. (Library of Congress – Collection of Civil War photographs)
All photographs this page from Civil War photographs, 1861-1865, compiled by Milhollen and Mugridge, Library of Congress, 1977.

October 18, 1871 — Anna Petersen died. Neither of the Petersens had drafted a will. The furniture from the house was sold by auction at the end of October of 1871. William H. Boyd purchased the bureau, gas jet, rocking chair, an engraving, and the bed from the bedroom where Lincoln died. **A porch at the rear of the building is mentioned for the first time although it appears in the Olszewski adaptation of the Oldroyd sketch depicting the house plan at Lincoln's death** (Figure 42, Part 1C).

1873 — Row house to the north of Petersen House was built.

1871-72 — **During the ownership of the Petersen heirs, a bathroom was added to the second floor in 1871-72.** Olszewski based the 1871-72 date of the construction of the rear addition from vouchers paid for work (Olszewski, 54). One of the vouchers is dated November 17, 1871 and lists plumbing work for $150 carried out by Tim O. Noonan; this voucher most likely represents the bathroom added to the second floor (Olszewski, 67).

November 25, 1878 — The Petersen heirs sold the house to Louis and Anne Schade for $4,500 (Olszewski, 29).

Shortly after the Schades moved into the house Louis Schade, as the editor of the *Washington Sentinel*, moved the office of the newspaper into the front room of the basement (Olszewski, 30; *Downtown Urban Renewal Area Landmarks*, 15).

December 5, 1878 — **A permit was filed by Louis Schade to "build a two-story brick back building with tin roof" at a cost of $250** (Permit #1640, 1878, on file at NARA). Based on survey findings the rear portion of the rear ell was constructed independently at a later date than the Death Room portion of the addition. **The Building Permit description appears to match the two-story, two-bay-wide west portion of the rear ell. Since tax assessments indicate a substantial increase in value from 1871-72, it is possible that the addition was built then. Therefore, the rear portion of the ell addition is given a date of 1870s.**

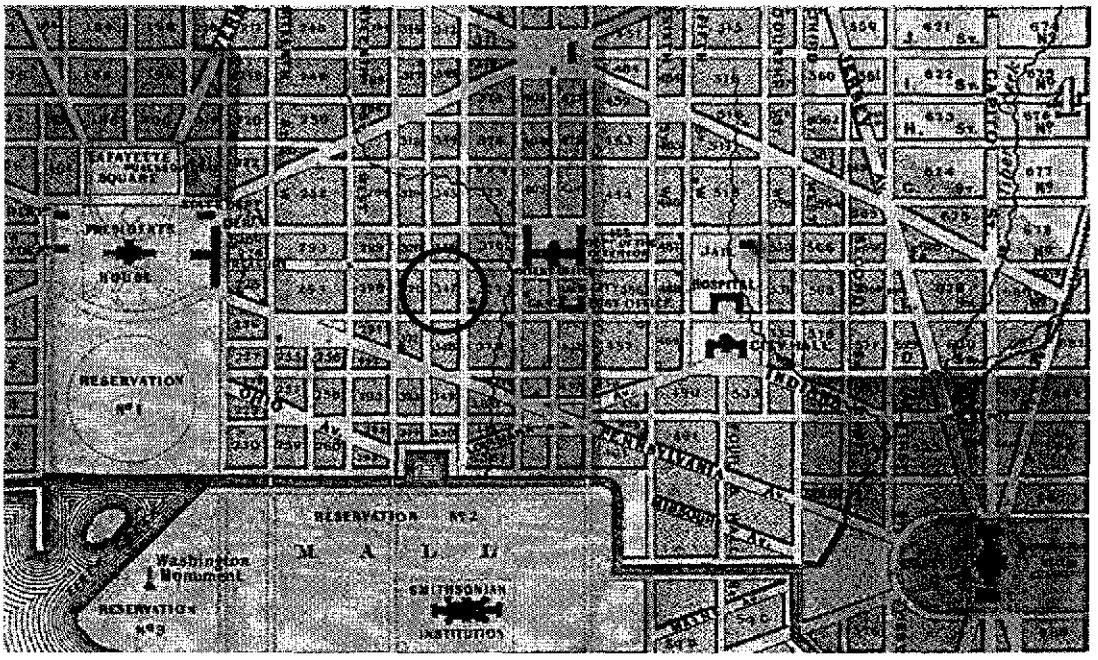


Figure 35 Vicinity of Petersen House located in Square 347 from c.1872 Map below

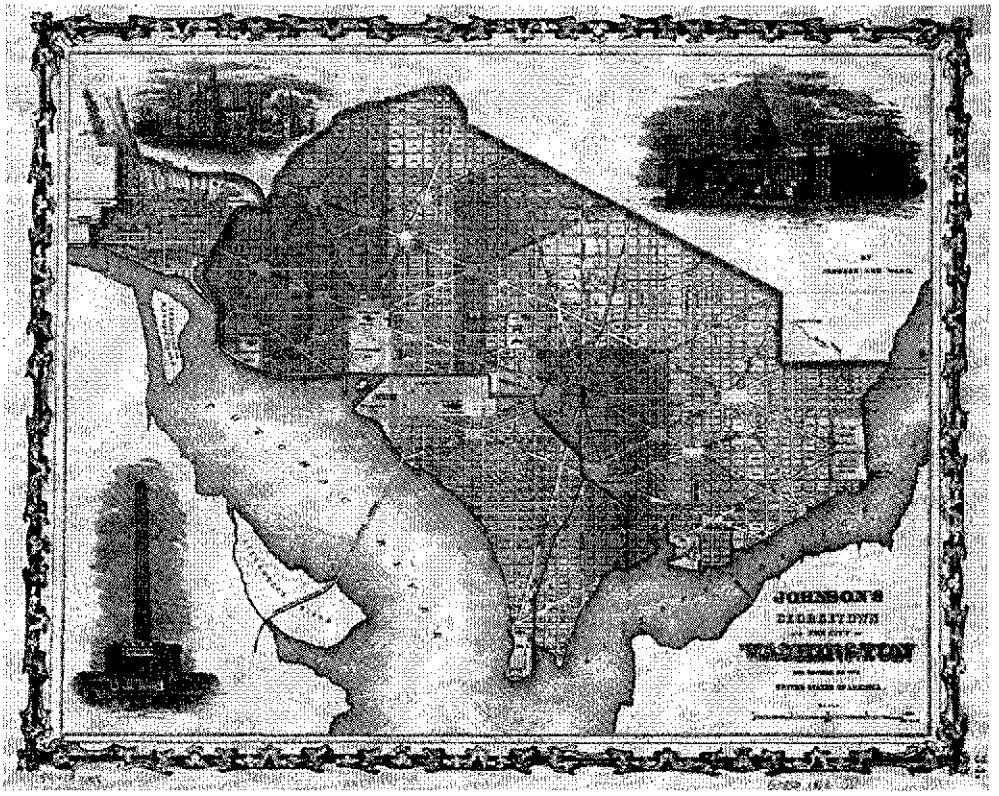


Figure 36 Johnson's Georgetown and the city of Washington: the capital of the United States of America by Johnson and Ward (from Johnson's Atlas of the World, Johnson & Ward, New York, 1862 – Library of Congress Maps Collection)

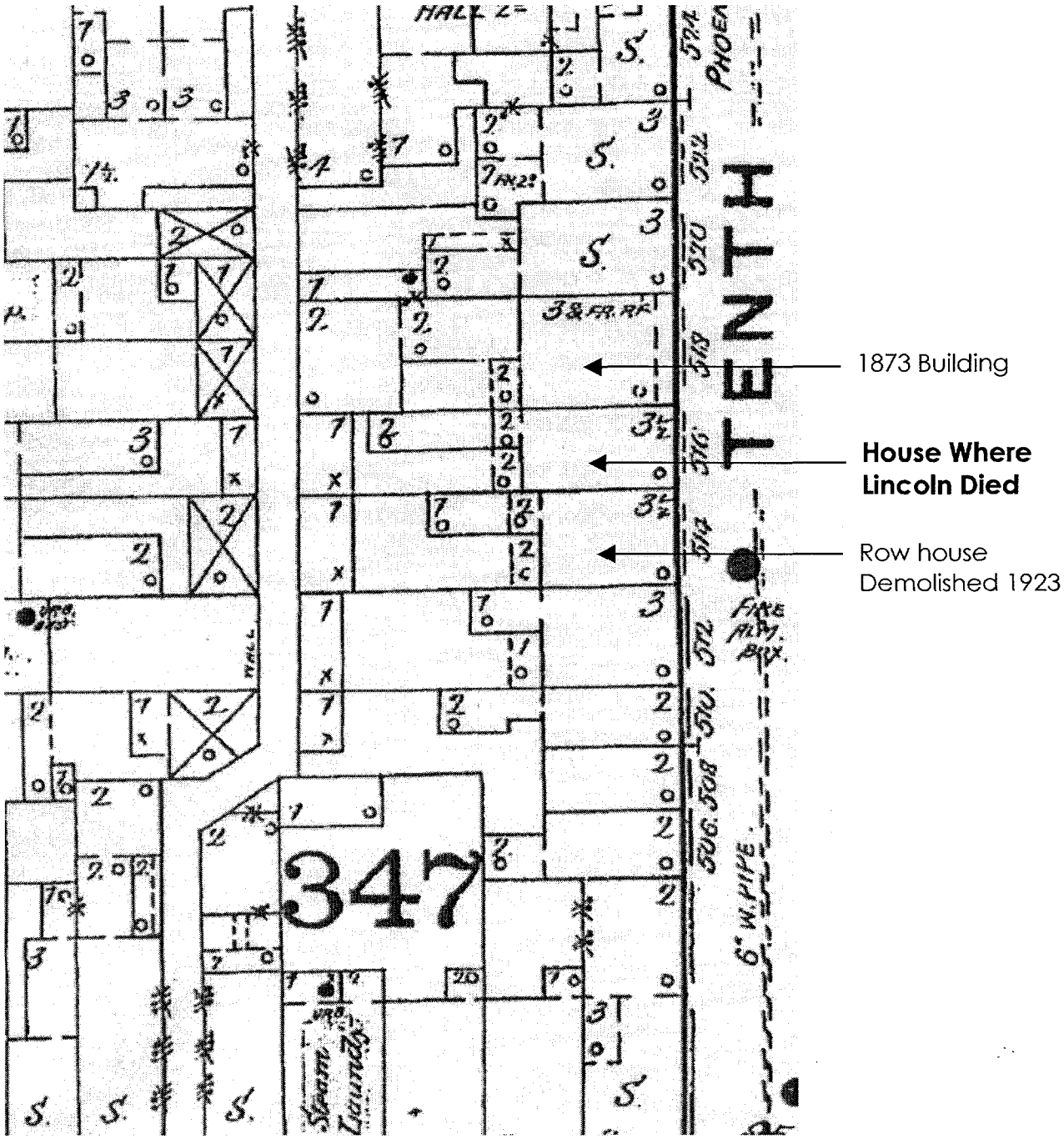


Figure 37 Detail of Square 347 - c.1880 Sanborn Fire Insurance Map of Washington, D.C. by Sanborn Map Company (this detail is taken from first known map of this location).

Key to Map Symbols

= metal cornice

o = slate or tin roof
x = shingle roof

= stable or carriage house

1 = 1 story ht.
2 = 2 story ht.
3 = 3 story ht.
3 ½ = 3 ½ story ht.

1880	Congress showed interest in turning the Petersen House into a national memorial, when Texas Congressman J. D. Sayers "introduced a bill to authorize the acquisition of the Petersen House and two adjoining row houses, but the bill was not passed" (*Downtown Urban Renewal Area Landmarks*, 15).
Circa 1883	A plaque was erected for the first time on the Tenth Street facade of the Petersen House between the second and third floors. Carved out of marble, the memorial plaque was installed by the Washington Memorial Association (McClure, 76; Olszewski, 63). [It has since been removed and replaced.]
1889	Andrew Boyd, the son of William Boyd, inherited the furniture, purchased by his father from the Petersen House, and sold the items to Charles F. Gunther of Illinois. Gunther intended to donate the collection to the Chicago Historical Society, yet he did not do this immediately (Craig, 32).
1893	The Schades moved out of the house on Tenth Street, supposedly discontent with the number of visitors desiring to see the death room (Olszewski, 30). The house was subsequently leased by the Memorial Association of the District of Columbia, a group formed by Congress on March 18, 1892.
June 29, 1896	The U.S. government purchased the house from the Schades for $30,000. The appropriation, dated June 11, 1896, included an additional $1,000 for repairs (*Downtown Urban Renewal Area Landmarks*, 16). (No further information is available on what repairs were completed.) Run by the U.S. Army Corps of Engineers, the Petersen House became the "first historic house obtained by the Federal government for museum purposes" (Scott, 58).
October 7, 1896	**The use of the passageway, located at the north edge of the Petersen House lot was granted by the Schade deed to the U.S. Government in perpetuity, as follows:** **"Subject to the perpetual right in the owner of the adjoining North part of said lot [14], to build over the**

North 3 ½ feet by depth of thirty-six feet, of the said south twenty-five feet of said lot, from and above a point ten and one-half feet above the level of the pavement; and for that purpose, to use without charge, the north wall of the building [Petersen House] on said south part of said lot,- the part so built over to remain forever for the exclusive use of the owner of the said south part of said lot, as an alley way, as provided for in deed - Liber J.A.S. 80, folio 267 " (cited in Olszewski, 63).

[This easement has proved beneficial to the NPS since it has allowed them to place the electrical supply system for the house away from the interior spaces.]

June 1898

Olszewski states that the Memorial Association of the District of Columbia allowed O. H. Oldroyd, a collector of Lincoln memorabilia, to occupy the Petersen House rent-free, but the exact start of his occupancy is unknown. Some sources state that Oldroyd moved into the house as early as 1893, but there is no documentary proof provided to back this up (NPS-NCR (FTNHS) Collection – Annual Report (NPS); Chase, 4). The first reference to Oldroyd's unique arrangement was made in June of 1898 by General John M. Wilson, Chief of Engineers (NPS-NCR (FTNHS) Collection – Annual Report (Army Corps of Engineers)), who wrote that Oldroyd "is occupying [the house] free of rent and acting as temporary custodian without pay" (Chase, 4).

The house was put under the jurisdiction of the War Department [under whose auspices the house would remain from 1898 until 1917], with Colonel Theodore A. Bingham, of the Army Corps of Engineers, as the Officer in Charge (Chase, 4).

October 9, 1899

On October 9, 1899, by the authority of the Secretary of War, O. H. Oldroyd was "allowed to occupy this building with his family as custodian, without pay, and to exhibit his Lincoln Museum and to charge a small entrance fee. . ." (NPS-NCR (FTNHS) Collection – Annual Report (Army Corps of Engineers)).

Oldroyd displayed his famed collection, the Oldroyd Lincoln Memorial Collection on the first floor.

1899-1900	**On March 3, 1899, Congress appropriated $3,833.50 for the repair of the house, and the work was completed by June 30, 1900. The repairs were described as follows: "thoroughly overhauled and put in good repair, repapered, repainted, furnished with steam heat, a waterproof course inserted in the walls of the main building, brick addition built in rear which furnishes a fuel shed on the ground floor [Army Corp. of Engineers drawing for "Coal Shed and Store Room to be Built, July 8, 1899" which implies that the 1871-72 date that Olszewski gives the addition is incorrect], and an additional room on the second story, new plumbing installed, and gas pipes and fixtures overhauled and put in good order"** (NPS-NCR (FTNHS) Collection – Annual Report (Army Corps of Engineers)).
1903	**The front door was varnished and the frame was painted** (NPS-NCR (FTNHS) Collection – Annual Report (Army Corps of Engineers)).
June 1905	**Repairs to plumbing. Window enlarged on rear alley.** A report written by Colonel Charles S. Bromwell of the Army Corps of Engineers stated that **"the brick front of the building was painted with three coats of red paint and penciled white, and the window sills, doors, and door frames, window frames, sashes, and blinds painted with two coats of paint"** (NPS-NCR (FTNHS) Collection – Annual Report (Army Corps of Engineers)).
October 1, 1905	First measured drawings of house were completed. **The first floor plan shows no rear (west) wall in place in the Death Room. [The rear wall was removed by Oldroyd to make way for display cases between 1896 and 1905** (Scott, 60).] There is also evidence of a yard shed at the west end of what is now the easement passageway. One sketch even shows plans for the purchase of adjacent properties in order to create an urban park around the Petersen House.
1906	Various repairs were made: **"The floor in the kitchen was taken up, the new floor laid and the plaster in the room repaired and pointed up. The ceilings of three rooms on the first floor and of the halls on three floors were scraped, sized, pointed up, and papered, and the**

walls and ceilings of three rooms on the third floor, two rooms on the second floor, and the bathroom were scraped, pointed up, sized, and papered. All of the interior woodwork, except that in the kitchen, the walls in rear, the porches and roof were painted. The plumbing and heating pipes were inspected and such repairs made as were necessary. The door frames and some of the washboards were painted, grained, and varnished. . . ." Three electric bells installed (NPS-NCR (FTNHS)Collection – Annual Report (Army Corps of Engineers)).

1907 **Repairs were made to the heating apparatus and to the plumbing – a heated coil was removed from one of the bedrooms. A partition on the first floor of the rear building was moved out 2 ½ feet, and minor repairs were made to woodwork** (NPS-NCR (FTNHS) Collection – Annual Report (Army Corps of Engineers)).

1908 **"The back porch on the first floor was inclosed [sic] with a wood and glass partition which was painted, and minor repairs were made to doors, windows, blinds. . . ." Repairs to steam-heating pipes** (NPS-NCR (FTNHS) Collection – Annual Report (Army Corps of Engineers)).

1911 **"The front, back, and roof of the house were painted. The old iron covering was removed from the roof of the rear porch. . .and a new tin cover put on." Plumbing fixtures and electric bell repaired** (NPS-NCR (FTNHS) Collection – Annual Report (Army Corps of Engineers)).

1912 **"The rear brick walls, the doors, door frames, windows, window frames, and shutters were painted with two coats of paint. . . ."** (NPS-NCR (FTNHS) Collection – Annual Report (Army Corps of Engineers)).

1914 **The "old slate roof" on the main portion of the house was removed and replaced with a tin roof, which was painted. Minor repairs made to plumbing fixtures and heating apparatus** (NPS-NCR (FTNHS) Collection – Annual Report (Army Corps of Engineers)).

1915 **"All the exterior wood and brick work on the front of the house was given three coats of paint." Leaks in the roof**

	of the rear addition were repaired (NPS-NCR (FTNHS) Collection – Annual Report (Army Corps of Engineers)).
1916	**Minor repairs were made to woodwork [no further details are given]. In addition, the "south rear party wall was covered with stucco" and a "new door was hung at the front entrance to basement hall"** (NPS-NCR (FTNHS) Collection – Annual Report (Army Corps of Engineers)).
1920	The Chicago Historical Society finally received the collection of furniture from the Petersen House, after purchasing it from Gunther's widow (Craig, 32).
1922	**"Various carpentry, plumbing, and tinning repairs were made, and the exterior woodwork on the rear of the building and much of that in the interior were painted." New steam system installed** (NPS-NCR (FTNHS) Collection – Annual Report (Public Buildings and Public Parks of the National Capital)).
1923	Olszewski cites tourist complaints as the main reason a **new bronze plaque was placed at eye level between the basement and the first floor** by the Washington Citizens Committee (Olszewski, 63).
1923	6 story Lincoln Building to the south of Petersen House is constructed (replacing the c.1849 3 ½ story row house of similar design to the Petersen House).
May 30, 1926	Congress purchased Oldroyd's collection of Lincoln memorabilia for $50,000 (*Downtown Urban Renewal Area Landmarks*, 16). The collection was deemed to be "of little practical value" by the Smithsonian (Scott, 59).
June 3, 1928	**A sightseeing bus "ran into the porch, doing some damage to the steps and columns supporting them;" repairs totaled $58.88** (NPS-NCR (FTNHS) Collection – Annual Report (Public Buildings and Public Parks of the National Capital)).
1928, 1929	The house was operated by the Welfare and Recreational Association of Public Buildings and

Grounds since no appropriation was made for the house (NPS-NCR (FTNHS) Collection – Annual Report (Public Buildings and Public Parks of the National Capital)).

1929 According to the Annual Report of the Director of Public Buildings and Public Parks of the National Capital, **"repairs were made to the Plastering in the front and back rooms on the second floor, and the rooms, including floors, were painted"** (NPS-NCR (FTNHS) Collection – Annual Report (Public Buildings and Public Parks of the National Capital)).

1932 Oldroyd collection was removed from the Petersen House to the Lincoln Museum which opened in Ford's Theatre on February 12, 1932. **At the same time, a group of five patriotic ladies' societies, under the leadership of Lt. Col. U. S. Grant, 3rd, attempted to restore the interior of the house to its appearance on the day of Lincoln's death "following as nearly as possible a diagram made shortly after the death of Lincoln."** The house was closed to visitors from February to April due to the renovation. It was during this time that the first reproduction of "original" wallpaper was done (McClure, 76; *Washington City and Capital*, 424; Olszewski, 64).

"Considerable work was done in connection with the restoration of the house to its original condition. All rooms on the first floor (five in number) have been repaired, papered and painted. Three of the windows were removed and openings squared and window frames reset. Floors in the front rooms which were sagging badly have been raised and leveled. Two front basement rooms and hall have been renovated. A number of colonial type gas fixtures were converted into electric fixtures and installed. Three rooms on the second and three on the third floor were repainted." (NPS-NCR (FTNHS) Collection – Annual Report (Public Buildings and Public Parks of the National Capital)).

As part of the restoration of the Petersen House that commenced in 1928, the Department of Public Buildings and Public Parks of the National Capital

replaced the rear wall of the death room [which had been removed during the Oldroyd Museum period]. **The rear wall door was placed flush with the exterior wall, but an 1865 sketch by Waud from *Harpers Weekly* shows that the door actually was located "several inches away from the exterior wall instead of flush with it, and the door should have opened into the room instead of out of it** (Scott, 60). [See 1979-80 entry for the correction of the door's location.]

1933

The Petersen House became a National Park Service site. **Hot water tank and coal heater, complete with coil, were installed for domestic service.** The report states that this eliminated the old range in the kitchen and the electric hot water heater in the bathroom. **Linoleum was laid in basement. Electric lights and power outlets were installed in the areaway on north side of basement and light fixtures were upgraded in the basement rooms of the rear ell (referred to in report as "shed"** (NPS-NCR (FTNHS) Collection – Annual Report (Public Buildings and Public Parks of the National Capital)).

The 1933 report stated that 39,326 visitors entered the house during the fiscal year following the 1932 renovations. (NPS-NCR (FTNHS) Collection – Annual Report (Public Buildings and Public Parks of the National Capital)).

1937

The **first automatic fire-detecting and alarm system was installed in the house** at a cost of $1,580 (NPS-NCR (FTNHS) Collection – Annual Report (NPS)).

1943-44

The following repairs are listed for this time period: **"Repairs were made to the concrete stairway at the entrance. On the first floor, the floors were stained, and the woodwork painted. Approximately ½ of the plaster was cracked and had to be removed on the second floor and 2/3 on the third floor. On both floors, the walls and ceilings were replastered and repainted, the floors stained and the woodwork painted. The doors and locks were also repaired, and the stairways repaired and repainted. The roof was repaired and painted"** (NPS-NCR (FTNHS) Collection – Annual Report (NPS)).

1945	**Repairs were made to seven windows within which the sash cords were broken and the weights dropped. Basement painted. Furnace was converted from coal to fuel oil** (NPS-NCR (FTNHS) Collection – Annual Report (NPS)).
1949	Drawings were issued showing **revisions to the existing fire alarm system.** There is no Annual Report on file for this year – it is not known if this work was performed. (DSC Technical Information Center – Drawings (scanned microfiche)).
1951	**New fire alarm system installed with automatic notification of Lincoln Museum, relayed on to U.S. Park Police and Federal Engineer at Central Office** (NPS-NCR (FTNHS) Collection – Annual Report (NPS) and DSC Technical Information Center – Drawings (scanned microfiche)).
1953	**Gas service and new heating system installed. The system incorporated radiators, in the restoration areas, within a fixture resembling a baseboard to respect the 1849 appearance of the first floor** (NPS-NCR (FTNHS) Collection – Annual Report (NPS)).
July 1957	Measured drawings, showing the house in its pre-restoration state, were completed. (DSC Technical Information Center – Drawings (scanned microfiche)).
1958-59	**The house was restored as part of the National Park Service's Mission 66 program, contract no. 14-10-028-1607. A 1959 photograph by NPS photographer Abbie Rowe shows that George C. Martin was the contractor.**
December 1958	**The 1871-72 bathroom addition and 1899-1900 addition were demolished. The outside wall to the alley was shortened to 8 feet (from its original two-story height), while the inside wall was demolished. The plaster was removed from the east wall of the front room in the basement and the front room on the third floor. The installation of a protective railing providing controlled circulation through the death room was shown for the first time on a 1958 NPS drawing. One plan recommends that the wood floors should be refinished.**

Plumbing for new bathroom in basement installed (NPS-NCR (FTNHS) Collection – Annual Report (NPS)).

January 1959

The enclosed porch and the stairs at the rear of the main house were rebuilt with a glass enclosure "to provide a more effective means for circulation of the public throughout the house" (NPS-NCR (FTNHS) Collection – Annual Report (NPS)). **A plywood cover was removed and beneath it was discovered the original door to the easement passageway to the north of the house. The front stoop was removed and replaced. The report states that the chimney was reduced in height from 10 feet to two feet, but the chimney was already reduced in a circa 1925 photograph** (NPS-NCR (FTNHS) Collection – Annual Report (NPS)).

February 1959

The facade was sandblasted, repointed, and then waterproofed. The windows and doorway were painted white with green shutters (the upper three floors of which were replaced in 1959) "giving the house a phony Federal look" (Scott, 59). **A new white pine door was installed at the basement level on the Tenth Street side. New gate installed on rear garden wall. A portion of the foot scraper believed to be original to the house, added to the Lincoln Museum's collection in 1943, was to be installed with a fabrication of the missing portion (the iron scraper) on the original granite block near the base of the stoop of the Tenth Street elevation. The roof was mended. Electrical and telephone cables installed underground from boiler room to rear of garden court** (NPS-NCR (FTNHS) Collection – Annual Report (NPS)).

A wide crack in the northeast corner of the front parlor was plastered. Plaster was also patched in the first floor hall. Front and rear rooms in basement and third floor ceilings were replastered. Metal lath was used as the substrate of all large plastering jobs. Electrical outlets (two-plug units) were installed in all rooms and hall. Heating baseboards were installed in Death Room. Three window locks believed to be original were removed from upper floors for use in first floor (NPS-NCR (FTNHS) Collection – Annual Report (NPS)).

March 1959	**Pointing of bricks on the rear of the house was started. Plywood covering was added to the floor of the Room Where Lincoln Died. Light fixtures removed from first floor. Death Room will have no ceiling light. Other first floor fixtures will be rewired. A new door patterned after the original was hung at the entrance to the porch from the Death Room, but it "hangs from the opposite side of the door casing than the original door. Hanging the door in this manner was necessary for structure reasons." Floorboards were stained a dark walnut color. New granite steps were put in place leading down to the basement entrance on Tenth Street** (NPS-NCR (FTNHS) Collection – Annual Report (NPS)).
May 1959	**A new brownstone porch, a replica of the original, was installed. The original wrought iron railing was reinstalled around the front porch and front steps by Acme Iron Works** (NPS-NCR (FTNHS) Collection – Annual Report (NPS)).
June 1959	**Rubber floor matting installed in hallway floor of basement. The original doorway leading to the easement alley has been restored and 85 % of the original fabric was retained** (NPS-NCR (FTNHS) Collection – Annual Report (NPS)).
July 4, 1959	Secretary of the Interior, Fred A Seaton, reopened the Petersen House to the public at an official ceremony (Olszewski, 9).
October 15, 1966	The house was listed in the National Register of Historic Places. In addition, Ford's Theatre and the Petersen House were jointly designated as the Ford's Theatre National Historic Site.
1966	The District of Columbia's Downtown Progress Association funded the District Department of Highway's **repaving of the sidewalk in front of the house in a brick herringbone pattern** (*Downtown Urban Renewal Area Landmarks*, 16).
April, 1967	Publication of *House Where Lincoln Died: Furnishing Study* by George J. Olszewski (Division of History, Office of Archeology and Historic Preservation, National Park

Service).

1969 **A 1969 description of the Petersen House, stated that the "mantels and fireplaces in both the front and rear parlors are the originals,"** (McClure, 140) although the validity of this is questioned due to their Victorian styling. **McClure also incorrectly wrote that the front stoop is original [as the stone was replaced in the 1958-59 restoration]** (McClure, 139).

1976 Publication of *Furnishing Plan: House Where Lincoln Died (Petersen House)* by Vera Craig, NPS Historian (Division of Reference Services, Harpers Ferry Center).

1978 Drawings were issued for **new Fire Alarm and Emergency Lighting Systems.** (DSC Technical Information Center – Drawings (scanned microfiche)).

1979-80 **The house was again restored by the National Park Service from 1978-80 when water seepage (through wallpaper and plaster) caused the need for repair, especially in the death room. In addition, there was a desire to make the restoration more accurate. Paint and wallpaper analysis were carried out on the interior. Exterior paint analysis was carried out on window trim and doors; analysis concluded that there were many layers of Victorian green under the top layers of white paint. The third layer of green was chosen as the approximate 1865 color. An 1880s photograph of the main facade indicated that the exterior door had originally been stained and that the shutters were the same tonal density as the trim, so these corrections were made. Finally, the 1930s replacement of the door on the back wall of the death room was altered based upon the Waud sketch [mentioned in the 1928-30s entry]. The door was placed 18 inches from the exterior wall (a distance based upon the above-mentioned images), and an 1849 door from the third floor replaced the reproduction door from the 1930s** (Scott, 60). **In addition, reproductions of the gas light fixture, comprised of an S-shaped wall gaslight bracket topped with a paper shade, found in Waud's drawing were installed in the room where Lincoln died** (Scott, 60). **The 1890 light fixtures in the parlors and the**

hallway were replaced with a set of 1850 gasoliers for the parlors and a pear-shaped single hanging fixture, also from the period, for the hallway (Scott, 61). **The drainage from the roof of the adjacent building to the north was rerouted to avoid the dumping of water on the rear ell roof.**

1985-86 NPS maintenance staff discovered pottery and other historic artifacts while removing decayed floorboards in the former First Floor kitchen of the rear ell addition. An archeological excavation was then carried out by the Regional Archeology Program.

1986-87 Following archeology, further excavation and venting of the crawl space, **the floor joists were replaced with pressure-treated wood** (due to previous termite infestations) **and new floorboards installed. The base-board trim was protected in place, and remains intact.**

Circa 1989 According to NPS sources, a new door to the easement passageway was installed.

1991 The Regional Archeology Program staff produced a report, titled *Archeology at the Petersen House: Unearthing an Alternate History*. It presents data associated with 1985-86 excavations carried out at the Petersen House.

1994 The garden (west) wall was rebuilt and the south wall was repointed as part of a preservation training workshop for historic masonry conducted by the Williamsport Preservation Training Center (NPS), now the Historic Preservation Training Center located in Frederick, Maryland. Bricks were salvaged from the lime kilns at the National Arboretum of Washington, D.C., selected for their similar appearance to the existing brick of Petersen House. Wood gate was reconstructed.

1994-5 It was determined that the roof needed to be replaced due to damage caused by fire fighting activities next door (south)at the Lincoln Building (June 1944). Glass shards fell on the painted tin roof, puncturing the surface through the wood decking, and creating multiple leaks during rain. **Plywood sheathing was**

installed over the existing wood decking (stained and in marginal condition due to water infiltration). **Roof on main house and rear ell was replaced with modern metal roof, with batten profiles and factory finish selected to match weathered copper. Copper gutters were repaired or replaced as required.**

1998 — The National Park Service's LCS Form for the Petersen House stated that a condition assessment was last carried out in 1998, at which time the condition of the structure was rated "Good." In addition to routine maintenance, the exterior windows needed to be repaired and painted.

2001 — Investigation of Historic Exterior Paint on Windows performed by Sara B. Chase, Preservation Consultant as part of the preliminary investigation and design work leading to the construction contract outlined below.

2001-2002 — Implementation of alterations and upgrades to mechanical, electrical, safety and structural systems of Petersen House and restoration of threatened architectural fabric, as per design and construction documentation performed under contract no. 1443-CX-2000-98-012:

- Ground level enclosure of back porch to facilitate interior "conditioning" of space
- Emergency side entrance/exit utilizing "alleyway"
- Window rehabilitation including repairs, painting
- Exterior architectural woodwork repairs/painting
- Alterations and Additions to Mechanical, Security and Fire Suppression Systems
- Modifying door swings
- Installation of attic insulation and ventilation
- Hazardous material removal/abatement associated with above actions

Some of the above items may have been omitted from the scope of work or may not have been implemented according to drawings and specifications. Other items may have been deferred for later consideration by park management. Therefore, the extent of all related work requires verification in the field.

PART 1: DEVELOPMENTAL HISTORY

C. Physical Description

C. Physical Description

Site Description

The Petersen House (House Where Lincoln Died) is located at 516 Tenth Street, N.W., in Washington, D.C. The building lot, 25 feet wide by 100 feet deep, constitutes the south half of the original Lot 14 (current lot 823) in Square 347. In this highly urban location, the house, including the main house and the ell addition at the rear, occupies the majority of the lot, and measures approximately 25 feet by 80 feet. At three and one-half stories, the building is 38 feet high. The front plane of the east, or primary, facade sits at the property line. A yard, which was paved prior to the 1959 rehabilitation, fills the rear, or western portion, of the lot. The west wall of the yard is formed of brick, remaining from the demolished coal shed, that returns along the rear of the south wall; a painted wood gate provides access to an alleyway in the center of the square. The south wall of the yard is formed by the wall of the adjacent six story property, known as the Lincoln Building. The blank lower portion of the stucco-textured wall is partially covered with a cedar wood fence at the ground level.

Directly across the street from the Petersen House is Ford's Theatre, the infamous site of Lincoln's assassination. Together with the Petersen House, Ford's Theatre is part of the Ford's Theatre National Historic Site, creating a tourist attraction that straddles the street. To the north of the Petersen House is a three-story (and attic) Victorian row house constructed in 1873. To the south is the 1923 Lincoln Building of Art Moderne style, that towers over the three-story Petersen House. To the west, is the large new building, Lincoln Square, constructed in 2001 (Figure 38).

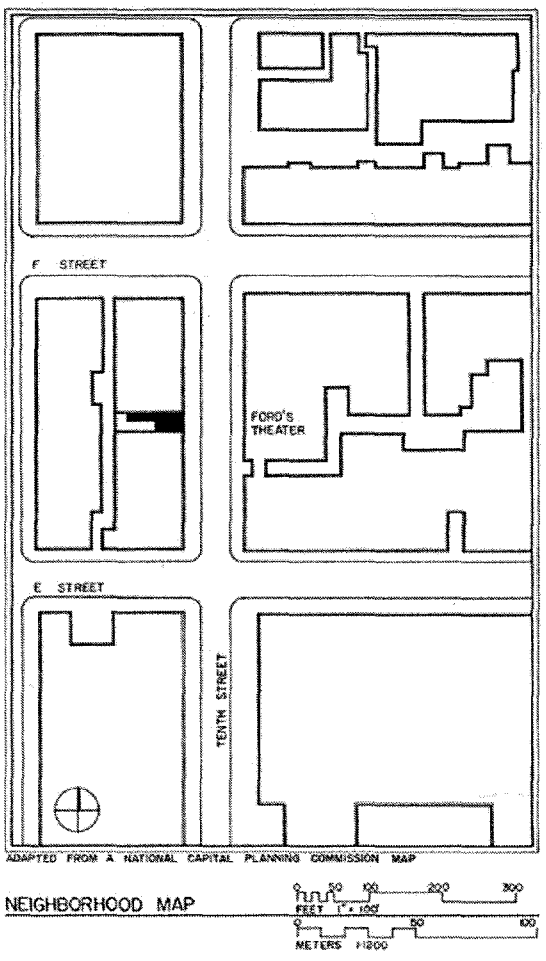


Figure 38 Site plan of Petersen House as the neighborhood appeared at time of the Historic American Buildings Survey (HABS) recordation project, 1977. The house where Lincoln died is the blackened footprint across Tenth Street from the structure labeled "Ford's Theater," which should read "Ford's Theatre." (Library of Congress, Prints and Photographs Division; DC-165, from Sheet 1 of 5).

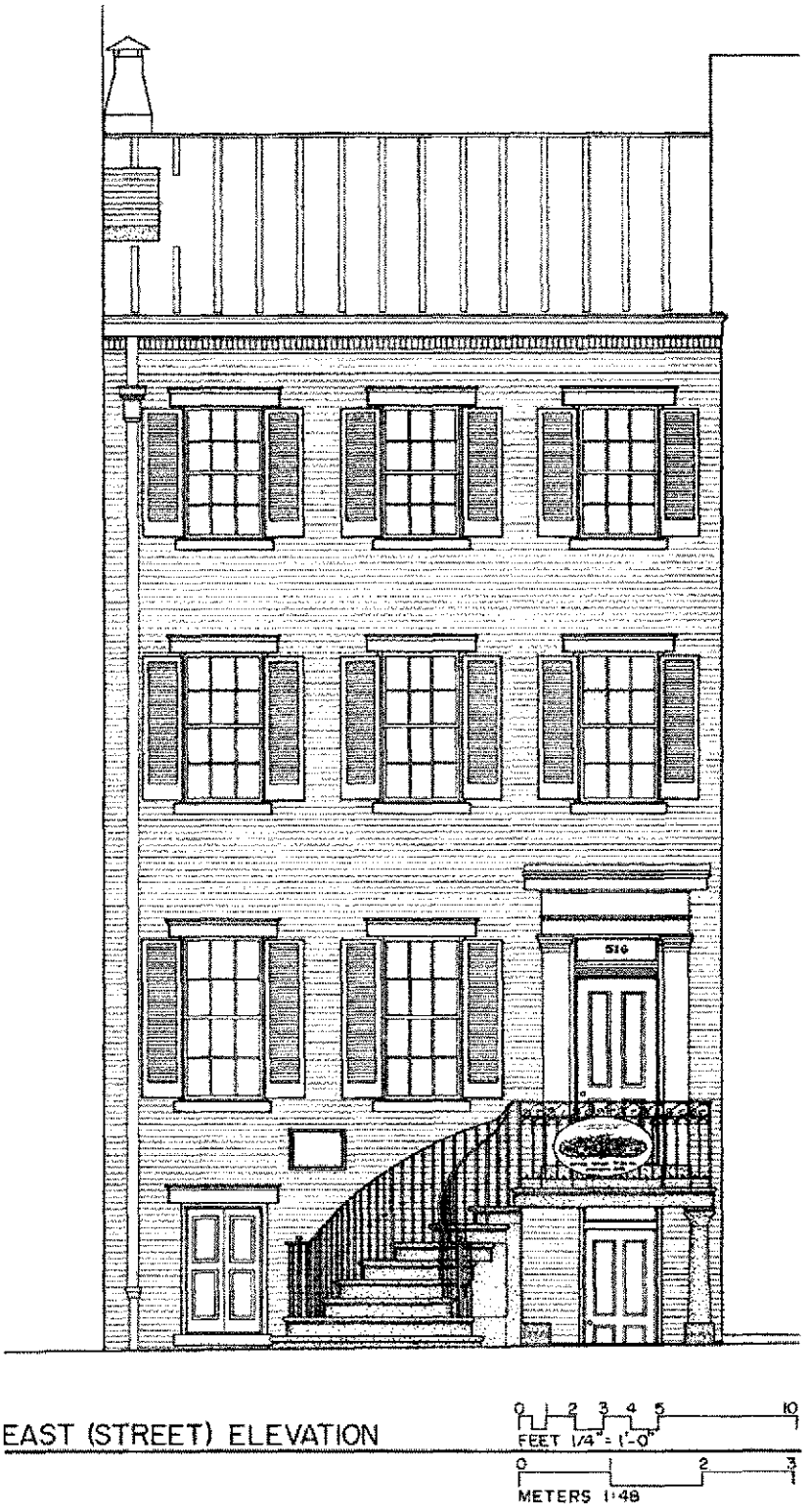


Figure 39 East Elevation of Petersen House - HABS recordation project, 1977. (Library of Congress, Prints and Photographs Division; DC-165, from Sheet 1 of 5).

Exterior Description

East Elevation

Constructed in 1849, the Petersen House exhibits handsome classical details and can be characterized as Greek Revival, which was the dominant style of American domestic architecture during the interval from about 1830 to 1850.[39] Exemplary of the Greek Revival style popular in the mid-nineteenth century, the house is a handsome and simple composition – a spare box with a sheer front plane pierced by crisply cut window openings with lintels and sills, and a simple stone stoop. Three bays wide and three stories tall above a raised basement, it is capped by a plain dentil cornice and low-pitched gable roof. The Petersen House represents the Greek Revival subtype of the town house, which was popular for narrow, urban lots in port cities of the Atlantic and Gulf coasts from 1830 to 1860. Greek Revival town houses typically can be characterized by the use of columns and pilasters, ornamental cornices, and six-over-six, double-hung sashes. A prominent doorway is also a common feature of Greek Revival row houses, and the Petersen House is no exception (Figure 39 and Photo AR-1).

The door enframement features a simple, classically inspired entablature of architrave, frieze, and cornice. Constructed of wood with a metal sheet attached atop the cornice, it appears to be original. Square Doric pilasters flank the entry. The dentils of the architrave are identical to those on the interior door surrounds on the first floor. The six-panel door matches early photographic images, and appears original to the house. The door is surmounted by a one-light transom, also likely original (Photo AR-2).

A curved brownstone stair with cast-iron railings leads from the central bay at ground level to the first-floor entrance in the northernmost bay. The raised entrance stoop or platform is supported by two brownstone Doric columns which frame the entrance to the basement. The steps sit upon a granite base. [Prior to the 1959 restoration, the stairs rested upon a mismatched, rectangular lower step. A copy of the brownstone curved steps was carried forward in the form of the granite replacement lower step.] The stairs, platform and columns were all replaced in 1959 due to spalling of the brownstone at the juncture point with the rusted railings. The cast-iron railings were removed, repaired, and carefully reinstalled within the new stairs. The original basement door was first replaced in 1916, and the current four-panel door was installed in 1959. The brownstone steps leading to the basement door underneath the stoop are

[39] Virginia and Lee McAlester, *A Field Guide to American Houses* (New York: Alfred A. Knopf, 1998), 182.

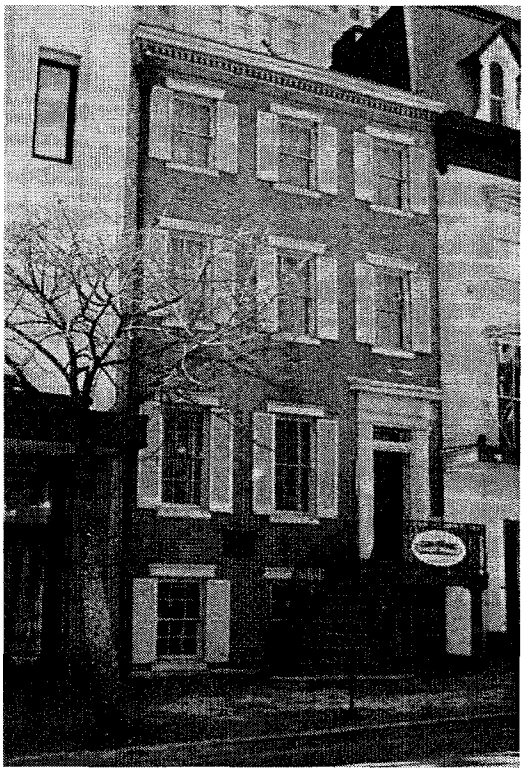


Photo AR-1; architrave p.c., architects 1/31/02

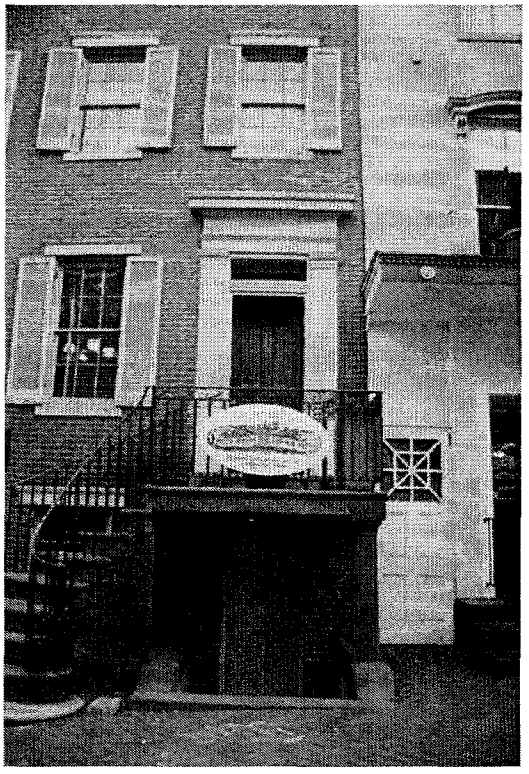


Photo AR-2; architrave p.c., architects1/31/02

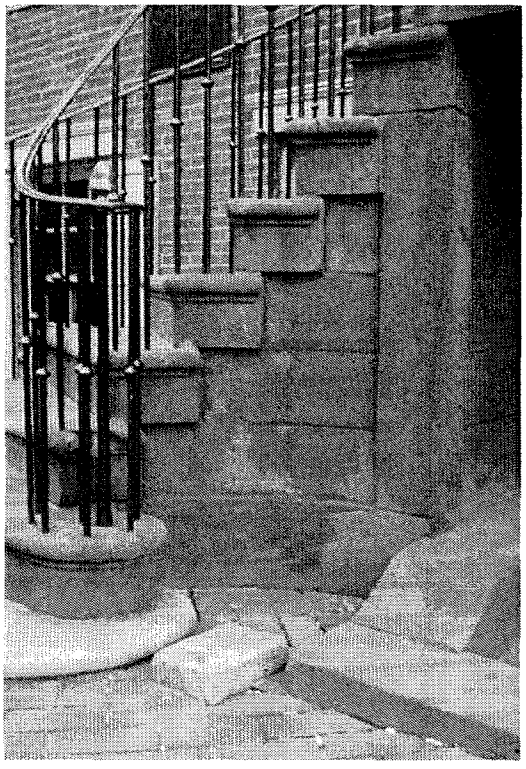


Photo AR-3; architrave p.c., architects 1/31/02

Existing Condition Photographs

Photo AR-1:
East Elevation of Petersen House

Photo AR-2:
East Elevation showing steps down to Basement Level Door, Door to Easement at Street Level (right) and curving brownstone steps leading to First Floor Level entrance Door.

Photo AR-3:
Detail of Brownstone steps (replacement) and iron railing (original-restored). The granite steps leading down are original and the granite block between is original, but the cast iron foot scraper is missing. The herringbone brick sidewalk is a 20th c. improvement.

Note: Identifications using "Photo" indicate existing conditions photograph taken for this report.

original.[40] A large, contemporary oval sign hangs from the cast-iron rail which encircles the platform (Photo AR-2). A commemorative bronze plaque, installed in 1923, is mounted in between the basement and first floor.

On the north side of the stairs, there is a granite base with two holes in it. This originally served as a foot scraper. Only the granite base survives of the two-part granite and cast-iron object (Photo AR-3). Both the base and its upper foot scraper portion were removed prior to 1943, the year the scraper was added to the Lincoln Museum's collection. The 1959 restoration plans called for the granite portion of the original foot scraper to be installed with the missing iron portion (to be fabricated) near the base of the stoop.[41] The entire scraper, as previously restored, was still in place in 1968 when HABS photograph documented the element. (Figure 40).

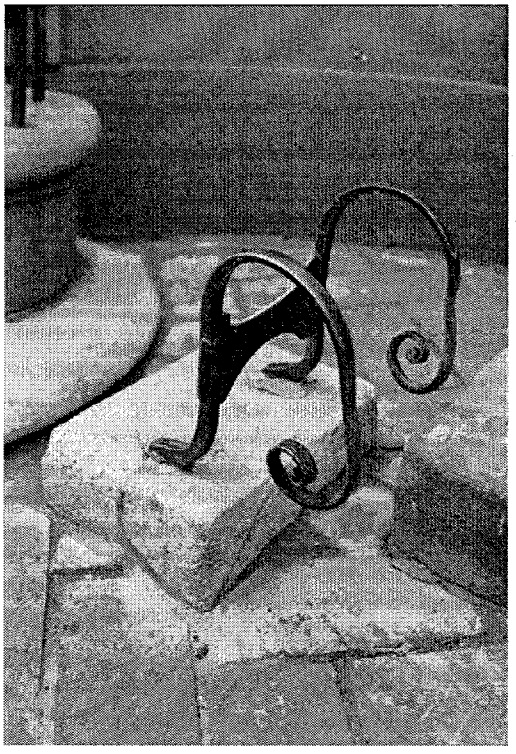


Figure 40 1968 HABS photograph of foot scraper (now missing from its granite base) (Library of Congress, Prints & Photographs Division, HABS, DC-165).

[40] NPS-NCR Collection – Ford's Theatre National Historic Site, *Rehabilitation of Petersen House, Basement Plan* (1958).

[41] NPS-NCR Collection – Ford's Theatre National Historic Site, Annual Work Report submitted by NPS.

Greek Revival lintels, believed to be original, cap all windows on the main elevation. The lintel profile is widely found on Greek Revival row houses. All the windows sit upon simple, rectangular wood sills, which also appear to be original. The windows are framed with louvered shutters installed in 1957. These current shutters are believed to replicate the originals photographed as early as 1883.[42] The south basement window retains its original paneled shutters, although the middle basement window shutters have been removed (and according to NPS sources are in storage at the Brentwood Management Facility, Maryland).

The composition of the east elevation is crowned with a dentiled wood cornice, with integral gutter, which appears to be original. The roof of the Petersen House is pitched, with a brick chimney located on the south side of the roof. Notes from the 1959 restoration show that the chimney was substantially reduced in height from 10 to two feet, but a circa 1925 photograph clearly shows that the chimney was already truncated. In 1914, the "old slate roof" on the main portion of the house was removed and replaced with a tin roof, which was painted.[43] Measured drawings dated 1957 indicate that the roof was copper at the period just prior to the major rehabilitation of the house, but this may have been the tin material painted to appear as weathered copper. Due to damage caused by a fire at the Lincoln Building immediately to the north in June 1994, a modern metal batten roof, designed to match the existing materials and profiles, was installed on the main house block, porch extension and rear ell. For durability and ease of maintenance, a factory painted finish was selected to recall the soft green color of weathered copper.

West Elevation

In comparison with the handsomely articulated Tenth Street elevation, the rear facade of the Petersen House is utilitarian in its design (Photo AR-4). The windows are not uniformly aligned, since the northernmost ones are placed at the landings of the stairs and thus sit lower than their counterparts. The brick bond is common in contrast with the conventional Greek Revival use of the running bond on the front elevation. The wood Greek Revival lintels of the east elevation are replaced with brick, jack-arch lintels on the rear. The first-, second- and third-floor windows in the southern bay are awkwardly crowned with

[42] The original louvered shutters were inaccurately replaced with a variant sometime between 1883 and 1894. An 1894 photograph of the east elevation shows louvered shutters with a central rail in place.

[43] NPS-NCR Collection – Ford's Theatre National Historic Site, Annual Work Report submitted by Army Corps of Engineers.

concrete lintels. These lintels are most likely replacements of the original jack-arch brick lintels, but it is unclear as to when and why the jack-arch lintels (visible in a 1959 photograph) failed. The rear windows have wood sills. All of the windows are originals except for the northernmost one on the second floor.[44] In 1871-72, a bathroom was constructed above the rear addition in between the first and second floors.[45] The addition was demolished in 1959 in an attempt to restore the building to its 1849 appearance, and a new window, window sill and brickwork under the sill were installed as a result.[46] The basement portion of the elevation consists of a window flanked by two openings. The south opening is a historic wood door, which appears to be original although altered, and accesses the rear room of the basement. It sits atop a stone threshold which also might be original. Both the window and the north entrance, which appears to be recent, are topped with jack-arch lintels, while the south door is supported by a segmental arch. The north entrance was most likely installed in 1863 to provide access to the rear ell, which was constructed away from the main block of the house. At one point shutters were in place on the rear elevation, since historic hardware remains on the window trim (Photo AR-5).

Obscuring the basement and first floors of the west elevation is an enclosed back porch. Wood stairs, supported by wood posts, lead up to a porch from the yard. The porch runs parallel to the house on the first floor and connects with a door to the Death Room. The original construction date of the porch is unknown, but it was enclosed in 1908 with a wood and glass partition of four casements.[47] A sloped metal awning is visible above the porch in pre-1959 restoration photographs. The porch consists of three sets of paired six-light casements with wood paneling below. During the 1959 restoration of the house, a new floor, sash and board under the sill were installed in the back porch. In addition, wood stairs were installed, which have proved useful for the house's role as a museum since they allow the swift circulation of visitors from the Death Room to the basement exit (Photo AR-6).[48]

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[44] Sara B. Chase, "A Brief Study of Historic Exterior Paint on Windows," *Design Development Report: Ford's Theatre and Petersen House* (Alexandria, VA: John Milner Associates, Inc., 6 August 2001), 8.

[45] NPS-NCR (FTNHS) Collection – Annual Report (NPS).

[46] Ibid.

[47] NPS-NCR (FTNHS) Collection – Annual Report (Army Corps of Engineers).

[48] NPS-NCR (FTNHS) Collection – Annual Report (NPS).

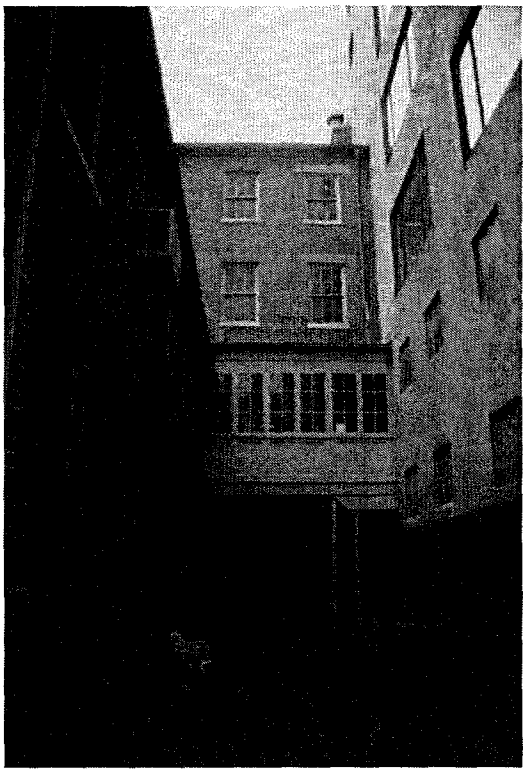

Photo AR-4; architrave p.c., architects 1/31/02

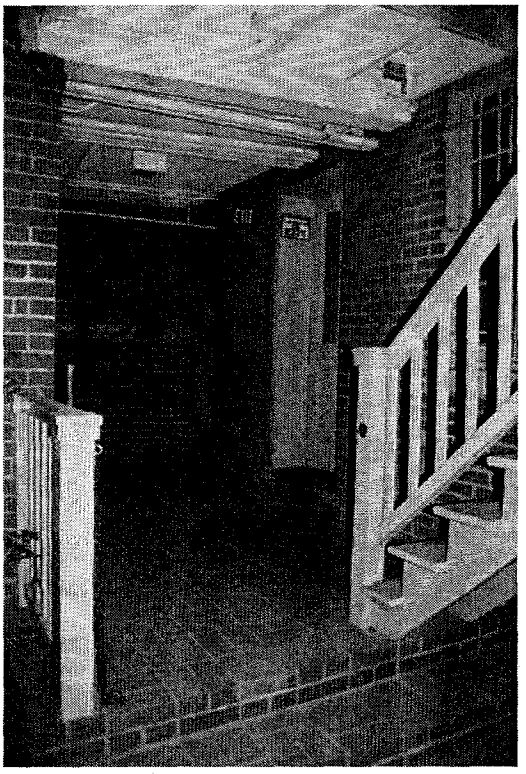

Photo AR-5; architrave p.c., architects 2/26/02

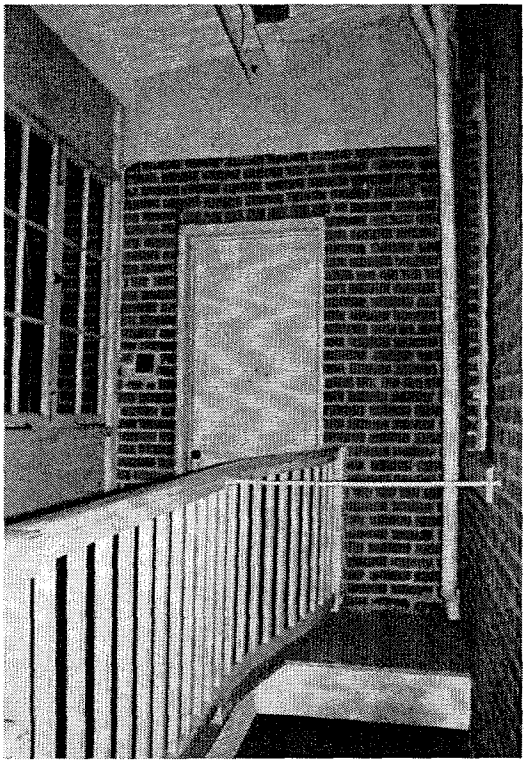

Photo AR-6; architrave p.c., architects 1/31/02

Photo AR-4:
West Elevation of Petersen House taken from Yard/Garden. Enclosed porch (First Floor level) extends from facade and connects with Rear Ell (on left).

Photo AR-5:
Open Areaway separates connection of Rear Ell to Basement level of house. Steps descend from enclosed porch above (visitor's exit from Death Room). Visitors then proceed through Basement Hall to lower Door at Street. Easement passage is beyond on right.

Photo AR-6:
Exit door from Death Room at First Floor level enclosed porch.

Easement Passageway

A passageway, which provides access to the rear of the Petersen House directly from Tenth Street, runs east to west along the north side of current lot 823. The space, formerly an alley, was converted into an enclosed passageway when a three-story row house to the north of the Petersen House was constructed, sometime prior to 1865. A door at the street front enclosed the passageway as early as circa 1865, the date of engravings of the Petersen House made after Lincoln died there (Part 1A: Figure 1). The passageway was deeded to the U.S. government by Louis Schade in 1896 as a permanent easement. To date, access to this passageway allows National Park Service staff to reach mechanical and electrical equipment that has been placed there, outside of the house walls (Photo AR-7), although this equipment was moved to the interior hall in 2002, allowing the easement to be used for ingress and egress. The south wall of the easement is brick while the north wall has a concrete base and brick above. At the point where the north wall and rear ell intersect, wood beams are cut flush with the brick wall perhaps where the former yard shed was located [a structure is visible at this location in a 1905 measured drawing of the house]. The easement reaches approximately fifteen feet high, and a 1950 drawing of the 1896 Plat of Deed shows that the easement is 36 feet long by 3 ½ feet wide (Figure 41).

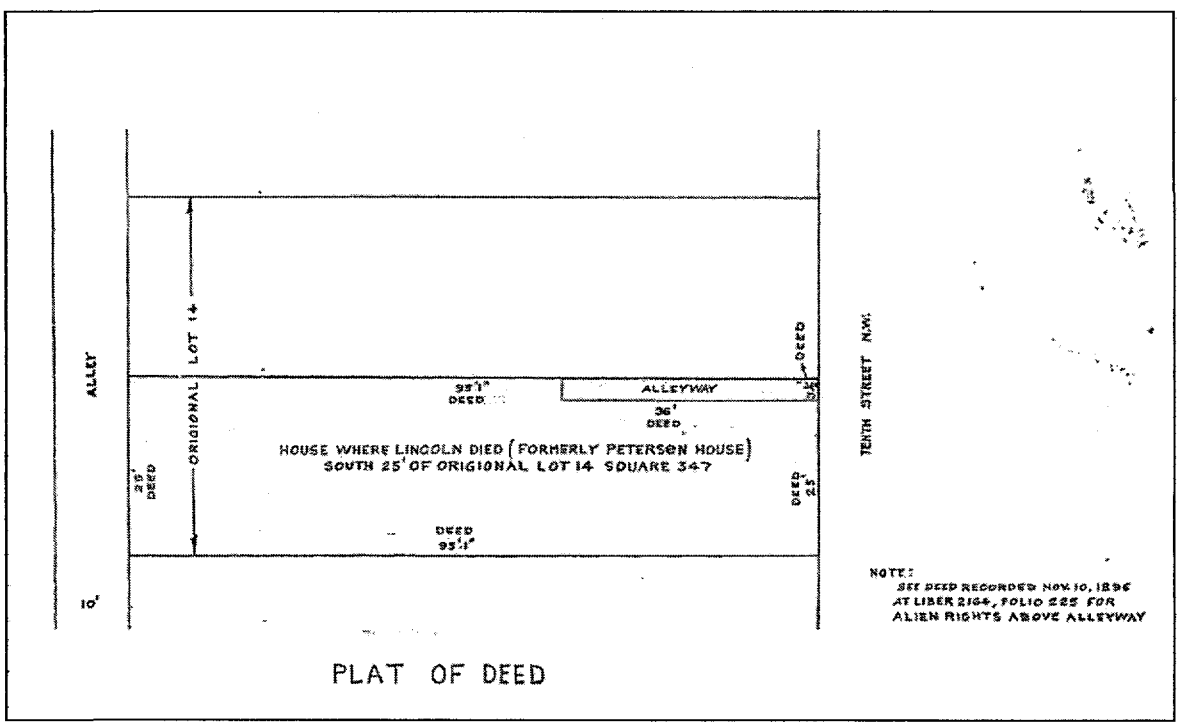

Figure 41 Plat Plan taken from 1950 NPS-NCR drawing adaptation of original 1896 deed (NPS-NCR Collection - FTNHS).

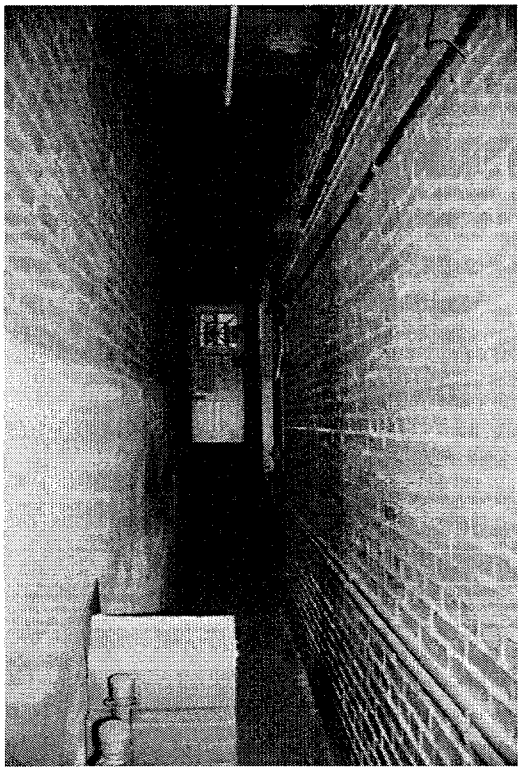

Photo AR-7; architrave p.c., architects 1/31/02

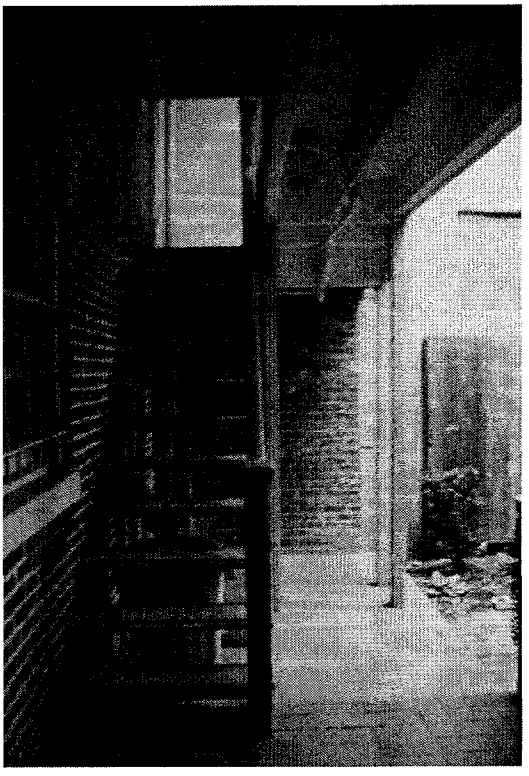

Photo AR-8; architrave p.c., architects 1/31/02

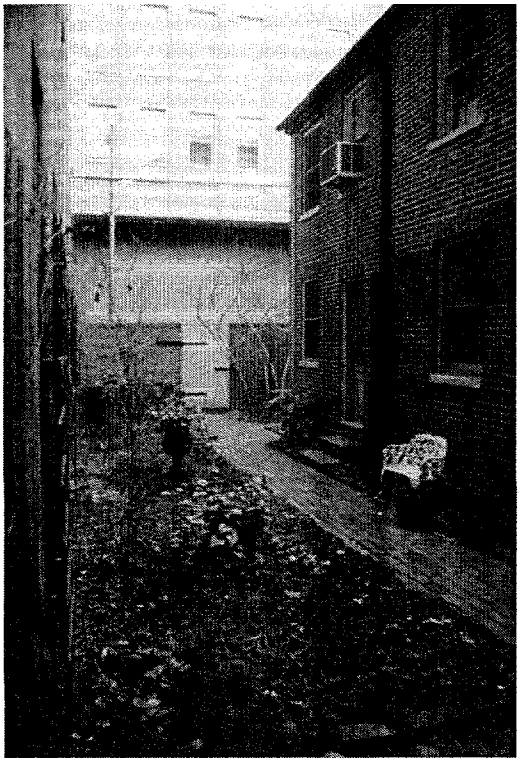

Photo AR-9; architrave p.c., architects 1/31/02

Photo AR-7:
Easement Passageway looking East towards Tenth Street.

Photo AR-8:
Floor Structure of Enclosed Porch above is visible from Garden level (porch rebuilt as is in 1959). Window of Boiler Room once had exterior shutters (now is protected with security grille)-jack arch lintel is obscured by the porch structure. Exterior door to boiler room is beyond, under stairs.

Photo AR-9:
Narrow Garden (formerly Yard) is defined by adjacent building wall on left (south) and Rear Ell Addition on right (north). Alley is beyond rear wall through gate.

A paneled door with a chinoiserie-inspired opening in the top third portion faces the street from the easement (Photos AR-2/AR-7). Since the passageway sits at basement level but the Tenth Street door is at street level, several stone steps lead up to the level of Tenth Street through this door. The original doorway leading to the easement alley installed by circa 1883 when the door is visible in a photograph – was restored in 1959 and National Park Service notes state that 85 percent of the original fabric was retained.[49] In "A Brief Study of Historic Exterior Paint on Windows," however, preservation consultant Sara Chase points out that as of April 2001, the door of "machine planed wood with chatter marks" indicating that the door was recently made.[50] Chase states that there is only a layer of primer on the Tenth Street side of the door, and concludes that both the door and doorway are new.[51] According to NPS sources, the door was replaced circa 1989 with a modern replica, and the former door discarded. An imposing stone lintel sits atop the door and provides structural support for the adjacent building façade that spans over the easement.

Rear Ell

All three elevations of the rear ell are laid in the common brick bond. The roof of the addition is a standing-seam metal one, replaced in 1998. A small chimney sits in the eastern half of the roof, directly above the west wall of the Death Room and former kitchen. The east elevation of the ell addition consists of a wood door flanked by brick walls. The upper story is connected with the house by the back porch, while an open areaway separates the lower level of the addition from the basement (Photo AR-5). When standing in the areaway, the wood floorboards of the porch are visible above. At one point shutters were in place on the rear elevation, since historic hardware remains on the window trim (Photo AR-8).

The eastern three bays of the rear ell were constructed in 1863 following a fire (described in HSR as Rear Ell (1)),[52] while the western two-bay portion was most likely constructed in the 1870s (described in HSR as Rear Ell (2)). The property's tax assessments increased in value from $2,965 to $6,965 in 1871-72, implying

[49] Ibid.

[50] Chase, 7.

[51] Ibid.

[52] Matthew R. Virta, *Archeology at the Petersen House: Unearthing an Alternate History* (Washington, D.C.: Regional Archeology Program, National Park Service, National Capital Region, 1991), 23.

that the addition could have been constructed then, but a 1878 building permit for a "two-story brick back building with tin roof" at a cost of $250 also exists.[53] (The permit carries no further detail.) The significant increase in value from 1871 to 1872 is puzzling since the only existing records (found in Olszewski's text) for that period are for the construction of the bathroom addition. There is no available data to clarify the exact date of the rear ell addition. A prominent seam clearly marks the separation between the two portions. A thick masonry wall sits at the interior point where these two additions meet, indicating that at one point this wall was an exterior wall. In addition to the brick courses not corresponding, the sills are different in each section. The window sills are all wood, with a slightly raised lip at each end in the 1863 sills and without the lip on the 1870s sills. The windows on the first floor are topped with jack arches, while those on the second floor are very close to the roofline and thus are only crowned with a single row of headers and then stretchers. The east of the west two bays contains a door, with a four-light opening in the upper half. These larger panes are indicative of a construction date after 1863.[54] The door sits atop two concrete steps (Photo AR-9).

The west elevation of the rear ell is a solid brick wall. This wall once served as the party wall between the ell addition and an 1899-1900 two-story coal shed/library addition. The latter was demolished during the rehabilitation work of 1959, and the plaster was removed from this now exterior wall. As a result, new brick infill is noticeable on this facade in the place of two former openings, in the center bay of the first floor and the south bay of the second floor, which once pierced this wall (Photo AR-10).

A new wood gate was installed on the rear wall of the yard in 1959 (and rebuilt in 1994), to provide access to the rear alley. This wall, now reduced in height by one story, once served as the rear elevation of the 1899-1900 portion of the rear ell. The opening for the gate originally was a door to the rear alleyway (Photo AR-11). The party wall adjoining the concrete wall to the south was left in place following the 1959 demolition, but the paint was removed and the brickwork cleaned. The north wall appears to predate the 1899-1900 addition, and was left in place since it is a part of the building to the north (Photo AR-10). The portions of the north and south party walls shared with the neighboring properties show ghost walls of where the 1899-1900 addition once was located, and traces of paint still remain.

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[53] Permit #1640, 1878, on file at NARA.

[54] In the last few decades of the nineteenth century, technology allowed for the production of increasingly larger panes of glass.

The Windows

All windows on the east and west elevations of the main house block and the elevations of the addition are six-over-six, double-hung sash (Photo AR-12). The size of the window panes is largest on the first floor of the east and west elevations, and decreases in size to the second and third floors. There are slight variations between the muntin profiles of the house and addition windows, but overall the windows are quite similar throughout. All appear to be original to the construction of their respective portion of the building. Preservation consultant Sara B. Chase writes that "All of the windows on the east and west walls of the main house have construction details that lead one to conclude they are original to the house, except for the window at the landing of the stairs from first to second floor."[55] This window was installed in 1959 when the 1871-72 bathroom addition was removed from its position on the landing between the first and second floors.

The muntins on the lower two stories (basement and first floor) of the residential portion of the house have an unusual profile. Chase recently carried out extensive research on these muntins that she describes as "typical of the German and other northern European settlers' houses in the Shenandoah, not too far from Washington, D.C." in the early 1800s.[56] (There was a large German population in the District of Columbia, as well.) The sides of the muntin "rise straight from the shoulders of the muntin bar and at a slight tilt toward each other so that they would meet at a point if that sharp edge were not made flat instead."[57] The use of this unique profile is possibly due to Petersen's German heritage [which Chase incorrectly labels as Swedish]. All other windows (stair landing and second and third stories) on the residential portion of the house have a muntin profile that is late Federal in style. Some original window locks remain on the interior; for example, there is one in the rear parlor on the first floor (north window) and one in the basement also on the west wall. Original locks were relocated from upper floor windows to the first floor in 1959, but the exact locations of these elements are unknown. All of the basement windows are covered with iron security grilles; on the east elevation the grilles are on the interior, and on the west elevation they are attached on the exterior of the window (Photo AR-8).

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[55] Chase, 8.

[56] Ibid, 3.

[57] Ibid.

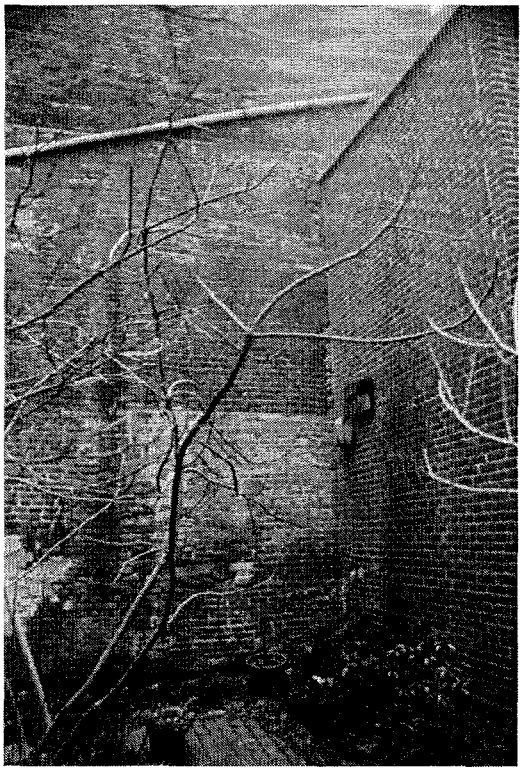

Photo AR-10; architrave p.c., architects 1/31/02

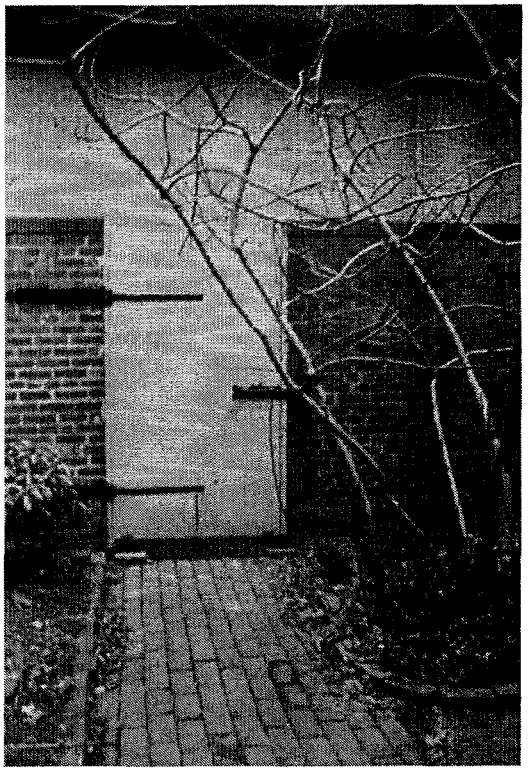

Photo AR-11; architrave p.c., architects 1/31/02

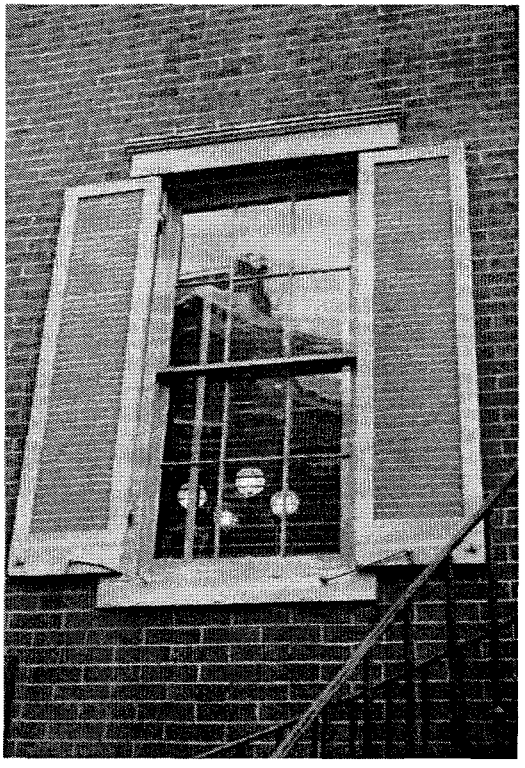

Photo AR-12; architrave p.c., architects 1/31/02

Photo AR-10:
West Elevation of Rear Ell (2) dating to 1870s-patches in brick are evident where former openings to 1899-1900 addition were filled. North wall of adjacent building (and south wall of opposite building) show shadows of former profile of demolished coalshed/ storage building, later library.

Photo AR-11:
Reconstructed wall at alley, capped with sandstone. Wood gate is also recent replacement.

Photo AR-12:
First Floor level window with original 6/6 sash located on the East Elevation, facing Tenth Street.

Interior Description

On the interior, the main house block of the Petersen House reflects the influence of the Greek Revival double-parlor plan, which on its primary floor is characterized by a formal double parlor separated by a wide opening, arranged front-to-back in the main house block and opening off of a linear side vestibule and stair hall.[58] The building's upper floors follow a similar configuration of substantially sized rooms opening off of a stair hall. As befitting the less prominent functions of the living space on the upper floors, the ceiling height and window pane size decrease from the first to the third floors – with the increased ceiling height, large windows, and ornate finishes of the first-floor parlors representing a marked attempt to emphasize the most grand public spaces of the house. The two rooms in the basement of the main house block likely would originally have served as dining room and kitchen (and at some point Petersen's tailor shop if it was indeed housed in the basement). To the rear (west) of the main house block, the first-floor level of the current narrow rear ell contains two small rooms (one, the bedroom in which President Lincoln died), as well as a rear stair.

The Front and Rear Parlors

The handsome front (Room 100-Photo AR-13) and rear (Room 102-Photo AR-14) parlors are mirror images of each other, measuring approximately 14 ½ feet by 16 ½ feet each. Both rooms have two six-over-six, double-hung sash windows on their respective exterior walls. The window surrounds are splayed out rather than perpendicular to the plane of the window. (This technique is also used in the basement.) The two rear windows currently open onto the back porch. Wood blinds hang from all four parlor windows. The south wall in both rooms is marked by a handsome, mid- to late-Nineteenth century fireplace. Although the arched cast iron grates and dark marble (brown and black) mantlepieces are said to be original, no documentation dates them.[59] Stylistically, they do not belong to the Greek Revival period, as do all other extant wood fireplace surrounds and mantels in the house.

On the north wall of each room, a door opens into each parlor from the entrance hall. On the shared wall, a large opening connects the two parlors

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[58] Mary Ellen Hayward, "Urban Vernacular Architecture in Nineteenth-Century Baltimore," *Winterthur Portfolio* 16.1 (Spring 1981): 48.

[59] Stanley W. McClure, "Ford's Theatre & the House Where Lincoln Died," *National Park Service Handbook* (Washington, D.C.: National Park Service, 1969), 77.

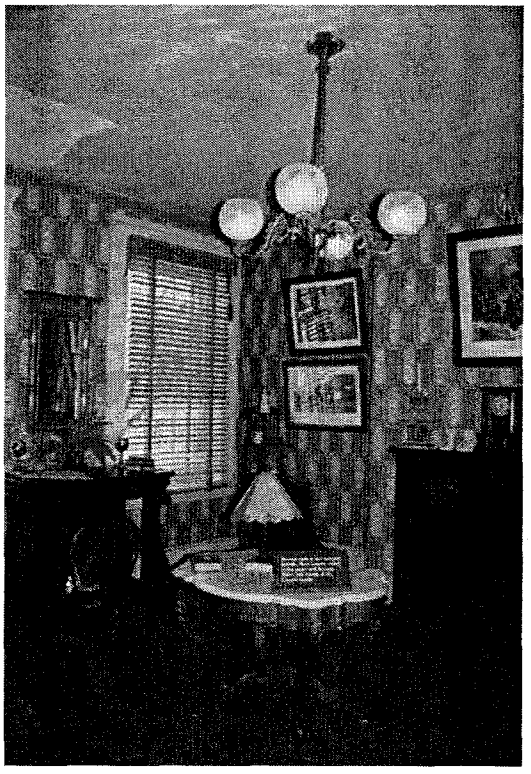

Photo AR-13; architrave p.c., architects 2/15/02

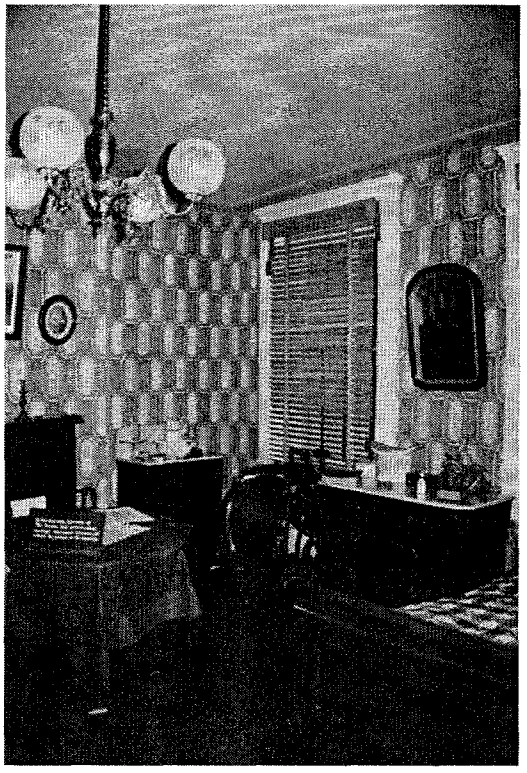

Photo AR-14; architrave p.c., architects 1/31/02



Photo AR-15; architrave p.c., architects 2/15/02

Photo AR-13:
Front Parlor, looking towards Tenth Street, as it appears today. Restoration of finishes in all First Floor spaces visited by the public dates to 1979-1980, when historic accuracy was focus of effort.

Photo AR-14:
Back Parlor, looking towards the Back Porch and Garden beyond, as it appears today.

Photo AR-15:
Entrance Hall leading to Death Room in Rear Ell, as it appears today.

and creates the effect of one large room. The door surround has a large entablature supported by a dentil course similar to the ornate surrounds found above the parlor doors, as well as on the parlor windows. Hinge mechanisms are visible within the door framing; two doors originally hung from the door frame and provided privacy between the two rooms when desired. The six-panel doors leading into the two parlors from the hall have three rows of vertical panels, with the top row having the largest panels and the middle row being quite small. The doors appear original. This paneling is identical to that of the front door. Radiators, installed in 1953, which were fabricated to resemble historic baseboards, run along the west wall of Room 102 and the east and north walls of Room 100, while the remaining walls exhibit the original simple baseboard profiles.

Both parlors, which were rented rooms at the time of Lincoln's assassination, are filled with nineteenth-century furniture in an attempt to recreate the interior appearance from the eve of April 14, 1865. None of the furniture is original to the house itself. Period pieces were acquired to match with descriptions of the furniture sold at auction by the Petersen heirs in 1871. The parlors' wood floors have been covered in replica nineteenth-century carpeting. The door and window surrounds are painted cream, while the wallpaper consists of a floral pattern of orange, white and pink. The wallpaper was first recreated in 1932 when the first reproduction wallpaper was applied. The current wallpaper dates from the 1979-80 renovation, which was necessary since water seepage caused damage to the interior's wallpaper and plaster. The renovation carried out wallpaper analysis to create a more accurate replica of the wallpaper in place during the period of significance. This analysis and the examination of drawings and photographs served as the basis for the creation of new wallpaper in the Death Room, but that of the parlors and hall is mostly conjectural.[60]

The Entrance Hall

Filling the north bay of the first floor of the house is a long hall (Room 107), leading from the Tenth Street entrance to the stairs and Death Room at the rear of the house (Photo AR-15). Through two doors, the hall also provides access to the Front and Rear Parlors. Wood paneling encloses the space under the stairs. A six-panel door sits adjacent to the wood paneling under the stairs and leads to stairs to the basement. Heating baseboards dating to 1953 line the base of each wall. A circa 1850 gasolier (retrofitted to a pendant lamp), hangs from the ceiling and was installed during the 1979-80 renovation. The wallpaper, of curvilinear forms of swags and leaves of brown and green against a white background, also is a replica of a period finish. The original six-panel front

[60] National Park Service personnel report that the wallpaper is the work of Scalamandre.

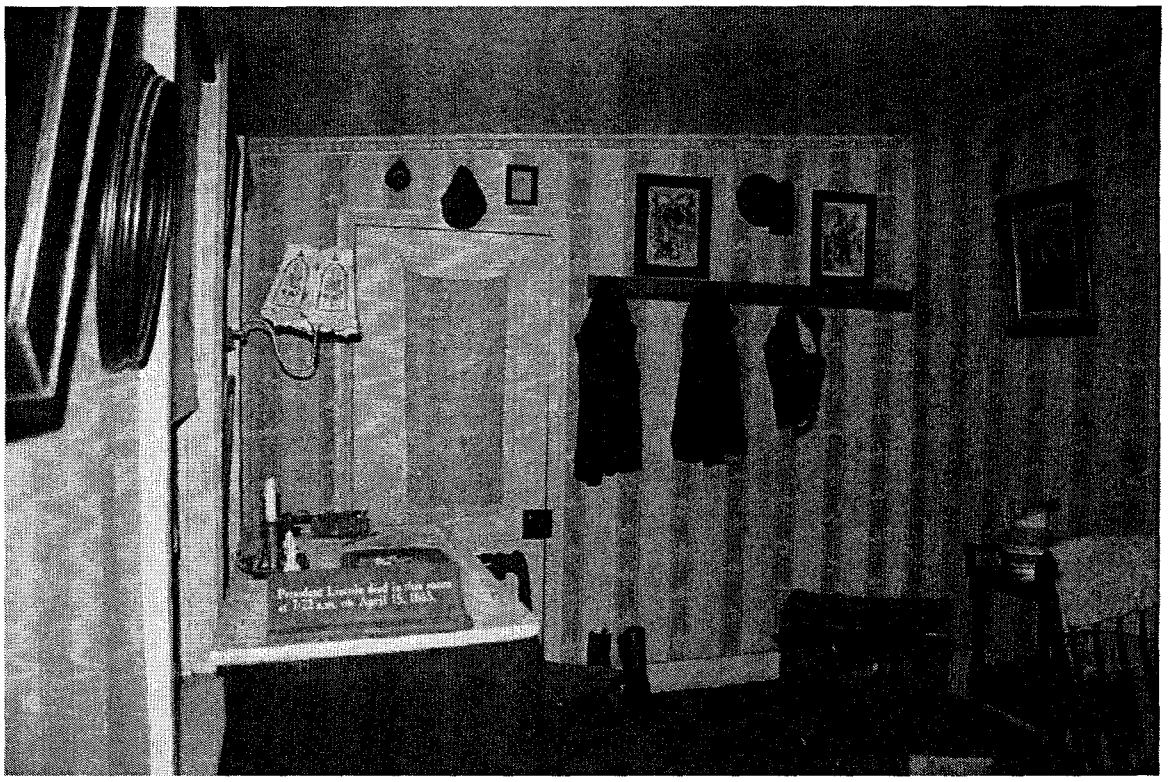

Photo AR-16; architrave p.c., architects 2/15/02



Photo AR-17; architrave p.c., architects 1/31/02

Photo AR-16:
The rear wall as it appears today, after the 1979 correction of the door placement and swing. All efforts were made during this last restoration effort to depict the room as it appeared in the Waud sketch.

Photo AR-17:
South wall of Death Room. Between the two windows is mounted the gas jet lamp fixture, also replicated from the Waud sketch.

entrance door matches the interior parlor doors. Currently, set above the door is a single-pane transom.

The Death Room

The Death Room (Room 103) is by far the most famous room in the house. Due to its location in the rear ell, it is also among the most modest in its size, appearance, and furniture (Photo AR-17). The ordinary appearance of the room is made especially apparent when comparing the Death Room with the handsome front and rear parlors. The Death Room measures approximately 18 by 10 feet. The ceiling of the room gently slopes downward to the south.

A recent metal ramp leads down to the level of the rear addition from the first floor hall, making visitor circulation through this small room less cumbersome. The main door has been taken off its hinges to further aid the accessibility of this room. A metal railing encloses this particular entrance and prevents visitors from fully walking into the room. Added in 1959, the railings are constructed of iron with a bronze hand rail.

A doorway (believed by Oldroyd to date to Lincoln's death - Figure 42) is located on the south wall of the Death Room. When utilized, it provides access to an enclosed wood walk-way (back porch) and stairs which lead to the basement and the museum's exit. A sheet of glass, supported from a frame mounted to the floor, sits adjacent to the bed to prevent visitors from touching or removing any objects from the death bed. The 6 foot high glass panel was added in 2000 for added protection, due to the visitors' natural tendency to touch the bed and wall above. This division between the viewing and viewed space is further emphasized by different patterns of carpet in each portion of the room.[61] Portions of the wallpaper immediately to the north of however, have been ripped away (and most likely kept as souvenirs).

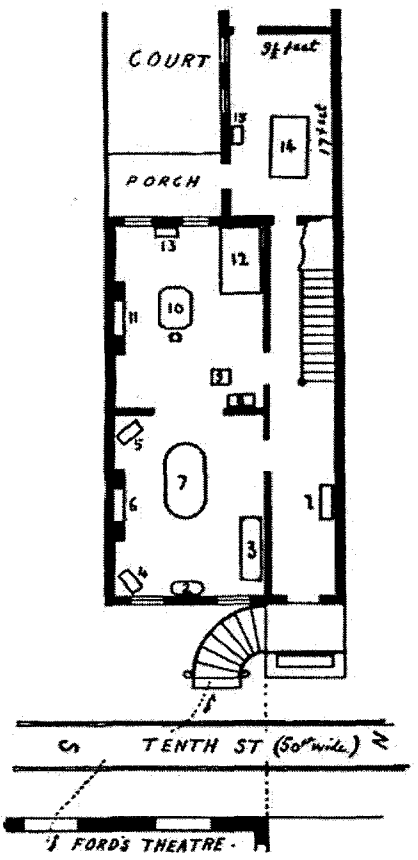

Figure 42 Olszewski's adaptation of Oldroyd's sketch of the house at time of Lincoln's death. (NPS-NCR Collection – FTNHS).

[61] As part of the 1959 rehabilitation of the house, a new maple floor was installed within the portion of the room that the railing encloses. Today, this new floor is covered with carpet.

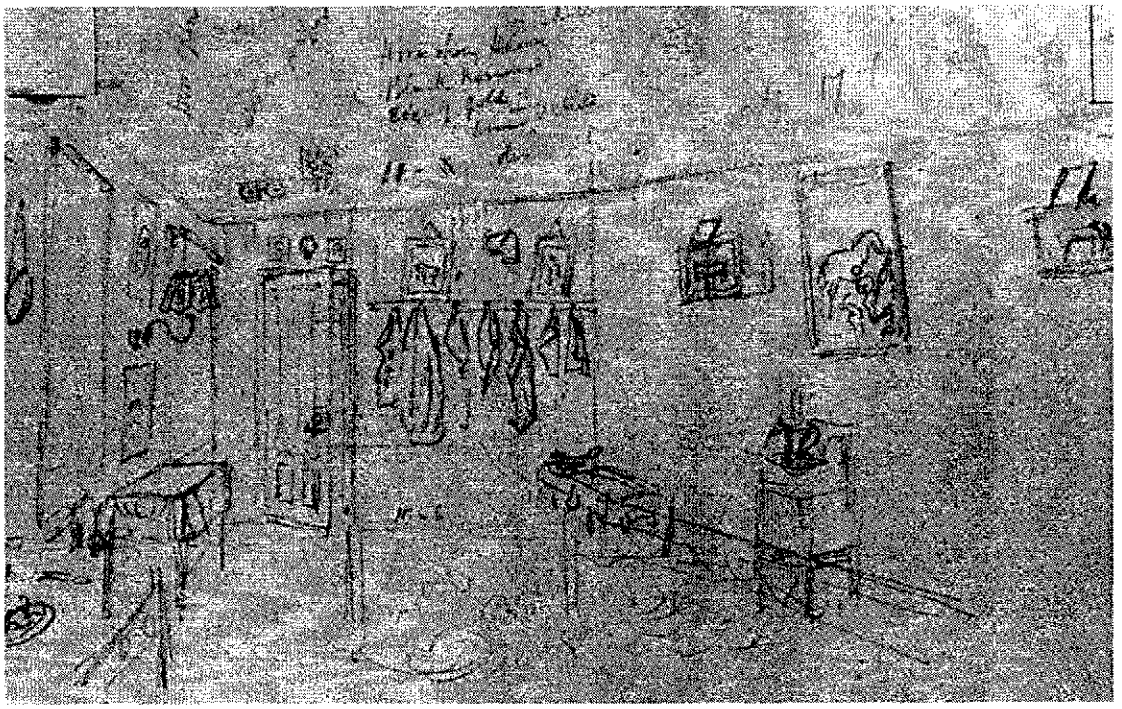

Figure 43 Alfred Waud sketch of rear wall of room where Lincoln died ("Bedroom of William Clark, East End" by Alfred R. Waud, Pencil, 1865. Library of Congress Collection).

One door hangs from the rear (west) wall of the room. It leads to Room 104 on the first floor of the addition. The rear wall, as it appears today, is based upon the 1865 Waud sketch of the Death Room (Figure 43). Between 1896 and 1905, Oldroyd removed the rear wall to provide room for display cases for his museum of Lincolniana.[62] During the 1932 restoration of the house, the rear wall was replaced, but it was not until the 1979-80 restoration that inaccuracies, such as the placement of the door, were corrected according to the Waud sketch.[63]

The Chicago Historical Society, which owns the Gunther Collection of original furniture from the Death Room, has created a replica of the Petersen House Death Room. Images of the Chicago Death Room show the recreated 1865 appearance of the room, but the size and configuration of the room is not completely accurate (Figure 44). (For example, a projection is located to the right of the door on the rear wall and within it there is a dummy door; however, no plans or images show that a dummy door or projection were ever present in the real Death Room. The placement of this door most likely has to do with the original configuration of the room chosen by the Chicago Historical Society's curatorial staff to house the Gunther Collection.)

[62] Scott, 60.

[63] Ibid.

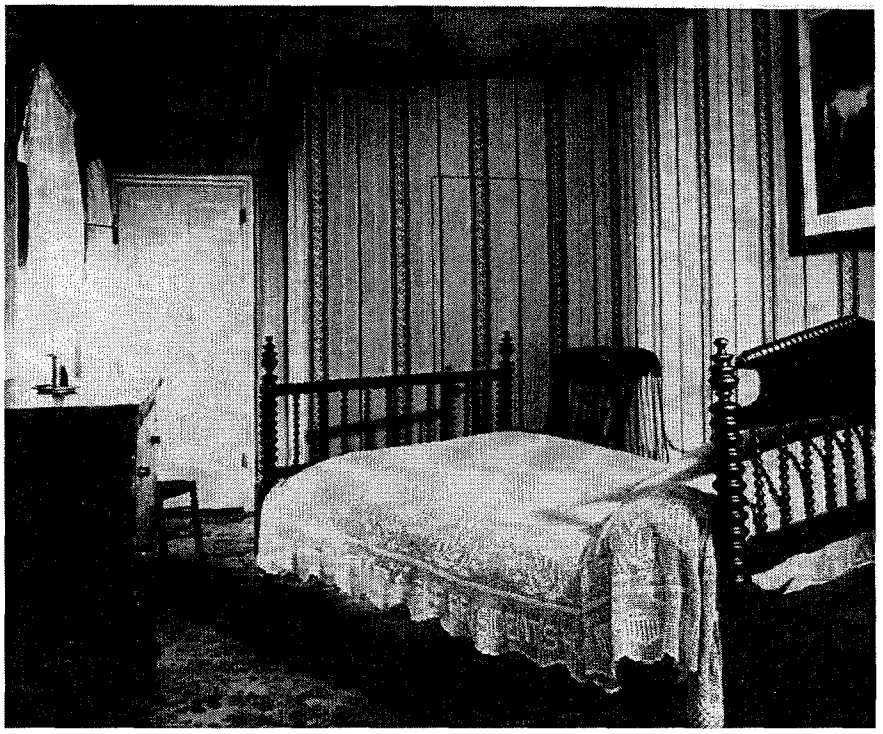

Figure 44 Recreation of Death Room at the Chicago Historical Society (NPS-NCR Collection – FTNHS).

There is conflicting evidence on a small alcove behind the rear wall and visible from the stairs to the basement level of the Petersen House ell. This space is located in the very location that a closet door might have been located. Thus, further physical investigation of the rear wall is needed to fully understand its complex history and to determine if the current placement of the rear wall is correct.

Two six-over-six, double-hung sash windows pierce the south wall of the Death Room. The muntins and window surround are both thinner than those in the house, possibly owing to their later construction date. A modern spotlight hangs from the ceiling of the southeast corner of the room. Baseboards, painted the same cream as the window surrounds, are located on the east and west walls of the Death Room, while the north and south walls have heating baseboards. The walls are covered in white and beige paper, and the red carpet is decorated with green swags. Both attempt to recreate the appearance of the room on the eve of Lincoln's death from sketches and one photograph made following the death. In addition, the furnishings are replicas from the period. Attention has been taken to match the style of the furniture with the pieces believed to be in the room at the time of Lincoln's death.

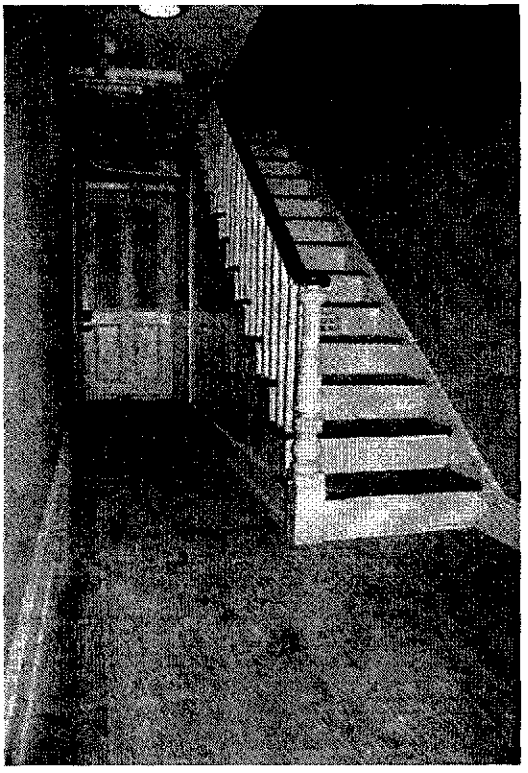

Photo AR-18; architrave p.c., architects 2/15/02

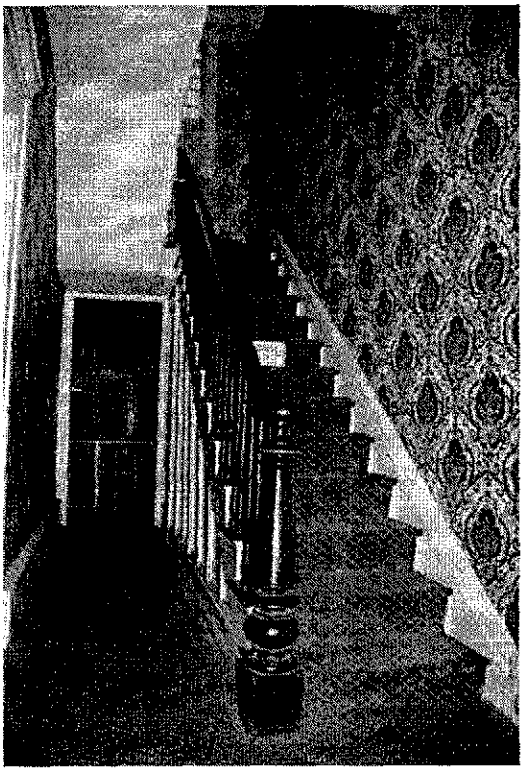

Photo AR-19; architrave p.c., architects 2/15/02

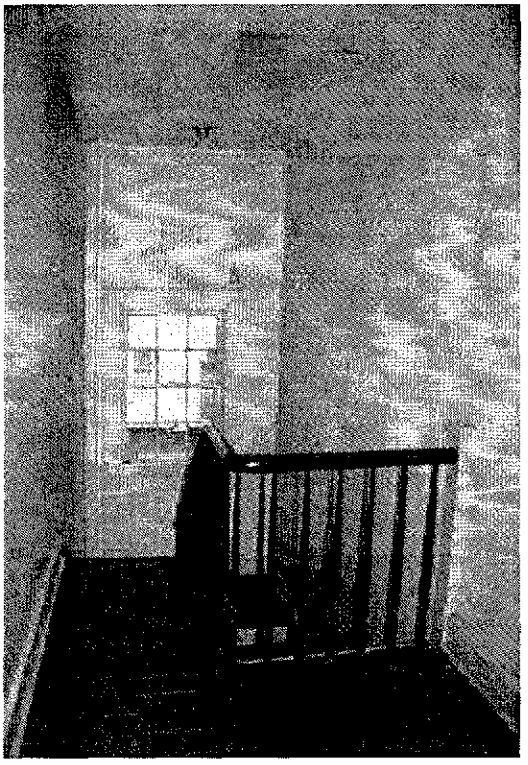

Photo AR-20; architrave p.c., architects 2/15/02

Photo AR-18:
Hall and Stairway at the Basement level. Beaded board partition fills the area beneath the stairs, with a door leading to a small closet. All stair elements are painted.

Photo AR-19:
Hall and Stairway at the First Floor level. Wood paneling encloses area under stairs with a door leading to the Basement. The heavy newel post and balusters are stained dark mahogany.

Photo AR-20:
Hall and terminus of Stairway at the Third Floor level. The delicately turned balusters and rail cap of round profile are painted.

The Stairs

The stairs in the Petersen House are located on the north side of the building. Starting in the basement, the stairs wrap around a landing halfway between each floor at which point a window on the rear elevation provides light to the landing. The disjunction between the height of the landing windows and those on the main floors, separated by approximately six feet, creates an irregular pattern on the rear elevation. The stairs lead to the third floor, at which point the banisters turn 90 degrees and continue into the north wall creating a balcony effect over the stairs below (Photo AR-20). An access panel in the ceiling of the third floor hall provides entry to the attic and a hatch within the attic provides access to the roof.

All features of the stairs, including the wood treads, and risers, and heavy banisters, hand rail and newel posts, are original and in good condition. There is a marked difference between the banisters of the basement and those of the upper stories; those in the basement are rectangular while upstairs the banisters are turned with ornate carvings in the lower third of each post. Wood paneling encloses the area beneath the stairs on both the basement and first floor. A closet is located under the basement stairs, while a door under the first-floor stairs leads to the basement. A horizontally paneled door placed on the landing between the first and second floors separates the first floor portion of the stairs from the upper floors. This wall may have been added during the 1900 governmental upgrades preparing the house for museum use, once the house left private ownership. The portion of stairs leading to this door is the only section of stairs to be carpeted. In addition, the wallpaper of the first floor hall continues to the landing door, creating a clear division between the public and more opulent first floor and the private and simpler upper stories. On all floors the treads and risers are painted. On all floors except the basement, the banisters and newel posts are unpainted (Photo AR-19).

The Basement

A hall (Room 9) aligned along the north wall of the building leads to the main stairs to the west and to a door to the street to the east (Photo AR-18). This four-panel door has a four-light transom over the doorway, and was replaced during the 1959 restoration. On the western end of the hall, a door opens to the rear of the building in the space between the house and the rear addition. The wood floorboards in the hall are wider than boards in other rooms in the basement and on the upper floors, and appear to be new. Wood baseboards remain on either side of the Tenth Street entrance and in the rear of the hall, but all others were replaced with heating baseboards. Spotlights have been installed within the ceiling. Near the street door, an entire section of plaster has been removed

from the south wall of the hall, because the plaster was loosened and the bond was irreversibly broken with the original brick wall underneath. The brick is now exposed. The rest of the walls were replastered in 1959.

The front room (Room 10) in the basement looks out on Tenth Street, as well as the brownstone stoop that services the house's front door. The room is currently used for storage. Historically, the room served as a dining room, and possibly later a workshop for Petersen's trade as a tailor. A door on the south wall opens into a closet with additional storage. Two windows pierce this east side of the room. The windows consist of six-over-six, double-hung sash. The window surrounds splay diagonally away from the window. Metal security grills have been placed over the windows from the interior. Spotlights hang from the ceiling. The brown and beige wallpaper is a replica of a nineteenth-century pattern. The wood door and door surrounds are identical to the four-paneled door to Tenth Street, characterized by slightly larger panels on top. These doors appear to be original. Baseboards, salvaged from the demolished 1899-1900 addition, run around the base of the room. The thin floorboards, running perpendicular to those in the hall, appear to be original.

The rear basement room (Room 11) has a more utilitarian atmosphere, fitting for its current role as the boiler room. A wood door (faced with metal on the boiler room side) opens into the space, which is three steps below the level of the rest of the basement. The floor is concrete, unlike the wood floorboards in the hall and front room. Various mechanical equipment and machinery, including boilers and extensive pipes hanging from the ceiling, fill the room. The west wall contains two openings: a window and a door to the south. The window is six-over-six, double-hung sash with a splayed surround identical to Room 10. Apart from the original window trim and possibly original yard door, this space has been greatly altered from its believed 1865 use as the back dining room.[64]

Second and Third Floors

Both the second and third floors are utilitarian in their use and appearance. The plans of both floors consist of three rooms forming an L-shape around a landing. In the south two bays, there are two large rooms, while in the north bay there is the landing and a small room located on the front of the building. All rooms have a door that opens onto the hall. The front room and rear room have a common door also, as does the front room with the small front located to its north. Historically, the upper two floors served as private living and sleeping space for the Petersen family and boarders.

[64] George, J. Olszewski, *House Where Lincoln Died: Furnishing Study* (Washington, D.C.: Division of History, Office of Archeology & Historic Preservation, National Park Service, Department of Interior, April 15, 1967), 57.

These rooms are not open to the public and do not serve a daily function in the operation of the house museum. The two front rooms on the second floor are used for administrative purposes: the small room (Room 203) serving as curatorial storage and the larger room (Room 201) as a workspace. The rear second floor room (Room 202) is currently used for storage and has two work surfaces, but overall it is quite spartan and appears to be rarely in use. The third floor rear room (Room 302), and small (Room 303) and large (Room 301) front rooms are all currently used for storage. The most noticeable difference between the configurations of the second and third floors is the large opening between front room and small front room on the second floor in comparison to the ordinary door on the third floor. The opening, which is similar to the large opening between the two parlors on the first floor, is framed by a door surround with the same profile as the regular door surrounds found on the second and third floors. This opening is visible on a floor plan of the second floor from 1932 (which is the earliest existing plan of the upper floors).

The rear room and large front room on both floors have fireplaces located on the south wall. All four fireplaces have identical mantelpieces, consisting of a simple entablature (similar to that of the window and door surrounds) supported by geometric Doric pilasters (Photo AR-21). All of the fireplaces have been filled in except for the one in the front room of the second floor that contains a decorative square iron grate. In the two large rooms on both the second and third floors, the fireplace is flanked by an indentation (on the exterior wall side) and a closet (on the interior wall side). The closets are extremely shallow, and most contain shelves or hooks (Photos AR-21/AR-22).

Some of the second-floor doors have five horizontal panels and are believed to date to the 1900s, while the third floor doors, which appear to be original, have four panels with the upper two being significantly taller than the bottom two (Photo AR-21). It is only the six-panel closet doors, however, which match those found on the first floor (Photo AR-22). All rooms on both floors have baseboards that run about six inches high. The windows can be characterized by the thin profile of their Greek Revival muntins (Photo AR-23). The panes are slightly larger on the second floor than on the third, but not as large as those on the first floor. The windows do not have the unusual splayed window surround of the basement and first floor. The wooden floorboards in all rooms on both floors, which appear to be original, have been painted. The second-floor rear room (Room 202) is the exception since its floorboards have been covered with brown linoleum tiles.

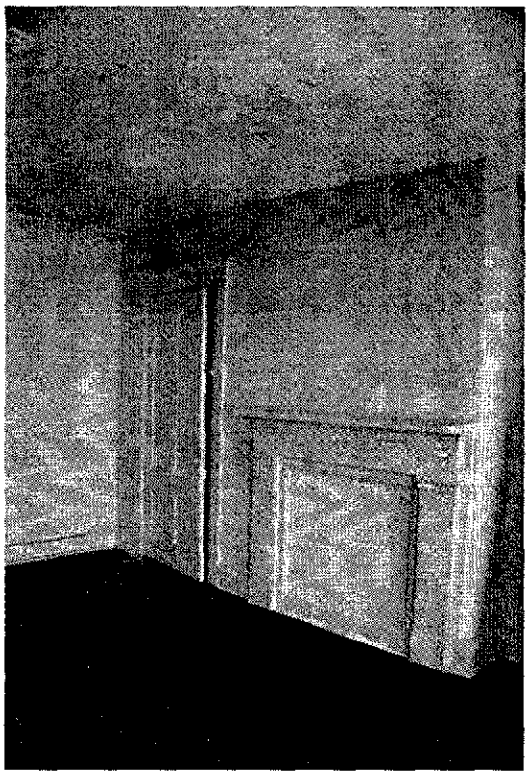

Photo AR-21; architrave p.c., architects 2/15/02

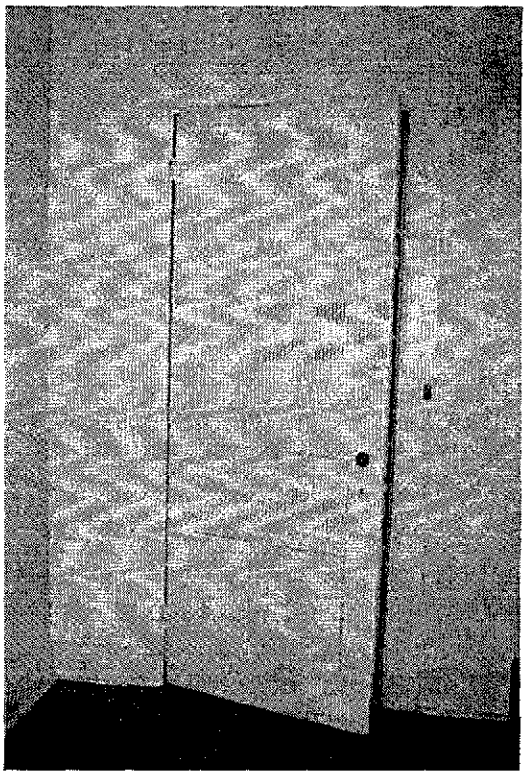

Photo AR-22; architrave p.c., architects 2/15/02

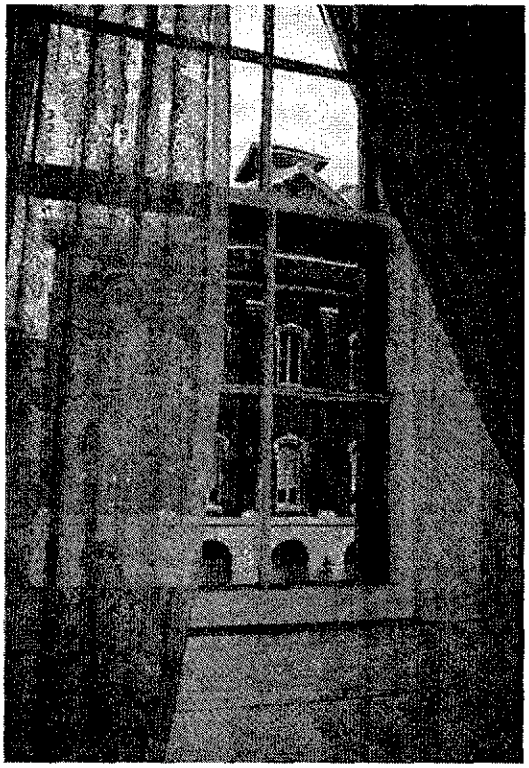

Photo AR-23; architrave p.c., architects 2/15/02

Photo AR-21:
Room 302 on back of house with mantel intact (chimney filled) and adjacent closet. The 4 paneled door and simple wood trim in the Greek Revival style are all original. Plaster exhibits previous water damage.

Photo AR-22:
Closet at Room 202 directly below location of Photo B-16. Original doors on the Second Floor are 6 paneled, and the door surround is more detailed.

Photo AR-23:
Detail of Front window with 6/6 sash in Room 201 with view of Ford's Theatre across Tenth Street.

Rear Ell

A series of small rooms are located on both levels of the circa 1863 reconstructed rear ell. The rooms have been greatly altered; most have tiled floors, modern wall coverings and altered light fixtures. It does appear that all the six-over-six, double-hung sash windows and the window surrounds in the ell addition are original. In addition, the stairs in the oldest portion of the ell are original, with turned banisters and newel post in a style similar to that of the main house (Photo AR-24). West of the Death Room on the first floor are two rooms, a hallway (Room 104) and a small room (Room 105), which also have gently sloped ceilings. The hallway located directly west of the Death Room has one window on its south wall. Within the hallway, an interior door leads to a stairway terminating in Room 12 at the lower level. The door is pierced with a six-light window. Room 105, which post dates Lincoln's death, historically served as a bedroom, is small in size and has two windows on the south wall. The walls are covered in brown, rough cloth wallpaper.

The ground floor level of the rear ell (aligned with basement level at main house) consists of two spaces, a large room once used as the kitchen (Room 12) and a small room (Room 13) once used as a pantry that now is broken up into three small spaces. Room 12 is a large space from which stairs rise to the upper floor (Photo AR-24). A wood closet door located under the stairs appears to be original. Two panels of fluorescent lights and various pipes hang from the ceiling. This is the only room in the addition to retain its wood floorboards, although the sleepers and boards were replaced in 1906 and 1986 due to rot. A decorative, pressed-tin ceiling and cornice, both repaired during the 1959 renovation, are both quite old, but do not date to 1863. Survey findings revealed a layer of wallpaper beneath the tin cornice. (There is no current explanation for the presence of this somewhat decorative wallpaper in what the *Archeology at Petersen House: Unearthing an Alternate History* identifies as the former kitchen space.)

This room and Room 105 both have heating baseboards similar to the ones found in the house. Room 13 consists of a hallway with a unique wall mounted radiator unit. The small space, once part of a singular room, adjoins a small restroom to the north, the partitions, door, and equipment of which were installed in 1959. Drawings from the 1959 rehabilitation show that a brick hearth was removed from this space, while installing a concrete slab on grade, which implies that at some point after this portion of the ell's construction in the 1870s, the kitchen may also have been located in or relocated to this room. (No further evidence clarifies the true kitchen location(s) over time.) The south wall of the hall is pierced with a door with a four-light window, leading to the garden. The westernmost space in Room 13 is also very small and houses a large

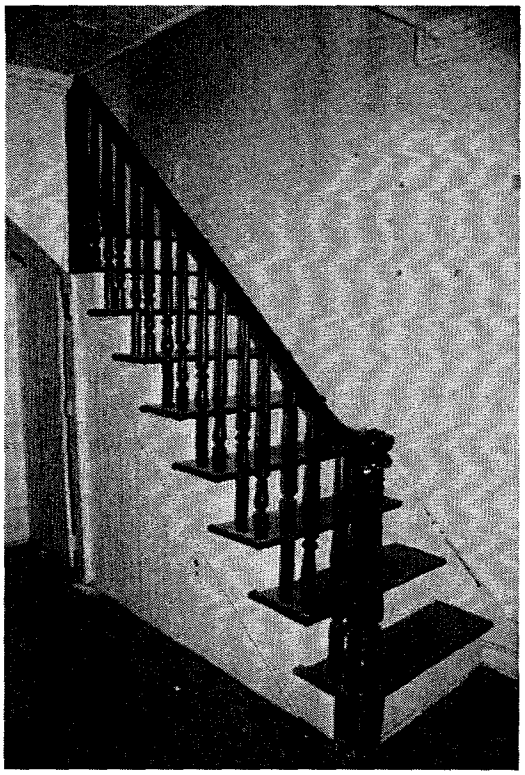

Photo AR-24; architrave p.c., architects 1/31/02

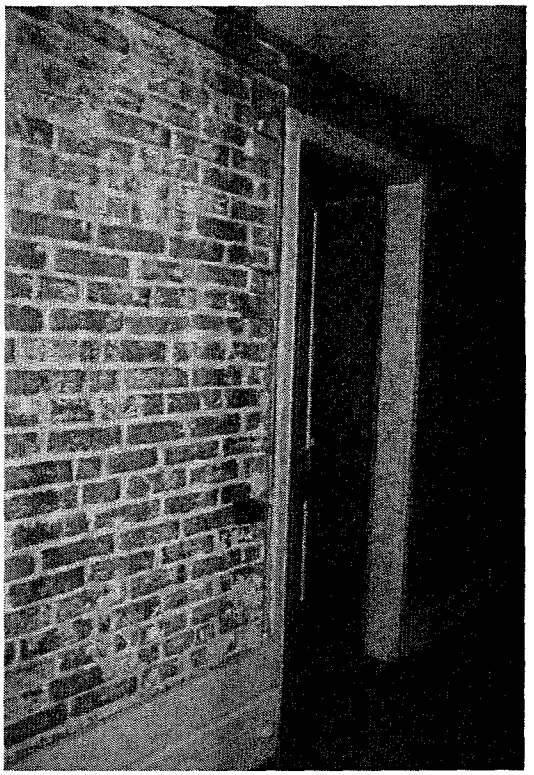

Photo AR-25; architrave p.c., architects 2/15/02

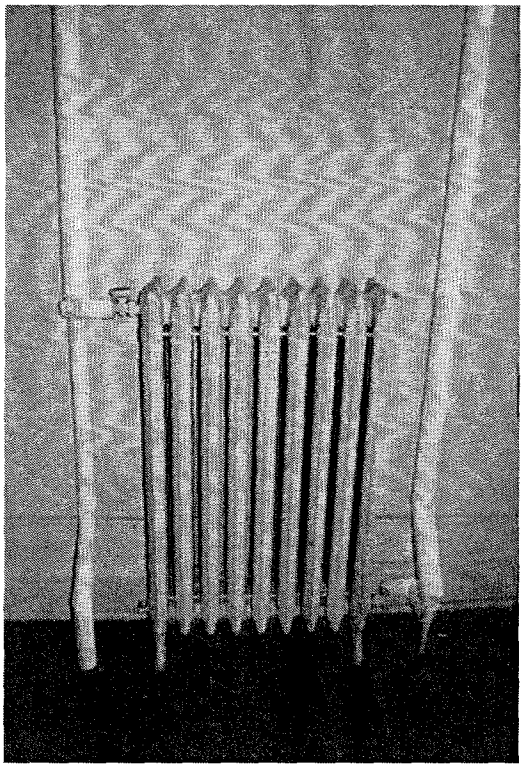

Photo AR-26; architrave p.c., architects 2/15/02

Photo AR-24:
Stairway within the former kitchen of the Rear Ell that was likely used by caregivers the night of Lincoln's assassination.

Photo AR-25:
Basement Hall within Main Block of House. Plaster has been removed to prevent the loosened material from failing during visitation hours. Cast iron baseboard heating unit is visible to left, designed to be discreet in restoration areas of the historic house.

Photo AR-26:
Hot water cast iron radiators (2 pipe) remain on upper floors.

porcelain sink, built-in wood shelves, and one window on the south wall. The wood trim and 6 paneled doors located on the interior walls within Room 13 (that date to 1959), were replications from elements of the original house.

Building Systems (Utilities) Description

Heating, Ventilation, and Air Conditioning Systems (HVAC)

None of the original heating elements to be expected in an 1849 building, such as active fireplaces and stoves, are present. The 1849 main house block has retained two chimneys both located on the south side of the building. The Annual Work report, filed by the Army Corp. of Engineers, which accounts the widespread repairs to the house by the government upon transfer from the Schades indicates that the chimneys were rebuilt then, due to a damaging gale on September 29, 1896. Later, the original brick chimneys were reportedly reduced in height from ten feet to two feet in January of 1959, yet photographs indicate that this work may have been performed earlier in the 20th century. The chimneys historically served two fireplaces located within the main rooms on the south side of each floor. The basement currently has evidence of a fireplace in the front room only. The back room on the basement level was converted to a boiler room as early as 1900, when steam heat was introduced to the house, and the fireplace located there assisted in meeting the system's requirements with venting pipes accessing the roof run through the flue. The fireplaces in the basement, on the third floor and the rear room fireplace on the second floor are visibly filled in, and the remaining retain original ornate iron fire screens that conceal the enclosure beyond. Historian Stanley McClure states that the marble mantels and fireplaces in both the front and rear parlors are the originals.[65] The metal screen in the front room of the second floor may also be original.

The documentation for early heating systems is sketchy. According to Annual Work Reports, by 1900, gas pipes were used to heat the house. This may mean that the fireplaces were burning gas instead of wood at that time. Since the reports also say that the house was furnished with steam heat by 1900 and that a coal shed was added at the same time, this probably means that a coal-fired boiler was used to produce the steam for the heating system. A "heating coil" was used in one of the bedrooms, and possibly other rooms, prior to 1907 when it was removed.[66] Early steam systems sometimes used coils or rows of pipe as the heating element in each room. In 1908, the steam-heating pipes were repaired,

[65] McClure, (1969), 77.

[66] NPS-NCR (FTNHS) Collection – Annual Report (Army Corps of Engineers).

so these pipes must have been installed prior to 1908.[67] Repairs were made to the boiler in 1909. The old boiler was replaced with a new steam boiler in 1922. A 66-gallon hot water tank with coal heater, complete with coil, was installed in 1933 for domestic service. The furnace was converted from coal to fuel oil in 1945. A new heating system, including heating baseboards replacing radiators within restoration areas, was installed at a cost of $5,066 in 1953.[68]

There are no fireplaces or flues evident today in the ell addition reconstructed in 1863, but there must have been stoves at some point when the lower room was used as a kitchen. The 1933 annual building report states that with the installation of the hot water tank and coal heater in 1933, the old range in the kitchen and the electric hot water heater in the bathroom were no longer needed. The portion of the rear ell built within the 1870s presently contains a chase wall and chimney that indicates a stove was located in the ground floor room (Room 13). The brick hearth was removed from this location in 1959 when it was converted to a rest room and the chase was claimed for plumbing purposes. No physical evidence remains of the hearth, because a concrete slab replaced the former floor during the rehabilitation. The construction of a fuel shed for coal in 1899-1900 at the rear of the property, adjoining the rear ell, illustrates that there was a need for coal for the building's stoves and fireplaces.

Cast iron upright radiators of Victorian styling (4 total) remain in place near the exterior walls of the second-floor front and rear rooms and the third-floor front and rear rooms (Photo AR-26). These fixtures can likely be dated to the late nineteenth century when the house was first converted to steam heat, since as early as 1908 steam pipes were being repaired. All upright radiators on the Basement and First Floor levels of the main house were removed in 1953, when baseboard units where discreetly installed within "restored" areas of the house open to the public (Photo AR-25). The same cast iron baseboard units were installed along various walls within the rear ell, due to the lack of active heating elements within this building addition.

The house and its furnishings have not had the benefit of a modern central cooling system, a situation that has posed a challenge to managing curatorial collections and to the comfort of those staff members working within and visiting the building. Window air conditioning units have been used sparingly on upper floors and in the rear ell, installed on rear windows not directly visible from the street or from within the restoration area of the house. Only one unit, at the top of the first floor stair landing, supplemented by floor fans, is used continuously to

[67] Ibid.

[68] NPS-NCR (FTNHS) Collection – Annual Report (NPS).

keep the restoration area cool during the summer months. The house museum is closed early on especially warm days, because this approach is ineffective in overcoming the continuous opening and closing of the front door by visitors.

Refer to Part 1E for a complete description and analysis of the existing heating, ventilation, and air conditioning systems.

Lighting and Electrical

Power service is not original to the building and installation dates of the various electrical devices and distribution systems could not be determined with certainty. At the time of its construction, most likely gas lighting and candles were used for illumination. Electrical service was introduced sometime after 1897 when the first practical incandescent light was developed. The first mention of electricity in the house within the Annual Reports is in 1906 with the installation of electric bells, as indicated in the chronology in Part 1B. Note that electricity was brought into the house after Lincoln's death and the period of significance for this historic resource. Therefore, in the interpreted portion of the house museum, electrical power outlets should be discreetly hidden and period lighting fixtures should appear to be gas fueled as in 1865. To meet this requirement, the scope of restoration of the house in 1978-80 included the addition of refurbished antique fixtures dating to the period of the original gas lighting fixtures used by the Petersens. Thus, the historically inappropriate 1890 light fixtures that hung in the parlors were replaced with a set of 1850 gasoliers and a pear-shaped single hanging fixture, also from the period, for the hallway.[69] Electricity has been carefully fed into these lights. Light levels are kept low for authenticity. The drop light with gas jet located in the Death Room was replicated. The appearance of this original fixture was copied from a sketch by Waud and a photograph by the Ulke brothers created immediately following Lincoln's death. (Reproductions of the gas light fixture, comprised of an S-shaped wall gaslight bracket topped with a paper shade, found in Waud's drawing were installed in the room where Lincoln died in 1979.)[70] Various modern lighting techniques such as spotlights and fluorescent fixtures can be found in non-restoration areas, including the basement, rear ell addition, and upper floors of the house. Some rooms on the third floor do not have light fixtures.

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[69] Gary Scott, "A Photograph and Artist's Renderings: Keys to the Restoration of a National Landmark," *Nineteenth Century* 6.3 (Autumn 1980): 61.

[70] NPS-NCR (FTNHS) Collection – Annual Report (NPS).

The electrical outlets (two-plug units) were installed about four inches above the baseboards in all rooms and the first floor hall. The outlets protrude from the wall and generally seem to be located on exterior walls. The wires are visible running within wiremold along the walls from the outlets; this is since the exterior walls are solid masonry, so the wires and outlets could not be hidden within the walls as is common practice today. No records of the installation date have been located. According to Annual Work Reports, in 1899-1900, the house's "gas pipes and fixtures [were] overhauled and put in good order."[71] An automatic fire-detecting and alarm system was installed in the house at a cost of $1,580 in 1937,[72] with alterations and additions in 1949, 1951 and 1978. The electrical meter was moved from the basement front hallway to the easement in 1959.

Refer to Parts 1E and 1F for a complete description and analysis of the existing electrical system and its components, including fire detection and security.

Plumbing

No information is available on the building's original plumbing. A well and outhouse were likely the extent of the original facilities within the rear yard, but we have not found any verification of this. A bathroom was added to the second floor in 1871-72. Historian George J. Olszewski based the 1871-72 date of the construction of the second floor bathroom from vouchers paid for work.[73] One of the vouchers is dated November 17, 1871, and lists plumbing work for $150 carried out by Tim O. Noonan.[74] According to Annual Work Reports, new plumbing was installed in the addition and the house during the 1899-1900 construction and renovation work.[75] The bathroom addition was demolished in 1959 to restore the house's exterior to its 1865 appearance. This bathroom was replaced with a small one, comprised of a sink and toilet, which was installed in the first floor of the rear ell addition in 1959 (Room 13). A porcelain janitor sink is located in the westernmost room on the first floor of the rear addition (Room 13).

Refer to Part 1E for a description and analysis of the existing plumbing system.

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[71] NPS-NCR (FTNHS) Collection – Annual Report (Army Corps of Engineers).

[72] NPS-NCR Collection – Ford's Theatre National Historic Site, Annual Work Report submitted by Public Buildings and Public Parks of the National Capital.

[73] Olszewski, 54.

[74] Ibid, 67.

[75] NPS-NCR (FTNHS) Collection – Annual Report (Army Corps of Engineers).

PART 1: DEVELOPMENTAL HISTORY

D. Architectural Inventory

D. Architectural Inventory (Character Defining Features, Spaces, Elements)

Key to Terms and Implications for Appropriate Management of Historic Fabric

Approaching preservation of an entire historic property to exacting "restoration" standards is a daunting and costly prospect for building managers. A recognized historic preservation practice is to "zone" the building and property according to the respective contribution to the resource's character and actual appearance at the time historic significance was established – in this case the night the Petersen's house became famous with President Lincoln's death in the small, rear bedroom.

***Restoration* as Level of Treatment:**

Restoration is undertaken to depict a property at a particular period of time in its history, while removing evidence of other periods.[76]

Restoration Zones of Petersen House

The following spaces of the house stood as direct witness to the tragic events through the evening prior to President Lincoln's death and are considered significant, or **contributing-primary**:

- Front Elevation facing Tenth Street, including curving Brownstone steps
- Rear Elevation of House (including Back Porch) and Rear Ell (1)
- First Floor level rooms of Main House, including Hall, Front and Rear Parlors
- First Floor level room of Rear Ell where Lincoln was placed – "Death Room"

Contributing-primary: These features, spaces and elements of the house are original to the period of significance (April 14-15, 1865). Within a restoration zone, these receive utmost priority, with protection of original historic fabric critical. Elements that are not original within a restoration zone and have been replicated to match the 1865 appearance due to damage or deterioration receive secondary priority, but many of these early replicated features have gained historic significance on their own merit, due to the early commemoration of this property. If there is evidence of missing features or elements within restoration zones, then reconstruction should be considered, only if sufficient physical or documentary evidence is available. Introduction of modern devises for fire suppression and security for instance should be discreetly located to minimize visual impact.

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[76] The Secretary of the Interior's Standards for the Treatment of Historic Properties, U. S. Department of the Interior, National Park Service, 1995.

Preservation as Level of Treatment:

Preservation focuses on the maintenance and repair of existing historic materials and retention of a property's form as it has evolved over time. This treatment includes protection and stabilization.[77]

Preservation Zones of Petersen House

The following elements of the house were present in April of 1865, but were not directly touched by the death scene. They are considered significant, but at a lower priority or **contributing-secondary**:

- Basement level rooms of Main House and Rear Ell (1), portion rebuilt 1863
- First Floor level room of Rear Ell (1) –directly behind "Death Room"
- Second Floor level rooms of Main House
- Third Floor level rooms of Main House
- Roof of Main House and Rear Ell
- Alley Easement to north.

Contributing-secondary: These features, spaces and elements of the house are original to the period of significance (April 14-15, 1865), and should be retained and protected. In order to maintain a restoration level treatment in adjoining spaces, some of these secondary, supporting areas have received minor alterations to meet management and code requirements or have been used for modernization of building systems. Within preservation zones, reconstruction of missing features or elements is not required.

Rehabilitation as Level of Treatment:

Rehabilitation acknowledges the need to alter or add to a historic property to meet continuing or changing uses while retaining the property's historic character.[78]

Rehabilitation Zones of Petersen House

The following elements of the site were not present in April of 1865 and are considered of no significance or **noncontributing**:

- Rear Ell (2) built during the 1870s containing one room on each of two floors at time of construction.
- Roofing material.
- Garden with brick garden wall/gate separating the garden from the alley.

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[77] Ibid.

[78] Ibid.

Noncontributing: These building elements were added after the time period of Lincoln's death, and if retained, are ideal locations to sensitively introduce adaptive use requirements (interior adaptation to modern needs only). Demolition may be considered by park managers, if this action is imperative to accurately interpret the period of significance, as determined by a General Management or Development Concept Plan.

This was recognized as early as 1959, when requirements to relocate a bathroom and modern plumbing were met within the post-1865 building. Other post-1865 additions that severely altered the historic configuration of the house from its 1865 appearance were demolished in 1959.

Other items that may be considered noncontributing are those building materials or features that have been replaced over time, but are differing materials that do not match the original or 1865 appearance or condition.

Physical Condition of Feature, Space or Element (as noted in Inventory)

Action if in Good condition:

- Continue routine maintenance and periodic inspections to determine special treatment requirements, if any.
- Continue to protect and preserve historic and/or architectural integrity of feature, space or element, within framework of Preservation Treatment Zone (Restoration, Preservation or Rehabilitation).

Action if in Fair condition:

- Make necessary repairs and/or restore to good condition, as soon as funds are available.
- Begin routine maintenance and periodic inspections to determine special treatment requirements in order to maintain condition at higher level.
- Readjust priorities to protect and preserve historic and/or architectural integrity of feature, space or element, within framework of Preservation Treatment Zone (Restoration, Preservation or Rehabilitation).

Action if in Poor condition:

- Make necessary repairs and/or restore to good condition, immediately – risk to historic fabric is not acceptable preservation practice.
- Begin routine maintenance and periodic inspections to determine special treatment requirements in order to maintain condition at higher level.
- Readjust priorities to protect and preserve historic and/or architectural integrity of feature, space or element, within framework of Preservation Treatment Zone (Restoration, Preservation or Rehabilitation).

Inventory of Exterior Character Defining Features, Spaces and Elements

East Elevation – Front Facing Tenth Street, S.E.				
Feature (Designation #- re: drawings)	**Dates to:**	**Original or Replica/Phy. Condition**	**Contributing-primary/secondary or Noncontributing**	**Comments/**
Exterior door (6 panel) **(EE1)**	1849	Appears **Original/ Good condition**	**Contributing-primary**	Main entrance door of wood-6 panels. Varnished in 1903.
Door enframement w/dentil trim **(EE2)**	1849	Appears **Original,** Restored in 1959. **Good condition**	**Contributing-primary**	Simple, flat pilasters surround main door and transom above, with architrave capped by a hood. Constructed out of wood.
Basement door (4 panel) **(EE3)**	1849	1959 **Replica/ Good condition**	**Contributing-primary**	Original door first replaced in 1916. New white pine door installed during 1959 rehab.
Transom above door **(EE4)**	1849	Appears **Original/ Good condition**	**Contributing-primary**	Street address painted on single light.
Steps to Basement-Brownstone **(EE5)**	1849	Appears **Original/ Good condition**	**Contributing-primary**	1959 Rehab Plans indicate that the "existing stairs and floor shall remain."
Brownstone steps, platform, columns, and granite base **(EE6)**	1849	Original damaged in 1928, replaced w/1959 **Replica/ Fair condition**	**Contributing-primary**	Repaired in 1928 when a sightseeing bus ran into steps and columns. Brownstone platform and steps were corroding from rusting iron rails, and was rebuilt exactly as before.
Cast-iron railings **(EE7)**	1849	**Original,** Restored in 1959. **Fair condition**	**Contributing-primary**	Removed and repaired in 1959 and reinstalled with new brownstone stairs (Source: Annual Reports, NPS-NCR Collection).
Wood cornice/built-in gutter system and copper collector **(EE8)**	1849	Appears **Original/ Good condition**	**Contributing-primary**	Integral gutter system feeds to collector (reconst. 1959).
Commemorative plaque **(EE9):** 1st-marble 1883 2nd-bronze 1923	1883	**1923 Bronze plaque/ Good condition**	**Contributing-primary** (Feature post-1865 but significant part of commemoration)	Circa 1883 marble plaque replaced in new location between Basement and First Flr.

East Elevation, cont.				
Feature (Designation #- re: drawings)	**Dates to:**	**Original or Replica/Phy Condition**	**Contributing- primary/secondary or Noncontributing**	**Comments**
Fenestration pattern **(EE10)**	1849	**Original/ Condition – N/A**	**Contributing- primary**	Three bays - typical of Greek Revival row houses.
Sash, sills, and lintels- simple wood hoods **(EE11)**	1849	**Original/ Sash & sills- Poor condition**	**Contributing- primary**	The sash and sills are wood, and the lintels are wood covered with copper sheeting. (Source: Chase).
Louvered shutters- First, Second and Third Floors. **(EE12)**	1849	**Replica** - late 19th c. original design was replicated in 1959. **Good cond.**	**Contributing- primary**	Louvered shutters with a center rail were installed between 1883 and 1894. Pre-1883 shutters and replacements have no center rail.
Paneled shutters- Basement **(EE13)**	1849	Appear to be **Original/ Fair cond.**	**Contributing- Primary**	Shutters at middle bay are missing.
Red brick running bond façade **(EE14)**	1849	**Original/ Good condition**	**Contributing-primary**	In 1905 (and possibly before) and 1911 the façade was painted red with penciled mortar joints. Sandblasted, waterproofed and repointed in 1959.
Roof (Main House Block) **(EE15)**	1849- slate 1914- metal 1995- metal replace d	20th c. replace- ments do not match original material. **Good cond.**	**Noncontributing**	Original slate roof replaced with a painted tin roof in 1914 (1959 drawings show copper?). Replaced in 1994 with batten seam metal.
Red Brick Chimneys **(EE16)**	1849	**Original but altered/ Fair cond.**	**Contributing- secondary**	East chimney reduced in height from 10 feet to 2 feet in 1959 and capped.
Cast-iron foot scraper and granite base **(EE17)**	1849, Restored in 1959	**Original granite base;** foot scraper is missing. **Granite- Good cond.**	**Contributing-primary,** but part of feature is **missing.**	Portion of footscraper believed to be original to house, added to Lincoln Museum's collection in 1943-installed (w/missing portion refabricated) on original granite block in 1959-in 1968 HABS photo.

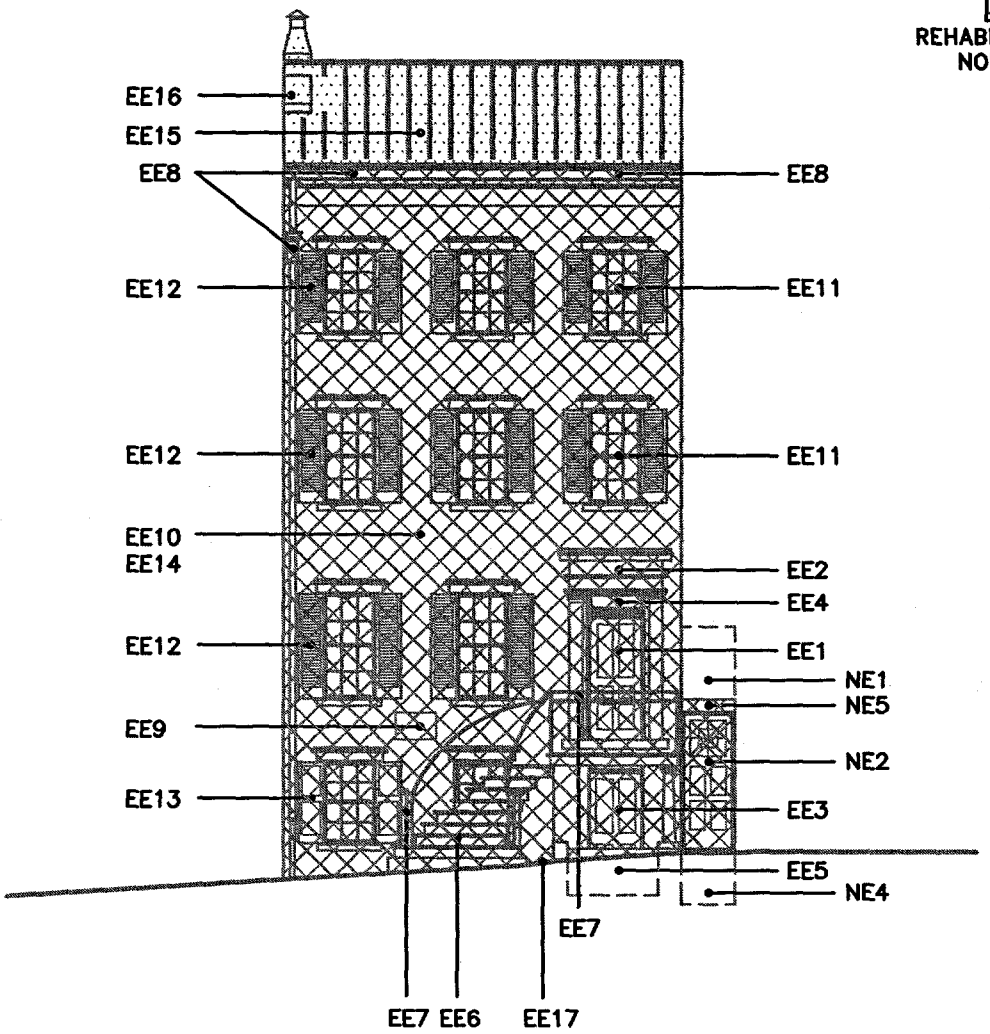
North Elevation				
Feature (Designation #- re: drawings)	**Dates to:**	**Original or Replica/Phy Condition**	**Contributing- primary/secondary or Noncontributing**	**Comments**
Former alley/Easement passageway **(NE1)**	By 1865, In 1896- perpet. ease- ment deeded	**Original** - space enclosed according to 1865 engravings. **Good condition**	**Contributing- secondary**	Originally was an alley providing access to rear yard of house-possibly enclosed when row house to north was built prior to 1865. Walls cleaned in 1959.
Easement door **(NE2)**	By 1865- earliest house engrav.	Replicated in 1959, Replaced early 1990s. **Good condition**	**Contributing- secondary**	Door was rebuilt using original material in 1959. Current door appears to be newer reconstruction.
Red brick common bond façade at easement interior **(NE3)**	1849	**Original/ Good condition**	**Contributing- secondary**	Protected party wall with adjacent property.
Stone steps at east end of easement **(NE4)**	By 1865	Appears **Original/ Good condition**	**Contributing- secondary**	
Stone lintel above easement door at Tenth St. facade **(NE5)**	By 1865	Appears **Original/ Good condition**	**Contributing- primary**	

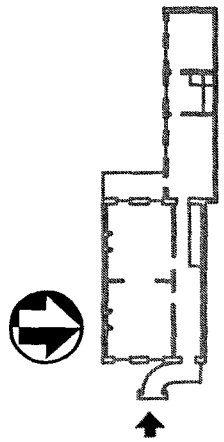
KEY TO TREATMENT ZONES:

RESTORATION ZONE
CONTRIBUTING–PRIMARY

PRESERVATION ZONE
CONTRIBUTING–SECONDARY

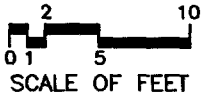
REHABILITATION ZONE
NONCONTRIBUTING





INVENTORY: ARCHITECTURE

PETERSEN HOUSE–HWLD
EAST ELEVATION–FRONT AT TENTH STREET



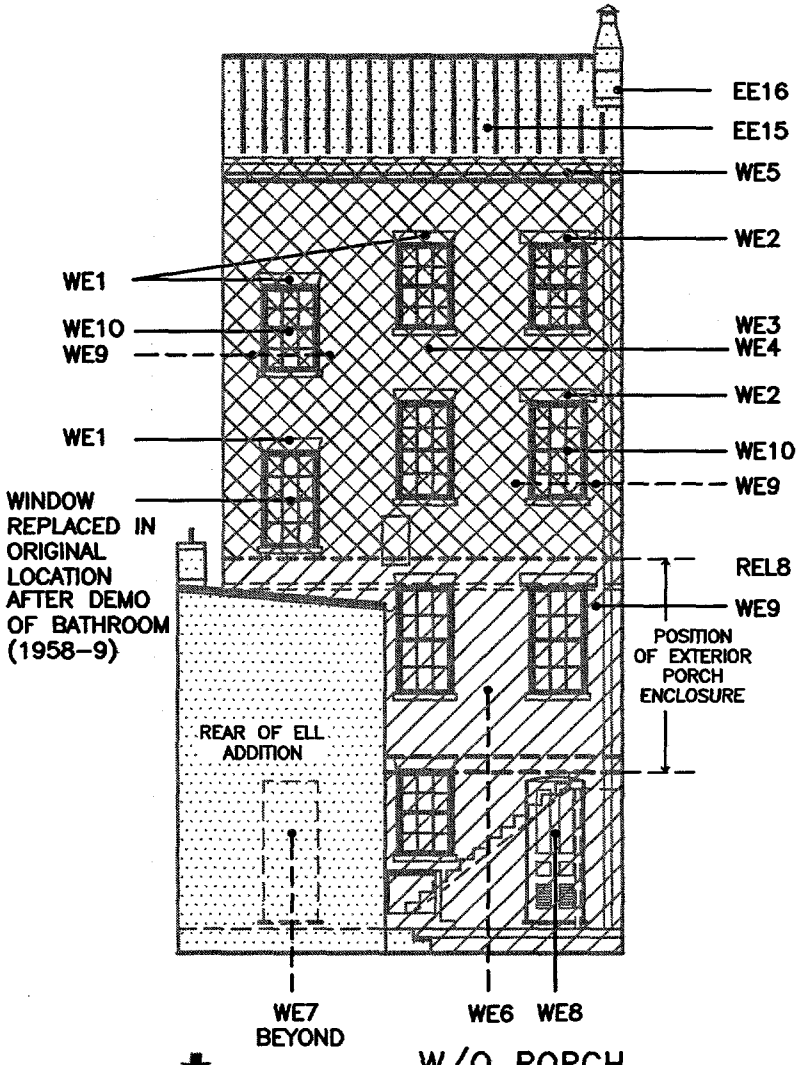
West Elevation – Facing Rear Yard/Garden				
Feature (Designation #- re: drawings)	**Dates to:**	**Original or Replica/Phy Condition**	**Contributing-primary/secondary or Noncontributing**	**Comments**
Jack arch brick lintels **(WE1)**	1849	Appears **Original/ Good condition**	**Contributing-primary**	Replaced w/conc. lintels at 3 windows in south bay
Concrete pre-cast lintels on south bay **(WE2)**	By 1958	Replaced 1849 lintels/ **Good cond.**	**Noncontributing**	Brick lintels must have failed-not replaced w/in-kind material.
Fenestration pattern **(WE3)**	1849	**Original/ Condition – N/A**	**Contributing-primary**	Window removed for bathroom was replaced in-kind in orig. position.
Red brick common bond façade **(WE4)**	1849	**Original** **Fair condition**	**Contributing-primary**	In 1905 and 1911 the façade was painted red with penciled mortar joints. Sandblasted, waterproofed and repointed in 1959.
Stepped brick cornice **(WE5)**	1849	**Original / Good condition**	**Contributing-primary**	Very simple. Exposed gutter on rear.
Back porch **(WE6)**	By 1865	May be original feature, but exist. porch (altered) dates to 1959. **Good condition**	**Contributing-secondary**	Porch was in place by 1865. Upper level was enclosed with windows/ wood paneling in 1908. Iron covering was removed from the roof in 1911. Windows, paneling, and floor replaced, and stairs to yard - added in 1959.
Door to Hall (Basement Room 9) (4 panel w/glazing above)**(WE7)**	1959?	**Replica** (altered) **Fair condition**	**Contributing-secondary**	Appears to be a Replacement, but altered version of orig.
Door to Boiler Room (Basement Room 11) (6 panel) **(WE8)**	1849	Appears **Original** - but minor alterations. **Fair cond.**	**Contributing-primary**	Paneled louvers have been added within 2 lower panels. Glazing above. Hardware appears original.
Window shutters assumed louvered **(WE9)**	1849-absent by 1959	N/A	**Missing element**	Shutter hinge hardware remains on original window frames.
Window wood 6/6 sash/wood sills **(WE10)**	1849	Appear **Original/ Poor cond.**	**Contributing-primary**	Wood (Source: Chase)

KEY TO TREATMENT ZONES:

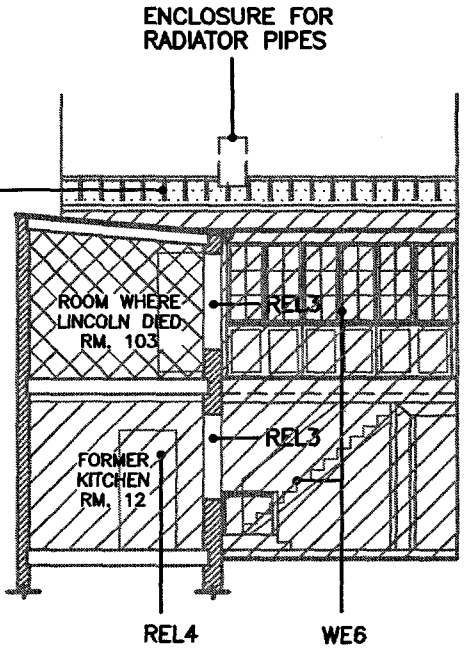
RESTORATION ZONE
CONTRIBUTING–PRIMARY

PRESERVATION ZONE
CONTRIBUTING–SECONDARY

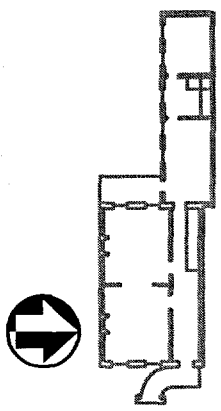
REHABILITATION ZONE
NONCONTRIBUTING



W/O PORCH

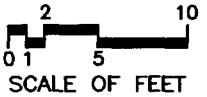


W/PORCH



INVENTORY: ARCHITECTURE

PETERSEN HOUSE–HWLD
WEST ELEVATION–REAR AT YARD/GARDEN



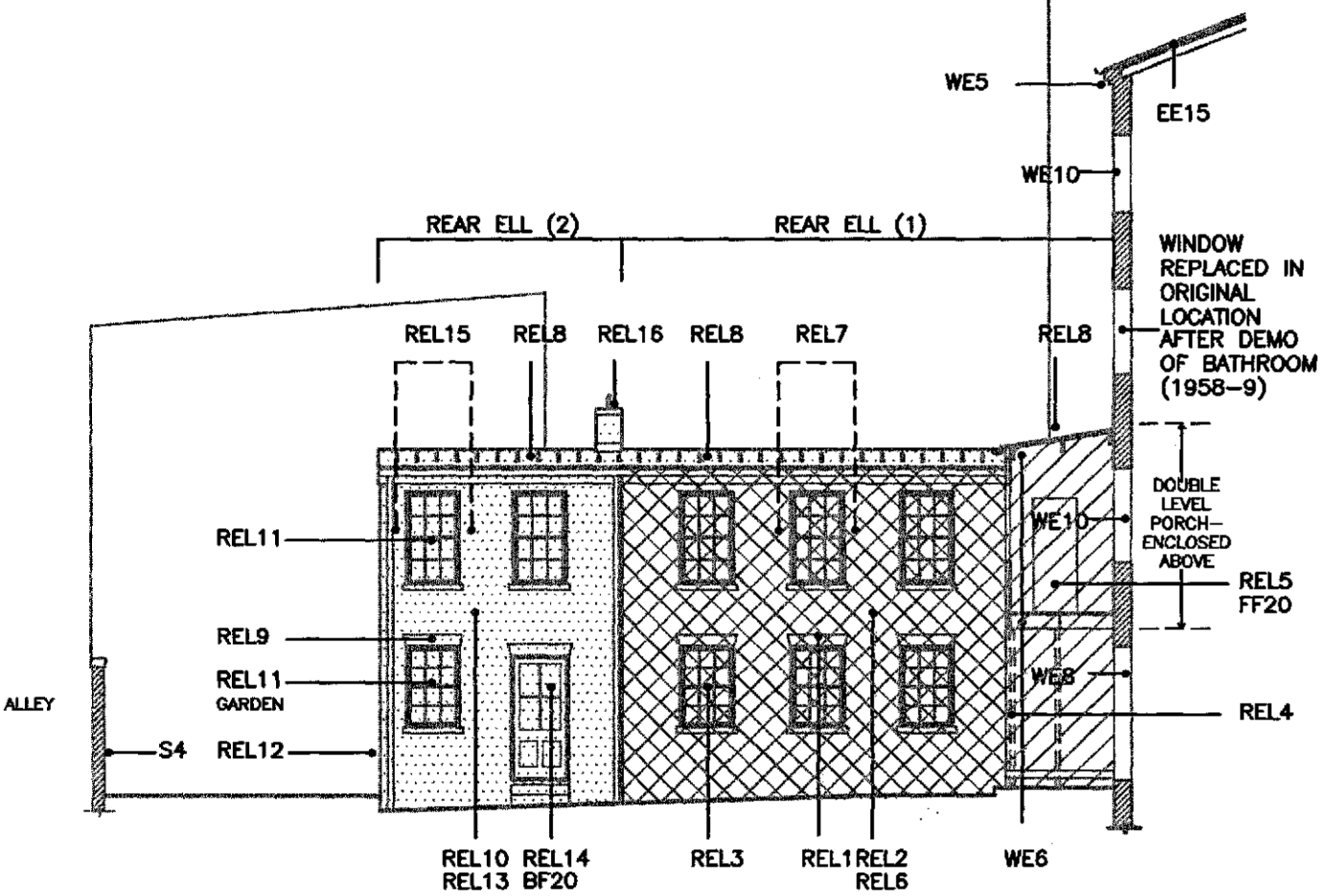
South Elevation - Rear Ell Addition (1) Facing Yard/Garden				
Feature (Designation #- re: drawings)	**Dates to:**	**Original or Replica (Condition)**	**Contributing- primary/secondary or Noncontributing**	**Comments**
Jack arch brick lintels (at Basement Level only) **(REL1)**	1863 (east 3 bays)	Appear **Original / Fair cond.**	**Contributing-primary** Feature dates to 1863 reconstruction.	
Fenestration pattern **(REL2)**	1863 (east 3 bays)	**Original/ Condition – N/A**	**Contributing-primary** Feature dates to 1863 reconstruction.	
Window 6/6 sash and wood sills **(REL3)**	1863 (east 3 bays)	**Original/ Poor condition**	**Contributing-primary** Feature dates to 1863 reconstruction.	Wood. (Source: Chase).
Door on east elevation (4 panel) **(REL4)**	1863	Appears **Original/ Fair condition**	**Contributing-primary**	Wood, ptd.
Door on south elevation (4 panel) at first floor/porch **(REL5)**	By 1865	**Replica** but altered in 1959. **Good condition**	**Contributing-secondary**	Wood, ptd. Door to porch is copy of original (installed by 1871). Hung from opposite side of door casing for structural reasons.
Red brick common bond façade **(REL6)**	1863 (east 3 bays)	**Original** **Fair to poor condition**	**Contributing-primary** (feature dates to 1865)	Unknown if this wall was sandblasted, waterproofed and repointed in 1959.
Window shutters assumed louvered, but no documentation **(REL7)**	1863-absent by 1959	N/A	**Missing element**	Shutter hinge hardware remains on original window frames.
Metal roof **(REL8)**	1994-1995	Replace-ment material in-kind for tin (post-1865). **Good condition**	**Noncontributing**	Batten seam metal-modern replaced former tin roofing-covers sections 1 and 2 of Ell and Porch.
Garden-brick wall **(S4)** - see also chart for Site, pg. 28	1899 - altered 1959/ rebuilt 1994	Feature adapted from stor. bldg. wall/ rebuilt. **Good condition**	**Noncontributing** No documentation indicates a brick wall in this location prior to the 1899 addition of coalshed. An 1888 Sanborn map shows a frame structure.	Height has been reduced from two-stories to 8 feet in 1959 w/demo of coalshed. Patched in 1959. Reconstructed in 1994 masonry workshop.

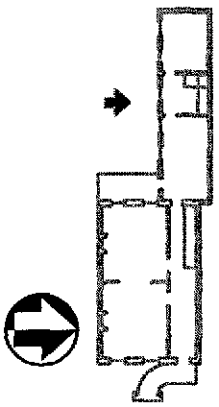
KEY TO TREATMENT ZONES:

RESTORATION ZONE
CONTRIBUTING–PRIMARY

PRESERVATION ZONE
CONTRIBUTING–SECONDARY

REHABILITATION ZONE
NONCONTRIBUTING





INVENTORY: ARCHITECTURE

PETERSEN HOUSE–HWLD

SOUTH ELEVATION–REAR ELL AT YARD/GARDEN

0 1 2 5 10
SCALE OF FEET

South Elevation - Rear Ell Addition (2) Facing Yard/Garden				
Feature (Designation #- re: drawings)	**Dates to:**	**Original or Replica (Condition)**	**Contributing- primary/secondary or Noncontributing**	**Comments**
Jack arch brick lintels **(REL9)**	1870s (west 2 bays)	Original to Addition/ **Fair cond.**	**Noncontributing** - feature post 1865.	Addition dates to 1870s – post 1865.
Fenestration pattern **(REL10)**	1870s (west 2 bays)	Original to Addition	**Noncontributing** - feature post 1865.	
Window 6/6 sash and wood sills **(REL11)**	1870s (west 2 bays)	Appears Original to Addition. **Poor cond.**	**Noncontributing** - feature post 1865.	Wood. (Source: Chase).
West elevation (brick masonry) **(REL12)**	1870s wall uncov-ered in 1959.	Appears Original to Addition- cut door openings filled in 1959. **Poor condition**	**Noncontributing** - feature post 1865.	West exterior wall of 1870s addition was enclosed with plaster when 1899 addition was constructed. 1959 renovation demolished coalshed leaving wall exposed. 1899 openings were patched.
Red brick common bond façade **(REL13)**	1870s (west 2 bays)	Original to Addition/ **Fair condition**	**Noncontributing** - feature post 1865.	Unknown if this wall was sandblasted. Waterproofed and repointed in 1959.
Door on south elevation **(REL14)**	1870s	Appears Original to Addition/ **Poor cond.**	**Noncontributing** - feature post 1865.	Wood with four lights.
Window shutters assumed louvered **(REL15)**	1870s-absent by 1959	N/A	**Missing element**	Shutter hinge hardware remains on original window frames.
Chimney (brick masonry-capped with conc. In 1959.) **(REL16)**	1870s	Appears Original to Addition, but altered. **Good condition**	**Noncontributing** - feature post 1865.	Potentially first used as flue for stove (cooking and/or heating). Capped with concrete – now used as vent chase for bathroom.

KEY TO TREATMENT ZONES:

RESTORATION ZONE
CONTRIBUTING–PRIMARY

PRESERVATION ZONE
CONTRIBUTING–SECONDARY

REHABILITATION ZONE
NONCONTRIBUTING

RIDGE 36'–9"

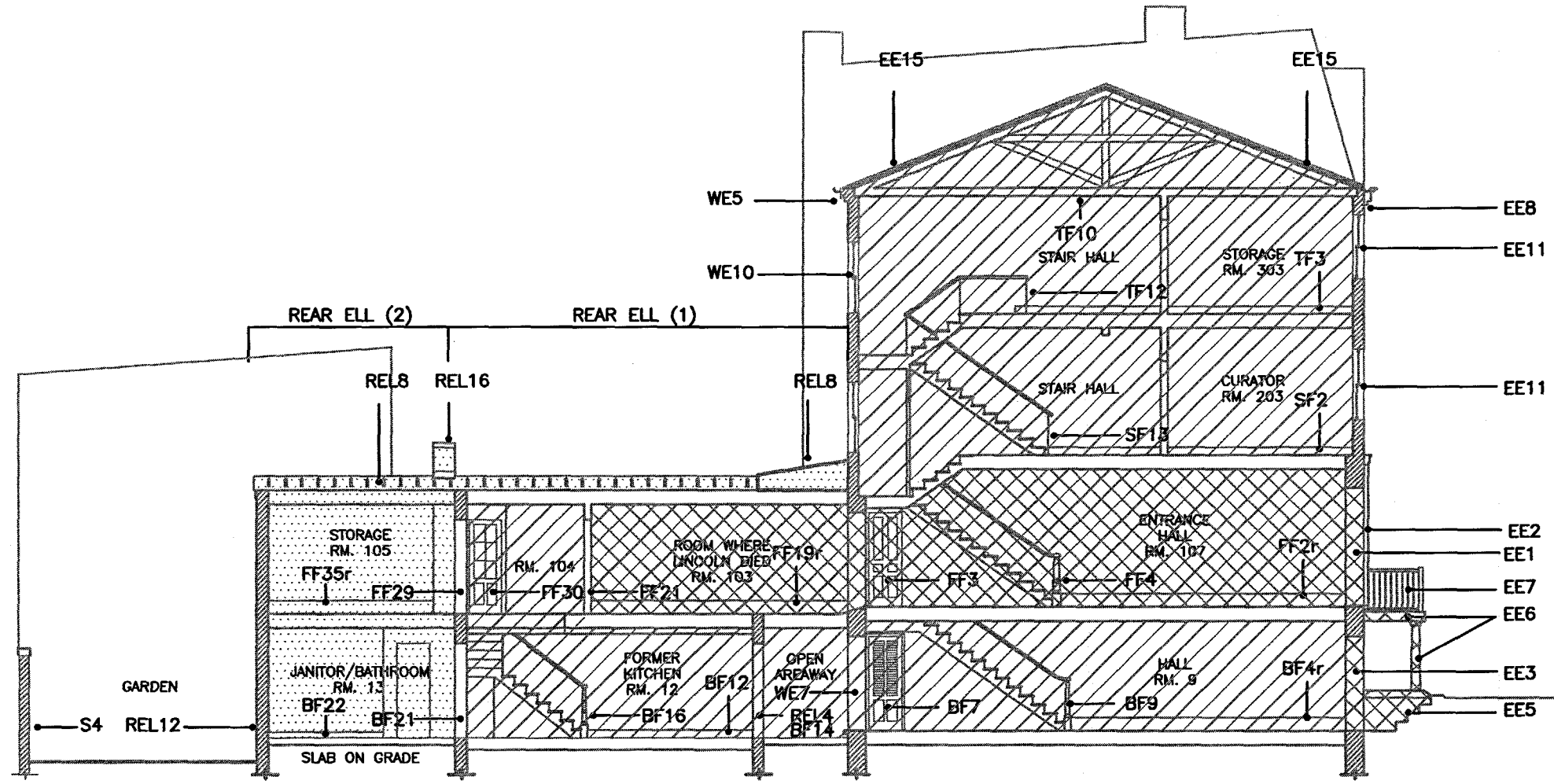
ATTIC 29'–7"

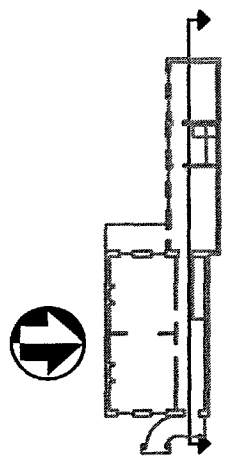
THIRD FLOOR 20'–9"

SECOND FLOOR 10'–9"

FIRST FLOOR 0'–0"

BASEMENT –8'–9"

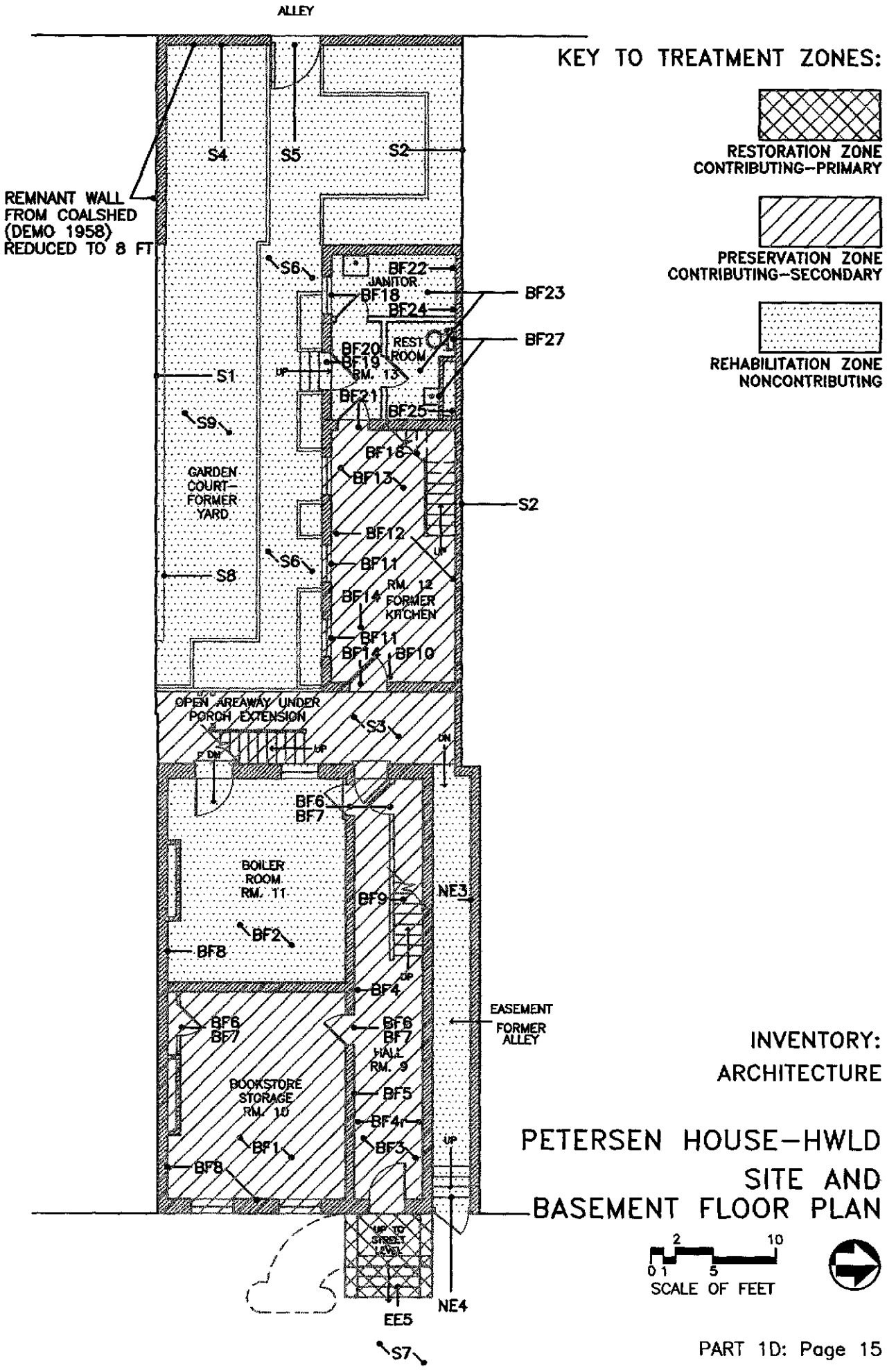




INVENTORY: ARCHITECTURE

PETERSEN HOUSE–HWLD: LONGITUDINAL BUILDING SECTION

2 10
0 1 5
SCALE OF FEET


ALLEY
KEY TO TREATMENT ZONES:
RESTORATION ZONE
CONTRIBUTING–PRIMARY
PRESERVATION ZONE
CONTRIBUTING–SECONDARY
REHABILITATION ZONE
NONCONTRIBUTING
REMNANT WALL FROM COALSHED (DEMO 1958) REDUCED TO 8 FT
S4
S5
S2
S6
BF22
JANITOR
BF18
BF23
BF24
BF27
REST ROOM
BF20
BF19
RM. 13
UP
S1
BF21
BF25
S9
BF16
BF13
GARDEN COURT– FORMER YARD
S2
BF12
S6
BF11
S8
RM. 12 FORMER KITCHEN
BF14
BF11
BF14
BF10
OPEN AREAWAY UNDER PORCH EXTENSION
S3
DN
UP
BF6
BF7
BOILER ROOM RM. 11
BF9
NE3
BF2
BF8
UP
BF4
EASEMENT FORMER ALLEY
BF6
BF7
BF6
BF7
HALL RM. 9
BOOKSTORE STORAGE RM. 10
BF5
BF4
BF1
BF3
UP
BF8
UP TO STREET LEVEL
NE4
EE5
S7
INVENTORY:
ARCHITECTURE
PETERSEN HOUSE–HWLD
SITE AND
BASEMENT FLOOR PLAN
2
10
0 1
5
SCALE OF FEET

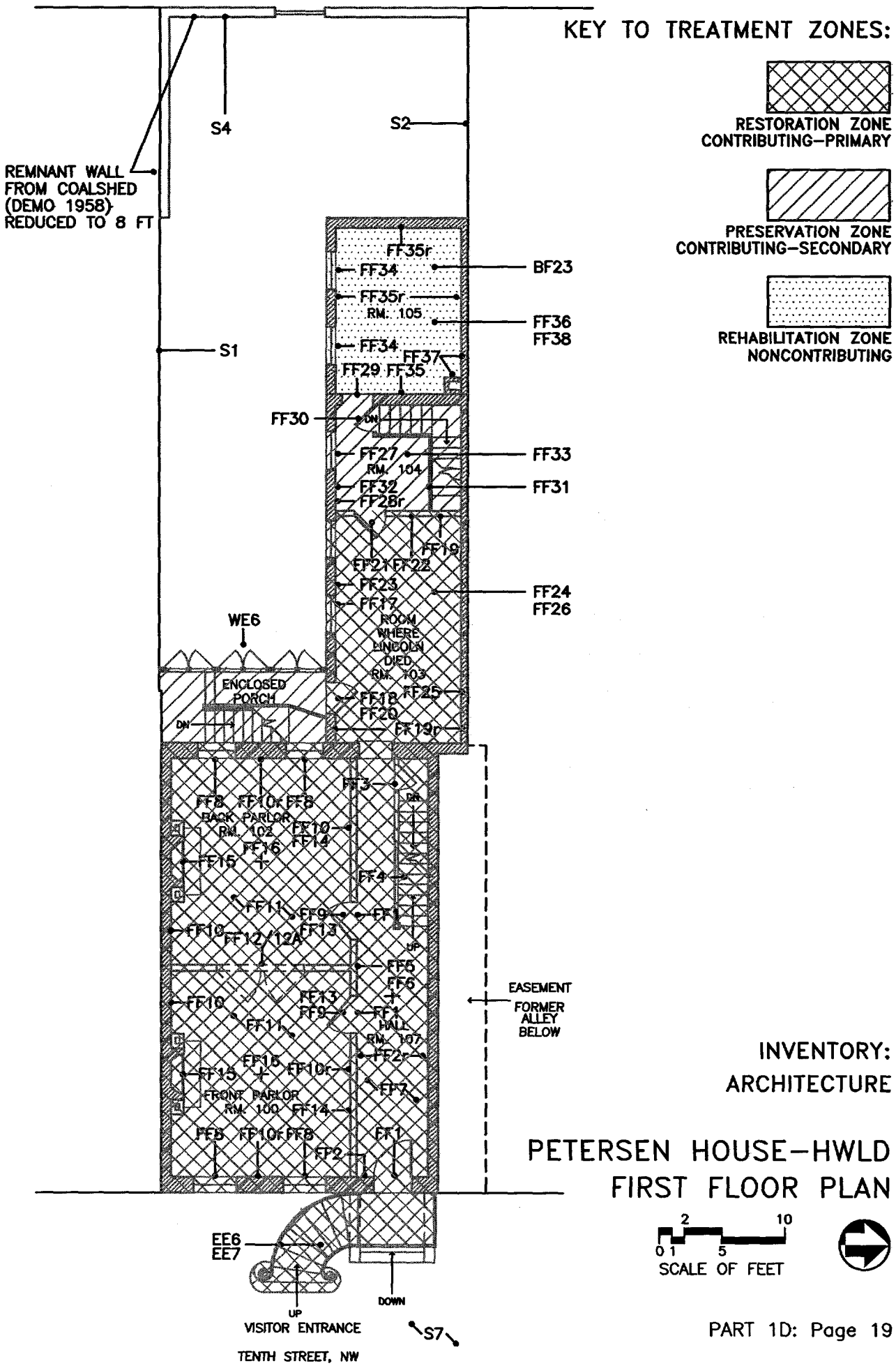
Inventory of Interior Character Defining Features, Spaces and Elements

Basement Floor-Main House Block				
Feature (Designation #- re: drawings)	**Dates to:**	***Original or Replica/Phy Condition***	**Contributing-primary/secondary or Noncontributing**	**Comments**
Floorboards in front room (Room 10) (ptd. pine-narrow) **(BF1)**	1849	Appear **Original** **Fair condition**	**Contributing-secondary**	Painted dark brown. Some boards appear to be replaced along south wall (perhaps at the location of a stove or fireplace or for access to crawl space).
Concrete floor in back room – Boiler Rm. (Room 11) **(BF2)**	By 1908?	Replace-ment (not in-kind) **Fair condition**	**Noncontributing**	Wood floor removed and crawl space excavated for slab-creating step down. Boiler room referred to as early as 1908. Concrete parging at wall base contributes to rising damp.
Floorboards in Hall (std. pine) (Room 9) **(BF3)** Note-Hall became visitor exitway in 1959 – receives more traffic.	?	Replace-ment (not in-kind) **Fair condition**	**Noncontributing**	Are wider than others in house. Are placed perpendicular to other boards due to joist direction. Rubber floor matting added to floor in 1959.
Baseboards in portions of Hall (ptd. wood) **(BF4)** or **(BF4r)**	1849 radia-tors: 1953	Appear **Original/ Fair condition**	**Contributing-secondary**	Only some baseboards remain since most have been replaced with cast iron baseboard radiators.
Exposed brick interior wall in Hall (Room 9) **(BF5)**	1849	Original bricks are exposed. **Poor cond.**	**Noncontributing** - wall intended to be finished	Plaster failed and was removed for safety. Investigation required before repair.
Door surrounds **(BF6)**	1849	Appear **Original/ Fair cond.**	**Contributing-secondary**	
Interior Doors (front room, front room closet, back room, closet under stairs) (4 panels)**(BF7)**	1849	All appear to be **Original**	**Contributing-secondary**	Repaired in 1945. Door from Hall to Room 11 is metal on boiler room side. Door to closet under stairs is louvered. (Fair condition)
Plaster walls on masonry/ All plaster surfaces at ceilings tested-now on metal lath. **(BF8)**	1906, 1959	Ceilings replaced with metal lath (former wood lath removed). **Fair cond.**	**Contributing-secondary**	Removed from portions of the front room in 1959. Plaster in Room 11 repaired and pointed up in 1906, and replastered in 1959.

Newel post, stairs, balustrade, and wood paneling under stairs **(BF9)**	1849	Appear **Original/ Good condition**	**Contributing-secondary**	Repaired and painted in 1943-44. Stairs not used by visitors.

Basement Floor (Ground Level) Rear Ell Addition (1) - Room 12 (Former Kitchen)				
Feature (Designation #- re: drawings)	**Dates to:**	**Original or Replica/Phy Condition**	**Contributing-primary/secondary or Noncontributing**	**Comments**
Door surround at areaway to house **(BF10)**	1863	Replace-ment –not in kind	**Noncontributing**	Standard millwork trim, not painted
Window surrounds **(BF11)**	1863	Appear **Original/ Fair cond.- interior only**	**Contributing-secondary**	
Baseboards (wood-ptd.) **(BF12)**	1863	**Original** but mult. floor replacement/ **Poor cond.**	**Contributing-secondary**	Peeling paint.
Pine Floorboards – random width. This kitchen had herringbone brick floor at one time-most likely before fire. This is documented in archaeological report, 1991. **(BF13)**	Unknown when wood first installed, but prior to 1906 when first replaced.	Replaced in 1906 and 1986 due to deterioration of sleepers and boards. **Good condition**	**Noncontributing**	Wood, formerly laid on sleepers – multiple termite infestations. Painted dark brown. New floor laid in 1906 (Annual Report). Repaired, stained and waxed in 1959. Replaced without use of sleepers on pressure treated joists after excavation/ventilation of crawl space.
Door to areaway **(BF14)**	1863	Appears **Original/ Fair cond.**	**Contributing-primary**	4 panel, wood-ptd.
Plaster walls **(BF15)** Original plaster clg. is concealed.	1863	**Original** but repaired. **Poor cond.**	**Contributing-secondary**	Peeling paint-evidence of water damage
Newel post, stairs, balustrade **(BF16)**	1863	**Original/ Fair cond.**	**Contributing-secondary**	
Pressed-tin ceiling and cornice – suspended below plaster **(BF17)**	post-1865 most likely	New feature – installed over plaster. **Poor cond.- peeling paint**	**Contributing - secondary**, due to time material has been in place.	Wallpaper discovered beneath tin cornice. Tin cornice and molding are not original, but are quite old.

Basement Floor (Ground Level) Rear Ell Addition (2) – Room 13 (Restroom and Janitor)				
Feature (Designation #- re: drawings)	**Dates to:**	**Original or Replica/Phy. Condition**	**Contributing- primary/secondary or Noncontributing**	**Comments**
Window surround **(BF18)**	1870s	Original to Addition, post-1865. **Fair cond.**	**Noncontributing**	Ornate profile design sets apart from Rear Ell (1).
Door surrounds **(BF19)**	1870s	Original to Addition, post-1865. **Fair condition**	**Noncontributing**	Ornate profile design sets apart from Rear Ell (1). Doorway leading to Room 12 was cut in exterior mas. wall when 1870s addition was built.
Exterior door **(BF20)**	1870s	Original to Addition, post-1865. **Poor cond.**	**Noncontributing**	Large glass panel above w/4 lights, 2 panels below. Wood-ptd.
Door to Room 12 **(BF21)**	1870s	? **Fair cond.**	**Noncontributing**	Wood-ptd.
Baseboards (exterior walls only) **(BF22)**	1870s	Original to Addition, post-1865. **Poor cond.**	**Noncontributing**	Only on exterior walls.
Floor – Vinyl Tile Squares on mastic over Concrete Slab **(BF23)**	1959	Replace-ment – not in kind. **Fair condition**	**Noncontributing**	Concrete slab installed in 1959 conversion of space to restroom/janitor closet. Slab may be creating rising damp at mas. wall.
Plaster Walls on Masonry (exterior walls only) **(BF24)**	1870s	Original to Addition, post-1865. **Poor condition**	**Noncontributing**	Interior walls/doors new to 1959 rehabilitation. Rising Damp created by slab-plaster exhibits advanced efflorescense.
Chase Wall (now in Restroom – vent for plumbing) **(BF25)**	1870s	Original to Addition, post-1865. **Poor condition**	**Noncontributing**	1959 rehab. plans indicate that a brick hearth was once located at the base of the chase –indicates that this was the location of a stove – possibly a later kitchen. Rising Damp evident, requires investigation.
Radiator-wall hung **(BF26)**	?	? **/Good condition**	**Noncontributing**	Distinctive design-early.
Plumbing Fixtures sink, toilet, slop sink **(BF27)**	1959	New, basic modern/ **Fair cond.**	**Noncontributing**	Janitor sink replaced earlier sink in 1959-may have been kitchen sink.


KEY TO TREATMENT ZONES:
RESTORATION ZONE
CONTRIBUTING–PRIMARY
PRESERVATION ZONE
CONTRIBUTING–SECONDARY
REHABILITATION ZONE
NONCONTRIBUTING
REMNANT WALL FROM COALSHED (DEMO 1958) REDUCED TO 8 FT
S4
S2
S1
BF23
FF36
FF38
FF33
FF31
FF24
FF26
WE6
ENCLOSED PORCH
ROOM WHERE LINCOLN DIED RM. 103
BACK PARLOR RM. 102
FRONT PARLOR RM. 100
HALL RM. 107
RM. 105
RM. 104
EASEMENT FORMER ALLEY BELOW
EE6
EE7
UP
VISITOR ENTRANCE
TENTH STREET, NW
DOWN
S7
INVENTORY:
ARCHITECTURE
PETERSEN HOUSE–HWLD
FIRST FLOOR PLAN
0 1 2 5 10
SCALE OF FEET

First Floor, Hall (Room 107)				
Feature (Designation #- re: drawings)	**Dates to:**	**Original or Replica/Phy Condition**	**Contributing-primary/secondary or Noncontributing**	**Comments**
Door surrounds **(FF1)**	1849	Appear **Original/ Good condition**	**Contributing-primary**	Dentiled wood surrounds, ptd. (around doors to front and rear parlors, and main entrance).
Baseboards (wood-ptd.) **(FF2)** or **(FF2r)**	1849 radia-tors: 1953	Appear **Original/ Good condition**	**Contributing-primary**	Half of baseboards have been replaced with cast iron baseboard radiators.
Door to basement **(FF3)**	1849	Appears **Original/**	**Contributing-primary**	Six-panels, wood-ptd.
Newel post, stairs, balustrade, and wood paneling under stairs **(FF4)**	1849	Appear **Original/ Good condition**	**Contributing-primary**	Repaired and painted in 1943-44. Stairs covered with carpet runner. Stairs not used by visitors.
Plaster walls **(FF5)**	1849	Most are **Original**-on wood lath. **Good cond.**	**Contributing-primary**	Plaster was patched in the first floor Hall using metal lath as the substrate in 1959.
Pear-shaped single hanging fixture **(FF6)**	mid-1800s	Replaced 1890 fixture. **Good condition**	**Contributing-secondary**	Antique period replacement of original fixture (installed in 1979).
Floorboards under carpeting (random width pine) **(FF7)**	1849	Appear **Original/ Good cond.-** protected from traffic)	**Contributing-primary**	Repaired, stained, waxed, and carpeted in 1959.

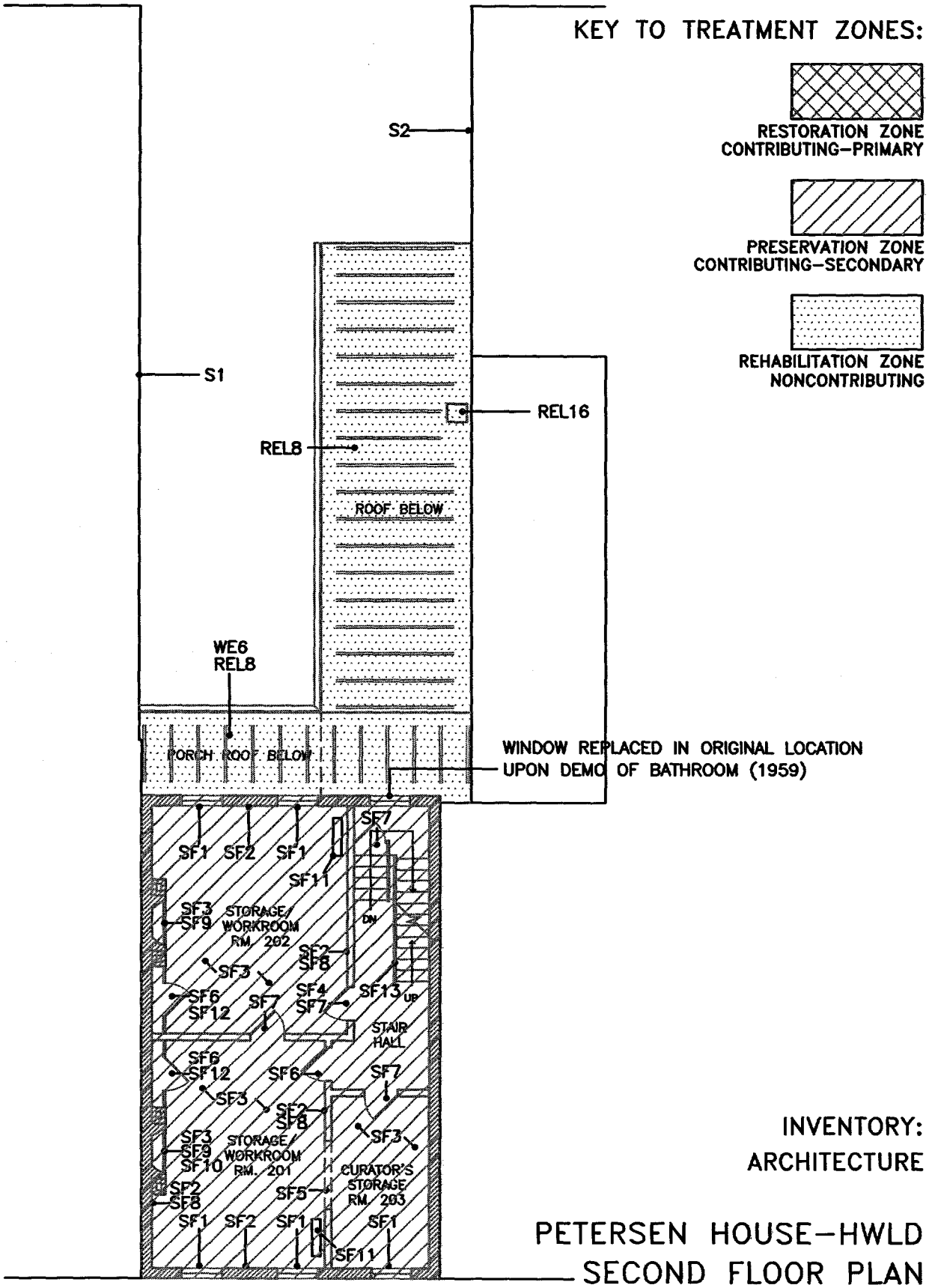
First Floor, Parlors (Rooms 100 and 102)				
Feature (Designation #- re: drawings)	**Dates to:**	**Original or Replica/Phy Condition**	**Contributing-primary/secondary or Noncontributing**	**Comments**
Window surrounds **(FF8)**	1849	Appear **Original/ Good cond.**	**Contributing-primary**	Dentiled wood surrounds, ptd. (Good condition)
Door surrounds **(FF9)**	1849	Appear **Original/ Good cond.**	Contributing-primary	Dentiled wood surrounds, ptd. (Good condition)
Baseboards (wood-ptd.) **(FF10)** or **(FF10r)**	1849 radia-tors: 1953	Appear **Original/ Good condition**	**Contributing-primary**	West wall of Room 102 and east and north walls of Room 100 have been replaced w/baseboard heating.
Floorboards under carpeting (random width pine) **(FF11)**	1849	Appear **Original/ Good condition**	**Contributing-primary**	New linoleum laid in 1915. Repaired, stained, waxed, and carpeted in 1959.
Door surround at large opening connecting both parlors (wood-ptd.) **(FF12)**	1849	Appears **Original/ Good condition**	**Contributing-primary**	Dentiled wood surround. Hinges are still in place (and show that the doors were not pocket doors, but rather opened into front parlor)
Paired Doors between parlors **(FF12a)**	1849	N/A	**Missing element**	Appear in stereograph of parlors, 1892 (Figure 8) 6 panel, wood-stained, also-curtains on rod within door opening.
Doors to Hall **(FF13)**	1849	Appear **Original/ Good cond.**	**Contributing-primary**	6-panel, wood-ptd.
Plaster walls **(FF14)**	1849	Most are **Original** - covered in wallpaper **Good cond.**	**Contributing-primary**	A wide crack in the northeast corner of the front parlor was plastered using metal lath as substrate in 1959.
Marble mantels and cast-iron fireplace fixed grille **(FF15)**	1849? likely later	**Original?** – no known evidence **Good cond.**	**Contributing-primary or secondary**	(Source: McClure - source unsubstantiated) Style suggests late 19th c.
Gasoliers-2 fixtures **(FF 16)**	1850s	Replaced 1890 fixtures. **Good cond.**	**Contributing-secondary**	Accurate period replacement of original fixtures (installed in 1979).

First Floor – Rear Ell (1), Death Room (Room 103)				
Feature (Designation #- re: drawings)	**Dates to:**	**Original or Replica/Phy Condition**	**Contributing-primary/secondary or Noncontributing**	**Comments**
Window surrounds (4"w x 1 ½"d) **(FF17)**	1863	Appear **Original/ Good cond-interior**	**Contributing-primary**	wood-ptd., simple profile
Door surround (3"w x 1"d) **(FF18)**	1863	Appears **Original/ Good cond-interior**	**Contributing-primary**	(except rear wall) wood ptd., simple profile
Baseboards (4 ½"h plain profile, wood-ptd.) **(FF19)** or **(FF19r)**	1863 radia-tors: 1953	Appear **Original/ Good condition**	**Contributing-primary**	North/south wall base-boards have been replaced w/baseboard radiator heating.
Door to back porch (4 panel, wood-ptd.) **(FF20)**	By 1865	**Replica** - altered 1959. **Good condition**	**Contributing-secondary**	Door to porch is copy of original (installed by 1865). Hung from opposite side of door casing for structural reasons.
Door on rear wall (4 panel, wood-ptd.) **(FF21)**	1849	Original door from alternate location in house. **Good condition**	**Contributing-secondary**	Original 1863 door was replaced in the 1932 renovation. The current door was placed on the rear wall in 1979, and is an original 1849 door from third floor of house.
Rear Wall **(FF22)**	1863	**Replica** dates to 1932, altered in 1979. **Good condition**	**Contributing-secondary**	Rear wall was removed by Oldroyd to make way for display cases (1896 – 1905). The wall was replaced during 1932 restoration.
S-shaped wall gaslight bracket **(FF23)**	mid-1800s	Replaced 1890 fixture. **Good cond.**	**Contributing-secondary**	Accurate reproduction of original fixture from photo (installed in 1979).
Floorboards under carpeting **(FF24)**	1863	Assume **Original/ Poor cond.**	**Contributing-primary,** but material is concealed.	Refinished in 1959. Plywd covering added in 1959 and replaced in 1979.
Plaster walls **(FF25)**	1863	Appear **Original,** but some repairs. **Good cond.**	**Contributing-primary**	Water damage to plaster walls led to 1979 restoration and accurate reproduction of wallpaper.
Sloped ceiling **(FF26)**	1863	**Original/ Fair condition**	**Contributing-primary**	

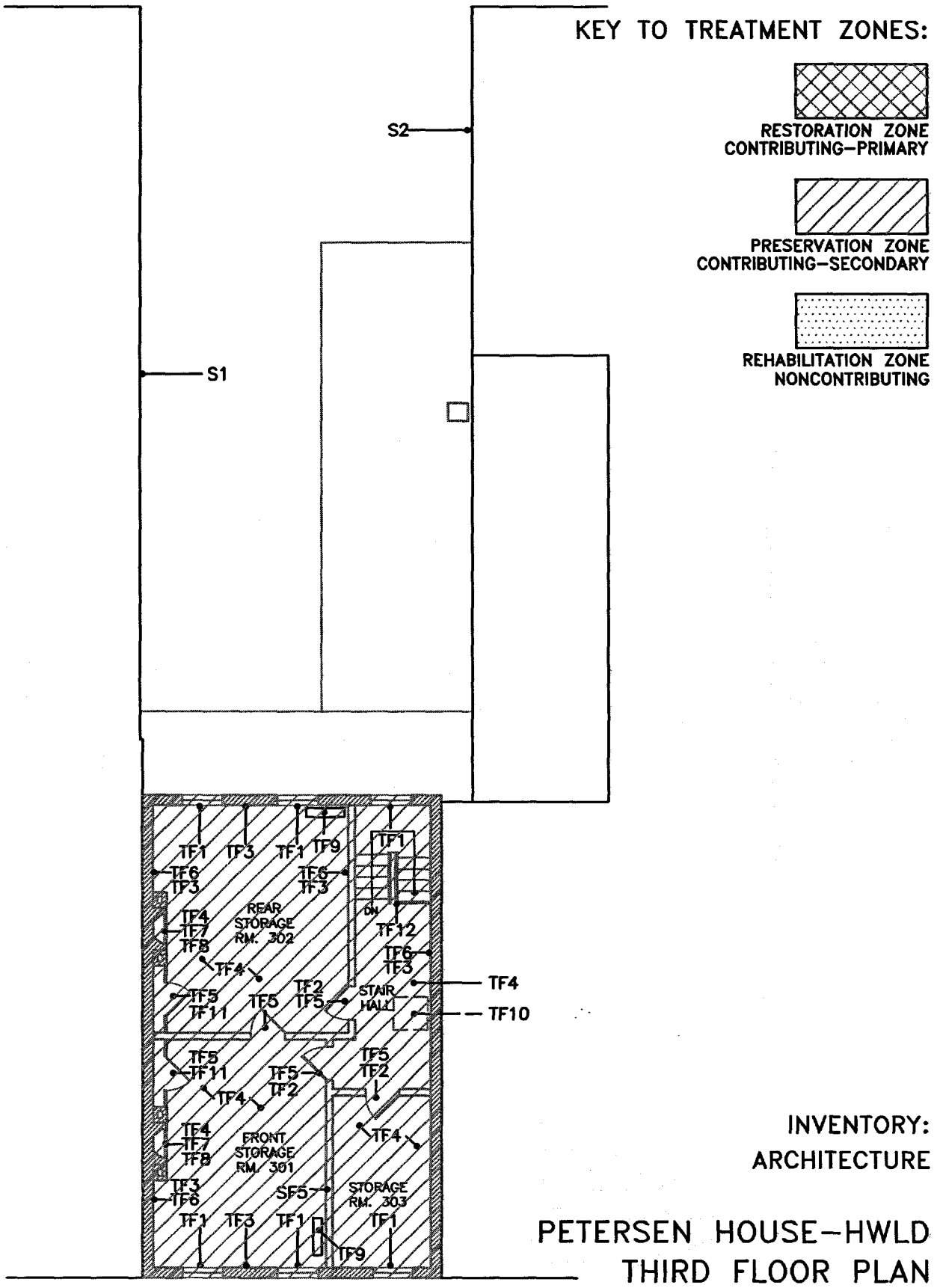
First Floor – Rear Ell (1), Room 104 (Behind Death Room)				
Feature (Designation #- re: drawings)	**Dates to:**	**Original or Replica/Phy Condition**	**Contributing- primary/secondary or Noncontributing**	**Comments**
Window surround (4"w x 1 ½"d) **(FF27)**	1863	Appears **Original/ Good cond- interior**	**Contributing-primary**	wood-ptd., simple profile
Baseboards (4 ½"h plain profile, wood-ptd.) **(FF28)** or **(FF28r)**	1863 radia-tors: 1953	Appear **Original/ Good condition**	**Contributing-primary**	South wall baseboard has been replaced w/baseboard radiator.
Doorway to Rm 105 **(FF29)**	1870s	New 1870s feature to access rear. **Good cond.**	**Noncontributing**	Doorway is cased opening in once exterior masonry wall-no door
Door at stairway **(FF30)** (Glass panel w/6 lights/2 panels below, wood-ptd.)	1863	Original door has been replaced. **Poor cond.**	**Noncontributing**	Current door not to period-does not fit opening.
Wood enclosure at stairway **(FF31)**	1863	**Original/ Good cond.**	**Contributing-primary**	vertical, beaded board, ptd.
Plaster walls **(FF32)**	1863	Appear **Original/**	**Contributing-secondary** (beyond public visitation area)	Walls covered with grass cloth – not to period
Sloped plaster ceiling **(FF33)**	1863	**Original / Fair cond.**	**Contributing-primary**	Some cracking.

First Floor – Rear Ell (2), Room 105				
Feature (Designation #- re: drawings)	**Dates to:**	**Original or Replica/Phy Condition**	**Contributing- primary/secondary or Noncontributing**	**Comments**
Window surrounds **(FF34)**	1870s	Original to Addition/ **Fair cond.**	**Noncontributing** - post-1865	Ornate profile design sets apart from Rear Ell (1).
Baseboard- wood-ptd. **(FF35)** or **(FF35r)**	1870s radiat 1953	Original to Addition/ **Good condition**	**Noncontributing** – post-1865	South/north/west wall baseboards have been replaced w/baseboard radiator heating.
Flooring- wood boards w/Vinyl Tile **(FF36)**	1870s- new cover	Original to Addition/ **Fair cond.**	**Noncontributing** – post-1865	Wood is concealed by vinyl-was not inspected.
Plaster walls on masonry ext. walls/ chase **(FF37)**	1870s	Original to Addition/ **Fair cond.**	**Noncontributing** – post-1865	Covered with grasscloth wallcovering.
Sloped plaster ceiling **(FF38)**	1870s	Original to Addition/ **Fair cond.**	**Noncontributing** – post-1865	Some cracking.

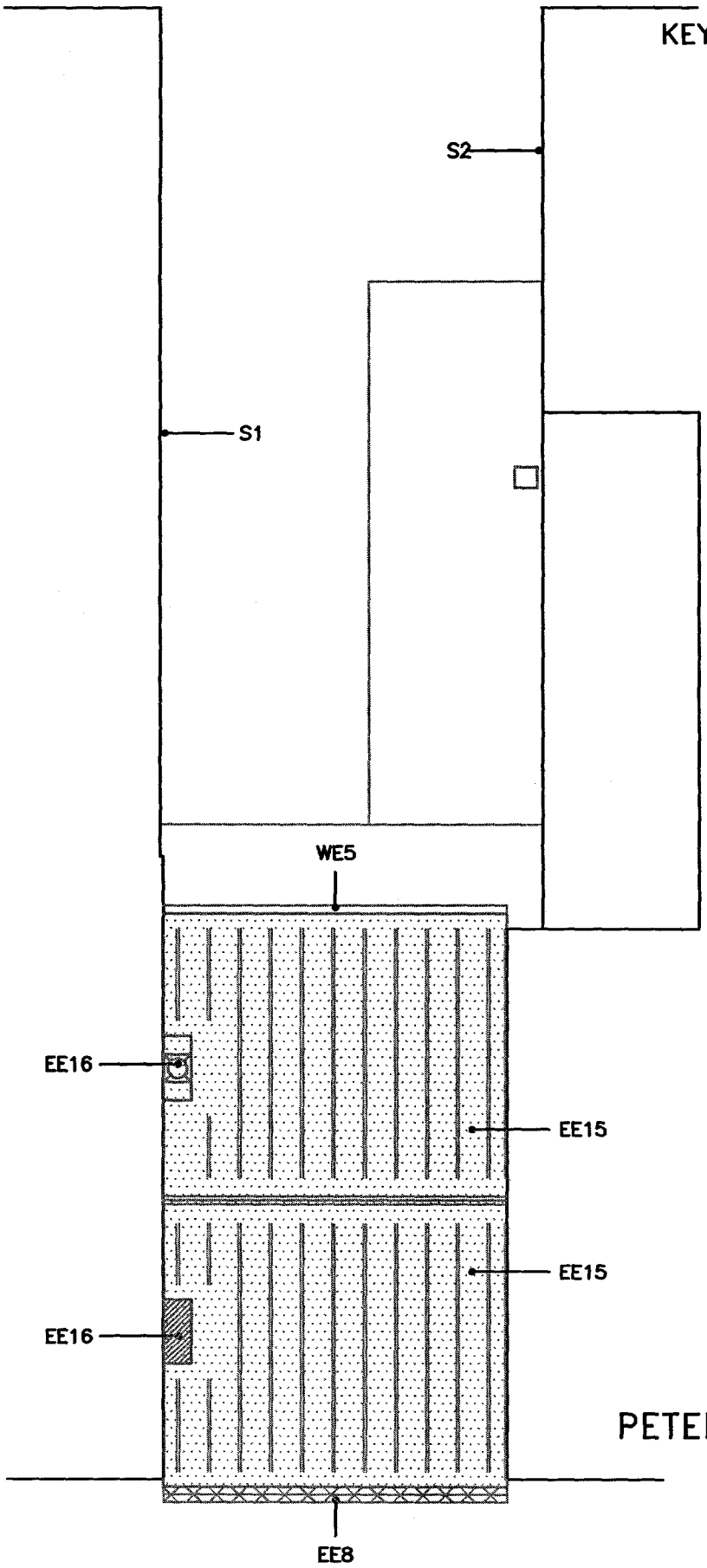
Second Floor – Main House Block (Rooms 201, 202, 203)				
Feature (Designation #- re: drawings)	**Dates to:**	**Original or Replica/Phy Condition**	**Contributing- primary/secondary or Noncontributing**	**Comments**
Window surrounds wood, ptd. **(SF1)**	1849	**Original/ Fair cond.- interior**	**Contributing- secondary**	Typical Greek Rev. detail
Baseboards, 6 ½" h. wood, ptd. **(SF2)**	1849	**Original/ Fair cond.**	**Contributing- secondary**	Plain board w/top bevel
Floorboards- patched at hearths **(SF3)**	1849	Appear **Original/ Fair cond.**	**Contributing- secondary**	Pine, random width, ptd.
Door surrounds wood, ptd. **(SF4)**	1849	**Original/ Fair cond.**	**Contributing- secondary**	Typical Greek Rev. detail
Door surround at large opening connecting Rooms 201 & 203 **(SF5)**	1849-1932	May not be Original but matched original trim. **Good cond.**	**Contributing- secondary**, due to time feature has been in place, indicates rooms used as parlor	Same profile as door and window surrounds on second floor. There are no hinges (which imply it may not be original).
Doors-6 panel/at rooms/closets **(SF6)**	1849	**Original/ Good cond.**	**Contributing- secondary**	Many have original rim mounted door hardware
Doors-5 horiz. panel **(SF7)**	Circa 1900	Replace-ments – not in kind. **Good cond.**	**Noncontributing**	These were added in existing openings – do not match original doors.
Plaster walls **(SF8)**	1849 repairs 1946, 1959	Most replaced in entirety. **Fair to poor condition**	**Noncontributing**	Repairs made to second floor plaster in 1929; half of plaster replaced in 1946; all rooms replastered in 1959.
Mantels in front and rear rooms **(SF9)**	1849	**Original/ Good cond.**	**Contributing- secondary**	Wood, ptd., simple style –
Fireplace grate cover in large front room (Room 201) **(SF10)**	1849	Appears **Original/ Fair cond.**	**Contributing- secondary**	Cast-iron – fireplace is bricked in behind it. Room 202 fireplace has plaster infill.
Radiators-2 pipe **(SF11)**	1900	New feature post-1865/ **Fair cond.**	**Noncontributing**	Hot water heat. Located in Rooms 201/202. Steam heat dates to 1900.
Closets in front and rear rooms **(SF12)**	1849	Appear **Original/ Poor condition**	**Contributing- secondary**	Located on exterior-wall side of fireplace. Wood shelves (very shallow). Six-paneled doors. Evidence of hooks.
Balustrade and stairs **(SF13)** and **(SF13w)**	1849, wall/ door?	Appear **Original** but altered/ **Fair cond.**	**Contributing- secondary, but wall Noncontributing** (wall appears reversible)	Repaired and painted in 1943-44. Wall w/5 horiz panel door on landing below 2nd Flr was added


KEY TO TREATMENT ZONES:
RESTORATION ZONE
CONTRIBUTING–PRIMARY
PRESERVATION ZONE
CONTRIBUTING–SECONDARY
REHABILITATION ZONE
NONCONTRIBUTING
S2
S1
REL16
REL8
ROOF BELOW
WE6
REL8
PORCH ROOF BELOW
WINDOW REPLACED IN ORIGINAL LOCATION
UPON DEMO OF BATHROOM (1959)
SF1
SF2
SF1
SF7
SF11
SF3
SF9
STORAGE/
WORKROOM
RM. 202
DN
SF2
SF8
SF3
SF6
SF12
SF7
SF4
SF7
SF13
UP
STAIR
HALL
SF6
SF12
SF6
SF7
SF3
SF2
SF8
SF3
SF9
SF10
STORAGE/
WORKROOM
RM. 201
SF3
CURATOR'S
STORAGE
RM. 203
SF2
SF8
SF5
SF1
SF2
SF1
SF1
SF11
INVENTORY:
ARCHITECTURE
PETERSEN HOUSE–HWLD
SECOND FLOOR PLAN
0 1 2 5 10
SCALE OF FEET

Third Floor – Main House Block (Rooms 301, 302, 303)				
Feature (Designation #- re: drawings)	**Dates to:**	**Original or Replica/Phy Condition**	**Contributing- primary/secondary or Noncontributing**	**Comments**
Window surrounds wood, ptd. **(TF1)**	1849	**Original/ Fair cond.- interior**	**Contributing- secondary**	typical Greek Rev. detail- a level simpler than 2nd Flr.
Door surrounds wood, ptd. **(TF2)**	1849	**Original/ Fair condition**	**Contributing- secondary**	typical Greek Rev. detail- a level simpler than 2nd Flr.
Baseboards, 6 ½" h wood, ptd. **(TF3)**	1849	**Original/ Fair condition**	**Contributing- secondary**	plain board w/top bevel
Floorboards- patched at hearths. **(TF4)**	1849	Appear **Original/ Fair condition**	**Contributing- secondary**	Wood. Painted dark brown. Repaired, stained and waxed in 1959.
Doors-6 panel at rooms/closets **(TF5)**	1849	Appear **Original/ Good condition**	**Contributing- secondary**	Many have original rim mounted door hardware.
Plaster walls **(TF6)**	1849, repair 1946	Replace- ment/ **Fair to poor condition**	**Noncontributing**	Two-thirds of plaster replaced in 1946. Removed from portions of the front room on the third floor in 1959. Paint peeling and some efflorescence.
Mantels in front and rear rooms **(TF7)**	1849	**Original/ Good condition**	**Contributing- secondary**	Wood, ptd., simple style.
Fireplace openings- closed at Rooms 301/302 **(TF8)**	1849	Altered date?/ **Fair condition**	**Contributing- secondary**	Plaster on brick infill.
Radiators-2 pipe **(TF9)**	1900	New feature post-1865/ **Fair condition**	**Noncontributing**	Hot water heat. Located in Rooms 301/302. Steam heat dates to 1900.
Access panel in ceiling of hall to attic **(TF10)**	?	New or altered feature/ **Fair condition**	**Noncontributing**	Trim looks new. Provides access to attic and roof.
Closets in front and rear rooms **(TF11)**	1849	Appear **Original/ Poor condition**	**Contributing- secondary**	Located on exterior-wall side of fireplace. Wood shelves (very shallow). Four-paneled doors. Evidence of hooks and some hooks remain in place.
Balustrade and stairs **(TF12)**	1849	**Original/ Fair condition**	**Contributing- secondary**	Repaired and painted in 1943-44.


KEY TO TREATMENT ZONES:
RESTORATION ZONE
CONTRIBUTING–PRIMARY
PRESERVATION ZONE
CONTRIBUTING–SECONDARY
REHABILITATION ZONE
NONCONTRIBUTING
S1
S2
REAR STORAGE RM. 302
FRONT STORAGE RM. 301
STAIR HALL
STORAGE RM. 303
TF1
TF2
TF3
TF4
TF5
TF6
TF7
TF8
TF9
TF10
TF11
TF12
SF5
ON
INVENTORY:
ARCHITECTURE
PETERSEN HOUSE–HWLD
THIRD FLOOR PLAN
0 1 2 5 10
SCALE OF FEET

Site (re: Basement Floor Plan)				
Feature (Designation #- re: drawings)	**Dates to:**	**Original or Replica/Phy Condition**	**Contributing- primary/secondary or Noncontributing**	**Comments**
South party wall (concrete) **(S1)**	Constr. date of adjoin. bldg.	Feature post-1865/ **Good condition**	**Noncontributing**	Covered in stucco in 1916. Patched in 1959. Wood fence added in 1980.
North party wall (brick masonry) **(S2)**	1873	Feature post-1865/ **Poor condition**	**Noncontributing**	Patched in 1959 after demo. of coalshed.
Open areaway at Basement Level only **(S3)**	1863	Altered feature-dates to pre-1865. **Fair condition**	**Contributing** - secondary (has been altered with stairway to upper level porch and brick flooring)	Wall reconstructed in 1863 to prevent future fires in addition from spreading to main block of house.
West wall at Alley (masonry w/ sandstone coping) **(S4)**	1959/ rebuilt 1994	Feature adapted from stor. bldg. wall/ rebuilt. **Good condition**	**Noncontributing** - no documentation indicates a brick wall in this location prior to the 1899 addition of coalshed.	Height has been reduced from two-stories to 8 feet in 1959 w/demo of coalshed. Patched in 1959. Reconstructed in 1994 masonry workshop.
West wall gate - wood **(S5)**	1959/ rebuilt 1994	New feature post-1865. **Good condition**	**Noncontributing** - gate location adapted from doorway of 1899 coalshed.	1888 Sanborn map shows a one-story frame structure at the rear yard along the alley.
Brick walkway **(S6)**	1959	New feature post-1865. **Fair condition**	**Noncontributing**	Concrete removed and Courtyard filled to desired height in 1959.
Sidewalk on 10th Street **(S7)**	1966	Replica not based on evidence/ **Fair condition**	**Noncontributing** - no documentation to show actual condition or material in 1865.	Repaving of the sidewalk in front of the house in a brick herringbone pattern carried out in 1966. Repairs scheduled.
Fence on south wall (cedar)-masks adjoining bldg. wall **(S8)**	1980	New feature post-1865. **Good condition**	**Noncontributing**	A Fence repaired with new material in 1911 (unsure which?).
Garden Design (Former Yard) **(S9)**	1959/ re-design in 1979	Replica of Victorian design - plants of era. **Fair condition**	**Noncontributing**	Graded and refilled in 1959. Current configuration is stylistic, not based upon archaeological or documentary evidence.



KEY TO TREATMENT ZONES:

RESTORATION ZONE
CONTRIBUTING–PRIMARY

PRESERVATION ZONE
CONTRIBUTING–SECONDARY

REHABILITATION ZONE
NONCONTRIBUTING

INVENTORY:
ARCHITECTURE

PETERSEN HOUSE–HWLD
ROOF PLAN

0 1 2 5 10
SCALE OF FEET

PART 1: DEVELOPMENTAL HISTORY

E. Assessment of Physical Condition

E. Assessment of Physical Condition - Treatment Recommendations

Architecture

Petersen House has endured as a government owned and managed house museum for more than a century, and has in turn, received numerous attempts at renovation, rehabilitation and restoration over these 100 years, with each major episode directed towards a specific purpose and broader goal. Unlike many historic properties of this type and use, Petersen House has undergone these restoration efforts based on the highest historic preservation principles practiced at the time, and the discerning use of all known documentary resources that served to record the house's exterior and interior appearance at the time of Lincoln's death in 1865. The years in which these major overhaul projects were conducted (with respective goals) are: 1899-1900 (focused on general overhaul and modernization of systems), 1932 (focused on renovation and furnishing of the First Floor Parlors and Death Room), 1958-59 (focused on exterior rehabilitation including removal of post-death building additions by private and public entities), and 1979-80 (repairs and accurate restoration/ replica of interior features/finishes of exhibit spaces) – thus, roughly occurring every twenty-five years. As a result, many elements of the house have been replicated to match the original feature, when deterioration reached the point where repair was infeasible, or the architectural element was already missing.

In interim years, between major projects conducted by the National Park Service and prior governmental custodial agencies, Annual Work Reports indicate that park staff performed or directed routine maintenance tasks, typically including the following: painting of interior and exterior wood door and window trim, repair and painting of window shutters, repairs of cracks to and painting of interior plaster, application of stain and wax to pine floor boards, and application of varnish to main entrance door. Accordingly, many layers of paint can be found on original historic elements, a factor leading to current failure of the coatings to protect the encased wood material. Currently unchecked decay of significant character-defining wood features must be reversed if they are to be preserved, remaining in place for future generations of visitors to view.

The presence of unwanted moisture and the related problems that follow, have collectively plagued Petersen House in recent years. Conditions that have been corrected within the last twenty years include collection and redirection of water run-off from the adjacent building's roof to the north, treatment for termite infestation and damaged floor assembly (sleepers on grade) in the former Kitchen (Room 12) with full replacement of flooring and structure with resistant materials, and full replacement of the metal roofing system. Rising damp within masonry walls remains a severe problem in several locations.

General Notes on Condition and Use

Refer to photographic references and Existing Condition Drawings: Architectural Elevations/Plans for specific location of condition/use notes.

Concerns at Architectural Exterior:

1. Deterioration of Brownstone Steps and Platform due to exposure to air-born pollutants, heavy use by museum visitors, and freeze-thaw dynamic introduced by cast iron railings (corroding ends where imbedded into top of stone surface).
2. Failure of pointing mortar at exterior face of masonry wall.
3. Exposure induced paint failure on decorative wood elements, such as door entablature, wood cornice, and window shutters.
4. Deterioration of window/door frames and panel/sash components due to exposure and failure of paint, allowing decay of wood material.
5. Poor drainage of storm water from well at Basement Door-may have caused moisture related damage in masonry wall at Basement Hall.
6. Water infiltration at North party wall due to inefficient and ill-maintained stormwater drainage from roof of adjacent building.
7. Watering practices for garden plant material located along foundation of exterior masonry walls, where soaking may exacerbate rising damp condition.

Concerns at Architectural Interior:

8. Rising Damp condition in base of masonry wall-in part created by modern addition of concrete slab on grade that directs trapped ground water to softer historic brick (acts as a wick).
9. Missing functional components of window assemblies, such as turn locks, and sash weights.
10. Extreme efflorescence/decay of historic plaster on interior face of masonry walls due to moisture infiltration through masonry wall or rising damp condition.
11. Moisture induced failure of paint on interior plaster surfaces (cracking, peeling)-may create hazardous condition with presence of LBP. Moist conditions are not managed with lack of positive air flow and absence of conditioned air.
12. Lack of ventilation and humidity control within exhibit area of house museum where historic artifacts are held and within storage spaces located throughout the balance of the house. Archival storage of historic documents and building materials, such as replicated wallpaper, are stored within spaces lacking these basic environmental requirements essential for appropriate conservation practice.
13. Damage to restored or replicated materials and finishes due to direct exposure to heavy traffic of visitors.

Existing Condition of East Elevation - Front Facing Tenth Street, NW

Physical Condition resulting from visual inspection, is assessed as FAIR with the following specific concerns that pose a direct threat to the preservation of historic building fabric (refer to Notes on Condition and Use-page 2, this section):

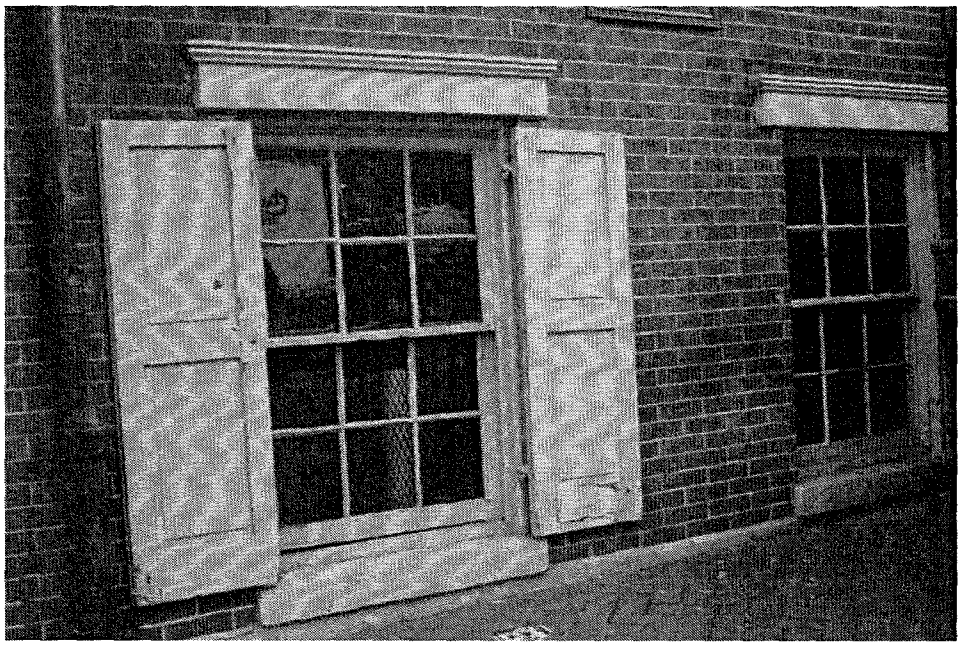
Exterior Envelope and Materials – Systems of Protection:
Concerns: Numbers 2 (in spots), 4 (all windows, but Basement level windows are in worst condition-see photo below), and 5.

Exterior Features and Elements – Functional and Decorative:
Concerns: Numbers 1 and 3.

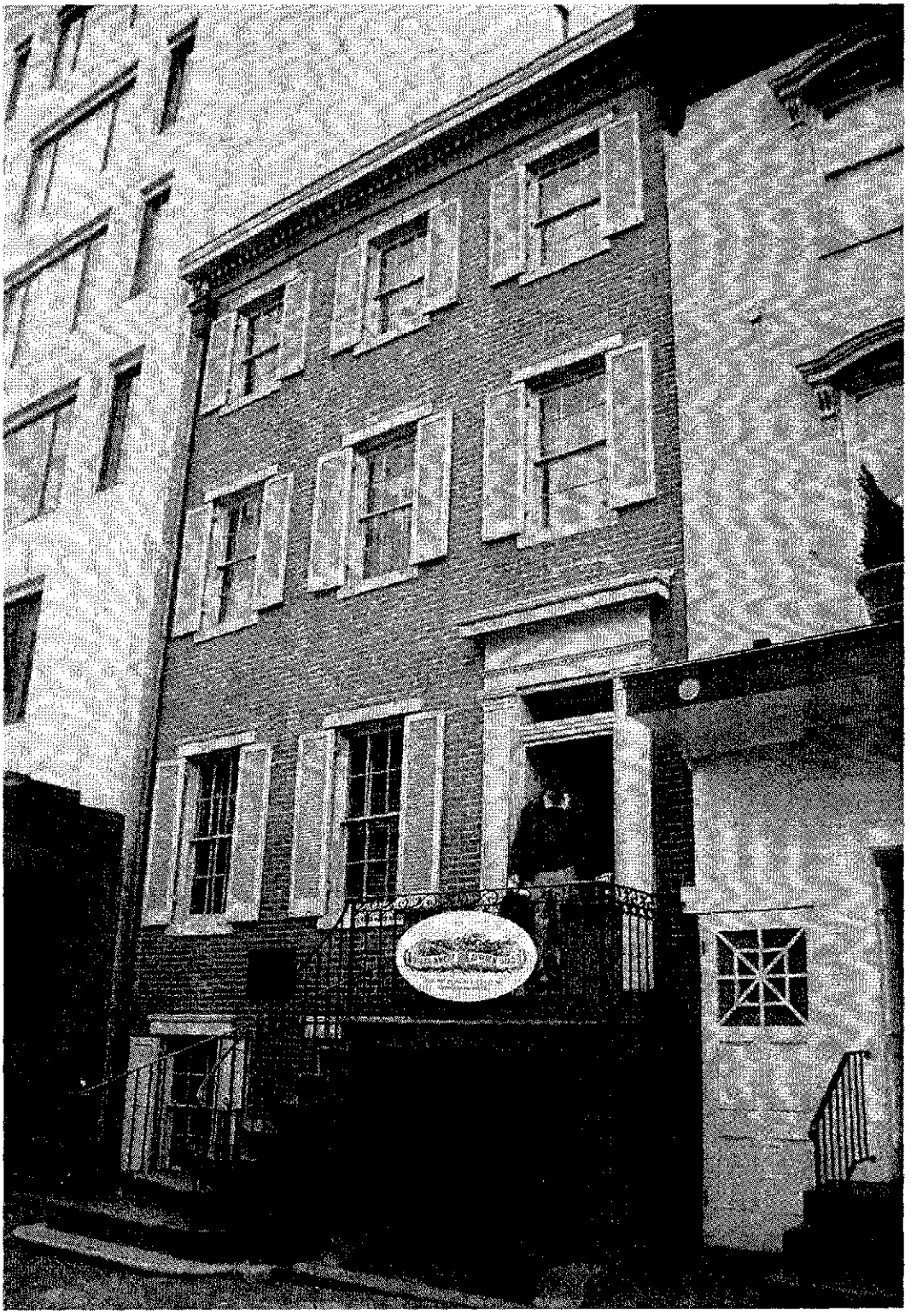
Treatment of Deficiencies

This face of the house is exposed to general public view, and presents the first significant image of the house and its contents to the visitor. Although this elevation is the best cared for of the house, it currently requires a level of repair and targeted restoration beyond maintenance, to include:

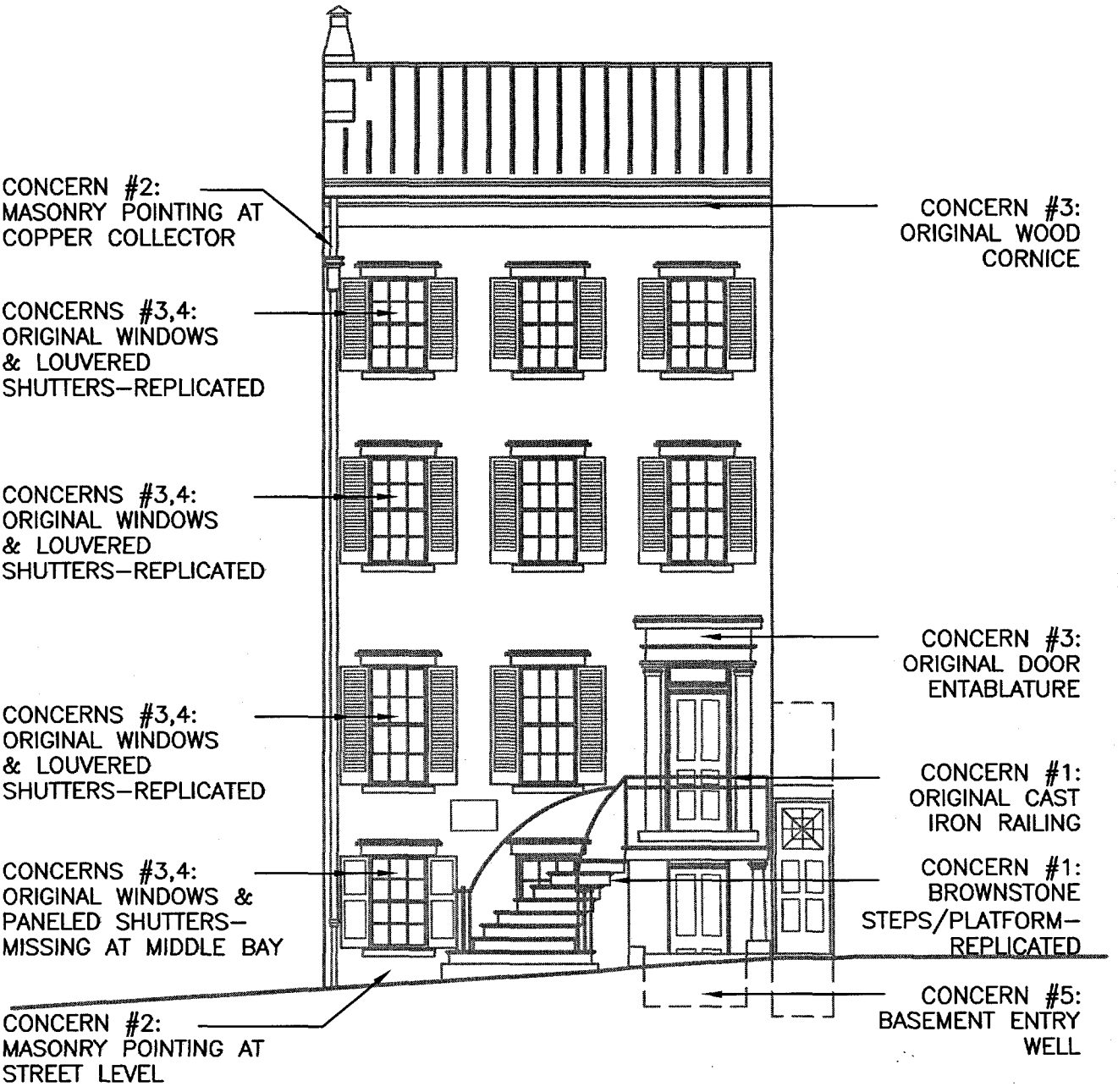
- Perform lead paint abatement, repair and paint wood windows, hoods, cornice and shutters (replace or reinstall 1 set).
- Alter use of Room 10 to exclude storage or secure Basement level shutters in closed position, to improve appearance of house by pedestrians.

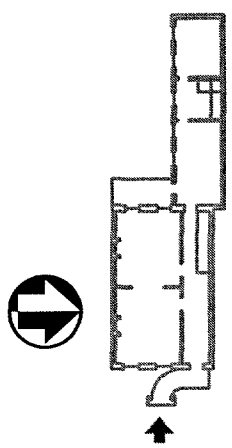


Original wood windows, hoods, sills, and paneled shutters at Basement Level windows require full, immediate repair and restoration. Visitors are unfortunately allowed to view interior clutter of store room and visually unattractive security grilles applied to interior of window openings.
Photo AR-27 architrave p.c., architects 2/26/02



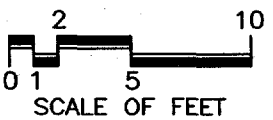
East (Front) Elevation of Petersen House – House Where Lincoln Died
Photo AR-28 architrave p.c., architects 1/31/02





EXISTING CONDITIONS: ARCHITECTURE

PETERSEN HOUSE–HWLD
EAST ELEVATION–FRONT AT TENTH STREET



Existing Condition of West Elevation - Rear Facing Yard/Garden

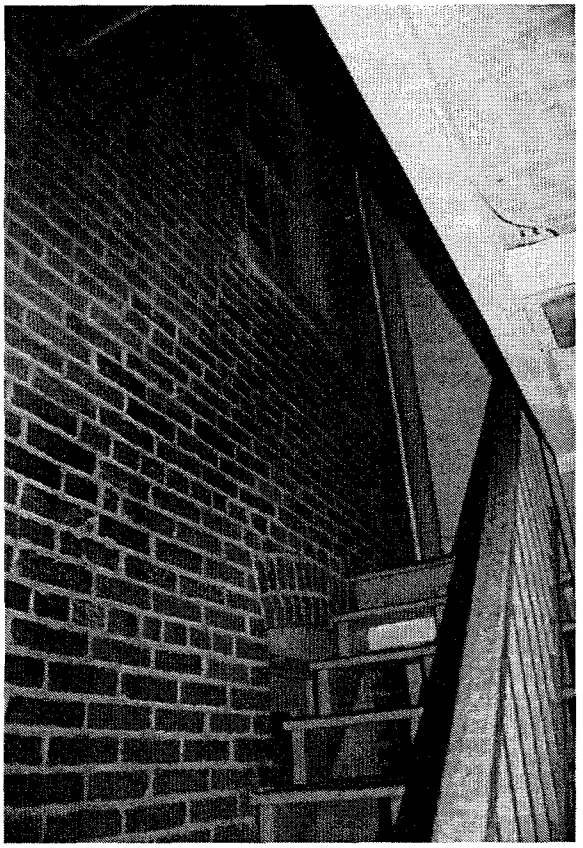
Physical Condition resulting from visual inspection, is assessed as FAIR with the following specific concerns that pose a direct threat to the preservation of historic building fabric (refer to Notes on Condition and Use-page 2, this section):

Exterior Envelope and Materials – Systems of Protection:

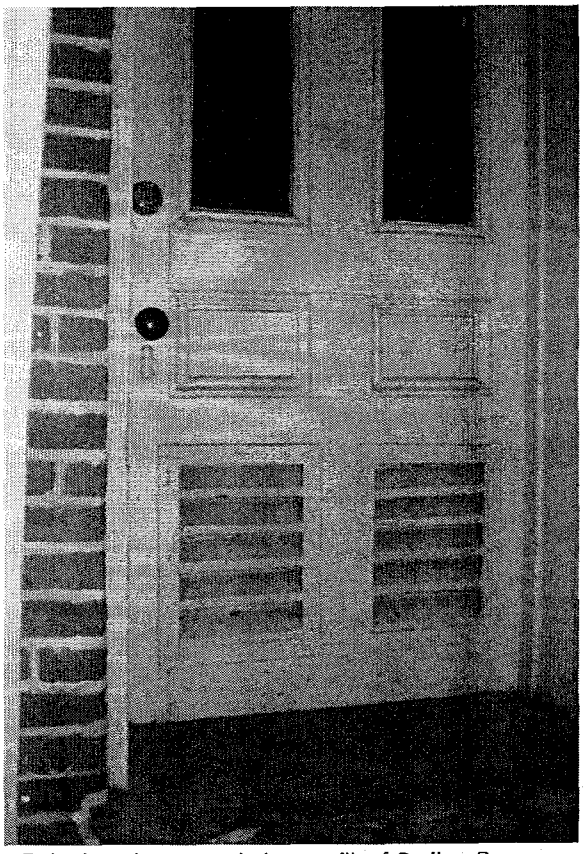
Concerns: Numbers 2 (in spots above rear porch), and 4 (all windows and doors, but those within upper porch enclosure are in better condition-see photos below). Historically inaccurate precast concrete lentils replaced brick jack arches at the upper windows within the south bay (see Photo AR-4 Part 1C).

Exterior Features and Elements – Functional and Decorative:

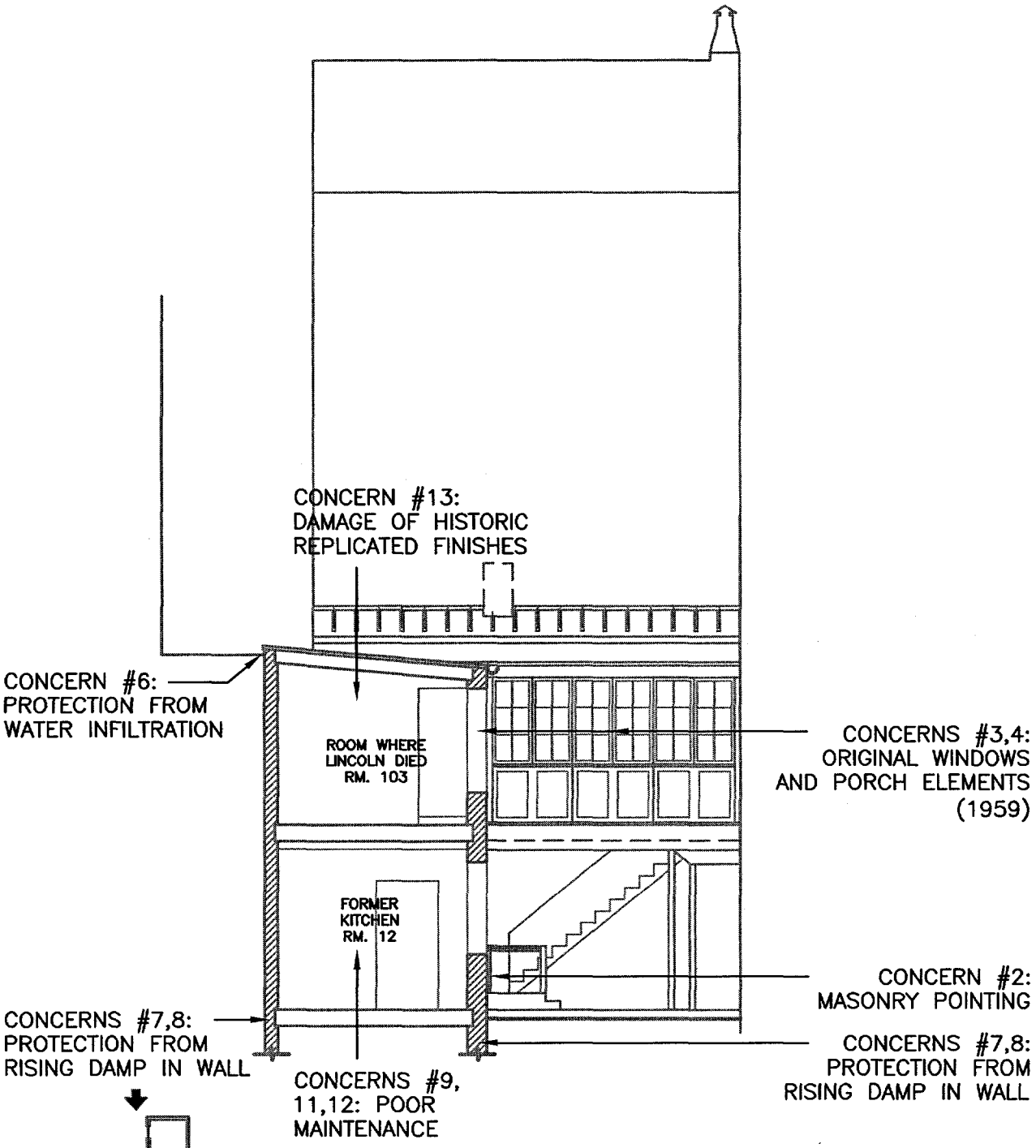
Concerns: None applicable. Window Shutters are missing, and decorative wood features such as hoods at lentil locations and door entablatures were excluded from this less public, functional side of the building when initially constructed.

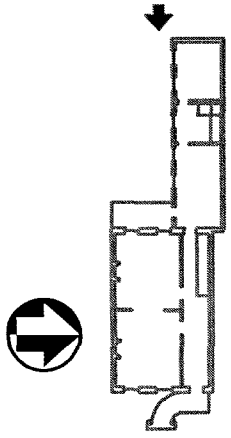


Protected face of Rear Elevation at porch location. Window shutters were removed to accommodate porch structure–rebuilt in 1959. Photo AR-29 architrave p.c., architects 2/15/02



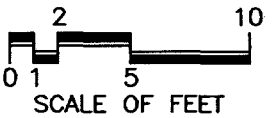
Exterior door and stone sill of Boiler Room (most likely 1st kitchen location) appear original, yet altered w/added louvers. Photo AR-30 architrave p.c., architects 2/26/02





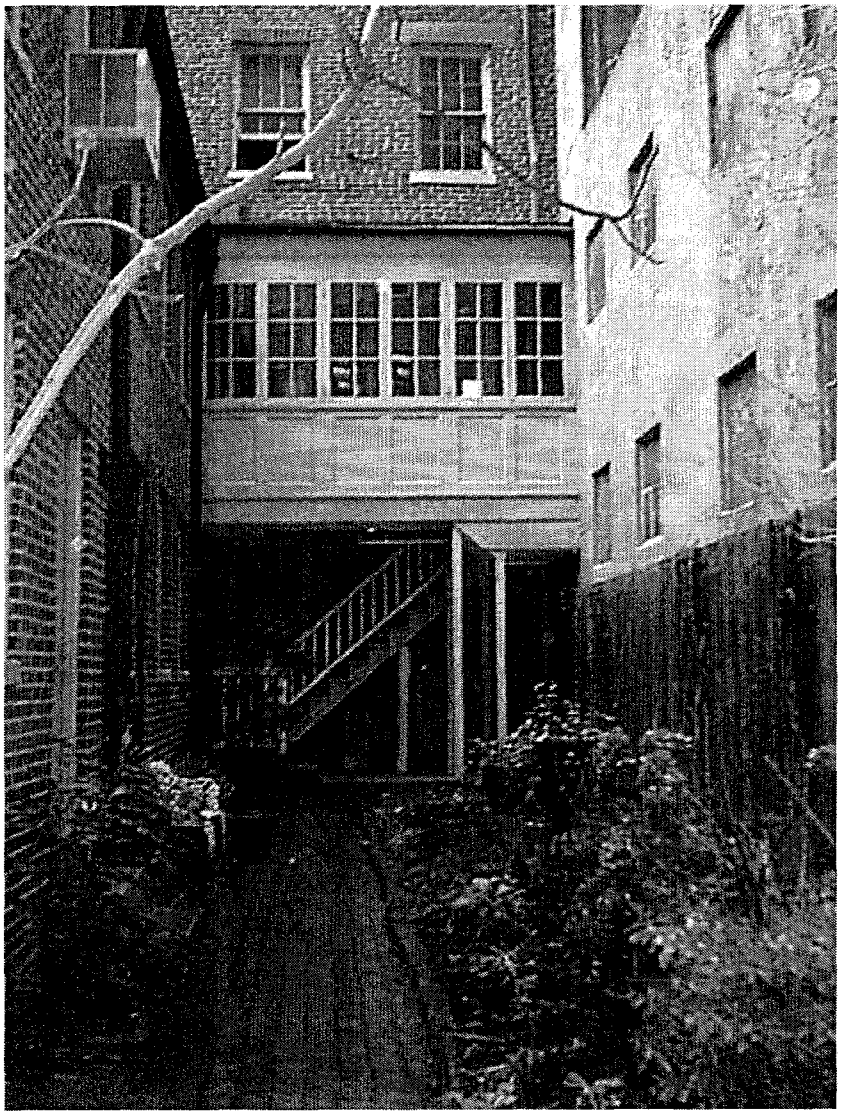
EXISTING CONDITIONS: ARCHITECTURE

PETERSEN HOUSE–HWLD
PORCH ELEVATION–SECTION AT REAR ELL

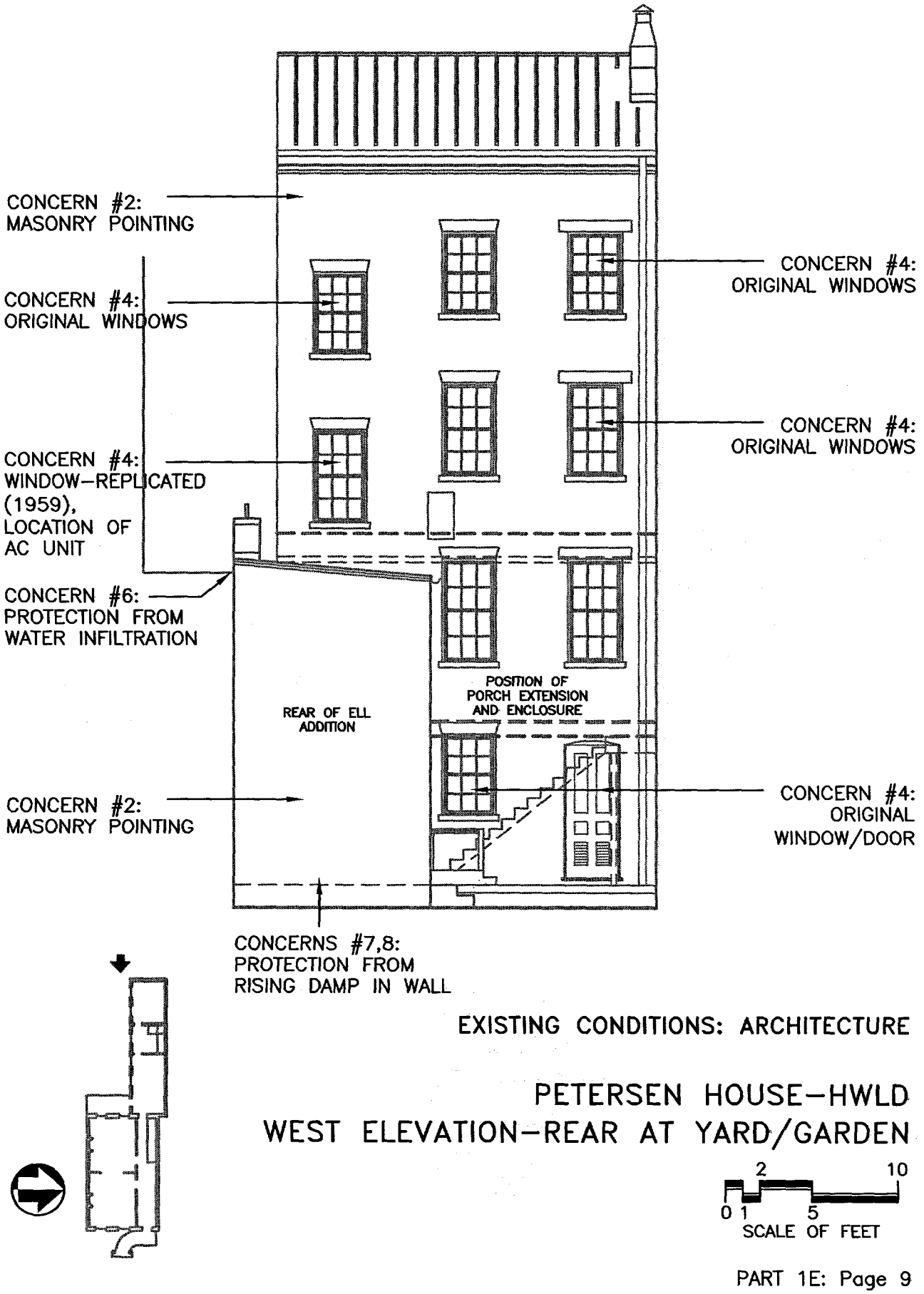


Treatment of Deficiencies

As on the front elevation of the house, wholesale door and window repair and repainting is essential to save the original building features, even though this side of the house is not currently seen by visitors. The ground floor areaway, under the rear porch, is frequently used as a storage zone, which is an inappropriate location to stockpile items from Ford's Theatre. Under the proposed upgrade project, this area will be enclosed to better control passive air conditioning of the interior. Visitors would then exit the Death Room through the rear porch and down the steps, to be directed back to the street, via the easement walkway (former alleyway). This pattern of circulation improves current visitor flow through the house and emergency egress, but does not meet ADA accessibility guidelines.



West (Rear) Elevation and Garden (former yard) of Petersen House – House Where Lincoln Died
Photo AR-31 architrave p.c., architects 1/31/02



EXISTING CONDITIONS: ARCHITECTURE

PETERSEN HOUSE–HWLD
WEST ELEVATION–REAR AT YARD/GARDEN

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SCALE OF FEET

Existing Condition of South and West Elevations – Rear Ell Facing Yard/Garden

Physical Condition resulting from visual inspection, is assessed as POOR with the following specific concerns that pose a direct threat to the preservation of historic building fabric (refer to Notes on Condition and Use-page 2, this section):

Exterior Envelope and Materials – Systems of Protection:

Concerns: Numbers 2 (mortar missing in spots), 4 (all windows and doors-decay is advanced in some members), 6 and 7 (South/West Elevations of rear ell).

Exterior Features and Elements – Functional and Decorative:

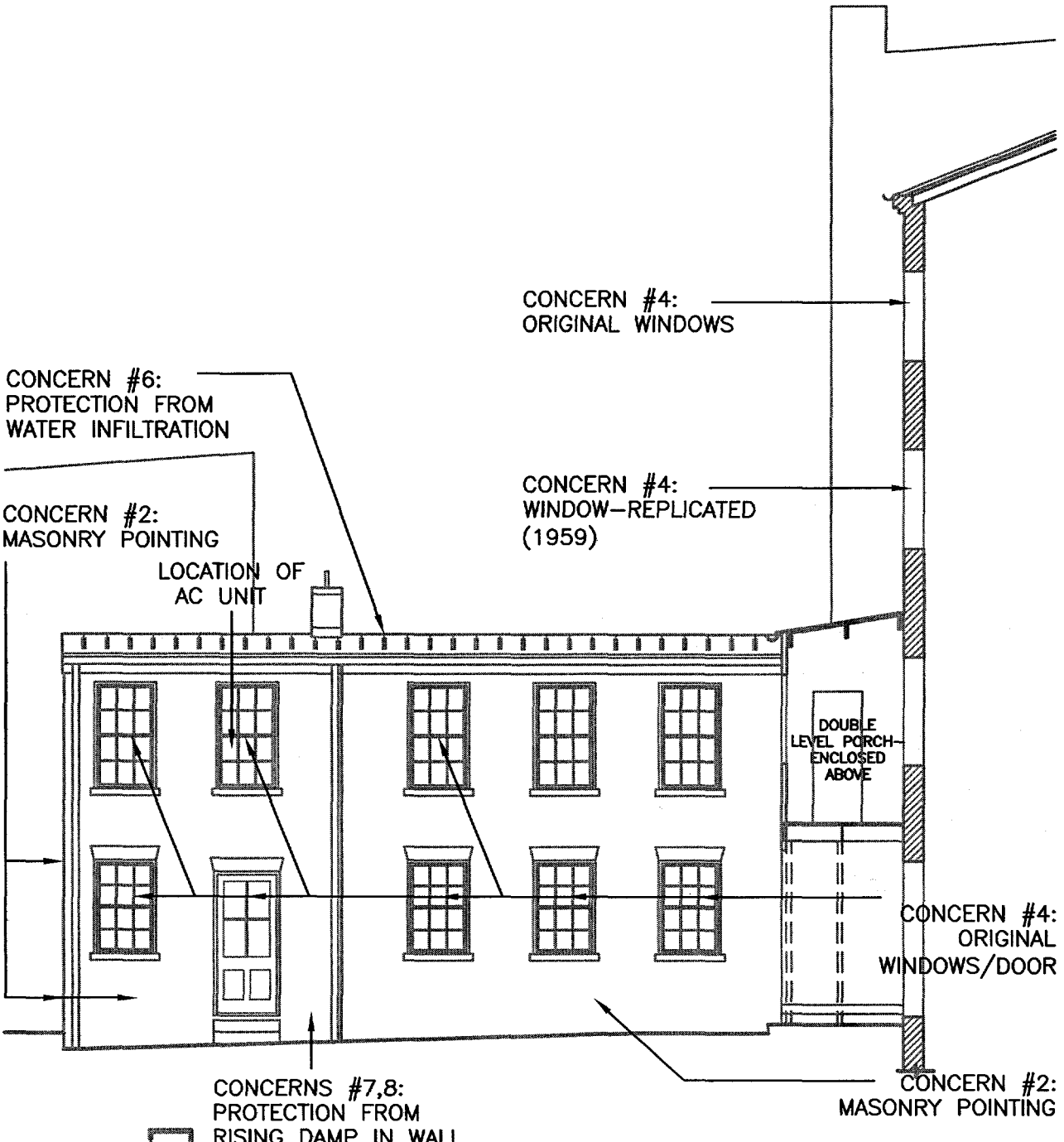
Concerns: None applicable. Window Shutters are missing, and decorative wood features were excluded from this less public, functional building addition.

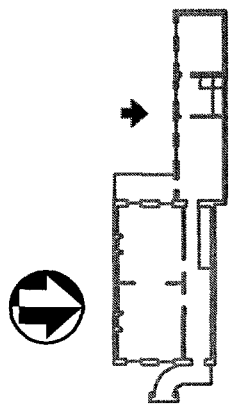
Treatment of Deficiencies

This rear section of the house (exterior) is not generally exposed to public view, because of the controlled circulation patterns of visitors through the main house, and has evidently received little attention to building maintenance issues. Although a supporting structure, the rear ell is historically significant as it contains the Death Room and the former kitchen below. This building section requires immediate repairs of building elements to alleviate the serious concerns listed above.



Rear Party Wall and West Elevation of Rear Ell where condition of brick masonry and pointing mortar is very poor. Planting beds along the base of the wall may be worsening rising damp. Photo AR-32 architrave p.c., architects 1/31/02

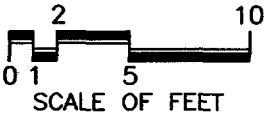




EXISTING CONDITIONS: ARCHITECTURE

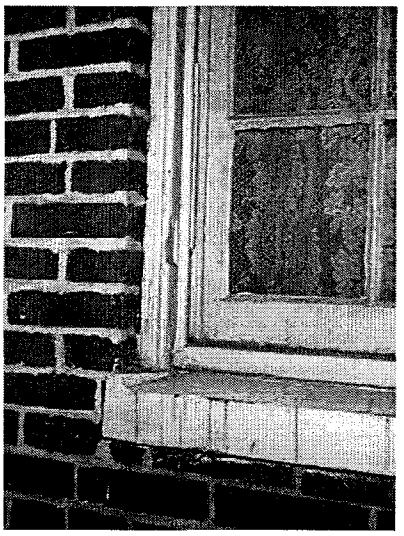
PETERSEN HOUSE–HWLD

SOUTH ELEVATION–REAR ELL AT YARD/GARDEN



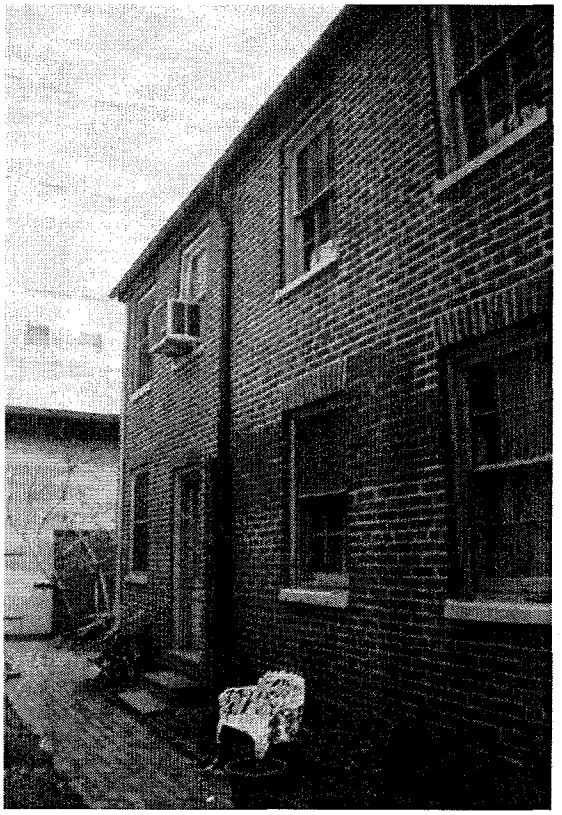


Intersection of original Rear Ell (rebuilt 1863) and 1870s extension, post Lincoln's death. Lattice treatment is inappropriate to period.

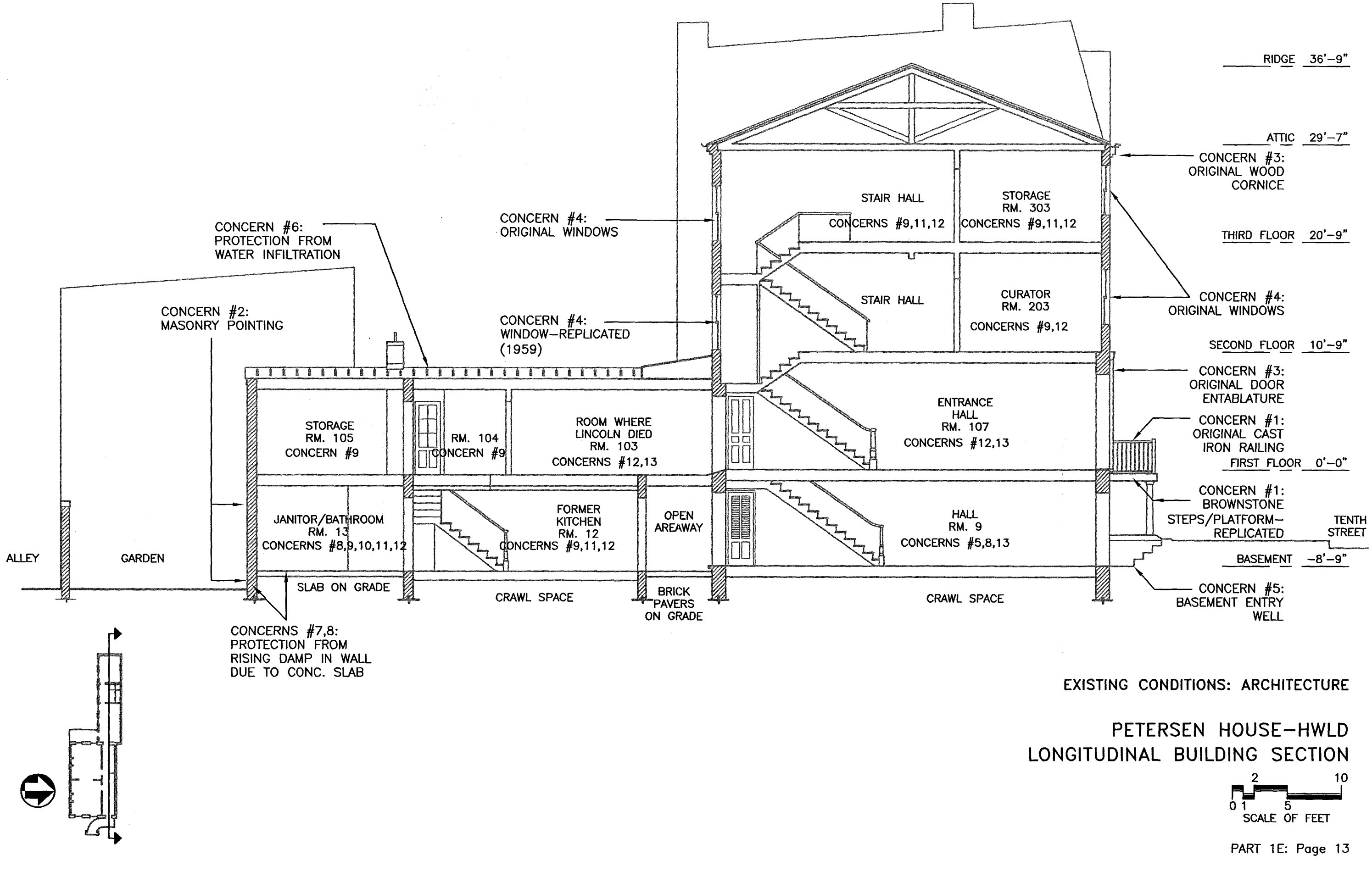


Condition of windows in Rear Ell are poor with broken panes, cracked paint and missing shutters.

Photos AR-33 and AR-34 architrave p.c., architects 1/31/02



South Elevation (Rear Ell) of Petersen House – House Where Lincoln Died
Photo AR-35 architrave p.c., architects 1/31/02



EXISTING CONDITIONS: ARCHITECTURE

PETERSEN HOUSE-HWLD
LONGITUDINAL BUILDING SECTION

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SCALE OF FEET

Existing Condition of Basement Level
Interior Spaces, Features and Finishes:

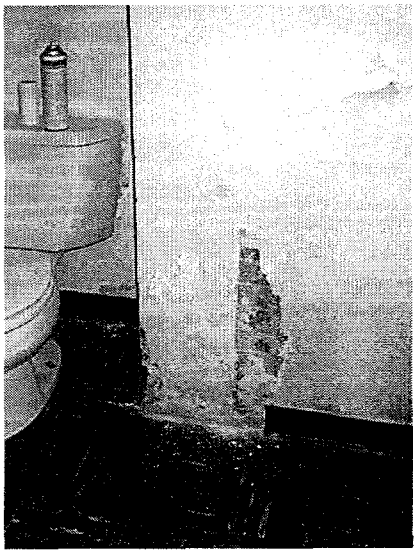
Main House Block
Hall (Room 9) – Condition Assessed as FAIR. Plaster was removed from a large section of wall due to probable rising damp condition or water intrusion (predicated by problematic drainage of stormwater from lowered entrance well) and/or structural settlement from heavy foot traffic above. Many visually obtrusive conduits and various pipes extend below the ceiling level, as this is not a restoration zone.
Storage (Room 10) – Condition Assessed as FAIR. The use of this space by the Museum Bookstore and security grilles for such, create a visual distraction from the sidewalk, inappropriate for a restored historic property.
Boiler Room (Room 11) – Condition Assessed as FAIR. The addition of a concrete slab floor and the parging treatment of the base of the brick masonry wall (interior to room) typically advance the probability of rising damp; however, no evidence was observed in the exterior face of the plaster finish.
Alley – Condition Assessed as FAIR. Any storage within this narrow passage is inappropriate, although not useable currently as an emergency exitway, with the front door permanently locked.

Rear Ell
Former Kitchen (Room 12) – Condition Assessed as FAIR. Evidence remains of staining from water seepage at north wall (current mold/mildew growth), and condition is worsened by storage of large items (filing cabinets, boxes, etc.) along the wall. Many visually obtrusive conduits and various pipes have damaged early building fabric, including the pressed tin ceiling, and extend below the ceiling level. Termites are no longer evident with replaced floor and pressure-treated floor framing within excavated crawl space.
Room in 1870s addition, Janitor and Rest Room (Room 13-subdivided in 1959) - severe rising damp/plaster damage due to concrete slab floor, added in 1959.

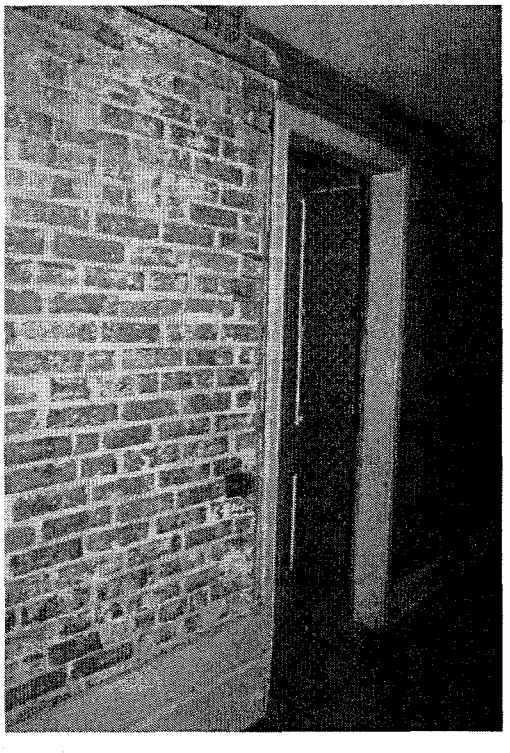
Treatment of Deficiencies
Unwanted intruding water can cause structural damage to below-ground masonry, and erodes mortar. The condition raises the interior relative humidity, increasing the deterioration of artifacts, and creating unacceptable air quality due to the rapid growth of bacteria and mold.

- Perform routine maintenance including regular cleaning of interior. Aggressively clean/monitor locations where mold/mildew are evident.
- Perform testing and monitor moisture levels for rising damp/water intrusion. Develop a treatment plan that responds to the physical investigation.
- Introduce positive air flow and ventilation to facilitate dry conditions.
- Repair/paint windows, and replace failed plaster (with drywall-Room 13).

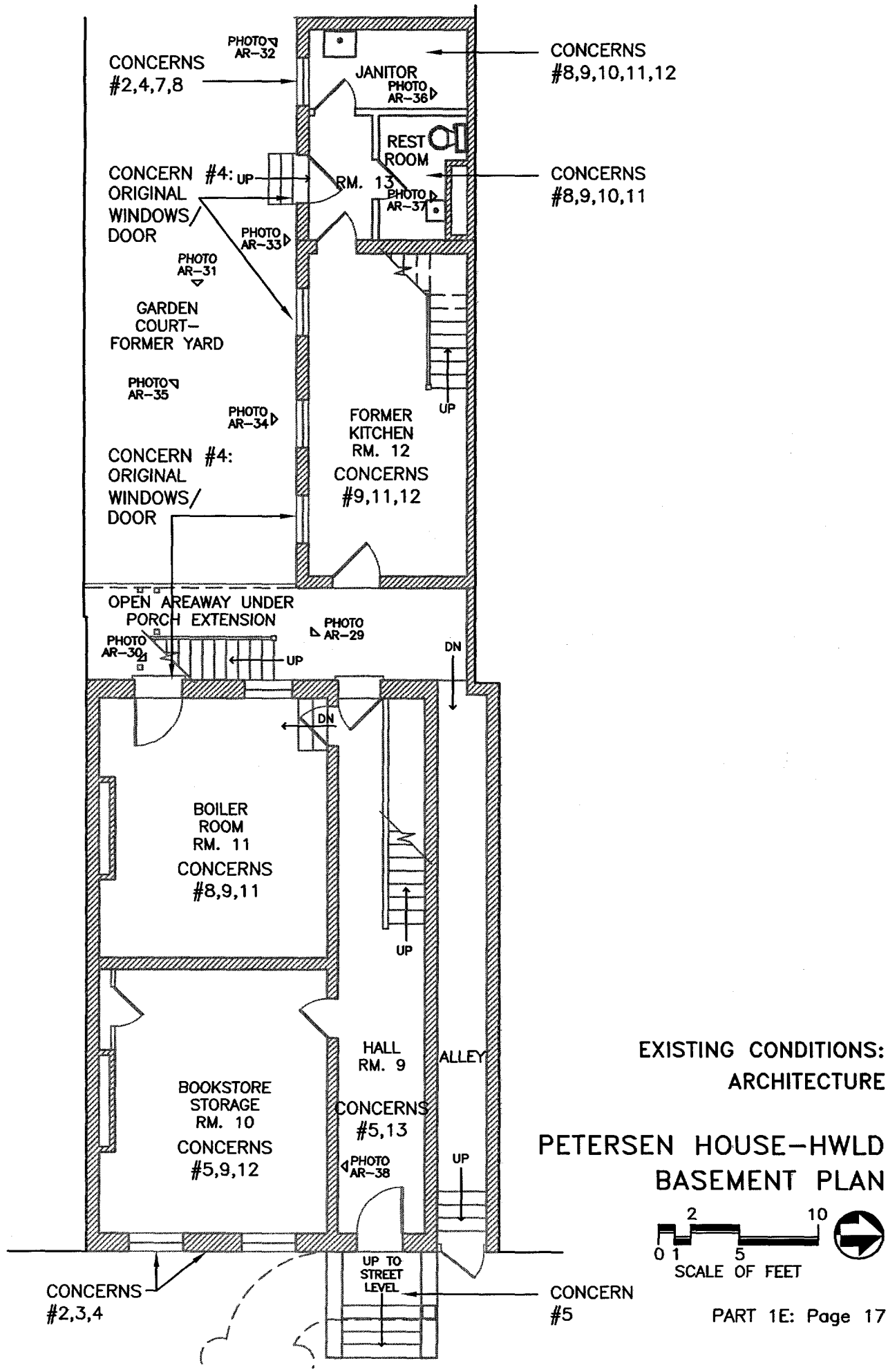




Failure of plaster on north wall of Rear Ell in Room 13, subdivided into Rest Room and Janitor's Room, caused by the addition of a concrete slab floor to this building section in 1959.
Photos AR-36 and AR-37 architrave p.c., architects 2/5/02



Basement Hall near Front Entrance Door where rising damp and structural weakness have combined to cause deterioration of historic plaster (removed prior to failure).
Photo AR-38 architrave p.c., architects 2/15/02



EXISTING CONDITIONS:
ARCHITECTURE

PETERSEN HOUSE–HWLD
BASEMENT PLAN

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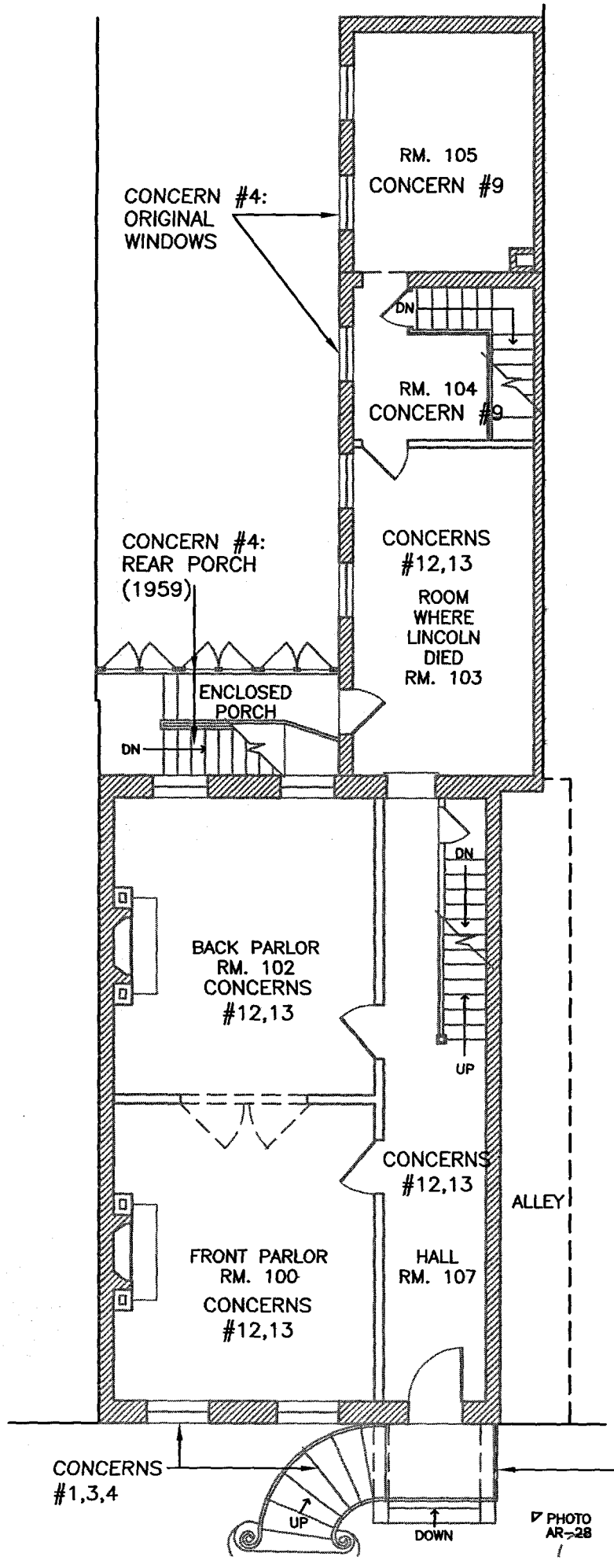
SCALE OF FEET

Existing Condition of First Floor Level – Interpreted Restoration Area
Interior Spaces, Features and Finishes:

Main House Block
Hall (Room 107), Front Parlor (Room 100), and Back Parlor (Room 102) – Condition Assessed as GOOD. These rooms are routinely cared for and monitored for deficient conditions, because of proper curatorial techniques for the museum level finishes and furnishings. Moisture levels are controlled, light levels are managed by venetian type blinds at the windows in both front and rear parlors, and electric lighting is kept dim. Staff efforts are focused to this floor, because visitors are only allowed entrance to this level of the house, at this time. Constant traffic in the hall, however, creates wear and tear on carpet and wallpaper, especially.

Rear Ell
Room Where Lincoln Died (Room 103) – Condition Assessed as GOOD. As above, this room is the heart of the visitor's experience in viewing the house. The space is well cared for by staff, while the impact from visitation is limited. Visitors are only allowed entrance into a confined area just inside the doorway from the Hall, as a metal rail prevents further access into the space. A recently placed glass screen serves to protect the wallpaper surrounding the death bed zone.
Stair/Room behind Death Room (Room 104) – Condition Assessed as FAIR. This space is not apparently utilized for any function, except for convenient staff access to the rear of the death room (stairs from former Kitchen lead up into this room). Historically, it provided direct access for the boarder living in Room 103 to the dining room/kitchen, and could have also served as a storage/closet area. Interior finishes (of no significance) are not maintained, and the window requires repair and painting. Door at the stairway does not fit well, so is probably not original to this location.
Room in 1870s addition (Room 105) – Condition Assessed as FAIR. This is the only room in the rear ell to have a window air conditioning unit, but the space does not serve a current function. The cooling would potentially help the moisture problems at the lower level in this section of the ell, if operated, but the door on the stairway in Room 104 prevents the free flow of air between the levels. Interior finishes (of no significance) are not maintained, and the windows require repair and painting.

Treatment of Deficiencies
- Repair/paint windows and interior trim.
- Inspect and maintain unused space on a routine basis.
- Use AC unit to help pro-actively manage moisture problems, or remove.



EXISTING CONDITIONS:
ARCHITECTURE

PETERSEN HOUSE–HWLD
FIRST FLOOR PLAN

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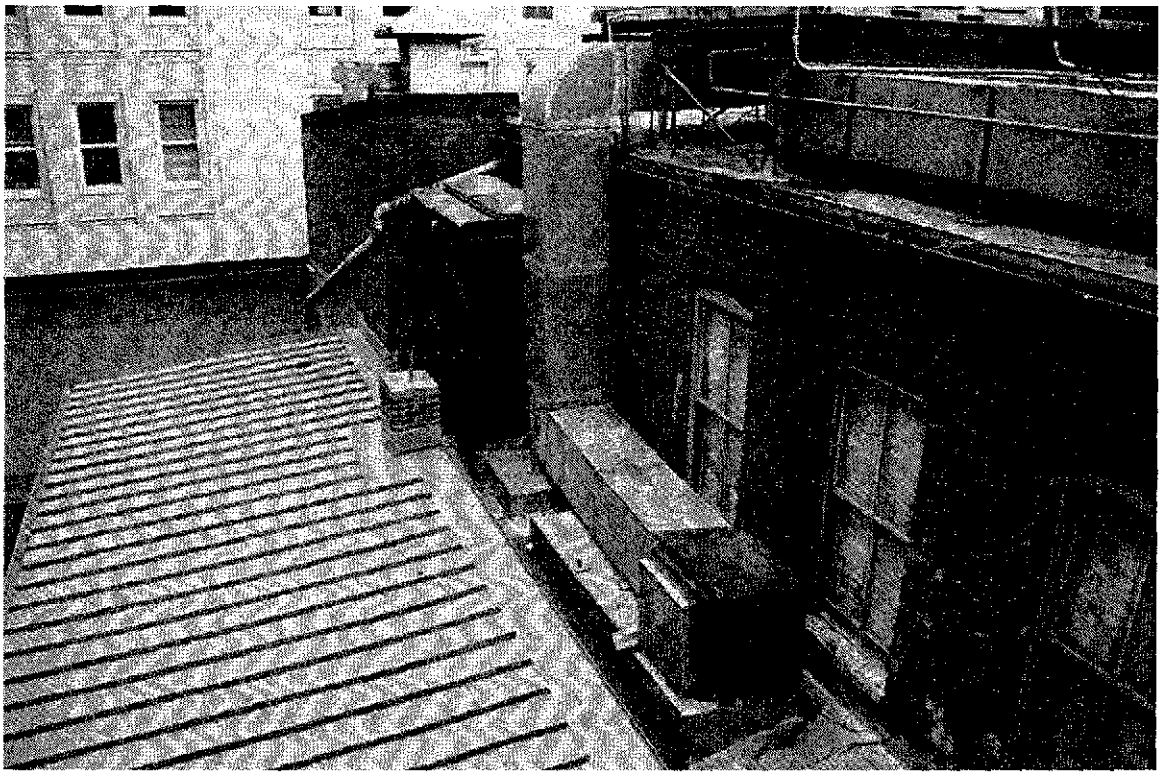
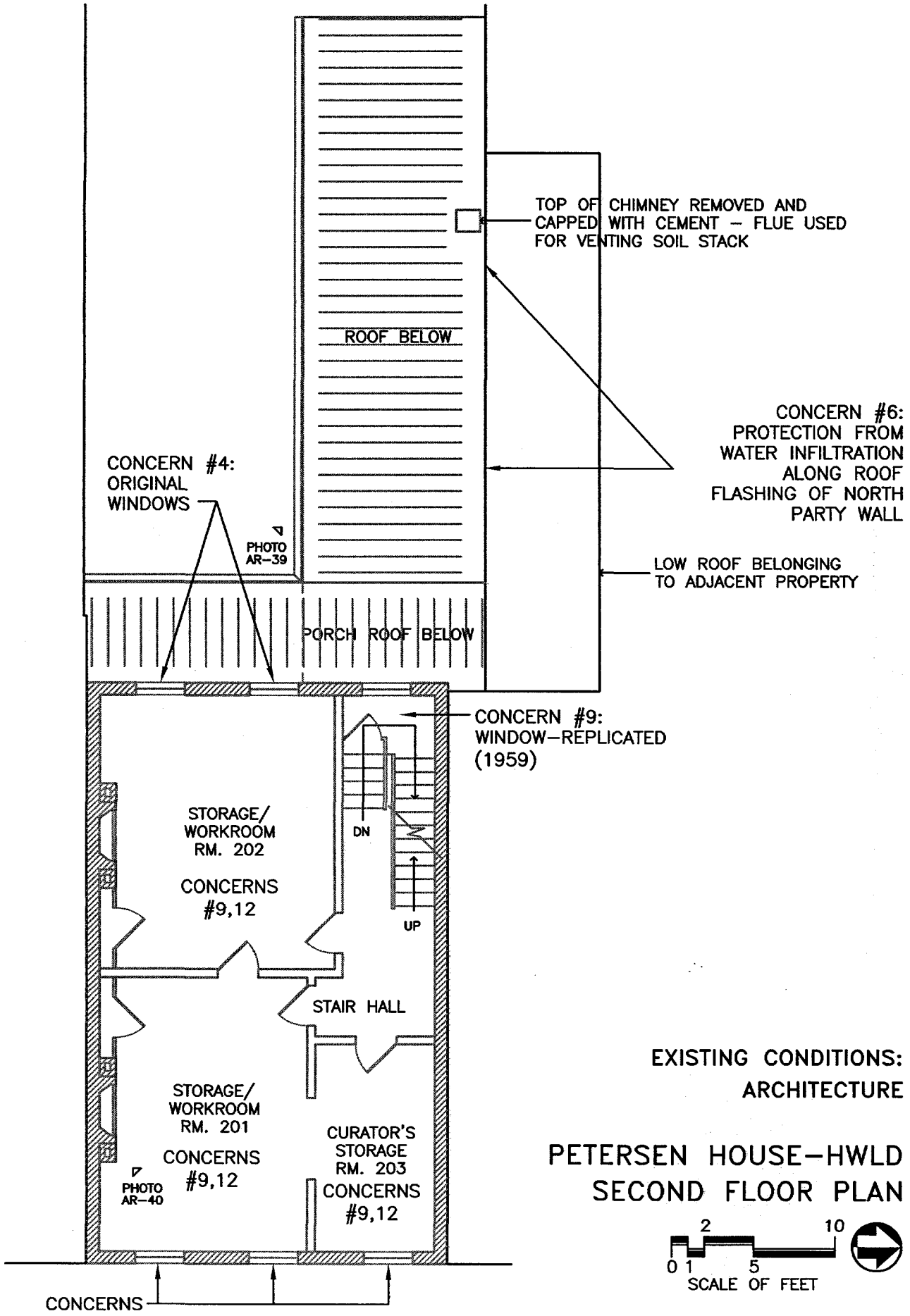
SCALE OF FEET



Sloping Rear Ell Roof with view of flat-roofed extension to adjacent building to North with potential for trapped stormwater; drainage of upper roof of adjacent building also poses a concern with long gutter run to rear alley.
Photo AR-39 architrave p.c., architects 2/15/02



EXISTING CONDITIONS:
ARCHITECTURE

PETERSEN HOUSE–HWLD
SECOND FLOOR PLAN

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SCALE OF FEET

Existing Condition of Second and Third Floor Levels
Interior Spaces, Features and Finishes:

Main House Block – Second Floor
Second Floor Stair Hall, Curator's Storage (Room 203), Front Storage/Workroom (Room 201), and Rear Storage/Workroom (Room 202) – Condition Assessed as FAIR, with primary elements of original historic fabric (windows) assessed as POOR. This floor is not accessed by visitors. If park staff needed a work area for exhibit related activities, this is the area available and most conducive. However, there is no current provision for cooling or ventilation in the summer months beyond opening windows. The space is inappropriately used for haphazard storage of various materials, and heavy filing cabinets have stressed the old framing of the house with evident low spots in the floor.

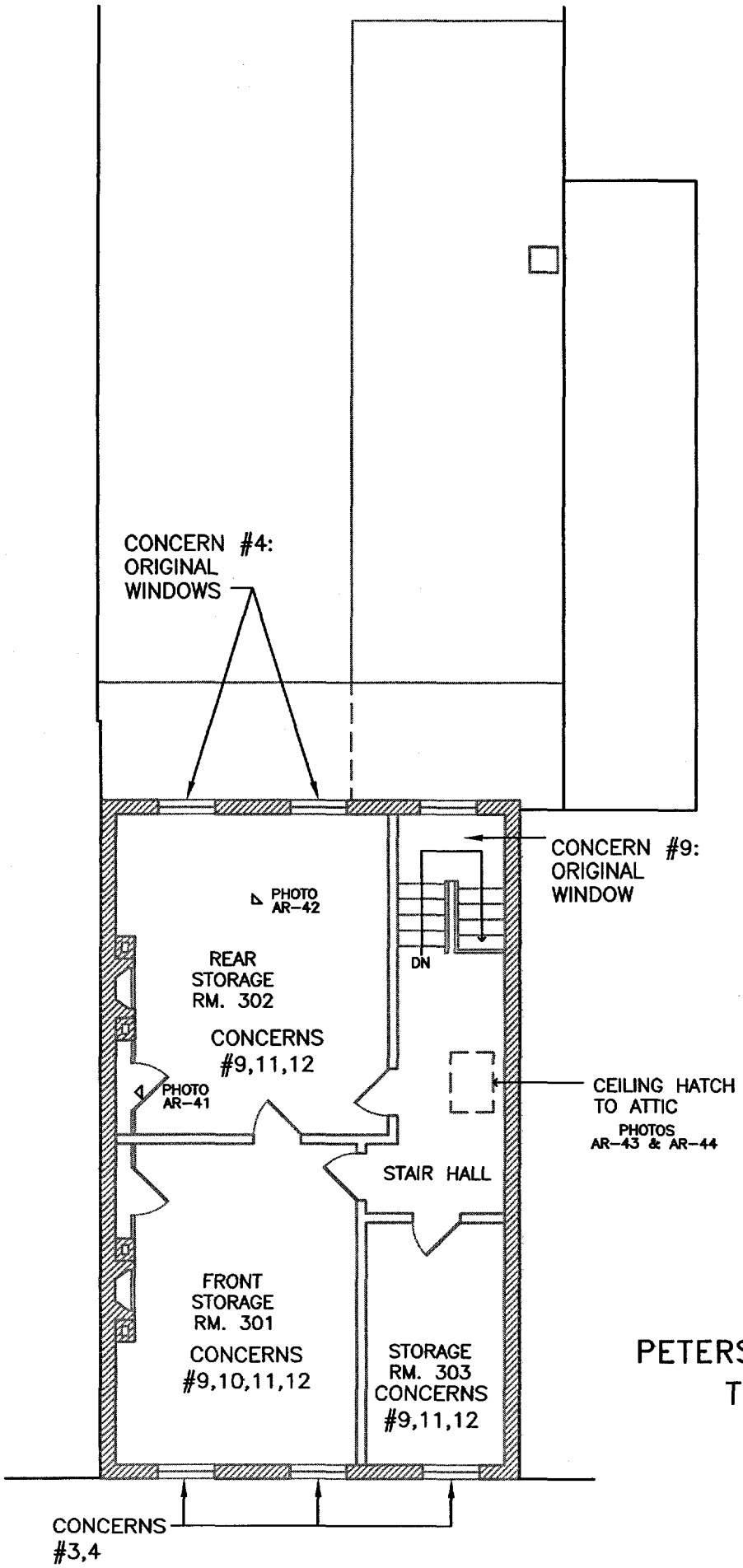
Main House Block – Third Floor

Third Floor Stair Hall, Storage (Room 303), Front Storage (Room 301), and Rear Storage (Room 302) – Condition Assessed as FAIR, with primary elements of original historic fabric (windows) assessed as POOR. This floor is not accessed by visitors. This level of the house has sustained moisture-related damage due to water infiltration from the damaged roof system, as evidenced by the peeling paint at the plaster ceiling throughout. Advanced efflorescence is visible at the front plaster wall in Room 301, which relates to water infiltration from the copper drainage scupper at the front elevation of the house. Rooms are used for storage, especially chairs and cushions from Ford's Theatre.

Treatment of Deficiencies
- Limit storage to well organized/packaged, lightweight items that are not highly flammable. Space is not conditioned properly for storage.
- Repair/paint windows, interior trim, and repair/paint plaster finish.
- Inspect and maintain upper floor levels on a routine basis.

Existing Condition of Main House Attic
Although former water damage is evident at framing and sheathing members, the replaced roof system, properly covers and protects. There is currently no insulation within the attic, which along with single-pane windows at the upper floors, further complicates management of interior temperatures.

Treatment of Deficiencies
- Supplement structural members as required by structural analysis section.
- Lay new insulation between joists.
- Introduce mechanical means of ventilating hot air from attic, without impacting the roof system, as proposed by Mechanical upgrade project.



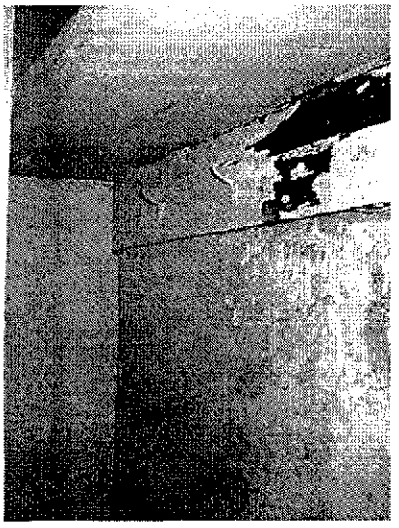
EXISTING CONDITIONS:
ARCHITECTURE

PETERSEN HOUSE–HWLD
THIRD FLOOR PLAN

0 1 2 5 10
SCALE OF FEET

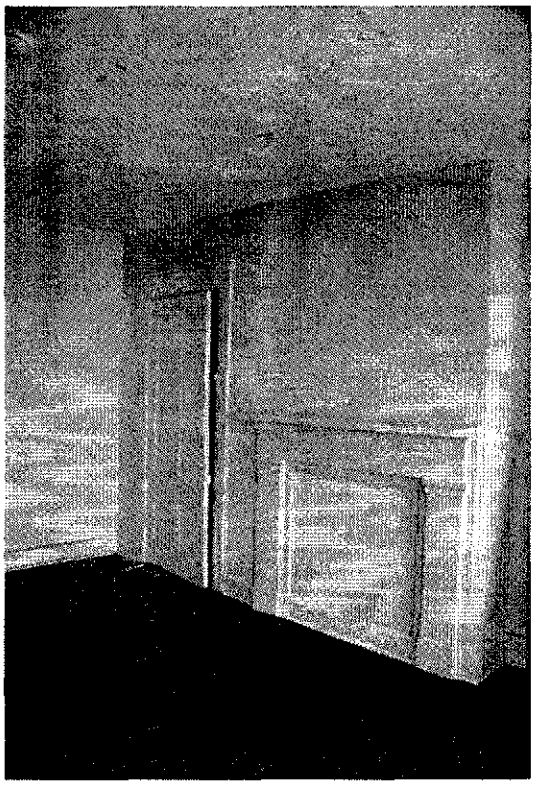


Decorative cast iron grille at Second Floor Fireplace, Room 201, likely late 19th c. addition.

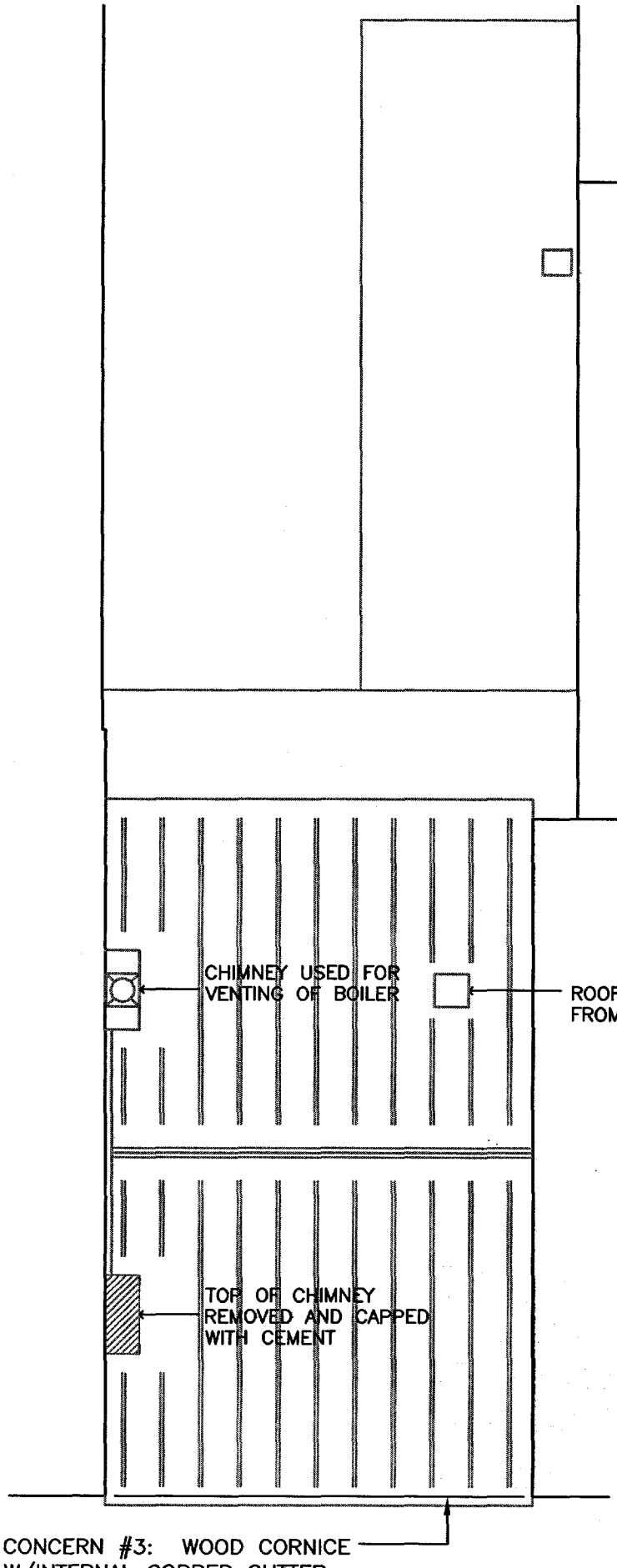


Close-up view of shallow closet, Room 302, showing early hooks.

Photos AR-40 and AR-41 architrave p.c., architects 1/31/02



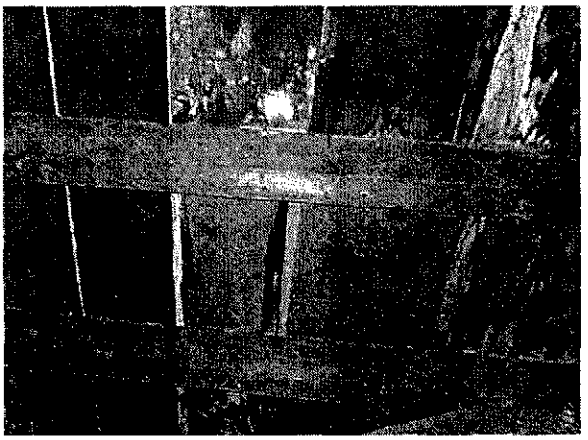
Peeling paint and cracking plaster is especially advanced at the ceiling plane of the Third Floor due to previous water damage that occurred prior to complete roof systems replacement. Photo also documents original painted floorboards, 4 panel door, and Greek Revival fireplace.
Photo AR-42 architrave p.c., architects 2/15/02



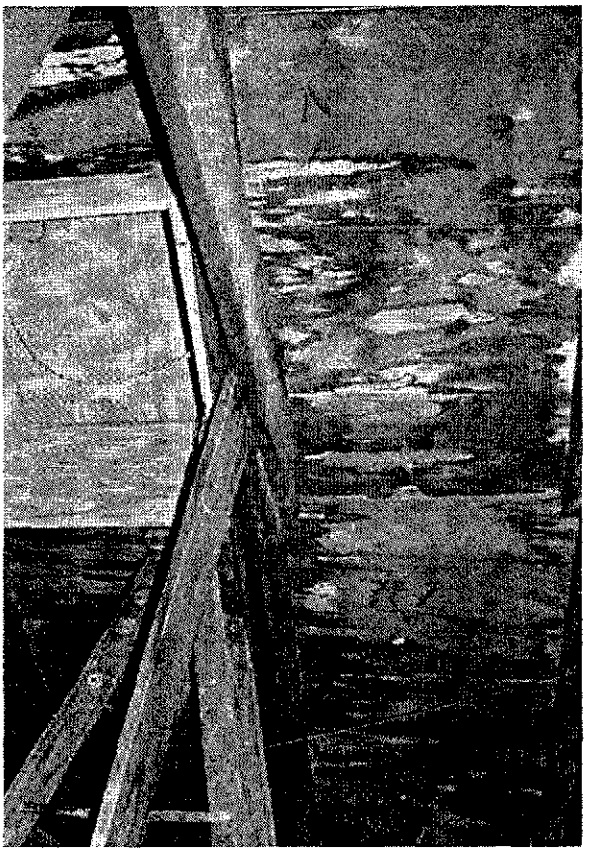
EXISTING CONDITIONS:
ARCHITECTURE

PETERSEN HOUSE–HWLD
ROOF PLAN

0 1 2 5 10
SCALE OF FEET



Water damage at original wide board sheathing, visible within Attic.
Photo AR-43 architrave p.c., architects 2/05/02



View from Third Floor ceiling hatch into Attic along North party wall that shows the extent of water damage to the old wooden roof decking. The damaged material was covered over with an additional layer of plywood decking and replacement batten seam metal roofing system.
Photo AR-44 architrave p.c., architects 2/15/02

Structure

Description and Inspection Methodology

The following observations are based upon site visits to the house made by the project structural engineer on January 15, 2002 and February 5, 2002. During the initial visit, observations were made of the existing structure for the main roof and the rear porch. These two locations are the only areas where the structure is visibly accessible. In order to obtain information on the existing structure in areas concealed by architectural finishes, 18 observation openings were cut through the floors/ceilings to expose the structure. Each of these openings provided a limited amount of structural data which has been incorporated into the findings of the report. Another source of information used in cases where the observation openings could not be located were the measured drawings dated July, 1957 and the NPS framing sketches from the January, 1985 repairs. It should be understood that the assessment effort made in this report is not an exhaustive study since the findings are based upon a limited number of openings that are assumed to be representative of the existing conditions in each of the rooms where the respective observation holes were cut.

Refer to Appendix C – Observation Openings for an annotated and pictorial description of each opening location.

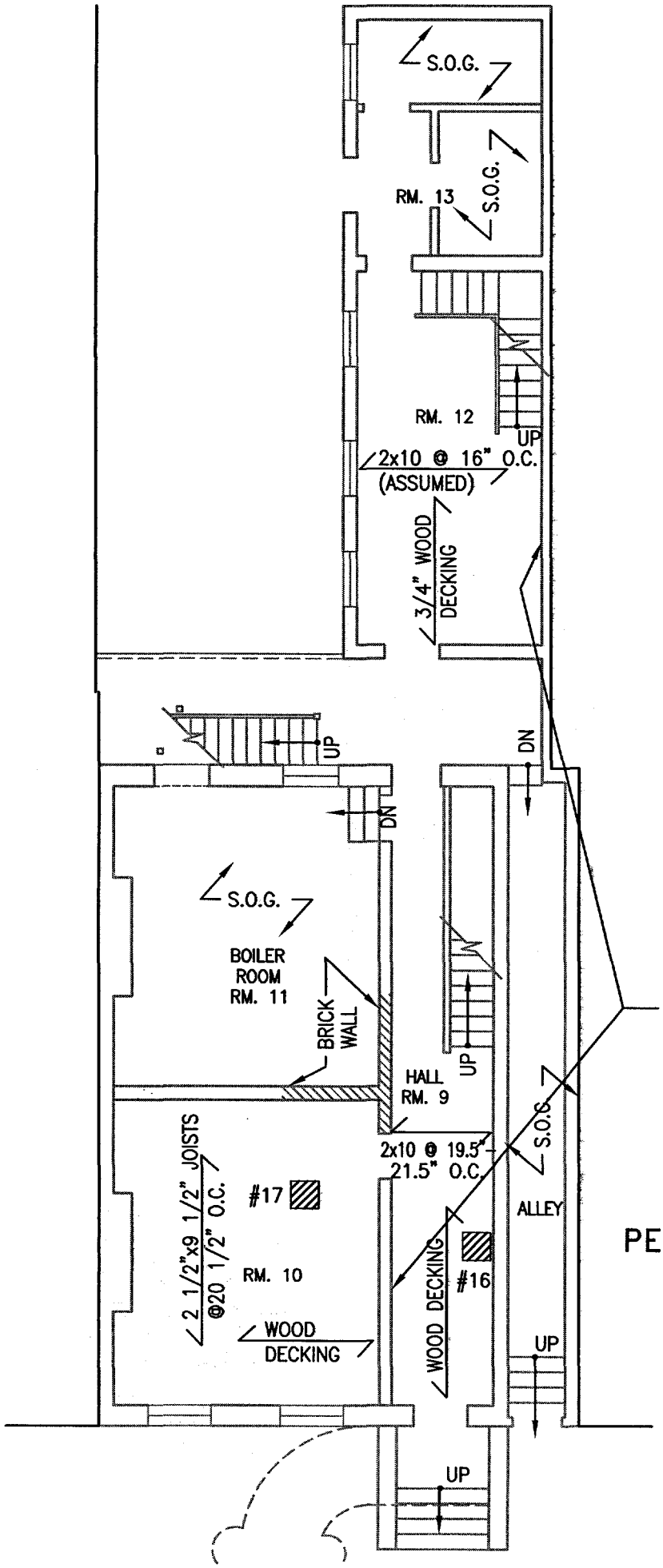
Structural System – Existing Conditions

Basement Framing:

At the front of the house, there are floor joists framed over a very shallow crawl space. In the large room (Room 10), the joists are 2 ½-inches x 9 ½-inches spaced at 20 ½ -inches on center, spanning front to back. In the hall (Room 9), the joists are 2-inches x 10-inches spaced at 19 ½-inches to 21 ½-inches on center, spanning side to side. At the basement hall, the bond of the wall plaster to the existing brick wall near the front entrance was failing, so was removed by park staff (see Photo AR-25 in Part IC). Staff had believed that structural weakness or damage from vibrations above were causing the problem, but no remaining evidence supports this. With the removal of the plaster, the cracking pattern cannot be examined. West of the front room is a mechanical/boiler room with a concrete slab on grade (Room 11). The original wood floor structure was removed in order to excavate and lay the slab, which is depressed several feet from the adjacent floor areas. Any remnants of joist pockets within Room 11 are covered over with cement parging at the base of the masonry walls.

In the rear ell (west half of the house) the July 1957 drawings indicated that at one time this area consisted of 2 x wood sleepers with wood board decking supported on grade (Room 12). Based on NPS records, these boards were first replaced in 1906. By January of 1985, the sleepers had again rotted and were termite infested, requiring immediate replacement. After an archeological investigation of the exposed crawl space, a new floor was installed that consisted of pressure treated 2 x 10 joists spaced at 16-inches on center. A crawl space on the order of 24-inches in depth was excavated beneath the new floor. The adjacent floor areas to the west (Room 13) appear to be a grade supported concrete slab, installed during the 1959 rehabilitation project. For more information on the archeological findings, refer to *Archeology at the Petersen House: Unearthing an Alternative History*, 1991, as referenced in the bibliography of this report. The report served as the basis for the information provided regarding the existing floor framing in Room 12, prior to the modern repairs.

There was a significant amount of plaster damage evident on the north wall of the house beneath the bedroom where Lincoln died or the Death Room. It appears that there may have been a roof leak at one time that has permitted water to enter the house and run down the interior face of the wall. This condition was discussed in Part IE, Architectural Assessment and Treatment, and was corrected in the 1978-1980 restoration.



NOTES:

1. ▨ DESIGNATES LOCATION OF OBSERVATION OPENING CUT INTO THE EXISTING FLOOR.

EXISTING CONDITIONS:
STRUCTURE

PETERSEN HOUSE–HWLD
BASEMENT PLAN
W/FLOOR FRAMING

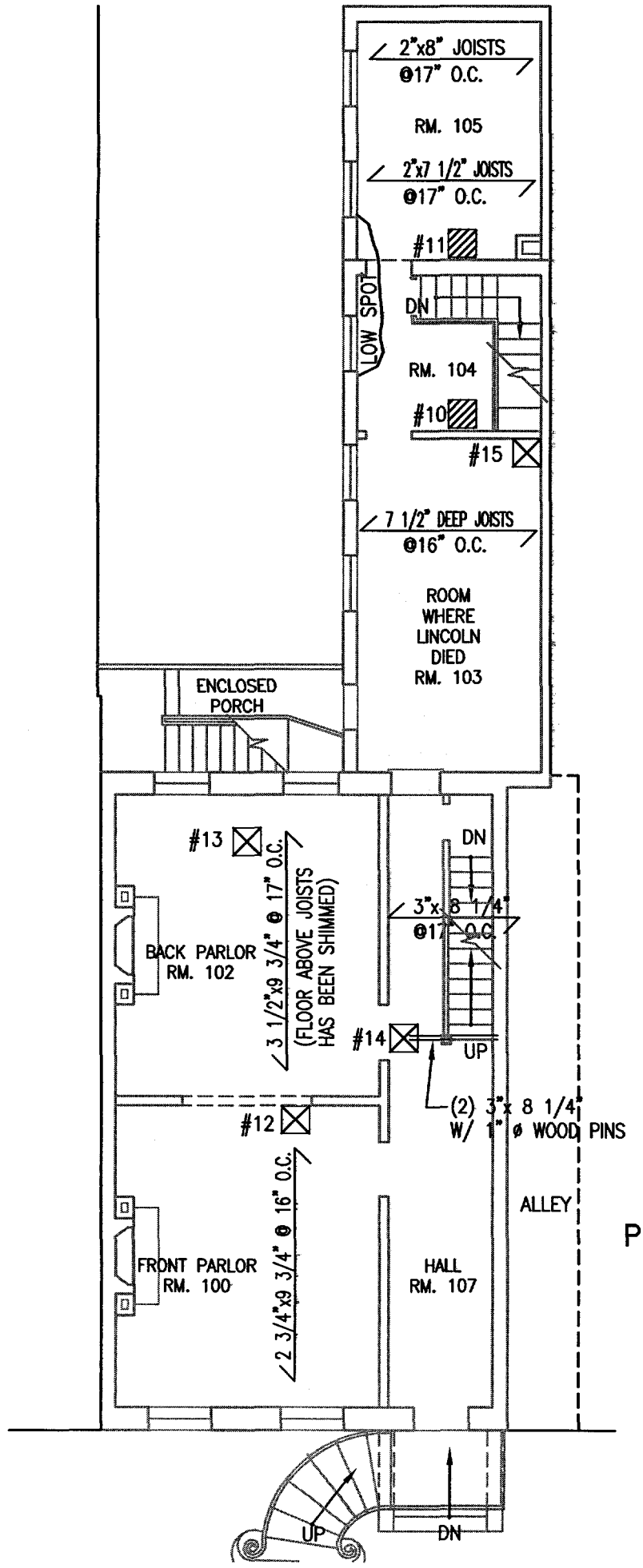
0 1 2 5 10
SCALE OF FEET

First Floor Framing:

At the first floor level, four openings were made through the basement ceiling and two openings were made through the first floor decking in order to observe the existing structure. At the east side of the house, the floor was framed with 2 ¾ -inch x 9 ¾ -inch framing spaced at 17-inches on center similar to the floors above. In the hall (Room 107), the joist size changed to 3-inches x 8 ¼ -inches spaced at 17-inches on center. A double joist fastened together with 1-inch diameter wood pins was observed at the base of the stair. At locations where joist to beam connections were required, mortise-tenon and pin joints were observed throughout the house.

At the west side of the house in the rear ell under the Death Room, the existing joist depth of 7 1/4-inches could be confirmed through a small hole in the ceiling. The joists in the adjacent room to the west were found to be 7 ½ -inches deep spaced at approximately 16-inches on center. According to the July, 1957 measured drawings, the joists in this area are 3-inches wide x 8-inches deep spaced at 16-inches on center. Since typical joists in the house measure 2 ¾-inches rather than 3-inches, a joist size of 2 ¾-inches x 7 ½-inches will be used as the basis for the load calculations at the west side of the house.

An additional request was made to remove several linear feet of the cornice molding of the suspended pressed tin ceiling and original plaster ceiling beyond (Room 12), in order to confirm the condition of the existing floor joists under the Death Room. Upon opening this area to view, no evidence of moisture damage to the joists was found within the pockets at the masonry party wall (north). It was also confirmed by the project architect that the joists in this area measure 2-inches wide x 7 ¼-inches deep, spaced 16 inches on center.



NOTES:

1. ☒ DESIGNATES LOCATION OF OBSERVATION OPENING CUT INTO THE BASEMENT CEILING BELOW.
2. ▨ DESIGNATES LOCATION OF OBSERVATION OPENING CUT INTO THE FLOORING OF THE FIRST FLOOR LEVEL.

EXISTING CONDITIONS:
STRUCTURE

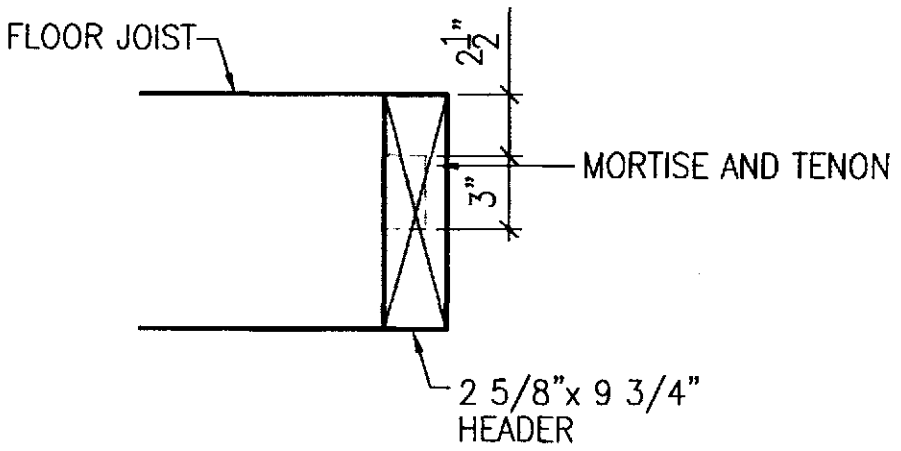
PETERSEN HOUSE–HWLD
FIRST FLOOR PLAN
W/FLOOR FRAMING

0 1 2 5 10
SCALE OF FEET

Second Floor Framing:

Five different observation openings were made through the wood floor decking at various locations in the second floor. In general, it appears that the floors are framed with 2 ¾ -inch x 9 ¾ -inch joists spaced at approximately 17-inches on center. The joists are supported by a wood stud wall and a wood header beam between the two large rooms (Rooms 201 and 202) and by two flush framed 2 ¾ -inch x 9 ¾ -inch wood headers at the north side of the house. Mortise and tenon joint connections are used to support the ends of the joists at the each of the headers (Section 1/2ND FF). Wood decking that appears original spans perpendicular to the joists.

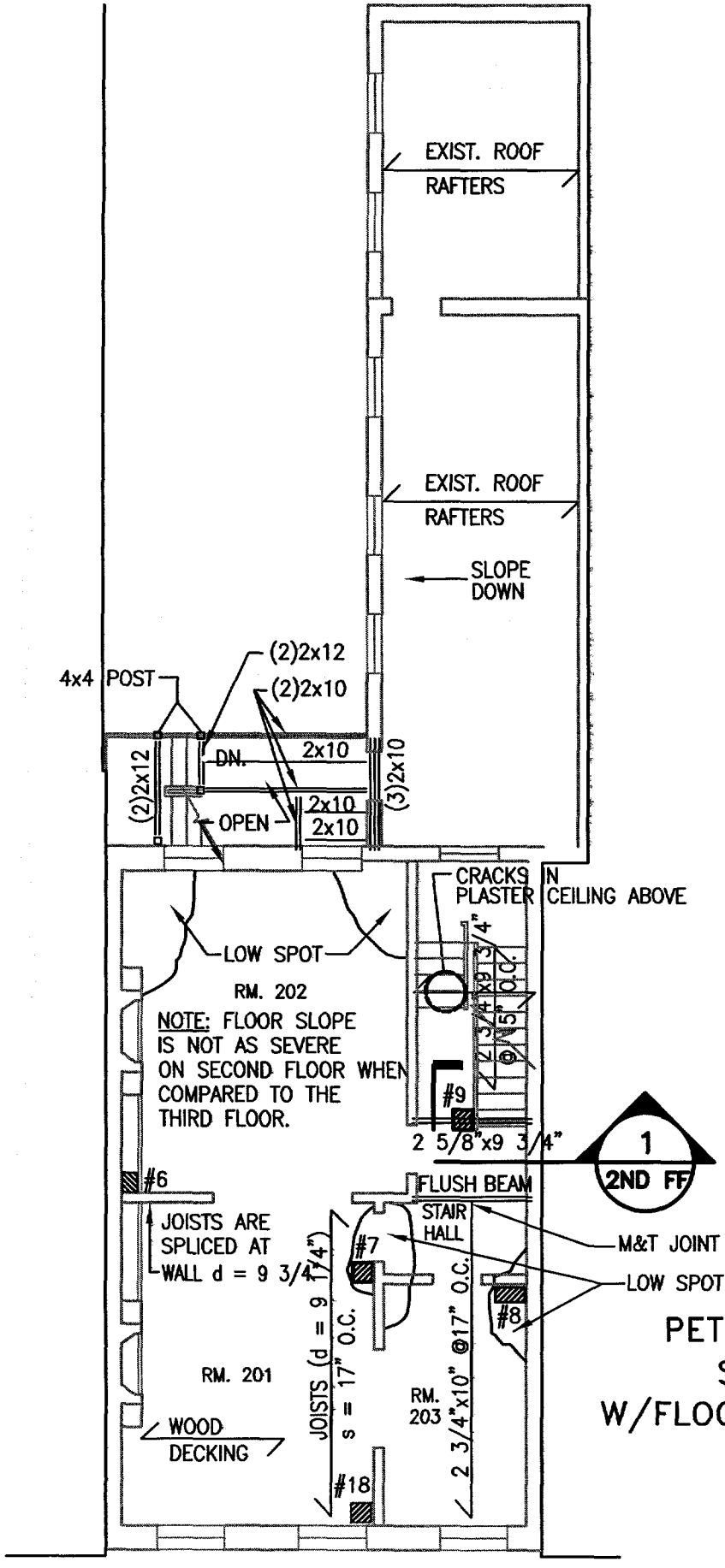
As observed at the third floor, the floor slopes toward the east/west partition wall and to the southwest fireplace. It appears that the slope of the floor adjacent to the wall may have been exacerbated by the presence of heavy storage cabinets placed against the wall. This use has caused permanent defection in the decking. It would be necessary to jack the floors in order to remove the deflection, an action that could cause significant damage to the existing plaster on the surface of the walls. For this reason, no remedial work is recommended for this condition, beyond immediate removal of all heavy objects. Note that the floor slopes observed on the second floor are slightly less severe than the slope observed at the third floor.



PETERSEN HOUSE–STRUCTURAL DETAIL
SECTION 1 @ 2ND FL. FRAMING



SCALE: 1-1/2" = 1'-0"



NOTES:

1. ▨ DESIGNATES LOCATION OF OBSERVATION OPENING CUT INTO THE FLOORING OF THE SECOND FLOOR LEVEL.

EXISTING CONDITIONS:
STRUCTURE

PETERSEN HOUSE–HWLD
SECOND FLOOR PLAN
W/FLOOR & ROOF FRAMING



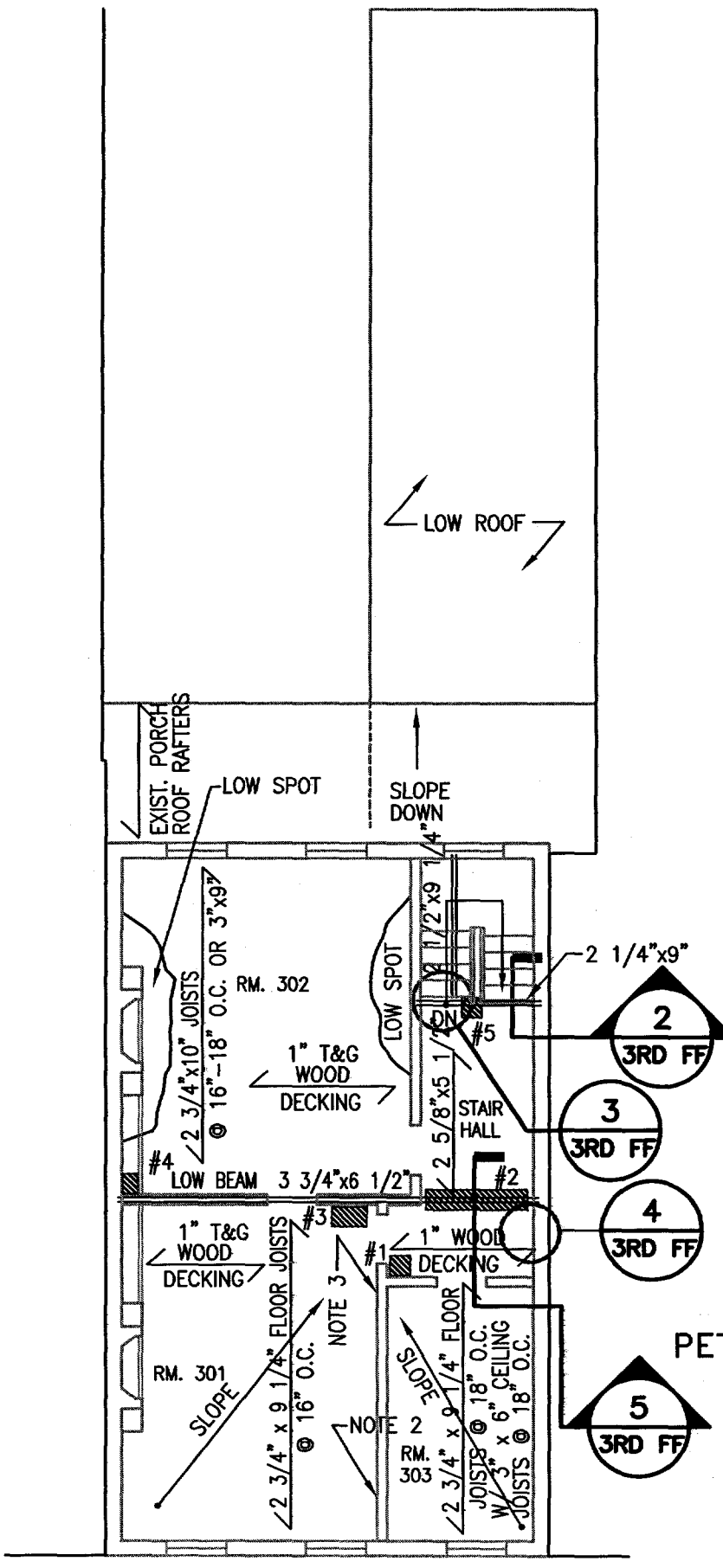
Third Floor Framing:

Five different observation openings were cut through the existing third floor decking. The joist size and spacing varied slightly from room to room. In general, the main rooms are framed with 2 ¾ -inch x 9 to 10 -inch deep joists spaced at 16 to 18 -inches on center. The joists bear on the east and west exterior walls and at the center of the house on a 3 ¾ -inch x 6 ½-inch deep beam that is located directly beneath the joists. There are likely a series of posts or studs which support the low beam. A 1-inch thick wood deck spans between each of the joists. At the stair hall/landing, the joist size decreases to 2 5/8-inch x 5 ½-inch. Ceiling joists 2 ½-inches x 5 ½-inches are located directly below each joist (Section 5/3RD FF).

At the stair header location, there does not appear to be any vertical support of the second floor ceiling joists. A crack was observed in the underside of the plaster ceiling at this location (Section 2/3RD FF). The joists are connected to the flush headers with mortise and tenon joints and one side of the stair and by a half lap joint at the opposite side of the stair (Plan Detail 3/3RD FF). One of the observation openings in the corridor was extended all the way to the north wall where a steel strap was observed extending from the joists into the brick wall (Plan Detail 4/3RD FF). The strap appears to be fastened directly to the underside of the floor joists providing a lateral brace to the brick wall which would have no other lateral connection to the framing since this wall is non-load bearing.

There are several areas adjacent to the east/west partition wall where the floor appears to have dropped several inches inducing a crack at the top of the partition. It appears that this condition has been caused by the deflection of the wood decking under the partition wall. The wall studs from below stop 6-inches below the floor decking. This existing framing condition causes the floor joists adjacent to the partition to support the additional load of the partition which causes additional deflection in the joists. Additional floor deflection has likely resulted from the use of these rooms for storage.

There is a significant amount of plaster damage on the south side of the house likely due to the previous water leaks evident in the roof. Another low spot was evident at the southwest fireplace which may be related to this condition.



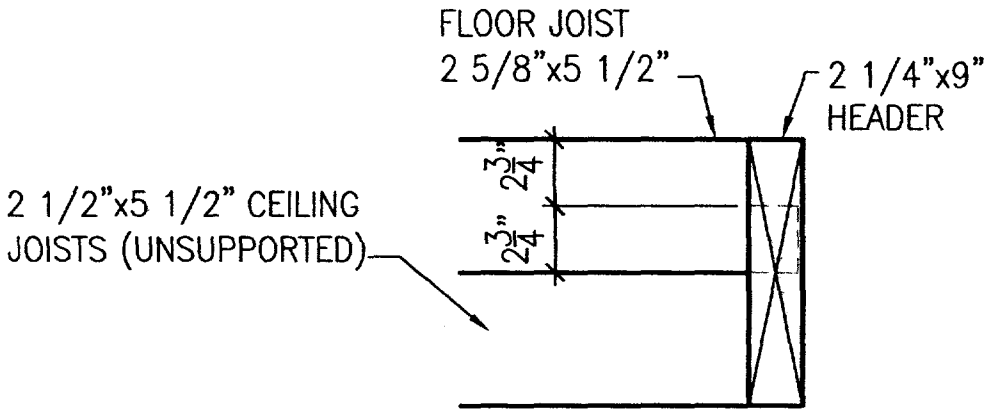
NOTES:

1. ▨ DESIGNATES LOCATION OF OBSERVATION OPENING CUT INTO THE FLOORING OF THE THIRD FLOOR LEVEL.
2. CRACK OBSERVED AT TOP OF PARTITION LIKELY DUE TO SETTLEMENT OF THIS WALL DUE TO LOAD FROM CEILING JOISTS ABOVE.
3. WALL STUDS FROM BELOW STOP 6" BELOW FLOOR DECK.

EXISTING CONDITIONS: STRUCTURE

PETERSEN HOUSE–HWLD
THIRD FLOOR PLAN W/FLOOR FRAMING

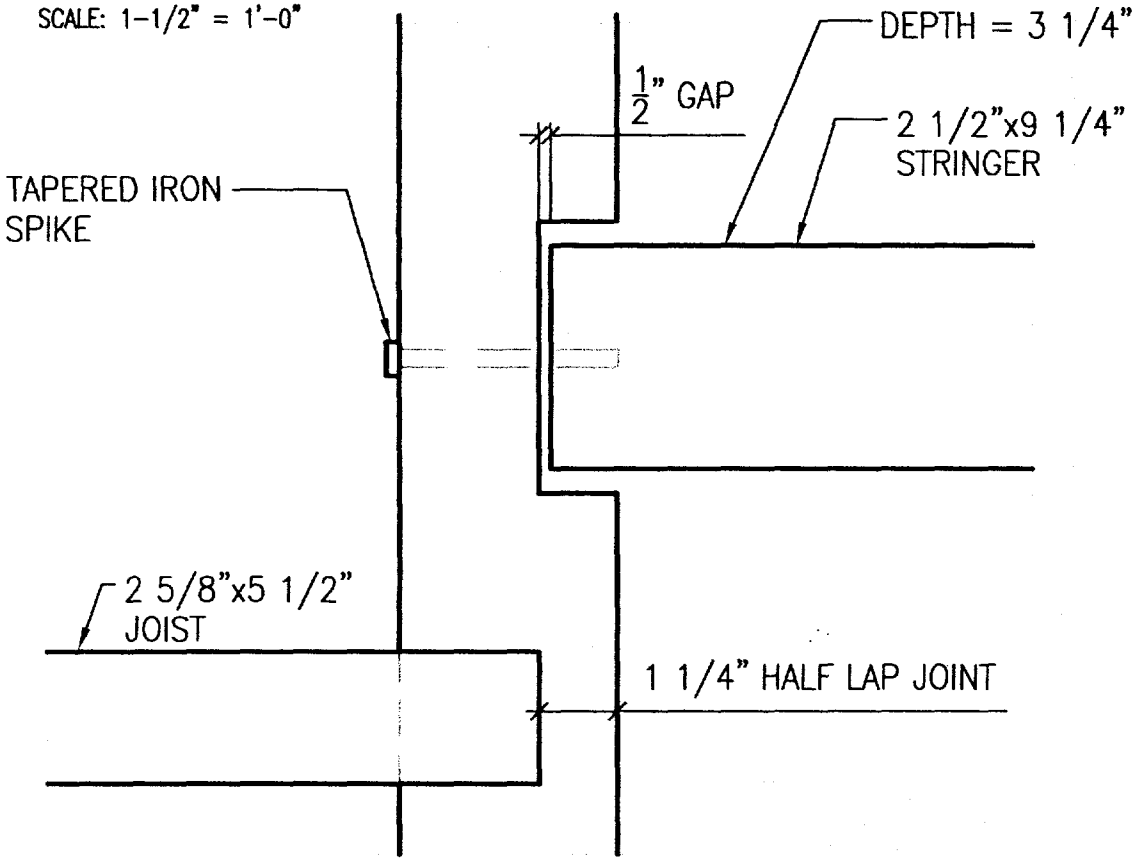
0 1 2 5 10
SCALE OF FEET



PETERSEN HOUSE–STRUCTURAL DETAIL
SECTION 2 @ 3RD FL. FRAMING



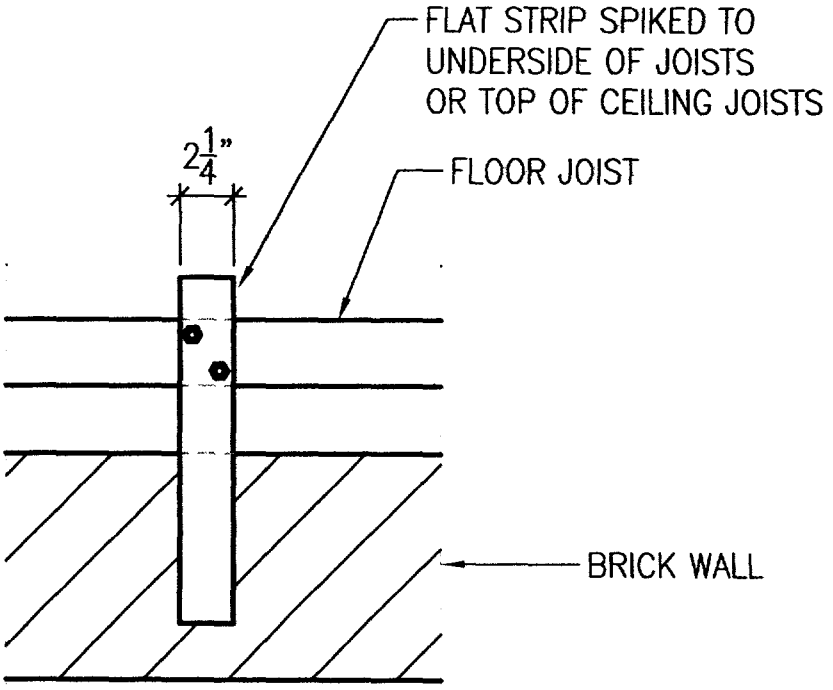
SCALE: 1-1/2" = 1'-0"



PETERSEN HOUSE–STRUCTURAL DETAIL
PLAN DETAIL 3 @ 3RD FL. FRAMING



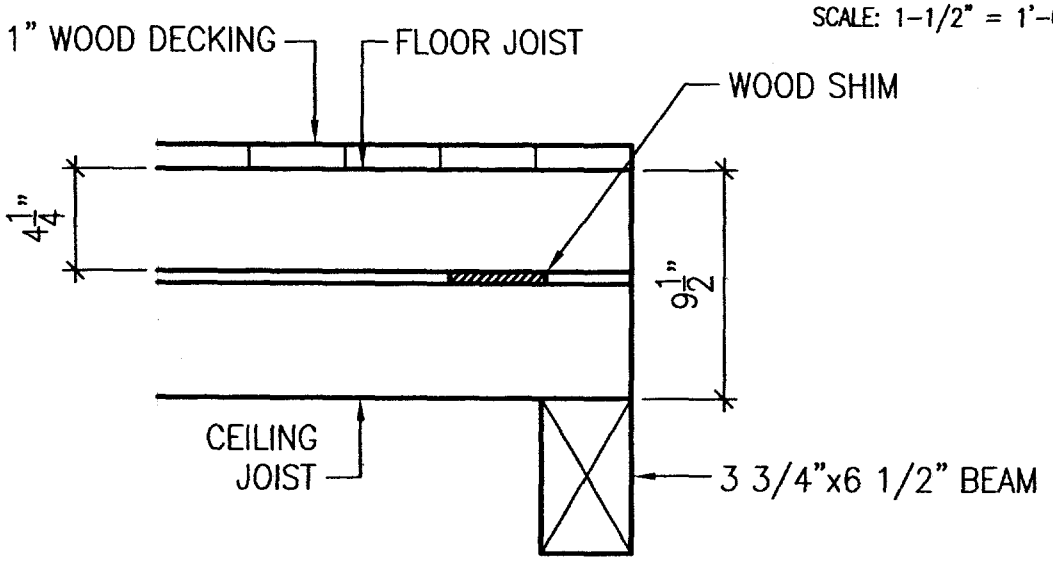
SCALE: 1-1/2" = 1'-0"



PETERSEN HOUSE–STRUCTURAL DETAIL
PLAN DETAIL 4 @ 3RD FL. FRAMING



SCALE: 1–1/2" = 1'–0"



PETERSEN HOUSE–STRUCTURAL DETAIL
SECTION 5 @ 3RD FL. FRAMING



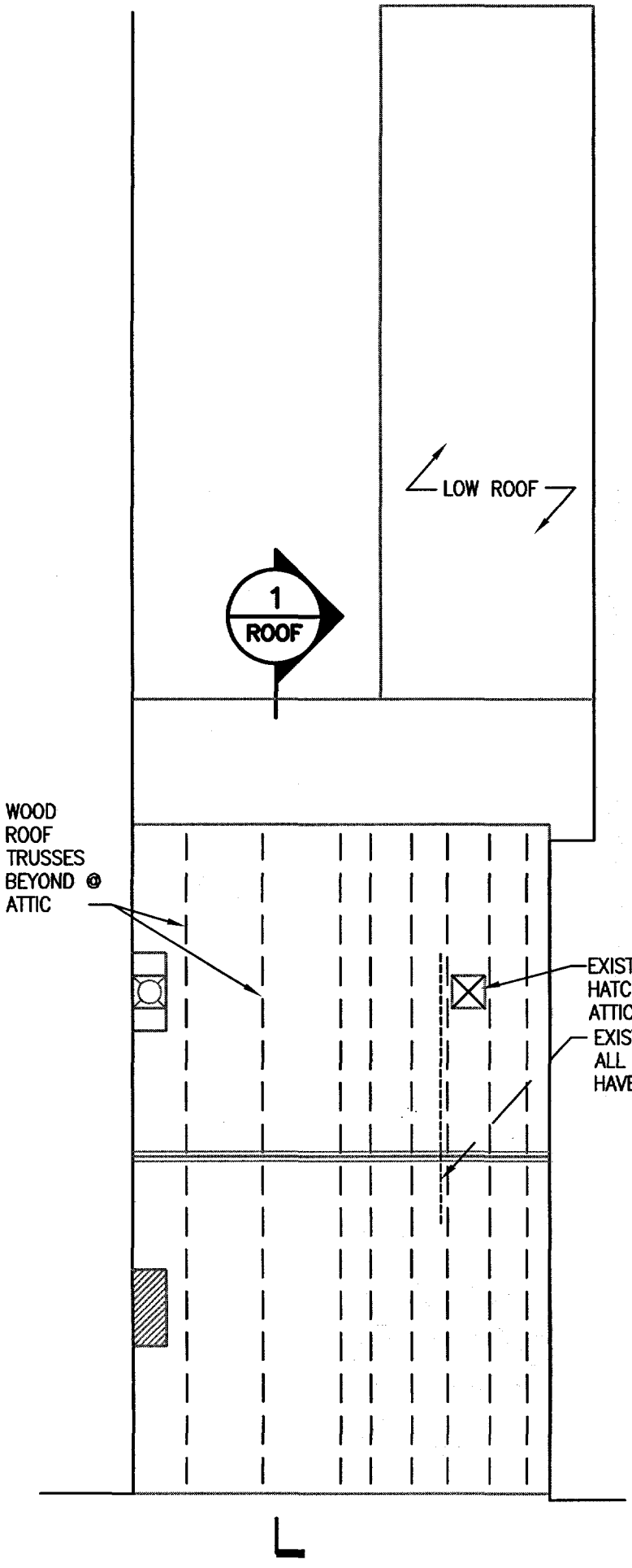
SCALE: 1–1/2" = 1'–0"

Roof Framing:

The existing roof is framed with stick built wood trusses which span the length of the house from east to west. The trusses consist of 3-inch x 4 ½-inch top chords with 2 ¾-inch x 5-inch bottom chords that also serve as the ceiling joists for the Third floor. A continuous ribbon board located on top of the ceiling joist and notched into the bottom of the top chords is used to join the top and bottom chords. The ceiling joists lap at the center of the roof and are partially supported by the Third floor partitions below. Typically, alternate trusses have 1 ½-inch x 6-inch collar ties and 2 ½-inch x 3 ¾-inch web members (Detail Section 6/Roof Framing). The exception to this occurs at the third truss from the north wall where all the web members and the collar tie have apparently been removed from the truss adjacent to the attic hatch. The spacing of the trusses varies from a maximum of 4-feet 2-inches to a minimum of 2-feet. Wood decking 1 ¼-thick x 8-inches wide spans between the trusses.

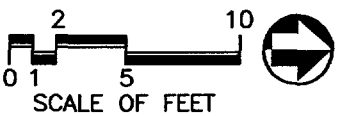
There is a significant amount of water staining evident on the underside of the decking and on the faces of the top chord. A layer of plywood sheathing has been added over the top of the existing wood decking as a permanent repair. Despite the water staining, no signs of rot were evident in the decking or the truss members. The heel connection of the trusses, a common location for rot to be found in wood trusses, was not accessible and could not be probed to verify the physical condition in this area. No signs of structural distress were evident to any of the existing truss members. There does not appear to be any active water leaks. The previously completed repairs have been effective in restoring the water tightness and overall serviceability of the roof.

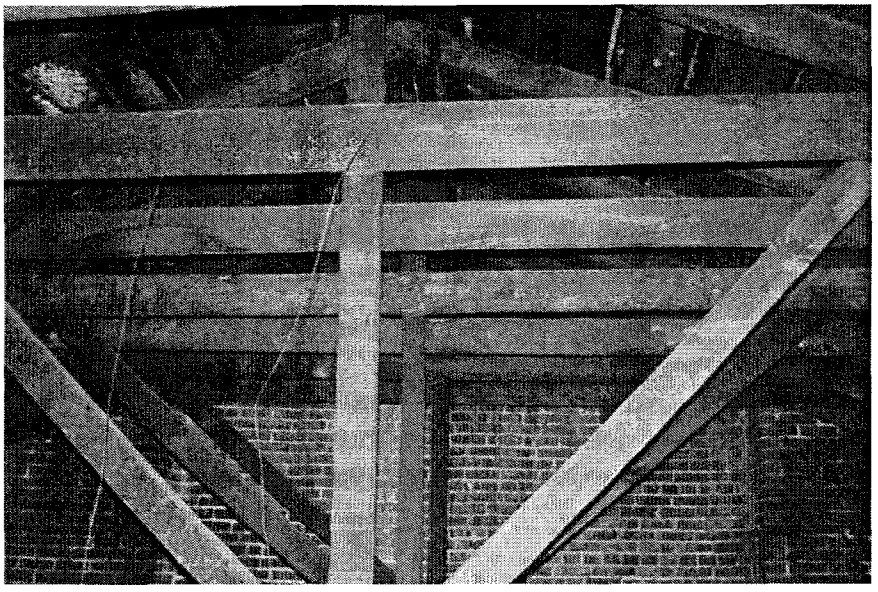
The lower shed roof area is not visibly accessible but appears to be performing in a serviceable condition. Observation opening #15 was expanded to view the existing framing where the plaster deterioration was evident. No framing defects were observed.



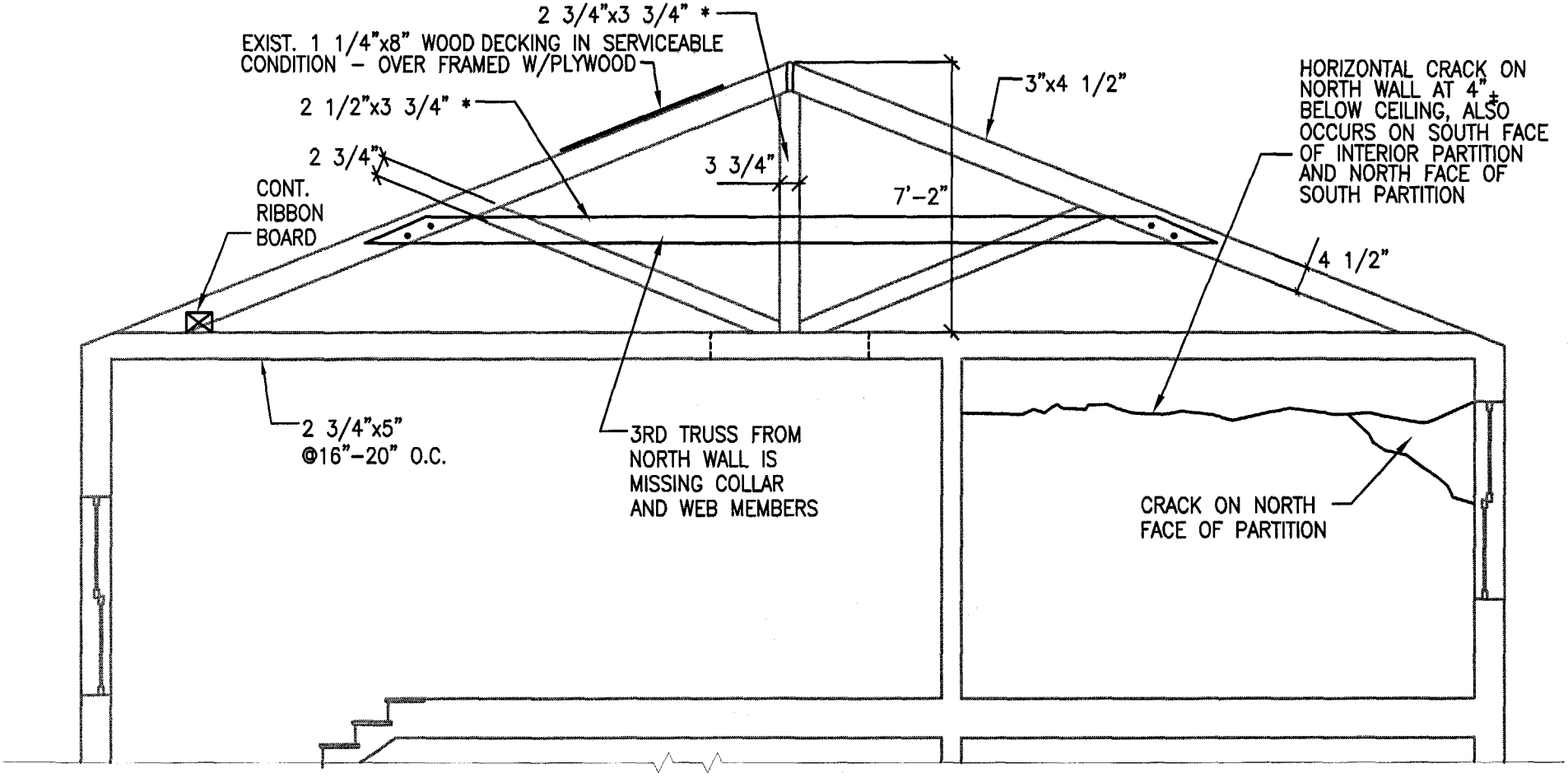
EXISTING CONDITIONS:
STRUCTURE

PETERSEN HOUSE–HWLD
ROOF FRAMING PLAN





Detail of Truss as viewed from Attic Hatch
Photo AR-4, architrave p.c., architects 2/15/02



NOTES:

1. *THESE MEMBERS OCCUR AT ALTERNATE TRUSSES EXCEPT AT 3RD TRUSS FROM NORTH WALL, WHERE ALL WEB MEMBERS INCLUDING COLLAR TIES ARE REMOVED.

2. MANY RAFTERS ARE WATER STAINED BUT NO SERIOUS SIGNS OF ROT OR DETERIORATION WERE EVIDENT.

PETERSEN HOUSE–HWLD
EXISTING TRUSS SECTION 1 @ ROOF FRAMING

1 5
0.5 2.5
SCALE OF FEET

System Assessment and Loading Analysis

The overall structural condition of the house appears to be serviceable at present. Excessive floor deflection and plaster cracking in the wall partitions and ceilings were evident at the locations indicated in the existing framing plans contained in this report. It appears that the deflection observed in the second and third floors located at the east/west partition at the front of the house has been caused by the partial loading of these partitions by the attic ceiling joists, the dead weight of the partitions, and by the weight of filing cabinets and furniture storage located adjacent to the walls. The observation openings made at the second and third floors confirmed that the wall studs are not continuous from floor to floor and thus the relatively small loads have caused settlement and cracking in the wall plaster. A similar condition appears to have occurred on the 3rd floor at the east/west partition between room 302 and the stair hall.

An additional low spot in the floor was observed at the fireplace hearths in the second and third floors. No openings were made at these locations but based on past experience, it is likely that the deflection in this area was caused by the weakening of the floor joists adjacent to the hearth by the mortise and tenon connection between the floor header and the last continuous joist at the edge of the fireplace hearth. The removal of the existing wood decking adjacent to the fireplace would be required in order to strengthen the joist and return the floor to a serviceable condition. It may be prudent to attempt to make additional openings at the hearth header to joist connections prior to performing any extensive removal of the existing decking.

Based upon observations made from floor openings at the east side of the stair, it appears that the support of the existing ceiling framing is minimal at best. The cracking observed in the second floor ceiling in the stair hall is likely associated with this condition. It would be necessary to remove the existing ceiling in this area in order to properly assess the existing condition and develop remedial recommendations.

The roof truss framing appears to be performing satisfactorily; however, the truss nearest the hatch is missing all of its web members. This condition significantly decreases the structural capacity of the truss. The missing members should be reattached identical to the adjacent trusses in order to restore the structural capacity of the truss and the roof system.

Load calculations have been performed based upon the existing framing information obtained from the various observation openings made in the ceilings and floors. The calculations are based upon the 1997 National Design

Specification for Wood Construction. For the purposes of the analysis, it has been assumed based on limited visual observations and experience with past framing of similar vintage that the existing timber species is pine. A grading of No. 1 or better has also been used. Most modern lumber is graded at No. 2 or better, but it is likely that lumber of this age would grade much higher than modern lumber.

At the third floor, the calculated live load for the rooms 301, 302 and 303 ranges from 52 psf to 53 psf. In the stair hall, the capacity of the floor joists is 101 psf but the overall capacity of the floor system is limited by capacity of the floor header at the stair (78 psf) and by the capacity of the mortise and tenon joint between the hall joists and the header (72 psf).

The central beam located beneath the north/south partitions which extends across the hall, has a calculated live load capacity of only 32 psf. Although this location in the house was not exposed and documented at each floor level, it is probable that this header condition exists at each floor and will limit the overall capacity of the halls to 32 psf.

The floor joists in the second floor have a calculated live load capacity of 68 psf. The capacity of the landing header exceeds 72 psf as does the capacity of the mortise-tenon joint between the landing joists and the header. The overall capacity of the rooms 201 and 202 may be limited by the capacity of the existing beam located above the wall opening between rooms 100 and 102. If the same beam size was used at this location as was observed in the hall opening on the floor above, the live load capacity in this area would be limited to 6 psf. Since no excessive deflection was observed in the floor at this location, it appears that a larger beam was used for this opening.

At the first floor, the calculated live load capacity for the floor joists in Rooms 100, 102, 103 and 105 is in excess of 80 psf. The limiting capacity was calculated at room 103.

In the basement, the calculated live load capacities for Rooms 9, 10 and 12 were in excess of 100 psf except for room 10 which was 62 psf. The remaining rooms consist of a grade supported slab which likely has a live load capacity in excess of 100 psf.

Code Compliance Evaluation

The current design code for the District of Columbia is the 1996 BOCA. According to Table 1606, the applicable minimum live loads are as follows:

Assembly areas/Lobbies	100 psf
1st Floor Corridors	100 psf
Other Corridors (same as occupancy served)	
Offices	50 psf
Residential Dwelling units/corridors	40 psf
Residential Public rooms/corridors	100 psf
Storage areas: Light	125 psf
Storage areas: Heavy	250 psf

The load calculation results contained in the preceding section indicate that most areas of the house meet typical residential live load requirements and that many areas also meet office load requirements. It should be understood, however, that for the house to qualify for an office use, an additional 20 psf minimum partition load is required in accordance with section 1606.2.4 to account for the possibility of future partitions being subsequently erected, rearranged or relocated.

It is also of note that none of the areas in the existing house qualify for any type of storage use which appears to be the current primary use for many of the rooms. This practice of using the rooms as storage for the theatre should be terminated since continued storage use may overstress the existing framing and cause permanent damage to the structure of the house.

Treatment of Deficiencies

The following is a summary of the significant structural deficiencies observed and the recommended remedial action for each item.

- Vertical settlement and plaster cracking in the east/west partition between Rooms 301and 303 on the third floor and 201 and 203 on the second floor. – *Add solid wood blocking between the discontinuous ends of the wall studs at each floor level. Since the discontinuity in the studs occurs immediately below the floor level, it may be easier to install the blocking from the top of the floor by removing a small portion of the existing decking, than to cut into the plaster ceiling below. Note, however, that the floor decking is likely original material, and the plaster below has previously been replaced.*

- Vertical settlement and plaster cracking in the east/west partition between Room 302 and the Stair Hall and Room 202 and the Stair Hall. – *Add solid wood blocking as described above.*

- Excessive floor deflection adjacent to the fireplace hearth in Room 302. – *Provide additional ceiling/floor openings at the location of the header to joist connection adjacent to the hearth. Examine the condition of the joist and evaluate the capacity of the first continuous joist adjacent to the hearth. Perform remedial work as required or limit the floor capacity of the room accordingly. Note that the floor decking is likely original material, and the plaster below has previously been replaced.*

- Existing roof truss located immediately to the south of the attic hatch is missing all web members. – *The members must be reinstalled to match the existing trusses and to restore the structural capacity of the truss.*

- Existing plaster ceiling at the 2nd floor stair landing is cracked. – *Remove a strip of plaster in the area to examine and assess the ceiling system. Develop a remedial solution based upon the findings.*

- Live load capacities – Depending upon the desired future use of the house there may be areas of the framing which will be structurally deficient – *Coordinate with the NPS to provide room capacity limits or develop floor strengthening details once the proposed function of each room has been determined.*

  Using a conservative load of 200 lbs/person, the occupancy of each of the floor levels of the house would be restricted as follows based upon the limiting calculated live load of each room:

  3rd Floor: 9 people
  2nd Floor: 9 people
  1st Floor: 28 people
  Basement: 34 people

  The 2 upper levels of the house should remain restricted from public use and in no case should the uppers floors be used for storage. Group sizes for visitors entering the house museum should be no larger than 28 people. This limitation is based upon all members of the group congregating in a single room or area of the house. If specific aisles were defined in the house that would limit public access to only small portions of the rooms, larger groups could be permitted.

Mechanical, Electrical, and Plumbing

Description and Inspection Methodology

This section of the report documents the existing conditions and evaluates the suitability of the mechanical, electrical, and plumbing systems for the present use of the Petersen House – the House Where Lincoln Died. The evaluation is based on the understanding from the National Park Service that the first floor will be the only exhibition floor. The other floors will be used for light storage and will typically be unoccupied, as will the rooms on the first floor beyond the Death Room.

JVP Engineers, P.C., performed their initial survey of the building on January 8, 2002. The survey was limited to visible and easily accessible elements; no attempts were made by JVP Engineers to dismantle, remove or uncover equipment, material or building components that were inaccessible or concealed. The evaluation is based on existing observable conditions, archival drawings and National Park Service mechanical upgrade project drawings as listed in the Appendix. Interviews with National Park Service personnel concerning the condition of the mechanical, electrical, and plumbing systems and the operation of the building aided the survey.

Mechanical System - Existing Conditions

Description:

Heating – A gas-fired boiler produces hot water for the building's heating system, which consists of cast iron radiators and baseboard radiation panels. The boiler and three circulating pumps are located in the boiler room (Room 11) in the basement. The boiler is model G200-W-7CON manufactured by H.B. Smith and has a capacity of 175 MBH output with 224 MBH input. The circulating pumps are series HV inline pumps manufactured by Bell & Gossett. Piping from these pumps runs along the basement ceiling and turns down to deliver hot water to baseboard radiation in the basement storage (Room 10) and hall (Room 9). Another branch runs to the rear ell and serves one radiator in the vestibule and one in the restroom (both Room 13).

Each room on the first floor has baseboard radiation on one or more walls served by concealed piping. The workroom/storage (Room 201) and curator's storage (Room 203) on the second floor are each heated by an upright cast iron radiator served by exposed piping (2 pipe system). Radiators in both the front storage and rear storage rooms of the third floor (Rooms 301/302) are

located directly above the radiators on the second floor. A thermostat in the front parlor of the first floor controls the boiler.

Ventilation – The introduction of fresh air into the building is dependent upon infiltration. This infiltration is provided primarily from the entering and exiting of visitors through the front door, and basement door when utilized. Cracks around windows throughout the house allow additional infiltration.

Restroom Exhaust – The single existing restroom in the house is located in the rear ell of the basement (Room 13). It has an 8"diameter wall exhaust fan made by Nutone, in fair condition, which ducts the air across the janitor's closet and discharges to the exterior through the rear wall. A speed switch in the restroom controls the fan.

Air Cleaner – A console-type air cleaner has been placed in the front parlor. The unit is made by ATI, model Cleanaire 300, and is in good condition.

Air Conditioning – At the time of our survey, two window-type air conditioning units provided spot cooling in the house. The room on the first floor 1870s portion of the rear ell (Room 105) behind the Death Room has a window unit manufactured by Carrier in fair condition. The rear window in the front stair at the landing above the first floor has a window unit manufactured by General Electric in good condition.

System Assessment

The existing system of radiator heating and window unit cooling is not an effective or efficient means of providing appropriate temperature, humidity, and air quality control for exhibit space. Wide variations in temperature and humidity cause increased rates of deterioration in the historic furniture and finishes. Ideal temperature and humidity conditions would need to be established by a conservator since textiles, woods, and finishes have different requirements. On the other hand, since this building was constructed without insulation and vapor retarders, year-round interior climate stability could be detrimental to the structure due to moisture penetration and condensation. The original single-pane windows, without any storm panels, also lack the ability to prevent heat loss in the winter and heat gain in the summer. With only one single window air conditioning unit serving the restored portion of the house, the interior temperature often rises above 85°F during the summer. During those extreme conditions, which are normal during Washington D.C. summers, the house is closed to visitors.

The National Park Service has made a value analysis decision to not provide central air conditioning for the house. Although window units are inappropriate for a historic structure, the NPS intends to retain the one unit at the landing between the first and second floors to provide relief to the ranger station at the base of the stairs.

The installation date of the boiler has not been determined, but it appears to be in good condition. As planned in the upgrading of the heating system, which is to take place in the spring of 2002, the unit will be retained for continued use.

Code Compliance Evaluation

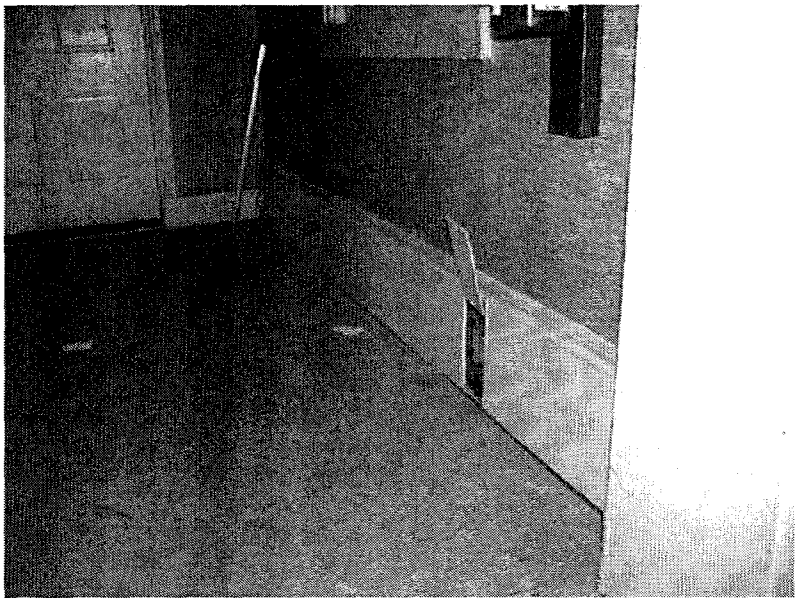
The building is generally in compliance with the applicable mechanical codes, except the chimney for the gas-fired boiler does not meet requirements. The combustion gases are currently discharged through a vent in an existing chimney that abuts a neighboring high rise. The National Fuel Gas Code (NFPA 54) paragraph 7.5.2 requires that the chimney "extend at least 3 feet above the highest point where it passes through a roof of a building and at least 2 feet higher than any portion of a building within a horizontal distance of 10 feet."

Treatment of Deficiencies

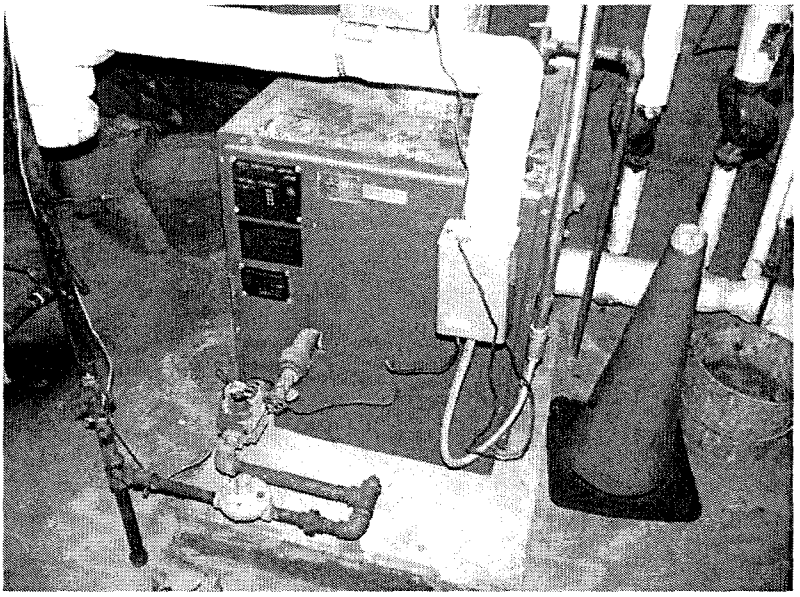
To comply with the code, the flue for the boiler would either need to be relocated to the center of the roof of the Petersen House or it would have to be extended up the side of the adjacent high rise to a point above its roof. Neither of these options are desirable due to the negative impact on the historic integrity of the structure. We recommend that the code authority having jurisdiction review this situation to determine if it is safe for the flue to remain as currently configured.

Although it is not a code violation, the lack of air conditioning is detrimental to the use of the house as a tourist site when the house must close due to high temperatures. The lack of air conditioning also hastens the deterioration of the antique furnishings. The installation of an air conditioning system to at least temper the air would reduce the fluctuations in temperature and humidity, but it would have significant physical impact on the historic structure. A condensing unit would need to be located outside, and space would need to be provided inside for an air conditioning unit. Ductwork would run exposed in non-exhibit areas. With extensive cutting and patching, it could be concealed within walls and ceilings. Air registers would be introduced into the historic exhibit spaces.

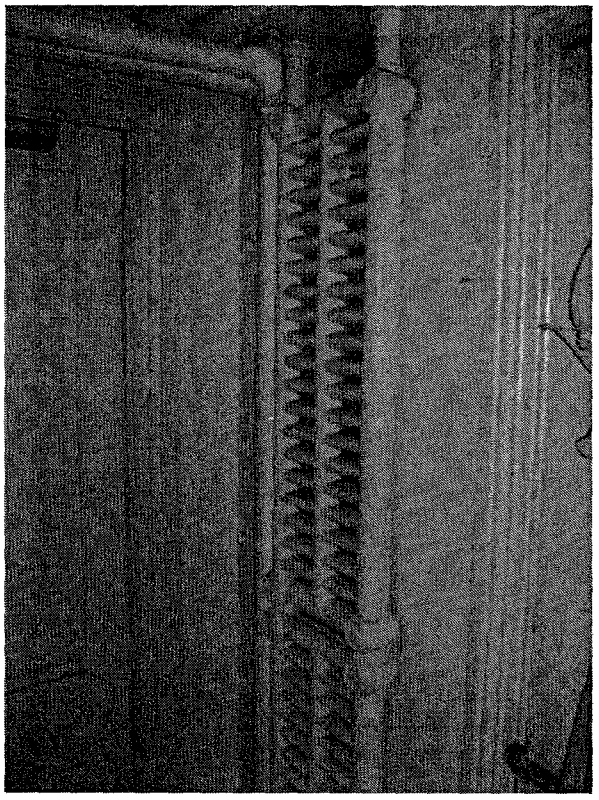
The introduction of historically appropriate interior storm window units would be advisable to better control temperature fluctuations caused by heat loss and heat gain. The storms also increase comfort by reducing drafts during the winter months. Operable units allow for opening of the windows during the summer. If there is no potential for use of the upper levels beyond light storage, black-faced insulation boards covering the window openings are a potential solution.



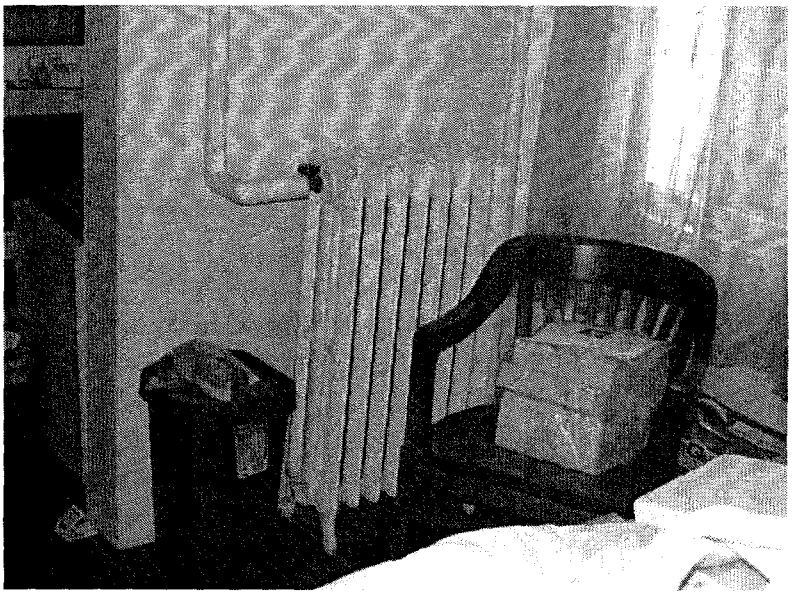
Hot water baseboard radiation, typical in basement and first floor.
Photo MEP-1 JVP Engineers, P.C. 1/8/02



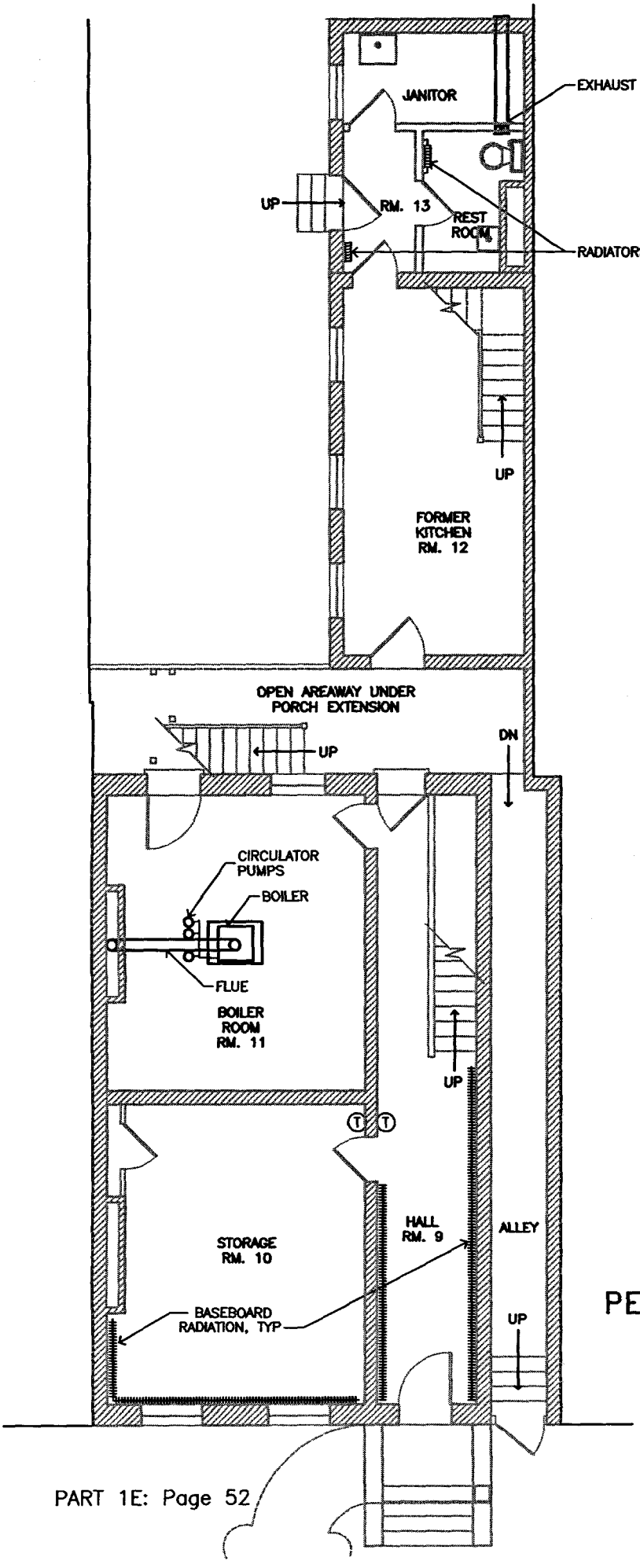
Gas-fired boiler in basement for heating system.
Photo MEP-2 JVP Engineers, P.C. 1/8/02



Cast iron radiator in rear vestibule of basement. Photo MEP-3 JVP Engineers, P.C. 1/8/02



Cast iron radiator at second floor. Photo MEP-4 JVP Engineers, P.C. 1/8/02



MECHANICAL LEGEND

Ⓣ WALL-MOUNTED THERMOSTAT

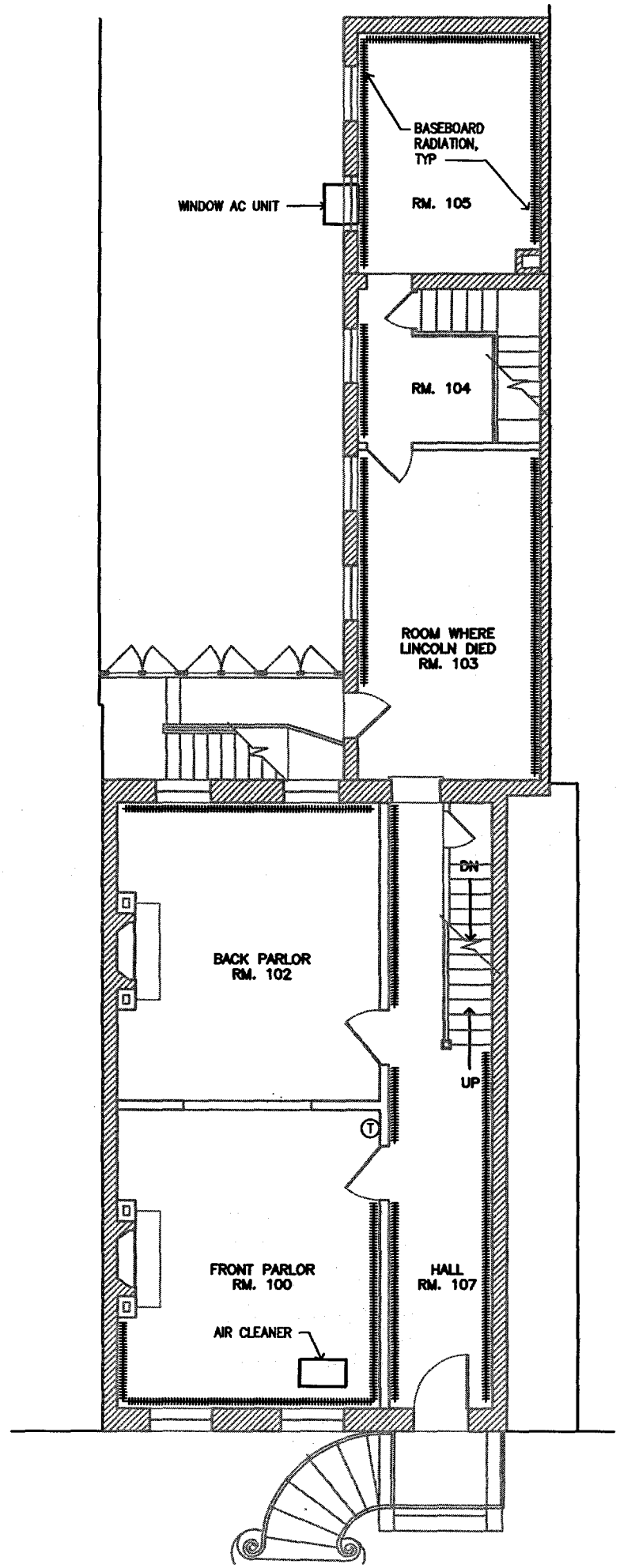
BASEBOARD RADIATOR, INSTALLED 1959

FLOOR MOUNTED 2 PIPE CAST IRON RADIATOR

EXISTING CONDITIONS:
MECHANICAL

PETERSEN HOUSE–HWLD
BASEMENT PLAN

0 1 2 5 10
SCALE OF FEET



MECHANICAL LEGEND

T WALL-MOUNTED THERMOSTAT

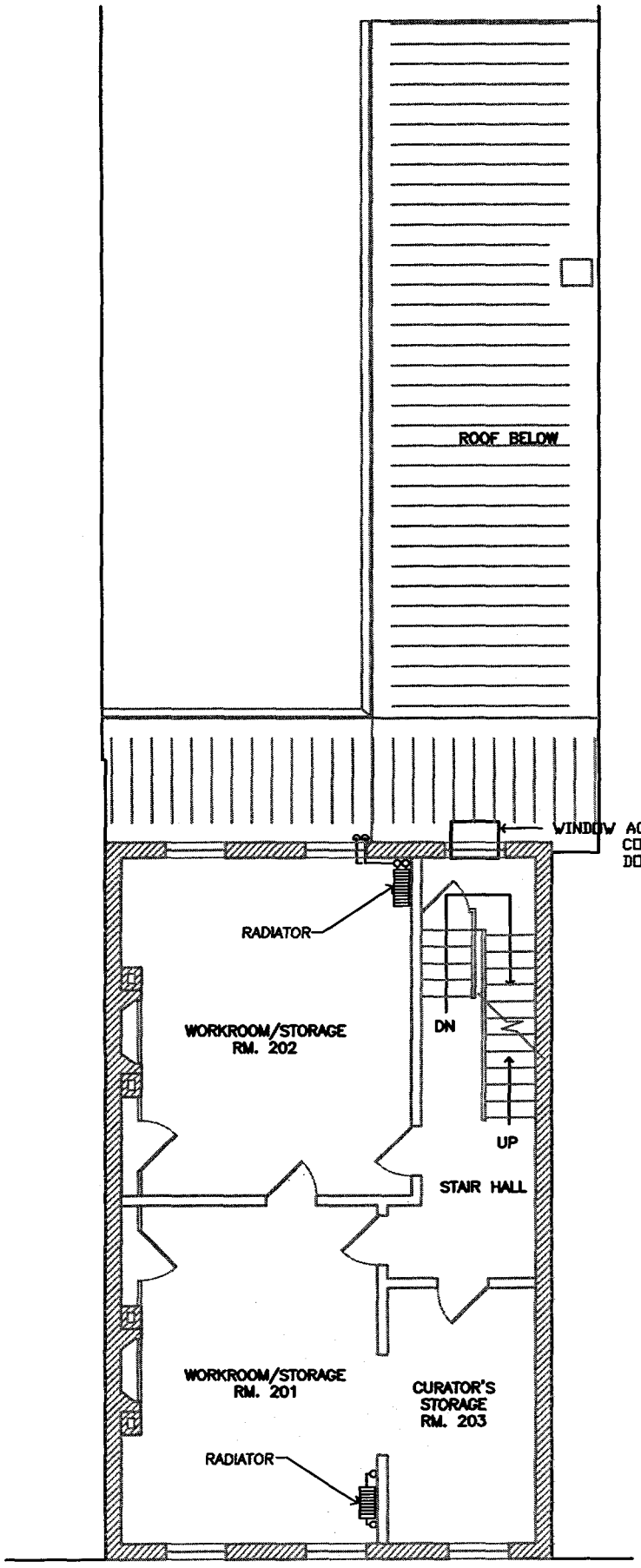
BASEBOARD RADIATOR, INSTALLED 1959

FLOOR MOUNTED 2 PIPE CAST IRON RADIATOR

EXISTING CONDITIONS:
MECHANICAL

PETERSEN HOUSE-HWLD
FIRST FLOOR PLAN

0 1 2 5 10
SCALE OF FEET



MECHANICAL LEGEND

Ⓣ WALL-MOUNTED THERMOSTAT

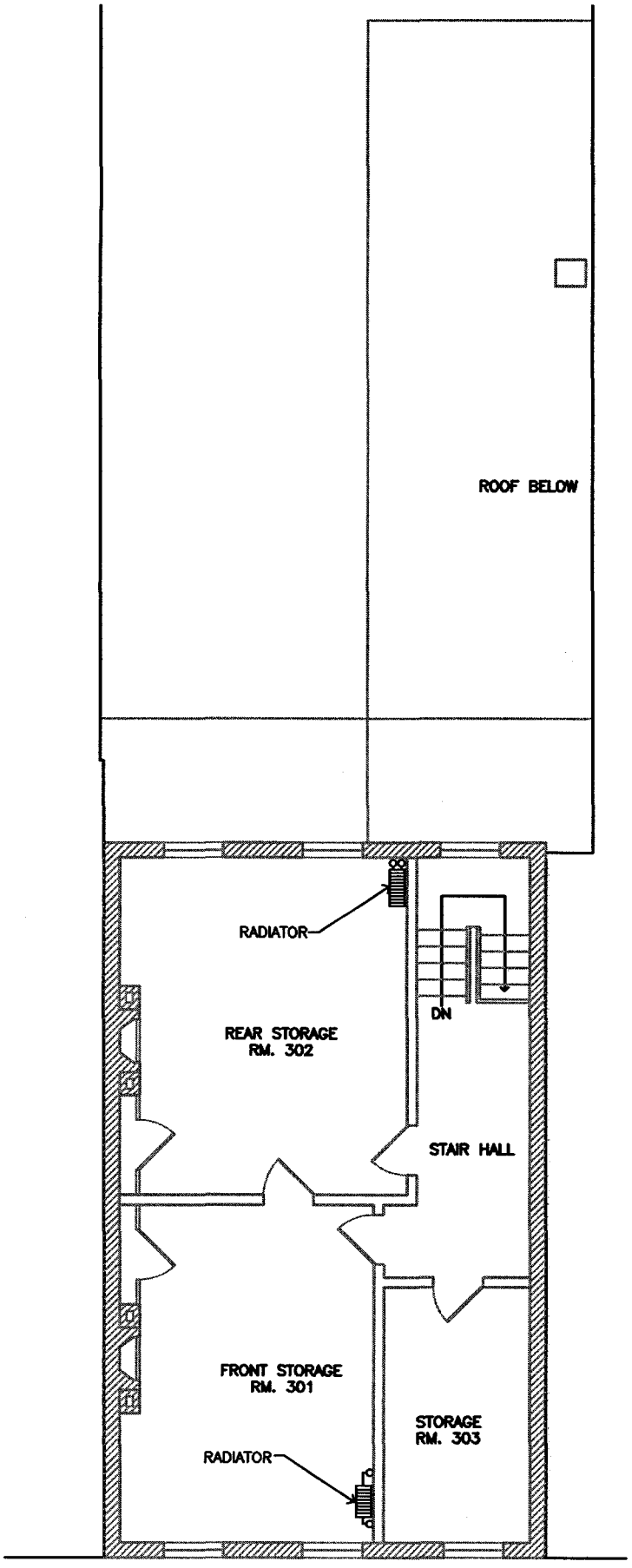
BASEBOARD RADIATOR, INSTALLED 1959

FLOOR MOUNTED 2 PIPE
CAST IRON RADIATOR

EXISTING CONDITIONS:
MECHANICAL

PETERSEN HOUSE-HWLD
SECOND FLOOR PLAN

0 1 2 5 10
SCALE OF FEET



MECHANICAL LEGEND

Ⓣ WALL–MOUNTED THERMOSTAT

BASEBOARD RADIATOR, INSTALLED 1959

FLOOR MOUNTED 2 PIPE
CAST IRON RADIATOR

EXISTING CONDITIONS: MECHANICAL

PETERSEN HOUSE–HWLD
THIRD FLOOR PLAN

0 1 2 5 10
SCALE OF FEET

Electrical System - Existing Conditions

Power:

The building's electrical service is provided from PEPCO. The meter and main electrical panel are located in the covered easement passageway on the north side of the basement. The present meter and panel board appear to be less than 50 years old. The meter probably dates to its relocation to the passageway in 1959. The panel is 150A, 2P, 240V/120V, 1 phase, 3 wire with a main circuit breaker and 30 poles. The panel has no spares. Electricity enters the house through the first stair down from the front entrance to the passageway. Power receptacles are typically surface-mounted and are served by exposed, square, metal conduit.

Lighting in Exhibit Area:

The first floor hall (Room 107) has a period pendant light (antique, but not original to the house). The front and back parlors (Rooms 100, 102) are lit by period-style chandeliers (antique, but not original to the house). The Death Room (Room 103) is lit by a wall sconce that is a custom replication of the original gas jet fixture (as documented by photographs and sketches of the room near the time of Lincoln's death). It has a decorative shade that has been stained, probably by heat of electric light bulbs. The enclosed porch and the back, basement vestibule (Room 13) have modern 8" x 8" surface mounted fixtures. The basement hall (Room 9) has circular incandescent fixtures about 6" diameter, with louvers.

Lighting in Functional, Back-of-House Areas:

The lighting is of several types and styles. The basement storage room (Room 10) has track lighting. The basement easement passageway has a wall-mounted bare bulb with a "jelly jar" cover and wire guard lying near and another fixture which is a "jelly jar" with wire guard. The stairs from the first floor to the basement have a bare 100 Watt incandescent bulb, wall mounted, near the top. The boiler room (Room 11) has surface-mounted bare bulbs. The janitor's closet (Room 13) has 8" x 8" surface-mounted fixtures. The restroom (Room 13) has a wall-mounted fixture with no lens cover. The second floor curator's storage (Room 203) has a surface mounted 8" x 8" incandescent fixture with lens. The curator's workrooms (Rooms 201, 202) each have one surface-mounted 1' x 4', 3 lamp fluorescent fixture. The storage room has an 8" x 8" fixture. The only lighting installed in the third floor is a surface-mounted down light in the stair hall. The three storage rooms (Rooms 301, 302, 303) have covers

in the center of the ceilings that indicate provision for ceiling mounted, concealed wiring fixtures.

Telephone – Telephones, connected to an exchange, were introduced to the house after 1878, when the first telephone exchange was installed in New Haven, CT. The main telephone panels are in the southwest corner of the boiler room. The terminal has about 52 lines with wires terminated on binding posts, secured by nuts. About 10 are in use. Also, a more recent terminal with about 60 lines, which is a punch down block, is in use with 7 pairs connected. Fifteen cables serve the house from this area. A lot of security wiring is present, which is the same type of wire as telephone, and probably uses telephone lines to report. Telephone-type wire is carefully plastered and painted to the joint between the ceiling and wall in the second and third floor rooms. Existing telephones include a touch tone wall phone at the top of the stairs that go from the main floor to the basement and a touch tone desk phone on the desk in Room 203. The stair wall in the former kitchen (Room 12) has a jack, Room 104 has a jack, and a loosely hung telephone jack is in the northwest corner of Room 202. In the front storage room on the third floor (Room 301), there is the unconnected end of a two pair telephone cable.

Fire Alarm and Life Safety – Each room has a smoke detector except for the boiler room, which has no smoke or heat detectors. These items are discussed in more detail in Part 1F of this report.

System Assessment

The power receptacles and conduits are in poor condition. The receptacles and conduits are loose in many places. The telephone panel is loose and is in very poor condition. Several light fixtures are missing lamps or have burned out bulbs.

Code Compliance Evaluation

The main electrical panel does not have the required 3 feet of clearance in front of the panel at its current location.

The surface-mounted conduit and the electrical devices are loose in many locations, in violation of the National Electrical Code (NFPA 70).

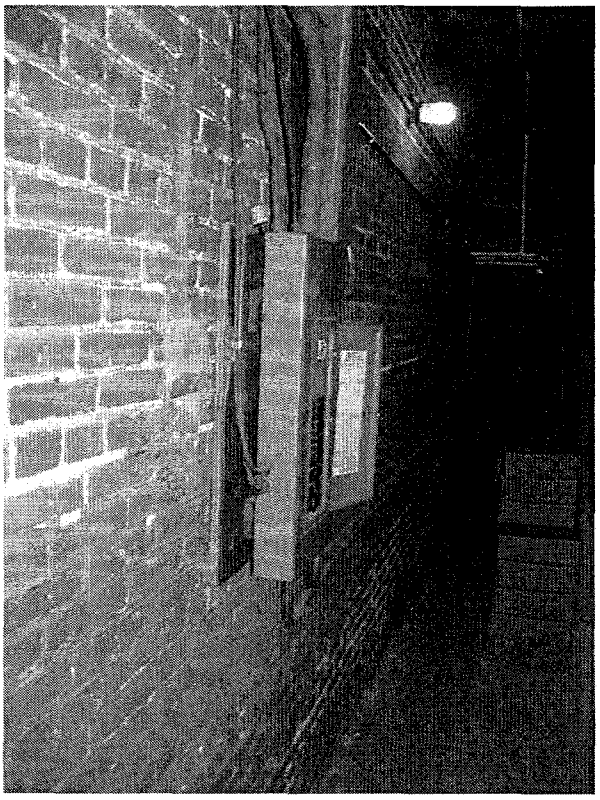
Fire alarm devices in the corridors do not comply with ADA guidelines.

Treatment of Deficiencies

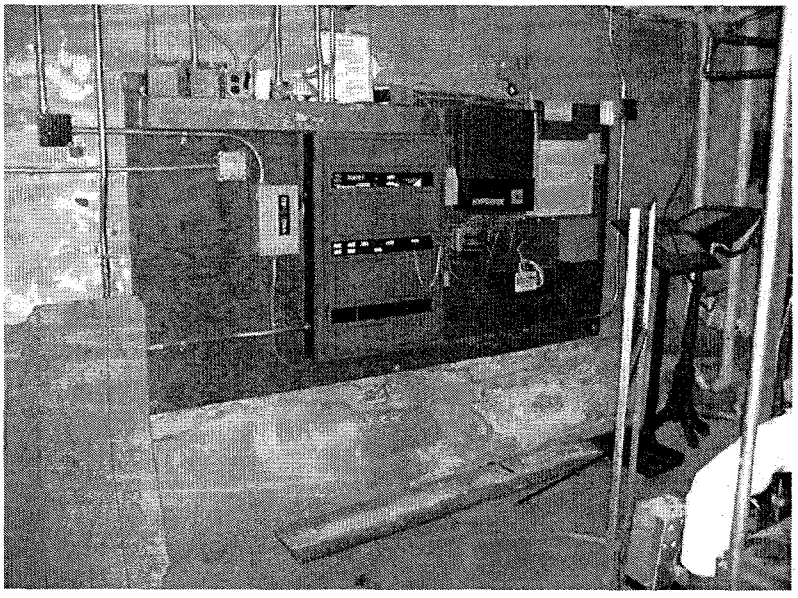
Tightening of loose conduits, replacement of loose and worn-out wiring devices, and replacement of burned-out light bulbs should be addressed as a maintenance item and will not have any new impact on the historical character or original building fabric.

A set of construction documents titled "Rehabilitate Mechanical and Electrical Systems, Ford's Theatre and Petersen House, Ford's Theatre National Historical Site" (NPS Project Number 1443-CX2000-98-012) prepared in 2001, recommends that the following code compliance issues be handled, by the following actions: the conduits are addressed by saying, "reuse existing raceways when possible." This implies that they will be made secure. A new electrical panel will be installed. Presumably it would have 3' clearance. A new fire alarm system is specified. The implication is that it would meet ADA guidelines. The poor condition of power receptacles, replacement of loose and worn-out wiring devices, the telephone panel (not a code issue), and missing/ burned out lamps are not addressed.

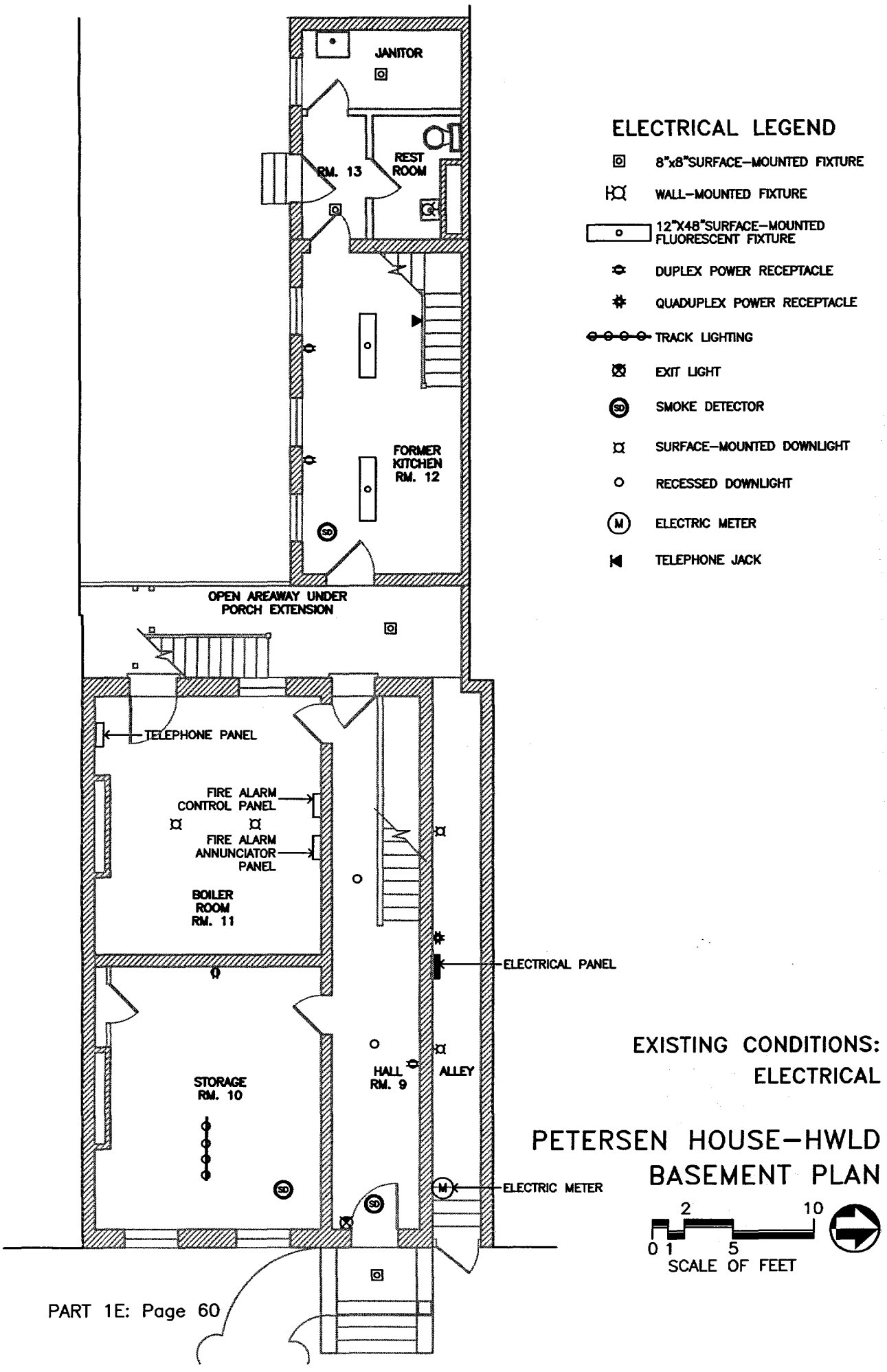
We recommend the implementation of this design to bring the building into conformance with the code and to improve the safety of the structure and its occupants. Routine inspections and attentive maintenance practices would serve to correct the other deficiencies outlined.

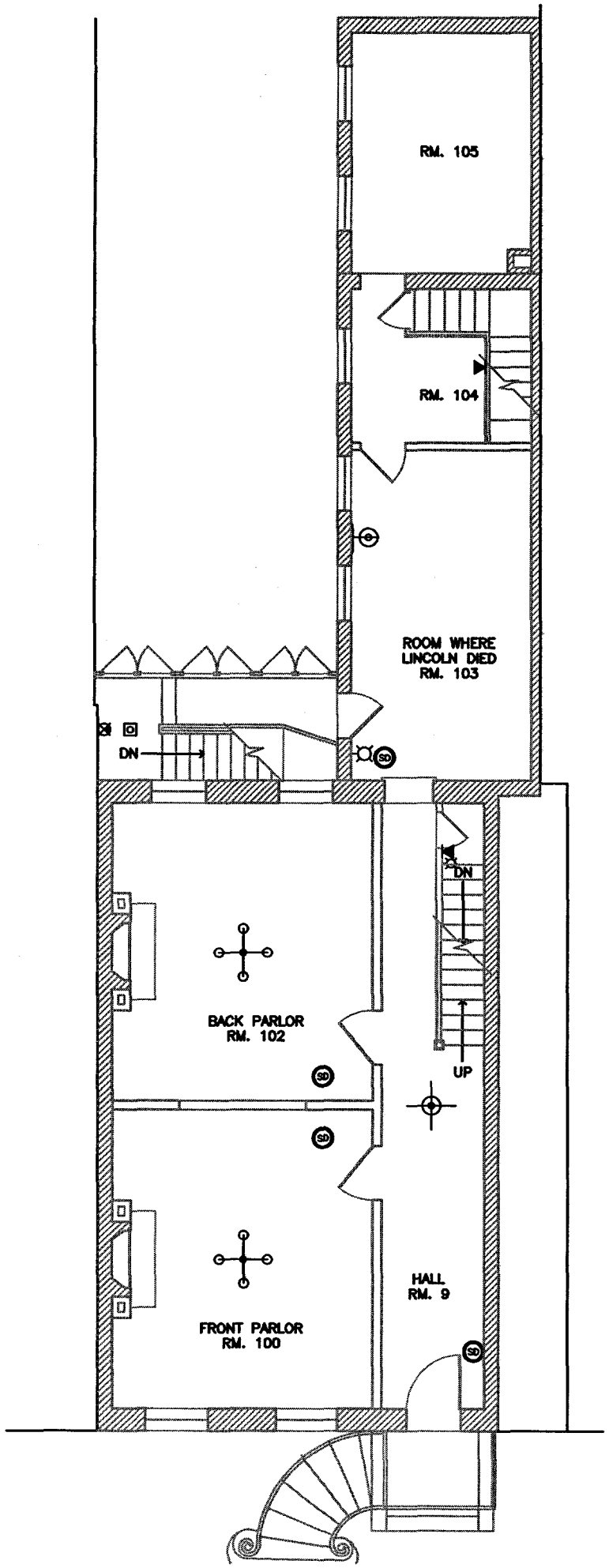


Main electrical panelboard in easement/alley, scheduled for relocation.
Photo MEP-5 JVP Engineers, P.C. 1/8/02



Fire alarm control panel in boiler room in basement.
Photo MEP-6 JVP Engineers, P.C. 1/8/02


JANITOR
REST ROOM
RM. 13
FORMER KITCHEN RM. 12
OPEN AREAWAY UNDER PORCH EXTENSION
TELEPHONE PANEL
FIRE ALARM CONTROL PANEL
FIRE ALARM ANNUNCIATOR PANEL
BOILER ROOM RM. 11
ELECTRICAL PANEL
STORAGE RM. 10
HALL RM. 9
ALLEY
ELECTRIC METER
ELECTRICAL LEGEND
8"x8"SURFACE-MOUNTED FIXTURE
WALL-MOUNTED FIXTURE
12"X48"SURFACE-MOUNTED FLUORESCENT FIXTURE
DUPLEX POWER RECEPTACLE
QUADUPLEX POWER RECEPTACLE
TRACK LIGHTING
EXIT LIGHT
SMOKE DETECTOR
SURFACE-MOUNTED DOWNLIGHT
RECESSED DOWNLIGHT
ELECTRIC METER
TELEPHONE JACK
EXISTING CONDITIONS:
ELECTRICAL
PETERSEN HOUSE-HWLD
BASEMENT PLAN
0 1 2 5 10
SCALE OF FEET



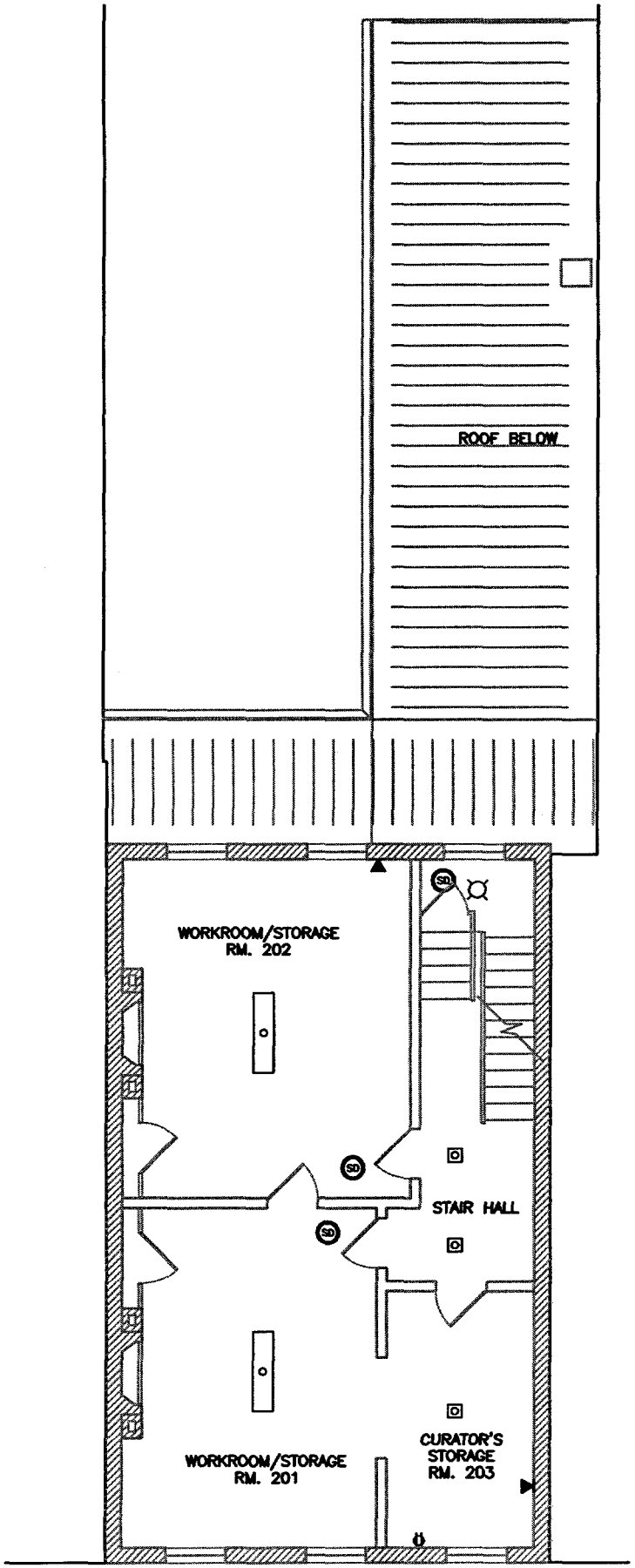
ELECTRICAL LEGEND

- 8"x8" SURFACE-MOUNTED FIXTURE
- WALL-MOUNTED FIXTURE
- 12"X48" SURFACE-MOUNTED FLUORESCENT FIXTURE
- DUPLEX POWER RECEPTACLE
- QUADUPLEX POWER RECEPTACLE
- TRACK LIGHTING
- EXIT LIGHT
- SMOKE DETECTOR
- SURFACE-MOUNTED DOWNLIGHT
- RECESSED DOWNLIGHT
- CHANDELIER-HISTORIC PERIOD
- PENDANT-HISTORIC PERIOD
- WALL SCONCE-REPLICA OF 1865 ORIGINAL
- TELEPHONE JACK

EXISTING CONDITIONS: ELECTRICAL

PETERSEN HOUSE-HWLD
FIRST FLOOR PLAN

0 1 2 5 10
SCALE OF FEET



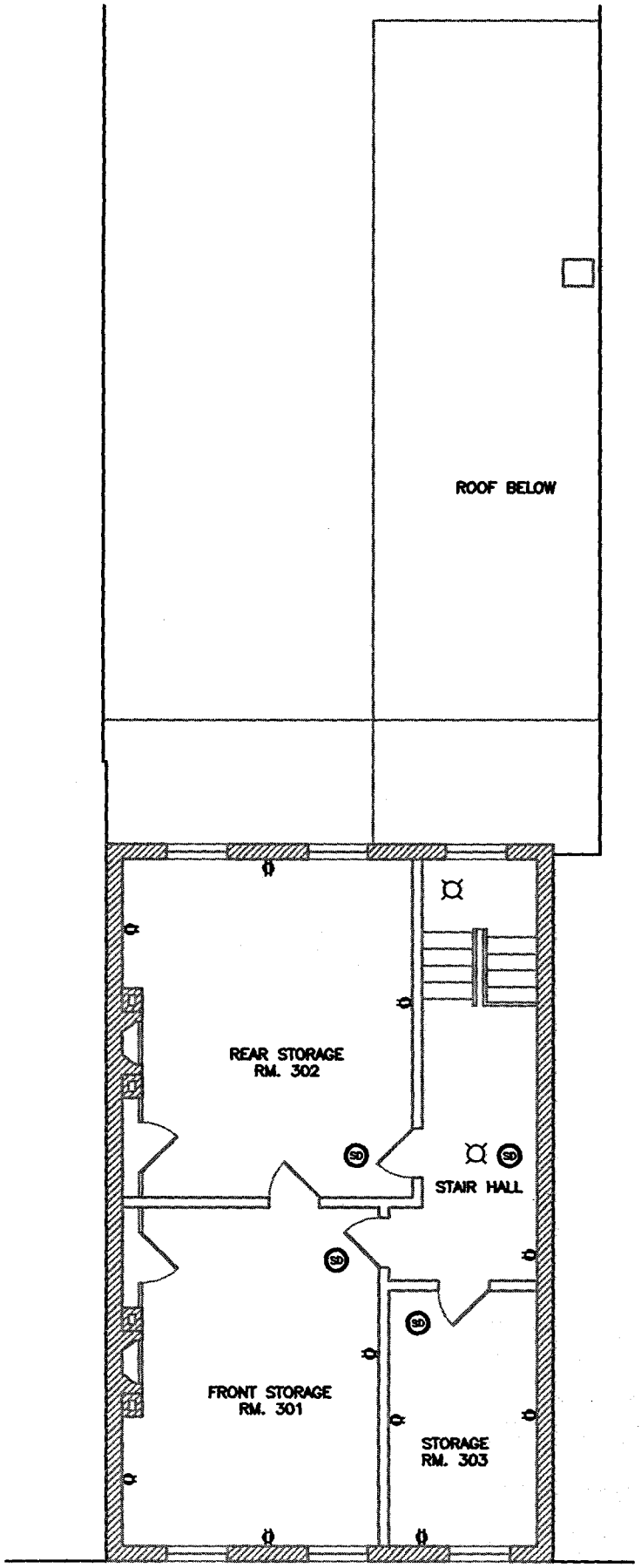
ELECTRICAL LEGEND

- 8"x8" SURFACE-MOUNTED FIXTURE
- WALL-MOUNTED FIXTURE
- 12"X48" SURFACE-MOUNTED FLUORESCENT FIXTURE
- DUPLEX POWER RECEPTACLE
- QUADUPLEX POWER RECEPTACLE
- TRACK LIGHTING
- EXIT LIGHT
- SMOKE DETECTOR
- SURFACE-MOUNTED DOWNLIGHT
- RECESSED DOWNLIGHT
- TELEPHONE JACK

EXISTING CONDITIONS:
ELECTRICAL

PETERSEN HOUSE-HWLD
SECOND FLOOR PLAN

0 1 2 5 10
SCALE OF FEET



ELECTRICAL LEGEND

- 8"x8" SURFACE-MOUNTED FIXTURE
- WALL-MOUNTED FIXTURE
- 12"X48" SURFACE-MOUNTED FLUORESCENT FIXTURE
- DUPLEX POWER RECEPTACLE
- QUADUPLEX POWER RECEPTACLE
- TRACK LIGHTING
- EXIT LIGHT
- SMOKE DETECTOR
- SURFACE-MOUNTED DOWNLIGHT
- RECESSED DOWNLIGHT

EXISTING CONDITIONS:
ELECTRICAL

PETERSEN HOUSE-HWLD
THIRD FLOOR PLAN

0 1 2 5 10
SCALE OF FEET

Plumbing System - Existing Conditions

Description:

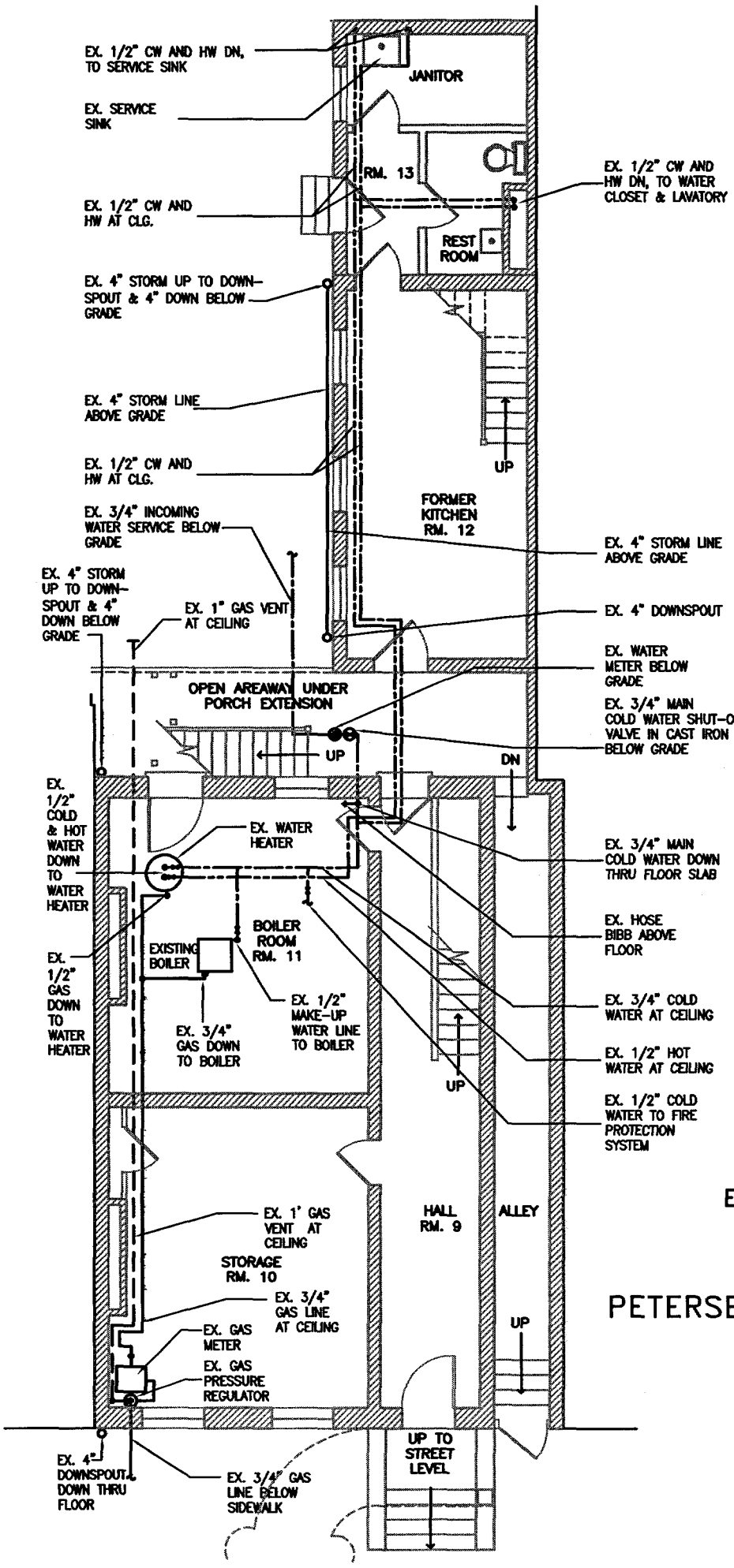
Storm Water System - Four 4-inch nominal diameter exterior cast iron downspouts handle the roof drainage, connect at grade level to cast iron boots, and discharge into the main sewer line below grade.

Plumbing fixtures – The building's only toilet room is located on the basement level in the 1870s portion of the rear ell (Room 13), and consists of a floor-mounted, tank-type water closet and a lavatory. The janitor closet is located next to the restroom, and a wall-mounted service sink is installed.

Sanitary Sewer System – All sanitary piping is below grade. The location and size of the sanitary line leaving the building has not been determined by our survey, but the archaeology report (1991-see bibliography) documents that a service line runs underground down the center of the former kitchen (Room 12).

Domestic Water System – Domestic water is supplied from the District of Columbia Water and Sewer Utility Administration by a ¾-inch copper line with a meter located below grade at the basement level in the rear of the house, between the boiler room (Room 11) and the former kitchen (Room 12). The water line goes through a ¾ inch gate valve located in a separate cast iron valve box next to the water meter box. The water line continues below grade and rises above the floor at the boiler room. The ¾-inch water line branches as follows: a ½-inch line to a hose bibb, a ½-inch line to serve the fire protection system, a ½-inch line to make-up water for the boiler, and a ½-inch line for the gas water heater. From the boiler room a ½-inch cold water pipe and a ½-inch hot water pipe leave the room at the ceiling and run to the restroom and janitor closet located in the rear ell of the basement level.

Natural Gas System – Gas is supplied to the building by Washington Gas through a gas meter located at the inside southeast corner of the house in Room 10 of the basement level. From the gas meter ½-inch copper piping goes to the boiler room (Room 11) and splits into two branches to serve the boiler and the water heater. The water heater is a 30 gallon storage capacity, 40,000 Btus per hour, State model # CD 30MRI4.



EXISTING CONDITIONS:
PLUMBING

PETERSEN HOUSE–HWLD
BASEMENT PLAN

0 1 2 5 10
SCALE OF FEET

System Assessment

Storm water system – The system appears to be in good condition.

Sanitary sewer system – The system appears to be in good condition. We found no evidence of leakage. The plumbing fixtures are in working order with exception of the service sink, which is very deteriorated.

Domestic water system – The water piping is in good condition with no visible oxidation or deterioration. Piping is insulated.

Natural gas system – The piping appears to be in good condition with no signs of deterioration. The water heater is in good condition.

Code Compliance Evaluation

The building does not have the plumbing fixtures required by the International Mechanical Code. For an assembly occupancy of 50 persons, separate toilet rooms are required for each sex with one water closet per 25 people, one lavatory for every 40 people, and one drinking fountain for every 100 people. The path of travel to the toilet room shall not exceed 500 feet and shall not be more than one story above or below the location of the occupant. A building that is required to be accessible is required to have accessible toilet facilities.

The current toilet room is for staff use only and does not comply with ADA accessibility guidelines. No toilets are provided in the visitation area. The Park Rangers limit visitors to 20 at a time, and staff consists of typically 2-3 persons.

Treatment of Deficiencies

Currently, the necessary toilet facilities, including accessible facilities, are provided across the street at Ford's Theatre. NPS justifies this by defining the two buildings as a single facility. Providing the required plumbing facilities in the Petersen House would require significant impact on the historic structure.

Due to the extensive modifications that would be required to install additional toilets, the minimal use of the second and third floors, and the fact that visitors typically spend less than ten minutes in this building, we recommend that the current arrangement for toilet facilities be maintained.

PART 1: DEVELOPMENTAL HISTORY

F. Additional Codes and Regulations Compliance

F. Additional Codes and Regulations Compliance

Occupancy and Life Safety Code Analysis

Applicable Codes

The applicable building code used by most federal agencies, including the National Park Service (NPS), for building construction is the latest edition of the International Building Code (IBC), which is currently the 2000 edition. The 2000 Life Safety Code (NFPA 101) is also referenced for means of egress issues.

The latest editions of the following codes and standards are also applicable:

International Mechanical Code
International Plumbing Code
NFPA 10, Standard for Portable Fire Extinguishers
NFPA 13, Standard for the Installation of Sprinkler Systems
NFPA 14, Standard for the Installation of Standpipe and Hose Systems
NFPA 70, National Electrical Code
NFPA 72, National Fire Alarm Code
NFPA 914, Fire Protection in Historic Structures

The local building code in the District of Columbia is the DC Construction Codes (DCCC), which adopts and amends the 1996 BOCA *National Building Code* (BOCA).

It should be noted that per DCCC Section 3603.1 and BOCA 3407.1, building code requirements are not mandatory for existing buildings classified by the federal, state or local government as historic and are judged by the code official to be safe. However, new construction requirements should be applied whenever the historic fabric of the building is not adversely affected.

Occupancy Classification

The Petersen House, originally constructed as a private residence, in what would be classified today as Residential, Use Group R-4, is currently used as a house museum with associated support spaces. The restored and interpreted museum is located on the first floor with storage and rarely used NPS workspaces located on the basement, second and third floors. There are no fire separation assemblies between the different areas. Therefore, the building is classified as nonseparated, Mixed Use with Assembly (Use Group A-3), Low Hazard Storage (Use Group S-2) and Business (Use Group B).

Allowable Height and Area

Building height is the vertical distance from grade plane to the average height of the highest roof surface. The grade plane is a reference plane representing the average of the finished ground level adjoining the building at all exterior walls. The Petersen House is approximately 42 feet in height, which is within the height limitation of 60 feet for a Type VB building (see Construction Classification below).

A story is defined as the vertical distance from top to top of two successive tiers of beams or finished floor surfaces. For the topmost story, the distance is measured from the top of the floor finish to the top of the ceiling joists or, where there is not a ceiling, to the top of the roof rafters. The Petersen House is 4 stories above grade. The maximum allowable number of stories is 2.

Building area is the area included within surrounding exterior walls exclusive of vent shafts and courts. The first floor has the largest footprint and is approximately 1,275 square feet. The building is within the allowable area of 7,560 square feet for a sprinklered building, with no credit taken for open perimeter.

Construction Classification

The Petersen House construction consists of a wood structural frame and flooring with plaster walls and brick masonry exterior walls. This construction most closely resembles Type VB construction. The building is protected throughout by an automatic sprinkler system.

In a nonseparated Mixed Use building, each portion of the building is individually classified as to use. The required type of construction for the building is determined by applying the height and area limitation for each of the applicable use groups to the entire building. The most restrictive type of construction is then applied.

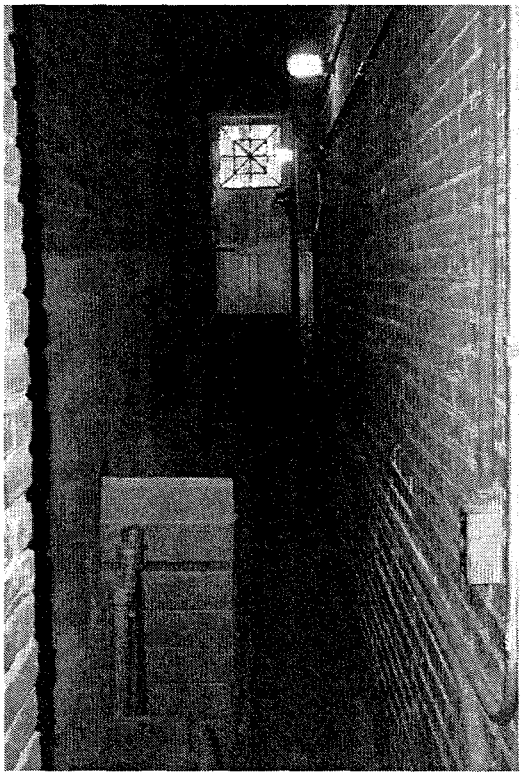
The most restrictive construction type of the three use groups is Assembly A-3. The minimum required construction type for an A-3 building of this height and area is Type IV (Heavy Timber) construction. While the building does not meet construction type requirements in the strictest application of the code, there are mitigating factors that maintain a higher degree of fire and life safety in the building than is required by the building code. Some of these mitigating factors include fire protection systems, which are described below. Also, The Petersen House does not have the relatively large occupant loads typically found in a museum.

Means of Egress

Public access to the Petersen House is strictly controlled at all times. An average of 15 to 20 visitors occupy the first floor at one time and NPS staff, which numbers less than five people, sparsely occupies the remaining floors. It appears unlikely that the total occupant load of the building will ever exceed 50 persons. Currently, visitors enter the building up stairs at the first floor and exit following the same path. The former circulation pattern, escorting visitors down and out through the basement level, may be reinstated at a future date. With the mechanical upgrade project completed, the easement/alley may be used for emergency egress.

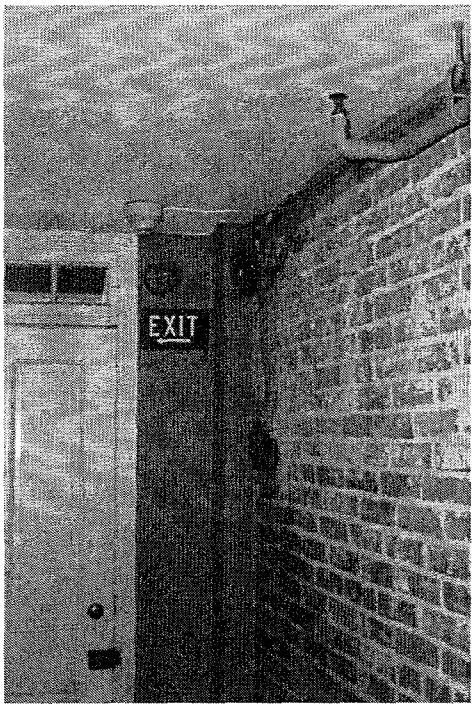
A single 30-inch, unrated exit stair serves all four stories of the building. The single stair provides exit capacity for 150 persons (30 inches/0.2 inches per person). This stair is the only exit from the second and third floors. Two 25-foot portable fire escape ladders are provided, located in Rooms 201 and 301.

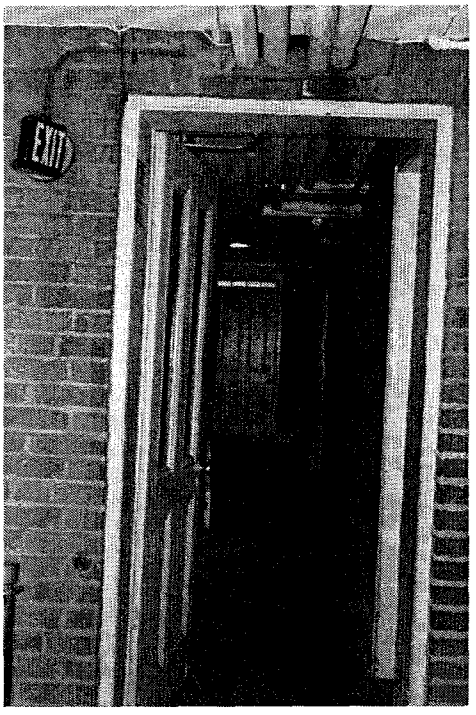
From the first floor, occupants have a choice of exiting through the 36-inch front door or continuing down to the Basement. The front door has a clear width of 32-inches, which provides exit capacity for 213 persons (32 inches/0.15 inches per person). Two exit doors are available at the basement level. The 34-inch east door discharges on the street side and provides capacity for 200 persons (30 inches/0.15 inches per person). The similarly sized west door discharges to the rear of the building where occupants can discharge to the public way via a side alley (easement passageway) or the back alley (Photo LS-1).



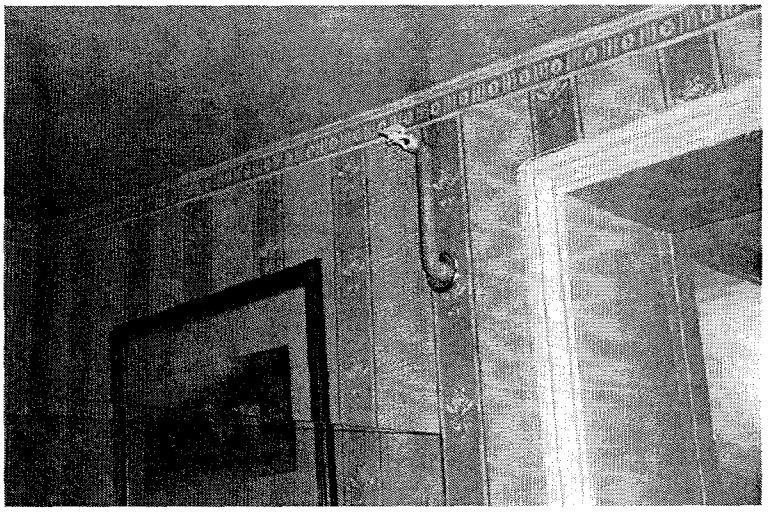
Current storage in the easement/side alley, identified as a future means of emergency egress.
Photo LS-1 Gage-Babcock & Associates

The west door is not designated as an exit, and the rear gate and side door are routinely kept locked, but the garden area is available for gathering away from the building, if needed. Overall, exit capacity is sufficient for the anticipated occupant loads.

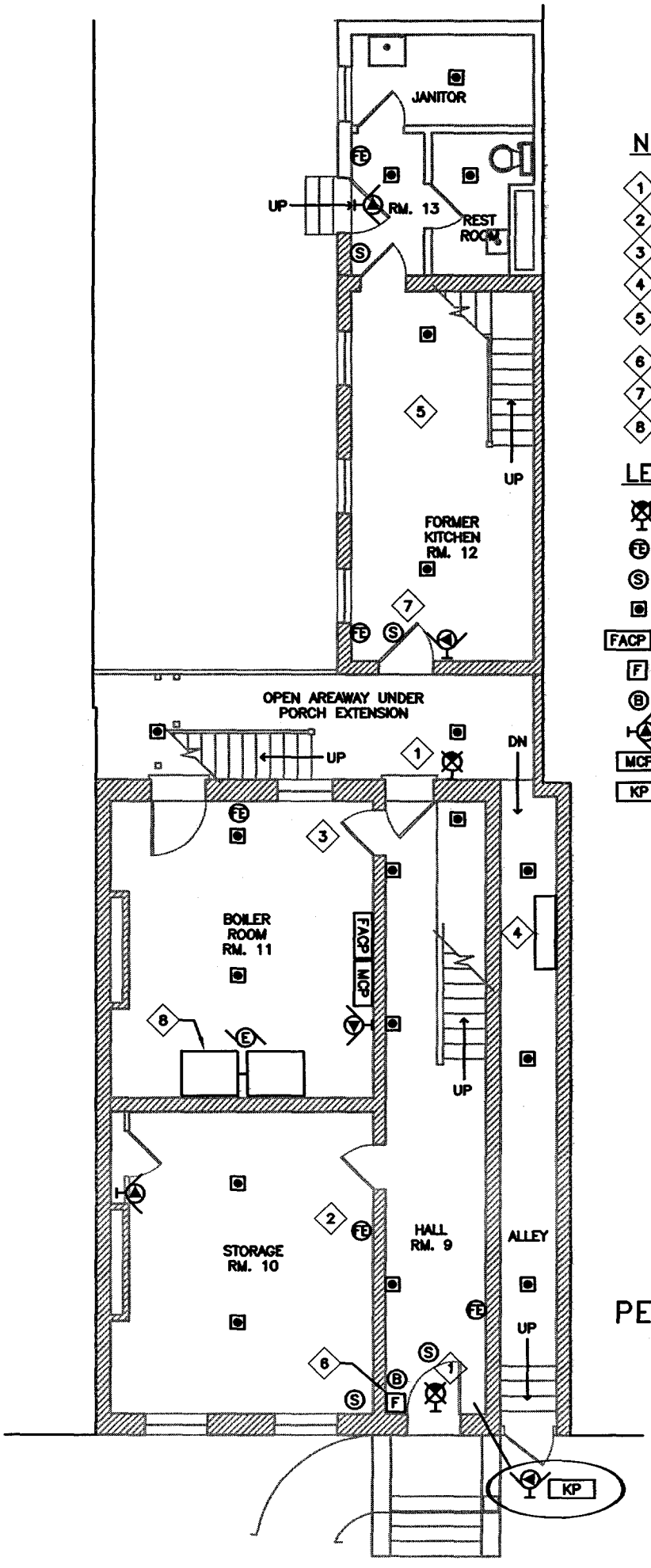




Non-illuminated exit signs at basement doors. Also shown are examples of typical fire alarm devices. Note exposed smoke detector wiring.
Photos LS-2 and LS-3 Gage-Babcock & Associates



Example of wetpipe, antifreeze system in Death Room.
Photo LS-4 Gage-Babcock & Associates



NOTES:

1. UNLIT EXIT SIGN
2. NO MONTHLY INSPECTION (TYP. OF ALL).
3. DOOR MISSING CLOSER.
4. STORAGE IN ALLEY.
5. STORAGE IN ROOM EXCEEDS SPRINKLER DESIGN PARAMETERS.
6. DEVICE HEIGHT NOT CODE/ADA COMPLIANT.
7. FIRE ALARM WIRING NOT IN CONDUIT.
8. FIRE SPRINKLER PUMP AND WATER SUPPLY.

LEGEND:

- EXIT SIGN
- FE — FIRE EXTINGUISHER
- S — SMOKE DETECTOR
- SPRINKLER
- FACP — FIRE ALARM CONTROL PANEL
- F — FIRE ALARM PULL STATION
- B — FIRE ALARM BELL
- MOTION DETECTOR
- MCP — MAIN SECURITY CONTROL PANEL
- KP — SECURITY KEY PAD

EXISTING CONDITIONS: FIRE PROTECTION & SECURITY

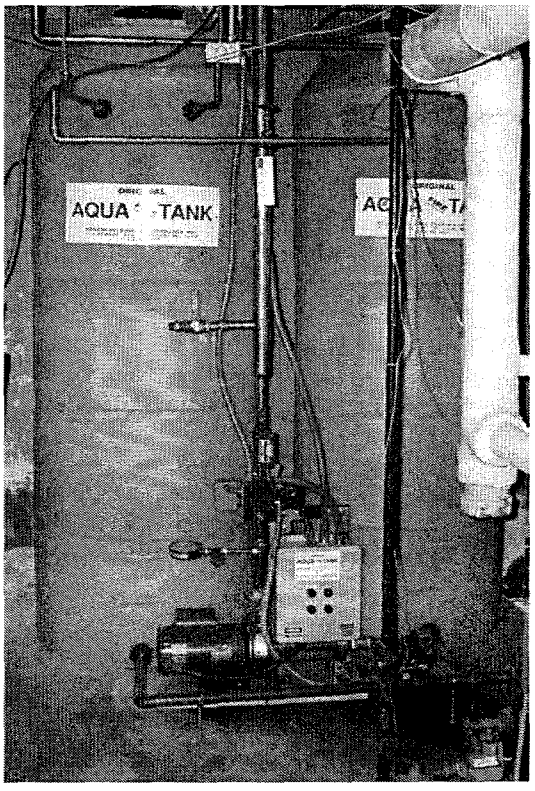
PETERSEN HOUSE–HWLD BASEMENT PLAN

0 1 2 5 10
SCALE OF FEET

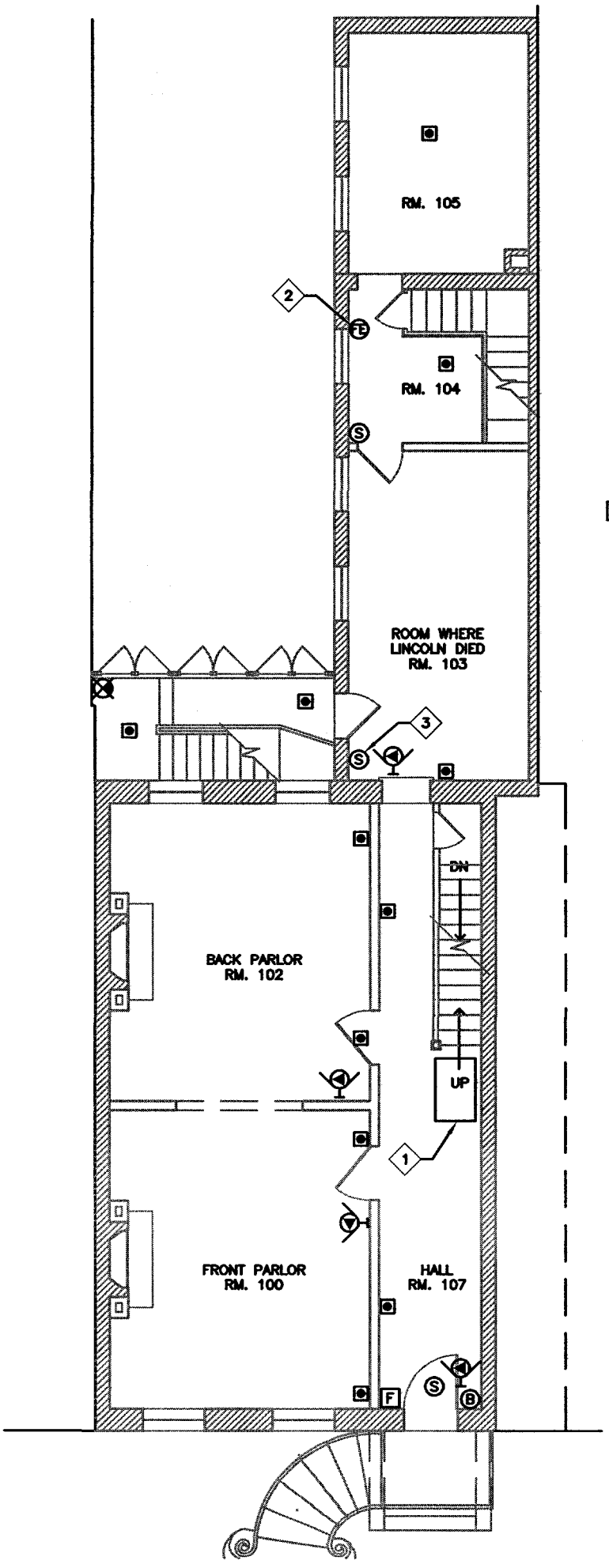
Exit signs are provided along the path of egress and at the discharge doors. Some of the signs are of the non-illuminated type or have burned out bulbs (Photos LS-2/LS-3). Emergency lighting consists of individual, battery-powered fixtures in the corridors.

Fire Suppression

The Petersen House was recently retrofitted with a wetpipe (antifreeze) fire sprinkler system (Photo LS-4). Sprinkler protection is provided in all occupied spaces, as well as, the attic, breezeway, porch and side alley. The system design exceeds code requirements and was designed for life safety and property protection. The system includes dedicated water supply tanks and a fire pump in the Basement boiler room (Room 11) (Photo LS-5). The system is supervised by a fire detection and alarm system via waterflow and valve supervisory switches. It should be noted that a fire suppression system is not required by the building code.



Sprinkler water supply and fire pump located in basement boiler room (Room 11)
Photo LS-5 Gage-Babcock & Associates



NOTES:

1. OBSTRUCTION AT BOTTOM OF STAIR.
2. NO MONTHLY INSPECTION (TYP. OF ALL).
3. FIRE ALARM WIRING NOT IN CONDUIT.

LEGEND:

- EXIT SIGN
- FE — FIRE EXTINGUISHER
- S — SMOKE DETECTOR
- SPRINKLER
- FACP — FIRE ALARM CONTROL PANEL
- F — FIRE ALARM PULL STATION
- B — FIRE ALARM BELL
- MOTION DETECTOR

EXISTING CONDITIONS:
FIRE PROTECTION
& SECURITY

PETERSEN HOUSE–HWLD
FIRST FLOOR PLAN

0 1 2 5 10
SCALE OF FEET

Dry chemical Type ABC fire extinguishers are provided on all levels. A carbon dioxide extinguisher is located in the Boiler Room. The annual code required service has been provided for these extinguishers; however, there is no indication that the monthly inspections have been performed.

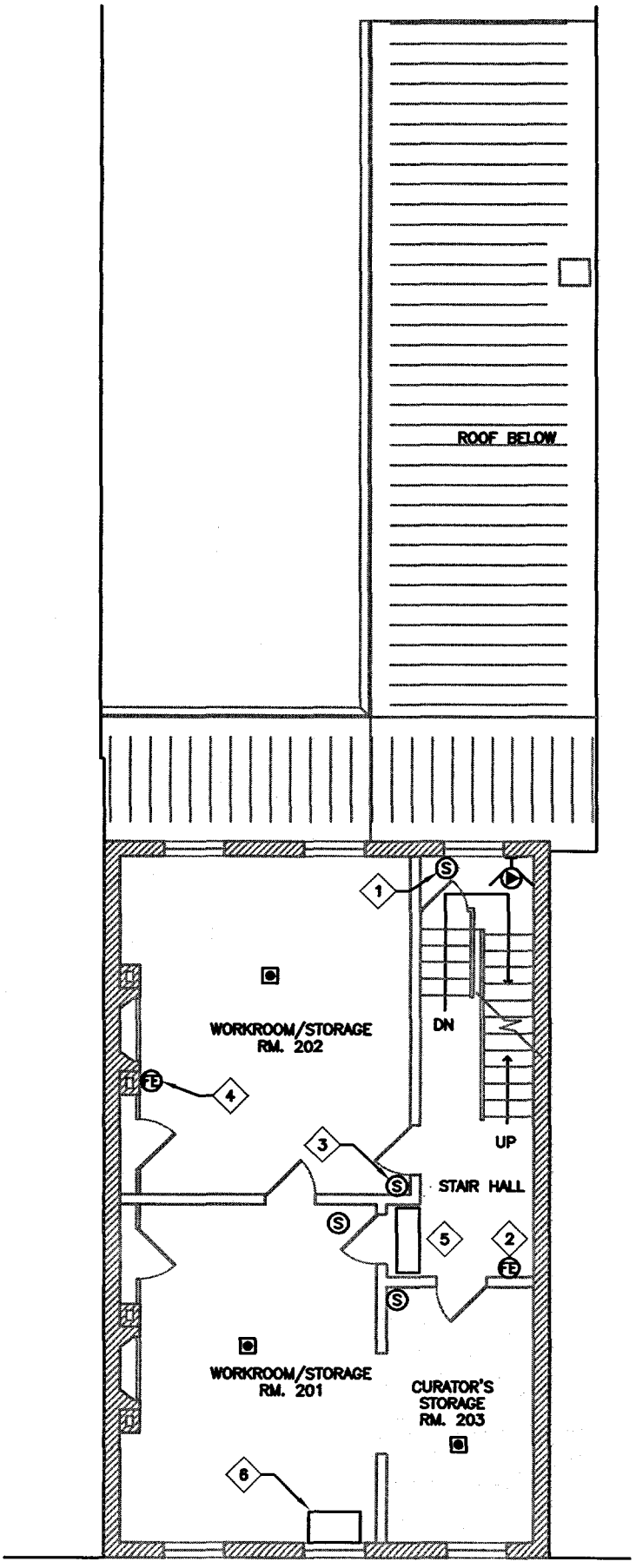
Fire Detection and Alarm

A Pyrotronics System 3 fire detection and alarm system is provided in the building. Fire detection, consisting of smoke detectors, is located throughout except in the attic. Wiring that serves to connect smoke detectors is not completely installed in conduit. Pull stations were only observed at the main entrance on the first floor and the exit at the basement level (Photo LS-2). Notification appliances consist of mechanical bells. Pull station locations do not comply with current building code requirements. Pull station mounting heights and notification appliances do not comply with ADA guidelines. A replacement fire detection and alarm system has been designed under the *Rehabilitate Mechanical and Electrical Systems* project (100% construction documents dated 10/4/2001), which corrects many of these deficiencies. Again, a fire detection and alarm system is not required by the building code for this building.

Summary of Fire Protection/Life Safety Issues

The following is a list of preliminary fire and life safety issues:

1. The existing construction type does not meet code requirements for a building of this height and use.
2. Additional exit signage is required above the rear door in the basement and above the front door on the first floor. Any new exits posed by the rehabilitation project will also require exit signage.
3. Existing signage needs to be repaired or replaced. See Basement Plan for exit signs that require maintenance.
4. Obstructions were observed along the path of egress.
5. The Boiler Room door is not self-closing.
6. A monthly inspection program must be instituted for the portable fire extinguishers.
7. The storage in the former kitchen (Room 12) is of a type and quantity that was not anticipated when the sprinkler system was designed.
8. All fire alarm wiring should be run in conduit.



NOTES:

1. STORAGE IN STAIR PREVENTS FULL DOOR SWING
2. NO MONTHLY INSPECTION (TYP. OF ALL)
3. FIRE ALARM WIRING NOT IN CONDUIT
4. UNMOUNTED
5. FILE CABINET
6. FIRE ESCAPE LADDER

LEGEND:

- FE — FIRE EXTINGUISHER
- S — SMOKE DETECTOR
- SPRINKLER
- MOTION DETECTOR

EXISTING CONDITIONS:
FIRE PROTECTION
& SECURITY

PETERSEN HOUSE–HWLD
SECOND FLOOR PLAN

0 1 2 5 10
SCALE OF FEET

Treatment of Life Safety Deficiencies

The issue with the construction type can be mitigated through operational procedures and the existing and proposed fire protection features. Although The Petersen House is defined as a museum, in reality, the actual occupant load of the entire building may never reach 50 persons. Therefore, if the occupant load is maintained at less than 50 persons, the building may be classified as Use Group B, Business. The building is also provided with fire protection systems, such as automatic sprinkler protection and automatic fire detection, which exceed code requirements. The code limits the heights of buildings because taller buildings usually present a greater safety hazard than shorter buildings, in terms of fire department access and egress time. The supervised automatic sprinkler system, fire detection and alarm system and low occupant loads (especially on the upper floors) offset any hazard that the additional stories may pose.

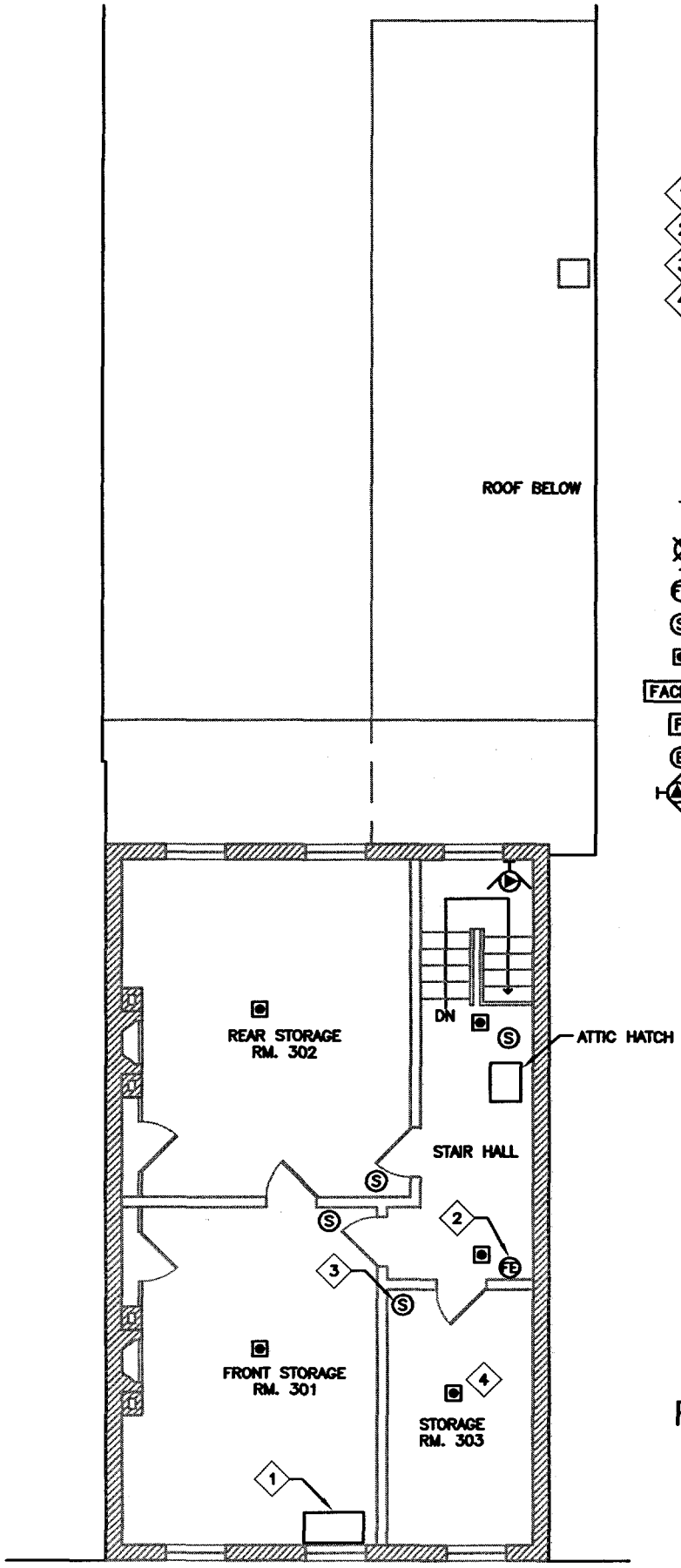
The building has an assortment of lit and unlit exit signage. Exit signs are required to be internally or externally illuminated while the building is occupied. The unlit exit signs should be replaced with illuminated signs as shown on the drawings. Replacing exit signs in existing locations should not affect the historical fabric of the building. All exit signs may be replaced with decorative signs that still meet code requirements.

The path of egress must be kept free of obstructions, such as furniture, storage or equipment, at all times. Removing obstructions from the path of egress will not affect the historic fabric, as the obstructions are not part of the structure nor historically significant.

The boiler room (Room 11) presents the most significant ignition source in the building. The boiler room is enclosed in brick construction, which affords a certain level of fire resistance. This separation between the room and the remainder of the structure should be maintained. This includes having an operable self-closing door to the boiler room. The boiler room door should be provided with a new door closer.

The code requires that portable fire extinguishers be visually inspected on a monthly basis. A record of this inspection is also required. Institute a program to inspect fire extinguishers in the Petersen House monthly.

Chairs and seat cushions are stacked up to the ceiling in the former kitchen (Room 12). The existing automatic sprinkler system was designed for a Light Hazard, as defined by NFPA 13. The contents and storage arrangement in Room 12 present a hazard that is at a minimum Ordinary Hazard, which could compromise the system's ability to perform as required. The sprinkler system was



NOTES:

1. FIRE ESCAPE LADDER
2. NO MONTHLY INSPECTION (TYP. OF ALL).
3. FIRE ALARM WIRING NOT IN CONDUIT.
4. MISSING ESCUTCHEON.

LEGEND:

- EXIT SIGN
- FE FIRE EXTINGUISHER
- S SMOKE DETECTOR
- SPRINKLER
- FACP FIRE ALARM CONTROL PANEL
- F FIRE ALARM PULL STATION
- B FIRE ALARM BELL
- MOTION DETECTOR

EXISTING CONDITIONS:
FIRE PROTECTION
& SECURITY

PETERSEN HOUSE–HWLD
THIRD FLOOR PLAN

0 1 2 5 10
SCALE OF FEET

only designed to protect Light Hazard contents. With the exception of Room 10, rooms in the Petersen House should not be used for storage.

NFPA 72 requires fire alarm wiring to be physically protected to ensure the integrity of the system for a reasonable time during a fire. About 18 inches of fire alarm wiring to the smoke detectors is not in conduit. This is typical throughout the building. The new replacement fire alarm system being designed under the *Rehabilitate Mechanical and Electrical Systems* project should specify that all fire alarm wiring be installed in conduit.

Security System Analysis

Existing Building and Security System

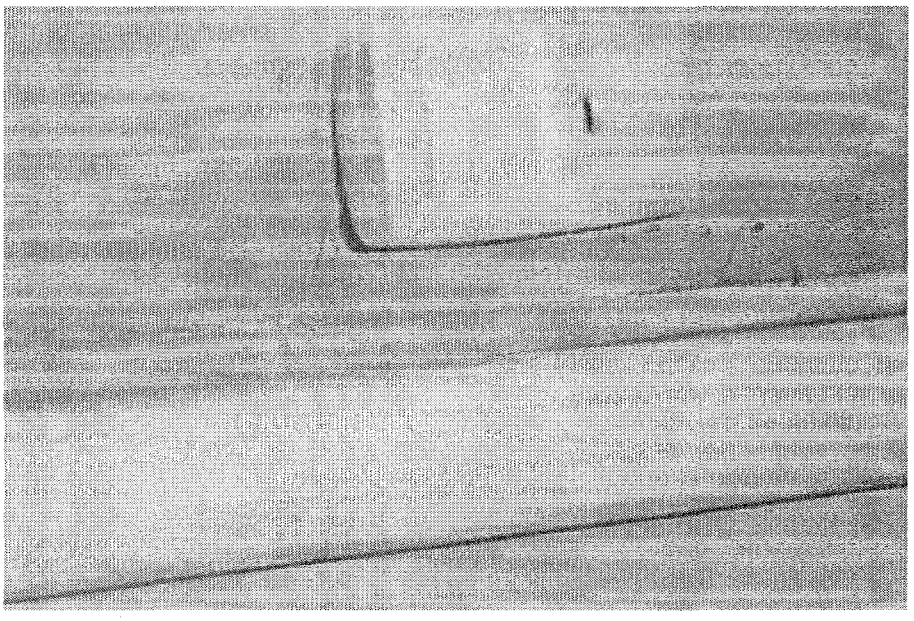
The Petersen House, originally constructed as a private residence, is owned by the NPS and operated as a house museum with associated support spaces. The restored museum floor is located at the first floor level and NPS work and storage areas are located on the basement, second and third floors. The entire building is protected by an existing hardwired security system composed of 8(eight) motion sensors located throughout the building. (Additional monitors have been recommended.) There is evidence of non-functional security wiring abandoned in place, located in the basement and on the first floor (Photo LS-6). The existing security program operates off a Moose (Sentrol) security system.

Security Monitoring of Access and Egress

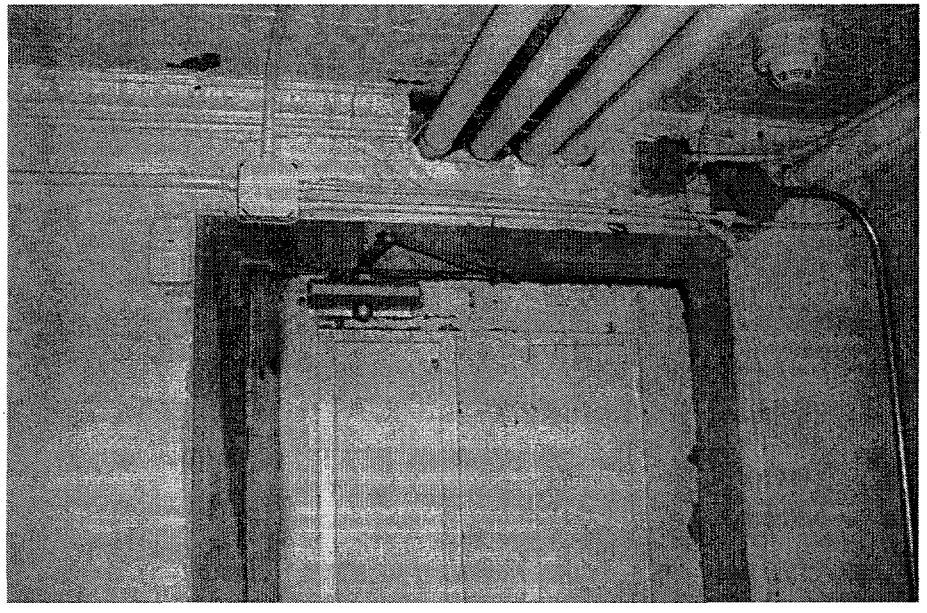
Public access to the Petersen House is strictly controlled at all times. Currently, a maximum of 15 to 20 visitors enter the building up the stairs to the first floor and return following the same path after viewing the restored rooms, including the Death Room. Visitors have in former years been escorted down and out through the basement level, a pattern that may be reinstated in the future. Note that the easement/side alley may be used for emergency egress after completion of the rehabilitation project. One to two NPS staff provide interpretation and additional staff, if any, occupies the remaining floors on an occasional basis.

A single stair serves all four stories of the building. This stair is the only exit from the second and third floors. There is however, a back stair way between the first floor and the basement located in the rear ell and exiting into the former kitchen (Room 12). Two 25-foot portable fire escape ladders are provided, located in Rooms 201 and 301. There are 24 existing windows, 22 of which are functional. At the basement level the windows are secured with grilles, bars and/or boarding. The upper level windows are not currently protected.

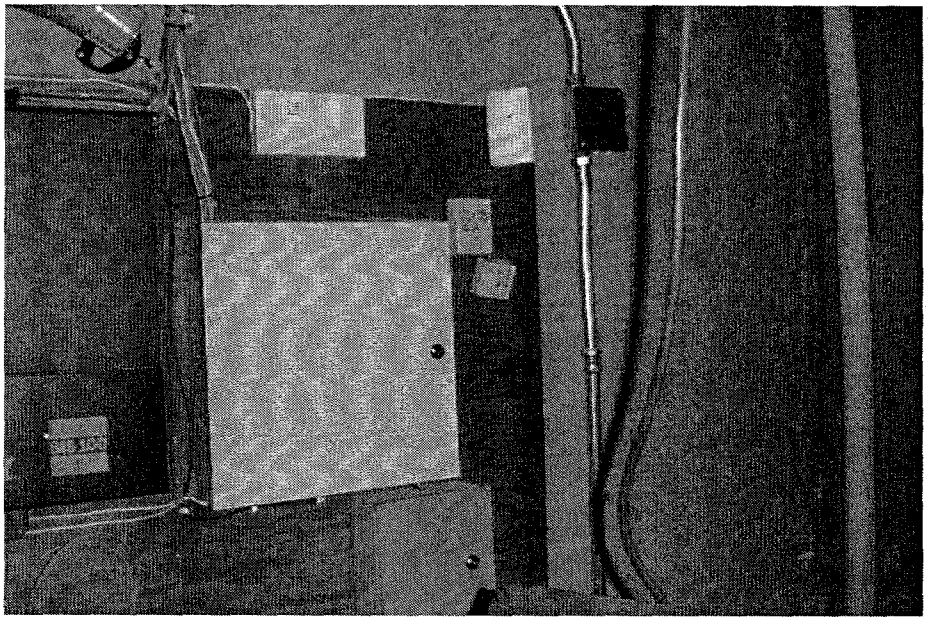
At the basement level there are 4 (four) motion detection devices (sensors) covering the front storage room (Room 10), the hall (Room 9), and the former kitchen (Room 12) and the hallway (Room 13) in the rear ell (Photo LS-7). The main control panel is located in the boiler room (Room 11) (Photo LS-8) and a remote access key pad (Photo LS-9) is located adjacent to the basement front doorway leading up to street level.



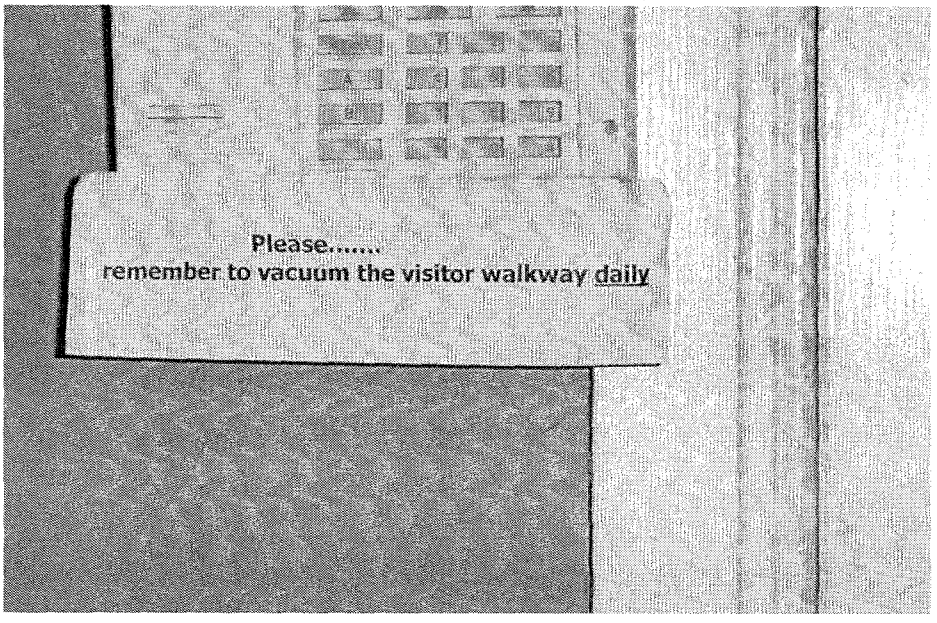
Both abandoned in place wiring and current security wiring are clearly visible.
Photo LS-6 Gage-Babcock & Associates 8/13/02



Former Kitchen (Room 12) – Motion detector placed to upper left of door.
Hardwire smoke detector is mounted to the pressed tin ceiling, with exposed wiring.
Photo LS-7 Gage-Babcock & Associates 8/13/02



Boiler Room (Room 11) – Main Security Control Panel
Photo LS-8 Gage-Babcock & Associates 8/13/02



Front Doorway from Basement up to Street Level – Remote Security Access Pad
Photo LS-9 Gage-Babcock & Associates 8/13/02

The first floor is monitored by 4 (four) motion sensors that cover the hall (Room 107), the front parlor (Room 100), the back parlor (Room 102), and the Room Where Lincoln Died (Room 103). From the first floor, visitors exit by returning through the front door or continue down to the basement level from the Death Room by way of an exterior stair located on the back porch. When routed through the basement, visitors were directed through the West exterior door back into the hall (Room 9) towards the house front, where the east door discharges directly on the street under the main entrance stairs. Studies have been conducted to determine the feasibility of utilizing the side alley (easement passageway) as an exiting path for visitors in the future.

The second and third floors are monitored by motion detection in the main stair hall. These floors are only accessible to NPS staff. There is no visible motion detection in the second floor curator's storage (Room 203) or the workroom/storage (Room 201). There was formerly a metal cabinet for records storage in the curator's storage area that has been removed.

From these upper floors, NPS staff/occupants have a choice of descending the stairs and exiting through the front door or continuing down to the basement level. Two exit doors are available at the basement level. The east door discharges on the street. The west door (not designated as an exit) discharges to the rear of the building where occupants can discharge to the public way via a side easement alley or the back alley. Access to the side easement alley exit is currently not monitored. The side alley door is locked and marked as a fire exit. Access to the rear alley via the open areaway under the porch extension is not monitored. There is a rear patio area that is not monitored.

Wiring connecting the security monitors is not completely installed in conduit and is clearly visible in many locations.

A Closed-Circuit Television (CCTV) system consisting of 3 (three) CCTV cameras has been proposed for installation on the third floor exterior and in the basement side easement alley that exits to the street (*Rehabilitation Mechanical and Electrical Systems* project – 100% construction documents dated 10/4/2001). Plans call for the basement level CCTV camera to be wireless. These cameras will provide coverage of the rear exit and part of the rear patio and the front street area and the front entrance (first floor) of the Petersen House. It is not clear if these CCTV cameras will have pan-tilt-zoom capabilities. The monitoring of the CCTV cameras in the building is to be performed at the guard station in the Ford's Theatre across Tenth Street.

Summary of Security Issues

The following is a list of security issues:

1. The existing system is dated but functional.
2. Support for system spare parts and maintenance may be problematic due to the age of the system, if not upgraded.
3. The alarm annunciation system should be integrated with the proposed CCTV system.
4. Consideration should be given to adding window and door contact switches. This issue may be mitigated by the installation of the proposed CCTV cameras. However, roof area access via adjacent buildings still presents a vulnerability issue.
5. Consideration should be given to using the rear exterior CCTV (proposed) for motion detection.
6. The boiler room door should be monitored.
7. Motion detection should be provided for the second floor.
8. Monitoring of the rear patio should be provided (this is not covered by the proposed CCTV system).
9. Consideration should be given to providing redundant monitoring capabilities of all Petersen House CCTV at the US Park Police Dispatch Center.
10. Guard tour stations should be incorporated into the security system.

Treatment of Security Deficiencies

- Replace existing outdated system with an updated monitoring panel.
- Remove existing abandoned in place security related wiring.
- Provide additional monitoring by CCTV cameras with pan-tilt-zoom capabilities.
- Add monitoring capabilities at the boiler room door and motion detectors throughout the second floor.
- Run all security alarm and future CCTV wiring in conduit.
- Integrate the alarm annunciation system with the proposed CCTV system.
- Provide both local annunciation and remote monitoring (both at Ford's Theatre and at the US Park Police Dispatch Center).

Presence of Hazardous Materials - Existing Conditions

Previous Testing and Abatement

Custer Environmental conducted a limited lead-based paint (LBP) survey in April, 1999 on exterior surfaces of the Petersen House. LBP was found using an RMD x-ray fluorescence (XRF) Type Analyzer on the exterior doorway, window sashes, jambs, casing, sills/stools, wells, and the window shutter. LBP was also found on the painted roof flashing by means of laboratory analysis.

Volz Environmental Services, Inc. (Volz) also performed further LBP screening and an asbestos survey in June and September, 2001. The objective of the screenings was to identify components which may be coated with LBP or have asbestos containing material (ACM) within the Petersen House in conjunction with the scheduled rehabilitation of the mechanical and electrical systems under National Park Service (NPS) contract No. 1443-CX-2000-98-012.

A total of 93 LBP readings were taken during the course of the Volz inspection, using a Niton model XL-309 (XRF) analyzer. Volz considered painted components with lead concentrations of 0.1 mg/cm^2 or greater to be LBP components. However, the Environmental Protection Agency (EPA) has defined a lead-based paint as any paint, plaster, or other surface coating material containing greater than or equal to 1.0 milligram per square centimeter (mg/cm^2) of lead. The District of Columbia uses a stricter value of equal to or greater than 0.7 mg/cm^2 of lead to define a lead-based paint. Levels equal to or exceeding this value require licensing, training, respiratory protection and certification of contractors performing abatement of these painted surfaces. Therefore, Volz used too low a criterion to determine if components contained LBP (0.1mg/cm^2 instead of the recognized threshold of 0.7 mg/cm^2). They erroneously listed many homogeneous areas (i.e., plaster ceilings and walls, white porch walls and yellow porch trim, and stained wood floors) as areas identified as containing LBP.

Volz conducted the asbestos survey in accordance with the proper inspection protocols and defined materials containing greater than 1% asbestos as ACM. No bulk sampling of suspected ACM was conducted in the Petersen House due to the historical significance of the building. Therefore, all plaster within the Petersen House was considered an ACM. Furthermore, many other materials, (such as residual pipe insulation, window caulking and glazing, and assorted floor tile) were also assumed to be ACM. During previous renovations, pipe insulation abatement may have been conducted in such a fashion as to abate only the material that was visibly exposed.

New Survey Findings: Hazardous Materials and Construction Implications

Asbestos was found in the form of pipe insulation at the radiator near the rear wall of Room 202, as shown in Table I to follow. The insulation is considered to be a regulated asbestos-containing material (RACM), and is in fair condition. If the material is to be disturbed by future renovations, then it is required to be properly removed by trained personnel and be disposed of as asbestos waste.

Lead-based paint was found in numerous places within the building, as shown in Table II to follow. In general, the metal pan ceiling and most plaster walls, wooden stairs, doors, windows and radiators were all identified as lead-based paint building components that will require licensing and certification of contractors performing abatement of these surfaces. Before renovation work begins that may disturb a painted surface, the specific building component should be checked against Table II to see if the presence of lead-based paint is confirmed. If it is, a licensed lead abatement contractor or a contractor experienced in performing renovation work in accordance with OSHA's Lead in Construction regulations should be hired to perform the work.

Current Asbestos

This part of this hazardous materials survey report describes the inspection for ACM located at the Petersen House conducted by MEC^{x}, LLC (formerly ManTech Environmental Corporation). MEC^{X}'s scope of work included the visual inspection of all areas as part of the Historic Structure Report to help guide future treatment and repair projects, and the sampling and analysis of encountered suspect ACM.

The survey was conducted by personnel who have successfully completed Inspector and Management Planner training as specified in the Environmental Protection Agency's (EPA) AHERA Model Accreditation Plan. The survey began with a walk-through on each floor to identify various visually distinct homogeneous areas. Each homogeneous area was assessed for friability and exposure potential. Friability is defined as the ease with which a dry material can be reduced to a dust or powder using hand pressure. Bulk samples were randomly collected during the survey. These samples were collected and placed in 6-mil polyethylene zip-lock bags for transportation to the laboratory. The sampling strategy used was adequate to meet all applicable local and federal National Emission Standards for Hazardous Air Pollutants (NESHAP) requirements for building renovations.

A total of 23 bulk samples of suspected asbestos-containing materials were collected during the survey. If identical material and substrate were identified on multiple floors, it was considered the same homogeneous material. Asbestos

bulk samples were collected from floor tiles, plaster walls and ceilings, covebase molding mastic, exterior window caulking, linoleum flooring, and exposed pipe insulation. Two samples were split into two discrete samples (012902PH-B1 and 012902PH-B6), due to the presence of two layers, floor tile and mastic. One sample was separated into two distinct samples (012902PH-B11), due to the presence of plaster skim and brown coats. A total of 26 samples were analyzed. All samples were analyzed at EMSL Analytical, Incorporated (EMSL) asbestos laboratory, which participates in both the American Industrial Hygiene Association (AIHA) and the National Voluntary Laboratory Accreditation Program (NVLAP). Analysis was accomplished using polarized light microscopy (PLM) in conjunction with dispersion staining techniques. The complete laboratory analytical results are found in the Building and Materials Analysis Reports Appendix.

The EPA defines any material having an asbestos content of greater than one percent as an asbestos-containing material. The material determined to be asbestos-containing was classified as regulated asbestos containing material (RACM) as defined in the federal NESHAP regulations.

Asbestos Survey Sample Results

All sample results are summarized in Table I that contains the location, sample designation, description, percentage and type of asbestos present in the sample. The samples are listed in numerical order based on location. Only 1 of the samples analyzed was determined to be asbestos-containing and it was the pipe insulation inside the wall near the rear window in Room 202.

TABLE I: ASBESTOS SAMPLE ANALYSIS SUMMARY*

Room	Sample Designation(1)	Description of Sampled Material	Amount of Material(2)	Percent and Type of Asbestos(3)
Basement/ first floor stairwell	012902PH-B7	Plaster wall in landing	N/A	NAD
9	012902PH-B11 (brown coat)	Plaster wall	N/A	NAD
9	012902PH-B11 (skim coat)	Plaster wall	N/A	NAD
9	012902PH-B12	Plaster ceiling	N/A	NAD
10	012902PH-B10	Plaster ceiling	N/A	NAD
11	012902PH-B13	Plaster wall	N/A	NAD
12	012902PH-B3	Plaster wall	N/A	NAD
12	012902PH-B4	Plaster ceiling above metal decorative pan ceiling	N/A	NAD
12	012902PH-B9	Exterior window caulk	N/A	NAD
13	012902PH-B1(mastic)	9x9 floor tile and mastic		NAD
13	012902PH-B1(tile)	9x9 floor tile and mastic	N/A	NAD
13	012902PH-B2	Plaster wall	N/A	NAD
13	012902PH-B5	Cove base mastic	N/A	NAD
100	012902PH-B15	Plaster wall	N/A	NAD
104	012902PH-B6 (mastic)	12x12 gray floor tile and mastic	N/A	NAD
104	012902PH-B6 (tile)	12x12 gray floor tile and mastic	N/A	NAD
105	012902PH-B8	Exterior window caulk	N/A	NAD
107	012902PH-B14	Plaster wall	N/A	NAD
201	012902PH-B17	Plaster wall	N/A	NAD
202	012902PH-B16	Plaster wall	N/A	NAD
202	012902PH-B18	Brown linoleum floor	N/A	NAD
202	012902PH-B19	Pipe insulation	Unknown	30% Chrysotile and 10% Amosite
202	012902PH-B20	Exterior window caulk	N/A	NAD
301	012902PH-B23	Plaster wall in closet	N/A	NAD
302	012902PH-B21	Plaster wall	N/A	NAD
302	012902PH-B22	Plaster ceiling	N/A	NAD

Notes:
1. Sample designations reference the date collected, location, and sample number.
2. Indicates total amount of material for particular area sampled.
3. Shaded samples indicate results greater than 1% asbestos.

*Samples taken and survey conducted by MEC^X, 29 January 2002.

Current Lead in Paint

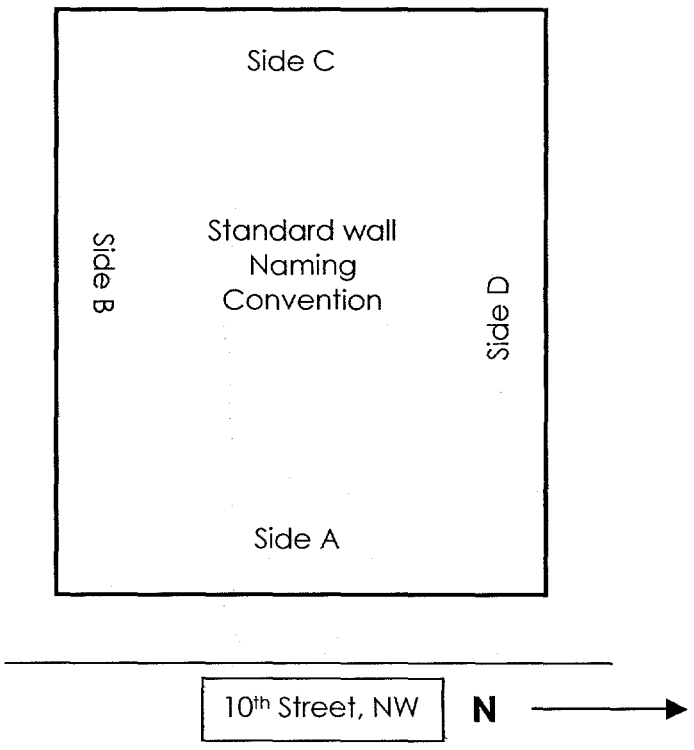
This section of the hazardous materials survey report describes the inspection for lead-based painted components located at the Petersen House as part of the Historic Structure Report. MEC^X conducted a lead-based paint survey to identify lead-based paint on interior and exterior surfaces of the Petersen House. The lead-based paint survey was performed concurrently with the asbestos survey.

This survey was performed by a licensed lead inspector in accordance with all local and federal regulations. The non-destructive lead-based paint survey was conducted using a Niton 703A Spectrum Analyzer Lead Detector (Serial No. U8382433LY) commonly referred to as an x-ray fluorescence (XRF) device.

The Occupational Safety and Health Administration (OSHA) has promulgated regulations concerning worker protection which require that precautions be taken when paint containing lead is disturbed. The major issue for worker protection is the amount of lead in the air, which is as dependent on the method of disturbance as it is on the concentration of lead in the paint. Only through air sampling during construction activities can the amount of lead in air be determined. Current OSHA regulations provide no threshold lead concentration that constitutes a lead-containing substance. Consequently, renovation and construction contractors should implement preventive control measures to ensure worker protection and regulatory compliance during activities which disturb lead-containing paint, until such time as exposure assessments indicate airborne lead concentrations are below permissible levels.

A visual inspection of the building components revealed that the painted surfaces varied by component and several layers of paint were evident on some of the sampled areas. Most painted surfaces were observed to be in relatively good condition, with minimal/negligible areas of damage. A total of 238 measurements were taken, including calibration readings. All calibration readings were within the range of accuracy required by the XRF manufacturer.

Building drawings provided a guide for labeling the XRF readings in various rooms on each floor. The inspector used a standard convention to label components for measurement, i.e., Side A of any room was the side nearest to the room entrance; Side B was to the left of Side A (when facing the building from the street); Side C was opposite A; and Side D was opposite Side B.



Lead-Based Paint Survey Sample Results

The overall results of the XRF testing indicated that lead-based paint (greater than or equal to 0.7 mg/cm^2) was identified on or within plaster walls, metal pan ceiling, wooden stairs, doors, windows, and radiators. The District of Columbia defines lead-based paint as equal to or greater than 0.7 mg/cm^2 of lead. The positive XRF results are listed in Table II.

Table II: POSITIVE LEAD-BASED PAINT SURVEY RESULTS*

Room	Side	Structure	Substrate	Color	Lead Conc. (mg/cm²)
Second Floor Hall	A	Wall	Plaster	White	1.27
Second Floor Hall	B	Wall	Plaster	White	1.51
Second Floor Hall	C	Wall	Plaster	White	1.31
Second Floor Hall	D	Wall	Plaster	White	1.41
Second Floor Hall	D	Window	Wood	White	3.8
Second Floor Hall	D	Window	Wood	White	4.61
Second Floor Hall	B	Door	Wood	White	14.73
Second Floor Hall	B	Door	Wood	White	19.85
Third Floor Hall	B	Window	Wood	White	40.81
Third Floor Hall	B	Window	Wood	White	39.94
Third Floor Hall	B	Window	Wood	White	44.62
Third Floor Hall	B	Window	Wood	White	26.29
Third Floor Hall	B	Stairs	Wood	Brown	5.14
Third Floor Hall	B	Stairs	Wood	Brown	40.63
Third Floor Hall	B	Stairs	Wood	Beige	21.03
Third Floor Hall	D	Door	Wood	Tan	33.08
Third Floor Hall	D	Door	Wood	Tan	34.38
Third Floor Hall	C	Floor	Wood	tan	24.87
Third Floor Hall		door	Wood	Tan	40.04
Porch	Exterior back	window	wood	Yellow	1.39
Porch	Exterior back	window	wood	Gray	4.02
Porch	Exterior back	window	wood	Taupe	36.25
Porch	Exterior front	window	wood	Taupe	2.88
Porch	Exterior front	railing	metal	Black	5.1
9	A	Wall	Plaster	Green	4.49
9	C	Wall	Plaster	Green	6.92
9	D	Door	Wood	White	1.2
9	D	Door	Wood	White	2.43
9	A	Door	Wood	White	32.36
9	A	Door	Wood	White	38.32
9	B	Door	Wood	White	33.95
9	C	Door	Wood	White	33.15
9	C	Door	Wood	White	41.6
9	C	Wall	Wood	White	36.71
9	A	Wall	Wood	White	23.19
9	C	Wall	Wood	White	25.38
9	C	Stairs	Wood	Brown	3.23
9	C	Stairs	Wood	White	34.25
9	C	Stairs	Wood	White	37.25
9	C	Stairs	Wood	White	20.75
9	C	Stairs	Wood	White	33.59
10	C	Door	Wood	Yellow	33.36
10	B	Wall	Plaster	Yellow	5.1
10	C	Wall	Plaster	Yellow	4.32
10	C	Door	Wood	Brown	30.69
10	C	Door	Wood	Brown	26.12
10	C	Door	Wood	Brown	29.13

Room	Side	Structure	Substrate	Color	Lead Conc. (mg/cm²)
10	C	Floor	Wood	Beige	16.67
10	D	Window	Wood	Beige	19.01
10	D	Window	Wood	Beige	36.53
11	A	Wall	Plaster	Green	5.1
11	B	Wall	Plaster	Green	15.9
11	C	Wall	Plaster	Green	5.1
11	D	Wall	Plaster	Green	5.1
11	B	Door	Wood	Brown	29.59
11	B	Door	Wood	Brown	39.99
11	B	Window	Wood	Brown	30.64
11	B	Window	Wood	Brown	36.76
12	B	Wall	Plaster	Tan	3.65
12	C	Wall	Plaster	Tan	4.31
12	D	Wall	Plaster	Tan	2.65
12		Ceiling	Metal	White	26.98
12	C	Stairs	Wood	Brown	25.75
12	C	Stairs	Wood	Yellow	28.47
12	C	Stairs	Wood	Yellow	28.26
12	A	Window	Wood	Yellow	38.81
12	A	Window	Wood	Yellow	39.01
12	A	Window	Wood	Yellow	14.44
12	A	Window	Wood	Yellow	18.61
12	A	Door	Wood	Yellow	39.3
12	A	Door	Wood	Yellow	31.77
12	A	Door	Wood	Yellow	16.22
12	D	Door	Wood	Yellow	50.94
12	B	Wall	Wood	Tan	32.51
13		Ceiling	Plaster	Yellow	0.84
13	A	Door	Wood	Yellow	24.27
13	A	Door	Wood	Yellow	29.67
13	A	Window	Wood	Yellow	2.72
100	D	Wall	Plaster	Other	0.93
100	A	Wall	Wood	Beige	2.72
100	D	Window	Wood	Beige	34.94
100	D	Window	Wood	Beige	34.84
100	D	Window	Wood	Beige	38.22
100	D	Door	Wood	Beige	36.68
100	D	Door	Wood	Beige	37.79
100	D	Door	Wood	Beige	10.23
100	D	Door	Wood	White	33.54
102	B	Window	Wood		46.03
102	C	Door	Wood	Beige	39.86
102	C	Door	Wood	White	37.35
102	C	Door	Wood	White	5.37
104	C	Wall	Plaster	Tan	1.42
105	C	Wall	Plaster	Tan	32.61
105	A	Window	Wood	Yellow	27.44
105	D	Door	Wood	Yellow	5.76

Room	Side	Structure	Substrate	Color	Lead Conc. (mg/cm²)
105	C	Wall	Wood	Yellow	20.44
105	D	Door	Wood	Yellow	33.38
107	C	Stairs	Wood	White	30.28
107	C	Stairs	Wood	White	37.22
107	C	Stairs	Wood	White	40.52
201	A	Wall	Plaster	White	3.84
201	B	Wall	Plaster	White	3.65
201	C	Wall	Plaster	White	2.94
201	D	Wall	Plaster	White	2.8
201	D	Door	Wood	White	5.1
201	D	Door	Wood	White	33.64
201	D	Door	Wood	White	45.03
202	B	Window	Wood	Tan	31.13
202	B	Window	Wood	Tan	32.72
202	B	closet	plaster	Blue	5.1
202		radiator	metal	White	1.2
203	C	Wall	Plaster	White	2.58
203	D	Window	Wood	White	2.29
203	D	Window	Wood	White	0.8
203	D	Window	Wood	White	3.27
203	D	Window	Wood	White	27.03
301	A	Closet	Wood	Tan	31.41
301	A	Closet	Wood	Tan	35.61
302	B	Radiator	Metal	Tan	1.76
303	C	Wall	Wood	Tan	30.08
303	D	Window	Wood	Tan	37.96
303	D	Window	Wood	Tan	40.91
303	D	Window	Wood	Tan	34.07
303	D	Window	Wood	Tan	23.33
303	A	Fireplace	Wood	Tan	24.5
303	A	Fireplace	Wood	Tan	20.53
303	A	Wall	Wood	Tan	25.77

*Samples taken and survey conducted by MEC^{x}, 29 January 2002.

In addition, XRF results not listed indicated that there are other lead-in-paint (less than 0.7 mg/cm² but greater than zero) components identified on or within the surveyed space, as well as other surfaces deemed to be lead-free. These areas are identified in a table with the complete XRF survey results in the Building and Materials Analysis Reports Appendix.

Abatement Requirements

The areas inspected and sampled during the asbestos and lead paint surveys indicated that asbestos-containing materials and lead-based painted components are present and could possibly be disturbed during future renovation projects at the Petersen House.

The asbestos-containing material identified was classified as RACM, as defined in the Federal National Emissions Standards for Hazardous Air Pollutants (NESHAP) regulations. Asbestos-containing material classified as RACM shall be removed prior to any renovation projects that will disturb the material.

Materials identified during the lead paint survey can be classified into three categories based on the amount of lead paint on the component. 1) lead-based painted components (greater than or equal to 0.7 mg/cm^2); 2) lead-in-paint components (less than 0.7 mg/cm^2 but greater than zero) and 3) lead free components. All three were identified within the Petersen House. Levels exceeding the lead-based paint value of greater than or equal to 0.7 mg/cm^2 require licensing and certification of contractors performing abatement of the painted surfaces. The major issue in levels below 0.7 milligrams per square centimeter becomes worker protection. The amount of lead in the air is as dependent on the method of disturbance as it is on the concentration of lead in the paint. Care should be taken to ensure that during the management in-place of this paint, the painted surfaces containing lead remain in good condition and do not become chipped or flaked.

Contractors are required to possess a lead-based paint abatement license prior to the start of abatement work on this project and any disturbance of lead-based painted components identified in this report must be done so by a contractor who has an established respiratory protection program and a minimum of two day lead worker training for employees working with lead-based paint. Where lead-based paint is present in the solid waste stream to be landfilled, undertake Toxicity Characteristic Leaching Procedure (TCLP) testing of the waste in accordance with EPA SWP 846 and local requirements to determine whether the waste is characterized as a hazardous material requiring disposal at a hazardous waste landfill or proper incineration. If any painted surfaces containing lead identified in this study will be disturbed in conjunction with a future renovation project, it is recommended that a licensed lead abatement contractor or a contractor experienced in performing renovation work in accordance with OSHA's Lead in Construction regulations, 29 Code of Federal Regulations (CFR) 1926.62, be hired to perform the work.

Ongoing Management of Hazardous Materials

To control asbestos-containing materials (ACM) in buildings, the USEPA (40 CFR 763, Subpart E) has outlined five recommended response actions. They are removal, enclosure, encapsulation, repair, and an operations and maintenance (O&M) program.

Removal means the taking out or the stripping of substantially all ACM from the building. If performed properly, removal eliminates the hazardous material from the building and reduces the liability of asbestos related diseases from exposures to asbestos by the building occupants.

Enclosure refers to an airtight, impermeable, permanent barrier around ACM to prevent the release of fibers into the air. An enclosure will only be effective if it remains undamaged. Encapsulation means the treatment of ACM with a material that surrounds or embeds asbestos fibers in an adhesive matrix to prevent the release of fibers. The encapsulant creates a membrane over the surface or penetrates the materials and binds its components together. Enclosure and encapsulation can be used to control the release of asbestos fibers into the air, but these response actions are only temporary solutions, the asbestos still remains in the facility and can pose a problem in the future.

Repair suggests returning damaged ACM to an undamaged condition or to an intact state so as to prevent fiber release. With this response action, the hazardous material remains in the building and should be monitored periodically. If the ACM has become damaged, the damage should be repaired immediately.

O&M denotes a program of work practices to maintain friable ACM in good condition, ensure clean up of asbestos fibers previously released, and prevents further release by minimizing and controlling friable ACM disturbance or damage. The O&M program should be instituted until all of the ACM is removed from the building.

Based on the results of the laboratory analysis of the bulk samples at the Petersen House, the pipe insulation, located on the second floor in room 202, was observed to contain asbestos, and is therefore a regulated asbestos-containing material (RACM). The pipe insulation was observed to be in fair to good condition at the time of the survey, and it will probably not be disturbed by either day to day activities in the building or by renovation plans. MEC^X recommends the material be periodically monitored by implementing an O&M program. Warning labels (as per USEPA 40 CFR 763.95) should be posted on the pipe insulation as RACM to inform building occupants of its presence.

Accessibility

ADA in Historic Properties

The Americans with Disabilities Act (ADA) mandates access for the disabled and includes the highly specific range of detailed provisions that are to be made to provide full access. The Federal Government has developed similar standards, called the *Uniform Federal Accessibility Standard* (UFAS). The National Park Service and the National Forest Service have also followed suit, developing additive guidelines for providing access for public landscapes. These collective standards have guided the National Park Service at Ford's Theatre National Historic Site in designing and providing as complete access to Ford's Theatre and Petersen House as is practical and consistent with the historic fabric of this historic site. Cursory inspections indicate that Petersen House when considered independently is not an accessible property under ADA guidelines, and that the NPS is fully aware of this situation. Rudimentary "accessible" facilities such as barrier free restrooms are available to visitors next door to Ford's Theatre, across the street, because minimal interpretation has kept visit time brief in the house. Yet, it is still unlikely that any disabled person could physically manage to visit the Petersen House without major changes to accommodate a lift or ramp.

Any physical changes to the house exterior or interpreted floors of the Petersen House to accommodate "accessibility" would violate the historic integrity of the site and directly threaten or destroy its historic significance. This fact is due to the importance of the house to our nation as the place where President Lincoln was taken following his assassination at Ford's Theatre, and the National Park Service's choice to restore and to interpret the house as it appeared this date in April of 1865. Generally, additions or alterations to an existing building must comply with ADA accessibility guidelines for new construction. However, as a federally owned qualified historic building, subject to the National Historic Preservation Act and review by the Advisory Council on Historic Preservation, alternative technical provisions may be permitted when "alterations" are undertaken. An alteration is a "change that affects or could affect the use of a building, such as a remodeling, renovation, rehabilitation, historic restoration, changes or rearrangements in structural parts or elements, or extraordinary repairs." No alterations of this magnitude have occurred at the property since January 26, 1992 when compliance by legislation became required. Following are examples of work that have been implemented on the property, but are not considered alterations by the legislation: maintenance, reroofing, painting or wallpapering, asbestos removal, and changes to mechanical and electrical systems. Similar actions will likely continue as the property is cared for under normal circumstances. In summary, because the property has not undergone a significant rehabilitation since the legislation requiring "accessibility" became effective, compliance with ADA has not been expected to date.

Universal Accessibility

Other accessibility related directives, beyond ADA compliance, seek to add a higher level of consideration by an agency - to take into account the simple satisfaction granted to the public visitor through ease and convenience of moving about and through a property. The term "universal access" describes the need to provide for enjoyment of public property by everyone, from fully able-body visitors to children in strollers, to toddlers, to grandparents, and to the wheelchair bound and otherwise mobility impaired. This concept of "inclusive" access also extends to persons with grasping, visual, and hearing impediments. To meet the principles of universal accessibility and to avoid discrimination of an "individual with a disability," the NPS provides an alternative means of accessing the Petersen House for visitors to the Ford's Theatre National Historic Site. To all visitors who are unable to physically mount the steps into and from the house, an alternative way to view the interior spaces of the first floor restored rooms, and especially the Death Room, is offered. A video of the Ford's Theatre National Historic Site highlighting both Ford's Theatre and the Petersen House is maintained for viewing at the security building that adjoins the theatre. The availability of this option is not advertised, but offered when requested. Other alternatives for the physically challenged visitor should be explored within the framework of a Comprehensive Development Plan, recommended as part of this study. Other visitors can be accommodated within the existing visitation pattern, but the experience may be enhanced for some through thoughtful improvements to circulation patterns and introduction of varied interpretation methods.

Accessibility Survey - Architecture

A thorough accessibility survey of the Petersen House was conducted in August 2002, using BOMA International's ADA Compliance Guidebook (Meeting the Title III Provisions of the Americans with Disabilities Act). The guidebook provides a checklist for compliance with Appendix A of 28 CFR Part 36 and investigates the accessibility of all aspects of the building and site from parking, to alarms and handrails. A visual inspection evaluated individual building elements and materials, then passages, stairs, doorways and diameters of handrails were measured to determine compliance. ADA compliance of fire alarms, signsfor exiting, and equipment controls were reviewed by surveyors for each respective engineering discipline (See Parts 1E and 1F). Detailed results of the architectural survey follow this summary. The path of travel used for the survey follows current and optional circulation patterns of the public through the restored areas of the property. The survey does not include the basement floor level where the public exited following the 1959 rehabilitation, because the Mechanical/Electrical upgrade project will relocate barriers into this corridor, clearing the side easement passage for unobstructed travel.

Public Path of Travel to and from the "Primary Function Area:"
The primary function area of the Petersen House is the first floor within the main block of the house and the Death Room within the rear ell. These are the only spaces within the house that are restored, interpreted and visited by the public. Ideally, this would be an accessible, continuous and unobstructed route, as the following statement describes: In buildings of "public accommodation," the accessible path of travel shall begin with accessible parking and building entrance and offer accessible restrooms (or single accessible unisex restroom) and compliant water fountains. If no restrooms or water fountains are required for use by the general public, then none need to be provided to meet ADA.

General architectural provisions that meet the requirements include:

- clear path width of minimum 36" (except at doorways)
- level walking surface, curb ramp at maximum slope 1:6 - no longer than 2' length; running slopes not exceeding 1:20
- maximum ramp slope of 1:12, maximum rise for any run shall be 30"
- thresholds at maximum ½" height
- on stairs, handrails 34-38" height measured from stair nosing
- on stairs, clear space between handrail and wall to measure 1 ½"

The following is an accounting of how these provisions compare to the actual built conditions (or as last renovated) at the Petersen House. Some minor deficiencies could be corrected and barriers removed, but in a majority of cases, the feature or element in violation is original to the house, and should not be altered.

Public Transit, Street Parking and Restroom Facilities:

Nearest Metro stop is Metro Center, with an accessible entrance 1 street over to the west, and one block to the north from Petersen House.

Curb measures 6" height – no accessible parking spaces are provided.

No curb cuts or ramps are provided in mid-block (only at street corners), so that dropping-off from a vehicle near the building entrance of the Petersen House is difficult to maneuver for the physically challenged. At Ford's Theatre across Tenth Street, the only curb cut located near the theatre is the driveway entrance to the adjacent parking garage (to the north). Temporary ramps have been added to span steps at the northernmost building entrance. This is the route to the only alternate means of viewing the Petersen House in video format and to accessible restrooms.

As designated after the 1959 rehabilitation, the Path of Travel directed visitors up the stairs from Tenth Street to the main entrance door into the first floor level. After viewing the Death Room, visitors exited through the doorway onto the rear porch and down the stairs to view the "beautified garden," with period plantings. Visitors then exited through the basement level of the house and up

the exterior stairs to the street level. There was no interpretation provided within the basement floor level, but visitors were allowed to see the rear of the house. They could see how the house levels related and surmise how the historic functions were organized. This path was altered for safety reasons when a plaster wall within the Basement hallway began to fail and cladding material from the Lincoln Building began to fall into the garden area.

Current Path of Travel – Entrance to Exit:

From Street/Sidewalk up to First Floor main entrance:

Curving steps consisting of 9 risers that equal 68" vertical level change, material: brownstone or seneca sandstone (replaced in 1959)
Step treads measure 7 ½" deep at narrowest point, 19" at widest point
Stairs measure 49" clear width between handrails at railing
Cast iron railing measures 32" high at steps and 35" high at stoop – pickets spaced at 4 ½" oc (original, but repaired when stoop replaced)
Sill 9" height above stoop level (one step height)
Main Doorway – 32 ½" clear width, ¾" threshold height

First Floor Level:

Hall – 68" width of corridor (baseboard radiators reduce by 4" both sides, then 60" clear at this point)
Hall at Stairs – 35" width of corridor (radiator one side, 31" clear)
Stairway – 30" clear width between wood railing (3" wide) and wall (no railing along wall), railing height 28" from step front

Continue path to exit by returning as entered.

The current Path of Travel directs visitors up the stairs from Tenth Street to the main entrance door into the first floor level. The steep, curving-type staircase is not easy to mount, and the railing is just shy of the recommended height, but this entrance sequence fittingly follows the path traveled by Lincoln, as he was carried after being shot. Visitors are not presently allowed to continue through the Death Room and down the rear porch steps for exiting through the basement level, due to safety concerns. Visitors are now directed to return as they entered, after viewing the restored rooms, leading to some congestion and confusion. This plan requires fewer NPS staff to limit visitor traffic and monitor the path, while providing informational support to the limited written interpretation provided. The full extent of the house including the yard/garden is not experienced and the historic use of the house for boarders is not understood. If bus load(s) arrive at one time, the staff person must allow only 15 (or 20 if school group) to enter at a time. There is no protected area to wait on the street. Strollers cannot be left unattended on the public sidewalk, so they are carried into the constricted space. This situation is problematic, because damage to the restored finishes will likely occur over time. This Path of Travel is very efficient, but only adequate in periods of low visitation.

Path of Travel as designed in M/E Upgrade project – Entrance to Exit:
Note: survey was performed prior to alterations under the upgrade project- verify conditions after construction is complete.

From Street/Sidewalk up to First Floor main entrance:
Same as above, but exit downstairs by passing through Death Room, down steps at Rear Porch to Basement level brick porch

Doorway from Hall to Death Room – 32" clear width,
apx. 6" change of vertical elevation at threshold is ramped down with metal sloped insert with roughened surface
Doorway from Death Room to Rear Porch – 28" clear width,
¾" threshold height to wooden deck level
Passage at rear porch along window wall – 35" clear width to railing
Railing – 34" height, 5/4 x 5/4 wooden pickets, spaced 4"oc
Stairs down measure 30" clear width between railing and wall (no railing along wall)
Steps down consisting of 2 risers that equal 10" vertical level change to mid-landing and 12 risers that equal 90" vertical level change to brick porch level equal 100" total change

From Rear Porch (scheduled to be enclosed with upgrades) through Side Easement passage to exitway (existing door) at Street:
Corridor width at entrance to passage from porch - 28" clear width
Step consisting of 1 riser that equals 9" vertical level change (at narrow point in corridor leading to passage).
Corridor width: 36" wide, but current obtrusions include, electric meter, electric panel board, surface mounted conduit, outlets, etc. (scheduled to be relocated to basement level corridor with upgrades)
Corridor materials: brick masonry walls, concrete floor, and narrow, two story height that creates feeling of claustrophobia (suspended drywall ceiling at one story height scheduled with upgrades)
Stairs measure 36" width (obtrusions currently prevent 36" clear width – verify removal of items in violation)
Step treads measure 10" deep
Steps leading to doorway consisting of 4 risers that equal 39 ½" vertical level change, material: stone (new concrete steps scheduled with upgrades)
Side Doorway at Street front– 33" clear width , currently locked from both sides by double keyed dead bolt (scheduled to receive panic/exit hardware with upgrades)

As designed within the proposed construction project *Rehabilitate Mechanical and Electrical Systems, Ford's Theatre National Historic Site* (2002), the Path of Travel would return to the 1959 scheme, requiring the electric panel at the side easement to be relocated to the basement level hallway to accommodate visitor exiting through the passageway. The initial goal was to better manage the interior environmental conditions (originally to include cooling) by enclosing the lower level of the rear porch and limiting the use by visitors of other exterior doorways into the "conditioned" building. When air conditioning was removed from the project design as a "value engineering" measure, some of the merits of the above scheme, including the porch enclosure, were negated.

If the above path was reversed, visitors could visit or view the yard/garden while waiting, a protected waiting area would be available, and there could be a fairly secure and out of the way area available for strollers to be parked while visiting the house. Normally, both of the schemes utilizing the side easement passage would require additional NPS staff for visitor control; however, monitoring by a closed circuit television along the path is also proposed under the upgrade project. If the former Kitchen (Room 12) was converted into an exhibit area, as recommended elsewhere in this study, this location off the rear porch level would serve the path of travel regardless of direction. To reach multiple objectives, Room 12 could become an "accessible" exhibit area for an alternative means of visitation for those visitors in wheelchairs if the floor of the side easement was finished as a sloping ramp. The corridor measuring 36" width meets "accessible" clearance requirements, except for the transition portal to the rear porch (28" clear). A ramp of 1:12 slope, running 36 feet long to span the 30" vertical differential from the easement door at Tenth Street to the rear brick porch, would fit perfectly in the available space. If this option for an "accessible entrance" was implemented, the addition of a permanently allocated handicap parking space with curb cut would be desirable in front of the house. This could be coordinated with future sidewalk improvements by DC.

Conclusion

It is apparent by the advantages and disadvantages outlined for all listed Paths of Travel, that none meet all accessibility requirements, and each present varying degrees of success in granting visitors the ability to view the historic configuration of the house and enhanced historic and cultural interpretation.

Once selected by the NPS, the final Path of Travel should be re-evaluated based on actual field conditions following the mechanical/electrical upgrade project to further identify ways to limit barriers and obstructions. In designing the circulation pattern that best meets both the NPS's and the visitor's needs and physical requirements, consider new opportunities for historic interpretation and expanding the visitor's experience of the house and its complete story.

APPENDIX A

Index to Historic Documents

Historic Photographs are arranged in chronological order by category:

Exterior of Petersen House

Photograph I	Primary (East) Facade	
Date: c1883	Photographer: unknown	NPS-NCR (FTNHS) Collection
Photograph II	Primary (East) Facade	
Date: c1890s	Photographer: unknown	NPS-NCR (FTNHS) Collection
Photograph III	Primary (East) Facade during Oldroyd's charge of Museum	
Date: c1925	Photographer: unknown	NPS-NCR (FTNHS) Collection
Photograph IV	Primary (East) Facade-Detail of Brownstone Steps	
Date: 1953	Photographer: A. Rowe-NPS	NPS-NCR (FTNHS) Collection
Photograph V	Primary (East) Facade during 1959 Rehabilitation	
Date: 2/1959	Photographer: A. Rowe-NPS	NPS-NCR (FTNHS) Collection
Photograph VI	Primary (East) Facade following 1959 Rehabilitation	
Date: unknown	Photographer: A. Rowe-NPS	NPS-NCR (FTNHS) Collection
Photograph VII	Rear Courtyard with 1899 Addition before 1959 Rehabilitation	
Date: 12/1958	Photographer: A. Rowe-NPS	NPS-NCR (FTNHS) Collection
Photograph VIII	Rear Courtyard and West Facade before 1959 Rehabilitation	
Date: 12/1958	Photographer: A. Rowe-NPS	NPS-NCR (FTNHS) Collection
Photograph IX	Demolition of 1899 Addition during 1959 Rehabilitation Second Floor Bathroom has yet to be demolished.	
Date: 12/1958	Photographer: Stewart Bros.	NPS-NCR (FTNHS) Collection
Photograph X	Primary (East) Facade – HABS-DC-165	
Date: 1968	Photographer: J. Boucher-NPS	Library of Congress–P&P
Photograph XI	Primary (East) Facade-Detail of Footscraper – HABS-DC-165	
Date: 1968	Photographer: J. Boucher-NPS	Library of Congress–P&P

Interior of Petersen House

Photograph XII Photographic repro of Sketch of rear wall of Death Room
Date: 1865 Artist: Alfred Waud Library of Congress

Photograph XIII Photograph of Death Room just after time of Lincoln's Death
Date: 4/1865 Photographer: Julius Ulke NPS-NCR (FTNHS) Collection

Photograph XIV Photograph of renovated Death Room – view of bed
Date: 1932 Photographer: unknown NPS-NCR (FTNHS) Collection

Photograph XV Photograph of renovated Death Room – view of rear wall
Date: 1932 Photographer: unknown NPS-NCR (FTNHS) Collection

Photograph XVI Photograph of Death Room during 1959 Rehabilitation
Date: 4/1959 Photographer: Stewart Bros. NPS-NCR (FTNHS) Collection

Photograph XVII Photograph of Death Room Bed after Rehab. – HABS-DC-165
Date: 1968 Photographer: J. Boucher-NPS Library of Congress–P&P

Photograph XVIII Photograph of Parlors after 1959 Rehab. – HABS-DC-165
Date: 1968 Photographer: J. Boucher-NPS Library of Congress–P&P

Historic Drawings arranged in chronological order:
Note: All Drawings are printed from reduced, scanned images of original documents, provided to the architect by NPS-NCR – although many with vital information are not included due to illegibility at report size.

Coal Shed and Storeroom to be built - Corps of Engineers (U.S. Army)-Office of Public Buildings and Grounds Date: 7/1899 NPS-NCR (FTNHS) Collection

Floor Plan – Square 347 (Measured Drawing) – Office of Public Buildings and Grounds Date: 1905 NPS-NCR (FTNHS) Collection

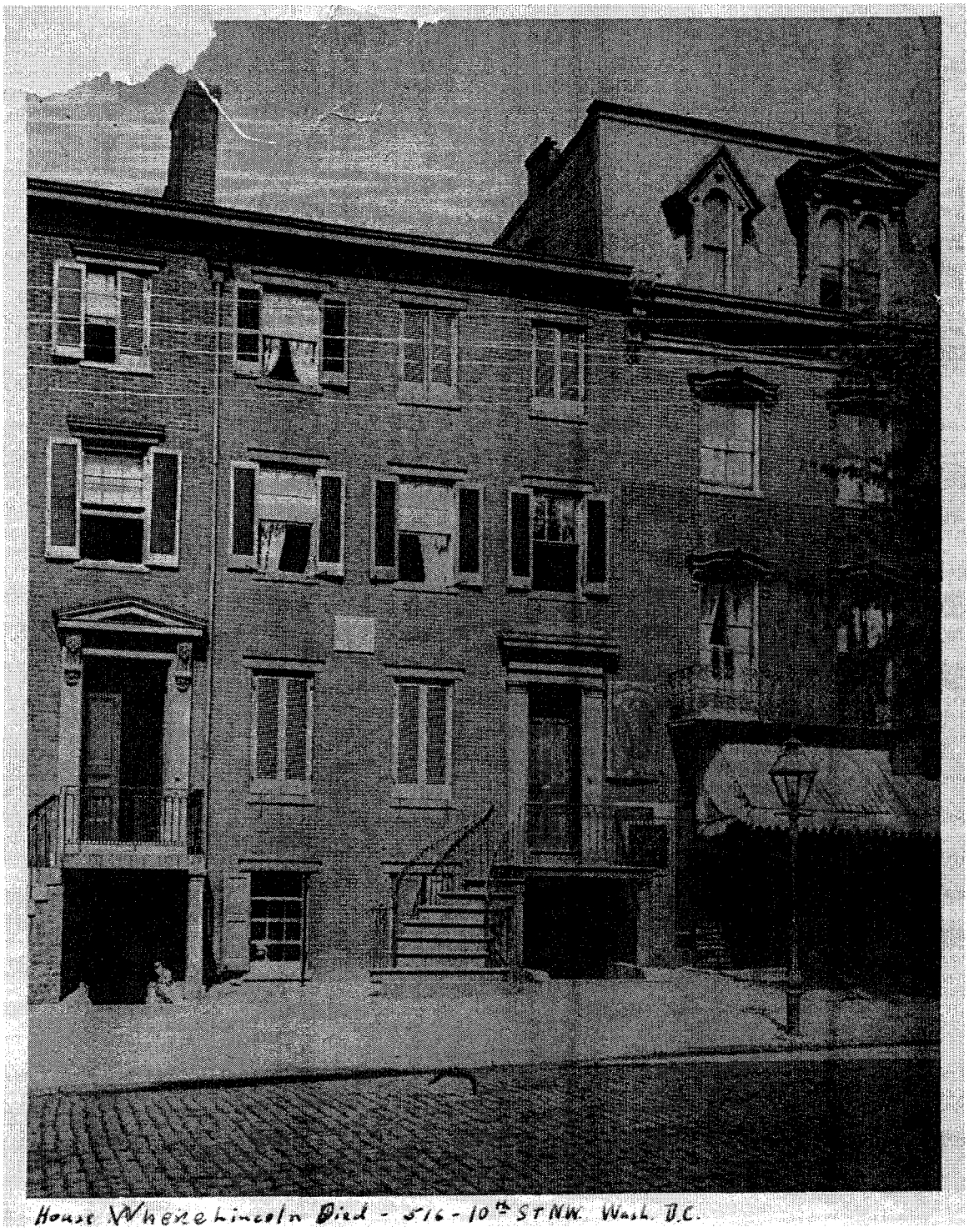
Plan of Room Where Lincoln Died, National Park Service – National Capital Parks
Date: 10/1945 NPS-NCR (FTNHS) Collection

Plat of Deed, Square 347, Lot 14 (from original deed), National Park Service – National Capital Parks Date: 2/1950 NPS-NCR (FTNHS) Collection

Garden Development Plan, National Park Service – National Capital Parks
Date: 7/1959 NPS-NCR (FTNHS) Collection

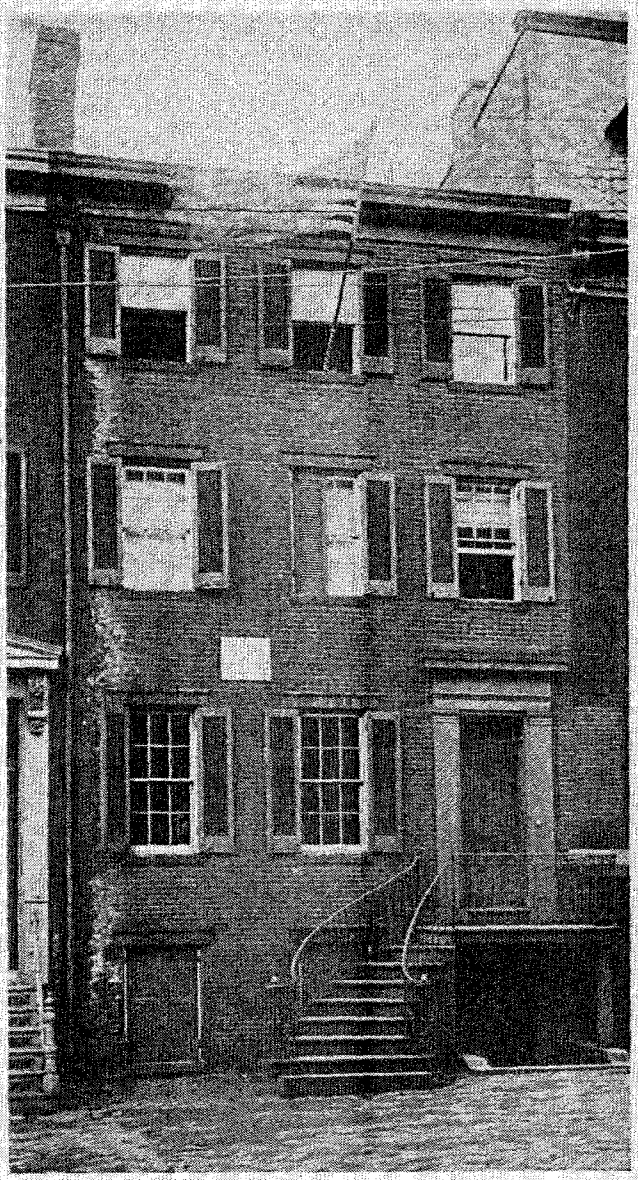
Historic American Buildings Survey Recordation Project of Wm. A. Petersen House (HABS-DC-165) 5 Drawing Sheets Date: 1977 Library of Congress–P&P

Photograph I Primary (East) Facade
Date: c1883 Photographer: unknown NPS-NCR (FTNHS) Collection



House Where Lincoln Died - 516 - 10th ST NW. Wash. D.C.

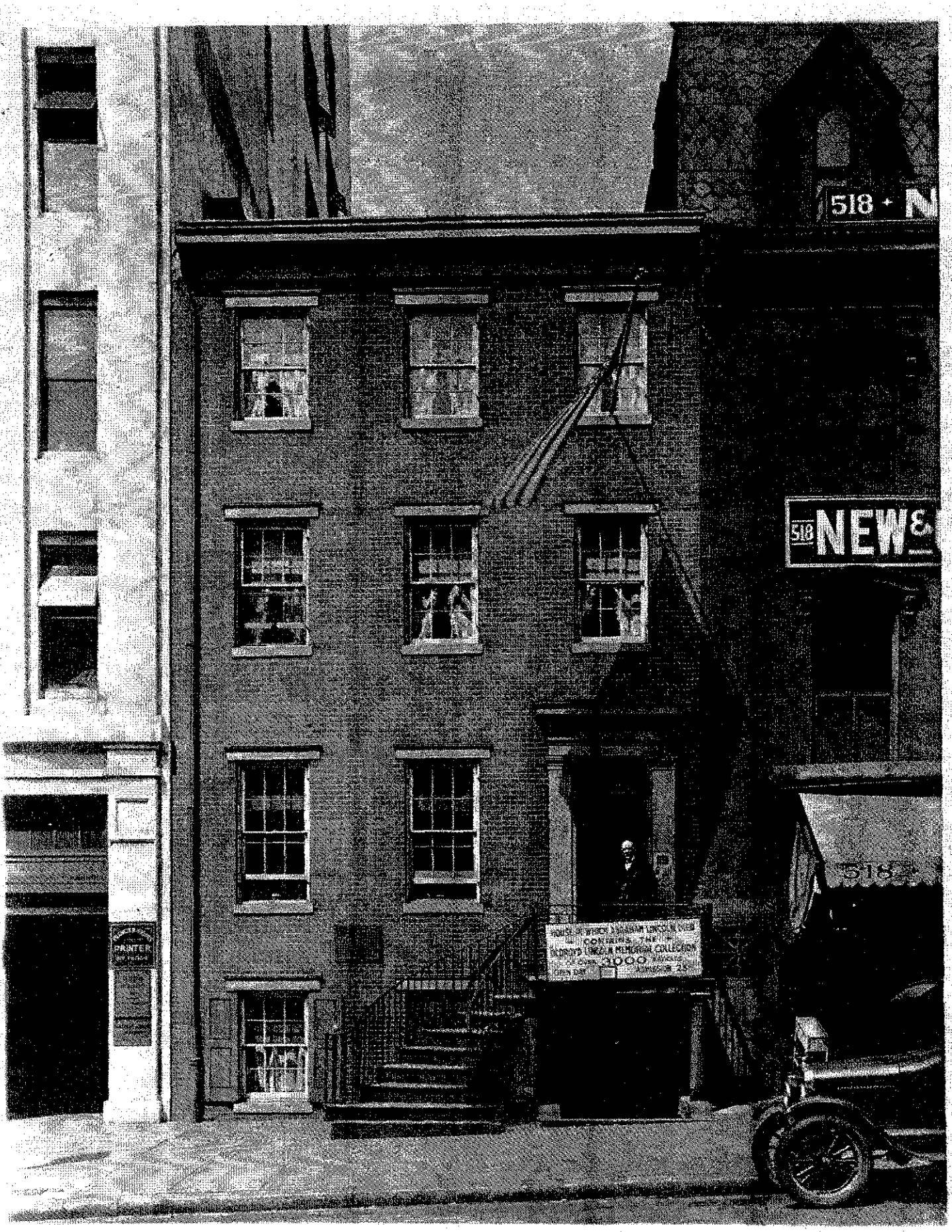
Photograph II Primary (East) Facade
Date: c1890s Photographer: unknown NPS-NCR (FTNHS) Collection



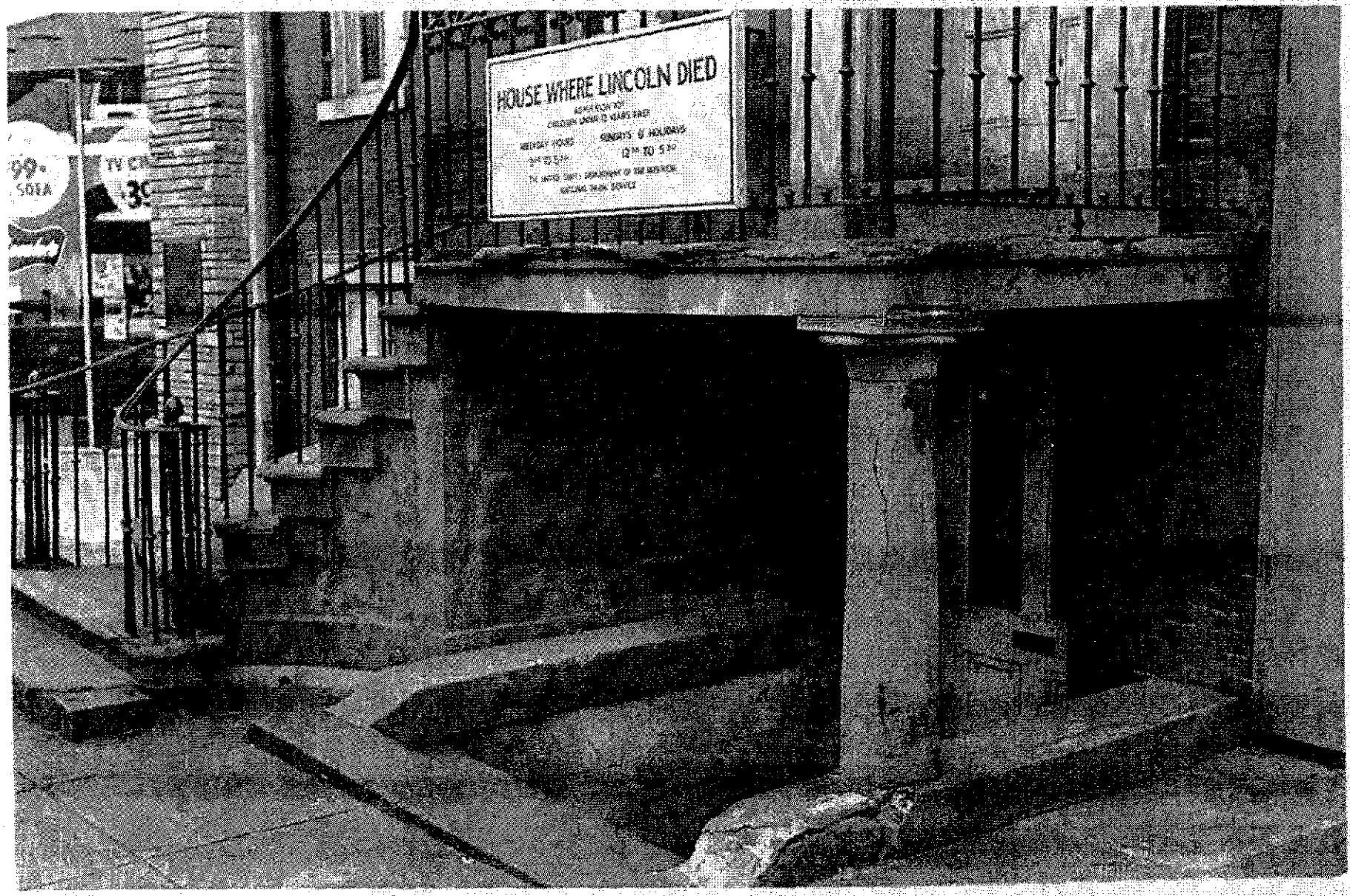
BROWN'S FAMOUS PICTURES. NO. 1228

HOUSE WHERE LINCOLN DIED, WASHINGTON.

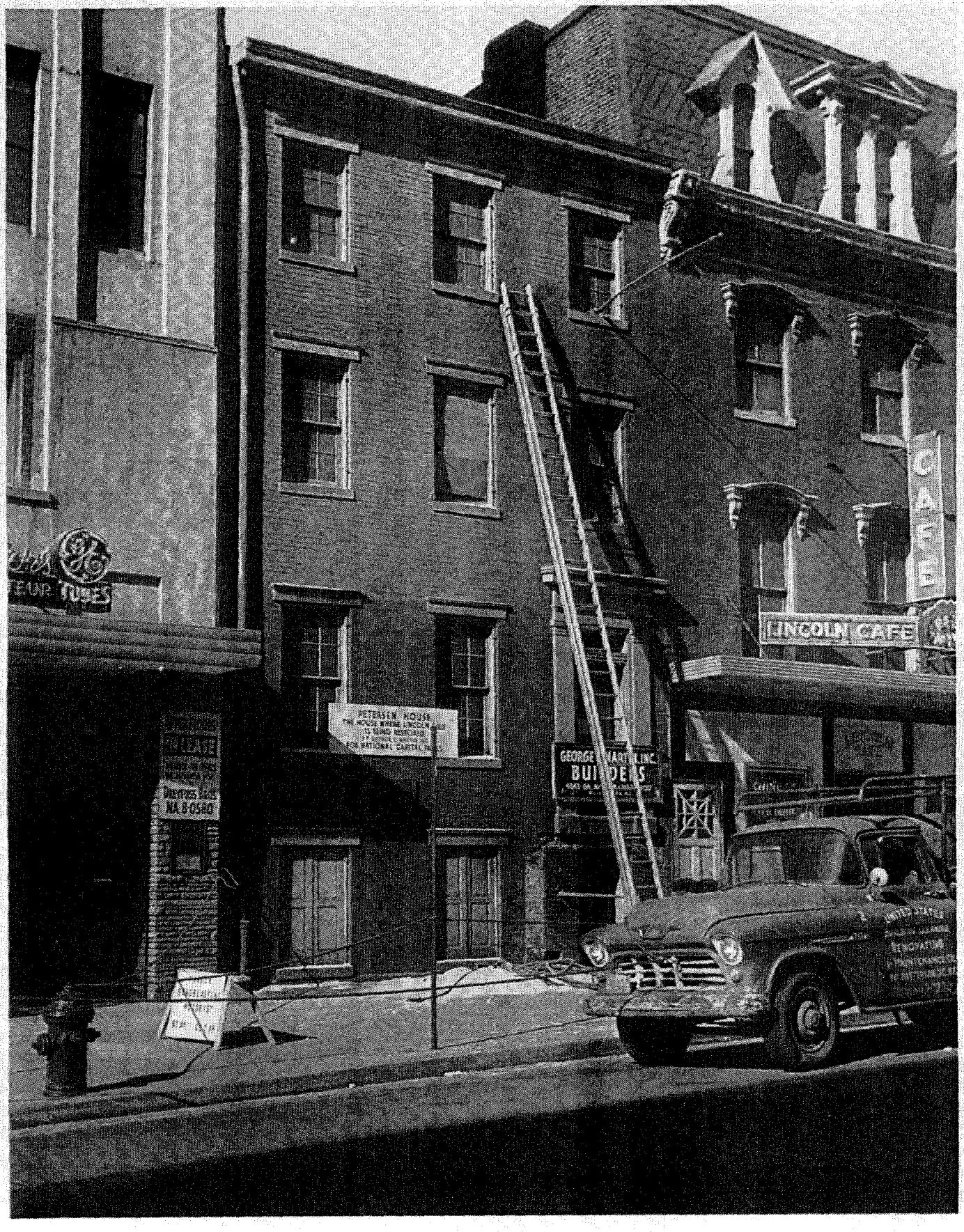
Photograph III Primary (East) Facade during Oldroyd's charge of Museum
Date: c1925 Photographer: unknown NPS-NCR (FTNHS) Collection


518 + N
518 NEW &
518 +
PAINTER
CONTAINS THE
MEMORIAL COLLECTION
3000

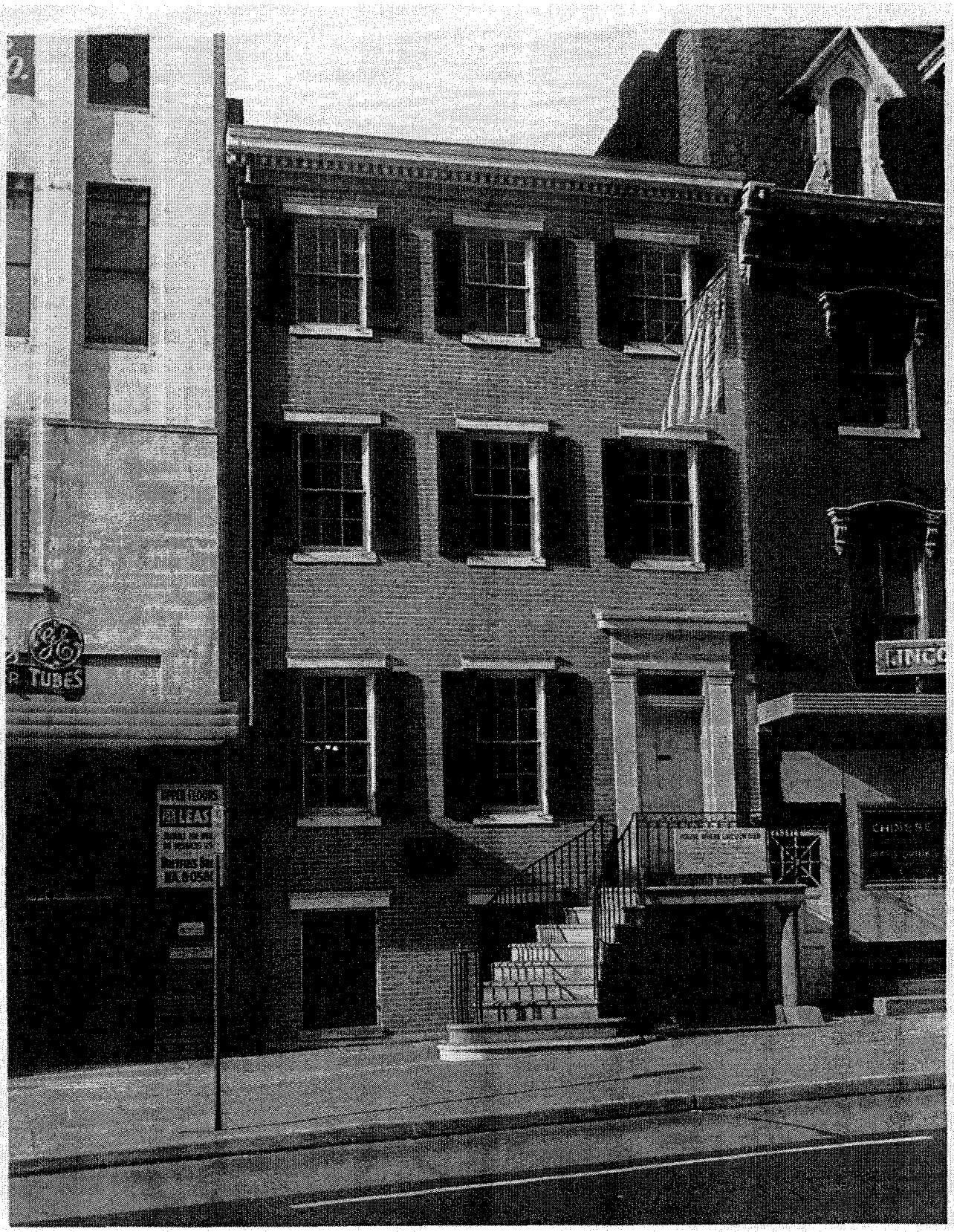
Photograph IV Primary (East) Façade–Detail of Brownstone Steps
Date: 1953 Photographer: A. Rowe-NPS NPS-NCR (FTNHS) Collection


HOUSE WHERE LINCOLN DIED
99¢
SODA

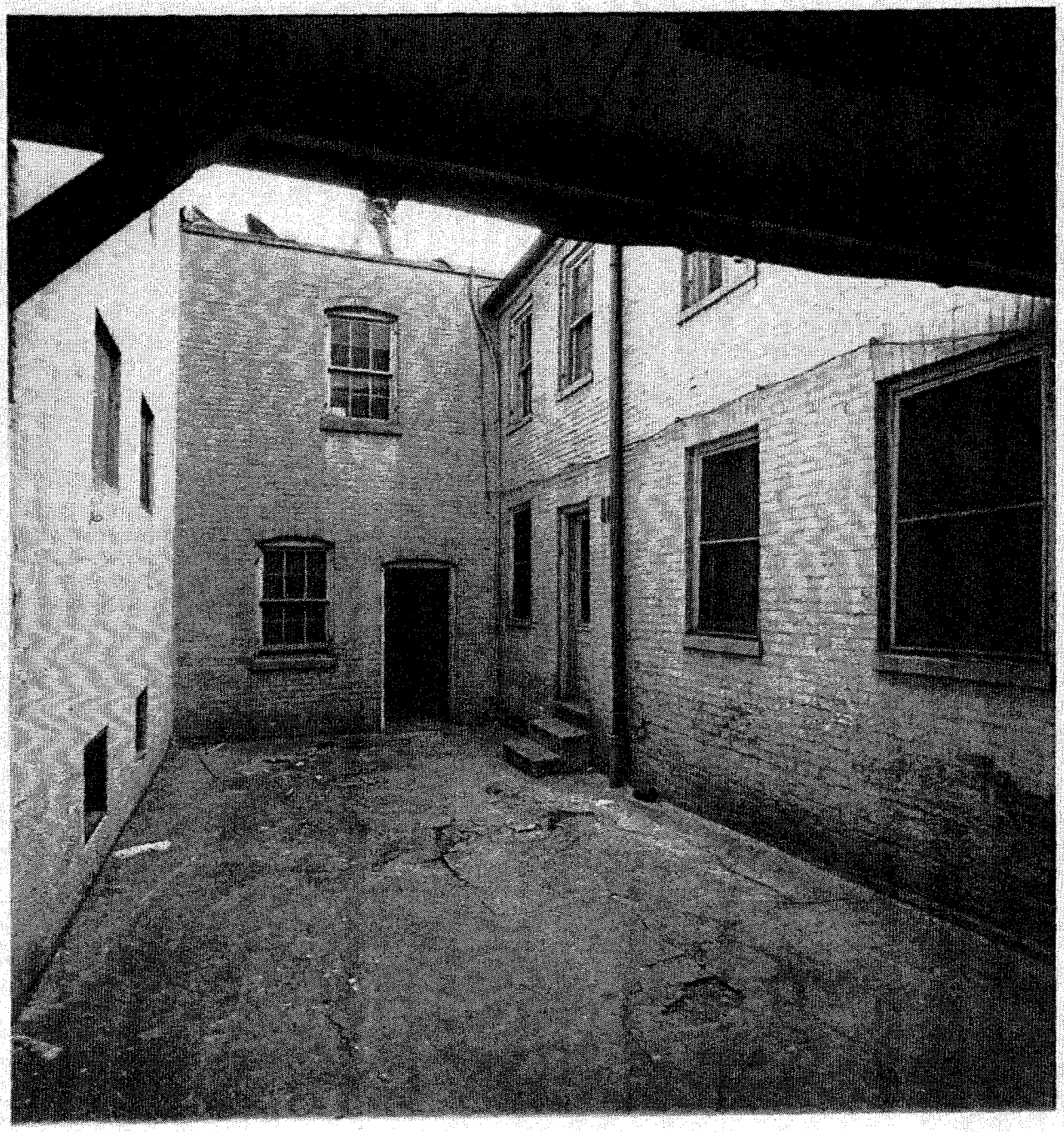
Photograph V Primary (East) Façade during 1959 Rehabilitation
Date: 2/1959 Photographer: A. Rowe-NPS NPS-NCR (FTNHS) Collection


CAFE
LINCOLN CAFE
PETERSEN HOUSE
BUILDERS

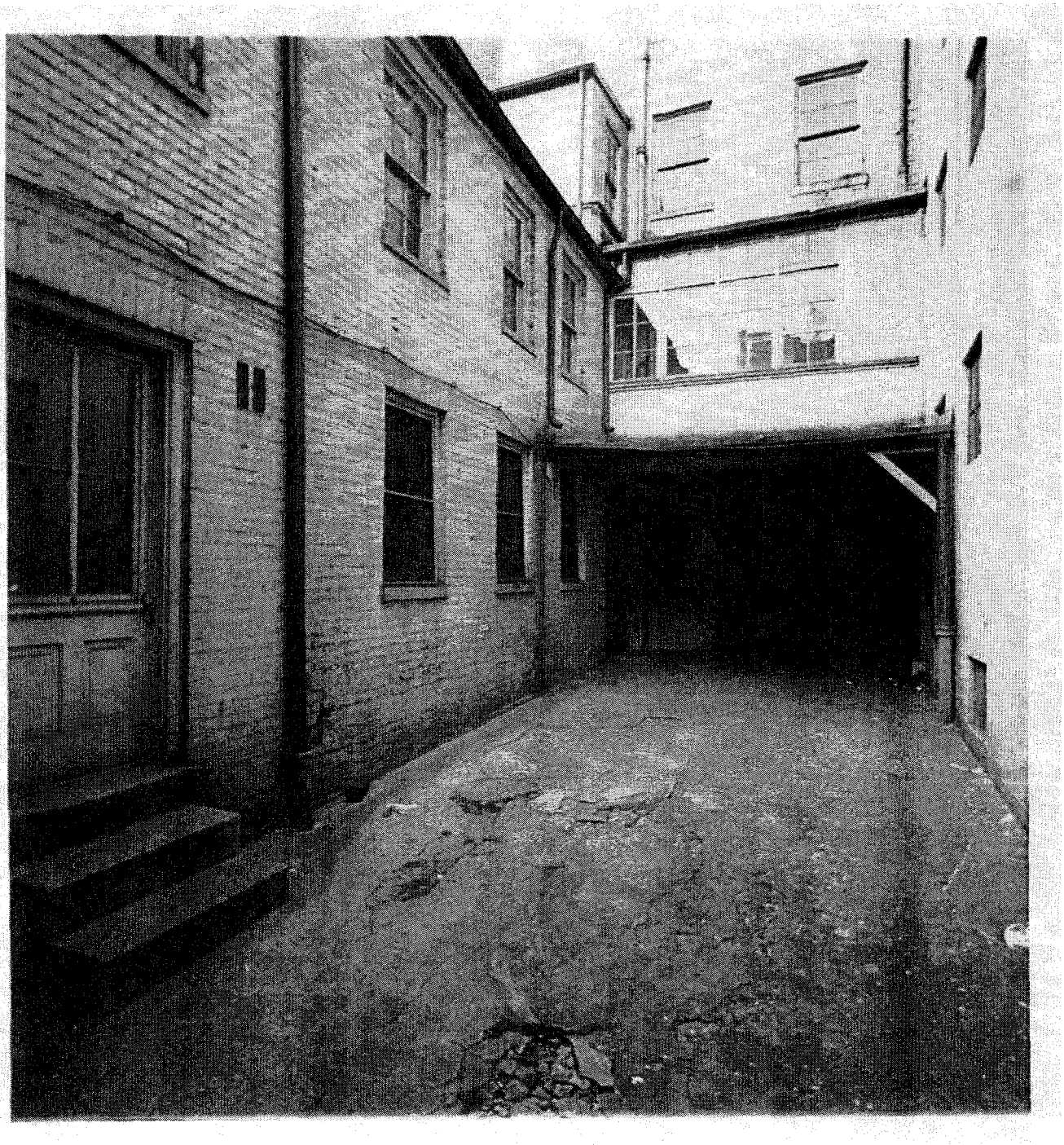
Photograph VI Primary (East) Facade following 1959 Rehabilitation
Date: unknown Photographer: A. Rowe-NPS NPS-NCR (FTNHS) Collection


TUBES
LEAS

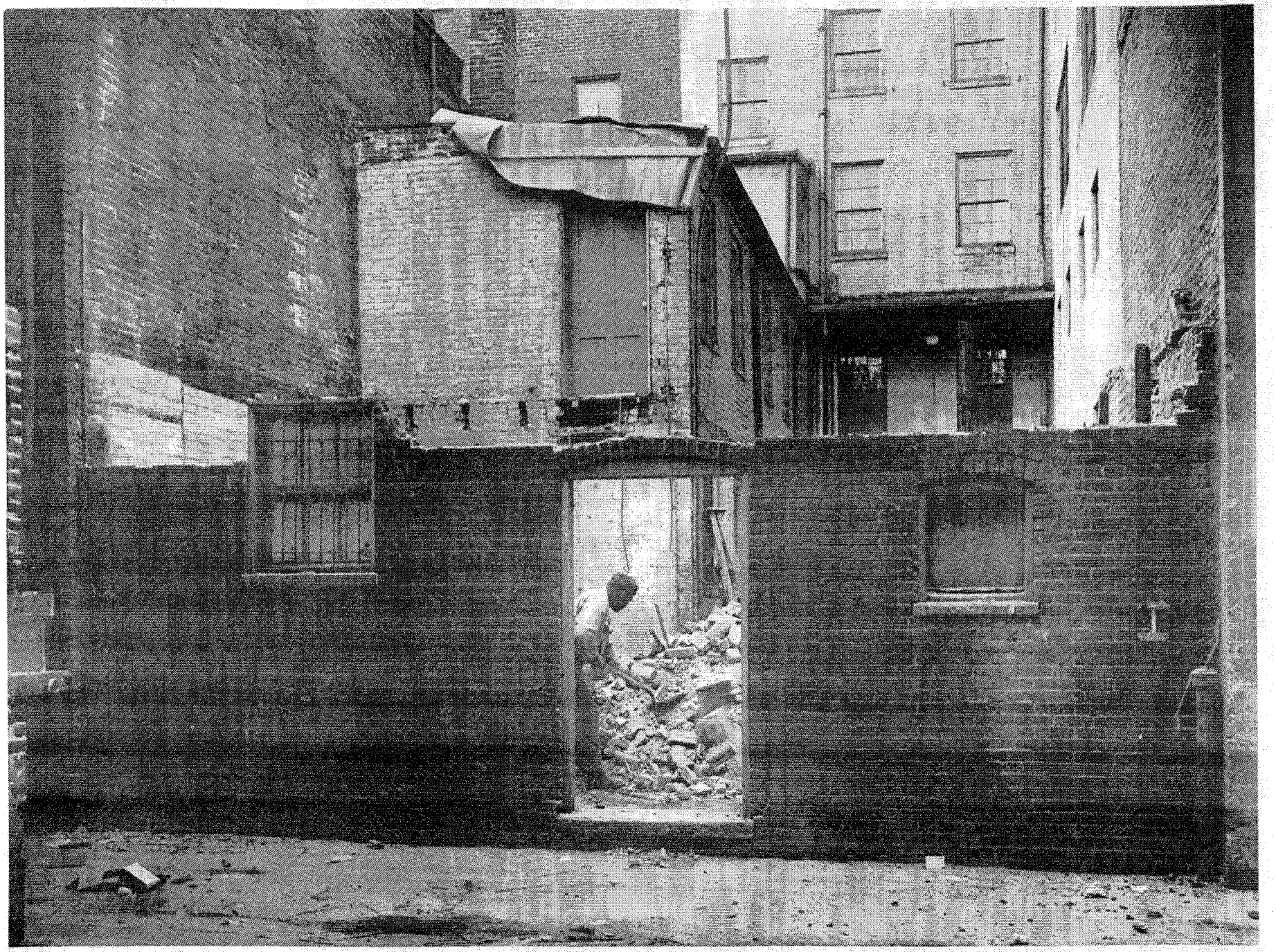
Photograph VII Rear Courtyard with 1899 Addition before 1959
Rehabilitation Date: 12/1958 Photographer: A. Rowe-NPS NPS-NCR
(FTNHS) Collection



Photograph VIII Rear Courtyard and West Façade before 1959 Rehabilitation
Date: 12/1958 Photographer: A. Rowe-NPS NPS-NCR (FTNHS) Collection

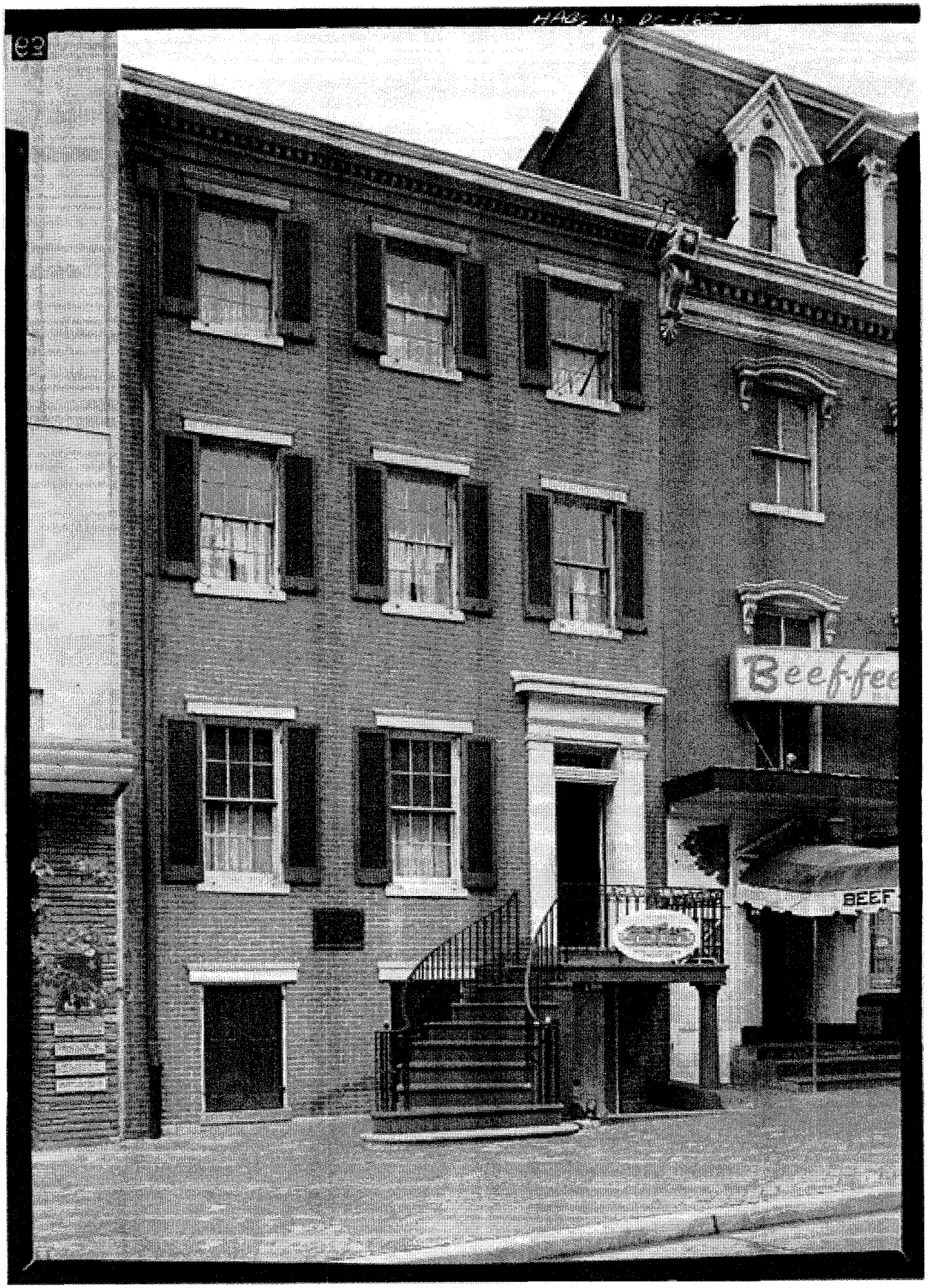


Photograph IX Demolition of 1899 Addition during 1959 Rehabilitation Second Floor Bathroom has yet to be demolished. Date: 12/1958 Photographer: Stewart Bros. NPS-NCR (FTNHS) Collection

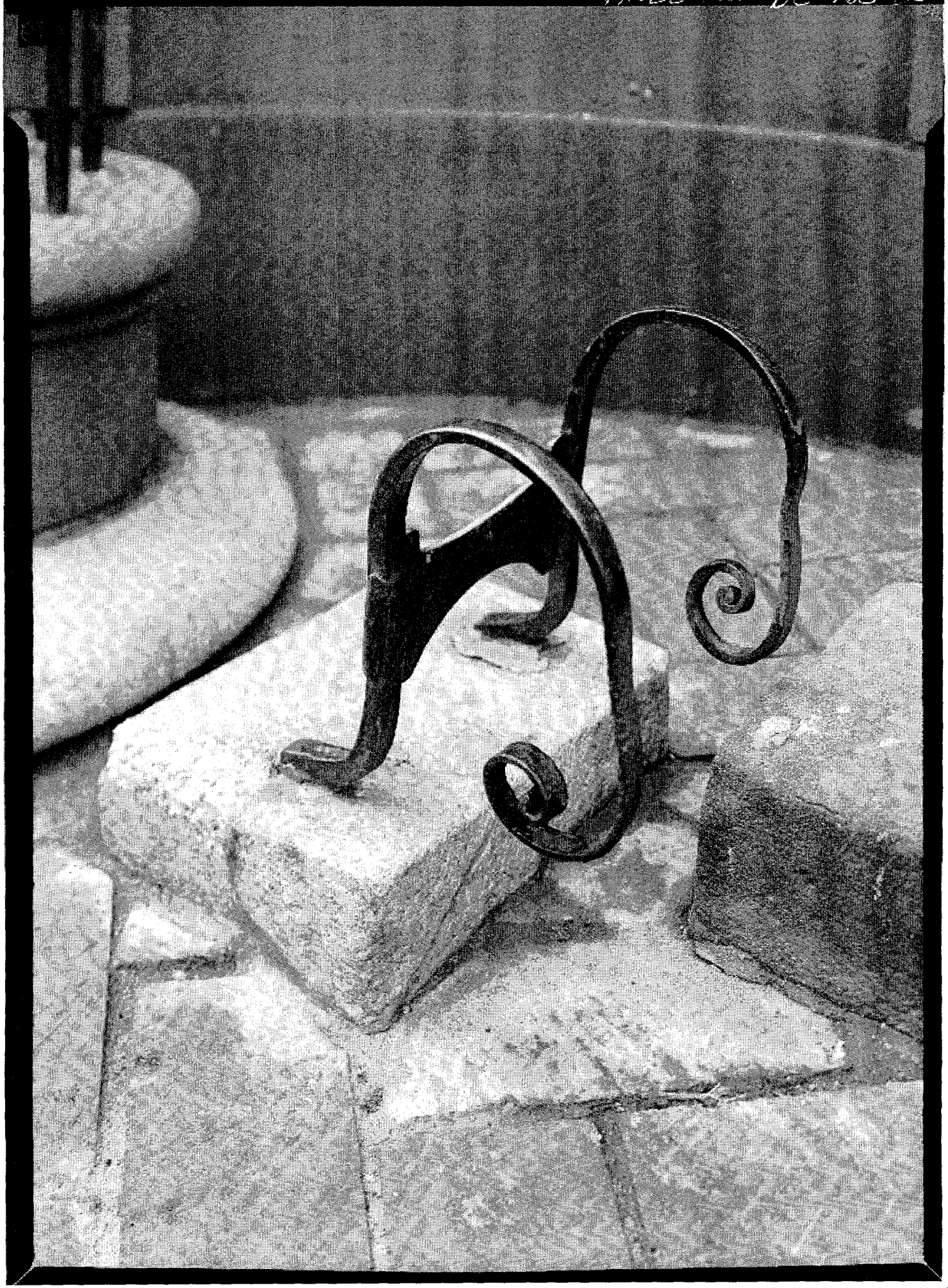


REHABILITATION OF PETERSON HOUSE
516,10th STREET,N.W.
CONTRACT NO.14-10-028-1607 GEO.C.MARTIN CONTRACTOR
DEMOLITION OF REAR OF BUILDING
DECEMBER 17th,1958 NO.2

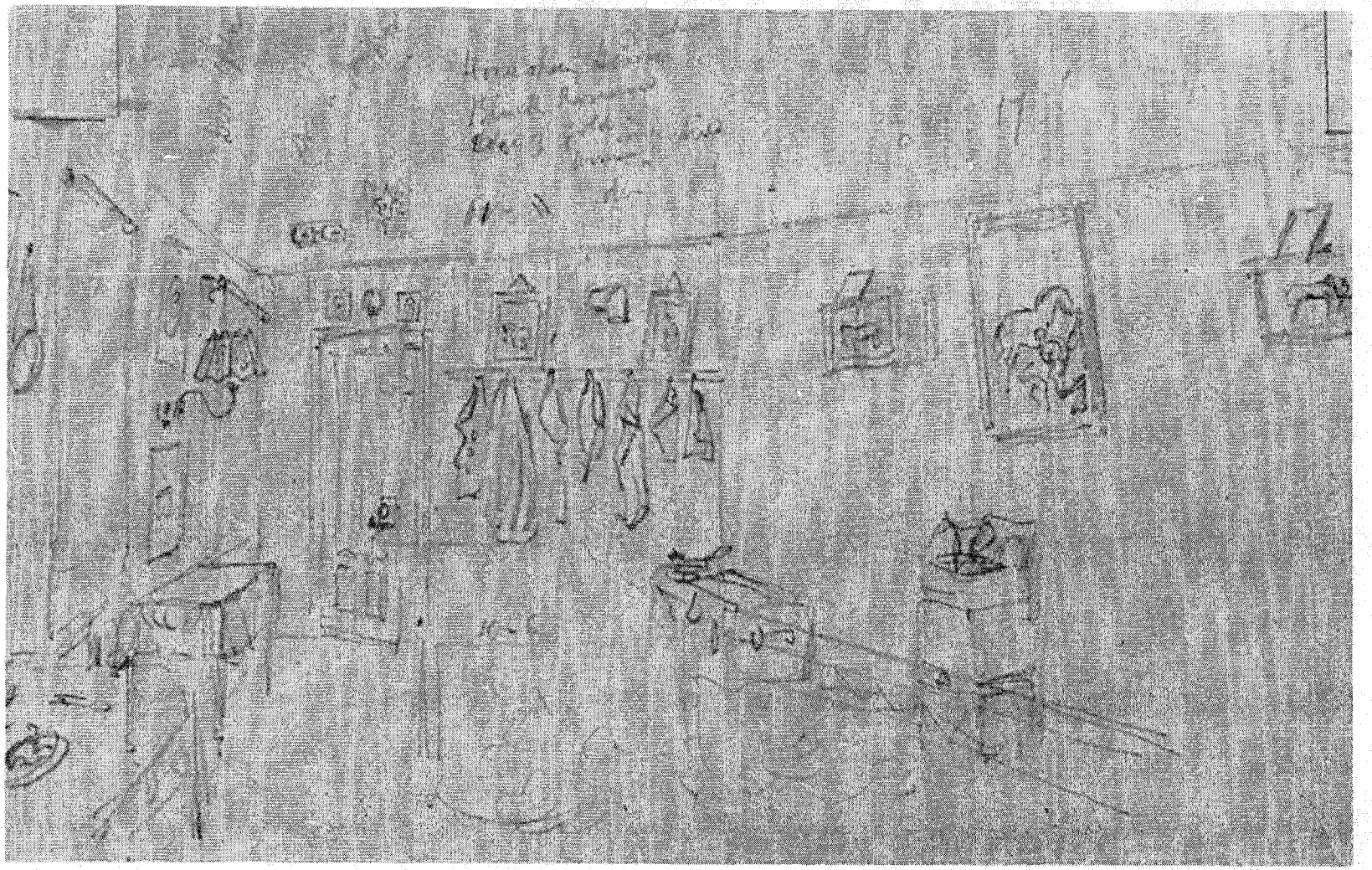
Photograph X Primary (East) Facade – HABS-DC-165
Date: 1968 Photographer: J. Boucher-NPS Library of Congress–P&P


Beef-free
BEEF

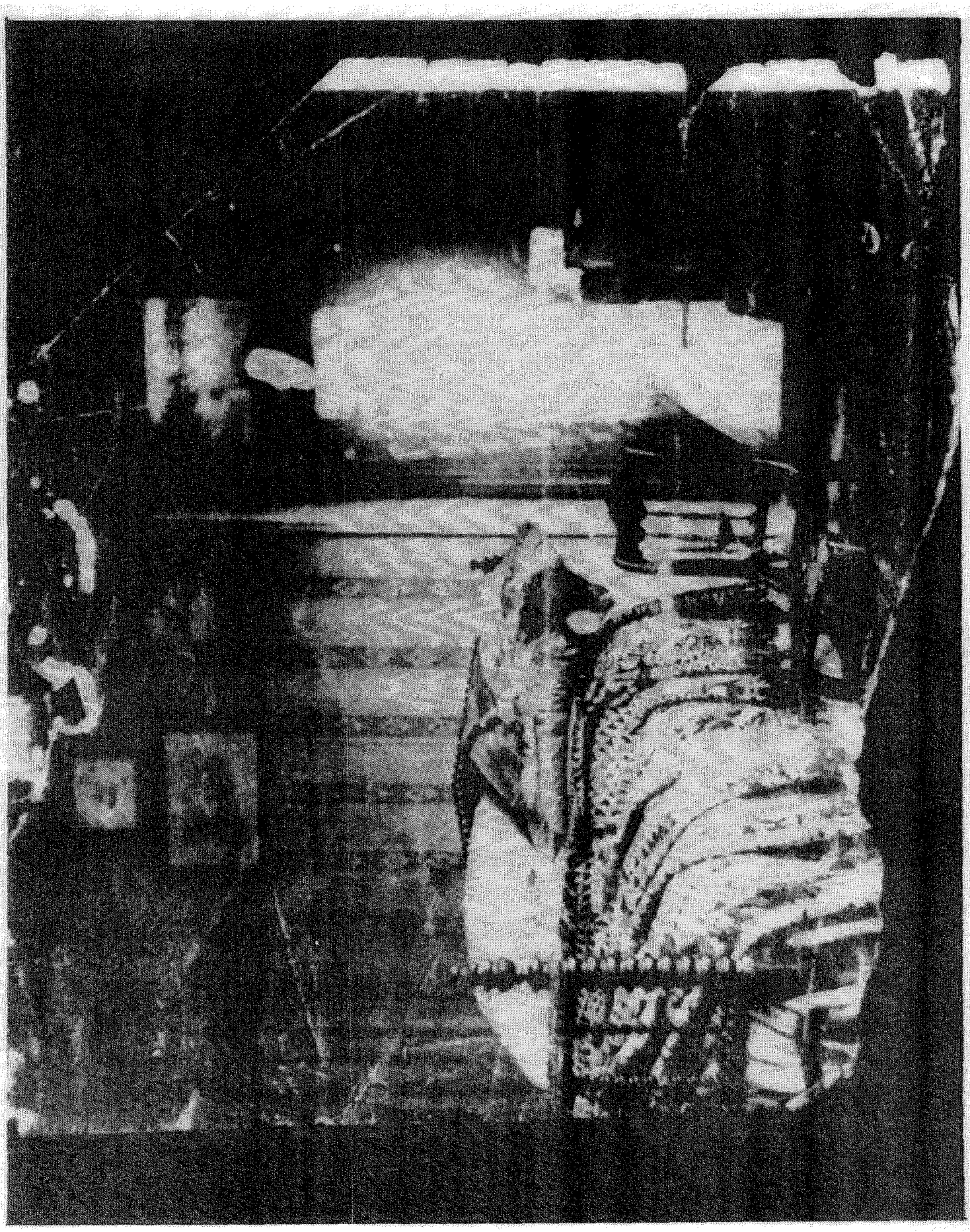
Photograph XI Primary (East) Facade-Detail of Footscraper – HABS-DC-165
Date: 1968 Photographer: J. Boucher-NPS Library of Congress–P&P



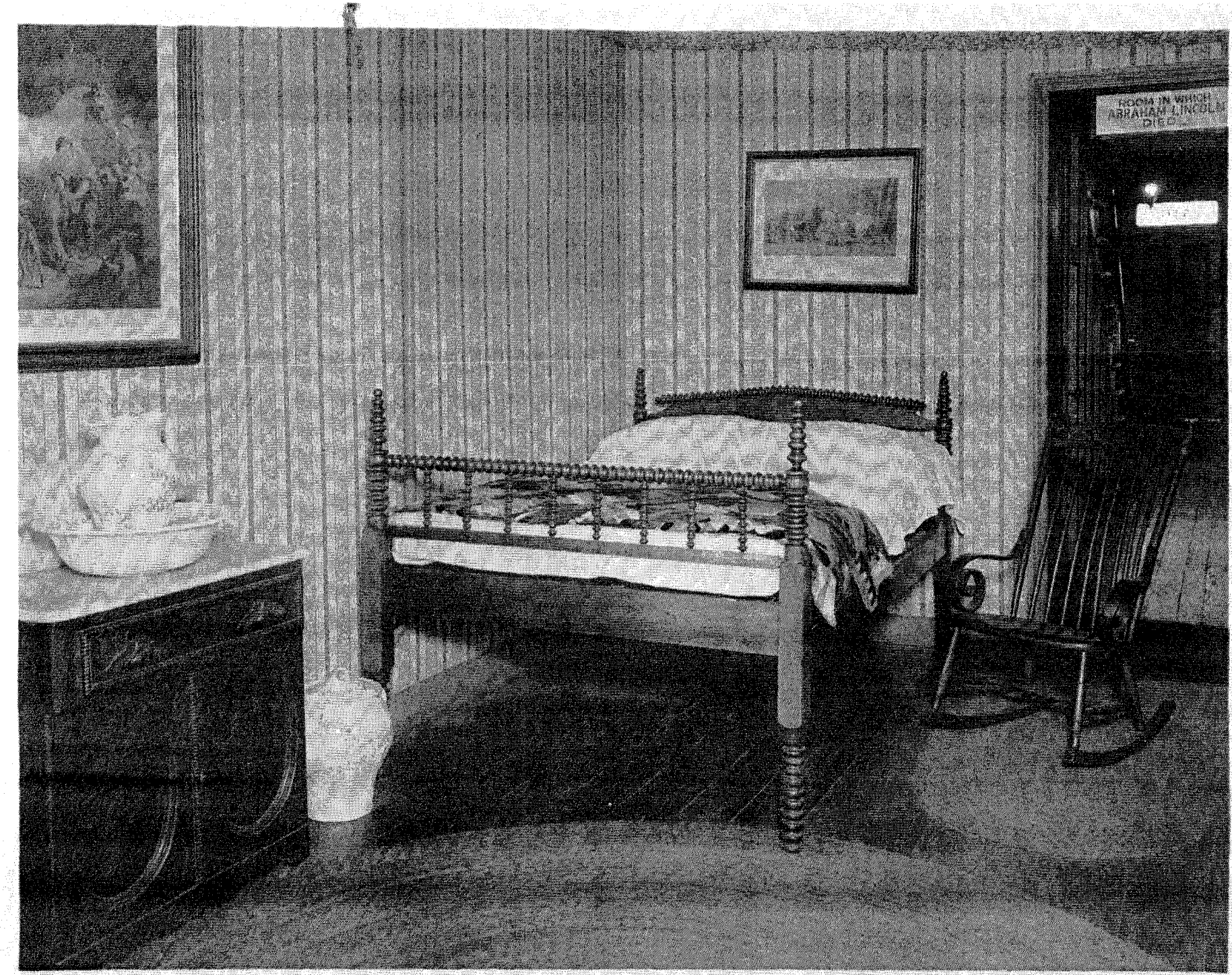
Photograph XII Photographic repro of Sketch of rear wall of Death Room
Date: 1865 Artist: Alfred Waud Library of Congress



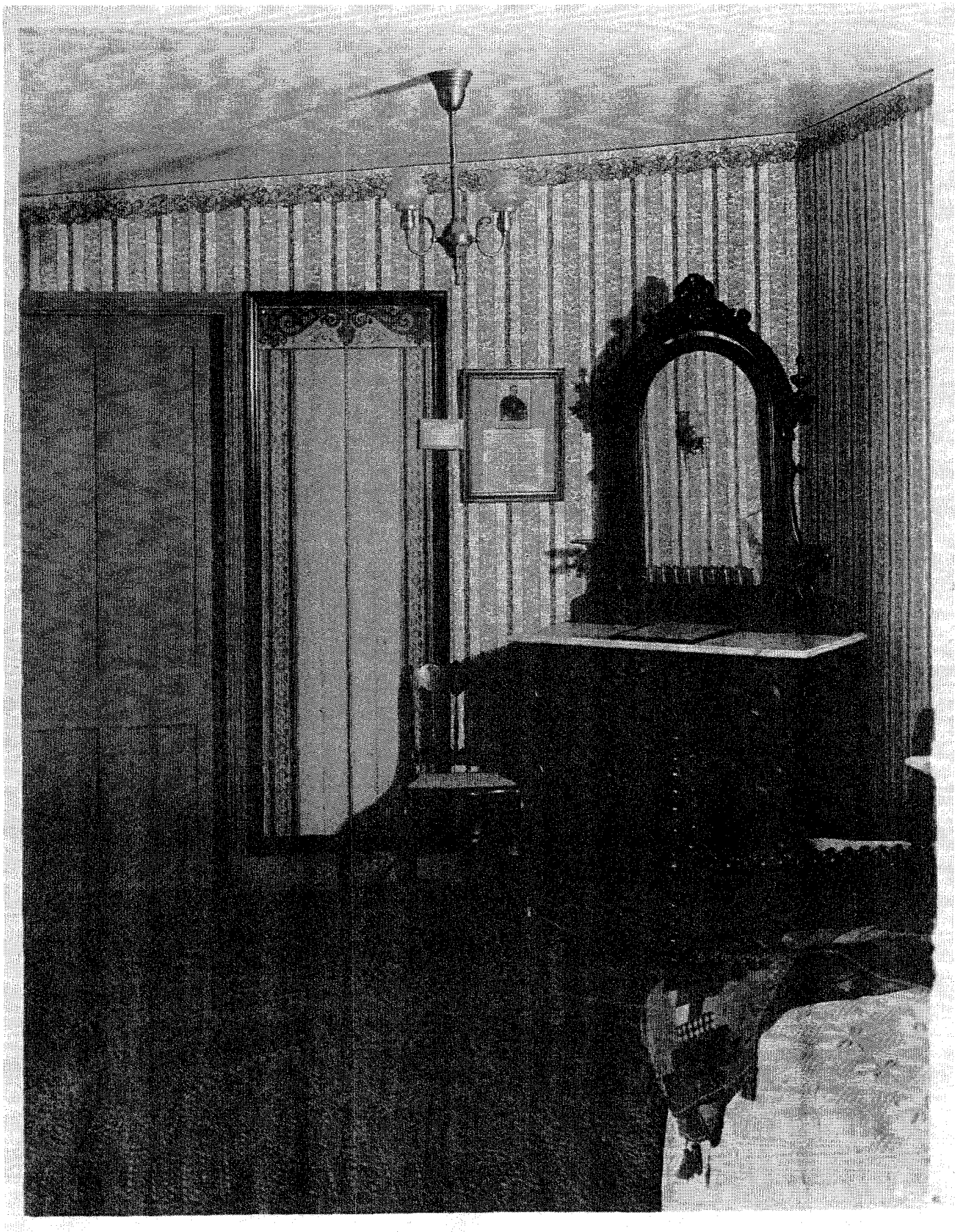
Photograph XIII Photograph of Death Room just after time of Lincoln's Death
Date: 4/1865 Photographer: Julius Ulke NPS-NCR (FTNHS) Collection



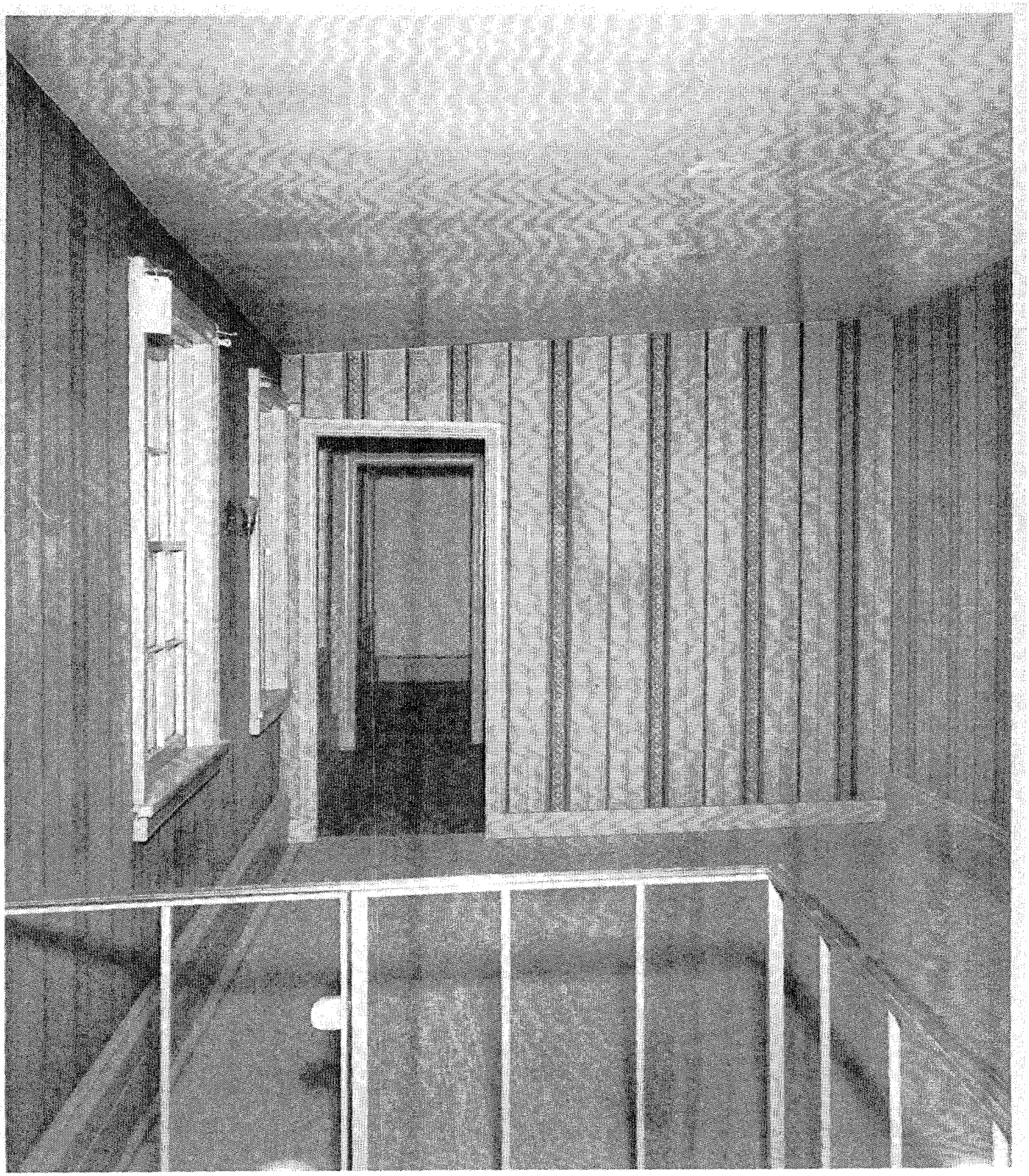
Photograph XIV Photograph of renovated Death Room – view of bed
Date: 1932 Photographer: unknown NPS-NCR (FTNHS) Collection


ROOM IN WHICH
ABRAHAM LINCOLN
DIED

Photograph XV Photograph of renovated Death Room – view of rear wall
Date: 1932 Photographer: unknown NPS-NCR (FTNHS) Collection



Photograph XVI Photograph of Death Room during 1959 Rehabilitation
Date: 4/1959 Photographer: Stewart Bros. NPS-NCR (FTNHS) Collection



REHABILITATION OF PETERSON HOUSE
516,10th STREET,N.W.

CONTRACT NO.14-10-028-1607
ROOM WHERE MR.LINCOLN DIED
APRIL 15th,1959

GEO.C.MARTIN CONTRACTOR

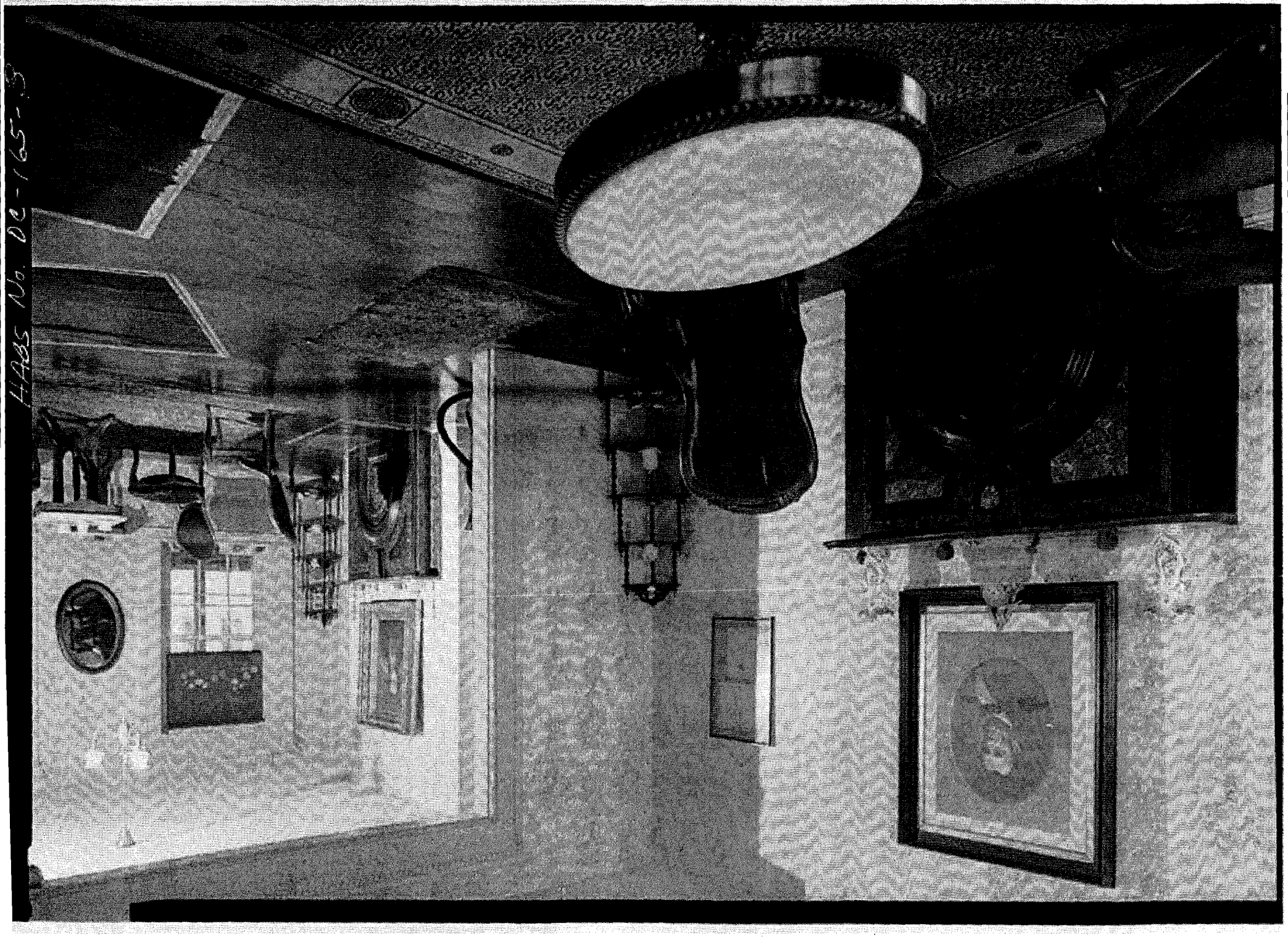
NO.13

Photograph XVII Photograph of Death Room Bed after Rehab. - HABS-DC-165
Date: 1968 Photographer: J. Boucher-NPS Library of Congress-P&P

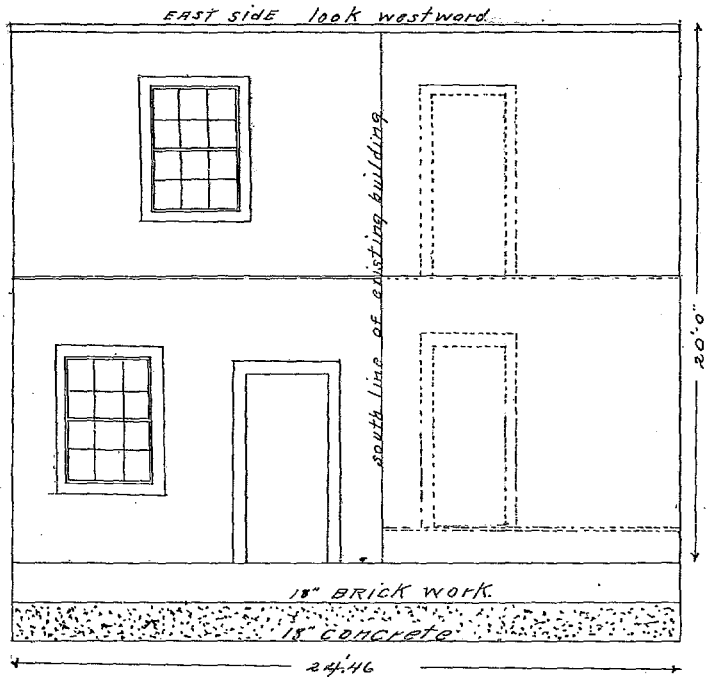
HABS No. DC-165-4

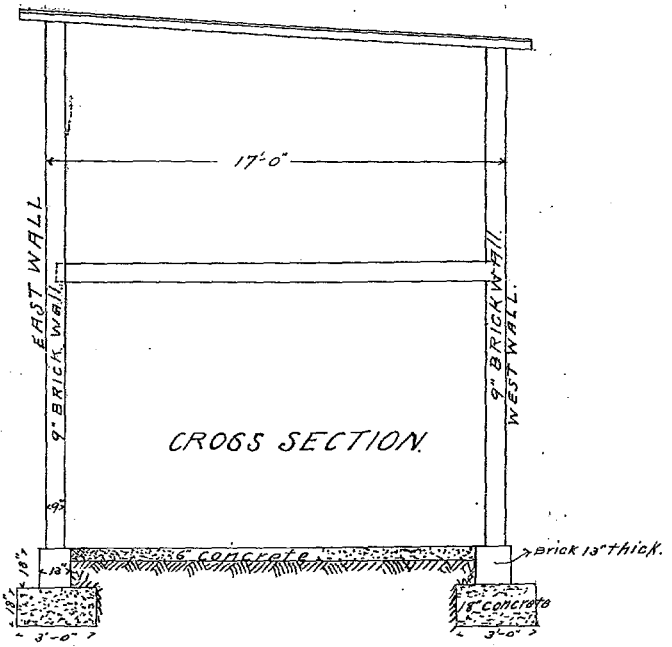


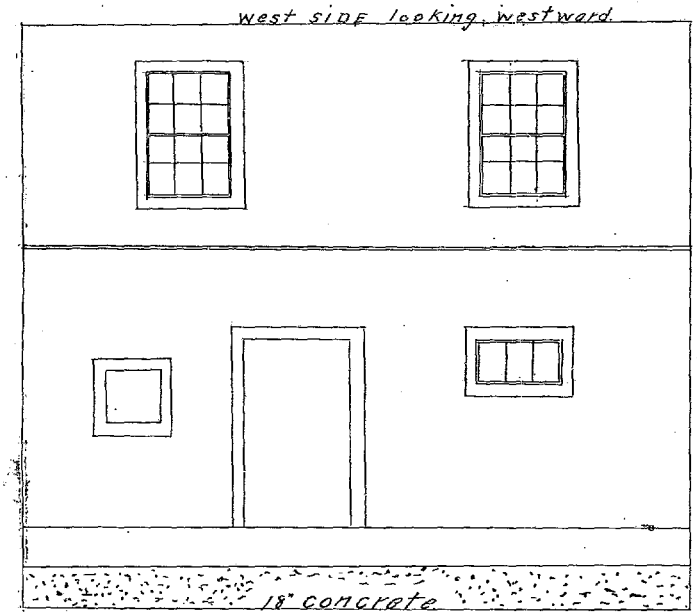
Photograph XVIII Photograph of Parlors after 1959 Rehab. - HABS-DC-165
Date: 1968 Photographer: J. Boucher-NPS Library of Congress-P&P


HABS No. DC-165-13

Coal Shed and Storeroom to be built
Corps of Engineers (U.S. Army)-Office of Public Buildings and Grounds
Date: 7/1899 NPS-NCR (FTNHS) Collection

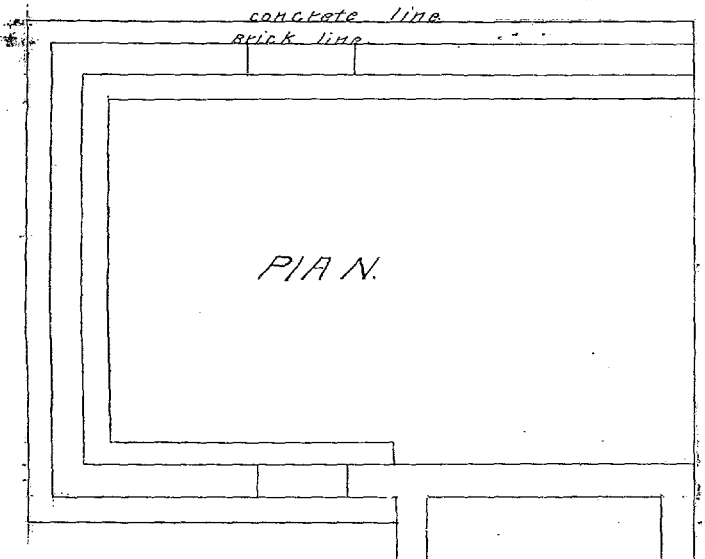






CORPS OF ENGINEERS U.S. ARMY
OFFICE PUBLIC BL'DGS & GR'DS
WASHINGTON D.C.

COAL SHED
AND
STORE ROOM
TO BE
BUILT
AT
516 – 10th ST. N.W.
scale 1/4"=1' July 8 1899



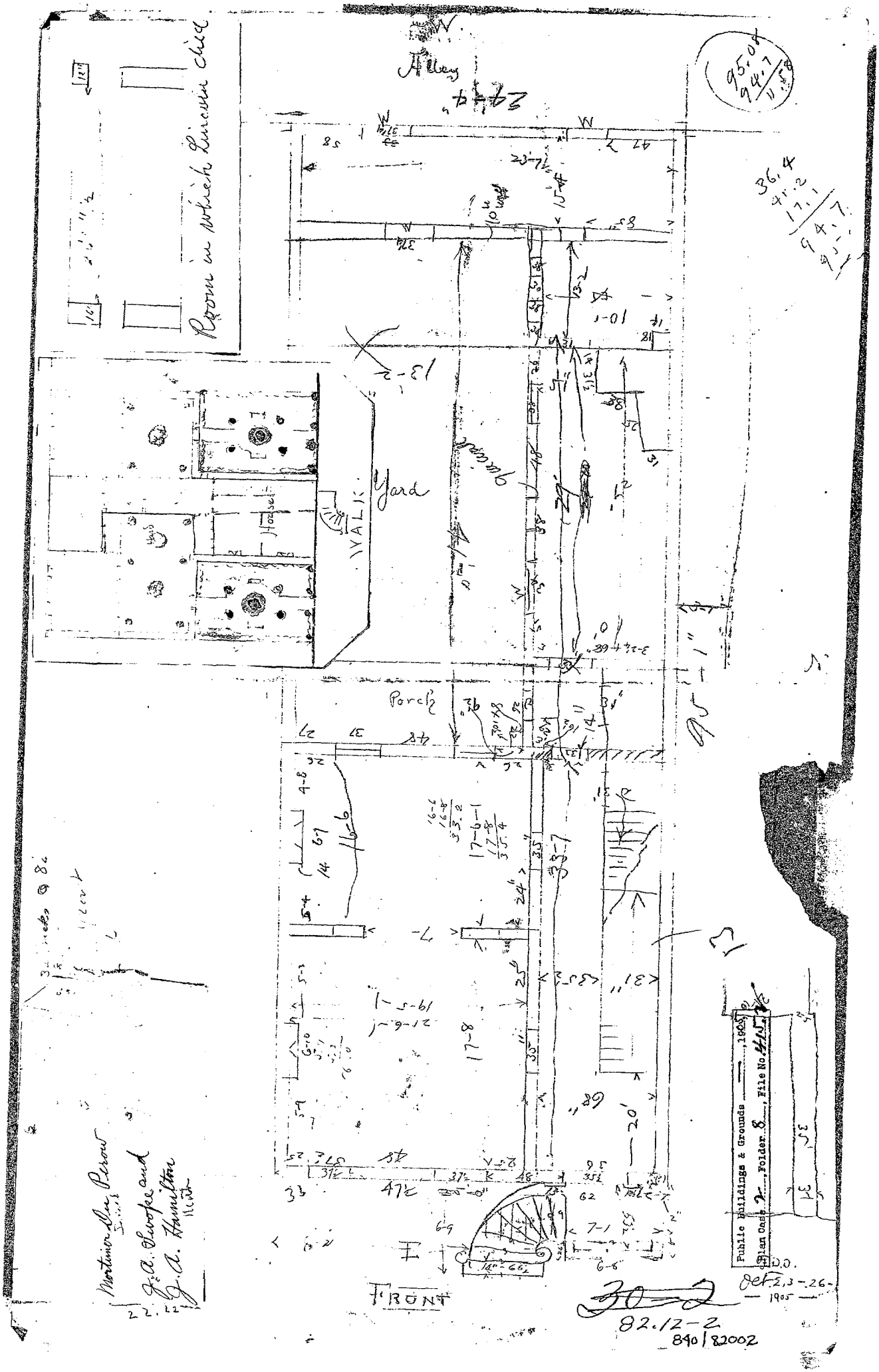
approved
Theo. A. Bingham
Colonel, U.S. Army
July 8, 1899

F. E. Gillen.

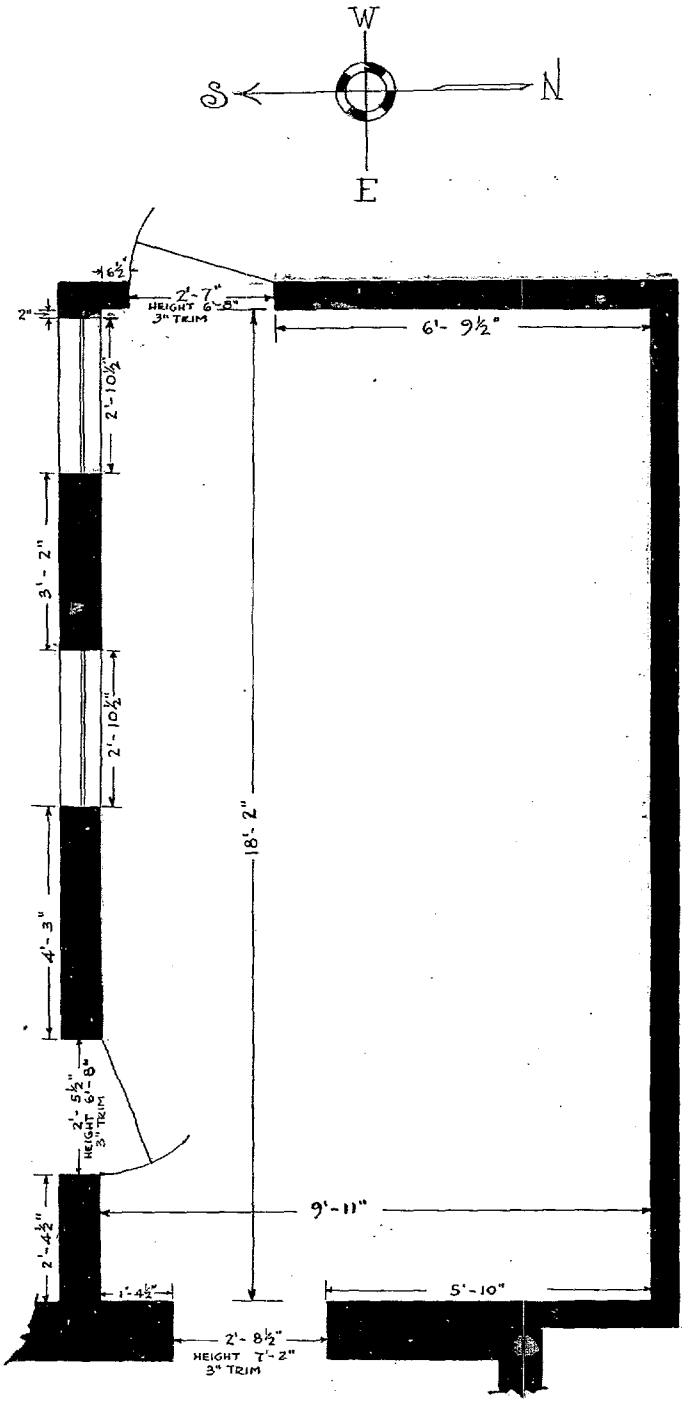
Public Buildings & Grounds ——, 1899
Plan Case 2, Folder 8, File No. 415.1

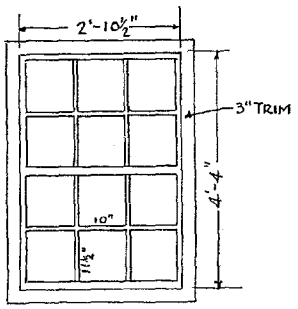
82 J2-1 804/82001

Floor Plan – Square 347 (Measured Drawing)
Office of Public Buildings and Grounds
Date: 1905 NPS-NCR (FTNHS) Collection


Room in which Lincoln died
Alley
Yard
Porch
FRONT
Public Buildings & Grounds, 1905
Plan Case 2, Folder 8, File No. 415
Oct. 2, 3-26-1905
30-2
82.12-2
840/82002

Plan of Room Where Lincoln Died, National Park Service
National Capital Parks
Date: 10/1945 NPS-NCR (FTNHS) Collection





WINDOW
ELEVATION

SAME SCALE AS PLAN

-PLAN-

~ Petersen House ~

516-Tenth Street N.W.

WASHINGTON D.C.

Room where Lincoln died

SCALE: 0 1 2 3 4 5 6 FEET

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
NATIONAL CAPITAL PARKS

OCTOBER 8-1945 - MBS

Plat of Deed, Square 347, Lot 14 (from original deed)
National Park Service – National Capital Parks
Date: 2/1950 NPS-NCR (FTNHS) Collection

TRIM LINE

TRIM LINE

CLEARED

REVIEWED

RECREATIONAL PLANNING AND STATE COORDINATION

RESEARCH AND EDUCATION

SANITATION

FORESTRY

HISTORY

PLANS AND DESIGN

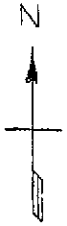
ENGINEERING

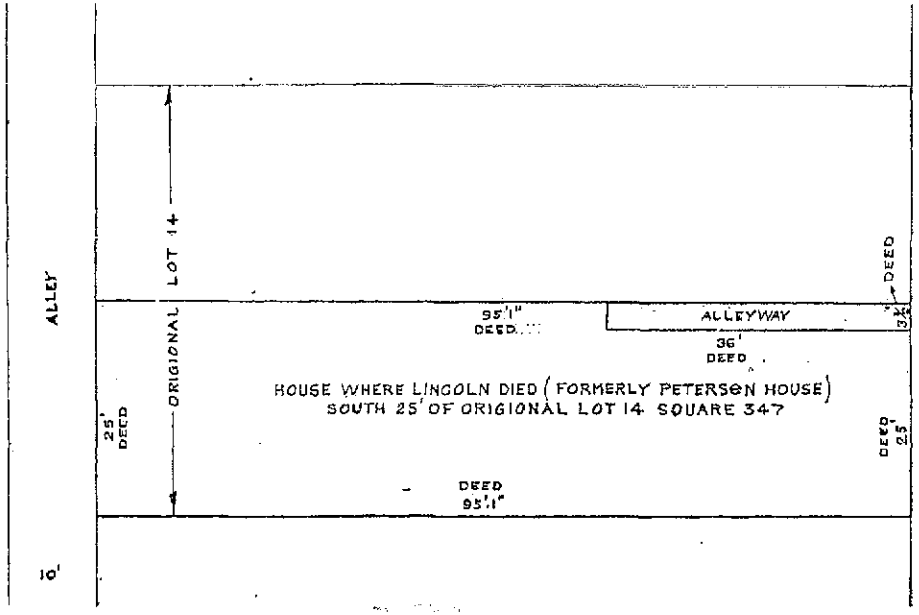
REGIONAL DIRECTOR

DESIGNED BY

DATE

VII, FEB. 27, 1950





NOTE:
SEE DEED RECORDED NOV. 10, 1896 AT LIBER 2164, FOLIO 225 FOR ALIEN RIGHTS ABOVE ALLEYWAY

PLAT OF DEED

BASIC DATA TAKEN FROM THE DEED.

SCALE 1" = 10'

RECOMMENDED _____ DATE _____

CONCURRED _____ DATE _____

APPROVED Albert Horne DATE 2/27/50

CHIEF, ENGINEERING DIVISION

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
NATIONAL CAPITOL PARK
PREPARED BY
ENGINEERING DIVISION
OFFICE

HOUSE WHERE LINCOLN DIED
NAME OF JOB
LOT 14; SQUARE 347
LOCATION
PETERSON HOUSE
NAME OF PARK OR MONUMENT

REGION
N.C.P.
WASHINGTON D.C.

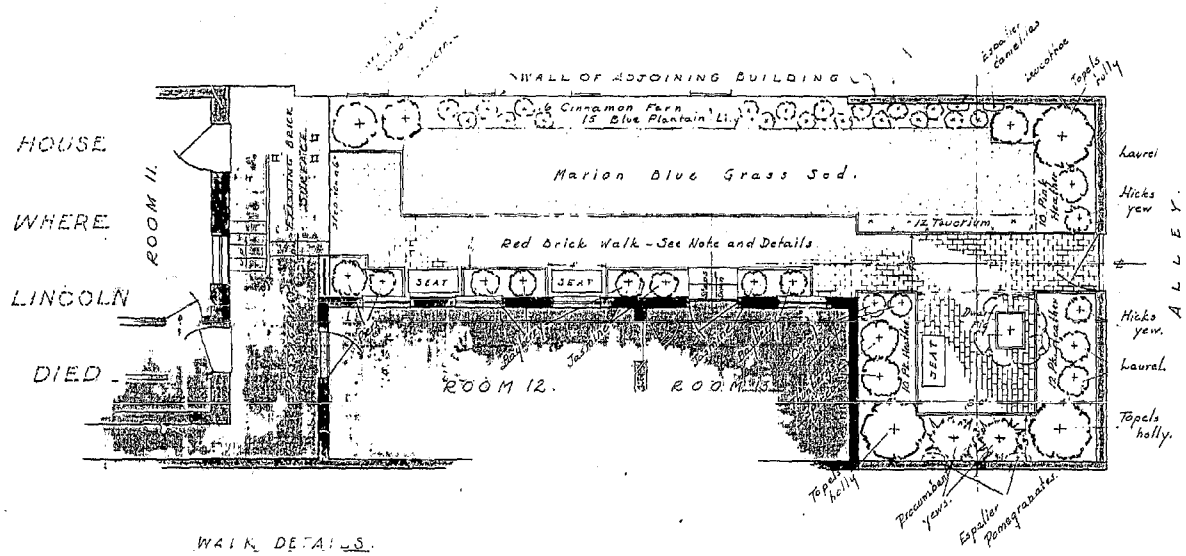
SHEET 1 OF 1

DRAWING NO.
N.C.P.
82.12-15

REDUCED SIZE REPRODUCTION

804/82015

Garden Development Plan
National Park Service – National Capital Parks
Date: 7/1959 NPS-NCR (FTNHS) Collection

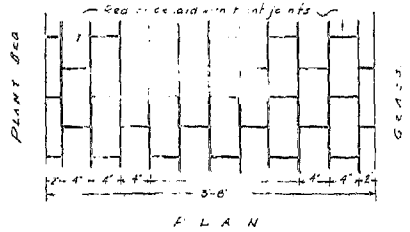


PLANT LIST.

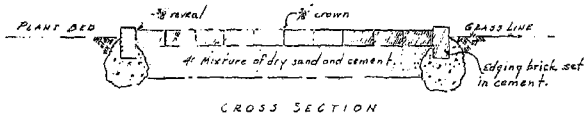
ITEM	QUANT.	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
1	32	Calluna vulgaris	Pink heather	heavy	field grown.
2	15	Hosta cerulea	Blue plantain lily	clumps	
3	3	Ilex attenuata	Topels holly	5'-6'	
4	2	Taxus med. hicksi	Hicks yew.	4'-5'	
5	2	Jasminum nudiflorum	Winter jasmine	3'-4'	heavy - specimen
6	3	Kalmia latifolia	Mountain laurel.	3'-4'	heavy.
7	2	Leucothoe catesbaei	Leucothoe	3'-4'	
8	4	Myrica cerifera	Southern bayberry	3'-4'	the dwarfer species
9	16	Osmunda cinnamomea	Cinnamon fern.		
10	2	Pieris japonica	Jap. pieris	3'-4'	
11	2	Punica granatum.	Pomegranate	3'-4'	Espalier
12	1	Rhododendron carol.	Carolina rhododendron	3' spr.	or variety Windbeam
13	2	Spirea thunbergi.	Thunbergs spirea	2'-3'	
14	2	Symphoricarpos orbicul.	Coralberry.	2'-3'.	
15	2	Taxus bac. procumbans	Prostrate yew.	3'-4' spr.	
16	12	Teucrium chamaedrys.	Germander.	4'-6'	Field grown.
17	50	Vinca minor	Periwinkle	5 stems.	Field grown.
18	2	Camellia sasanqua	Camellia.	4'-5'	Espalier.
19	1	Ficus carica	Dwarf fig	3'-4'	Single stem.
20					

WALK DETAILS.

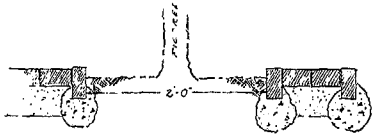
Scale 1/2" = 1'-0"



PLAN



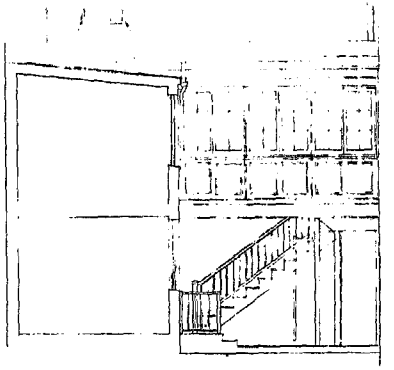
CROSS SECTION



SECTION THRU A-A.

NOTES -

All existing soil for plant beds to be excavated and removed.
Beds to be refilled to grade with prepared topsoil-16" for plant beds, 6" for grass space
Vinca minor to be planted as a ground-cover in open spaces in shrub beds.
All brick walks to drain toward alley gate.
All evergreens to be balled & burlapped.



PART REAR ELEVATION OF HOUSE

1/4" = 1'-0"
SCALE

ORIENTATION

RECOMMENDED
CHIEF, DIVISION OF DESIGN & CONSTRUCTION — 7/24/59
ASSOC. REGIONAL DIRECTOR — 7/24/59
APPROVED SUPERINTENDENT — 7/24/59

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
NATIONAL CAPITAL PARKS
DIVISION OF DESIGN & CONSTRUCTION

GARDEN DEVELOPMENT PLAN
HOUSE WHERE LINCOLN DIED.
10TH STREET, WASHINGTON, D.C

PREPARED A.H. Clarsen
DESIGNED A.H. 7/6/59
DRAWN J. Howe
CHECKED
Preliminary 6/15/59
Tracing 12/21/59
Revised 2/24/59
Revised 7/21/59
Revised 7/27/59

REGION N.C.P.
PCP
SHEET 1 OF 1
DRAWING NO. N.C.P. 82.12-24
DATE 7/27/59

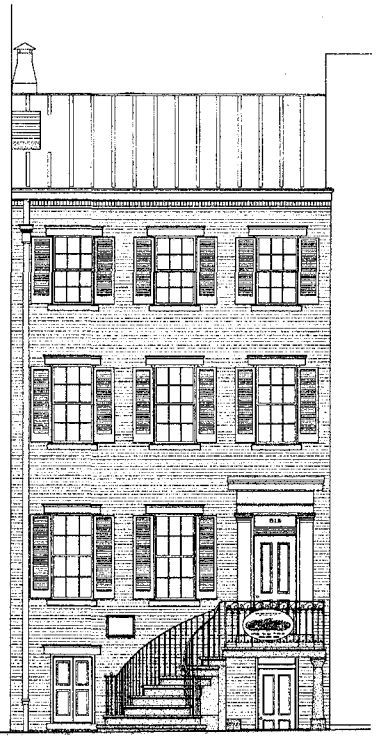
BASIC DATA - CONTRACT DRWG. N.C.P. 82.12-19-1. DATED - JUNE 1, 1958.

REDUCED SIZE REPRODUCTION

FILE COPY - SEE NCP 82.12-24A
P04/82074

WILLIAM A. PETERSEN HOUSE

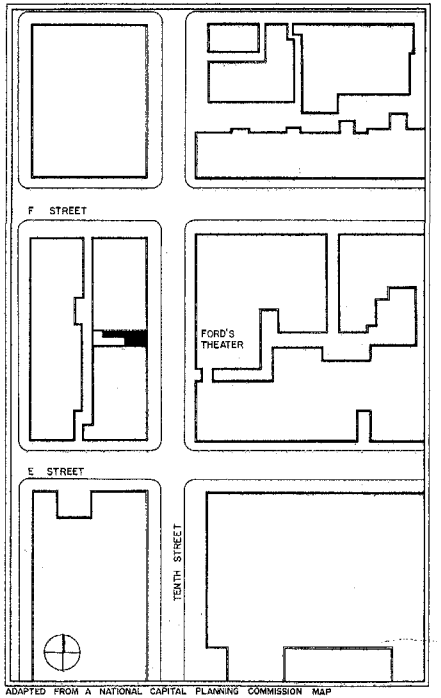
(HOUSE WHERE LINCOLN DIED)



EAST (STREET) ELEVATION

FEET 1/4" = 1'-0"

METERS 1:48

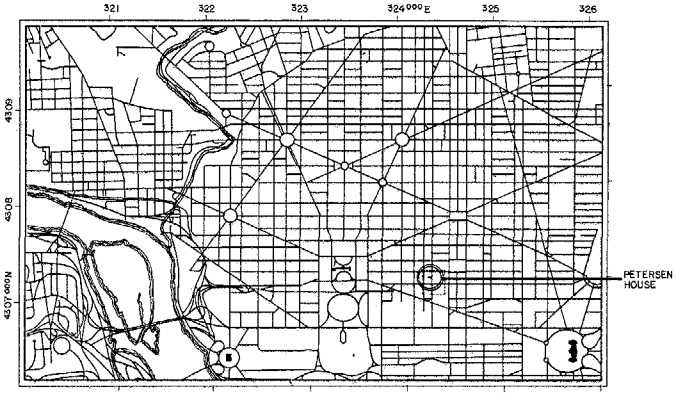


ADAPTED FROM A NATIONAL CAPITAL PLANNING COMMISSION MAP

NEIGHBORHOOD MAP

FEET 1" = 100'

METERS 1:1200



TAKEN FROM USGS WASHINGTON WEST, D.C. QUADRANGLE MAP 1971 UTM:18.324260.4307040

LOCATION MAP

MILES

KILOMETERS 1:24000

THE PETERSEN HOUSE WAS BUILT BY WILLIAM A. PETERSEN IN 1849. THE HOME WAS THE SCENE OF PRESIDENT LINCOLN'S DEATH ON APRIL 15, 1865. LINCOLN WAS BROUGHT TO A SMALL BEDROOM ON THE FIRST FLOOR AFTER BEING SHOT BY JOHN WILKES BOOTH WHILE ACROSS THE STREET AT FORD'S THEATER. THE U.S. GOVERNMENT PURCHASED THE HOUSE IN 1896 AND PLACED IT UNDER THE JURISDICTION OF THE NATIONAL PARK SERVICE THIRTY YEARS LATER. TODAY IT IS KNOWN AS THE HOUSE WHERE LINCOLN DIED.

THIS PROJECT WAS UNDERTAKEN BY THE HISTORIC AMERICAN BUILDINGS SURVEY IN COOPERATION WITH THE HISTORIC RESOURCE SERVICES DIVISION OF THE OFFICE OF PROFESSIONAL SERVICES FOR THE NATIONAL CAPITAL REGION. UNDER THE DIRECTION OF JOHN POPPELIERS, CHIEF OF HABS, THE PROJECT WAS COMPLETED DURING THE SUMMER OF 1977 AT THE HISTORIC AMERICAN BUILDINGS SURVEY'S OFFICE IN WASHINGTON D.C. BY KENNETH PAYSON (TEXAS TECH. UNIVERSITY), PROJECT SUPERVISOR, AND ROBERT CLARKE (UNIVERSITY OF NOTRE DAME), JONATHAN FINE (CORNELL UNIVERSITY), AND DURWARD W. POTTER (UNIVERSITY OF MARYLAND), ARCHITECTURAL TECHNICIANS.

DRAWN BY: KENNETH PAYSON, DURWARD W. POTTER

HABS WASHINGTON OFFICE, 1977
OFFICE OF ARCHAEOLOGY AND HISTORIC PRESERVATION
UNDER DIRECTION OF THE NATIONAL PARK SERVICE
UNITED STATES DEPARTMENT OF THE INTERIOR

NAME AND LOCATION OF STRUCTURE

WILLIAM A. PETERSEN HOUSE (HOUSE WHERE LINCOLN DIED)

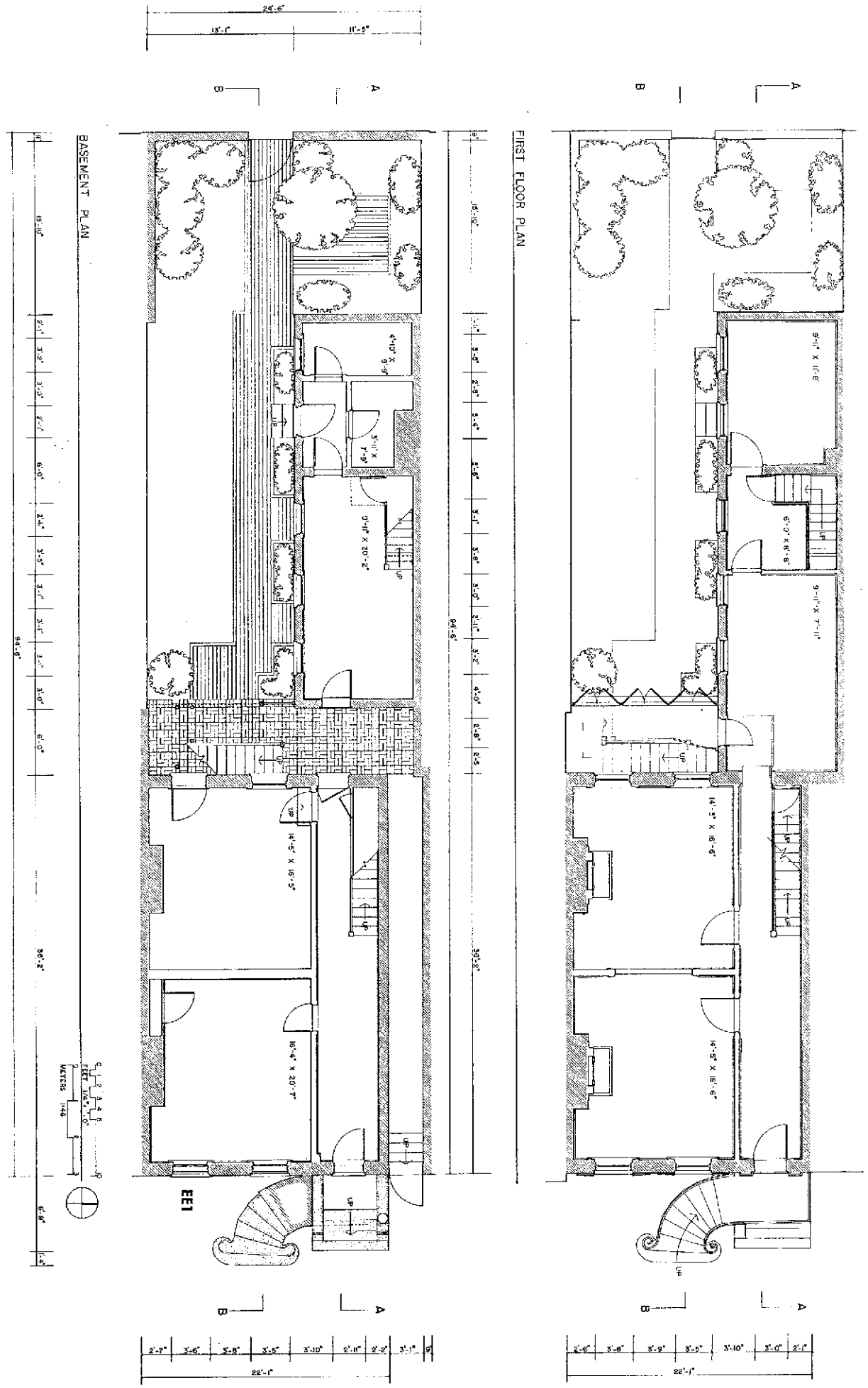
516 10TH STREET, N.W. WASHINGTON DISTRICT OF COLUMBIA

SURVEY NO. DC-165

HISTORIC AMERICAN BUILDINGS SURVEY

SHEET 1 OF 5 SHEETS

TRIM LINE



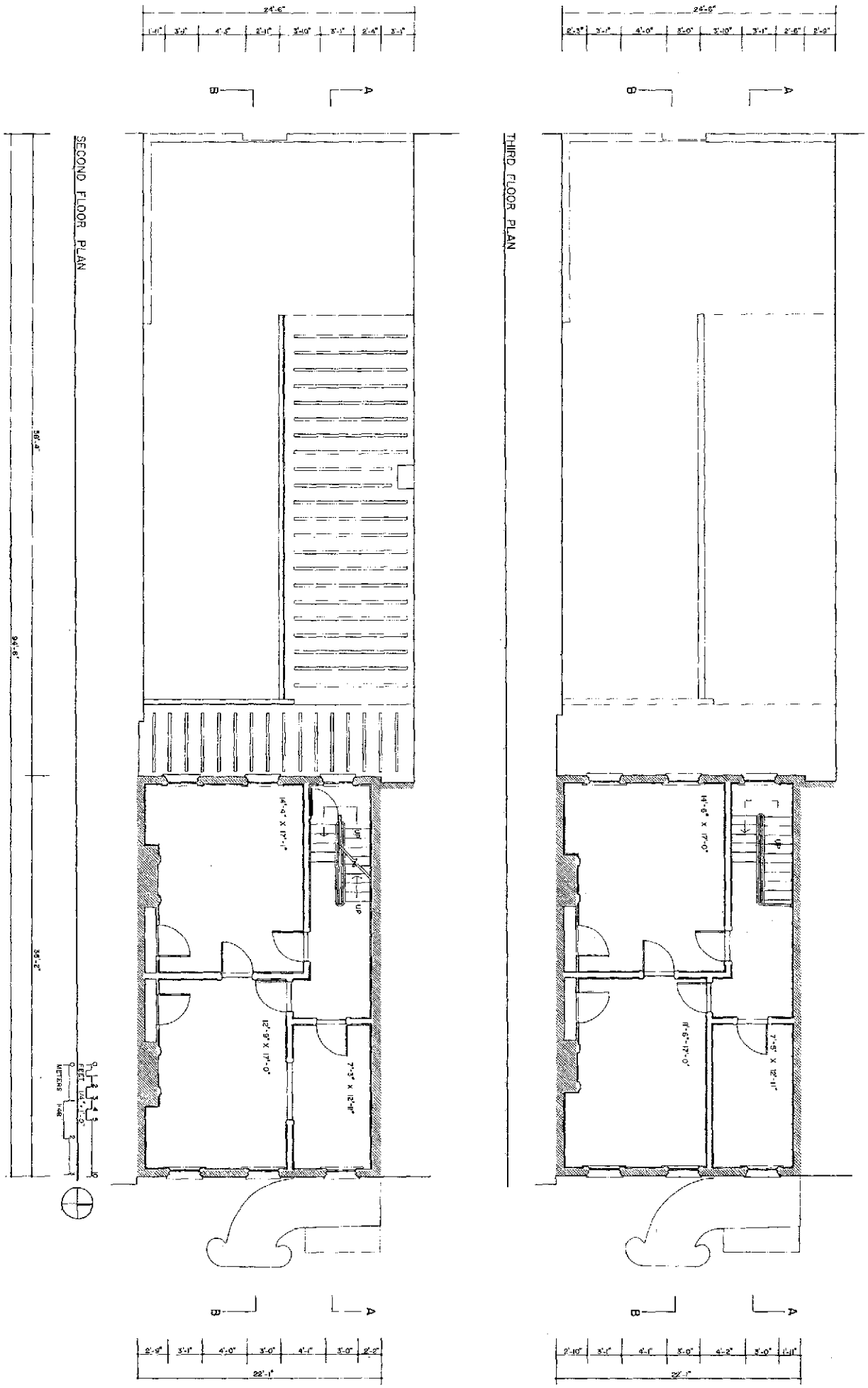
DRAWN BY: JONATHAN FINE, KENNETH PAYSON, DURWARD W. POTTER

HABS WASHINGTON OFFICE, 1977
OFFICE OF ARCHEOLOGY AND HISTORIC PRESERVATION
UNDER DIRECTION OF THE NATIONAL PARK SERVICE
UNITED STATES DEPARTMENT OF THE INTERIOR

NAME AND LOCATION OF STRUCTURE
WILLIAM A. PETERSEN HOUSE (HOUSE WHERE LINCOLN DIED)
516 10TH STREET, N.W. WASHINGTON DISTRICT OF COLUMBIA

SURVEY NO.
DC-165

HISTORIC AMERICAN BUILDINGS SURVEY
SHEET 2 OF 5 SHEETS



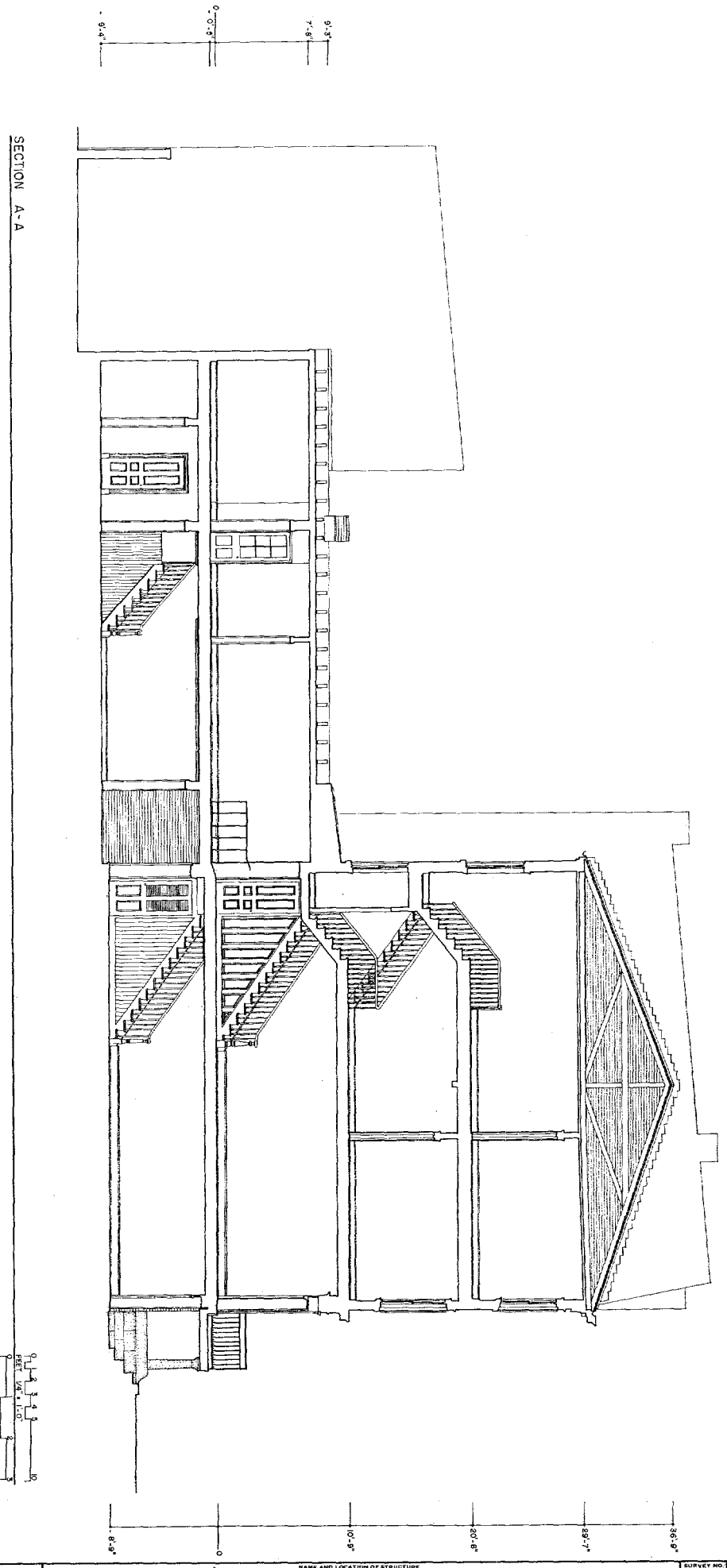
DRAWN BY: JONATHAN FINE, KENNETH PAYSON, DURWARD W. POTTER

HABS WASHINGTON OFFICE, 1977
OFFICE OF ARCHEOLOGY AND HISTORIC PRESERVATION
UNDER DIRECTION OF THE NATIONAL PARK SERVICE
UNITED STATES DEPARTMENT OF THE INTERIOR

NAME AND LOCATION OF STRUCTURE
WILLIAM A. PETERSEN HOUSE (HOUSE WHERE LINCOLN DIED)
516 10TH STREET, N.W. WASHINGTON DISTRICT OF COLUMBIA

SURVEY NO. DC-165

HISTORIC AMERICAN BUILDINGS SURVEY
SHEET 3 OF 5 SHEETS



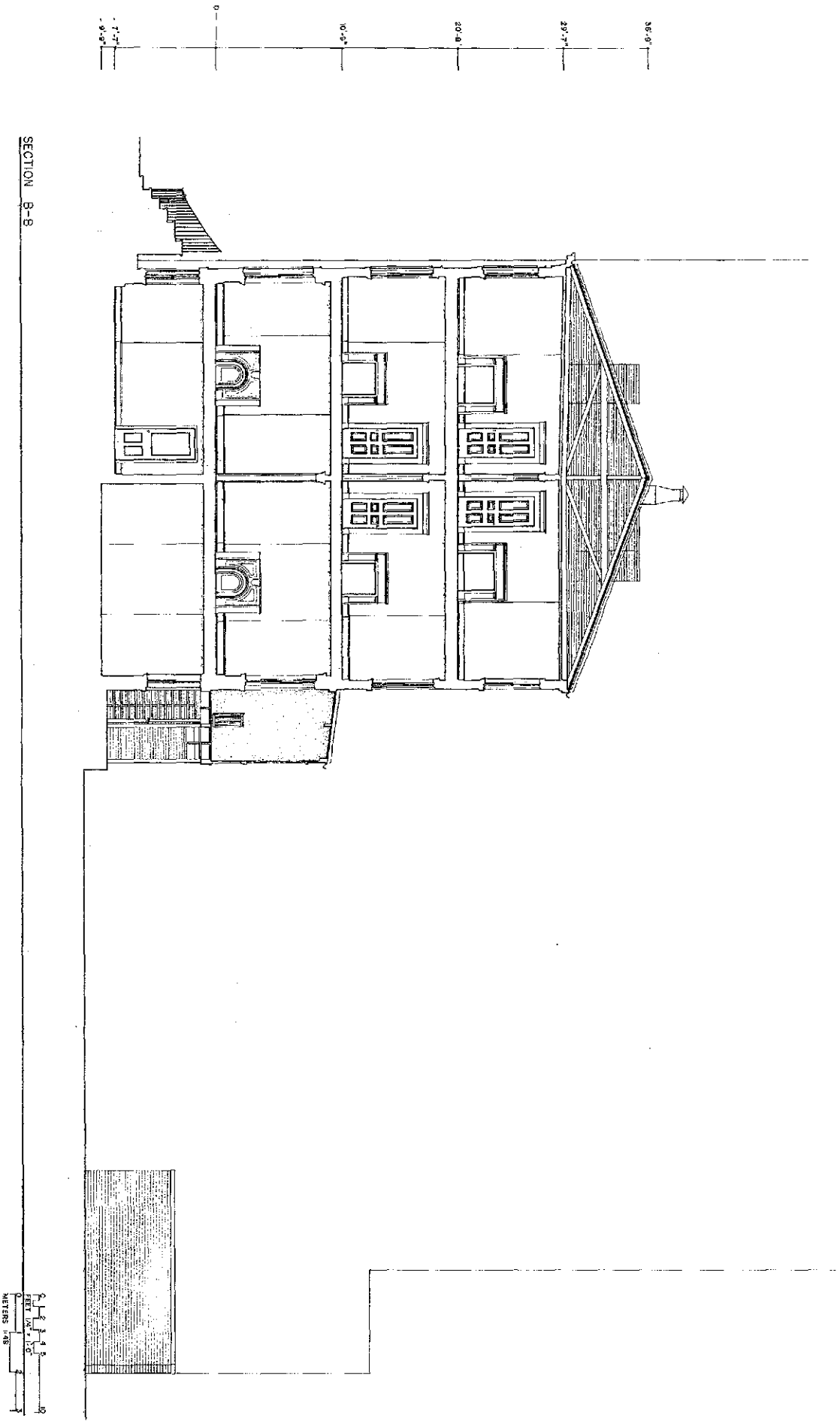
DRAWN BY KENNETH PAYSON

HABS WASHINGTON OFFICE, 1977
OFFICE OF ARCHEOLOGY AND HISTORIC PRESERVATION
UNDER DIRECTION OF THE NATIONAL PARK SERVICE
UNITED STATES DEPARTMENT OF THE INTERIOR

NAME AND LOCATION OF STRUCTURE
WILLIAM A. PETERSEN HOUSE (HOUSE WHERE LINCOLN DIED)
516 10TH STREET, N.W. WASHINGTON DISTRICT OF COLUMBIA

SURVEY NO.
DC-165

HISTORIC AMERICAN
BUILDINGS SURVEY
SHEET 4 OF 5 SHEETS



DRAWN BY KENNETH PAYSON

HABS WASHINGTON OFFICE, 1977
OFFICE OF ARCHEOLOGY AND HISTORIC PRESERVATION
UNDER DIRECTION OF THE NATIONAL PARK SERVICE,
UNITED STATES DEPARTMENT OF THE INTERIOR

NAME AND LOCATION OF STRUCTURE
WILLIAM A. PETERSEN HOUSE (HOUSE WHERE LINCOLN DIED)
516 10TH STREET, N.W. WASHINGTON DISTRICT OF COLUMBIA

SURVEY NO. DC-165

HISTORIC AMERICAN BUILDINGS SURVEY
SHEET 5 OF 5 SHEETS

APPENDIX B

EMSL Analytical, Inc.
10768 Baltimore Avenue
Beltsville, MD 20705
Phone: (301) 937-5700 Fax: (301) 937-5701

Attn.: Dana Gates
Mantech Environmental Corporation
9189 Red Branch Road
Columbia, MD 21045-2013

Friday, February 08, 2002

Ref Number: MD02597

POLARIZED LIGHT MICROSCOPY (PLM)

Performed by EPA 600/R-93/116 Method*

Project: 9017-034

Sample	Location	Appearance	Sample Treatment	ASBESTOS % Type	NON-ASBESTOS % Fibrous	% Non-Fibrous
012902PH-B1(TILE)	9x9 flr. tile & mastic (ground)	Black/White Non-Fibrous Homogeneous	Crushed/Dissolved	None Detected	None Detected	100% Other
012902PH-B1(MASTIC)	9x9 flr. tile & mastic (ground)	Brown Non-Fibrous Homogeneous	Crushed/Dissolved	None Detected	None Detected	100% Other
012902PH-B2	Plaster wall (ground)	White Non-Fibrous Homogeneous	Crushed/Dissolved	None Detected	None Detected	85% Gypsum 15% Other
012902PH-B3	Plaster wall (ground)	White Non-Fibrous Homogeneous	Crushed/Dissolved	None Detected	None Detected	85% Gypsum 15% Other
012902PH-B4	Plaster ceiling (ground)	Grey Other Homogeneous	Crushed/Dissolved	None Detected	5% Hair	85% Quartz 10% Gypsum
012902PH-B5	Covebase mastic	Brown Non-Fibrous Homogeneous	Crushed/Dissolved	None Detected	None Detected	100% Other

Comments: For all obviously heterogeneous samples easily separated into subsamples, and for layered samples, each component is analyzed separately. Also, "# of Layers" refers to number of separable subsamples.

* NY samples analyzed by ELAP 198.1 Method.

B. J. Macey

Brett Macey
Analyst

Approved Signatory

Disclaimers: PLM has been known to miss asbestos in a small percentage of samples which contain asbestos. Thus negative PLM results cannot be guaranteed. EMSL suggests that samples reported as <1% or none detected be tested with either SEM or TEM. The above test report relates only to the items tested. This report may not be reproduced, except in full, without written approval by EMSL. The above test must not be used by the client to claim product endorsement by NVLAP nor any agency of the United States Government. Laboratory is not responsible for the accuracy of results when requested to physically separate and analyze layered samples.

1

EMSL Bulk #200293, WV Lic.# LT000053)

EMSL Analytical, Inc.
10768 Baltimore Avenue
Beltsville, MD 20705
Phone: (301) 937-5700 Fax: (301) 937-5701

Attn.: Dana Gates
Mantech Environmental Corporation
9189 Red Branch Road
Columbia, MD 21045-2013

Friday, February 08, 2002

Ref Number: MD02597

POLARIZED LIGHT MICROSCOPY (PLM)

Performed by EPA 600/R-93/116 Method*

Project: 9017-034

Sample	Location	Appearance	Sample Treatment	ASBESTOS % Type	NON-ASBESTOS % Fibrous	% Non-Fibrous
012902PH-B6(TILE)	12x12 gray flr. tile & mastic (second)	Grey Non-Fibrous Homogeneous	Crushed/Dissolved	None Detected	None Detected	90% Ca Carbonate 10% Matrix
012902PH-B6(MASTIC)	12x12 gray flr. tile & mastic (second)	Brown Non-Fibrous Homogeneous	Crushed/Dissolved	None Detected	None Detected	100% Other
012902PH-B7	Plaster wall in stairwell	White Non-Fibrous Homogeneous	Crushed/Dissolved	None Detected	None Detected	85% Gypsum 15% Other
012902PH-B8	Exterior window caulk (second)	White Non-Fibrous Homogeneous	Crushed/Dissolved	None Detected	None Detected	85% Ca Carbonate 15% Other
012902PH-B9	Exterior window caulk (ground)	Grey Non-Fibrous Homogeneous	Crushed/Dissolved	None Detected	None Detected	100% Other
012902PH-B10	Plaster ceiling front parlor	Grey Non-Fibrous Homogeneous	Crushed/Dissolved	None Detected	None Detected	35% Perlite 65% Other

Comments: For all obviously heterogeneous samples easily separated into subsamples, and for layered samples, each component is analyzed separately. Also, "# of Layers" refers to number of separable subsamples.

* NY samples analyzed by ELAP 198.1 Method.

B. F. Macey

Brett Macey
Analyst

Approved Signatory

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Analysis performed by EMSL Beltsville (NVLAP Air and Bulk #200250-0, NVLAP Lab ID Code 101048-0)

EMSL Analytical, Inc.
10768 Baltimore Avenue
Beltsville, MD 20705
Phone: (301) 937-5700 Fax: (301) 937-5701

Attn.: Dana Gates
Mantech Environmental Corporation
9189 Red Branch Road
Columbia, MD 21045-2013

Friday, February 08, 2002

Ref Number: MD02597

POLARIZED LIGHT MICROSCOPY (PLM)

Performed by EPA 600/R-93/116 Method*

Project: 9017-034

Sample	Location	Appearance	Sample Treatment	ASBESTOS % Type	NON-ASBESTOS % Fibrous	% Non-Fibrous
012902PH-B11(SKIM COAT)	Plaster wall in hall (ground)	White Non-Fibrous Homogeneous	Crushed/Dissolved	None Detected	None Detected	85% Gypsum 15% Other
012902PH-B11(BROWN COAT)	Plaster wall in hall (ground)	Brown Other Homogeneous	Crushed/Dissolved	None Detected	3% Hair	90% Quartz 7% Gypsum
012902PH-B12	Plaster ceiling in hall	White/Grey Other Heterogeneous	Crushed/Dissolved	None Detected	2% Hair	80% Quartz 18% Other
012902PH-B13	Plaster wall in mech. rm	White/Grey Other Heterogeneous	Crushed/Dissolved	None Detected	2% Hair	90% Quartz 8% Other
012902PH-B14	Plaster wall in hall (first)	White/Grey Other Heterogeneous	Crushed/Dissolved	None Detected	3% Hair	87% Quartz 10% Other
012902PH-B15	Plaster wall in front parlor (first)	White/Grey Other Heterogeneous	Crushed/Dissolved	None Detected	3% Hair	85% Quartz 12% Other

Comments: For all obviously heterogeneous samples easily separated into subsamples, and for layered samples, each component is analyzed separately. Also, "# of Layers" refers to number of separable subsamples.

* NY samples analyzed by ELAP 198.1 Method.

B. J. Macey

Brett Macey
Analyst

Approved
Signatory

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Analysis performed by EMSL Beltsville (NVLAP Air and Bulk #200293, WV Lic.# LT000063)

EMSL Analytical, Inc.
10768 Baltimore Avenue
Beltsville, MD 20705
Phone: (301) 937-5700 Fax: (301) 937-5701

Attn.: Dana Gates
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Columbia, MD 21045-2013

Friday, February 08, 2002
Ref Number: MD02597

POLARIZED LIGHT MICROSCOPY (PLM)

Performed by EPA 600/R-93/116 Method*

Project: 9017-034

Sample	Location	Appearance	Sample Treatment	ASBESTOS % Type	NON-ASBESTOS % Fibrous	% Non-Fibrous
012902PH-B16	Plaster wall (second)	White Non-Fibrous Homogeneous	Crushed/Dissolved	None Detected	None Detected	100% Other
012902PH-B17	Plaster wall (second)	White Non-Fibrous Homogeneous	Crushed/Dissolved	None Detected	None Detected	100% Other
012902PH-B18	Linoleum flr. brown (second)	Brown Other Homogeneous	Crushed/Dissolved	None Detected	75% Cellulose	25% Other
012902PH-B19	Pipe Insulation (second)	White Other Homogeneous	Crushed/Dissolved	30% Chrysotile 10% Amosite		60% Gypsum
012902PH-B20	Exterior window caulk (second)	Grey Non-Fibrous Homogeneous	Crushed/Dissolved	None Detected	None Detected	90% Ca Carbonate 10% Other
012902PH-B21	Plaster wall (third)	White/Brown Other Heterogeneous	Crushed/Dissolved	None Detected	2% Hair	90% Quartz 8% Gypsum

Comments: For all obviously heterogeneous samples easily separated into subsamples, and for layered samples, each component is analyzed separately. Also, "# of Layers" refers to number of separable subsamples.

* NY samples analyzed by ELAP 198.1 Method.

Brett Macey
Analyst

Approved
Signatory

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EMSL Analytical, Inc.
10768 Baltimore Avenue
Beltsville, MD 20705
Phone: (301) 937-5700 Fax: (301) 937-5701

Attn.: Dana Gates
Mantech Environmental Corporation
9189 Red Branch Road
Columbia, MD 21045-2013

Friday, February 08, 2002

Ref Number: MD02597

POLARIZED LIGHT MICROSCOPY (PLM)

Performed by EPA 600/R-93/116 Method*

Project: 9017-034

Sample	Location	Appearance	Sample Treatment	ASBESTOS % Type	NON-ASBESTOS % Fibrous	% Non-Fibrous
012902PH-B22	Plaster ceiling (third)	White Non-Fibrous Homogeneous	Crushed/Dissolved	None Detected	None Detected	85% Gypsum 15% Other
012902PH-B23	Plaster wall (third)	White/Brown Non-Fibrous Homogeneous	Crushed/Dissolved	None Detected	None Detected	85% Quartz 15% Gypsum

Comments: For all obviously heterogeneous samples easily separated into subsamples, and for layered samples, each component is analyzed separately. Also, "# of Layers" refers to number of separable subsamples.

* NY samples analyzed by ELAP 198.1 Method.

B. J. Macey

Brett Macey
Analyst

Approved Signatory

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Analysis performed by EMSL Beltsville (NVLAP Air and Bulk #200293, WV Lic.# LT000053)

5

EMSL Analytical, Inc.
Revised January, 2000

CHAIN OF CUSTODY

MD02597

Asbestos

EMSL Rep:	Connie Frasca		
Your Company Name:	Mantech Environmental, Inc.	**EMSL-Bill to:**	Third Party Billing requires written authorization from third party MANT50
Street:	9189 Red Branch Road	**Street:**	
Box #:		**Box #:**	
City/State:	Columbia MD **Zip** 21045-2013	**City/State:**	**Zip**
Phone Results to:		**Fax Results to:**	
Name:		**Name:**	Dana Gates
Telephone #:	410-772-3300	**Fax #:**	410-772-3304
Project Name/Number:	9017-034	**Purchase Order #:**	

MATRIX

TURNAROUND

☐ Air	☐ Soil	☐ Micro-Vac	☐ 3 hrs	☐ 6 Hours	☐ Same Day or 12 Hours*	☐ 24 Hours (1 day)
☒ Bulk	☐ Drinking Water		☐ 48 Hours (2 days)	☐ 72 Hours (3 days)	☐ 96 Hours (4 days)	☒ 120 Hours (5 Days)
☐ Wipe	☐ Wastewater		☐ 144+ hours (6-10 Days)			

Please call ahead to schedule TEM AIR, 3 hours, 6 hours. There is a premium charge for 3 hour TAT; call 1-800-220-3675 for price prior to sending samples. You will be asked to sign an authorization form for this service.
* 12 hours must arrive by 11:00 am Mon. - Fri. Please Refer to Price Quote

PCM - Air
- ☐ NIOSH 7400 (A) Issue 2: August 1994
- ☐ OSHA w/TWA
- ☐ Other:

TEM AIR
- ☐ AHERA 40 CFR, Part 763 Subpart E
- ☐ NIOSH 7402 Issue 2
- ☐ EPA Level II

TEM WATER
- ☐ EPA 100.1
- ☐ EPA 100.2
- ☐ NYS 198.2

PLM - Bulk
- ☒ EPA 600/R-93/116
- ☐ EPA Point Count
- ☐ NY Stratified Point Count
- ☐ PLM NOB (Gravimetric) NYS 198.1
- ☐ NIOSH 9002
- ☐ EMSL Standard Addition

TEM BULK
- ☐ Drop Mount (Qualitative)
- ☐ Chatfield SOP-1988-02
- ☐ TEM NOB (Gravimetric) NY 198.4
- ☐ EMSL Standard Addition

TEM MICROVAC / WIPE
- ☐ ASTM D 5755-95 quantitative
- ☐ Wipe Qualitative

XRD
- ☐ Asbestos
- ☐ Silica NIOSH 7500

SEM Air or Bulk
- ☐ Qualitative
- ☐ Quantitative

PLM Soil
- ☐ EPA Protocol Qualitative
- ☐ EPA Protocol Quantitative
- ☐ EMSL MSD 9000 Method fibers/gram

OTHER
- ☐

Client Sample # (s): 012902PH-B1 - 012902PH-B23 Total Samples #: 23

Relinquished:	Dana E. Gates	**Date:**	1/31/02	**Time:** 6:00
Received:	K. Flores	**Date:**	2/1/02	**Time:** 9:00am
Relinquished:		**Date:**		**Time:**
Received:		**Date:**		**Time:**
Relinquished:		**Date:**		**Time:**
Received:		**Date:**		**Time:**

Page 1 of 2

EMSL Analytical, Inc.
Revised January, 2000

CHAIN OF CUSTODY

Asbestos

SAMPLE NUMBER	SAMPLE DESCRIPTION/LOCATION	VOLUME (If Applicable)
012902PH-B1	9x9 floor tile + mastic (ground)	N/A
-B2	plaster wall (ground)	N/A
B3	plaster wall (ground)	
B4	plaster ceiling (ground)	1878
B5	Cove base mastic	Schade Annex
B6	12x12 gray floor tile + mastic	(second)
B7	plaster wall in stair well	
B8	exterior window caulk (second)	
B9	exterior window caulk (ground)	
B10	plaster ceiling front parlor	
B11	plaster wall in hall (ground)	
B12	plaster ceiling in hall	
B13	plaster wall in mech. room	
B14	plaster wall in hall (first)	original
B15	plaster wall in front parlor (first)	construction
B16	plaster wall (second)	
B17	plaster wall (second)	
B18	linoleum floor, brown, (second)	
B19	pipe insulation (second)	
B20	exterior window caulk (second)	
B21	plaster wall (third)	
B22	plaster ceiling (third)	1950s addition
B23	plaster wall (third)	

Testing for Lead-Based Paint by MEC²: X-Ray Fluorescence (XRF) Table Refer to Part 1F: Hazardous Materials

No.	Floor	Room No.	Side	Structure	Substrate	Feature	Condition	Color	Date	Depth Index	Result	Lead Concentration
1	Shutter Calibration								1/29/2002	0	PASS	NA
2	Calibrate Surface Lead 1.0 mg/cm²								1/29/2002	1	PASS	1.02
3	Calibrate Surface Lead 0.0 mg/cm²								1/29/2002	1	PASS	0.01
4	Calibrate Buried Lead 1.0 mg/cm²								1/29/2002	2.4	PASS	1.08
5	Basement	12	A	Wall	Plaster				1/29/2002	1	NEG	0
6	Basement	12	B	Wall	Plaster		Peeling	Tan	1/29/2002	1.8	POS	3.65
7	Basement	12	C	Wall	Plaster		Peeling	Tan	1/29/2002	4.7	POS	4.31
8	Basement	12	D	Wall	Plaster		Peeling	Tan	1/29/2002	2.9	POS	2.65
9	Basement	12	A	Wall	Plaster		Peeling	Tan	1/29/2002	1.6	NEG	0.01
10	Basement	12	A	Ceiling	Metal		Poor	White	1/29/2002	10	POS	26.98
11	Basement	12	C	Stairs	Wood	Rail cap	Fair	Brown	1/29/2002	1	NEG	0.15
12	Basement	12	C	Stairs	Wood	Newal post	Fair	Brown	1/29/2002	1.7	POS	25.75
13	Basement	12	C	Stairs	Wood	Baluster	Fair	Brown	1/29/2002	1	NEG	0.02
14	Basement	12	C	Stairs	Wood	Baluster	Fair	Brown	1/29/2002	1	NEG	0.15
15	Basement	12	C	Stairs	Wood	Tread	Fair	Brown	1/29/2002	1	NEG	0.27
16	Basement	12	C	Stairs	Wood	Riser	Fair	Yellow	1/29/2002	8.2	POS	28.47
17	Basement	12	C	Stairs	Wood	Stringer	Fair	Yellow	1/29/2002	10	POS	28.26
18	Basement	12	A	Window	Wood	Stool	Fair	Yellow	1/29/2002	10	POS	38.81
19	Basement	12	A	Window	Wood	Casing	Fair	Yellow	1/29/2002	10	POS	39.01
20	Basement	12	A	Window	Wood	Sash	Fair	Yellow	1/29/2002	3.4	POS	14.44
21	Basement	12	A	Window	Wood	Apron	Fair	Yellow	1/29/2002	4	POS	18.61
22	Basement	12	A	Door	Wood	Door	Fair	Yellow	1/29/2002	1	NEG	0
23	Basement	12	A	Door	Wood	Casing	Fair	Yellow	1/29/2002	4.3	NEG	0.05
24	Basement	12	A	Door	Wood	Jamb	Fair	Yellow	1/29/2002	9.6	POS	39.3
25	Basement	12	A	Door	Wood	Casing	Fair	Yellow	1/29/2002	6	POS	31.77
26	Basement	12	A	Door	Wood	Door	Fair	Yellow	1/29/2002	1	NEG	0
27	Basement	12	A	Door	Wood	Baseboard	Fair	Yellow	1/29/2002	7.7	POS	16.22
28	Basement	12	D	Door	Wood	Casing	Fair	Yellow	1/29/2002	10	POS	50.94
29	Basement	12	B	Wall	Wood	Baseboard	Fair	Tan	1/29/2002	9.9	POS	32.51
30	Basement	Bath	B	Door	Wood	Door	Fair	Yellow	1/29/2002	2.1	NEG	0.04
31	Basement	Bath	B	Door	Wood	Door	Fair	Yellow	1/29/2002	1.1	NEG	0.02
32	Basement	Bath	B	Door	Wood	Casing	Fair	Yellow	1/29/2002	1	NEG	0.01

Testing for Lead-Based Paint by MEC[2]: X-Ray Fluorescence (XRF) Table Refer to Part 1F: Hazardous Materials

No.	Floor	Room No.	Side	Structure	Substrate	Feature	Condition	Color	Date	Depth Index	Result	Lead Concentration
33	Basement	Bath	B	Door	Wood	Jamb	Fair	Yellow	1/29/2002	1	NEG	0.02
34	Basement	Bath	A	Wall	Plaster		Fair	Yellow	1/29/2002	2.2	NEG	0.41
35	Basement	Bath	B	Wall	Plaster		Peeling	Yellow	1/29/2002	2	NEG	0.28
36	Basement	Bath	C	Wall	Plaster		Peeling	Yellow	1/29/2002	4.3	NEG	0.02
37	Basement	Bath	D	Wall	Plaster		Peeling	Yellow	1/29/2002	1.6	NEG	0.26
38	Basement	13	D	Ceiling	Plaster		Peeling	Yellow	1/29/2002	1.8	POS	0.84
39	Basement	13	A		Metal	Radiator	Fair	Yellow	1/29/2002	2.2	NEG	0.05
40	Basement	13	A	Door	Wood	Door	Fair	Yellow	1/29/2002	5.9	POS	24.27
41	Basement	13	A	Door	Wood	Casing	Fair	Yellow	1/29/2002	7.1	POS	29.67
42	Basement	13	A	Door	Wood	Casing	Fair	Yellow	1/29/2002	1	NEG	0.01
43	Basement	13	A	Window	Wood	Stool	Fair	Yellow	1/29/2002	4.9	POS	2.72
44	Basement	13	A	Wall	Plaster		Fair	Tan	1/29/2002	2	NEG	0.32
45	Basement	13	B	Wall	Plaster		Fair	Tan	1/29/2002	1.6	NEG	0.17
46	Basement	13	C	Wall	Plaster		Peeling	Tan	1/29/2002	1.8	NEG	0.09
47	First	104	A	Wall	Plaster	Burlap covering	Good	Tan	1/29/2002	3.2	NEG	0.01
48	First	104	B	Wall	Plaster	Burlap covering	Good	Tan	1/29/2002	1	NEG	0
49	First	104	C	Wall	Plaster	Burlap covering	Good	Tan	1/29/2002	1	POS	1.42
50	First	104	D	Wall	Plaster	Burlap covering	Good	Tan	1/29/2002	1	NEG	0
51	First	105	A	Wall	Plaster		Peeling	Tan	1/29/2002	1.8	NEG	0.05
52	First	105	B	Wall	Plaster		Peeling	Tan	1/29/2002	1	NEG	0
53	First	105	C	Wall	Plaster		Peeling	Tan	1/29/2002	3	NEG	0.2
54	First	105	D	Wall	Plaster		Peeling	Tan	1/29/2002	2.3	NEG	0.11
55	First	105	C	Wall	Plaster		Peeling	Tan	1/29/2002	6.6	POS	32.61
56	First	105	A	Window	Wood	Stool	Fair	Yellow	1/29/2002	9.4	POS	27.44
57	First	105	A	Wall	Wood	Baseboard	Fair	Yellow	1/29/2002	1	NEG	0.01
58	First	105	D	Door	Wood	Jamb	Good	Yellow	1/29/2002	2.4	POS	5.76
59	First	105	D	Wall	Metal	Baseboard	Good	Yellow	1/29/2002	1	NEG	0.03
60	First	105	C	Wall	Wood	Baseboard	Good	Yellow	1/29/2002	4.5	POS	20.44
61	First	105	D	Door	Wood	Casing	Good	Yellow	1/29/2002	1	NEG	0

Testing for Lead-Based Paint by MEC²: X-Ray Fluorescence (XRF) Table Refer to Part 1F: Hazardous Materials

No.	Floor	Room No.	Side	Structure	Substrate	Feature	Condition	Color	Date	Depth Index	Result	Lead Concentration
62	First	105	D	Door	Wood	Door	Good	Yellow	1/29/2002	5.9	POS	33.38
63	First	105	D	Door	Wood	Jamb	Good	Yellow	1/29/2002	1	NEG	0
64	Basement	10	C	Door	Wood	Door		Yellow	1/29/2002	9.6	POS	33.36
65	Basement	10	A	Wall	Plaster			Yellow	1/29/2002	1.2	NEG	0.15
66	Basement	10	B	Wall	Plaster			Yellow	1/29/2002	3.3	POS	5.1
67	Basement	10	C	Wall	Plaster			Yellow	1/29/2002	2.5	POS	4.32
68	Basement	10	D	Wall	Plaster			Yellow	1/29/2002	1.7	NEG	0.16
69	Basement	10	C	Door	Wood	Door		Brown	1/29/2002	4.2	POS	30.69
70	Basement	10	C	Door	Wood	Casing		Brown	1/29/2002	5.7	POS	26.12
71	Basement	10	C	Door	Wood	Jamb		Brown	1/29/2002	10	POS	29.13
72	Basement	10	C	Floor	Wood			Brown	1/29/2002	1	NEG	0.03
73	Basement	10	C	Floor	Wood	Baseboard	Fair	Beige	1/29/2002	6.7	POS	16.67
74	Basement	10	D	Window	Wood	Apron	Fair	Beige	1/29/2002	5.1	POS	19.01
75	Basement	10	D	Window	Wood	Casing	Fair	Beige	1/29/2002	6.8	POS	36.53
76	Basement	10	D	Ceiling	Plaster		Fair	White	1/29/2002	1.4	NEG	0.02
77	Basement	9	D	Ceiling	Plaster		Fair	White	1/29/2002	1	NEG	0
78	Basement	9	A	Wall	Plaster		Fair	Green	1/29/2002	10	POS	4.49
79	Basement	9	C	Wall	Plaster		Fair	Green	1/29/2002	6.3	POS	6.92
80	Basement	9	D	Wall	Plaster		Fair	Green	1/29/2002	10	NEG	0.29
81	Basement	9	D	Door	Wood	Door	Fair	White	1/29/2002	10	POS	1.2
82	Basement	9	D	Door	Wood	Casing	Fair	White	1/29/2002	10	POS	2.43
83	Basement	9	A	Door	Wood	Casing	Fair	White	1/29/2002	10	POS	32.36
84	Basement	9	A	Door	Wood	Casing	Fair	White	1/29/2002	10	POS	38.32
85	Basement	9	B	Door	Wood	Casing	Fair	White	1/29/2002	10	POS	33.95
86	Basement	9	B	Door	Wood	Door	Fair	White	1/29/2002	5.5	NEG	0.58
87	Basement	9	C	Door	Wood	Door	Fair	White	1/29/2002	10	POS	33.15
88	Basement	9	C	Door	Wood	Casing	Fair	White	1/29/2002	10	POS	41.6
89	Basement	9	C	Wall	Wood		Intact	White	1/29/2002	8	POS	36.71
90	Basement	9	C	Wall	Metal	Radiator	Intact	White	1/29/2002	9.4	NEG	0.17
91	Basement	9	A	Wall	Wood	Baseboard	Intact	White	1/29/2002	1	NEG	0
92	Basement	9	A	Wall	Wood	Baseboard	Intact	White	1/29/2002	10	POS	23.19
93	Basement	9	C	Wall	Wood	Baseboard	Intact	White	1/29/2002	5.5	POS	25.38
94	Basement	9	C	Stairs	Wood	Tread	Intact	Brown	1/29/2002	1.7	POS	3.23

Testing for Lead-Based Paint by MEC²: X-Ray Fluorescence (XRF) Table Refer to Part 1F: Hazardous Materials

No.	Floor	Room No.	Side	Structure	Substrate	Feature	Condition	Color	Date	Depth Index	Result	Lead Concentration
95	Basement	9	C	Stairs	Wood	Rail cap	Intact	Brown	1/29/2002	1	NEG	0.12
96	Basement	9	C	Stairs	Wood	Newal post	Intact	Brown	1/29/2002	1.6	NEG	0.17
97	Basement	9	C	Stairs	Wood	Newal post	Intact	White	1/29/2002	10	POS	34.25
98	Basement	9	C	Stairs	Wood	Baluster	Intact	White	1/29/2002	5.8	POS	37.25
99	Basement	9	C	Stairs	Wood	Riser	Intact	White	1/29/2002	5	POS	20.75
100	Basement	9	C	Stairs	Wood	Stringer	Intact	White	1/29/2002	7.9	POS	33.59
101	Basement	11	A	Wall	Plaster		Peeling	Green	1/29/2002	2	POS	5.1
102	Basement	11	B	Wall	Plaster		Peeling	Green	1/29/2002	2.1	POS	15.9
103	Basement	11	C	Wall	Plaster		Peeling	Green	1/29/2002	2.6	POS	5.1
104	Basement	11	D	Wall	Plaster		Peeling	Green	1/29/2002	1.9	POS	5.1
105	Basement	11	B	Door	Wood	Door	Peeling	Brown	1/29/2002	1.8	POS	29.59
106	Basement	11	B	Door	Wood	Casing	Peeling	Brown	1/29/2002	1.9	POS	39.99
107	Basement	11	B	Window	Wood	Stool	Peeling	Brown	1/29/2002	1.7	POS	30.64
108	Basement	11	B	Window	Wood	Casing	Peeling	Brown	1/29/2002	1.9	POS	36.76
109	First	100	A	Wall	Plaster		Intact	Other	1/29/2002	1	INCOM	0.44
110	First	100	A	Wall	Plaster		Intact	Other	1/29/2002	1.1	NEG	0.3
111	First	100	B	Wall	Plaster		Intact	Other	1/29/2002	1	NEG	0.46
112	First	100	C	Wall	Plaster		Intact	Other	1/29/2002	1	NEG	0.28
113	First	100	D	Wall	Plaster		Intact	Other	1/29/2002	1	POS	0.93
114	First	100	A	Wall	Wood	Baseboard	Intact	Beige	1/29/2002	4	POS	2.72
115	First	100	D	Window	Wood	Apron	Intact	Beige	1/29/2002	8.7	POS	34.94
116	First	100	D	Window	Wood	Stool	Intact	Beige	1/29/2002	10	POS	34.84
117	First	100	D	Window	Wood	Casing	Intact	Beige	1/29/2002	10	POS	38.22
118	First	100	D	Door	Wood	Door	Intact	Beige	1/29/2002	6.8	POS	36.68
119	First	100	D	Door	Wood	Door	Intact	Beige	1/29/2002	8	POS	37.79
120	First	100	D	Door	Wood	Door	Intact	Beige	1/29/2002	8.5	POS	10.23
121	First	100	D	Door	Wood	Jamb	Intact	White	1/29/2002	10	POS	33.54
122	First	102	A	Wall	Plaster		Intact		1/29/2002	1.1	NEG	0.28
123	First	102	B	Wall	Plaster		Intact		1/29/2002	1	NEG	0.34
124	First	102	C	Wall	Plaster		Intact		1/29/2002	1	NEG	0.41
125	First	102	B	Window	Wood	Stool	Intact		1/29/2002	9.3	POS	46.03

Testing for Lead-Based Paint by MEC²: X-Ray Fluorescence (XRF) Table Refer to Part 1F: Hazardous Materials

126	First	102	C	Door	Wood	Door	Intact	Beige	1/29/2002	7.1	POS	39.86	
127	First	102	C	Door	Wood	Jamb	Intact	White	1/29/2002	9.8	POS	37.35	
128	First	102	C	Door	Wood	Jamb	Intact	Brown	1/29/2002	1	NEG	0.01	
129	First	102	C	Door	Wood	Door	Intact	White	1/29/2002	5.9	POS	5.37	
130	First	107	C	Wall	Plaster		Intact		1/29/2002	1	NEG	0	
131	First	107	C	Wall	Plaster		Intact		1/29/2002	5.9	NEG	0.11	
132	First	107	C	Wall	Metal	Radiator	Intact	White	1/29/2002	1.6	NEG	0.06	
133	First	107	C	Stairs	Wood	Rail cap	Intact	Brown	1/29/2002	1	NEG	0.01	
134	First	107	C	Stairs	Wood	Newal post	Intact	Brown	1/29/2002	1.4	NEG	0.06	
135	First	107	C	Stairs	Wood	Tread	Intact	Brown	1/29/2002	1	NEG	0.17	
136	First	107	C	Stairs	Wood	Stringer	Intact	White	1/29/2002	10	POS	30.28	
137	First	107	C	Stairs	Wood	WallCasing	Intact	White	1/29/2002	10	POS	37.22	
138	First	107	C	Stairs	Wood	Stringer	Intact	White	1/29/2002	10	POS	40.52	
139	First	107	C	Door	Wood	Door	Intact	Brown	1/29/2002	1.2	NEG	0.01	
140	First	107	C	Door	Wood	Casing	Intact	White	1/29/2002	1	NEG	0.01	
141	First	107	C	Door	Wood	Jamb	Intact	Beige	1/29/2002	2.4	NEG	0.56	
142	Second	Hall	B	Window	Wood	Apron	Intact	Tan	1/29/2002	6.4	NEG	0.15	
143	Second	Hall	B	Window	Wood	Casing	Intact	Tan	1/29/2002	3	NEG	0.1	
144	Second	Hall	B	Window	Wood	Sash	Intact	Tan	1/29/2002	1.5	NEG	0.03	
145	Second	Hall	B	Window	Wood	Sash	Intact	Tan	1/29/2002	6.8	NEG	0.13	
146	Second	Hall	B	Window	Wood	Casing	Intact	Tan	1/29/2002	2.6	NEG	0.07	
147	Second	Hall	A	Wall	Plaster		Intact	Beige	1/29/2002	1.6	NEG	0.07	
148	Second	Hall	B	Wall	Plaster		Intact	Beige	1/29/2002	2.8	NEG	0.11	
149	Second	Hall	C	Wall	Plaster		Intact	Beige	1/29/2002	2.4	NEG	0.15	
150	Second	Hall	D	Wall	Plaster		Intact	Beige	1/29/2002	3.1	NEG	0.23	
151	Second	Hall	A	Wall	Plaster		Intact	White	1/29/2002	6.1	POS	1.27	
152	Second	Hall	B	Wall	Plaster		Intact	White	1/29/2002	1.9	POS	1.51	
153	Second	Hall	C	Wall	Plaster		Intact	White	1/29/2002	1	POS	1.31	
154	Second	Hall	D	Wall	Plaster		Intact	White	1/29/2002	10	POS	1.41	
155	Second	Hall	D	Window	Wood	Stool	Intact	White	1/29/2002	5.8	POS	3.8	
156	Second	Hall	D	Window	Wood	Casing	Intact	White	1/29/2002	2.2	NEG	0.42	
157	Second	Hall	D	Window	Wood	Apron	Intact	White	1/29/2002	1	NEG	0.01	
158	Second	Hall	D	Window	Wood	Sash	Intact	White	1/29/2002	2.1	POS	4.61	
159	Second	Hall	B	Door	Wood	Casing	Intact	White	1/29/2002	10	POS	14.73	

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160	Second	Hall	B	Door	Wood	Jamb	Intact	White	1/29/2002	10	POS	19.85
161	Second	203	A	Wall	Plaster		Intact	White	1/29/2002	5.5	NEG	0.04
162	Second	203	B	Wall	Plaster		Intact	White	1/29/2002	7.5	NEG	0.05
163	Second	203	C	Wall	Plaster		Intact	White	1/29/2002	6.1	POS	2.58
164	Second	203	D	Wall	Plaster		Intact	White	1/29/2002	2.1	NEG	0.02
165	Second	203	D	Window	Wood	Stool	Intact	White	1/29/2002	4.9	POS	2.29
166	Second	203	D	Window	Wood	Casing	Intact	White	1/29/2002	2.3	POS	0.8
167	Second	203	D	Window	Wood	Sash	Intact	White	1/29/2002	2.7	POS	3.27
168	Second	203	D	Window	Wood	Baseboard	Intact	White	1/29/2002	10	POS	27.03
169	Second	201	A	Fireplace	Wood	Mantle	Intact	White	1/29/2002	1.3	NEG	0.02
170	Second	201	A	Wall	Plaster		Intact	White	1/29/2002	10	POS	3.84
171	Second	201	B	Wall	Plaster		Intact	White	1/29/2002	10	POS	3.65
172	Second	201	C	Wall	Plaster		Intact	White	1/29/2002	10	POS	2.94
173	Second	201	D	Wall	Plaster		Intact	White	1/29/2002	10	POS	2.8
174	Second	201	D	Door	Wood	Door	Intact	White	1/29/2002	2.8	POS	5.1
175	Second	201	D	Door	Wood	Casing	Intact	White	1/29/2002	10	POS	33.64
176	Second	201	D	Door	Wood	Jamb	Intact	White	1/29/2002	7.3	POS	45.03
177	Shutter Calibration								1/29/2002	0	PASS	NA
178	Shutter Calibration								1/29/2002	0	PASS	NA
179	Calibrate Surface Lead 1.0 mg/cm²								1/29/2002	1	PASS	0.97
180	Second	202	B	Window	Wood	Stool		Tan	1/29/2002	1.6	NEG	0.11
181	Second	202	B	Window	Wood	Apron		Tan	1/29/2002	5.7	POS	31.13
182	Second	202	B	Window	Wood	Casing		Tan	1/29/2002	4.9	POS	32.72
183	Second	202	B	Window	Wood	Sash		Tan	1/29/2002	1.7	NEG	0.36
184	Second	202	B	Window	Wood	Sash		Tan	1/29/2002	1.7	NEG	0.17
185	Third	Hall	B	Floor	Wood		Poor	Brown	1/29/2002	1.1	NEG	0.18
186	Third	Hall	B	Window	Wood	Apron	Poor	White	1/29/2002	10	POS	40.81
187	Third	Hall	B	Window	Wood	Stool	Poor	White	1/29/2002	10	POS	39.94
188	Third	Hall	B	Window	Wood	Casing	Poor	White	1/29/2002	3.9	POS	44.62
189	Third	Hall	B	Window	Wood	Sash	Poor	White	1/29/2002	5.8	POS	26.29
190	Third	Hall	B	Stairs	Wood	Tread	Poor	Brown	1/29/2002	1.7	POS	5.14
191	Third	Hall	B	Stairs	Wood	Rail cap	Poor	Brown	1/29/2002	1	NEG	0.05
192	Third	Hall	B	Stairs	Wood	Baluster	Poor	Brown	1/29/2002	1.5	NEG	0.2
193	Third	Hall	B	Stairs	Wood	Baseboard	Poor	Brown	1/29/2002	5.2	POS	40.63
194	Third	Hall	B	Stairs	Wood	Riser	Poor	Beige	1/29/2002	7.8	POS	21.03

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195	Third	Hall	A	Wall	Plaster		Poor	Beige	1/29/2002	6.8	NEG	0.07
196	Third	Hall	C	Wall	Plaster		Poor	Green	1/29/2002	1.8	NEG	0.15
197	Third	Hall	D	Door	Wood	Door	Poor	Tan	1/29/2002	4.5	POS	33.08
198	Third	Hall	D	Door	Wood	Jamb	Poor	Tan	1/29/2002	4.6	POS	34.38
199	Third	303	A	Wall	Plaster		Poor	Tan	1/29/2002	1.9	NEG	-0.34
200	Third	303	C	Wall	Plaster		Poor	Tan	1/29/2002	3.3	NEG	0.02
201	Third	303	C	Wall	Wood	Baseboard	Poor	Tan	1/29/2002	5.1	POS	30.08
202	Third	303	C	Floor	Wood		Poor	Brown	1/29/2002	1.5	NEG	0.26
203	Third	303	A	Wall	Plaster		Poor	Tan	1/29/2002	1	NEG	-0.3
204	Third	303	B	Wall	Plaster		Poor	Tan	1/29/2002	6.7	NEG	0.28
205	Third	303	C	Wall	Plaster		Poor	Tan	1/29/2002	3.9	NEG	0.14
206	Third	303	D	Window	Wood	Apron	Poor	Tan	1/29/2002	9.3	POS	37.96
207	Third	303	D	Window	Wood	Stool	Poor	Tan	1/29/2002	7	POS	40.91
208	Third	303	D	Window	Wood	Casing	Poor	Tan	1/29/2002	5.6	POS	34.07
209	Third	303	D	Window	Wood	Sash	Poor	Tan	1/29/2002	5.6	POS	23.33
210	Third	303	A	Fireplace	Wood	Mantle	Poor	Tan	1/29/2002	5.8	POS	24.5
211	Third	303	A	Fireplace	Wood	Trim	Poor	Tan	1/29/2002	4.6	POS	20.53
212	Third	303	A	Wall	Wood	Baseboard	Poor	Tan	1/29/2002	5.7	POS	25.77
213	Third	301	A	Closet	Wood	Door	Poor	Tan	1/29/2002	3.3	POS	31.41
214	Third	301	A	closet	Wood	Casing	Poor	Tan	1/29/2002	4.7	POS	35.61
215	Third	301	A	Closet	Plaster	Wall	Poor	Tan	1/29/2002	1.5	NEG	0.06
216	Third	302	B	Radiator	Metal		Intact	Tan	1/29/2002	2.7	POS	1.76
217	Third	302	A	Wall	Plaster		Intact	Tan	1/29/2002	3.1	NEG	0.16
218	Third	302	B	Wall	Plaster		Intact	Tan	1/29/2002	1.5	NEG	0.04
219	Third	302	C	Wall	Plaster		Intact	Tan	1/29/2002	1.4	NEG	0.04
220	Third	302	C	Ceiling	Plaster		Peeling	Grey	1/29/2002	1.9	INCOM	0.06
221	Third	302	C	Ceiling	Plaster		Peeling	Grey	1/29/2002	1.1	NEG	-0.28
222	Third	302	C	Floor	Wood		Poor	Brown	1/29/2002	1	NEG	0.08
223	Third	hall	C	Floor	Wood	Baseboard	Poor	tan	1/29/2002	5.7	POS	24.87
224	Third	hall		attic	Wood	Door hatch	good	Tan	1/29/2002	1	NEG	0
225	Third	hall		door	Wood	casing	good	Tan	1/29/2002	3.3	POS	40.04
226	Second	202	B	closet	plaster	wall	fair	Blue	1/29/2002	6.4	POS	5.1
227	Second	202		radiator	metal		fair	White	1/29/2002	7.5	POS	1.2
228	second	202		window	wood	sill	fair	tan	1/29/2002	1	NEG	0.04

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229	Shutter Calibration								1/29/2002	0	PASS	NA
230	First	porch	Exterior back	window	wood	Molding	good	Yellow	1/29/2002	7	POS	1.39
231	First	Porch	Exterior back	window	wood	sash	good	Gray	1/29/2002	9.7	POS	4.02
232	First	Porch	Exterior back	floor	wood		good	Gray	1/29/2002	4.6	NEG	0.52
233	First	Porch	Exterior back	window	wood	sill	good	Taupe	1/29/2002	10	POS	36.25
234	First	Porch	Exterior front	window	wood	shutter	good	Taupe	1/29/2002	4.1	POS	2.88
235	First	porch	Exterior front	railing	metal		good	Black	1/29/2002	1.6	POS	5.1
236	Calibrate Surface Lead 1.0 mg/cm²								1/29/2002	1	PASS	1.06
237	Calibrate Surface Lead 0.0 mg/cm²								1/29/2002	1	PASS	0
238	Calibrate Buried Lead 1.0 mg/cm²								1/29/2002	2.2	PASS	1

* In the District of Columbia, a positive result equates to > 0.7 mg/cm^2 of lead. A negative result equates to ≤ 0.7 mg/cm^2 of lead. An acceptable calibration reading is annotated by a PASS result.

* Negative lead concentrations were artifacts of the Niton XRF instrument, due to element interferences in the components (such as strontium or bromine in drywall). According to Niton, these measurements should be interpreted as measuring concentrations of 0.0 mg/cm^2 of lead.

* Depth Index identifies location of lead, if present. The Depth Index ranges from 1 (surface lead) to 10 (buried lead).

APPENDIX C

Structural Analysis

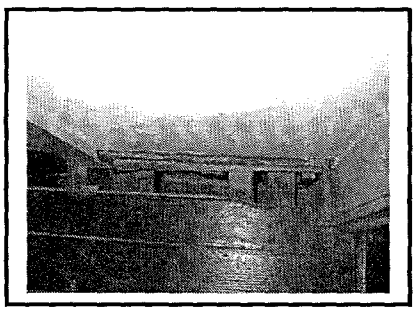
Observation Openings

Opening #1
Location: Third Floor - Stair Hall

- Floor of hallway along base of wall (at Room 303)

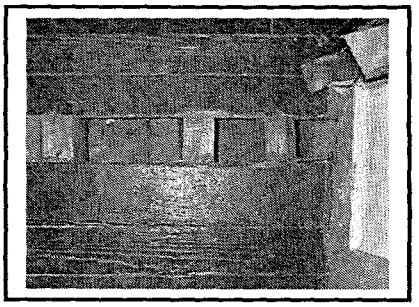
Reason for Opening/Findings:

- To observe bearing condition at area of severe floor deflection.
- Confirmed that partition is non-loadbearing and that wall studs are discontinuous.



Opening #2
Location: Third Floor - Stair Hall

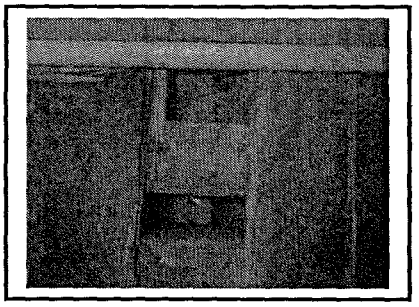
- Floor of hallway above suspected beam location



#2 - Photo at interior wall

Reason for Opening/Findings:

- To observe potential joist bearing location.
- To determine framing size, span direction and spacing of members.
- Framing information for floor and ceiling was documented. Low beam was observed.
- At north wall, steel strap was found extending from joists into brick wall. Strap serves as a lateral brace.



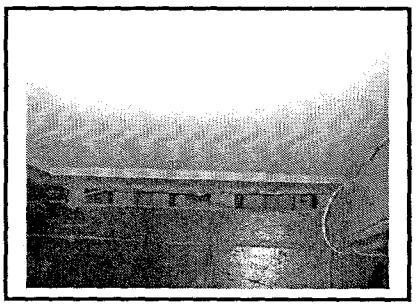
#2 - Photo at exterior wall (north)

Opening #3
Location: Third Floor - Room 301

- Floor along base of interior partition

Reason for Opening/Findings:

- To confirm floor framing information and observe possible joist bearing condition.
- Framing information was measured and documented.



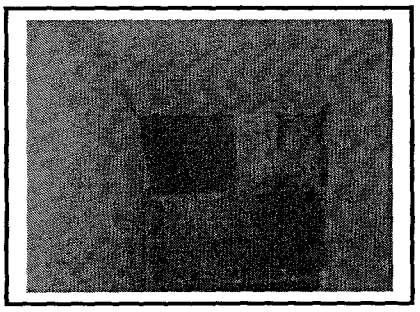
Opening #4

Location: Third Floor - Room 302

- Floor of shallow closet

Reason for Opening/Findings:

- To observe assumed bearing wall/beam bearing condition.
- Found that the low beam runs continuous across the width of the house.



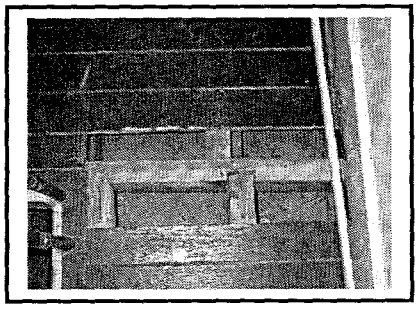
Opening #5

Location: Third Floor - Stair Hall

- Floor of hallway near stairs

Reason for Opening/Findings:

- To observe stair/floor connection.
- Determined stair header size and landing joist sizes.



Opening #6

Location: Second Floor - Room 202

- Floor of shallow closet

Reason for Opening/Findings:

- To observe assumed bearing wall/beam bearing condition.
- Found that no low beam occurs at this location. Wall studs extend to face of existing brick wall.



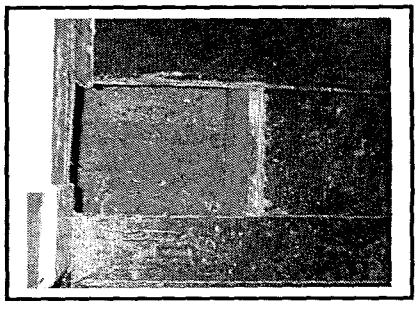
Opening #7

Location: Second Floor - Room 201

- Floor at base of interior partition

Reason for Opening/Findings:

- To observe bearing condition at area of severe floor deflection.
- Confirmed that partition is non-loadbearing and that wall studs are discontinuous.



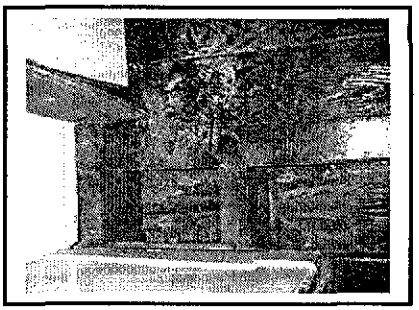
Opening #8

Location: Second Floor - Room 203

- Floor where interior partition meets exterior masonry wall.

Reason for Opening/Findings:

- To observe bearing condition at area of severe floor deflection.
- Confirmed that partition is non-loadbearing and that wall studs are discontinuous. Steel strap, bracing wall into wood floor, was observed.



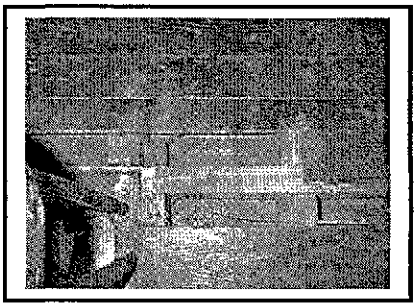
Opening #9

Location: Second Floor - Stair Hall

- Floor of hallway near stairs

Reason for Opening/Findings:

- To observe stair/floor connection.
- Determined stair header size and landing joist sizes.



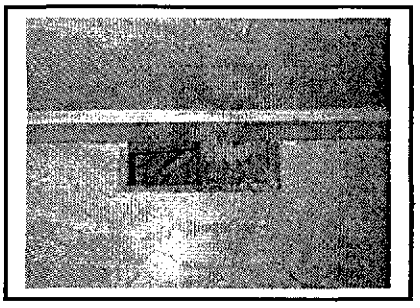
Opening #10

Location: First Floor/Rear Ell – Room 104

- Floor at base of partition near death room (partition likely removed and rebuilt)

Reason for Opening/Findings:

- To observe framing size, spacing and span direction in original portion of ell (in location out of the restoration area).
- Framing information was measured and documented.



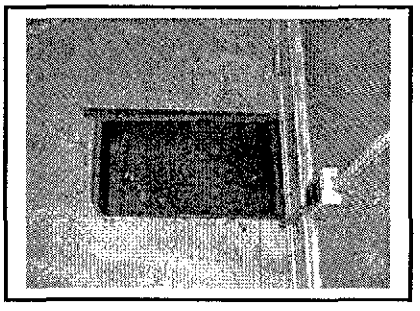
Opening #11

Location: First Floor/Rear Ell – Room 105

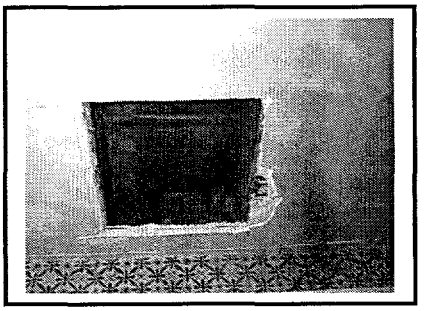
- Floor at base of interior masonry wall (rear exterior wall in 1865)

Reason for Opening/Findings:

- To observe framing size, spacing and span direction in 1870s portion of ell.
- Framing information was measured and documented.



Opening #12



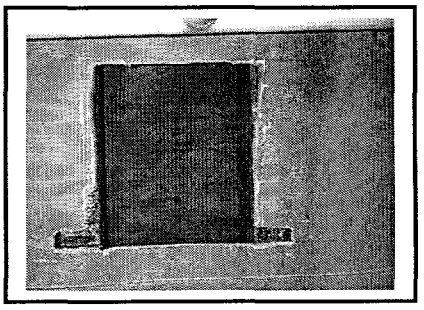
Location: Basement Floor – Room 10

- Ceiling at interior partition, below Front Parlor

Reason for Opening/Findings:

- To observe framing size, spacing and span direction at assumed bearing wall (in location out of the restoration area).
- Framing information was measured and documented.

Opening #13



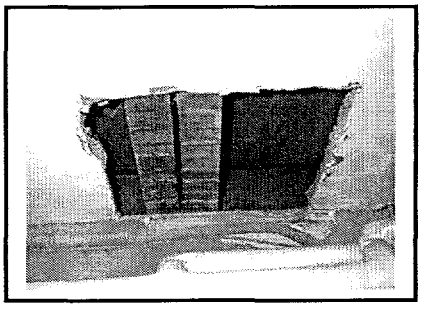
Location: Basement Floor – Room 11

- Ceiling, central to room, below Back Parlor

Reason for Opening/Findings:

- To observe framing size, spacing and span direction (in location out of the restoration area).
- Framing information was measured and documented.

Opening #14



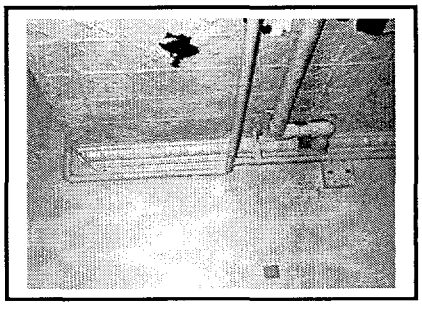
Location: Basement Floor – Stair Hall

- Ceiling at interior partition

Reason for Opening/Findings:

- To observe potential joist bearing location.
- To determine framing size, span direction and spacing of members.
- Framing information for floor and ceiling was documented. Low beam was observed.

Opening #15



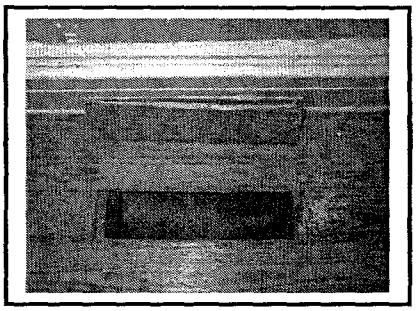
Location: Basement Floor – Room 12

- Ceiling at north wall – removal of cornice trim at pressed tin ceiling and original plaster ceiling beyond

Reason for Opening/Findings:

- To observe existing framing condition where water damage may have occurred.
- Framing, size and spacing, was confirmed. No structural damage was apparent at joist ends.

Opening #16



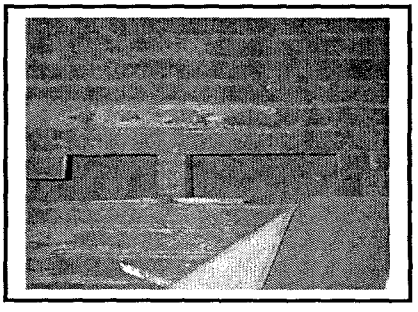
Location: Basement Floor – Stair Hall

- Floor of hallway near north exterior masonry wall

Reason for Opening/Findings:

- To confirm joist bearing condition at exterior brick wall (east)
- Joists were observed to pocket into existing brick. Framing, size and spacing, was measured and documented.

Opening #17



Location: Basement Floor – Room 10

- Floor - in central location

Reason for Opening/Findings:

- To observe framing size, spacing and span direction and condition of crawl space.
- Framing information was measured and documented.

Opening #18

Location: Second Floor - Room 201

- Floor at front masonry wall at interior partition (in corner near radiator)

Reason for Opening/Findings:

- To confirm joist bearing condition at exterior brick wall (east)
- Joists were observed to pocket into existing brick. Framing, size and spacing, was measured and documented.

Structural Calculations

Refer to following sheets.

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8381 Old Courthouse Road, Suite 350
Vienna, Virginia 22182
(703) 556-0651

PROJECT NAME Petersen House. PROJ. NO. 2561.1
SHEET NO. 1 OF
CALCULATED BY DL. DATE 8/5/02
CHECKED BY DATE

LOADING ANALYSIS: 1996 BOCA.

WOOD PROPERTIES:
SPECIES: PINE (VISUAL OBSERVATIONS)
GRADE: USE No 1, (OLD LUMBER IS TYPICALLY OF SUPERIOR QUALITY THAN MODERN LUMBER)

I. 3rd FLOOR FRAMING:

A.) ROOMS 301 & 303:

Ex. JOISTS, $2\frac{3}{4}" \times 9\frac{1}{4}"$ $S_x = \frac{2.75(9.25)^2}{6} = 39.2\ in^3$
F_b: 1300 psi

DEAD LOADS

CEILING JOISTS. 3"×6"/144 (35 PCF) 1/1.5	=	3 psf.
1" T & G DECKING.	=	4 psf
MEP ALLOWANCE.	=	3 psf
PARTITION ALLOWANCE. (1606.2.4)		N/A.
PLASTER CEILING + WOOD LATH	=	8 psf
JOISTS. $2\frac{3}{4}" \times 9\frac{1}{4}"/144$ (35) 1/1.5 =	=	4 psf
		22 psf

SPAN = 17'-6"

$w_{DL} = 33$ plf, $M_{DL} = 33(17.5)^2/8 = 1264$ ft.lbs.

$M_{allow} = 39.2\ in^3 \cdot 1300 \frac{lbs}{in^2} \cdot \frac{ft}{12 in} = 4247$ ft.lbs.

$C_f = 1.15$

$M_{TOTAL} = 4247(1.15) = 4884$ ft.lbs.
$M_{LL\ allow} = 2984$ ft.lbs,
$w_{LL\ allow} = 52$ psf ok for residential use.
NG. for office < (50+20)

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CALCULATED BY BL. DATE 8/5/02
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B.) Room 302

$2\frac{3}{4}" \times 10"$, ∴ ok by comparison to A.)

3"×9" Joists , $S_x = \frac{3(9)^2}{6} = 40\ in^3 > 39.2\ in^3$ ∴ ok by comparison

c.) STAIR HALL: $2\frac{5}{8}" \times 5\frac{1}{2}"$

$S_x = \frac{2.625(5.5)^2}{6} = 13.2\ in^2.$, SPAN = 9'6"

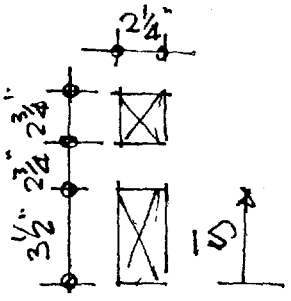
$M_{allow} = 13.2\ in^3 \cdot \frac{1650\ lbs}{in^2} \cdot \frac{ft}{12\ in} = 1815\ ft.lbs.\ (1.15)$
$= 2087\ ft.lbs.$

$M_{DL} = \frac{33(9.5)^2}{8} = 372\ ft.lbs.$

$M_{Lallow} = 1715\ ft.lbs.$
$W_{allow} = 22\ PSF \cdot (1715/372) = 101\ PSF.$
∴ ok for assembly use.

CHECK HALF LAP CONNECTION AT BEAM:

EX. HEADER. $2\frac{1}{4}" \times 9"$, DISCONTINUOUS AT HALF-LAP JOINTS
CONT. HEADER SIZE AS BELOW:



$\bar{y} = \frac{2.25(3.5)(1.75) + 2.75(2.25)(7.625")}{7.875 + 6.19} = \frac{60.96\ in^3}{14.06\ in^2}$

$= 4.34\ in$

$I_{xx} = \frac{2.25(3.5)^3 + 2.25(2.75)^3}{12} + 7.875(2.59)^2 + 6.19(3.28)^2 = 131.6\ in^4.$

$S_{xx} = 131.6/4.06 = 28.2\ in^3.$

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SHEET NO. 3 OF
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$w_{rd} = 22(13.5/2) = 148$ plf.

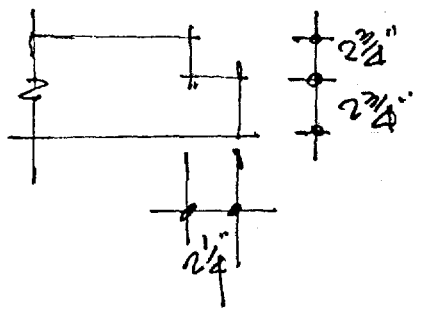
$M_{rd} = 148(6)^2/8 = 668$ ft.lbs.

$M_{allow} = .28.2(1300)\frac{1}{12} = 3055$ ft·lbs.

$M_{LL\,allow} = 2387$ ft.lbs <.

$LL_{allow} = 78$ psf. ok for OFFICE USE > 70 psf.

CHECK NOTCH CAPACITY IN JOIST.



R: (OFFICE LOAD) = 655 lbs.

$f_v = \frac{3(655)}{2(2.625)\left[5.5 - \left(\frac{2.75}{2.75}\right)2.25\right]}$

$= 115$ psi

$F_v = 90$ psi (NG.)

$P_{TOTAL.\,allow} = 90/115\,(50+20+22)$
$= 72$ psf, $\therefore$ $LL_{allow} = 50$ psf
ok FOR RESIDENTIAL.

CHECK BEAM AT CENTER CORRIDOR: $3\frac{3}{4}" \times 6\frac{1}{2}"$

$S_x = \frac{3.75(6.5)^2}{6} = 26.4\ in^3.$

$M_{rd} = 22(27\frac{1}{2}) = 297(6)^2/8$
$= 1337$ ft.lbs.

$M_{allow} = 26.4(1500)\frac{1}{12} = 3300$ ft.lbs.

$M_{LL\,allow} = 1963$ ft.lbs, $LL_{allow} = .32$ psf.
$\therefore$ ok for residential bedrooms

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PROJECT NAME Petersen House. PROJ. NO. 2561.1.
SHEET NO. 4 OF
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II. 2ND FLOOR FRAMING:

A.) Rooms 201 & 203.

$2\frac{3}{4}" \times 9\frac{1}{4}"$ @ 17" o.c. $S_x = \frac{2.75(9.25)^2}{6} = 39.22\ in^3$

SPAN = $17\frac{1}{6}"$ $C_r = 1.15$

$M_{allow} = 39.22 \cdot \frac{1300\ lbs}{in^2} \cdot \frac{ft}{12\ in} = 4248$ ft.lbs. (1.15) = 4885 ft.lbs.

$w_{DL} = 22\ (17/12) = 31.2$ plf, $M_{DL} = \frac{31.2(17.5)^2}{8} = 1193$ ft.lbs

$M_{LL\ allow} = 3692$ ft.lbs

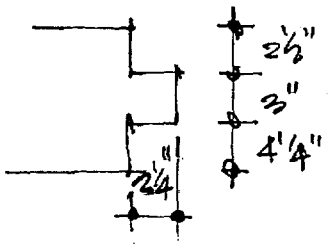
$LL_{allow} = 68$ psf. ∴ ok for RESIDENTIAL.
< 70 PSF ∴ NG FOR OFFICE USE.

B.) Room 202: Joists NOT visible, ASSUMED SAME AS ADJACENT ROOM.

C.) LANDING HEADER: $2 5/8" \times 9\frac{3}{4}"$

∴ ok by COMPARISON TO 2ND FLOOR HEADER.

D.) CHECK SHEAR AT M & T JOINT:



R: (OFFICE LOAD) = 345 lbs.

$f_v = \frac{3(345)}{2(2.75)(5.5)}\left(\frac{9.75}{5.5}\right) = 61$ psi < 90 psi
∴ ok

E.) CENTRAL BEAM BETWEEN 201 & 202: $3\frac{3}{4}" \times 6\frac{1}{8}"$ (ASSUMED)
$M_{allow} = 3300$ ft.lbs. $M_{DL} = 22(17')(7.5)^2/8 = 2630$ ft.lbs.

$M_{LL\ allow} = 670$ ft.lbs. $LL_{allow} = 22(670/2630) = 6$ psf

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SHEET NO. 5 OF
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III. 1ST FLOOR FRAMING:

A) Rooms 100 & 107

$2\frac{3}{4}" \times 9\frac{3}{4}"$ @ 16" o.c. $S_x = \frac{2.75(9.75)^2}{6} = 43.6\ in^3$.

SPAN = 17'

$M_{allow} = 43.6\ in^3 \cdot \frac{1300\ lbs}{in^2} \cdot \frac{ft.}{12\ in} = 4720\ ft.lbs\ (1.15)$
$= 5428\ ft.lbs$

$w_{DL} = 22\ (16/12) = 29.3\ lbs/ft.$

$M_{DL} = 1060\ ft.lbs$, $M_{LL\ allow.} = 4368\ ft.lbs.$

$LL_{allow} = 22\ (4368/1060) = 90\ psf > (50+20)$ ∴

EXISTING FLOOR JOISTS ARE ADEQUATE FOR OFFICE USE.

B.) Room 102

$3\frac{1}{2}" \times 9\frac{3}{4}"$ @ 17" o.c. $S_x = \frac{3.5(9.75)^2}{6} = 55.4\ in^3$.

SPAN = 17'

$M_{allow} = 55.4/43.6\ (5428) = 6904\ ft.lbs.$

$w_{DL} = 22\ (17/12) = 31.2\ lbs/ft.$ $M_{DL} = 1126\ ft.lbs.$

$M_{LL\ allow} = 5778\ ft.lbs$, $LL_{allow.} = 113\ psf.$

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PROJECT NAME Petersen House. PROJ. NO. 2561.1.
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c.) Room 103: Lincoln Death Room

2" x 7¼" @ 16" o.c.

$S_x = \frac{2(7.25)^2}{6} = 17.5 \text{ in}^3$

SPAN = 10'-6"

$M_{allow} = 17.5 \text{ in}^3 \cdot \frac{1500 \text{ lbs}}{\text{in}^2} \cdot \frac{\text{ft}}{12 \text{ in}} = 2190 \text{ ft.lbs.} (1.15)$
$= 2518 \text{ ft.lbs.}$

$W_{bL.} = 16/12 (22) = 29.3 \text{ lbs/ft.}$

$M_{bL} = 29.3(10.5)^2/6 = 539 \text{ ft.lbs.}$

M_u allow. = 1979 ft.lbs. $u_{allow} = 22 (1979/539) = 80$ PSF.

∴ ok FOR OFFICE LOADING OF 50+20 PSF.

D.) Room 105

OFFICE LOAD o.k by comparison to Room 103.

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PROJECT NAME Paterson House. PROJ. NO. 2561.1.
SHEET NO. 7 OF
CALCULATED BY M. DATE 8/7/02
CHECKED BY DATE

BASEMENT FLOOR FRAMING:

A) Room 10

2½" x 9½" @ 20½" o.c. $S_x = \frac{2.5(9.5)^2}{6} = 37.6\ in^3$.

span = 17.

$M_{allow} = 37.6\ in^3 \cdot 1300 \frac{lbs}{in^2} \cdot \frac{ft}{12\ in} = 4074$ ft.lbs. (1.15)
$= 4685$ ft.lbs.

w_{DL} = (M CEILING) = 14 psf (20.5/12) = 23.9 lbs/ft.

M_{DL} = 864 ft.lbs. , $M_{LL\ allow.}$ = 3821 ft.lbs.

$L_{allow.} = 14\ (3821/864) = 62$ psf.

∴ ok for residential but not office loads.

B) RM 9

2x10 @ 20.5" o.c. $S_x = 21.38\ in^3$.

$M_{allow} = 2316\ (1.15) = 2664$ ft.lbs. span = 6'

$w_{DL} = 14\ (20.5/12) = 23.9$ lbs/ft. $M_{DL} = 108$ ft.lbs.

$M_{LL\ allow} = 2556$ ft.lbs, $L_{allow} = 100$ psf.

∴ ok for use as a public corridor.

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c.) RM 12

2x10 @ 16" o.c. $S_x = 21.39\ in^3$.

$M_{allow} = 2664$ ft.lbs, $span = 10'-6"$.

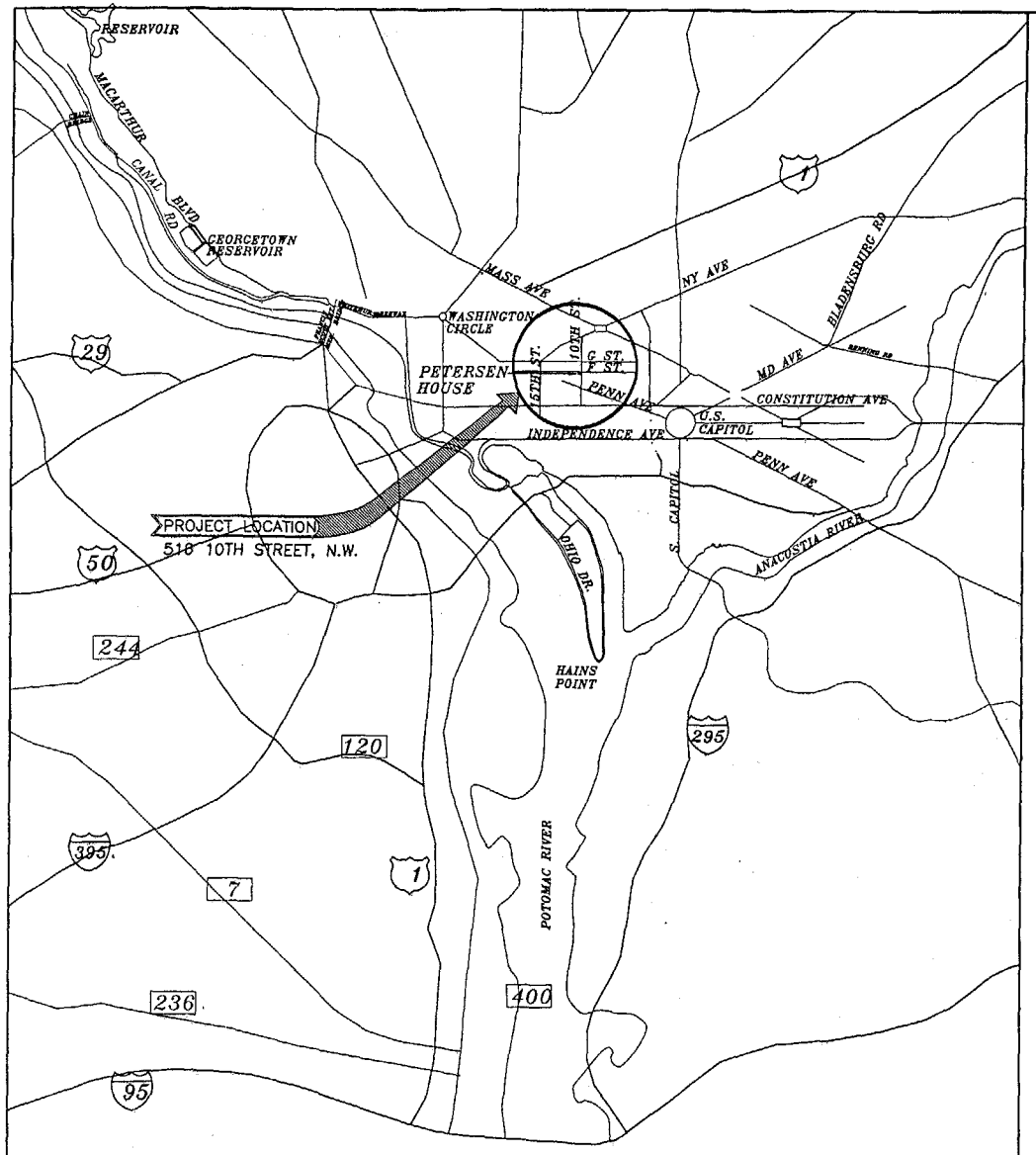
$w_{DL} = 23.9$ lbs/ft, $M_{DL} = 329$ ft.lbs.

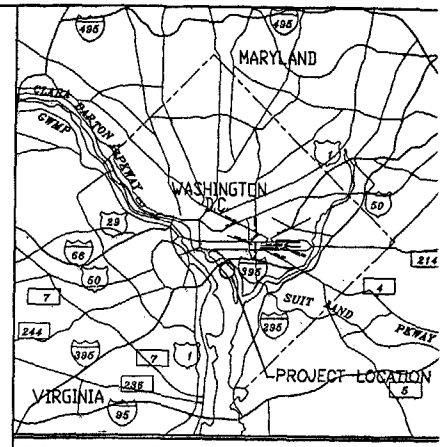
$M_{LL\,allow} = .2335$ ft.lbs

$LL_{allow} = 14\ (2335/329) = 99$ psf. ≥ 100 psf

$\therefore$ ok for Public Assembly Use.

APPENDIX D





REHABILITATE MECHANICAL AND ELECTRICAL SYSTEMS
FORD'S THEATRE AND PETERSEN HOUSE
FORD'S THEATRE NATIONAL HISTORICAL SITE

WASHINGTON, D.C.

100% CONSTRUCTION DOCUMENT
1443–CX2000–98–012 OCTOBER 4, 2001

Mark	Sheet	REVISION	Date	Initials

RECOMMENDED: _____ Project Manager, Denver Service Center — Date

APPROVED: _____ Superintendent, National Capital Parks–Central — Date

CONSTRUCTION DOCUMENTS

UNITED STATES
DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE
DENVER SERVICE CENTER

TITLE OF DRAWING
COVER SHEET
LOCATION WITHIN PARK
516 10TH STREET, N.W.
NAME OF PARK
FORD'S THEATRE NATIONAL HISTORICAL SITE
REGION: NATIONAL CAPITAL | COUNTY | STATE: WASHINGTON, D.C.

DRAWING NO. 804 41,002
PKG. NO. NACC 791 16CD
SHEET 1 OF 86

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45	E5	FIRE-ATTIC PLAN-FORD'S THEATRE
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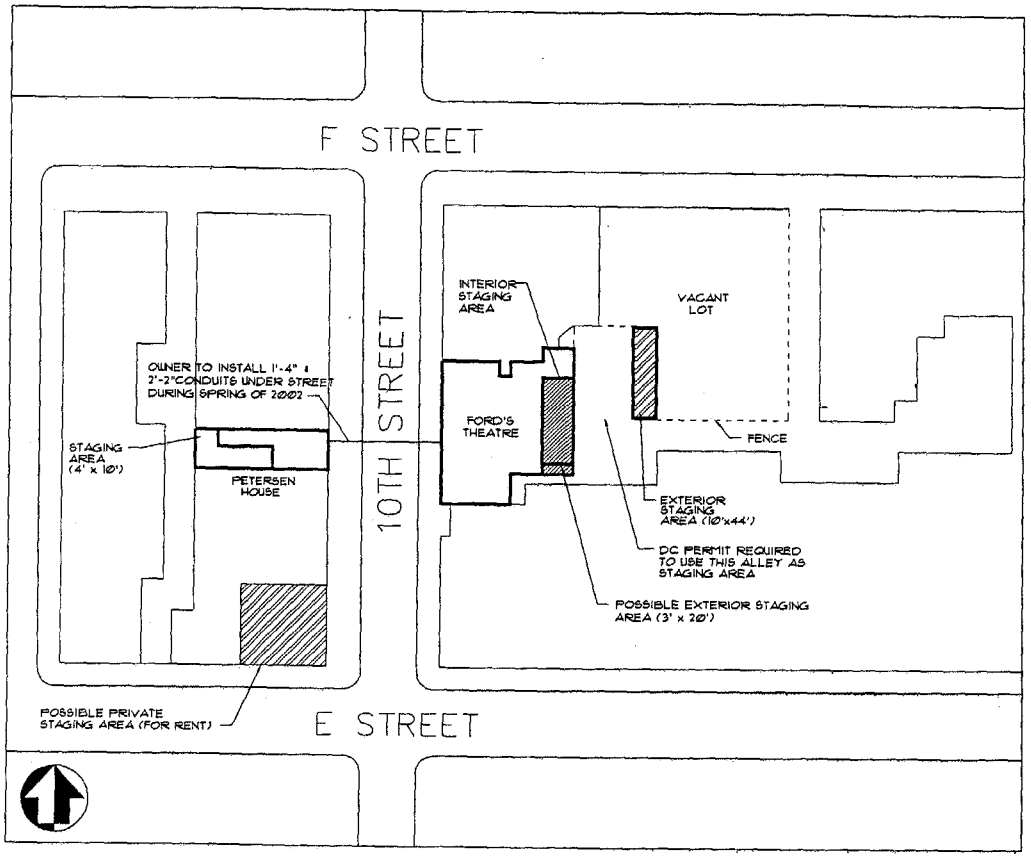
85	E45	ELECTRICAL-DIMMER RACK "C" CIRCUIT SCHEDULE-FORD'S THEATRE
86	E46	ELECTRICAL-DIMMER RACK "D" CIRCUIT SCHEDULE-FORD'S THEATRE



BASE BID #1

WORK ASSOCIATED WITH FORD'S THEATRE

BASE BID #2

WORK ASSOCIATED WITH PETERSEN HOUSE

NEIGHBORHOOD MAP

NO SCALE

NOTES: 1. CONTRACTOR MAY USE THE INTERIOR STAGING AREA (REAR OF STAGE) FROM END OF JUNE UNTIL END OF SEPTEMBER.

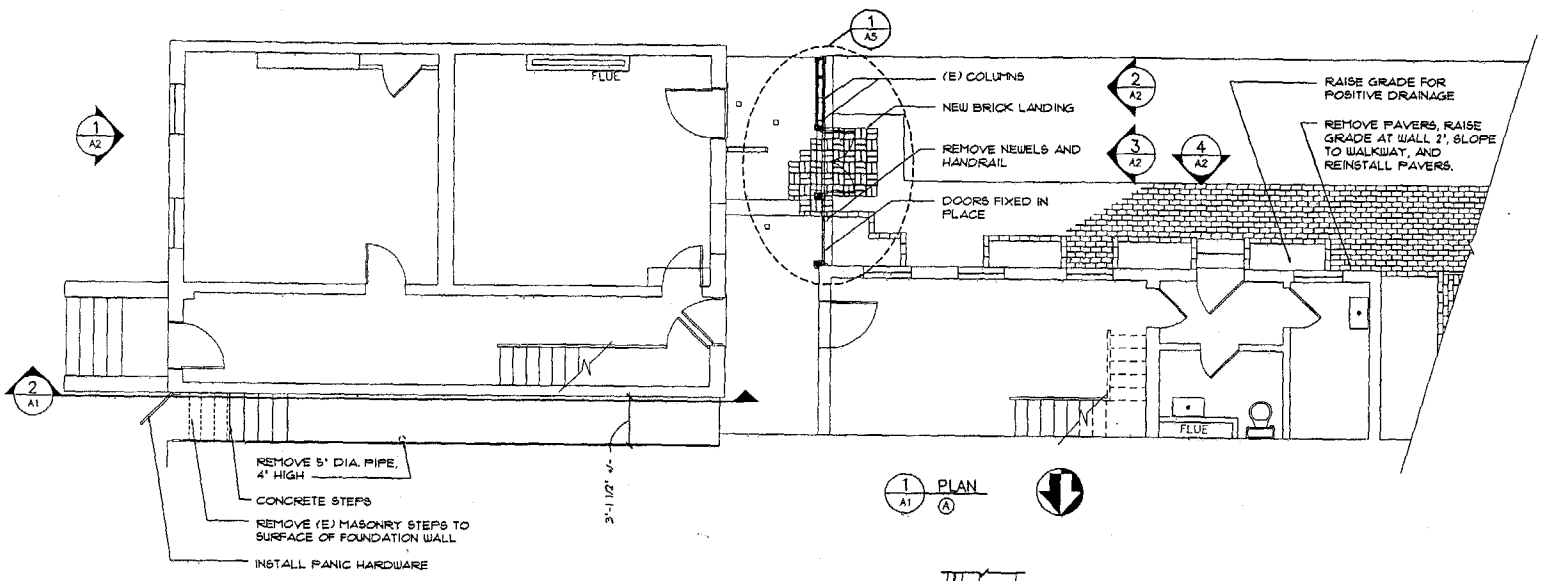
PROJECT OPTIONS

OPTION #1 - THEATRE SOUND SYSTEM
OPTION #2 - MDF2 ELECTRICAL WIRING
OPTION #3 - COMMISSIONING
OPTION #4 - THEATRE LIGHTING FIXTURES
OPTION #5 - CONNECT FAN COIL UNITS TO DDC SYSTEM
OPTION #6 - PETERSEN HOUSE REAR ADDITION SHUTTERS
OPTION #7 - PETERSEN HOUSE WINDOW REPLACEMENT

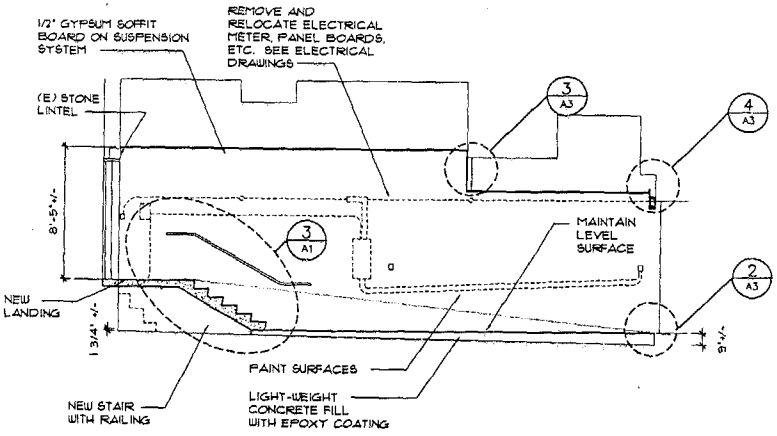
100% CONSTRUCTION DOCUMENT SUBMISSION

DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
AJK	G1	DRAWING LIST	804 41,002
CHECKED: OJB			PKG. NO. NACC 791
TECH. REVIEW: PEP			SHEET 2 OF 86
DATE: 10/04/2001		FORD'S THEATRE NATIONAL HISTORICAL SITE	

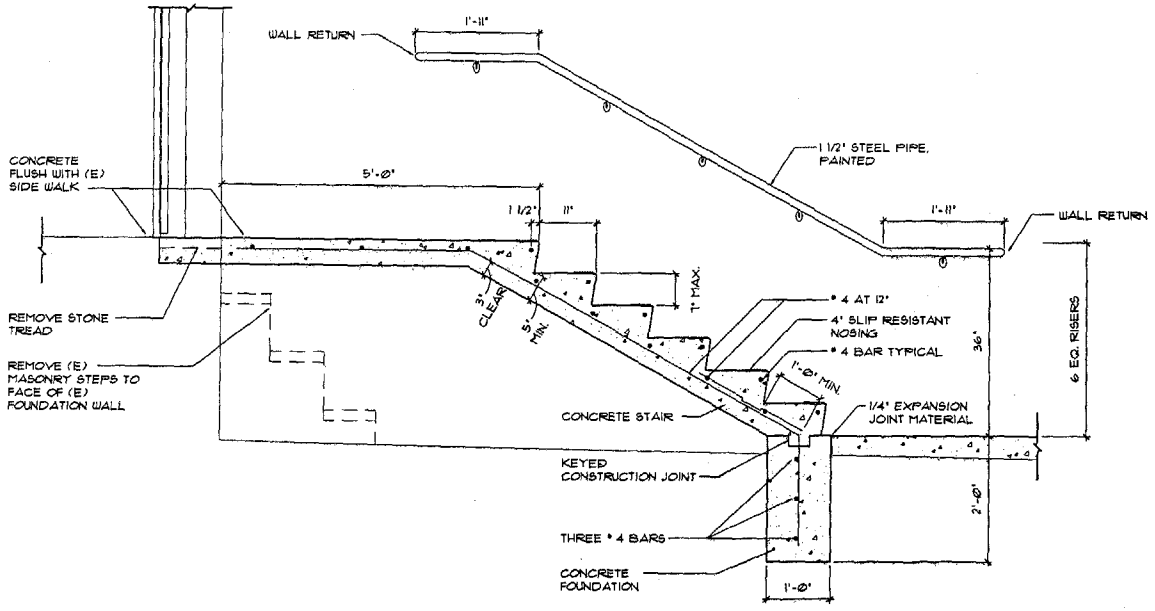
P:\NACC\791\GD\G1DLIST.dwg 10301 33426



1 A1 PLAN (A)



2 A1 SECTION AT PASSAGE (A)



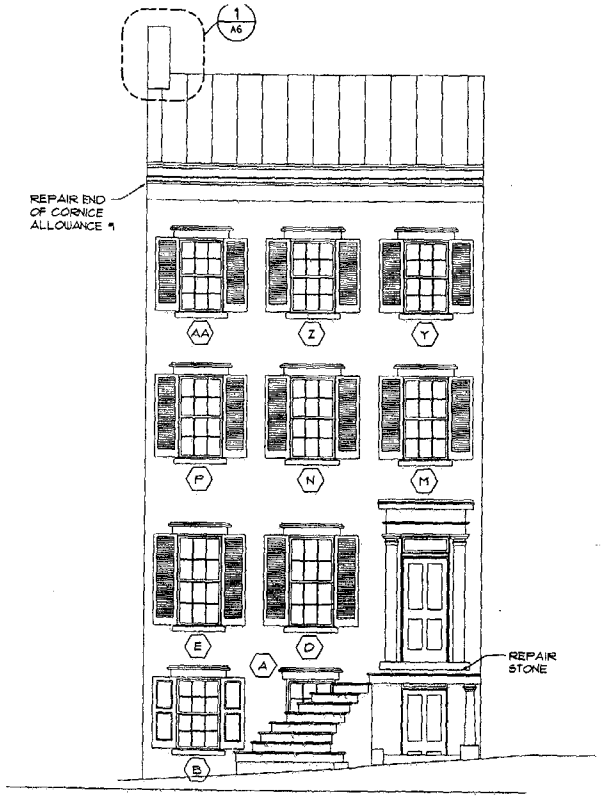
3 A1 CONCRETE STAIR (B)

(A) 4 0 4 8 SCALE OF FEET

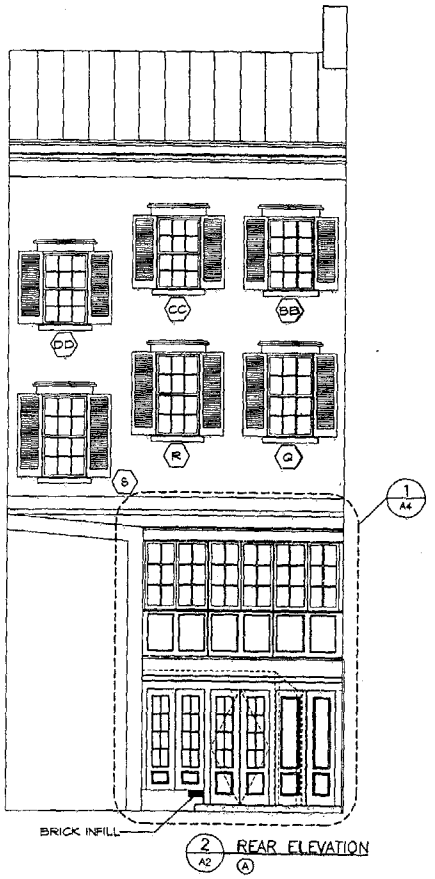
(B) 1 0 1 2 SCALE OF FEET

DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
-	A1	PETERSEN HOUSE PLAN AND PASSAGE SECTION	804 41,002
CADD FPW			PKG. NO. NACC 791 16CD
TECH. REVIEW: JKM			SHEET 3 OF 86
DATE: 10/04/01		FORD'S THEATRE NATIONAL HISTORICAL SITE	

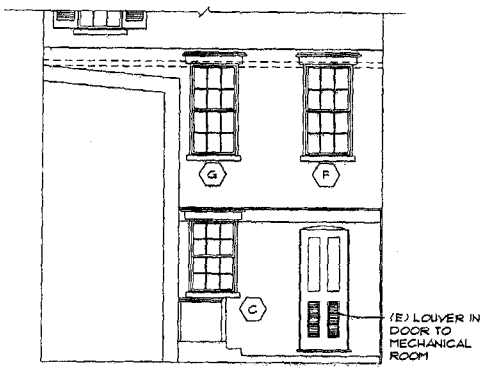
10/4/01 13:55 ADMINISTRATOR R14 P:\FORD\791\16CD\ARCH\A1 XREFS: P:\FORD\791\16CD\BASE\XAPETERP2.DWG



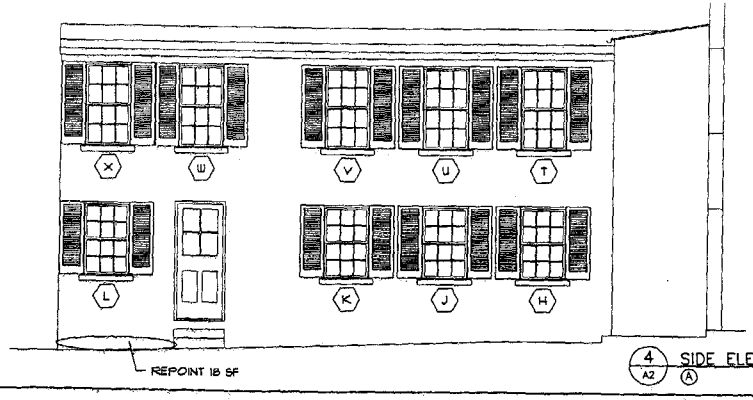
1 A2 (A) FRONT ELEVATION



2 A2 (A) REAR ELEVATION



3 A2 (A) REAR ELEVATION WITHOUT ENCLOSURE



4 A2 (A) SIDE ELEVATION OF ADDITION

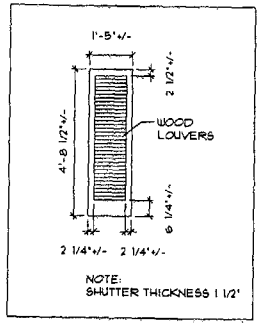
(A) 4 0 4 8 SCALE OF FEET

(B) 1 0 1 2 SCALE OF FEET

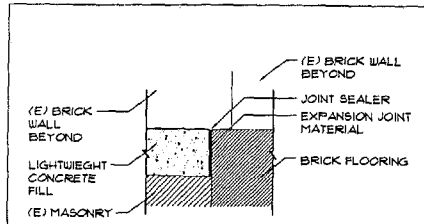
DESIGNED: - DRAWN: FPW TECH. REVIEW: JKM DATE: 10/04/01	SUB SHEET NO. A2	TITLE OF SHEET: PETERSEN HOUSE ELEVATIONS — FORD'S THEATRE NATIONAL HISTORICAL SITE	DRAWING NO. 804 41,002; PKG. NO. NACC 791 16CD; SHEET 4 OF 86

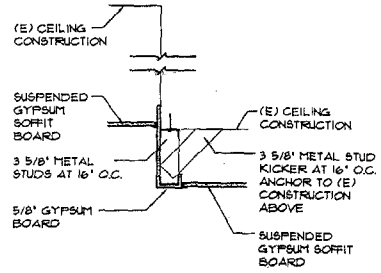
WINDOW RESTORATION SCHEDULE
PETERSEN HOUSE

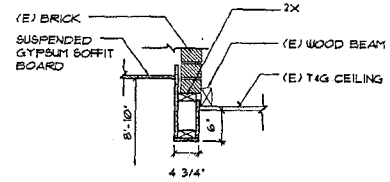
WINDOW NUMBER	WINDOW SIZE +/- W	WINDOW SIZE +/- H	EXTERIOR FRAME: REMOVE SCREEN AND SCREEN HARDWARE	EXTERIOR FRAME: STRIP PAINT, REPAIR AS NOTED HEREIN, FILL, SAND SMOOTH, AND PAINT	EXTERIOR FRAME: FILL OPEN JOINT BETWEEN FRAME AND MASONRY WALL	EXTERIOR FRAME: REMOVE ONE PINTAL, INSTALL 2" X 8" DUTCHMAN AT LOCATION OF ATTACHMENT AND REINSTALL PINTAL	SASH: REMOVE SASH, STRIP PAINT, REPAIR AS NOTED HEREIN, PRIME SURFACES, AND REINSTALL	SASH: REMOVE GLASS, RECONDITION RABBETS, AND REGLAZE	SASH: REPLACE BROKEN AND DEFECTIVE GLASS LITES	SASH: REPLACE BOTTOM RAIL OF UPPER SASH	SASH: REPLACE MUNTIN	SASH: ADJUST AND ALIGN SASH FOR PROPER FIT AT THE STOOL	SASH: REMOVE WINDOW A.C. UNIT AND REFIT LOWER SASH	SASH: INSTALL DUTCHMAN AT TOP RAIL OF LOWER SASH AND REATTACH WINDOW LOCK	SASH: REPLACE SASH CORD	SASH: INSTALL LIFTS ON LOWER SASH	SASH: RESTORE / REPAIR EXISTING LOCK	SASH: INSTALL NEW LOCK WITH KEEPER	SASH: INSTALL NEW KEEPER ONLY	SASH: REMOVE CORROSION FROM EXISTING HARDWARE	SILL: STRIP PAINT, MAKE REPAIRS CALLED FOR HEREIN, FILL, SAND SMOOTH, AND PAINT	SILL: REPLACE 18" OF WOOD SILL (ON MASONRY SILL)	INTERIOR: REMOVE WINDOW SHADE HANGERS AND FILL HOLES	INTERIOR: REMOVE LOOSE PAINT, SAND TO FEATHER OUT ROUGH EDGES, AND PAINT	INTERIOR: FILL OPEN JOINT BETWEEN INTERIOR TRIM AND STOOL	INTERIOR: REMOVE FILLER FROM THE SPLIT IN THE STOOL AND REFILL	INTERIOR: SECURE SPLIT PORTION OF TRIM AT HEAD	INTERIOR: REPLACE LOWER 9" OF INTERMEDIATE STOP	INTERIOR: REATTACH LOWER 14" OF INTERMEDIATE STOP TO JAMB	INTERIOR: INSTALL NEW INTERMEDIATE STOP AT HEAD AND ON ONE JAMB	INTERIOR: INSTALL 1" DUTCHMAN AT INTERMEDIATE STOP	INTERIOR: REATTACH INSIDE STOP TO FRAME	INTERIOR: REMOVE CAULKING FROM OPEN JOINT BETWEEN TRIM AND STOOL AND REFILL	INTERIOR: REMOVE BOARD ATTACHED TO JAMB WHICH PREVENTS OPERATION OF SASH	INTERIOR: INSTALL NEW COVER FOR WEIGHT BOXES	INTERIOR: REMOVE ROPE ANCHOR	SHUTTERS: INSTALL NEW PAIR OF SHUTTERS COMPLETE WITH STRAP HINGES AND HOOK AND STAPLE	SHUTTERS: INSTALL NEW HOOKS AND STAPLES FOR EXISTING SHUTTERS	SHUTTERS: REPLACE 4 MISSING PINTALS	SHUTTERS: REPLACE 3 MISSING PINTALS	SHUTTERS: REPLACE 2 MISSING PINTALS	SHUTTERS: REPLACE 1 MISSING PINTAL	SHUTTERS: REPLACE 2 SHUTTER STOPS ON SILL	SHUTTERS: REPLACE 1 SHUTTER STOP ON SILL	SHUTTERS: TRIM EXISTING SHUTTER STILES TO FIT
GROUND FLOOR																																										
A	3'-1"	4'-9"		●			●	●			●									●	●																						
B	3'-1"	4'-9"		●			●	●													●																						
C	3'-1"	4'-9"		●			●	●													●																						
FIRST FLOOR																																										
D	3'-1"	6'-1"		●		●	●	●													●																						
E		6'-1"																																									
F		6'-1"																																									
G		6'-1"																																									
H		4'-9"	●																																								
J		4'-9"																																									
K		4'-9"	●																																								
L	3'-1"	4'-9"	●	●			●	●													●																						
SECOND FLOOR																																										
M	3'-1"	5'-5"		●	●		●	●	●												●																						
N																																										
P																																										
Q																																										
R					●																																					
S		5'-5"																																									
T		4'-9"																																									
U																																										
V																																										
W																																										
X	3'-1"	4'-9"		●			●	●													●																						
THIRD FLOOR																																										
Y	3'-1"	4'-9"		●			●	●	●												●																						
Z																																										
AA																																										
BB																																										
CC																																										
DD	3'-1"	4'-9"		●			●	●													●																						

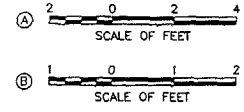


NOTE:
SHUTTER THICKNESS 1 1/2"









1/A3 Ⓐ SHUTTER ELEVATION

2/A3 Ⓑ JOINT DETAIL

3/A3 Ⓑ CEILING BREAK DETAIL

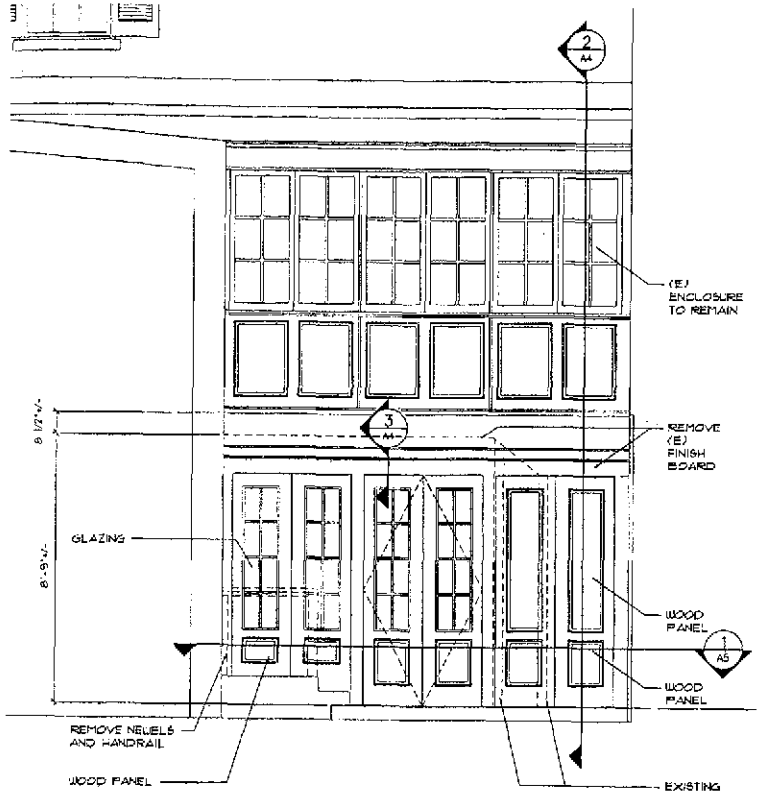
4/A3 Ⓑ CEILING DETAIL

DESIGNED:	-
DRAWN:	FPW
TECH. REVIEW:	JKM
DATE:	10/04/01

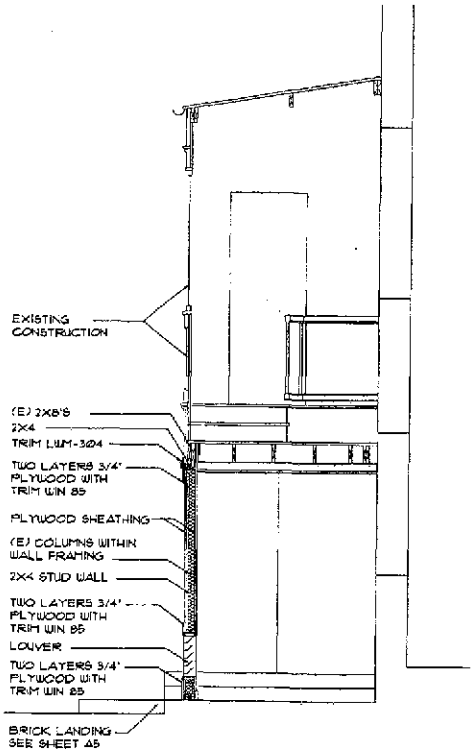
SUB SHEET NO. A3

TITLE OF SHEET
PETERSEN HOUSE
WINDOW SCHEDULE
& GENERAL DETAILS
-
FORD'S THEATRE NATIONAL HISTORICAL SITE

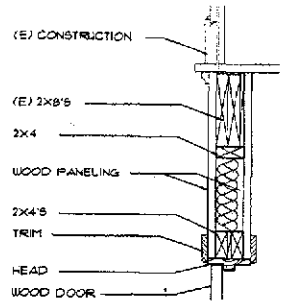
DRAWING NO. 804 41,002
PKG. NO. NACC 791 LGCD
SHEET 5 OF 86



1 A4 ENCLOSURE ELEVATION
A



2 A4 SECTION AT ENCLOSURE
A

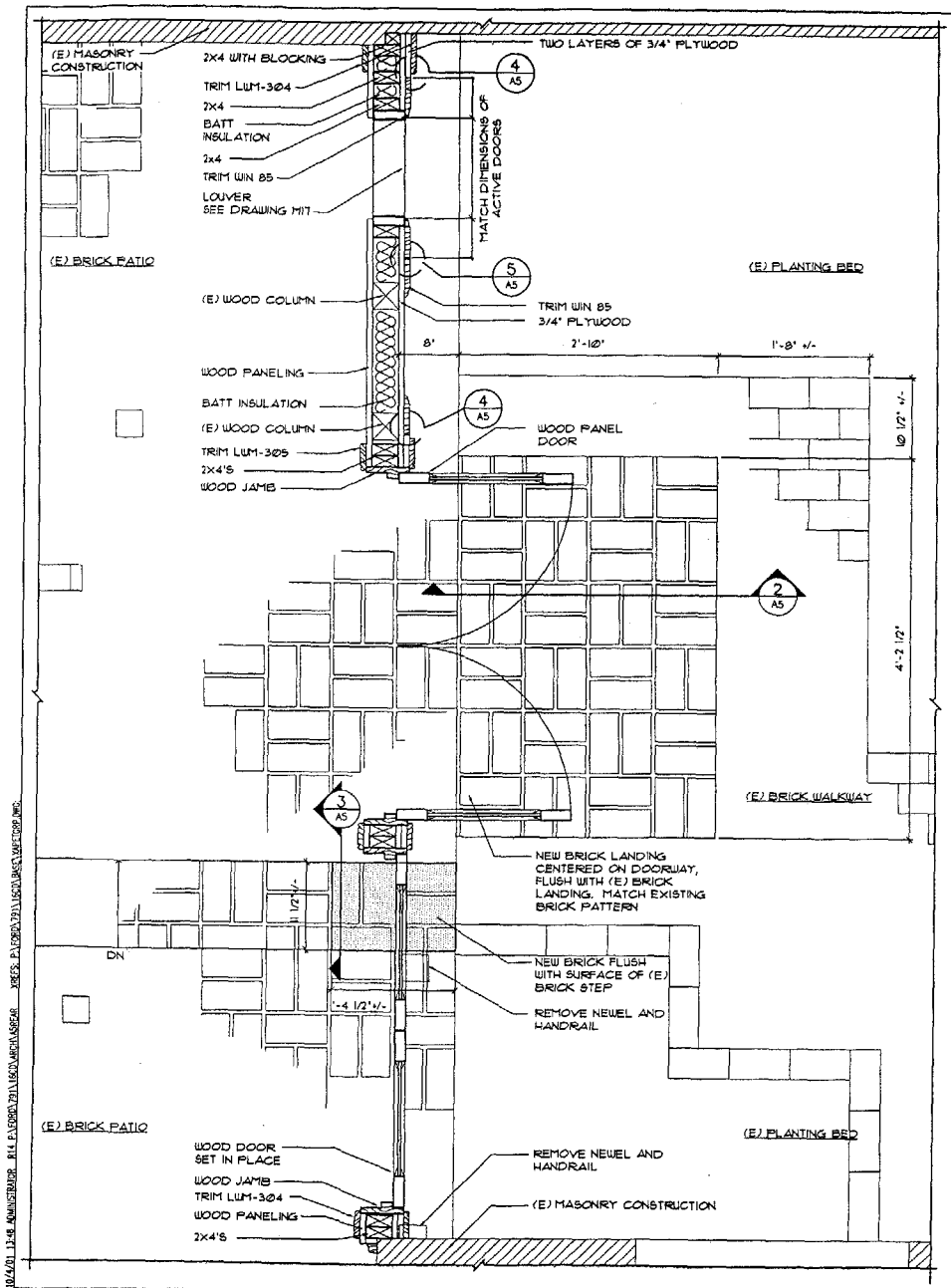


3 A4 HEAD
B

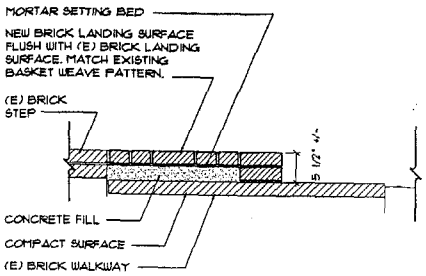
A 2 0 2 4 SCALE OF FEET

B 12 6 0 12 SCALE OF INCHES

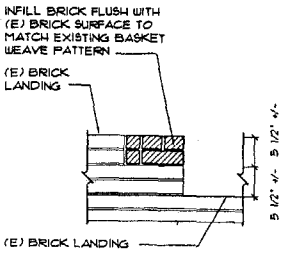
DESIGNED: –	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO. 604 41,002
DRAWN: FPW	A4	PETERSEN HOUSE ENCLOSURE AND DETAILS	PKG. NO. NACC 791 16CD
TECH. REVIEW: JKM			SHEET 6 OF 86
DATE: 10/04/01		FORD'S THEATRE NATIONAL HISTORICAL SITE	



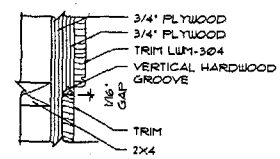
1 A5 NEW REAR WALL (A)



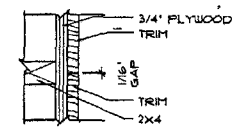
2 A5 SECTION AT BRICK LANDING (B)



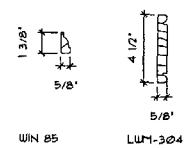
3 A5 SECTION AT BRICK STEPS (B)



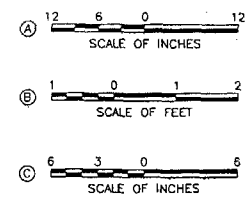
4 A5 WALL DETAIL (C)



5 A5 WALL DETAIL (C)

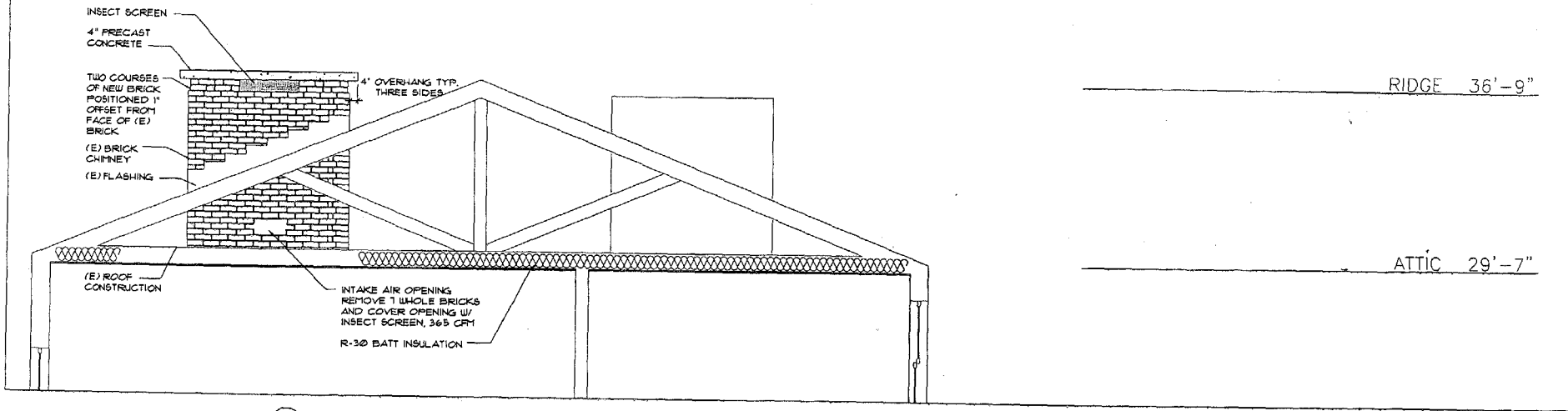


6 A5 TRIM (C)

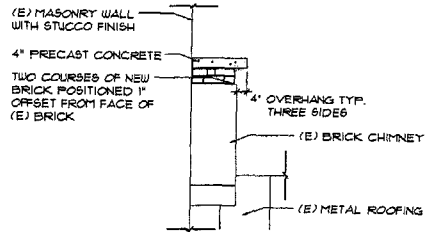


DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
-	A5	PETERSEN HOUSE REAR ENCLOSURE PLAN AND DETAILS	804 41,002
CADD FPW			PKG. NO. NACC 791 16CD
TECH. REVIEW: JKM			SHEET 7 OF 86
DATE: 10/04/01		FORD'S THEATRE NATIONAL HISTORICAL SITE	

10/4/01 13:48 ADMINISTRATOR R14 P:\FORD\791\16CD\ARCH\ASRFAR XREFS: P:\FORD\791\16CD\BASE\XAPETORP.DWG



1 / A6 / A — SECTION AT ATTIC & CHIMNEY CAP DETAIL



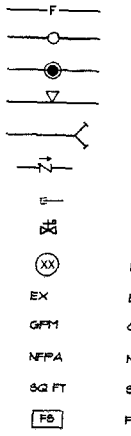
2 / A6 / A — CAP DETAIL AT SOUTHEAST CHIMNEY

A 2 0 2 4
SCALE OF INCHES

P:\WACC\791\16CD\ A6Chimney.dwg 10801 101005

DESIGNED: -	SUB SHEET NO. A6	TITLE OF SHEET: CHIMNEY DETAIL PETERSEN HOUSE	DRAWING NO. 804 41,002
DRAWN: FPW			PKG. NO. WACC 791 16CD
TECH. REVIEW: JKM		FORD'S THEATRE NATIONAL HISTORICAL SITE	SHEET 8 of 86
DATE: 10/04/01			

FIRE PROTECTION SYMBOLS AND ABBREVIATIONS



—F—	FIRE LINE
—○—	UPRIGHT SPRINKLER
—◉—	PENDANT SPRINKLER, WITH GUARD
—▽—	SIDEWALL SPRINKLER
	FIRE DEPARTMENT CONNECTION
—N—	CHECK VALVE
	CAP OR PLUG
	SUPERVISED VALVE
(XX)	PLAN NOTES
EX	EXISTING
GPM	GALLONS PER MINUTE
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
SQ FT	SQUARE FEET
FS	FLOW SWITCH

FIRE PROTECTION GENERAL NOTES:

1. ALL EXISTING CONDITIONS HAVE BEEN OBTAINED THROUGH FIELD SURVEY AND EXISTING FIRE PROTECTION DRAWINGS WHICH MAY OR MAY NOT BE ENTIRELY ACCURATE.

2. ALL FUSIBLE LINK STYLE SPRINKLER HEADS THAT HAVE BEEN PAINTED OR LOADED WITH ANY FOREIGN MATERIAL, OR SHOWING ANY SIGNS OF CORROSION OR DAMAGE SHALL BE REPLACED.

3. ALL CONCEALED TYPE SPRINKLER HEADS WITH MISSING OR DAMAGED COVER PLATES SHALL HAVE THE COVER PLATES REPLACED. REPLACEMENT COVER PLATES SHALL MATCH EXISTING CONDITIONS.

4. FOR MECHANICAL LEGEND AND ABBREVIATIONS REFER TO DRAWING 62.

SPRINKLER SYSTEM DESIGN BASIS

	MECHANICAL AND ELECTRICAL AREAS	STORAGE AREAS AND JANITOR CLOSETS	STAGE AND EXHIBIT AREAS	ATTIC	STAGE OPENING	ALL OTHER AREAS
OCCUPANCY CLASSIFICATION:	ORDINARY GROUP 1	ORDINARY GROUP 1	ORDINARY GROUP 2	ORDINARY GROUP 1	ORDINARY GROUP 2	LIGHT
TYPE OF SYSTEM:	WET	WET	WET	WET	DELUGE	WET
DESIGN AREA OF WATER APPLICATION:	1500 SQ FT	1500 SQ FT	1500 SQ FT	1500 SQ FT	1500 SQ FT	1500 SQ FT
MINIMUM DENSITY:	.15 GPM/SQ FT	.15 GPM/SQ FT	.20 GPM/SQ FT	.15 GPM/SQ FT	.20 GPM/SQ FT	.10 GPM/SQ FT
MAXIMUM AREA PER SPRINKLER:	130 SQ FT	130 SQ FT	130 SQ FT	130 SQ FT	130 SQ FT	225 SQ FT

100% CONSTRUCTION DOCUMENT SUBMISSION

DESIGNED: AJK	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
CADD KBE	F0	FIRE PROTECTION LEGEND & ABBREVIATIONS	804 41,002
TECH. REVIEW: PEP		FORD'S THEATRE NATIONAL HSTORICAL SITE	PKG. NO. NACC 791 16CD
DATE: 10/04/2001			SHEET 15 OF 86

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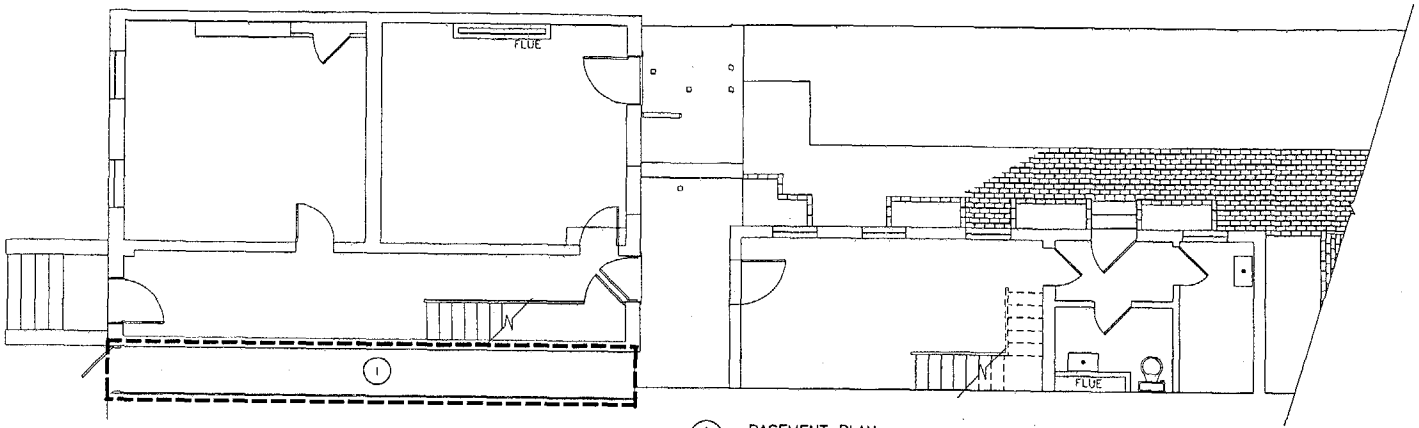
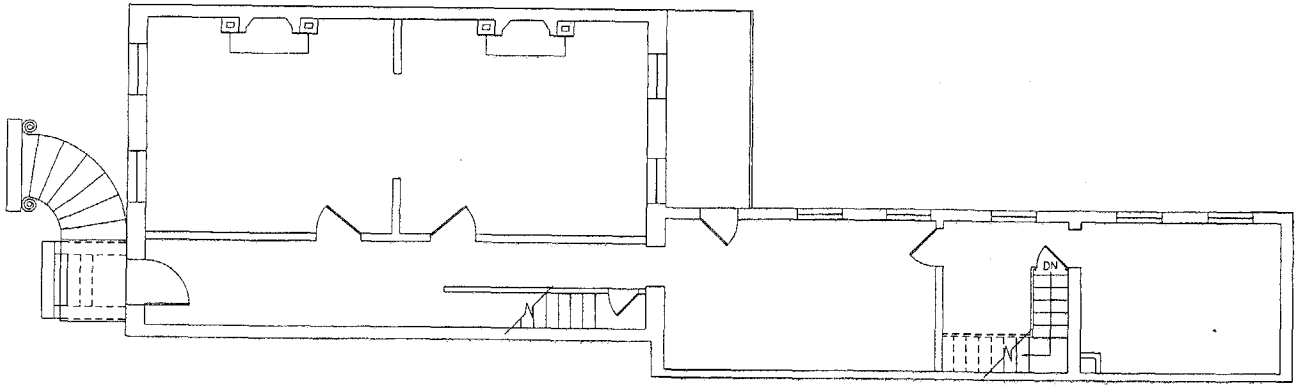


1/F6 BASEMENT PLAN
SCALE A

PLAN NOTES:

(1) THE CONTRACTOR SHALL PROVIDE PENDENT SPRINKLERS FOR FIRE PROTECTION BELOW THE NEW CEILING. THE CONTRACTOR SHALL TIE THE NEW SPRINKLERS INTO THE EXISTING COPPER PIPING OF THE EXISTING SPRINKLER SYSTEM.



2/F6 FIRST FLOOR PLAN
SCALE A

4 0 4 8
SCALE OF FEET

100% CONSTRUCTION DOCUMENT SUBMISSION

DESIGNED: AJK DRAWN: DJB TECH. REVIEW: AJK/PEP DATE: 10/04/2001	SUB SHEET NO. F6	TITLE OF SHEET: FIRE BASEMENT & FIRST FLOORS PETERSEN HOUSE FORD'S THEATRE NATIONAL HISTORICAL SITE	DRAWING NO. 804 41,002 PKG. NO. NACC 791 1600 SHEET 21 OF 86

P:\NACC\791\16CD\FIRE\F6FIRE.dwg 10801 103605

ABBREVIATIONS

AAV	AUTOMATIC AIR VENT
ABV	ABOVE
ACU	AIR CONDENSING UNIT
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
AP	ACCESS PANEL
APPROX	APPROXIMATELY
ARCH	ARCHITECTURAL
AS	AIR SEPARATOR
AUX.	AUXILIARY
AVE	AVERAGE
BC	BALANCING COCK
BD	BAROMETRIC DAMPER
BDD	BACKDRAFT DAMPER
BHP	BREAK HORSE POWER
BLU	BLUE
BLK	BLACK
BLW	BELOW
BRN	BROWN
BSMT	BASEMENT
BTUH	BRITISH THERMAL UNIT PER HOUR
CD	CHILLED WATER DRAIN
CFM	CUBIC FEET PER MINUTE
CHAR	CHARACTERISTIC
CHK V	CHECK VALVE
C.I.	CAST IRON
CO	CLEANOUT
COND	CONDENSATE
CHS	CHILLED/HOT WATER SUPPLY
CHR	CHILLED/HOT WATER RETURN
CHS/R	CHILLED/HOT WATER SUPPLY & RETURN
CWFT	CONDENSER WATER FROM TOWER
CWTT	CONDENSER WATER TO TOWER
CW	COLD WATER
D	DRAIN
DB	DRY BULB
DDC	DIRECT DIGITAL CONTROL
DHW	DOMESTIC HOT WATER
DIA	DIAMETER
DN	DOWN
DR	DRAIN
(E)	EXISTING
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EF	EXHAUST FAN
EFF	EFFICIENCY
ELEC	ELECTRIC
ELECT	ELECTRICAL
EWT	ENTERING WATER TEMP
EX	EXISTING
EXH	EXHAUST
EXP	EXPANSION
EXT.	EXTERNAL
F	FAHRENHEIT
FC	FORWARD CURVE/FAN CONTRACTOR
FCB	FAN CIRCUIT BREAKER
FCO	FLOOR CLEANOUT
FCU	FAN COIL UNIT
FD	FLOOR DRAIN, FIRE DAMPER
FNL	FUNNEL
FLA	FULL LOAD AMPS
FLR	FLOOR
FM	FAN MOTOR
FPM	FEET PER MINUTE
FR	FROST
FT	FEET
GALV	GALVANIZED
GC	GENREAL CONTRACTOR
GCO	GRADE CLEANOUT
GPM	GALLONS PER MINUTE
GRA	GRAY
GRN	GREEN
GV	GATE VALVE
H	HEIGHT
HB	HOSE BIBB
HC	HEATING CONTRACTOR
HP	HORSE POWER
HR	HOUR
HGB	HOT GAS BYPASS
HP	HEAT PUMP, HORSEPOWER
HT	HIGH TEMPERATURE
HW	HOT WATER
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
ID	INSIDE DIAMETER
IN	INCHES
KW	KILOWATT
L	LENGTH
LAT	LEAVING AIR TEMPERATURE
LBS	POUNDS
LH	LATENT HEAT
LRA	LOCKED ROTOR AMPS
LWCO	LOW WATER CUT OFF
LWT	LEAVING WATER TEMPERATURE
MAV	MANUAL AIR VENT
MAX	MAXIMUM
MD	MOTORIZED DAMPER
MECH	MECHANICAL
MIN	MINIMUM
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN, NUMBER
OA	OUTSIDE AIR
OAT	OUTSIDE AIR TEMPERATURE
OBD	OPPOSED BLADE DAMPER
OPNG	OPENING
ORN	ORANGE
PC	PLUMBING CONTRACTOR
PG	PRESSURE GUAGE
PNK	PINK
POC	POINT OF CONNECTION
PRV	PRESSURE REDUCING VALVE
RA	RETURN AIR
RAD	RADIATOR
RGC	RETURN GRILLE CEILING
RM	ROOM
RPM	REVOLUTIONS PER MINUTE
RTN	RETURN
RV	RELIEF VENT
SA	SHOCK ABSORBER, SUPPLY AIR
SDC	SUPPLY DIFFUSER CEILING
SENS	SENSIBLE
SH	SENSIBLE HEAT
SP	STATIC PRESSURE
SRF	SUPPLY REGISTER FLOOR
STR	STRAINER
TEMP	TEMPERATURE
TH	THERMOMETER
TOT	TOTAL
TRANS	TRANSITION
TYP.	TYPICAL
V	VENT, VOLTS
VD	VOLUME DAMPER
VFS	VENTURI FLOW STATION
VIO	VIOLET
VTR	VENT THROUGH ROOF
VVB	VARIABLE VOLUME BOX
VVT	VARIABLE VOLUME TEMPERATURE BOX
WB	WET BULB
W	WATT, WASTE, WIDTH
W/	WITH
W/O	WITHOUT
WPD	WATER PRESSURE DROP
WTR	WATER
YEL	YELLOW

AIR CONDITIONING PIPING SYMBOLS

- CHS — CHILLED/HOT WATER SUPPLY
- CHR — CHILLED/HOT WATER RETURN
- CWFT — CONDENSER WATER FROM TOWER
- CWTT — CONDENSER WATER TO TOWER
- D — DRAIN
- RL — REFRIGERANT LIQUID
- RS — REFRIGERANT SUCTION

HEATING PIPING SYMBOLS

- HWR — HEATING WATER RETURN
- HWS — HEATING WATER SUPPLY

PLUMBING PIPING SYMBOLS

- COLD WATER
- A — COMPRESSED AIR
- DOMESTIC HOT WATER
- DOMESTIC HOT WATER RECIRCULATING
- F — FIRE
- G — GAS
- LPG — LP GAS
- WASTE (ABOVE GRADE)
- WASTE (BELOW GRADE)
- ST — STORM DRAIN
- VENT
- SLOPE DOWN IN DIRECTION OF ARROW

PIPING SYMBOLS

- CAP
- FCO — FLOOR CLEANOUT
- FLOOR DRAIN
- GCO — GRADE CLEANOUT
- CLEANOUT PLUG, IN LINE
- WCO — WALL CLEANOUT
- TEE, OUTLET UP
- TEE, OUTLET DOWN
- ELBOW, TURNED DOWN
- ELBOW, TURNED UP
- EXPANSION JOINT
- FLEXIBLE CONNECTOR
- FLOOR DRAIN
- REDUCER - CONCENTRIC
- REDUCER - ECCENTRIC
- SLEEVE - THROUGH WALL
- UNION
- FUNNEL DRAIN
- HOSE CONNECTION
- ORIFICE PLATE
- STRAINER WITH BLOWDOWN AND HOSE CONNECTION
- SIGHT GLASS
- FS — FLOW SWITCH
- P/T — PRESSURE AND TEMPERATURE TAP
- FLUID METER
- THERMOMETER
- PRESSURE GAUGE
- PG — PRESSURE GAUGE
- VENTURI FLOW METER
- SHOCK ABSORBER
- AV — AIR VENT - AUTOMATIC
- MV — AIR VENT - MANUAL
- PIPE ANCHOR
- ANGLE VALVE
- ANGLE GATE VALVE, PLAN
- ANGLE GLOBE VALVE
- ANGLE GLOBE VALVE, PLAN
- BALL VALVE
- CHECK VALVE
- PLUG VALVE

- RELIEF VALVE
- OUTSIDE STEM AND YOKE VALVE
- OUTSIDE STEM AND YOKE VALVE WITH TAMPER SWITCH
- HB — HOSE BIB (PLAN)
- WH — WALL HYDRANT

- GATE VALVE
- GLOBE VALVE
- 3-WAY AUTOMATIC VALVE
- 2-WAY AUTOMATIC VALVE
- BALANCING VALVE

VENTILATION AND AIR CONDITIONING SYMBOLS

- 12x2Ø / 10Ø — TERMINAL DEVICE SIZE, TYP; SUPPLY REGISTER OR GRILLE; TERMINAL DEVICE CFM, TYP
- 12x2Ø / 10Ø — RETURN OR EXHAUST GRILLE
- SUPPLY DUCT UP
- SUPPLY DUCT DOWN
- RETURN OR EXHAUST DUCT UP
- RETURN OR EXHAUST DUCT DOWN
- 12x2Ø — DUCT (FIRST FIGURE, SIDE SHOWN AND SECOND FIGURE, SIDE NOT SHOWN) ALL DUCTS DIMENSIONS SHALL BE SHOWN IN INCHES.
- R — INCLINED RISE (R), ARROW IN DIRECTION OF AIR FLOW
- D — INCLINED DROP (D), ARROW IN DIRECTION OF AIR FLOW
- TRANSITIONS
- RECTANGULAR TO ROUND TRANSITION
- STANDARD RECTANGULAR BRANCH FOR SUPPLY OR RETURN
- RECTANGULAR DUCT ELBOW WITH TURNING VANES
- FLEXIBLE CONNECTION
- MANUAL VOLUME DAMPER
- AUTOMATIC DAMPER
- FIRE DAMPER WITH ACCESS DOOR
- BDD — BACKDRAFT DAMPER
- LINED DUCT
- ROUND DUCT UP
- ROUND DUCT DOWN
- POINT OF CONNECTION TO EXISTING
- FIRE DAMPER
- F_D — DUCT DETECTOR
- T — THERMOSTAT
- T_S — TEMPERATURE SENSOR
- H — HUMIDISTAT
- TS — TIME SWITCH
- F_D — DUCT MOUNTED SMOKE DETECTOR
- 24x24 / 10Ø — SUPPLY DIFFUSER ARROWS INDICATE THROW PATTERN
- NUMBER OF SLOTS; SLOT LENGTH; 3-48; 25Ø; CFM — SLOT DIFFUSER
- NECK DIAMETER; FACE DIAMETER; 8-12; 25Ø; CFM — ROUND DIFFUSER
- A / M1 — SECTION LETTER; SHEET WHERE SHOWN
- A / M1 — DETAIL NUMBER; SHEET WHERE SHOWN

NOTE

ALL SYMBOLS AND ABBREVIATIONS SHOWN ARE NOT NECESSARILY USED.

100% CONSTRUCTION DOCUMENT SUBMISSION

DESIGNED:	KBE
DRAWN:	KBE
TECH. REVIEW:	PEP
DATE:	10/04/2001
SUB SHEET NO.	M0
TITLE OF SHEET	MECHANICAL LEGEND AND ABBREVIATIONS
	FORD'S THEATRE NATIONAL HISTORICAL SITE
DRAWING NO.	804 41,002
PKG. NO.	NACC 791 16CD
SHEET	22 OF 86

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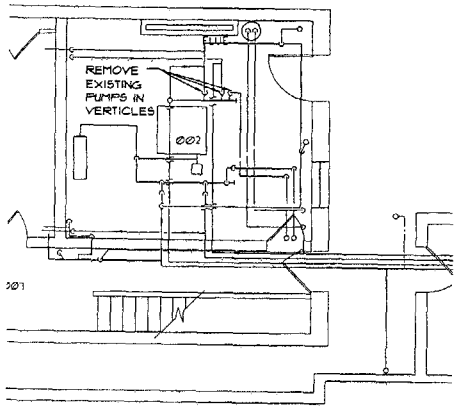
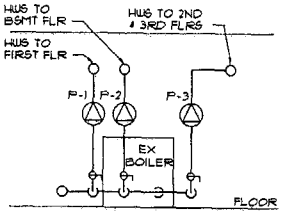
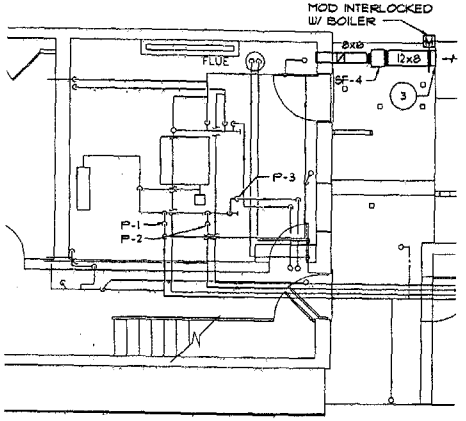


1 M7 MECH ROOM DEMOLITION PLAN
SCALE A

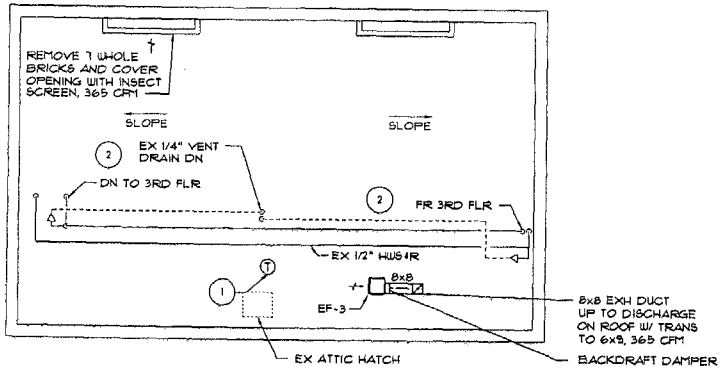




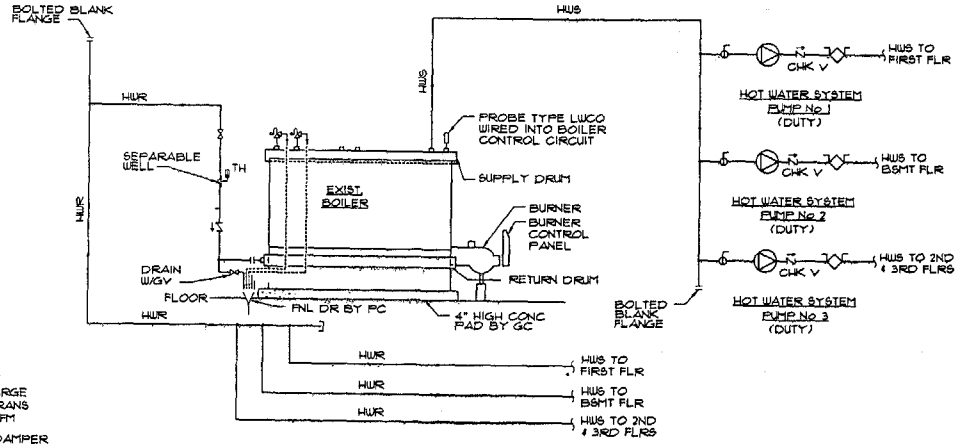
2 M7 MECH ROOM PIPING PLAN
SCALE A

PLAN NOTES:

1. T'STAT FOR EF-4 TO BE MOUNTED TO EXISTING TRUSS. WHEN ATTIC SPACE REACHES 90°F, EF-4 TO START.
2. INSTALL NEW AIR VENTS IN SUPPLY & RETURN PIPING IN ATTIC. RECONNECT TO EXISTING PIPING THAT DRAINS TO BOILER ROOM IN BASEMENT. BLEED AIR OUT OF EXISTING LINES
3. 12x6 LOUVER W/ INSECT SCREEN TO BE LOCATED IN NEW DOOR PANEL.



3 M7 ATTIC PLAN
SCALE A



HOT WATER
SCHEMATIC PIPING FLOW DIAGRAM
NOT TO SCALE

A SCALE OF FEET 4 0 4 8

100% CONSTRUCTION DOCUMENT SUBMISSION

DESIGNED: KBE/PEP	SUB SHEET NO. M7	TITLE OF SHEET: MECHANICAL – PETERSEN HOUSE HVAC SYSTEM MODIFICATIONS FORD'S THEATRE NATIONAL HISTORICAL SITE	DRAWING NO. 804 41,002
DRAWN: KBE			PKG. NO. NACC 791 16CD
TECH. REVIEW: PEP			SHEET 29 OF 86
DATE: 10/04/2001			

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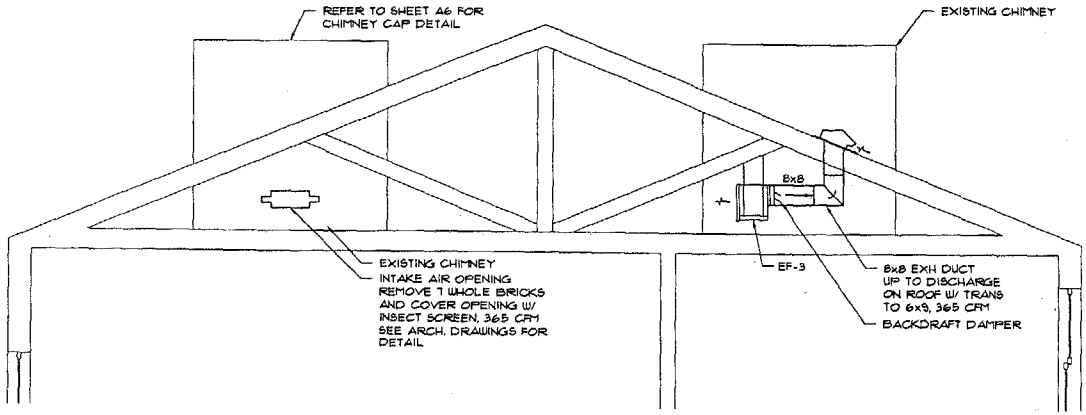

1/M15 ATTIC SECTION – PETERSEN HOUSE
SCALE Ⓐ

Ⓐ 4 0 4 8
SCALE OF FEET

DESIGNED: KBE; DRAWN: KBE; TECH. REVIEW: PEP; DATE: 10/04/2001	SUB SHEET NO. M15	TITLE OF SHEET: SECTIONS FORD'S THEATRE & PETERSEN HOUSE; FORD'S THEATRE NATIONAL HISTORICAL SITE	DRAWING NO. 804 41,002; PKG. NO. NACC 791 16CD; SHEET 37 OF 86

100% CONSTRUCTION DOCUMENT SUBMISSION

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DIFFUSER, REGISTER, AND GRILLE SCHEDULE

MARK	TYPE	FACE SIZE	THROW	CFM	INLET	INSULATED PLENUM	REMARKS
A	LSD	2(1 1/2") 8'	1-WAY	600	12" FO	-	-
B	LSD	2(1 1/2") 8'	1-WAY	420	10" FO	-	-
C	SRC	12x12	-	420	-	-	-
D	SRW	12x6	-	165	-	-	-
E	SRC	22x22	-	1300	-	-	-
F	SDC	24x48	-	385	10	-	-
G	RGW	24x24	-	1425	-	-	-
H	SDC	24x24	4-WAY	75	6	-	-
J	SDC	24x24	4-WAY	215	8	-	-
K	SGF	16x6	-	200	-	-	-
L	RGW	24x48	-	3660	-	-	-
M	ERW	12x18	-	500	-	-	-
N	ERW	16x24	-	1210	-	-	-
O	SDC	24x24	4-WAY	190	8	-	-
P	SDC	24x24	4-WAY	500	14	-	-
R	SDC	24x24	4-WAY	375	12	-	-
S	RGC	24x24	-	480	-	-	-
T	RGC	36x24	-	3000	-	-	-

NOTE:
1. DESIGNED AROUND TITUS.

PETERSEN HOUE PUMP SCHEDULE

PUMP NO	PUMP DUTY	GPM	FEET HEAD	EFF %	BHP	MOTOR HP	RPM	ELECTRICAL CHAR	OPERATING CONDITIONS		IMPELLER SIZE
P-1	DUTY	Ø	21	@ 2Ø	-	1/4	1750	1-60-115	GPM	8	4 11/16"
		8	20.5	26	-				FEET	18	
		16	19.5	41	-				EFF	26	
P-2	DUTY	Ø	19.5	@ 2Ø	-	1/4	1750	1-60-115	GPM	6	4 1/2"
		6	19.5	21	-				FEET	17	
		12	19	34	-				EFF	20	
P-3	DUTY	Ø	20.5	@ 2Ø	-	1/4	1750	1-60-115	GPM	8	4 1/2"
		8	20	26	-				FEET	18	
		16	19	41	-				EFF	26	

NOTE:
1. DESIGNED AROUND BELL & GOSSETT.

STEAM HUMIDIFIER SCHEDULE

SYMBOL	LOCATION	OUTPUT LBS/HR	SUPPLY STEAM PSG	AMPS	TRAP LBS/HR	ELEC. CHAR.	MAX OPER WT (LBS)	REMARKS
H-1	MECH. RM FORD'S	6.8	-	7	-	3-60-208	80	-
H-2	UTILITY RM BLDG 511	13.6	-	14	-	3-60-208	80	-

NOTE:
1. DESIGNED AROUND ARMSTRONG. MODEL NO. EHU-701.

VARIABLE VOLUME BOX SCHEDULE

SYMBOL	LOCATION	SERVES	CFM		BOX DIMENSIONS			INLET DUCT (IN)	DISCHARGE DUCT WxH (IN)	MAX SP LOSS (IN)	REMARKS
			MIN	MAX	L (IN)	W (IN)	H (IN)				
VVB-1	ATTIC	3RD FLR	225	750	15.5	14	12.5	10	14 x 12.5	-	-
VVB-2	ATTIC	3RD FLR	225	750	15.5	14	12.5	10	14 x 12.5	-	-
VVB-3	ATTIC	3RD FLR	225	750	15.5	14	12.5	10	14 x 12.5	-	-
VVB-4	ATTIC	3RD FLR	225	750	15.5	14	12.5	10	14 x 12.5	-	-
VVB-5	ATTIC	2ND FLR	504	1680	15.5	24	18	16	18 x 24	-	-
VVB-6	ATTIC	1ST FLR	540	1800	15.5	24	18	16	18 x 24	-	-
VVB-7	ATTIC	3RD FLR	147	490	15.5	12	10	8	10 x 12	-	-
VVB-8	ATTIC	3RD FLR	390	1300	15.5	20	17.5	14	17.5 x 20	-	-
VVB-9	ATTIC	3RD FLR	225	750	15.5	14	12.5	10	14 x 12.5	-	-
VVB-10	ATTIC	3RD FLR	390	1300	15.5	20	17.5	14	17.5 x 20	-	-
VVB-11	ATTIC	3RD FLR	225	750	15.5	14	12.5	10	14 x 12.5	-	-
VVB-12	ATTIC	3RD FLR	147	490	15.5	12	10	8	10 x 12	-	-
VVB-13	ATTIC	1ST FLR	540	1800	15.5	24	18	16	18 x 24	-	-
VVB-14	ATTIC	2ND FLR	504	1680	15.5	24	18	16	18 x 24	-	-
VVB-15	511 3RD FLR	3RD FLR	247	825	15.5	14	12.5	10	14 x 12.5	-	-
VVB-16	511 3RD FLR	3RD FLR	247	825	15.5	14	12.5	10	14 x 12.5	-	-
VVB-17	511 3RD FLR	3RD FLR	75	250	15.5	12	8	6	12 x 8	-	-

NOTE:
1. ALL VARIABLE VOLUME BOXES (VVB) SHALL BE FACTORY FURNISHED WITH A ONE-ROW, HOT WATER REHEAT COIL, AND FACTORY MOUNTED DDC CONTROLLER AND MODULATING VALVE, SUPPLY BY THE DDC EQUIPMENT SUPPLIER.
2. DESIGNED AROUND TITUS.

FAN COIL UNIT SCHEDULE (CW/HW)

SYMBOL	CFM	OA CFM	EXT SP (IN)	CHILLED WATER COOLING COIL DATA									HOT WATER HEATING COIL DATA						ELECT HEATER			MOTOR DATA	MOUNTING	REMARKS
				EAT °F		TOT MBH	SENS MBH	GPM	TEMP DIFF	EWT °F	LWT °F	WPD FT	EAT °F		LAT °F	TOT MBH	GPM	EWT °F	TEMP DIFF	WPD FT	TOT MBH	KW	FLA	ELECT CHAR		
				DB	WB								DB		DB											
FCU-1	300	-	-	80	65	9000	6300	1.8	10	45	-	6	67	-	18	1.8	1.8	180	20	6	18	5.27	28.8	1-60-208	FLOOR	-
FCU-2	300	-	-	80	65	9000	6300	1.8	10	45	-	6	67	-	18	1.8	1.8	180	20	6	18	5.27	28.8	1-60-208	FLOOR	-
FCU-3	300	-	-	80	65	9000	6300	1.8	10	45	-	6	67	-	18	1.8	1.8	180	20	6	18	5.27	28.8	1-60-208	FLOOR	-
FCU-4	300	30	-	80	65	9000	6300	1.8	10	45	-	6	67	-	18	1.8	1.8	180	20	6	18	5.27	28.8	1-60-208	FLOOR	-
FCU-5	300	30	-	80	65	9000	6300	1.8	10	45	-	6	67	-	18	1.8	1.8	180	20	6	18	5.27	28.8	1-60-208	FLOOR	-
FCU-6	600	30	-	80	65	18600	13600	3.8	10	45	-	6	67	-	38	3.8	3.8	180	20	6	38	8	-	1-60-208	FLOOR	-
FCU-7	200	-	-	80	65	7800	-	1.56	10	45	-	6	67	-	14.4	1.44	1.44	180	20	6	-	-	-	1-60-208	FLOOR	-
FCU-8	200	-	-	80	65	7800	-	1.56	10	45	-	6	67	-	14.4	1.44	1.44	180	20	6	-	-	-	1-60-208	FLOOR	-
FCU-9	300	-	-	80	65	9000	6300	1.8	10	45	-	6	67	-	18	1.8	1.8	180	20	6	18	5.27	28.8	1-60-208	FLOOR	-
FCU-10	300	30	-	80	65	9000	6300	1.8	10	45	-	6	67	-	18	1.8	1.8	180	20	6	18	5.27	28.8	1-60-208	FLOOR	-
FCU-11	600	30	-	80	65	18600	13600	3.8	10	45	-	6	67	-	38	3.8	3.8	180	20	6	38	8	-	1-60-208	FLOOR	-
FCU-12	300	-	-	80	65	11800	-	2.36	10	45	-	6	67	-	21.3	2.13	2.13	180	20	6	-	-	-	1-60-208	FLOOR	-
FCU-13	600	30	-	80	65	18600	13600	3.8	10	45	-	6	67	-	38	3.8	3.8	180	20	6	38	8	-	1-60-208	FLOOR	-
FCU-14	800	30	-	80	65	26600	14100	4.2	10	45	-	6	67	-	42	4.2	4.2	180	20	6	42	8	-	1-60-208	FLOOR	-
FCU-15	300	-	-	80	65	9000	6300	1.8	10	45	-	6	67	-	18	1.8	1.8	180	20	6	18	5.27	28.8	1-60-208	FLOOR	-

NOTE:
1. DESIGNED AROUND CARRIER.

100% CONSTRUCTION DOCUMENT SUBMISSION

DESIGNED: PEP/KBE; @ADD: KBE; TECH. REVIEW: AJK/PEP; DATE: 10/04/2001	SUB SHEET NO. M16	TITLE OF SHEET: MECHANICAL SCHEDULES FORD'S THEATRE & PETERSEN HOUSE — FORD'S THEATRE NATIONAL HISTORICAL SITE	DRAWING NO. 804 41,002; PKG. NO. NACC 791 16CD; SHEET 38 OF 86

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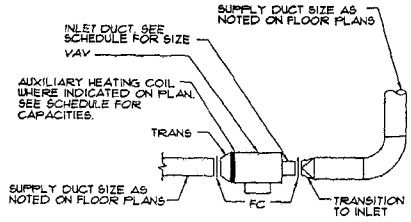
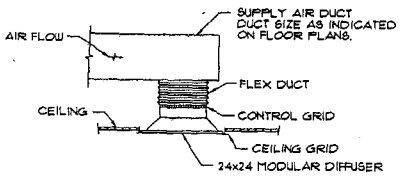
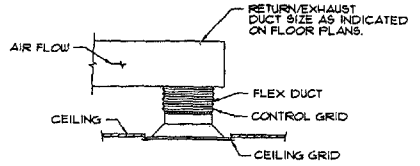


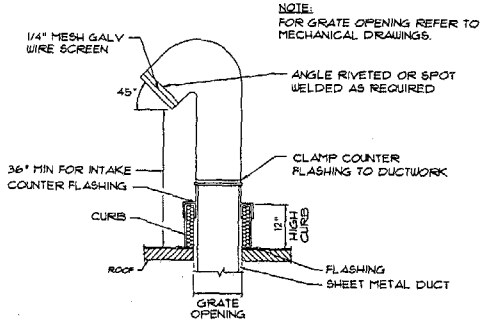
VARIABLE AIR VOLUME BOX
NOT TO SCALE



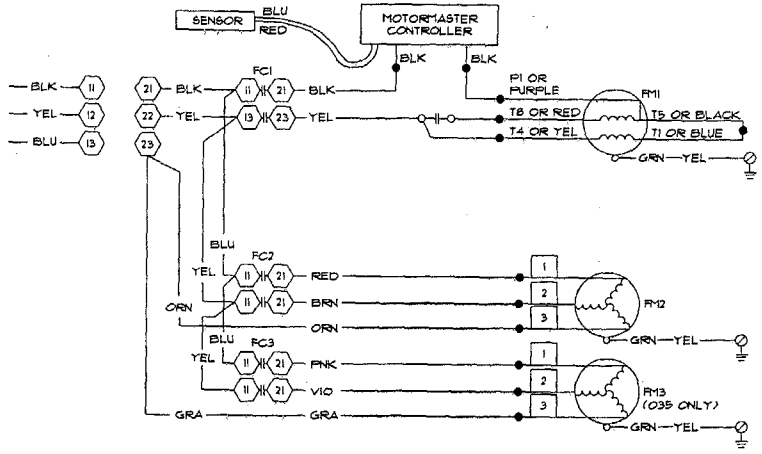
SUPPLY AIR DIFFUSER SQUARE TYPICAL CONNECTION
NOT TO SCALE



RETURN/EXHAUST GRILLES TYPICAL CONNECTION
NOT TO SCALE

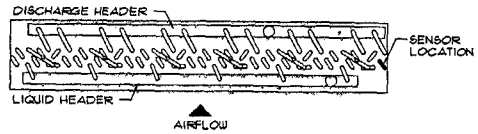


DUCT THRU ROOF (W/GOOSENECK)
NOT TO SCALE

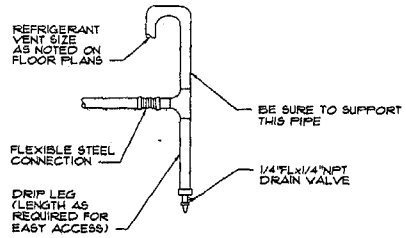


FC —— FAN CONTRACTOR
FCB —— FAN CIRCUIT BREAKER
FM —— FAN MOTOR

MOTORMASTER CONTROL WIRING - 208/230 VOLT
NO SCALE



MOTORMASTER CONTROLLER SENSOR LOCATIONS ON CONDENSOR COIL HEADER ENDS
NO SCALE



CHILLER REFRIGERANT VENT DETAIL
NOT TO SCALE

FAN SCHEDULE

SYMBOL	LOCATION	SERVES	TYPE	ROOF OPENING/ LOUVER SIZE	SYSTEM CFM	FAN CFM	RPM	STATIC PRESSURE	TIP SPEED	DRIVE	HP	ELEC CHAR	REMARKS	MODEL NO.
EF-1	BASEMENT-517	RESTROOMS	INLINE	24 x 18	750	873	1140	.5	3917	DIRECT	1/6	1-60-115	RESTROOM EXHAUST FAN	SQ-120-B
EF-2	MECH. RM	MECH. RM.	INLINE	-	1210	1332	1295	.5	4448	BELT	1.5	3-60-208	EMER. REFRIG. & MECH. RM. EXHAUST FAN	BSQ-130-4
EF-3	PETERSEN ROOF	ATTIC	INLINE CABINET	6 x 9	365	368	1350	.25	-	DIRECT	-	1-60-115	ATTIC EXHAUST FAN	SP-228
SF-4	PETERSEN HOUSE	BOILER RM	INLINE CABINET	12 x 525	100	113	1100	.25	-	DIRECT	-	1-60-115	COMBUSTION AIR SUPPLY FAN	CSP-216
SF-5	MECH. RM	BOILER	SIDEWALL PROP	15x15	540	564	1350	.15	-	DIRECT	1/20	1-60-115	COMBUSTION AIR SUPPLY FAN	81-10-440-G

NOTE:
1. ADJUST BELT DRIVEN FANS TO PROVIDE SYSTEM CFM.
2. DESIGNED AROUND GREENHECK.

100% CONSTRUCTION DOCUMENT SUBMISSION

DESIGNED: KBE/PEP	SUB SHEET NO. M17	TITLE OF SHEET: MECHANICAL DETAILS & SCHEDULES	DRAWING NO. 804 41,002
DRAWN: KBE			PROJ. NO. NACC 791
TECH. REVIEW: AJK/PEP			SHEET 39
DATE: 10/04/2001		FORD'S THEATRE NATIONAL HISTORICAL SITE	16CD OF 86

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- DUPLEX RECEPTACLE - EXISTING
- DUPLEX RECEPTACLE - MOUNTED ABOVE CEILING - EXISTING
- TELEPHONE/DATA OUTLET - EXISTING
- TELEPHONE/DATA OUTLET - FLOOR MOUNTED - EXISTING
- MOTION DETECTOR - EXISTING
- CURTAIN MOTION DETECTOR - EXISTING
- MOTION DETECTOR - WIRELESS - EXISTING
- SMOKE DETECTOR - EXISTING
- SMOKE DETECTOR WITH INDICATOR LIGHT - EXISTING
- FIRE/INTRUSION ALARM HORN W/FLASHING STROBE LIGHT - EXISTING
- MAGNETIC DOOR CONTACT (D INDICATES ENTRY/EXIT DELAY) - EXISTING
- MANUAL PULL STATION - EXISTING
- CLOSED CIRCUIT TV - EXISTING
- FIRE/INTRUSION ALARM PANEL - EXISTING
- FIRE ALARM PANEL - EXISTING
- DISCONNECT SWITCH - EXISTING
- MOTOR STARTER - EXISTING
- MOTOR CONNECTION - EXISTING
- SPEAKER - EXISTING
- MICROPHONE - EXISTING
- JUNCTION BOX - EXISTING
- PANELBOARD - EXISTING
- MAGNETIC DOOR HOLDER - EXISTING

- DOUBLE DUPLEX RECEPTACLE - GFCI
- DOUBLE DUPLEX RECEPTACLE
- DUPLEX RECEPTACLE GFCI
- DUPLEX RECEPTACLE
- DUPLEX RECEPTACLE - MOUNTED ABOVE CEILING
- DUPLEX RECEPTACLE - TRANSIENT VOLTAGE SURGE SUPPRESSION
- DOUBLE DUPLEX RECEPTACLE - TRANSIENT VOLTAGE SURGE SUPPRESSION
- TELEPHONE/DATA OUTLET
- TELEPHONE/DATA OUTLET - FLOOR MOUNTED
- MOTION DETECTOR
- CURTAIN MOTION DETECTOR
- MOTION DETECTOR - WIRELESS
- SMOKE DETECTOR
- SMOKE DETECTOR WITH INDICATOR LIGHT
- FIRE ALARM HORN W/FLASHING STROBE LIGHT
- INTRUSION ALARM HORN/SIREN/SPEAKER
- MAGNETIC DOOR CONTACT (D INDICATES ENTRY/EXIT DELAY)
- MANUAL PULL STATION
- CLOSED CIRCUIT TV
- FIRE/INTRUSION ALARM PANEL
- INTRUSION ALARM PANEL
- FIRE ALARM PANEL
- DISCONNECT SWITCH
- MOTOR STARTER
- MOTOR CONNECTION
- SPEAKER
- INTERCOM
- MICROPHONE
- AUTO PHONE DIALER
- JUNCTION BOX
- PANELBOARD
- FIRE/INTRUSION ALARM KEYPAD
- ANNUNCIATOR PANEL
- EXIT LIGHT
- WEATHERPROOF
- CIRCUIT HOMERUN

- POWER CIRCUIT
- LIGHTING CIRCUIT
- S — SINGLE POLE SWITCH
- S_D — DIMMER SWITCH (TWO OR THREE WAY)
- S_3 — THREE WAY SWITCH
- DUCT DETECTOR
- FLOW SWITCH
- TAMPER SWITCH
- EXTRA UNDER CARPET WIRING DATA TERMINAL TRANSITION BLOCK MINIMUM 6 SCREW TERMINALS.
- MAGNETIC DOOR HOLDER

GENERAL NOTES:

1. THE OWNER HAS THE FIRST RIGHT OF ALL MATERIALS REMOVED DURING THIS PROJECT. ANY MATERIALS DEEMED 'UNWANTED' BY THE OWNER, SHALL BE REMOVED BY THE CONTRACTOR, AT NO ADDITIONAL EXPENSE TO THE OWNER.

ELECTRICAL ABBREVIATIONS:

AFF	ABOVE FINISHED FLOOR
ATC	AUTOMATIC TEMPERATURE CONTROL
CCTV	CLOSED CIRCUIT TELEVISION
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION
WP	WEATHER PROOF
REC	RECEPTACLE

100% CONSTRUCTION DOCUMENT SUBMISSION

DESIGNED: AJK; DRAWN: DJB; TECH. REVIEW: PEP; DATE: 10/04/2001	SUB SHEET NO. E0	TITLE OF SHEET: ELECTRICAL LEGEND AND ABBREVIATIONS — FORD'S THEATRE NATIONAL HISTORICAL SITE	DRAWING NO. 804 41,002; PKG. NO. NACC 791 15CD; SHEET 40 OF 86

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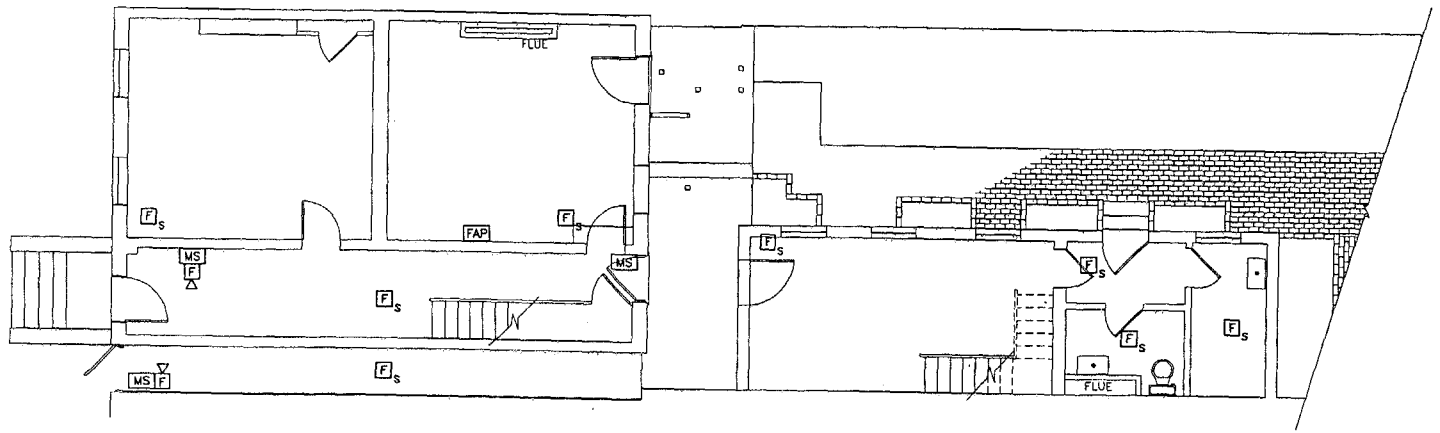
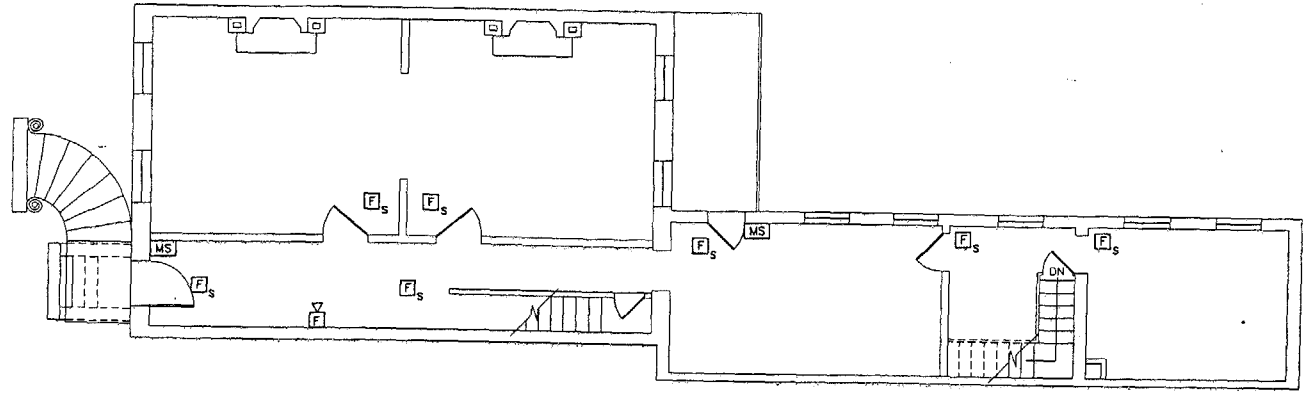


1/E6 BASEMENT PLAN
SCALE A

GENERAL NOTES:

1. UNLESS INDICATED OTHERWISE, DISCONNECT AND REMOVE ALL WIRING, DEVICES AND EQUIPMENT ASSOCIATED WITH THE PRESENT FIRE ALARM SYSTEM. SAVE CONDUIT, WHEN POSSIBLE, FOR RE-USE. INSTALL NEW CONDUCTORS TO NEW FIRE ALARM CONTROL PANEL. INSTALL PULL STRINGS IN EXISTING UNUSED CONDUITS.

PLAN NOTES:



2/E6 FIRST FLOOR PLAN
SCALE A

4 0 4 8
SCALE OF FEET

100% CONSTRUCTION DOCUMENT SUBMISSION

DESIGNED: AJK DRAWN: DJB TECH. REVIEW: AJK/PEP DATE: 10/04/2001	SUB SHEET NO. E6	TITLE OF SHEET: FIRE BASEMENT & FIRST FLOORS PETERSEN HOUSE FORD'S THEATRE NATIONAL HISTORICAL SITE	DRAWING NO. 804 41,002 PKG. NO. NACC 791 16CD SHEET 46 OF 86

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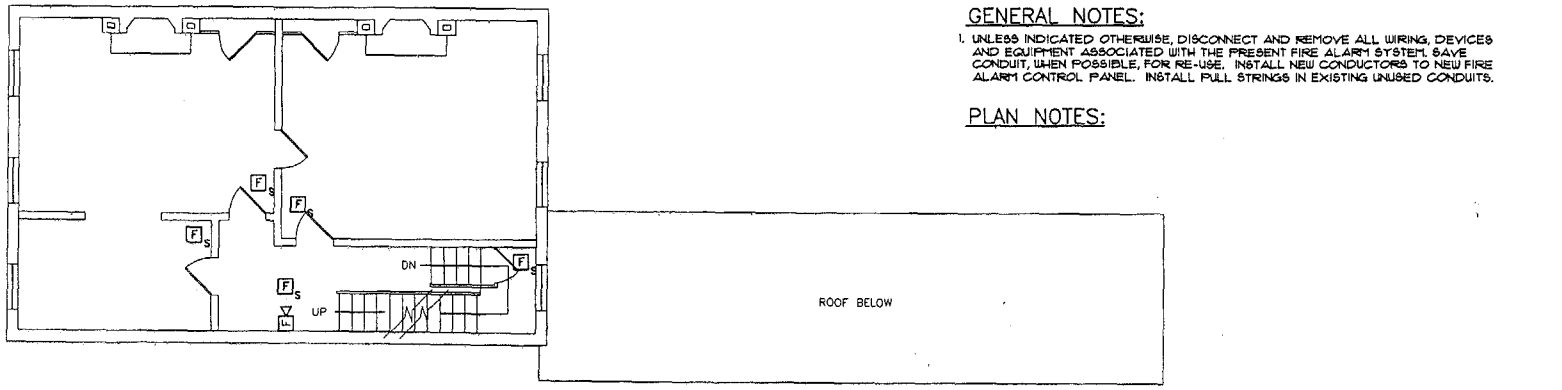
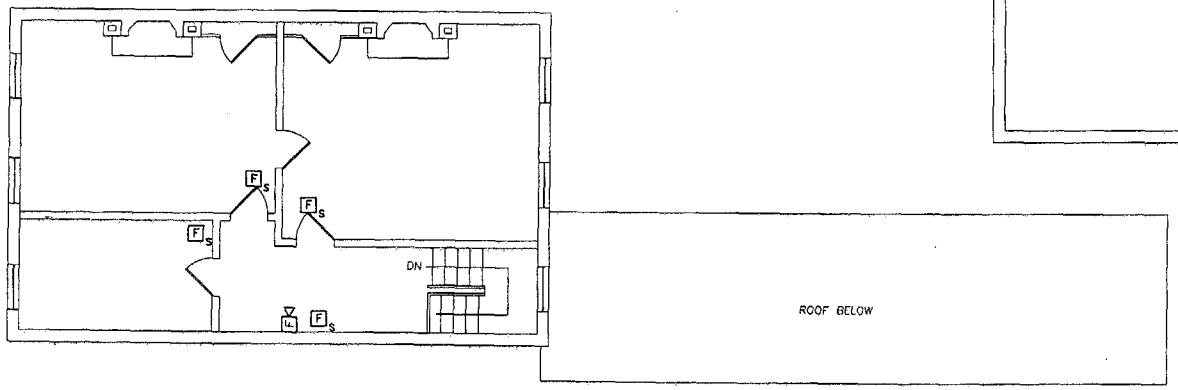
GENERAL NOTES:

1. UNLESS INDICATED OTHERWISE, DISCONNECT AND REMOVE ALL WIRING, DEVICES AND EQUIPMENT ASSOCIATED WITH THE PRESENT FIRE ALARM SYSTEM. SAVE CONDUIT, WHEN POSSIBLE, FOR RE-USE. INSTALL NEW CONDUCTORS TO NEW FIRE ALARM CONTROL PANEL. INSTALL PULL STRINGS IN EXISTING UNUSED CONDUITS.

PLAN NOTES:



(1/E1) SECOND FLOOR PLAN
SCALE A



(2/E1) THIRD FLOOR PLAN
SCALE A

4 0 4 8
SCALE OF FEET

100% CONSTRUCTION DOCUMENT SUBMISSION

DESIGNED: AJK; DRAWN: DJB; TECH. REVIEW: AJK/PEP; DATE: 10/04/2001	SUB SHEET NO. E7	TITLE OF SHEET: FIRE SECOND AND THIRD FLOORS PETERSEN HOUSE — FORD'S THEATRE NATIONAL HISTORICAL SITE	DRAWING NO. 804 41,002; PKG. NO. NACC 791 1600; SHEET 47 OF 86

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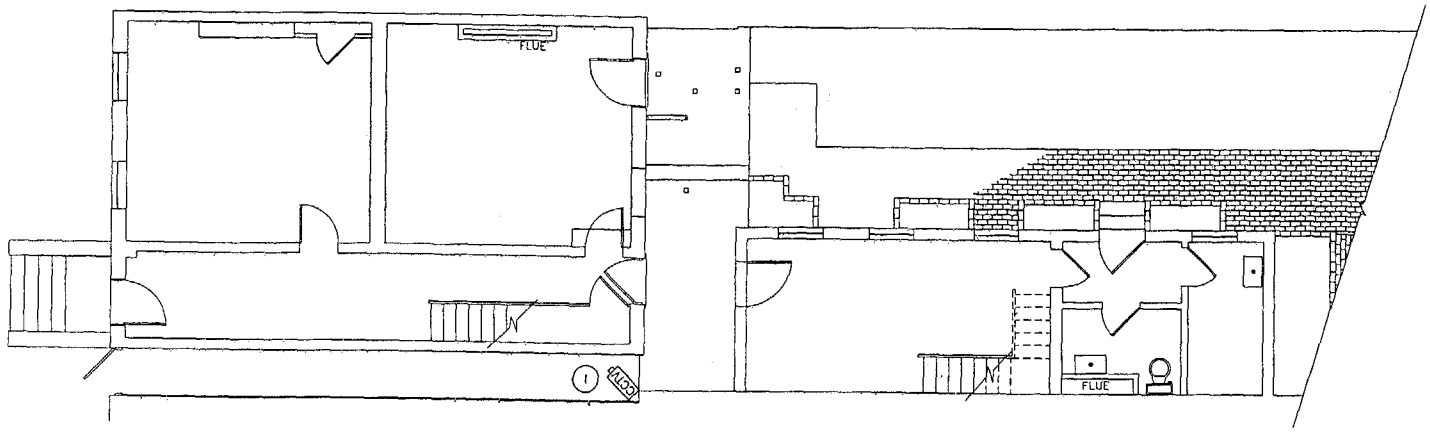


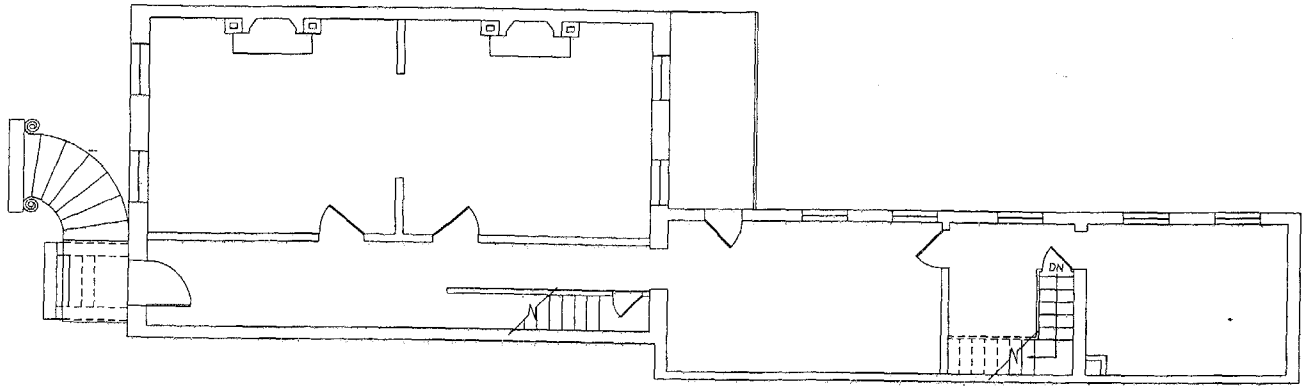
1/E13 BASEMENT PLAN
SCALE A

GENERAL NOTES:

1. MONITORING OF CCTV CAMERAS IN THIS BUILDING SHALL BE PERFORMED AT THE GUARD'S STATION ACROSS THE STREET AT FORD'S THEATRE.

PLAN NOTES:

(1) THIS CCTV CAMERA SHALL BE WIRELESS.



2/E13 FIRST FLOOR PLAN
SCALE A

4 0 4 8
SCALE OF FEET

DESIGNED: AJK; DRAWN: DJB; TECH. REVIEW: AJK/PEP; DATE: 10/04/2001	SUB SHEET NO. E13	TITLE OF SHEET: CCTV BASEMENT & FIRST FLOORS PETERSEN HOUSE — FORD'S THEATRE NATIONAL HISTORICAL SITE	DRAWING NO. 904 41,002; PKG. NO. NACC 791 160D; SHEET 53 OF 86

100% CONSTRUCTION DOCUMENT SUBMISSION

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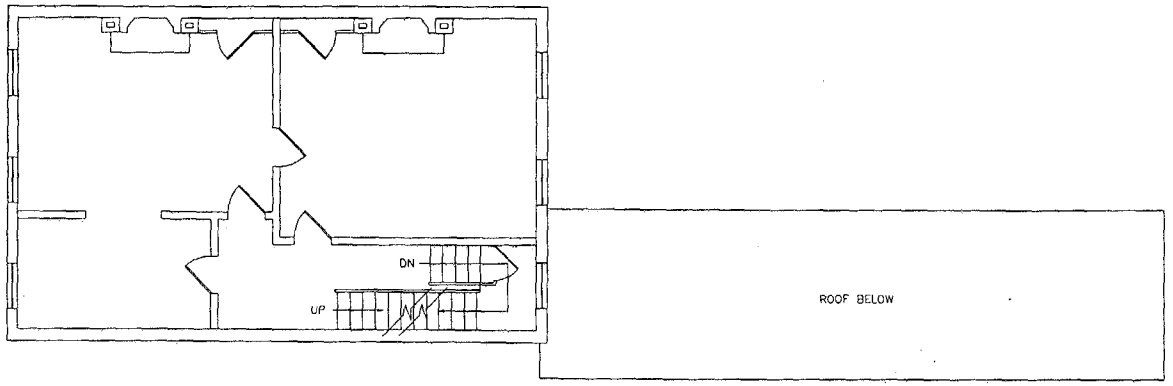


GENERAL NOTES:

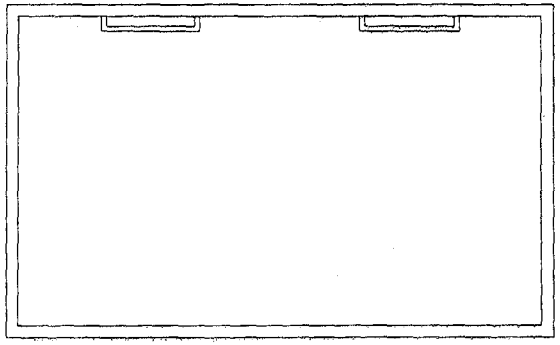
1. MONITORING OF CCTV CAMERAS IN THIS BUILDING SHALL BE PERFORMED AT THE GUARD'S STATION ACROSS THE STREET AT FORD'S THEATRE.

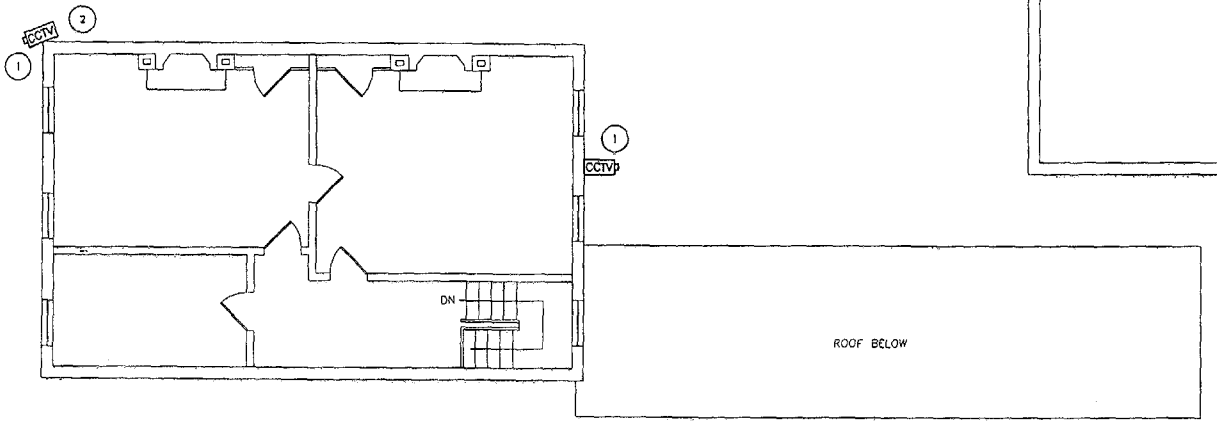
PLAN NOTES:

(1) THIS CCTV CAMERA SHALL BE WIRELESS.

(2) MOUNT ON NEIGHBORING BUILDING, IF POSSIBLE.

(1/E14) SECOND FLOOR PLAN
SCALE (A)





(2/E14) THIRD FLOOR PLAN
SCALE (A)

4 0 4 8
SCALE OF FEET

100% CONSTRUCTION DOCUMENT SUBMISSION

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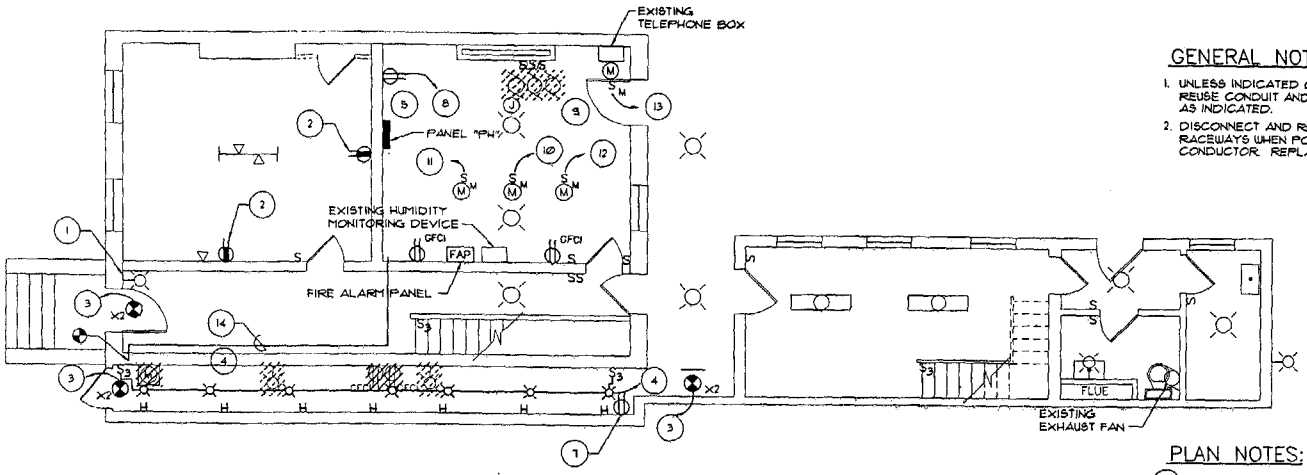
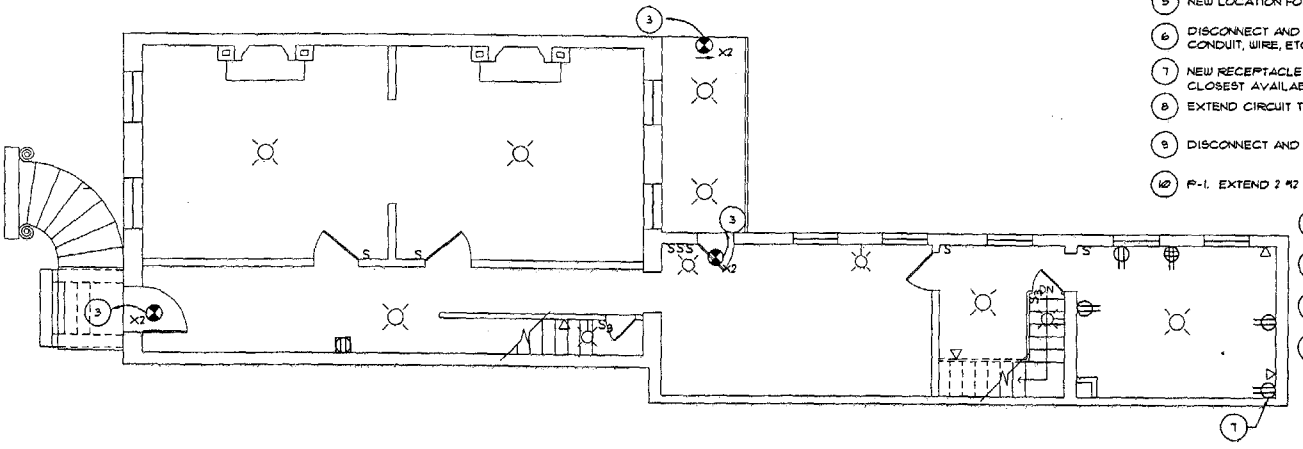


1/E30 BASEMENT PLAN
SCALE A



2/E30 FIRST FLOOR PLAN
SCALE A

GENERAL NOTES:

1. UNLESS INDICATED OTHERWISE, DISCONNECT AND REMOVE EXISTING EXIT SIGNS. REUSE CONDUIT AND CONDUCTORS WHERE POSSIBLE. INSTALL NEW EXIT SIGNS AS INDICATED.
2. DISCONNECT AND REMOVE ALL EXISTING BRANCH CIRCUIT WIRING. REUSE EXISTING RACEWAYS WHEN POSSIBLE. INSTALL NEW BRANCH CIRCUIT WIRING WITH GROUND CONDUCTOR. REPLACE ALL EXISTING BRANCH CIRCUIT WIRING DEVICES.

PLAN NOTES:

1. DISCONNECT AND REMOVE EXISTING RED LIGHT SERVING AS AN EXIT SIGN LIGHT.
2. REPLACE EXISTING RECEPTACLE WITH TVSS RECEPTACLE. CONNECT TO EXISTING CIRCUIT. IF A DEDICATED GROUNDING CONDUCTOR (GROUND WIRE) IS NOT PRESENT, EXTEND GROUNDING CONDUCTOR BACK TO ELECTRICAL PANEL.
3. EXTEND 2#12 & 1#12 GND IN 1/2" CONDUIT TO SPARE BREAKER LOCATED IN EXISTING MAIN PANEL.
4. EXTEND CIRCUIT TO PH-33.
5. NEW LOCATION FOR NEW MAIN ELECTRIC PANEL.
6. DISCONNECT AND REMOVE EXISTING LIGHTS, SWITCHES, RECEPTACLES, PANEL, METER, CONDUIT, WIRE, ETC. IN THIS AREA.
7. NEW RECEPTACLE FOR NEW EXTERIOR CCTV CAMERA. CONNECT NEW RECEPTACLE TO CLOSEST AVAILABLE CIRCUIT WITH CAPACITY.
8. EXTEND CIRCUIT TO PH-16.
9. DISCONNECT AND REMOVE EXISTING HYDRONIC ZONE CIRCULATORS.
10. P-1. EXTEND 2 #12 & 1 #12 GND IN 1/2"C TO 15A-1P BREAKER IN PANEL PH.
11. P-2. EXTEND 2 #12 & 1 #12 GND IN 1/2"C TO 15A-1P BREAKER IN PANEL PH.
12. P-3. EXTEND 2 #12 & 1 #12 GND IN 1/2"C TO 15A-1P BREAKER IN PANEL PH.
13. COMBUSTION AIR FAN. EXTEND 2 #12 & 1 #12 GND IN 1/2"C TO CIRCUIT PH-31.
14. EXTEND 1-4"C & 2"C INTO MECHANICAL ROOM AS INDICATED.

4 0 4 8
SCALE OF FEET

100% CONSTRUCTION DOCUMENT SUBMISSION

DESIGNED: AJK; DRAWN: KBE; TECH. REVIEW: AJK/PEP; DATE: 10/04/2001	SUB SHEET NO. E30	TITLE OF SHEET: ELECTRICAL BASEMENT & FIRST FL. PETERSEN HOUSE; FORD'S THEATRE NATIONAL HISTORICAL SITE	DRAWING NO. 604 41,002; PKG. NO. NACC 791 1600; SHEET 70 OF 86

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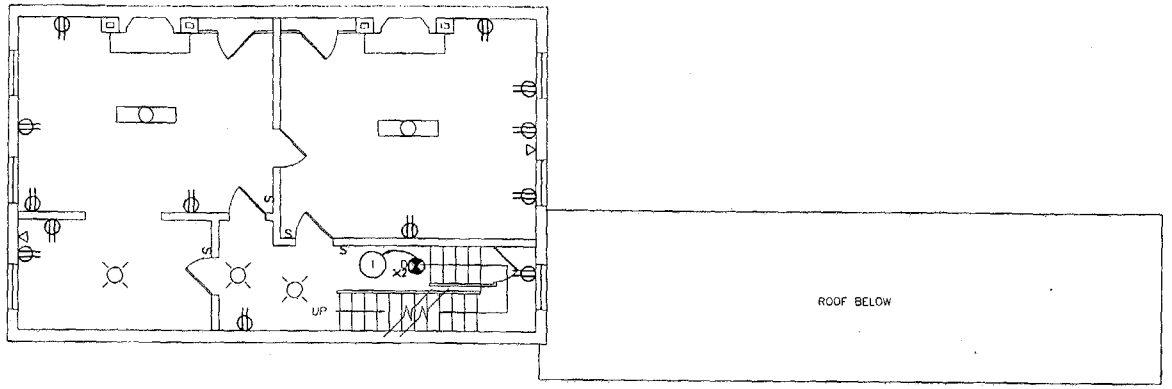


1/E31 SECOND FLOOR PLAN
SCALE A

GENERAL NOTES:

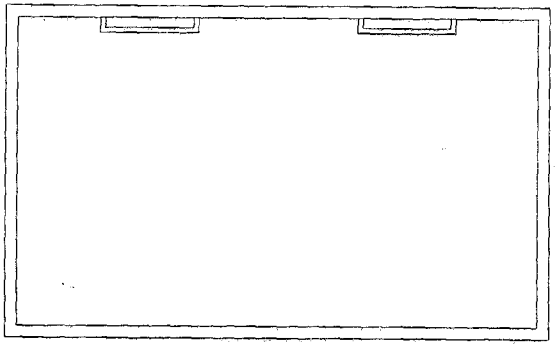
1. UNLESS INDICATED OTHERWISE, DISCONNECT AND REMOVE EXISTING EXIT SIGNS. REUSE CONDUIT AND CONDUCTORS WHERE POSSIBLE. INSTALL NEW EXIT SIGNS AS INDICATED.
2. DISCONNECT AND REMOVE ALL EXISTING BRANCH CIRCUIT WIRING. REUSE EXISTING RACEWAYS WHEN POSSIBLE. INSTALL NEW BRANCH CIRCUIT WIRING WITH GROUND CONDUCTOR. REPLACE ALL EXISTING BRANCH CIRCUIT WIRING DEVICES.

PLAN NOTES:

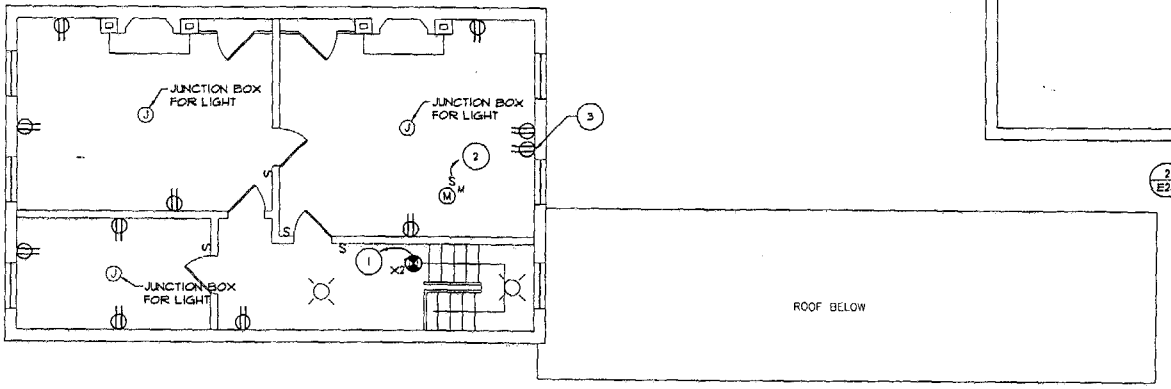
(1) POWER FOR EXIT/EMERGENCY LIGHT: EXTEND 2 #12 & 1 #12 GND IN 1/2" CONDUIT TO BREAKER LOCATED IN NEW MAIN PANEL.

(2) POWER FOR ATTIC EXHAUST FAN: EXTEND 2 #12 & 1 #12 IN 1/2" CONDUIT TO BREAKER IN PANEL PH. INTERCONNECT EXHAUST FAN TO THERMOSTAT.

(3) NEW RECEPTACLE FOR NEW CCTV CAMERA. CONNECT NEW RECEPTACLE TO CLOSEST AVAILABLE CIRCUIT WITH CAPACITY.



2/E26 ATTIC PLAN
SCALE A



3/E31 THIRD FLOOR PLAN
SCALE A

4 0 4 8
SCALE OF FEET

100% CONSTRUCTION DOCUMENT SUBMISSION

DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
AJK	E31	ELECTRICAL SECOND AND THIRD FL. PETERSEN HOUSE	804 41,002
DRAWN: DJB			
TECH. REVIEW: AJK/PEP		FORD'S THEATRE NATIONAL HISTORICAL SITE	PKG. NO. NACC 791 16CD
DATE: 10/04/2001			SHEET 71 OF 86

P:\NACC\791\16CD\ELEC\E31ELEC.dwg 10801 110225

PANELBOARD 517-3A

120/208 VOLTS, 3 φ, 4 WIRE, 225 A. BUS, 150 A. MAIN C.B., RECESSED MOUNT,
SYM. A.I.R. (MAIN C.B. 200,000, BRANCH C.B. 200,000), 100% NEUTRAL BUS, PROVIDE GROUND BUS
N/A BRANCH C.B., NEMA 1 ENCLOSURE, MANUFACTURER AND CAT. NO. XXX

LOAD VA	DESCRIPTION	L1	L2	L3	DESCRIPTION	LOAD VA	BUS LOAD (VA) L1	L2	L3
-	4TH FLR OFFICE	20/1	2/15		EXISTING CIRCUIT	-	---		
-	-	-/3	4/15		EXISTING CIRCUIT	-		---	
-	EXISTING CIRCUIT	15/5	6/20		EXISTING CIRCUIT	-			---
-	EXISTING CIRCUIT	15/7	8/-		-	-	---		
-	EXISTING CIRCUIT	20/9	10/20		EXISTING CIRCUIT	-		---	
-	-	-/11	12/20		EXISTING CIRCUIT	-			---
-	EXISTING CIRCUIT	20/13	14/15		EXISTING CIRCUIT	-	---		
-	-	-/15	16/20		EXISTING CIRCUIT	-		---	
-	EXISTING CIRCUIT	15/17	18/20		EXISTING CIRCUIT	-			---
-	A.C.	50/19	20/20		LUNCH ROOM 2ND FLOOR	-	---		
-	-	-/21	22/20		EXISTING CIRCUIT	-		---	
-	EXISTING CIRCUIT	20/23	24/30		EXISTING CIRCUIT	-			---
-	EXISTING CIRCUIT	15/25	26/15		EXISTING CIRCUIT	-	---		
-	EXISTING CIRCUIT	20/27	28/15		EXISTING CIRCUIT	-		---	
-	SPARE	20/29	30/20		SPARE	-			---
-	RCPT - CONTROL BOOTH	20/31	32/20		LITES - CONTROL BOOTH	-	---		
-	RCPT - CONTROL BOOTH	20/33	34/20		RCPT - CONTROL BOOTH	-		---	
-	RCPT - CONTROL BOOTH	20/35	36/20		RCPT - CONTROL BOOTH	-			---
-	RCPT - CONTROL BOOTH	20/37	38/20		SPARE	-	---		
-	RCPT - CONTROL BOOTH	20/39	40/20		SPARE	-		---	
-	RCPT - CONTROL BOOTH	20/41	42/20		SPARE	-			---
					BUS LOAD TOTALS (KVA)		---	---	---
					TOTAL LOAD (KVA)			---	
					ESTIMATED MAXIMUM DEMAND (KVA)			---	

PANELBOARD PH

120/240 VOLTS, 1 φ, 3 WIRE, 150 A. BUS, 200 A. MAIN C.B., SURFACE MOUNT,
SYM. A.I.R. (MAIN C.B. 200,000, BRANCH C.B. 200,000), 100% NEUTRAL BUS, PROVIDE GROUND BUS
N/A BRANCH C.B., NEMA 1 ENCLOSURE, MANUFACTURER AND CAT. NO. XXX

LOAD VA	DESCRIPTION	L1	L2	L3	DESCRIPTION	LOAD VA	BUS LOAD (VA) L1	L2	L3
-	EXISTING CIRCUIT	15/1	2/15		EXISTING CIRCUIT	-	---		
-	EXISTING CIRCUIT	15/3	4/15		FL REC ENT HALLWAY	-		---	
-	EXISTING CIRCUIT	15/5	6/15		EXISTING CIRCUIT	-			---
-	EXISTING CIRCUIT	15/7	8/15		EXISTING CIRCUIT	-	---		
-	EXISTING CIRCUIT	15/9	10/15		EXISTING CIRCUIT	-		---	
-	EXISTING CIRCUIT	30/11	12/20		EXISTING CIRCUIT	-			---
-	EXISTING CIRCUIT	30/13	14/20		EXISTING CIRCUIT	-	---		
-	HALL AIR COND UNIT	40/15	16/20		PANEL RECEPT.	-		---	
-	-	-/17	18/20		SPARE	-			---
-	AC UNIT #1 2ND FLOOR	40/19	20/20		EXISTING CIRCUIT	-	---		
-	-	-/21	22/-		-	-		---	
-	AC UNIT #2 2ND FLOOR	30/23	24/20		EXISTING CIRCUIT	-			---
-	-	-/25	26/-		-	-	---		
-	NEW EXIT SIGNS	20/27	28/30		EXISTING CIRCUIT	-		---	
-	SPACE	-/29	30/-		-	-			---
-	COMBUSTION EXHAUST FAN	20/31	32/20		SPARE	-	---		
-	LIGHTING	20/33	34/20		SPARE	-		---	
-	P-1 ZONE CIRCULATOR	15/35	36/20		SPARE	-			---
-	P-2 ZONE CIRCULATOR	15/37	38/20		SPARE	-	---		
-	P-3 ZONE CIRCULATOR	15/39	40/20		SPARE	-		---	
-	SPARE	20/41	42/20		SPARE	-			---
					BUS LOAD TOTALS (KVA)		---	---	---
					TOTAL LOAD (KVA)			---	
					ESTIMATED MAXIMUM DEMAND (KVA)			---	

EXISTING PANELBOARD 517-1A

120/208 VOLTS, 3 φ, 4 WIRE, 225 A. BUS, MLO A. MAIN C.B., SURFACE MOUNT,
SYM. A.I.R. (MAIN C.B. ?????? , BRANCH C.B. ???????), ??? NEUTRAL BUS, PROVIDE GROUND BUS
N/A BRANCH C.B., NEMA 1 ENCLOSURE, MANUFACTURER AND CAT. NO. XXX

LOAD VA	DESCRIPTION	L1	L2	L3	DESCRIPTION	LOAD VA	BUS LOAD (VA) L1	L2	L3
-	EXISTING CIRCUIT	15/1	2/20		EXISTING CIRCUIT	-	---		
-	EXISTING CIRCUIT	15/3	4/15		EXISTING CIRCUIT	-		---	
-	EXISTING CIRCUIT	20/5	6/15		EXISTING CIRCUIT	-			---
-	EXISTING CIRCUIT	20/7	8/15		EXISTING CIRCUIT	-	---		
-	EXISTING CIRCUIT	20/9	10/15		EXISTING CIRCUIT	-		---	
-	EXISTING CIRCUIT	15/11	12/20		EXISTING CIRCUIT	-			---
-	EXISTING CIRCUIT	20/13	14/20		EXISTING CIRCUIT	-	---		
-	-	-/15	16/20		EXISTING CIRCUIT	-		---	
-	EXISTING CIRCUIT	20/17	18/20		EXISTING CIRCUIT	-			---
-	-	-/19	20/20		EXISTING CIRCUIT	-	---		
-	EXISTING CIRCUIT	20/21	22/20		EXISTING CIRCUIT	-		---	
-	EXISTING CIRCUIT	15/23	24/20		RCPT - OFFICE	-			---
-	EXISTING CIRCUIT	20/25	26/-		SPACE	-	---		
-	EXISTING CIRCUIT	50/27	28/50		SPARE	-		---	
-	-	-/29	30/-		-	-			---
					BUS LOAD TOTALS (KVA)		---	---	---
					TOTAL LOAD (KVA)			---	
					ESTIMATED MAXIMUM DEMAND (KVA)			---	

LIGHTING FIXTURE SCHEDULE

TYPE	SYMBOL	MODEL	LAMP	VOLTS	FINISH	DESCRIPTION / NOTES
A	▭	PARA WASH MODEL # FW 82-1 40TT-LD K-TT 120	FLUOR.	120	WHITE	8"x2' PENDANT MOUNTED LIGHT WITH 40W TRIPPLE TUBE LAMP, LINEAR BAFFLE AND DIMMABLE ELECTRONIC BALLAST.
B	▭	LITECONTROL MODEL # P-1-5324T8-CWM-LP/ELB-ICNP-120	FLUOR.	120	WHITE	4' PENDANT MOUNTED LIGHT WITH TWIN 32W FLUORESCENT TUBES AND LOW PROFILE, DIMMABLE ELECTRONIC BALLAST.
C	▭	LITECONTROL MODEL # P-1-5348T8-CWM-LP/ELB-ICMP-120	FLUOR.	120	WHITE	8' PENDANT MOUNTED LIGHT WITH TWIN 32W FLUORESCENT TUBES AND LOW PROFILE, DIMMABLE ELECTRONIC BALLAST.
D	•	CAPRI MODEL # LVITX	MR-16	120	WHITE	LOW VOLTAGE DOWNLIGHT WITH ADJUSTABLE GIMBLE RING AND CLEAR REFLECTOR. 12V 35W LAMP WITH 60° SPREAD.
E	•	CAPRI MODEL # LVITX	MR-16	120	WHITE	LOW VOLTAGE DOWNLIGHT WITH ADJUSTABLE GIMBLE RING AND CLEAR REFLECTOR. 12V 20W LAMP WITH 10° SPREAD.
F	——	LUMENYTE MODEL # SFC301-65	OPTIC FIBER	120	NONE	6.0mm DIAMETER FIBER OPTIC CABLE WITH CLEAR, FLEXIBLE JACKET. 60 WATT MULTICOLOR ILLUMINATOR.
G	⊗	LITHONIA LIGHTING MODEL #R 5 AC	50W PAR 20	120	WHITE	5" INCANDESCENT RECESSED DOWNLIGHT.
H	⊗	LITHONIA LIGHTING MODEL #AP 2/18 DTT 6AR	(2) 18W DTT 4 PIN	120	CLEAR	6" FLUORESCENT RECESSED DOWNLIGHT WITH ELECTRONIC BALLAST.
X1	⊗	LITHONIA LIGHTING MODEL #LE S 1 R 120/277 TP	LED	120	PER OWNER	DIE-CAST ALUMINUM EXIT WITH LED LAMPS AND DIRECTIONAL ARROWS. UNIT MAY BE CEILING, WALL, PENDENT OR RECESS MOUNTED (MATCH EXISTING).
X2	⊗	LITHONIA LIGHTING	LED & (2) 5.4W TUNGSTEN	120	WHITE	POLYCARBONATE EXIT & EMERGENCY LITE COMBO WITH RECHARGEABLE BATTERY.

NOTES:
1.) MR-16 LAMPS SHALL BE SIMILAR TO "TRU-AIM TITAN MR-16". PROVIDE PROTECTIVE SHIELD FOR PROTECTION AGAINST ULTRAVIOET RADIATION.
2.) PROVIDE PLASTIC TUBE GUARDS OR LAMPS SIMILAR TO SYLVANIA "OCTRON" WHICH FILTER 95% OR MORE OF UV EMMISSIONS FOR FLUORESCENT LAMPS.

100% CONSTRUCTION DOCUMENT SUBMISSION

DESIGNED: AJK
DRAWN: DJB
TECH. REVIEW: AJK/PEP
DATE: 10/04/2001
SUB SHEET NO. E35

TITLE OF SHEET: ELECTRICAL SCHEDULES
PETERSEN HOUSE & BUILDING 517
FORD'S THEATRE NATIONAL HISTORICAL SITE

DRAWING NO. 804 41,002
PKG. NO. NACC 791 LGCD
SHEET 75 OF 86

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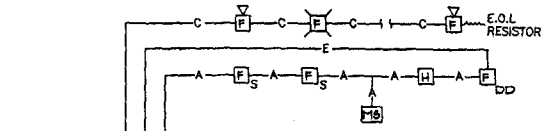

FIRE ALARM WIRING PLAN

A - #18 TWISTED/SHIELDED PAIR
B - NOT USED
C - 1 PAIR #12 FOR HORN/STROBE CIRCUIT (IN & OUT OF EACH DEVICE TO EOL RESISTOR)
D - NOT USED
E - 1 PAIR #14 FOR 24VDC POWER
F - 1 PAIR #14 TO CONNECT NON-ADDRESSABLE DEVICE TO ADDRESSABLE MODULE
X - ANNUNCIATOR WIRING: 1 PAIR #18 TWISTED/SHIELDED & 1 PAIR #14

MAIN FIRE ALARM PANEL (FAP)

TELEPHONE LINE

120 V.A.C.

2#12 & 1#12G-1/2"C

NOTES:
1. 1/2"C UNLESS NOTED OTHERWISE
2. SEE FLOOR PLANS FOR ACUTAL QUANTITIES.
3. FOR CLARITY, NOT ALL DEVICES ARE SHOWN.

FIRE ALARM RISER SCHEMATIC
NOT TO SCALE

SYSTEM OUTPUTS

	CONTROL UNIT ANNUNCIATOR												NOTIFICATION												REQUIRED FIRE SAFETY CONTROL												SUPPLEMENTARY											
SYSTEM INPUTS	ACTUATE CARBON ALARM SIGNAL INDICATOR	ACTUATE AUDIBLE ALARM SIGNAL	ACTUATE CARBON SUPERVISORY SIGNAL INDICATOR	ACTUATE AUDIBLE SUPERVISORY SIGNAL	ACTUATE CARBON TROUBLE SIGNAL INDICATOR	ACTUATE AUDIBLE CARBON TROUBLE SIGNAL	ACTUATE BUILDING FLOOR ALARM INDICATOR	ACTUATE FAU ALARM INDICATOR	ACTUATE LIFE SAFETY GENERATOR RUNNING INDICATOR	ACTUATE BUILDING FLOOR EVACUATION SIGNALS FIRE FLOOR, FLOOR ABV, FLOOR BLW	DISPLAY/PRINT CHANGE OF STATUS	TRANSMIT FIRE ALARM SIGNAL TO SUPERVISING STATION	TRANSMIT SUPERVISORY SIGNAL TO SUPERVISING STATION	TRANSMIT TROUBLE SIGNAL TO SUPERVISING STATION	ACTUATE EXTERIOR FLASHING BEACON	CLOSE ASSOCIATED SMOKE/FIRE DAMPERS IN RATED WALLS OR DUCTS	UNLOCK ALL EXIT DOORS	RELEASE HOLD OPEN/RELEASE GATE LATCHES	ACTUATE GRAPHICS SYSTEM - DISPLAY FLOOR PLAN	ACTUATE ANNUNCIATOR PROCEDURE																																		
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	BB	CC	DD	EE	FF	GG	HH																		
1. MANUAL FIRE ALARM BOXES	●	●					●						●	●	●		●						●	●				●							1.																		
2. SMOKE DETECTORS	●	●					●						●	●	●		●						●	●				●							2.																		
3. HEAT DETECTORS	●	●					●						●	●	●		●						●	●				●							3.																		
4. WATERFLOW	●	●					●						●	●	●		●					●	●	●				●							4.																		
5. SPRINKLER CONTROL VALVE			●	●												●								●											5.																		
6. IN-DUCT SMOKE DETECTORS														●														●							6.																		
7. FIRE PUMP RUNNING																																			7.																		
8. FIRE PUMP POWER FAILURE/PHASE REVERSAL																																			8.																		
9. JOCKEY PUMP RUNNING																																			9.																		
10. JOCKEY PUMP POWER FAILURE/PHASE REVERSAL																																			10.																		
11. FIRE ALARM AC POWER FAILURE					●	●							●				●																		11.																		
12. FIRE ALARM SYSTEM LOW BATTERY					●	●							●				●																		12.																		
13. FIRE ALARM SYSTEM OPEN CIRCUIT					●	●							●				●																		13.																		
14. FIRE ALARM SYSTEM GROUND FAULT					●	●							●				●																		14.																		
15. NOTIFICATION APPLIANCE CIRCUIT SHORT									●				●			●																			15.																		
16. GENERATOR RUNNING																																			16.																		
17. GENERATOR FAILURE																																			17.																		
18. CARBON MONOXIDE DETECTORS					●								●				●																		18.																		
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	BB	CC	DD	EE	FF	GG	HH																		

FIRE ALARM SYSTEM INPUT/OUTPUT MATRIX

100% CONSTRUCTION DOCUMENT SUBMISSION

DESIGNED: AJK	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.	
DRAWN: DJB	E39	ELECTRICAL DETAILS FIRE ALARM PETERSEN HOUSE	804 41.002	
TECH. REVIEW: AJK/PEP		FORD'S THEATRE NATIONAL HSTORICAL SITE	PKG. NO. NACC 791 16CD	SHEET 79 OF 86
DATE: 10/04/2001				

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Bibliography

Property and Management History:

Aikman, Lonnelle. "The Lights are Up at Ford's Theatre." *National Geographic* 137.3 (March 1970): 392-401.

This article describes the opening of Ford's Theatre following its extensive restoration by the National Park Service.

Allaback, Sarah. *Mission 66 Visitor Centers*. Washington, D.C.: Park Historic Structures and Cultural Landscapes Program, National Park Service, 2000.

This book details the Mission 66 program created by the National Park Service in the 1960s, which intended to erect a visitors' center in every national park. The restoration of Ford's Theatre was carried out under the auspices of Mission 66; however, there is no mention of the Petersen House in the book.

Bucher, Ward, Ed. *Dictionary of Building Preservation*. New York, John Wiley & Sons, 1996.

Bucher provides an extensive dictionary of preservation terminology. Included in the dictionary are architectural terms associated with row houses in the Greek Revival style.

Chase, Sara B. "A Brief Study of Historic Exterior Paint on Windows." *Design Development Report: Ford's Theatre and Petersen House*. Alexandria, VA: John Milner Associates, Inc., 6 August 2001.

Chase discusses the window treatments of the Petersen House and provides a scientific analysis of the paint substrates used on the windows.

Craig, Vera. *Furnishing Plan: House Where Lincoln Died (Petersen House), Washington, D.C.* National Park Service, Harpers Ferry Center, Division of Reference Services, 1976.

Craig builds upon Olszewski's furnishing plan. She consults extensive primary resources in order to provide evidence of original furnishings. She includes drawings and plans of how each room was furnished. As with most studies, Craig is primarily concerned with the first floor.

Donald, David Herbert. *Lincoln*. New York: Touchstone, 1996.

This biography details the life and presidency of Lincoln. A chapter chronicles the assassination of the president and his death in the Petersen House.

Don't Tear It Down. *Downtown Survey*. Washington, D.C.: Don't Tear It Down, 1980.

This 1980 survey includes a data form for each lot within a portion of Washington's old downtown. A description and significance summary for the Petersen House are provided on one such form.

"Establishment of a Lincoln Memorial Museum in Building Known as Ford's Theatre." *69th Congress, House of Representatives, Report No. 1985*. 4 February 1927.

This report is the legal basis for the establishment of the Lincoln Memorial Museum in Ford's Theatre.

Federal Writers' Project, Works Progress Administration. *Washington City and Capital*. Washington, D.C.: Government Printing Office, 1937.

This 1937 report provides descriptions of a large number of buildings found in the nation's capital. The authors include a succinct entry for the Petersen House.

Getzinger, Karen. *Anna Petersen: Her Life in Washington D.C. and the Petersen Boarding House (The House Where President Lincoln Died) 1819-1871*. 2000.

Getzinger analyses primary documents associated with the Petersens to provide insight into the life of Anna Petersen (wife of William Petersen). In addition, Getzinger provides historical background on nineteenth-century Washington, German immigrants in Washington, the use of the Petersen House as a boarding house, and the family. Getzinger writes that the primary significance of the Petersen House is as the death place of President Lincoln, but this article shows that a significant event can lead to uncovering information about a person and a family who would otherwise be unknown today.

Hayward, Mary Ellen. "Urban Vernacular Architecture in Nineteenth-Century Baltimore." *Winterthur Portfolio* 16.1 (Spring 1981): 33-63.

This detailed article does not discuss the Petersen House, but its account of nineteenth-century row house typology is helpful in understanding the Petersen House's floor plans and rear ell addition.

Lee, Richard M. *Mr. Lincoln's City: An Illustrated Guide to the Civil War Sites of Washington*. McLean, VA: EPM Publications, Inc., 1981.

Lee describes the historical context for the Civil War's impact upon Washington. He provides analysis on the key events, including the assassination of President Lincoln, that eventually shaped the city into a much larger metropolis after the war's end.

Maddex, Diane. *Historic Buildings of Washington, D.C.* Pittsburgh: Ober Park Associates, Inc., 1973.

Maddex describes a large number of Washington's historic buildings. A small entry on the Petersen House is included in the volume.

Massey, James C. and Shirley Maxwell. "Rows and Rows of Row Houses." *Old-House Journal*. (March-April 1993): 52-7.

This article does not discuss the Petersen House, but its analysis of row house architecture is useful in understanding both the exterior and interior of the Petersen House.

McAlester, Virginia and Lee. *A Field Guide to American Houses*. New York: Alfred A. Knopf, 1998.

This field guide gives description and examples of architectural styles found in America since its creation. There is a detailed section on Greek Revival architecture.

McClure, Stanley W. "The Lincoln Museum & the House Where Lincoln Died." *National Park Service Historical Handbook*. Series No. 3. Washington, D.C.: National Park Service, 1949.

This brief article provides a history of the Petersen House.

---. "Ford's Theatre & the House Where Lincoln Died." *National Park Service Handbook*. Washington, D.C.: National Park Service, 1969.

This two-page article briefly summarizes the history of the Petersen House and its 1969 furnishings.

National Capital Planning Commission. *Downtown Urban Renewal Area Landmarks*. Washington, D.C.: NCPC and District of Columbia Redevelopment Land Agency, 1970.

This document provides an architectural description and significance statement for buildings and statues located within the boundaries of the Downtown Urban Renewal Area. An entry is included for the Petersen House.

NPS-NCR Collection – Ford's Theatre National Historic Site. Annual Work Reports submitted by NPS.

---. Annual Work Reports submitted by War Department: Army Corps of Engineers.

---. Annual Work Reports submitted by Public Buildings and Public Parks of the National Capital.

These annual reports provide key information on the alterations and restorations carried out since the sale of the Petersen House to the U.S. Government by the Schade family in 1896. The house was first maintained by the Army Corps of Engineers, then by the Public Buildings and Public Parks of the National Capital, and finally, starting in 1933, by the National Park Service. The building was supervised by each of the above agencies, with each required to submit annual reports to the government during its tenure of the house.

Olszewski, George, J. *House Where Lincoln Died: Furnishing Study*. Washington, D.C.: Division of History, Office of Archeology & Historic Preservation, National Park Service, Department of Interior, April 15, 1967.

In this extensive report, a detailed furnishing study supports an attempt to refurnish the rooms as they appeared on the night of April 14-15, 1865. Olszewski also provides a construction history of the house (which incorrectly dates the additions of the rear ell) and the history of the Petersen and Schade families. Extensive photographs of the house, including its interior, are included. An extensive appendix provides important primary resources.

Peleszak, Chris. *Structural Report on the Petersen House (House Where Lincoln Died)*. Washington D.C.: National Park Service, 1987.

Peleszak provides key structural information on the stability of the Petersen House.

Reed, Robert. *Old Washington, D.C. in Early Photographs: 1846-1932*. New York: Dover Publications, Inc., 1980.

Reed provides an extensive collection of historical photographs of Washington, D.C. Photographs of the Petersen House and Ford's Theatre are included in this book.

Scott, Gary. "A Photograph and Artist's Renderings: Keys to the Restoration of a National Landmark." *Nineteenth Century*. Vol. 6, no. 3 (Autumn 1980): 58-61.

Scott details the restoration of the Petersen House that the National Park Service carried out from 1978 to 1980. The restoration, which focused on the interior rooms of the first floor, was based upon historical evidence derived from primary sources and physical evidence garnered from scientific analysis of wallpaper and paint colors.

Virta, Matthew R. *Archeology at the Petersen House: Unearthing an Alternate History*. Washington, D.C.: Regional Archeology Program, National Park Service, National Capital Region, 1991.

Virta describes and provides the results of several excavations carried out at the Petersen House starting in November 1985. The project, which first was an emergency salvage of a refuse midden, turned into the discovery of previously unknown architectural characteristics of the first rear ell. Extensive primary resources, including deeds, were consulted to provide the historical context for the construction of the Petersen House and its first rear ell.

Whiffen, Marcus. *American Architecture Since 1780: A Guide to the Styles*. Cambridge, MA and London: The MIT Press, 1996.

Whiffen's style guide includes a section on Greek Revival architecture.

Winik, Jay. *April 1865: The Month that Saved America*. New York: HarperCollins, 2001.

In this larger history of the events of Civil War's end in April 1865, Winik briefly describes the assassination of President Lincoln.

Physical Investigation and Treatment Requirements:

(listed in chronological order)

Official Documents/Correspondence concerning Petersen House held by National Park Service, National Capital Parks – Central:

Memorandum:	date-7/84	subject-termites
Product/Services:	date-11/84	subject-estimate for flooring (Rm 12)
Memorandum:	date-11/84	subject-wood preservation course
Architectural Report:	date-1/85	subject-basement floor project
Memorandum:	date-3/85	subject-status of floor replacement
Product/Services:	date-11/85	subject-order for flooring replacement

Structural Report on the Petersen House (HWLD); by Chris Peleszak, FTNHS, 1987.

Repairs to the Petersen House; prepared by Stephen Ziegenfuss, AIA, NPS-NCR, National Capital Parks – Central, 1992.

Project Files held by architrave p.c., architects (architrave archive no. 9402.03): Petersen House Roof Repair (and related Asbestos Removal), 1994-1995.

Construction Documentation-Drawings and Specifications:

Rehabilitate Mechanical and Electrical Systems-Ford's Theatre and Petersen House, Ford's Theatre National Historic Site (contract no. 1443-CX200-98-012), 75% and 100% Design Development Submissions and 100% Construction Documents dated 4 October, 2001.

National Park Service
U.S. Department of the Interior

Historic Architecture Program
National Capital Region
1100 Ohio Drive, SW
Washington, D.C. 20242

Prepared by:
architrave p.c. architect
420 10th Street, SE
Washington, D.C. 20003

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