001607
184
ALPO

historic structure report
architectural data section

july 1982

ALLEGHENY PORTAGE RAILROAD

THE LEMON HOUSE



NATIONAL HISTORIC SITE / PENNSYLVANIA

HISTORIC STRUCTURE REPORT
THE LEMON HOUSE
ALLEGHENY PORTAGE RAILROAD NATIONAL HISTORIC SITE
PENNSYLVANIA

ARCHITECTURAL DATA SECTION

By
Penelope Hartshorne Batcheler

DENVER SERVICE CENTER
BRANCH OF HISTORIC PRESERVATION
MID-ATLANTIC/NORTH ATLANTIC TEAM
NATIONAL PARK SERVICE
UNITED STATES DEPARTMENT OF THE INTERIOR
DENVER, COLORADO





TABLE OF CONTENTS

Frontispiece: Lemon House North Elevation, 1980, P. H. Batcheler

I. Administrative Section (prepared by Superintendent, Allegheny Portage Railroad National Historic Site; and Chief, Resource Preservation, Mid-Atlantic Regional Office (MARO). 1

Legislative Compliance. 4

II. Architectural Data Section 5

A. Introduction 6

B. Brief Chronology of the Lemon House. 9

C. Historical Illustrations of the Lemon House. 15

D. Conjectural 1831-99 Plans and Elevations 52

E. 1912-43 Plans. 64

F. 1943-61 Plans. 69

G. Architectural Description and Significance of the Lemon House. 74

H. Building Evidence and Conditions 77
1. Exterior 78
2. Interior 84
3. Mechanical, Electrical, and Security Systems 97

I. Evidence Drawings, Plans, and Details. 99

J. Recommendations 108
1. Short Term Recommendations 109
2. Long Term Recommendations 110
3. Impact Evaluation 111
4. Compliance Summary 113
5. Recommended Research Yet to be Done 114
6. Package Estimating Detail 130

K. Appendices 131
1. National Park Service Reports on the Lemon House . . 132
2. National Park Service Drawings of the Lemon House . . 133
3. Evidence Discussion (West Wing, Etc.) 134
4. Porch Research 144
5. Paint Study 150
6. Exterior Wall Pointing 194
7. Structural Conditions 195
8. Moisture Problems Resolved 209
9. Trip Report 211

L. Bibliography 215

THE LEMON HOUSE

I. ADMINISTRATIVE SECTION

ADMINISTRATIVE SECTION FOR THE HISTORIC STRUCTURE REPORT FOR THE LEMON HOUSE

I. ADMINISTRATIVE SECTION

A. The (Samuel) Lemon House, Structure No. 1, is located on U. S. Route 22, Cresson Township, Cambria County, between Cresson and Duncansville, Pennsylvania. The structure is historic and located within a National Historic Site. The building is considered to be of National Second Order of Significance. It is in Management Category "A."

B. The proposed treatment of the structure as recorded in the List of Classified Structures is restoration.

The approved general management plan proposed the construction of a shelter over the ruins of the nearby Engine House No. 6. The shelter would then become the focal point to tell the technological and mechanical story of the railroad. Shelter construction is programmed for fiscal year 1988 or later.

When the proposed shelter is constructed, and provided adequate documentation is available, four rooms on the first floor would be restored to represent the tavern trade conducted at the house from 1832 to 1860. A tavern room, parlor, kitchen, and dining room would be restored and refurnished on the first floor; and a tavern bedroom would be restored and refurnished on the second floor. The house would then not only tell the story of Samuel Lemon as a leading entrepreneur in Western Pennsylvania during the Portage Railroad era, but also will provide a focal point for interpretation of the social, cultural, and economic progress brought by the railroad.

The remainder of the house interior will be adapted into offices, exhibit rooms, restrooms, storage, utility, and meeting rooms. Until the Engine Room No. 6 shelter is built and sufficient evidence to support restoration and refurnishing is provided, the first floor will continue to be used to house exhibits dealing with the construction of the Pennsylvania Mainline Canal and the Allegheny Portage Railroad.

Exterior details of the structure will be restored: porches, doors, and trim. Landscape features within a 500' radius of the structure will also be restored in accordance with available documentation.

C. The General Management Plan for Allegheny Portage Railroad/Johnstown Flood approved July 2, 1980, outlines the above stated treatment for the Lemon House. Additional references include the Interpretive Prospectus and the Resource Management Plan, both of which are on review in the Mid-Atlantic Regional Office (MARO), and a Historic Furnishings Plan prepared by Anna Coxe Toogood under contract to Harpers Ferry Center, in July 1980.

D. The Lemon House is the only remaining above-ground structure in National Park Service (NPS) ownership which is directly related to the operation of the Allegheny Portage Railroad. It is within the Summit Level Unit of Allegheny Portage Railroad National Historic Site. This unit is identified in all planning documents as that unit which, because of its location, accessibility, and surviving historical resources, will function as the central point for telling the story of the construction, operation, and demise of the Portage Railroad. The Lemon House is the dominant visual feature of this unit and occupies a key location within it.

The Lemon House has sufficient integrity that architectural investigation should produce evidence to support accurate restoration of the rooms mentioned above.

E. The proposed treatment and use is in accord with documentary and physical evidence, with the condition of the structure, with the completed analysis section, and the NPS Management Policies.

A. LEGISLATIVE COMPLIANCE

All actions proposed must comply with the provisions of Section 106 of the 1966 National Historic Preservation Act and Executive Order 11593 as codified in the Regulations of the Advisory Council on Historic Preservation (36 CFR Part 800). Prior to a decision to implement any provisions recommended, these regulations require that all cultural resources in or near the project areas must be identified and evaluated in terms of the National Register Criteria of Eligibility. The evaluation must be done by appropriate professionals for the regional director in consultation with the State Historic Preservation Officer. Additionally, the Criteria of Effect and the Criteria of Adverse Effect (36 CFR Part 800.3a and b) must be applied by appropriate professionals for the regional director in consultation with the State Historic Preservation Officer and the Advisory Council procedures completed as appropriate.

THE LEMON HOUSE
II. ARCHITECTURAL DATA SECTION

A. INTRODUCTION

The Lemon House, as the principle structure at Allegheny Portage Railroad National Historic Site, has been used to its utmost. It has housed the park headquarters, visitor exhibits, visitor services, and a tenant apartment. The advantage to this has been that maintenance problems have been readily attended to. But the disadvantage has been the enormous pressure to have workable spaces, the modern finishes of which have interferred with architectural and preservation investigations. Furthermore, as all activities could not cease to turn over the building for a complete structural rehabilitation, this work has been piecemeal and protracted over a number of years.

This report is, therefore, not the final study to be made of the Lemon House. Because the present uses of the building have prevented detailed research on the architectural finishes of the original interior, this report does not include detailed recommendations for the restoration of the 1831 barroom, dining rooms, parlor, and bed chamber as called for in the project description of Package 102. Because the archeological studies pertaining to the missing exterior porches have in the opinion of this author not touched all the potential areas of investigation, this report only suggests possible forms of the porches and recommends further research.

What this report does do is present the state of architectural data on the history of the structure, including corrections of earlier reports. For instance, we now know that the west wing was built as a part of the original building, and was enlarged in 1900 to its present size.

What this report also does is to recommend the next phase in the structural rehabilitation of the house framing. It is hoped that along with the upgrading of the water and sewer systems, that structural reinforcement of the second floor, attic, and roof shall be carried out under a fiscal year 1981 contract (see Contract Drawings 423/41017A, Sheet S1).

With the completion of this work, the Lemon House will have reached a stage where it can utilize all its rooms without threatening the capabilities of its structure. With the present top quality interpretive exhibits on the Portage Railroad, the house ought to serve the park indefinitely as is.

When sufficient data has been gathered, a reconstruction of the exterior porches would give meaning to the floating first floor hallway door of the south elevation and provide the visitor a refreshment similar to that enjoyed by the original wayfarers.

For the long range when separate railroad interpretive facilities may be developed, the house interior could then be researched and restored to its historical appearance.

The papers and other data generated for this study will be boxed and placed on deposit at Allegheny Portage Railroad National Historic Site headquarters. It is hoped that this report and these materials will be a good reference for further research.

Acknowledgements

Research on the Lemon House was started by Historian Anna Coxe Toogood and Historical Architect Norman M. Souder in the early 1970s. Their work has provided a springboard for this study. Anna Coxe Toogood has guided the author through the use patterns of the occupants, and provided key early views of the house which have clarified architectural questions raised by evidence in the house itself.

Denver Service Center Historical Architect Shelly King Roberts began the study leading to this report. Her contributions particularly helped in the description of existing conditions and in gathering and analyzing paint color evidence. Denver Service Center Architect Jeffrey L. Bentz has coordinated the structural rehabilitation engineering process and prepared the contract documents for this next phase of work.

Lastly, the interest of the staff at Allegheny Portage Railroad National Historic Site has been most appreciated. They have also been helpful in opening up limited areas of the structure and then cleaning up and generally covering the tracks of the investigation. I would like to thank Chiefs of Maintenance Kevin Cann and Dan Ray for their help and that of their staffs; Chief Ranger Dean Garrett and Ranger Barry Zaffuto for their support; and particularly Chief of Interpretation Larry Trombello for his good job in interviewing past occupants of the house and for procuring copies of the old views.

To outgoing Superintendent James Zinck go my compliments for demanding a definitive case for substantiating this author's theory that the west wing was original. To newly appointed Superintendent Randall Cooley, go thanks for his immediate support and interest before even arriving at his new post.

Penelope Hartshorne Batcheler
May 1981

B. BRIEF CHRONOLOGY OF THE LEMON HOUSE

Except where noted, all entries are based on NPS Historical Data Section by Anna Coxe Toogood, 1972; and NPS Historic Furnishing Plan by Anna Coxe Toogood, 1980.

1826 Samuel Lemon purchased 286 acres 61 perches (including site of present Lemon House). He built a two-story log tavern next to the "Northern Turnpike" east of the summit of the Allegheny Mountains.

1831-32 Samuel Lemon built the substantial stone house known today as the Lemon House.

1834 Samuel Lemon and family lived in the Lemon House and operated the tavern serving passengers of the newly built "Allegheny Portage Railroad" as well as the wayfarers of the "Northern Turnpike." There was in addition to Lemon's tavern "a large and commodius hotel," located at the summit where the turnpike and railroad crossed.

1840 Samuel Lemon opened a vein of coal on his property. This provided wealth in the coming years.

1847 Samuel Lemon purchased a house in Hollidaysburg to which he moved his family. Taxes were not collected on the tavern for the next five years.

1848 A tax was collected for a "store" in the Lemon House. With the railroad declining in business, the store and his coal business apparently supplemented Lemon's income.

1854-55 A new railroad was completed which bypassed the steep planes of the old Portage Railroad. Local freight including the Lemon coal mines continued to use the old portage system.

1867 Samuel Lemon died on February 25, age 72. Two sons, John A. and Samuel H., inherited the stone house and property. A third son Robert, the eldest, had died previously. A daughter, Margaret A., was married and lived in Hollidaysburg. The Lemon House was now used in the summers by John A. Lemon and his family.

1878 The Pennsylvania Railroad Company leased land from the heirs of Samuel Lemon and a survey was drawn of the site showing the house, outbuildings (including the Engine House No. 6 which now served as a barn), fences, and coal structures.

1880 Samuel Lemon's wife Jean Moore Lemon died.

1882-92 Mrs. Katherine Glass and her husband were tenants for a short time living in the barroom. Their in-laws lived in the southeast parlor. The Glasses hung quilts over a pass-through from the bar to the central hall to keep down drafts. Mrs. Glass is quoted as remembering that the west wing held the kitchen, and wagons delivered goods to the cellar door. (Interview recording of Larry Trombello with Mrs. Zella Gailey, ALPO, March 1980).

1884-87 A photograph records the house with the original west wing and a roofed porch in disrepair at its south wall. No porch existed at this time along the south wall of the main house.

1893 A family portrait was taken at the main entrance with both John A. and Samuel H. Lemon present.

1895 John A. Lemon died intestate with Samuel H. as trustee of the estate.

1899 The heirs of John A. and Samuel H. disputed the disposition of the estate of John A. Lemon. Samuel H. acquired sole ownership of the stone house and surrounding land.

1900 The Engine House No. 6, which was used as a barn subsequent to the demise of the Portage Railroad, was torn down in this year. The old stone house having been neglected for many years, Samuel H. Lemon tore down the south and west walls of the old west wing and built a new larger wing. He redivided the second floor into small hotel rooms, added a new porch along the east gable end, installed new double doors at the main entry, a new fanlight sash in the east gable, and hung gutters and spouting along the north elevation. It is likely that he and his wife planned this to be one of the hotels in "the handsomest resorts in Blair and Cambria Counties" (Altoona Mirror, August 14, 1900). He was reported to have been making major alterations in the Johnstown Tribune, August 17, 1900.

1903 Samuel H. Lemon died willing the property to his wife Mary E. Lemon.

1907 Mary E. Lemon sold the property to Joseph A. Gray.

1907-12 Mr. and Mrs. David Claussen were tenants in the house, living in the west wing. Their kitchen was in the cellar. It had a wood floor, plastered walls, and trim. Their living room was at the west wing first floor and bedroom in the second floor. (Per interview with their granddaughter Mrs. Zella Gailey, ALPO.)

1908 Joseph A. Gray sold the property to W. J. Sherry.

1912 W. J. Sherry sold the property to Joseph and James Clyde Weston. The Weston's lived year round in the house (see plans of the house at this time as recalled in an interview with their granddaughter, Mrs. Jessica Walters, ALPO).

1933 After Mrs. Weston died her husband took in boarders and for their convenience installed the second bathroom on the second floor. (Per telephone conversation with Mrs. Jessica Walters, May 13, 1980.)

1943-61 James and Zella Gailey leased the house from the Weston's. They also took in boarders (see plans of the house at this time).

1954 The Lemon House and property were sold to Byron Roberts. The Gailey's continued to live there.

1961 The Byron Roberts moved into the house and made major alterations; adding a garage and new porch along the south side; filling in earth to raise the grade around the south elevations; a new porch was built at the northeast corner; a new front door installed with side lights; a new entry was cut through the north wall with exterior steps leading to a second floor apartment; a new cellar entrance was cut through the west wall; they made changes in the interior partitions and sanded the flooring of the first floor west rooms (see Drawing No. 423/26000).

1966 The property was condemned by the U. S. Government to create Allegheny Portage Railroad National Historic Site.

1970s The NPS removed the south and east porches, removed the garage, and reexcavated the old grades to expose the south cellar walls again. They installed park offices on the second floor, opening a new connecting door between the southeast chamber and the north hallway; and set up interpretive facilities and visitor services on the first floor. A new cedar shake roof was put on.

1979-80 The NPS reinforced the first floor framing, adapted the cellar with new toilets, storage rooms, and a conference room. They closed up the west exterior doorway into the cellar; and restored the front entrance doorway, the east gable fanlight, all the window sash and secondary doors, and repointed the exterior walls.

C. HISTORICAL ILLUSTRATIONS OF THE LEMON HOUSE

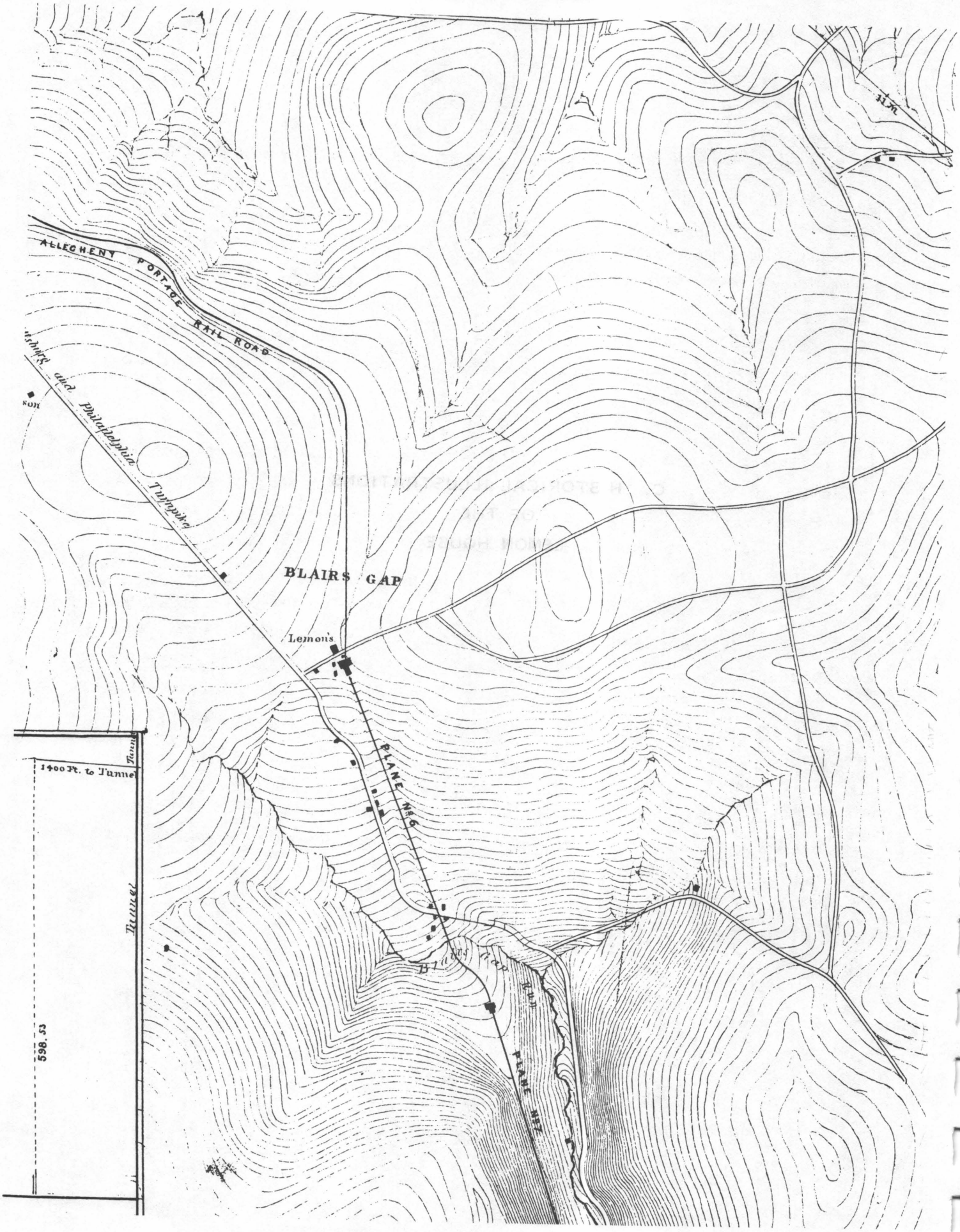

ALLEGHENY PORTAGE RAIL ROAD
Johnstown and Philadelphia Turnpike
BLAIRS GAP
Lemons
PLANE No 6
PLANE No 7
1400 Ft. to Tunnel
Tunnel
598.53

Illustration No. 1

Circa 1850-51 survey showing "Lemon's" tavern, the plane No. 6 Engine House and outbuildings. As on an 1840 land survey the Lemon House is shown without a west wing. The text of this report demonstrates that indeed a west wing existed and was part of the original building.

In addition to "Lemon's" stone house, Samuel Lemon's first log tavern is probably the structure shown along the "Pittsburgh and Philadelphia Turnpike" to the west.

Undated, this survey was titled: "Map of Road to Avoid Inclined Planes on the Allegheny Portage R. R. From the Tunnel (at Summit) to Duncansville, as surveyed by R. Faries C. E., Scale 1000 Ft to an Inch, The Contour Lines represent elevations of 10 Feet, Theo Franks."

The approximate date 1850-51 is from a pamphlet entitled: Notes on the Internal Improvements of Pennsylvania by Wittassell Wilson, C.E., and Reminiscences of the First Railroad over the Allegheny Mountain by Solomon W. Roberts C.E., Railway World, No. 423, Walnut St., Philadelphia, 1879., p. 43 (original given to park collection by the author in 1981).

The original of this map is in the Pennsylvania State Archives, Harrisburg, Map Book 13, a, b, and c. A photostat negative and positive is in the park files.

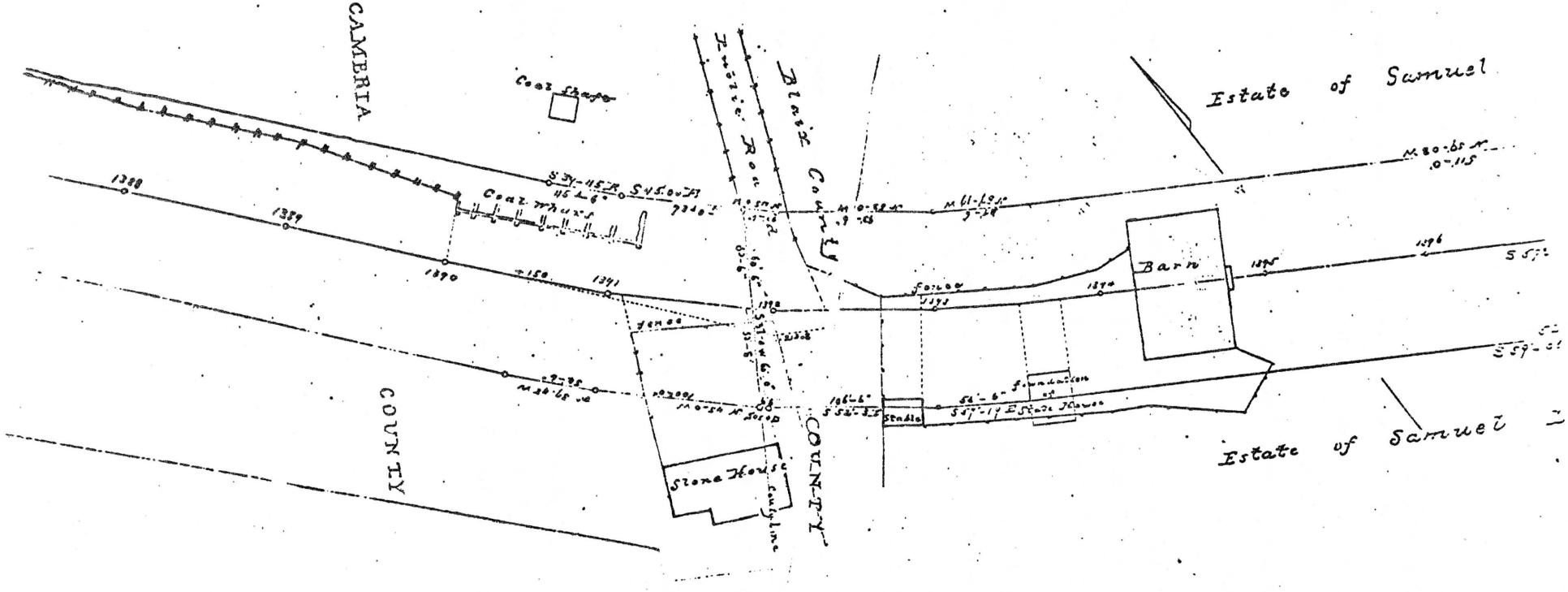

CAMBRIA
COUNTY
Blair County
Estate of Samuel
Estate of Samuel
Barn
Stone House
Coal Shaft
Coal Shaft
Stable
1388
1389
1390
1391
1392
1393
1394
1395
1396
150
115
S 39-45 E
S 45-0 W
N 44-15 W
N 80-65 W
N 11-19 W
S 59-0 E
S 58-30 E
S 31-0 W
N 30-30 W
N 50-0 W
N 22-45 W
S 59-0 E

Illustration No. 2

Portion of survey, 1878, made for a lease between the Pennsylvania Railroad and the heirs of Samuel Lemon.

This survey drawing was made with a degree of accuracy and attention. It notes right-of-way dimensions and the position of the county line which runs right through the east end of the Lemon House. However, it is not exactly to scale, at least the known overall dimensions of the Lemon House do not compare graphically with the house as drawn.

Indeed, for the last decade this house outline has been interpreted to indicate that the west wing as it stands today had been built just prior to this survey. As the rest of this report explains, this interpretation no longer holds. What is undoubtedly seen here is the house as originally built including the projection of the porches on the south side of the original west wing which survived to be recorded here and in the subsequent c. 1884-87 photograph.

Also of significance in this survey is its record of outbuildings, fences, roads, and the features of the Lemon coal mining business. The structure labeled "Barn" was the old "Engine House No. 6."

Next westward were the "foundations of State House," possibly the residence/office of the old railroad manager. It is conceivable that these foundations were incorporated in those of the present barn which was built between 1884-87 and 1900 when the Engine House No. 6 was torn down.

The "stable" structure can be seen in the 1884-87 photograph beyond the house.

The map was found by Historian Anna Coxe Toogood in the Blair County Court House, Hollidaysburg, Pennsylvania. See Historic Structures Report, Historical Data, Lemon House, Toogood, 1972, p. 29, f. 41.

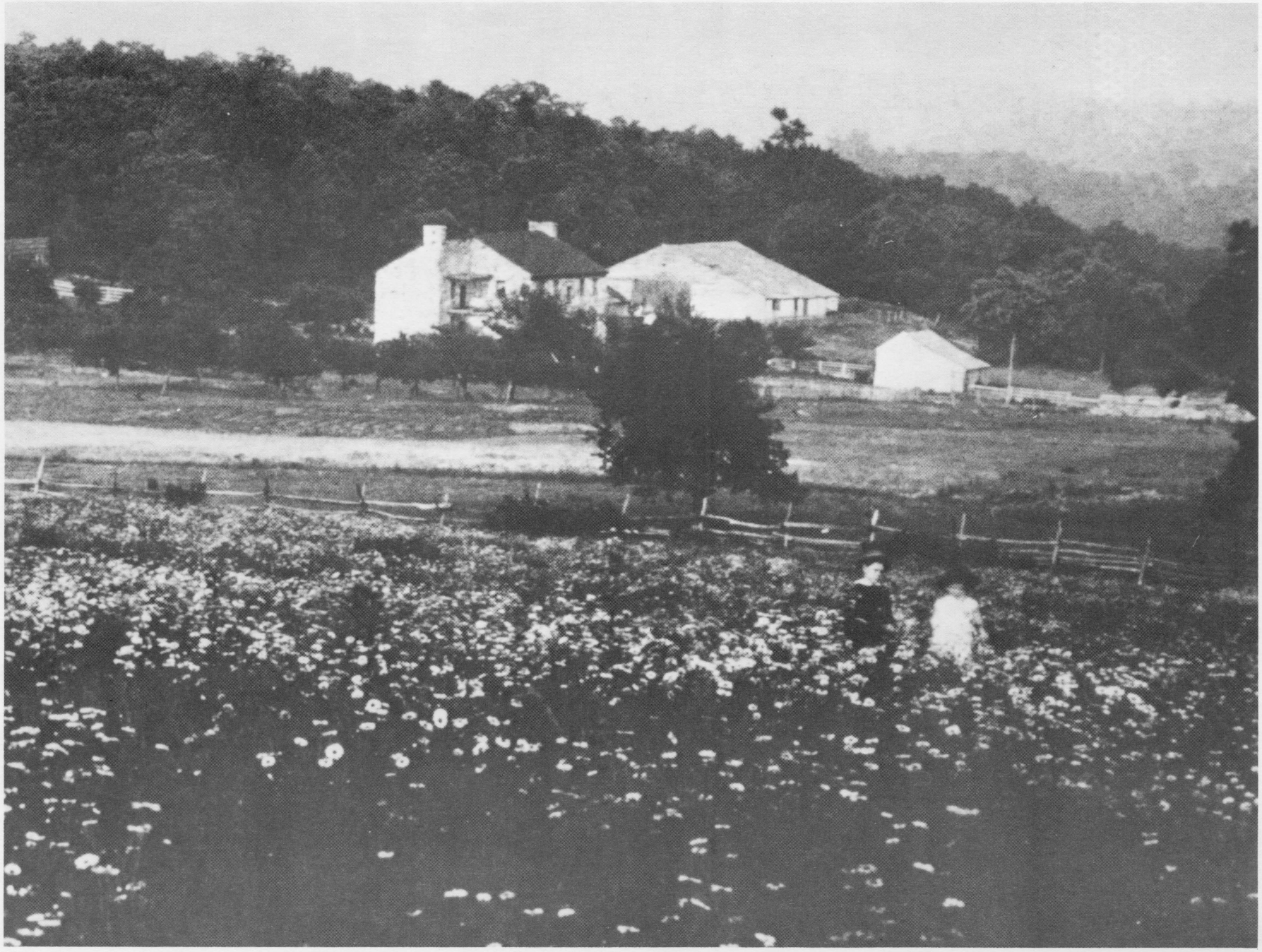


Illustration No. 3

Circa 1884-87, enlarged detail of photograph of the Lemon House from the southwest. (Park copy negative.)

This is the earliest known photograph of the Lemon House. Shown also is the Engine House No. 6 beyond, and between the two is to be seen a corner of the stable.[1] The use of the other outbuilding to the south of the house is as yet unknown.

The significance of this photograph is that it shows the Lemon House west wing in its original form. Contrary to previous reports on the Lemon House we know now that the west wing was built along with the main house, but as this photograph shows, it was a smaller structure than it is today and included a roofed porch at the first and second floor levels. The text and Appendix 3 of this report elaborates on all the evidence behind this conclusion.

There is one detail shown in this photograph which establishes that the three succeeding photographs were all taken while the west wing was still in its original smaller form. Note that the west wing chimney is definitely smaller in its north-south length than the main house chimney which is further away.

The main house chimney holds four flues from the four fireplaces at that end of the building. This west wing chimney could have, therefore, contained only three flues from cellar, first, and second floor fireplaces.

The brick chimney discussed in later photographs does not appear here. Apparently at this time it was not used and was capped under the roofing.

---

1. The structure is shown to be the stable if one superimposes the angle of the camera view onto the 1878 survey between the Pennsylvania Railroad and the Samuel Lemon heirs (Blair County Court House), Illustration No. 2.

The original print of this photograph is at the Cambria County Historical Society, 521 West High Street, Ebensburg, Pennsylvania 15931, (814) 472-6674, Lemon House Collection. The original was donated by Mr. Paul Kane of Ebensburg[2] whose grandmother was the little girl in the foreground, Annie Adelsberger, born c. 1880, died 1960. Annie and her brother, also shown, were born and raised in Cresson, Pennsylvania, where Annie eventually married Angus Condron.

The original print is mounted on cardboard (4" by 5") which has the date 1887 rubber stamped and the number "78-2-1-F" written in ink on its back side. A 1980 photographer's processing number is also to be found on the cardboard.

---

2. Mr. Kane works for the Laurel National Bank, Ebensburg, (814) 472-8400.



Illustration No. 4

Circa 1893 portrait of the Lemon family at the front (north) entrance of the Lemon House. (Park copy negative.)

This photograph is important in that it shows original details of the front entrance. The recent restoration incorporated what could be seen such as: the exterior trim with corner blocking similar to the extant interior trim; the transom bar flush with the exterior wall face; and the side lights with panel below. Note the herringbone brick walk which is square to the house and laid next to the house wall.

The older gentlemen shown are the sons of Samuel Lemon, Senator John A. standing at left, and Samuel H. at right.

This photograph was made available to the NPS by the great grandson of Senator John Lemon, Mr. Joseph P. Gifford, 2305 Harvard Avenue, Box 325, Camp Hill, Pennsylvania 17011, (717) 737-9666.

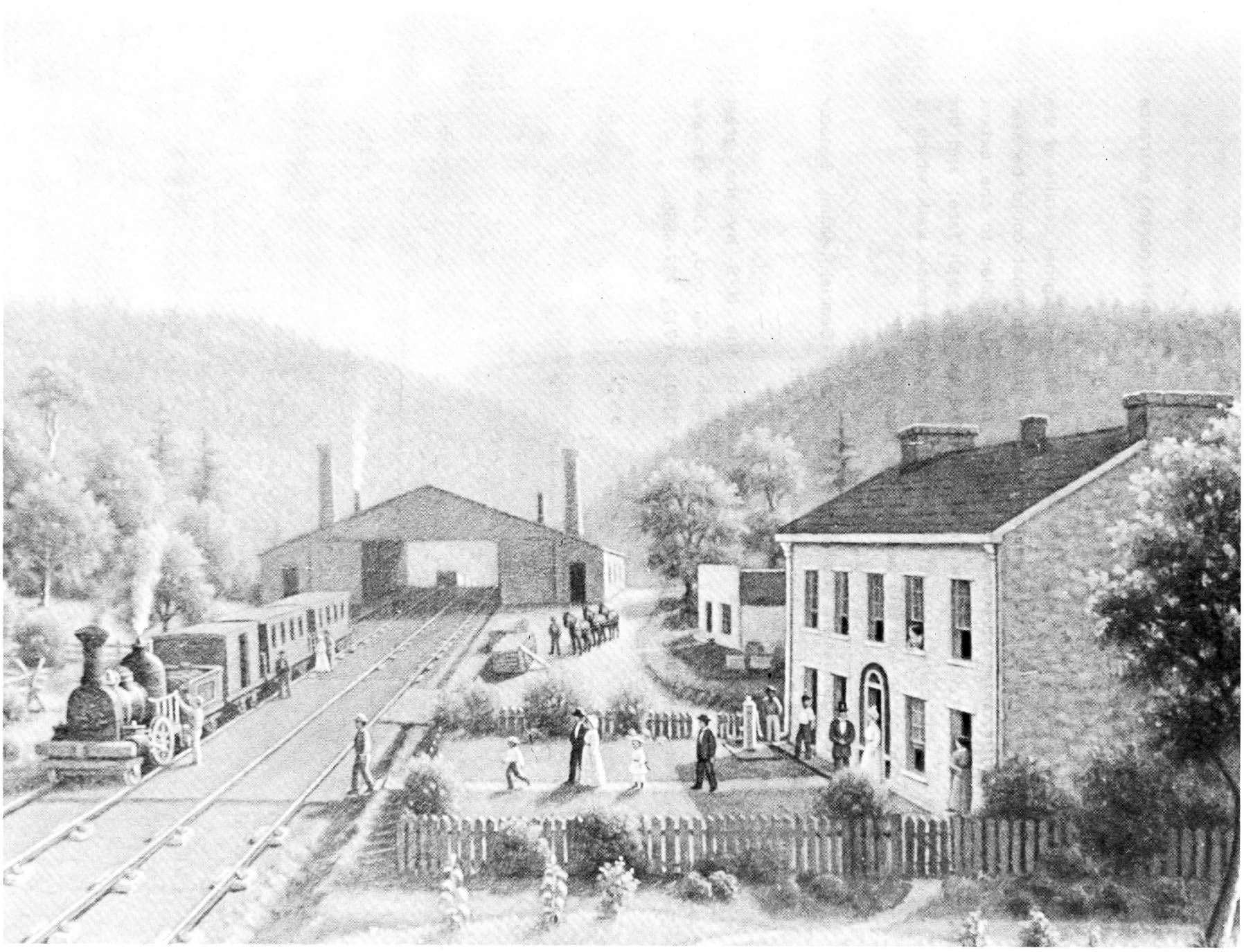


Illustration No. 5

Circa 1898 oil painting of Lemon House by George W. Storm. (Park copy negative.)

This painting of the Lemon House has been misleading. The artist took license with his presentation probably in the interest of simplifying his task. The house is presented as a symmetrical five bay facade with matching stone chimneys at the end gables.

The question one might ask is, what is the brick chimney shown in the center of the roof? As the text and Appendix 3 of this report discuss, Storm apparently showed the existing number of chimneys of the house but left off the two extra bays which the west wing contains.

The original of this oil on canvas is in the collection of the William Penn Museum, Harrisburg, Pennsylvania, Catalogue No. 05.209.2, donor unknown.

George W. Storm was born in Johnstown, Pennsylvania, c. 1826. He had a studio in Harrisburg, c, 1890-1913, when he died. He is known in this period to have painted many large landscapes from memory and photographs.[3]

This view was published in "The Evolution, Decadence, and Abandonment of the Allegheny Portage Railroad" by William Bender Wilson, in the Annual Report of the Secretary of Internal Affairs of the Commonwealth of Pennsylvania, 1898-99, Part IV: Railroad, Canal, Navigation, Telegraph and Telephone Companies, State Printer, 1900, Harrisburg, Pennsylvania, XXXIX - XCVI.

---

3. Telephone conversation with Curator Wenner of the William Penn Museum, May 14, 1980.

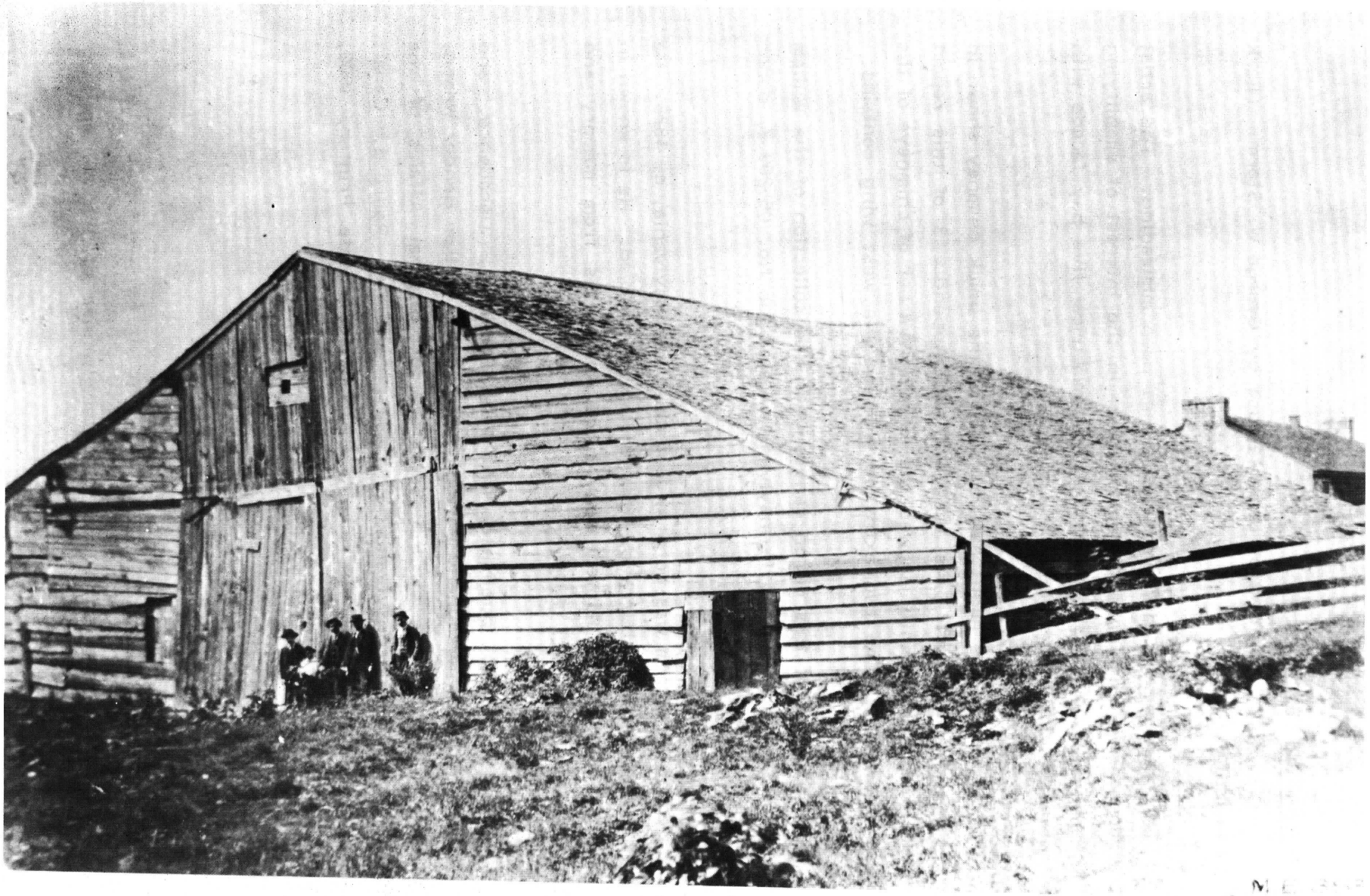


Illustration No. 6

Pre-1900 (1902?) view of Engine House No. 6 with the Lemon House in the background. (Park copy negative.)

This is a splendid record of the old Engine House No. 6 in its last days when it served as a barn.

Although not much of the main house shows beyond, this view does establish that the brick chimney was present along with the smaller chimney of the original west wing.

This view is marked M. E. 3531 in the lower right hand corner. It seems to have been taken by the same photographer, and at the same time, as the next view of the north front of the Lemon House. Note the mass of dark ivy on the house front in both views.

The original prints of this view and the next are owned by John D. Ribblett, RD No. 2, Box 471, Hollidaysburg, Pennsylvania, (814) 695-8129. He does not know the circumstances for the photographs being made. His family collected them along with other railroad memorabilia. The notation on the back of the photograph reads in ink:

"Allegheny Portage RR
Head House
Top of Plane No. 6
1902
'Lemon House' in background"

The 1902 date is disputed by Historian Anna Coxe Toogood as she has found documentation that the Engine House No. 6 was torn down by 1900.[4]

---

4. The December Term 1900 Orphans Court Records, Docket Partition No. 2 records say that the old Engine House No. 6 had been used as a barn and was "now gone."

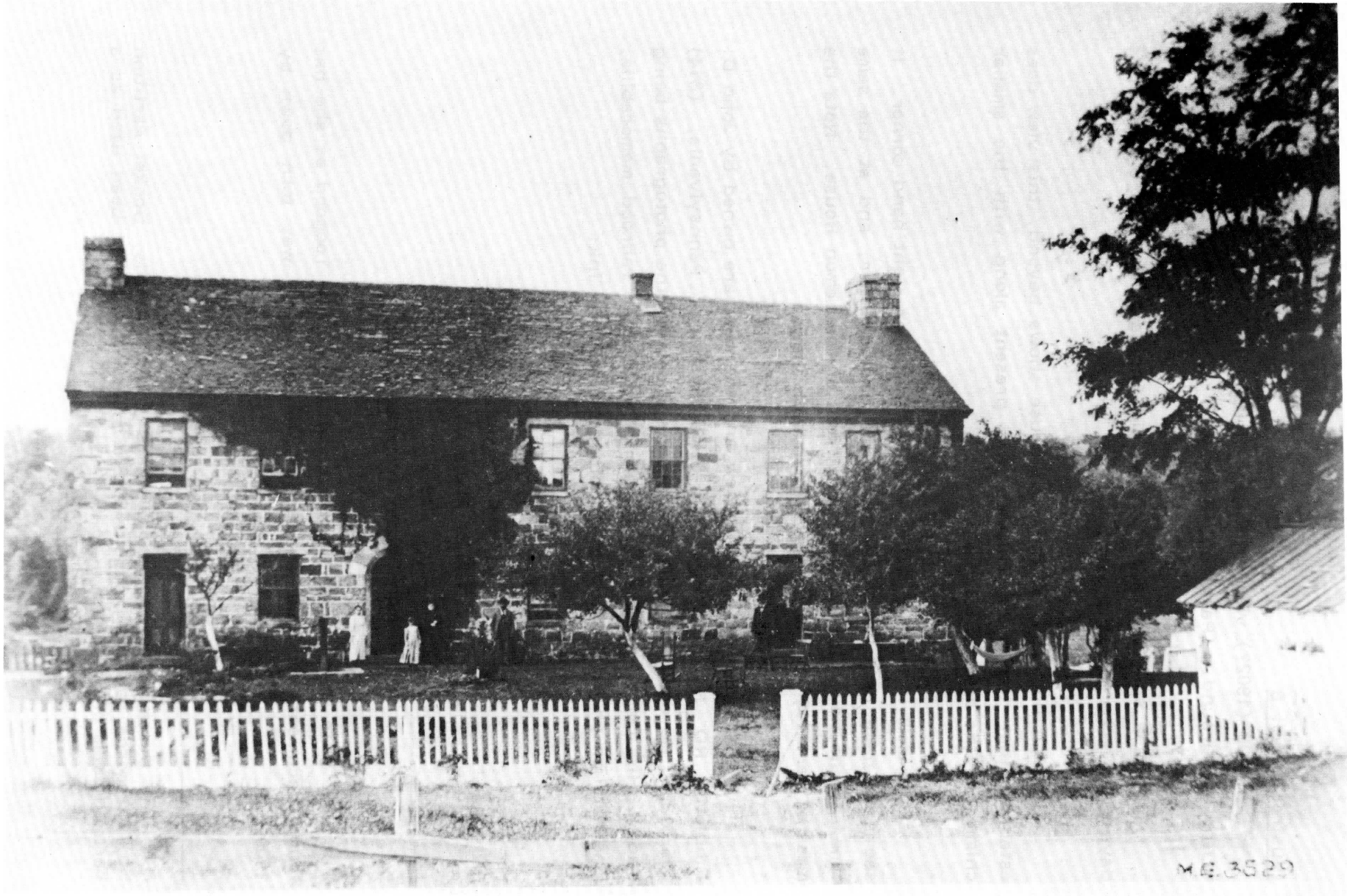

ME.3529

Illustration No. 7

Pre-1900 (1902?) view of north front of the Lemon House. (Park copy negative.)

The ink marking "ME 3529" in the lower right corner of this photograph relates it to that of the Engine House No. 6 (Illustration No. 6) marked "ME 3531." They were probably taken by the same man at the same time. Note in both cases there is a dark mass of ivy on the wall.

This view records the brick chimney on the south slope of the deteriorated roof with a trap door on the north slope, both immediately flanking the ridge. Framing for this trap door still exists, and the present brick chimney has the same position. This evidence and the view of the brick chimney along with the smaller chimney of the original west wing (per companion photograph of the Engine House No. 6) helps in establishing the originality of the brick chimney.

This view is also significant as it shows details of the yard: the pump, a square shaft with handle projecting eastward (i.e., spout to south), and platform around it; the garden grades eastward and westward from the highest point outside the old dining room (northwest) windows; the grade at the barroom door several inches below the stone door sills; six or so fruit trees with whitewashed trunks; no gutters or downspouts on the house; the walk full length of the house placed up against the wall (which helped drain rainwater away from the house walls); a bench on the walk at the west wing; a hammock between two trees and other household chairs grouped near the west wing; a whitewashed picket fence along the north side of the yard with a post and rail fence parallel and still north of it; a whitewashed and slab roofed outbuilding in the northwest corner of the garden, with the rewards of a hunting trip nailed to its east wall; and a whitewashed vertical board fence descending the hill beyond the west wing.

The original print of this photograph is owned by John D. Ribblett, RD No. 2, Box 471, Hollidaysburg, Pennsylvania. It is part of a family railroad memorabilia collection. The back of the print has written in ink:

"Allegheny Portage RR Lemon House near top of Plane #6 1902 near wagon road leading south from Gallitzin which intersects with new state road East of Cresson Sanatorium." Historian Anna Coxe Toogood disputes the 1902 date for the companion photograph of the Engine House No. 5 and thus for this one also (see explanation in Footnote 1 of Illustration No. 6).



Illustration No. 8

Undated photograph of the Lemon House from the northeast. (Park copy negative, source of photograph unknown.)

This view is perhaps the last taken of the Lemon House before the west wing was altered. Note that the original west wing small chimney is still in place, and the brick chimney very near the ridge still projects above the roof ridge.

The east gable fanlight sash has been closed over, and everything looks in a state of neglect. The pump is leaning over; the nearest fruit tree is limbless; and the picket fence is shabby.

What shows clearly is the two-toned paint color treatment of the door panels with contrasting stiles and rails. To be seen through the picket fence is a railed platform of some sort in front of the barroom east door.

Published by Strouse Photo Co

OLD STONE HOUSE, CRESSON, PA. 7991

Hi Mother, Dad, Jim & Doris
We are on Pleasure
Trip on Rt 10
Frances

Illustration No. 9

Picture postcard of the Lemon House, view from the northeast. There are two known copies, one postmarked 1903 and one postmarked 1908.

Sometime between c. 1900-08 the Lemon House was renovated, apparently by Samuel H. Lemon who acquired undivided ownership of the property from his brother's estate in 1899.[5]

From this view the renovations included: expansion of the west wing with its new larger chimney; a new porch at the east end; new double doors covering the full width of the front entrance; a new east gable fanlight; a hanging gutter with downspouts on the north facade; a new pump on a platform; a new jog in the walk leading to the porch steps; and a new picket fence with capped box gate posts.[6] The photographer was standing so close to the house that the material of the main roof is not discernable, although the new porch looks to have wood shingles. Unfortunately, the enlargement of the postcard has cropped off the southeast corner of the porch including the wood post and the square stone pier below.

The 1908 postmarked copy of this card is in the Postcard Collection MG-213, Cambria County Section, Division of Archives and Manuscripts, Pennsylvania Historical and Museum Commission, Box 1026, Harrisburg, Pennsylvania 17120. This card is marked: "OLD STONE HOUSE, CRESSON, PA. 7331," "Published by Cresson Pharmacy," and on the address face, "George V. Miller & Co., Publishers, Scranton, PA."

The 1903 postmarked copy is owned by Mr. John P. Gifford, great great grandson of Samuel Lemon.

---

5. See Toogood, Historical Data Section, 1972, "The Lemon House as the Subject of a Family Dispute," pp. 36-38.

6. There is a very good view of the north facade in this period on p. 183, in The Architectural Heritage of Early Western Pennsylvania, by Charles Morse Stotz, University of Pittsburgh Press, 1966.

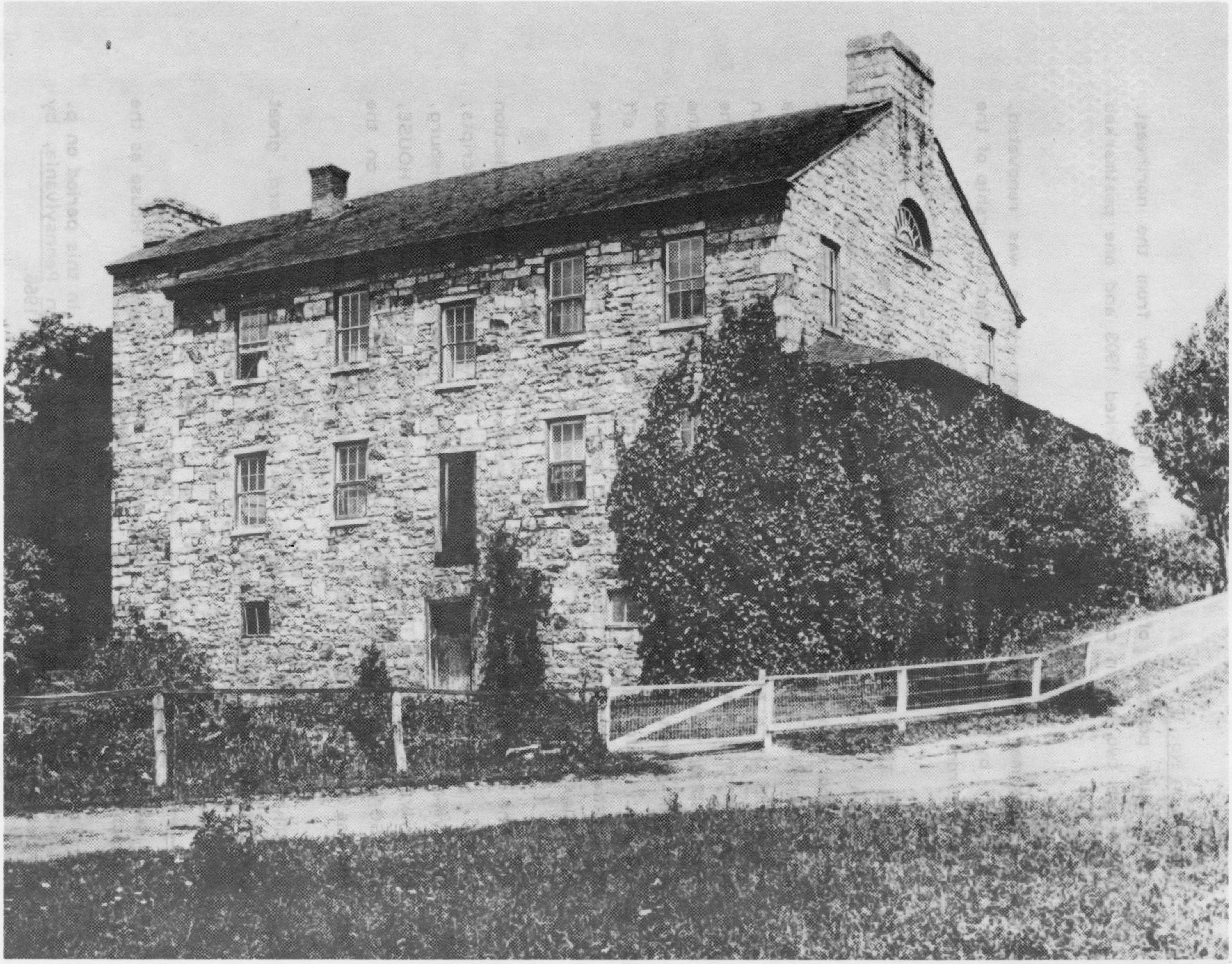


Illustration No. 10

Post-1903 - pre-1933 photograph of the Lemon House. (Park copy negative, source unknown.)

This photograph is particularly important in that it shows that the upper courses of the brick chimney have been rebuilt with contrasting brick probably when the west wing was enlarged c. 1900. It also shows that both the main house and porch had wood shingles.

This is the earliest view we have of the cellar openings. Note these windows are small and square meant to be hidden by the missing south porch. Note also that the cellar door has a solid wood frame, it opens in, is of vertical boards probably with battens, and, at this time, apparently has a single light window in its upper half, the bottom of which projects out of the shadow made by the sun.

The picket fence has been replaced by a galvanized wire screen fence with a gate and path leading to the cellar entrance.

The next illustration explains why this view pre-dates 1933.

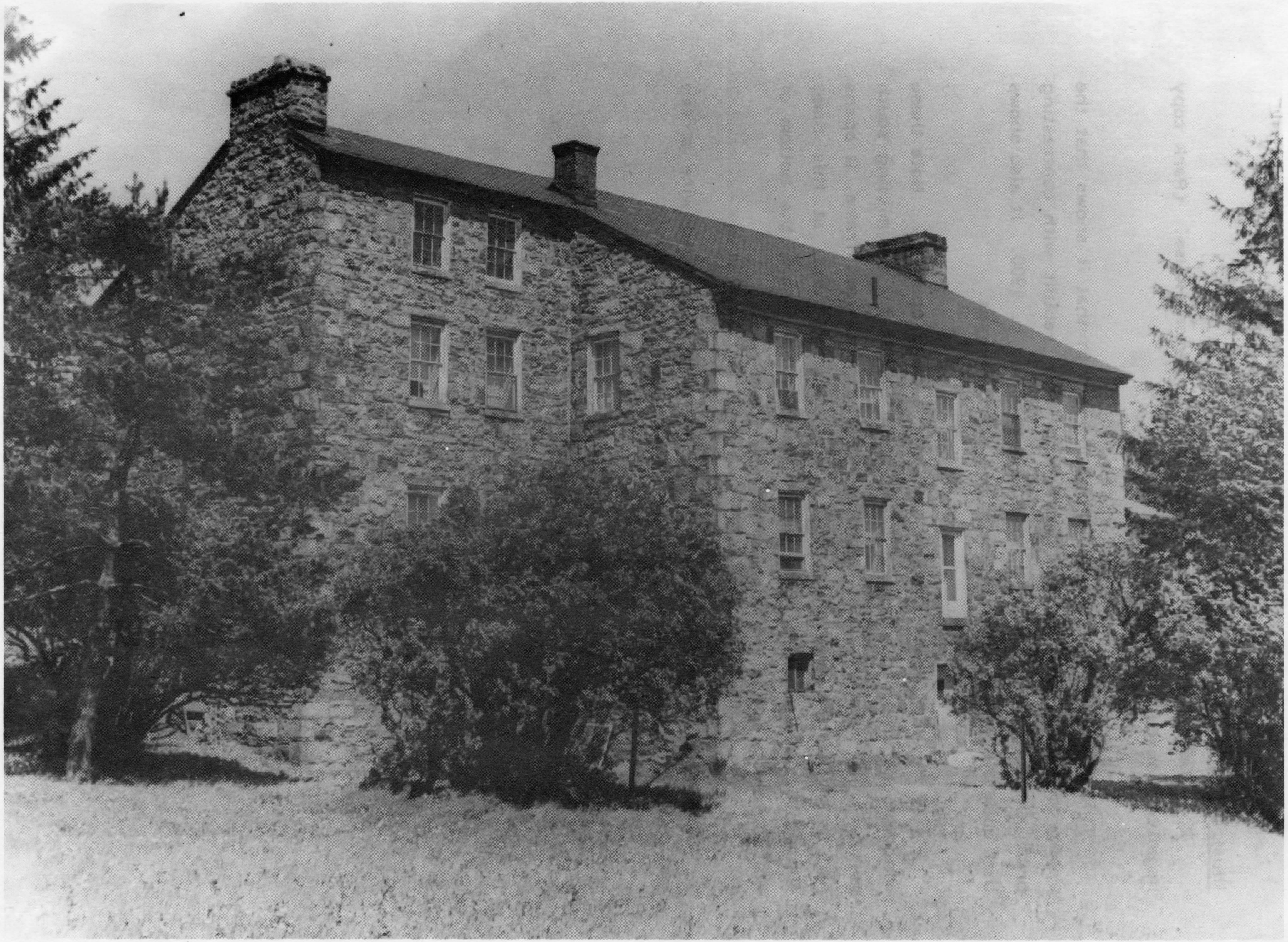


Illustration No. 11

Post-1933 photograph of the Lemon House from the southwest. (Park copy negative, source unknown.)

An interview with Mrs. Jessica Walters, granddaughter of the 1933 owner of the Lemon House, Joseph Weston, explains that her grandfather upon his wife's death in 1933, started to take in tourists. It was for their convenience that he added a bathroom at the second floor southwest room, which explains the soil vent pipe shown here projecting through the roof at that location. Apparently, Mr. Weston also replaced the shingle roof with some sort of asphalt or asbestos roofing material.

Note that the cellar door still has the single light window in its upper half. And the grade is at least 6" below the cellar floor with a chunky stone step outside the door.

For other views of this era see the survey by Charles Morse Stotz for The Early Architecture of Western Pennsylvania, Art Department, Carnegie Library of Pittsburgh, 4400 Forbes Avenue, Pittsburgh, Pennsylvania 15213, listed under Cambria County, photographs C1-12, a-e. These include two good views of the 1900 double entrance doors; the north sidewalk laid with herringbone pattern laid perpendicular to house wall; the grade changes; and the downhill slope around the west wing starting right at the north entrance to the west wing.



Illustration No. 12

1948 photograph of the Lemon House from the southeast. (Copy negative NPS, 5256 Port Royal Road, Springfield, Virginia 22151, Graphics Division.)

Again a south view shows us the single lighted cellar door, the small square windows, and the low grade at the cellar entrance.

The east porch by this time was supported on wood posts at its south end. Their foundations were stones. But interestingly there are a series of stones following the south edge of the porch back to the house wall. These may be the stones found by the 1980 archeological excavation. They hint at there once having possibly been a series of stone walls supporting an east wall extension of the original south porch.

This photograph was made by the Altoona Mirror on May 20, 1948.

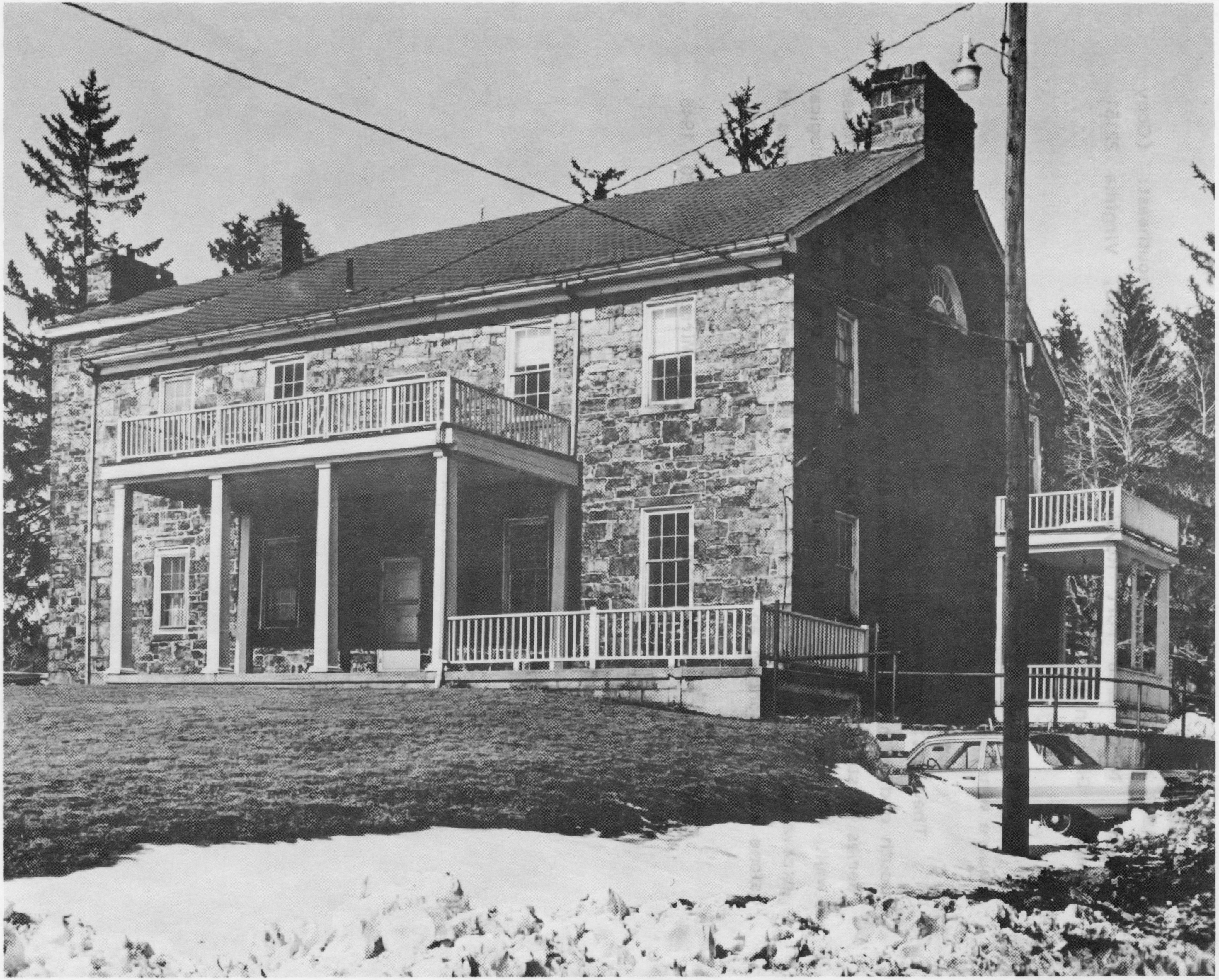


Illustration No. 13

1968 photograph of the Lemon House from the southeast. (Copy negative NPS, Graphics Branch, Springfield, Virginia.)

Byron Roberts and his wife Florence acquired the Lemon House in 1954 and proceeded to make major changes to the grades, installing this underground garage, new south and east porches, and generally modernizing the interiors.

The NPS acquired the house in the year this photograph was taken, and proceeded to strip the house of the exterior porches, garage, and built-up grading. No archeological/architectural surveillance was performed thus probably destroying what otherwise may have been fruitful evidence of the early porch foundations.

This photograph was taken for the Johnstown Tribune Democrat by Barndt, February 25, 1968.

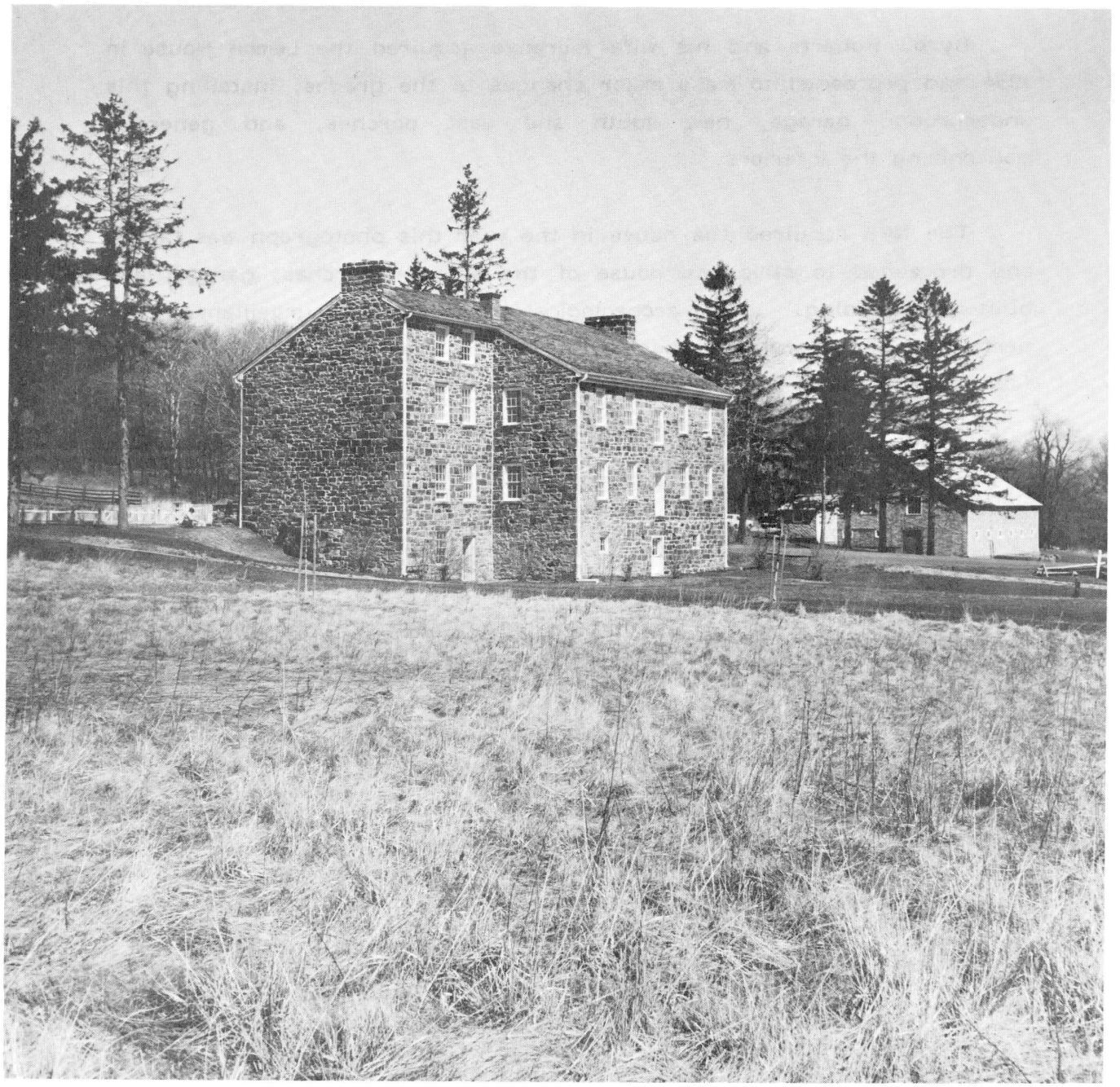


Illustration No. 14

A 1980 photograph of the Lemon House from the northwest by Penelope H. Batcheler.

This view was taken primarily for comparison with Illustration No. 3, to demonstrate the difference between the original west wing and the structure we have today.

In the author's opinion the floating south doorway and stripped appearance of the house calls for a reconstruction of the main house south porch, providing sufficient evidence can be gathered to make a convincing drawing.



Illustration No. 15

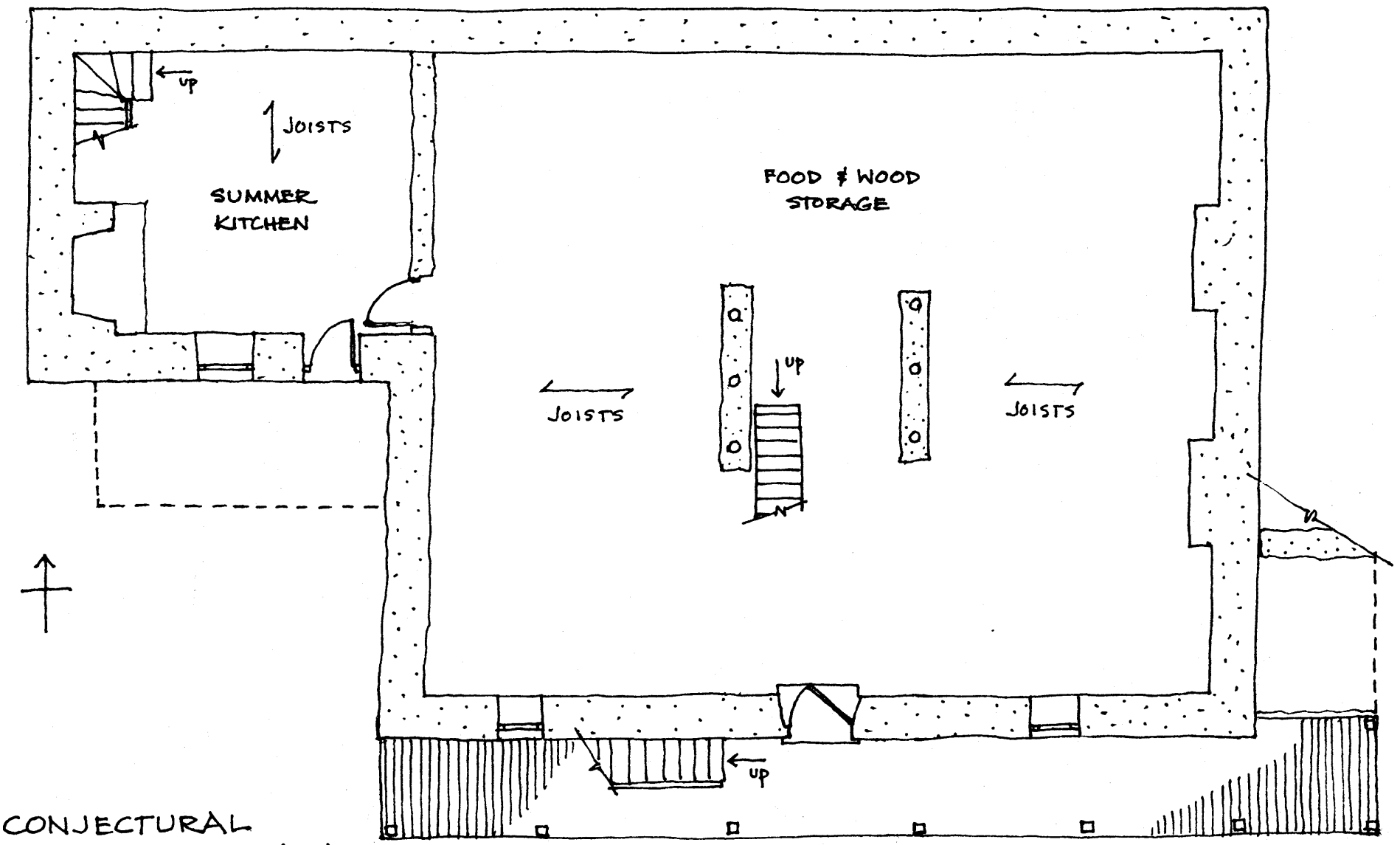
A 1980 photograph of the Lemon House east facade, by Penelope H. Batcheler.

Recorded here is the NPS built wood platform leading to the barroom door. The stone piers supporting the framing are apparently original according to archeological studies.

The gable fanlight shown is a recent NPS reconstruction.

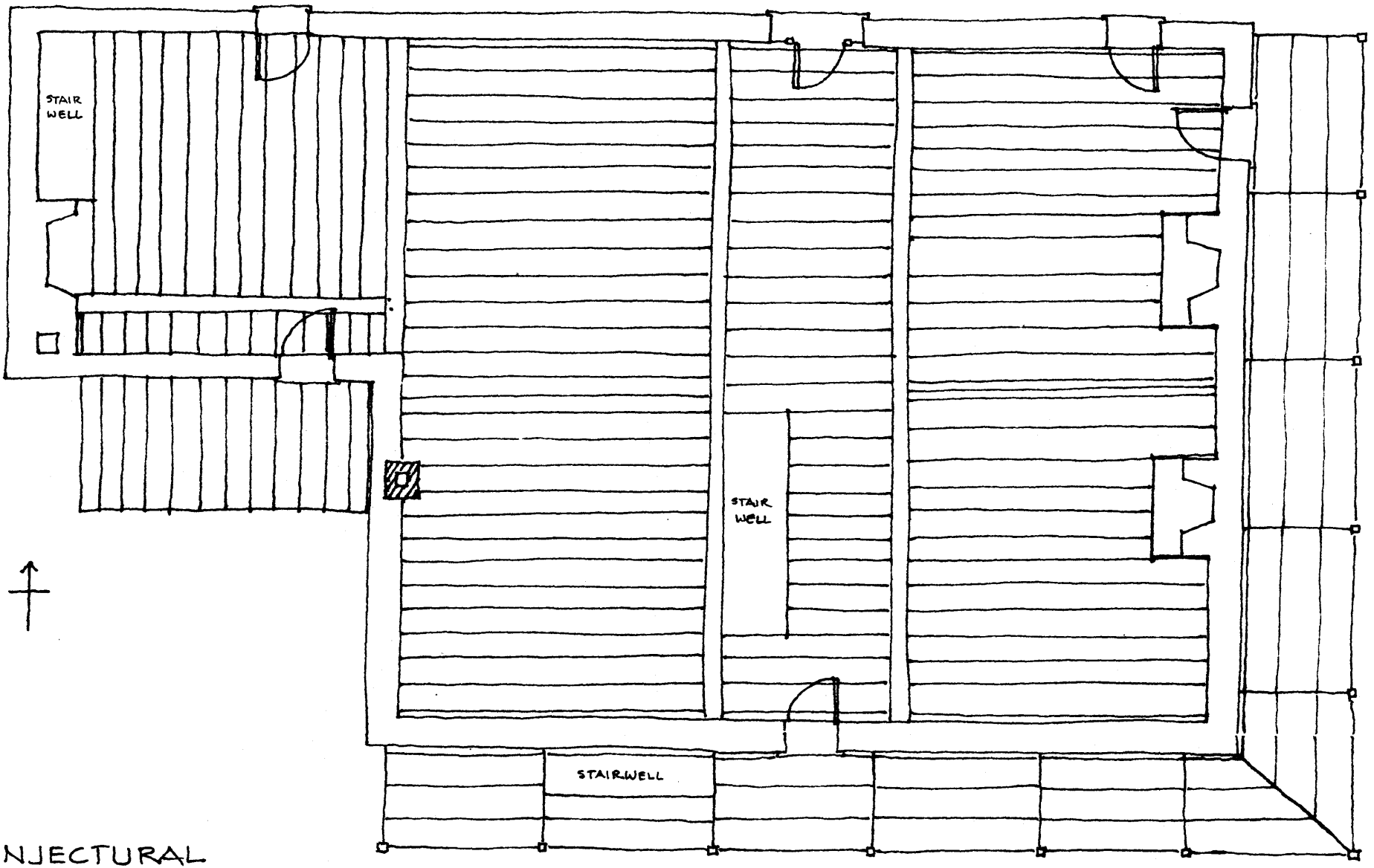
The porch roof outline is that of the 1900 porch. It is a question, however, whether originally porches on both the south and east walls did not connect. Definitive archeological study is needed on this point.

D. CONJECTURAL 1831-99 PLANS AND ELEVATIONS



CONJECTURAL
CELLAR FLOOR PLAN — 1831-1899
LEMON HOUSE ALPO

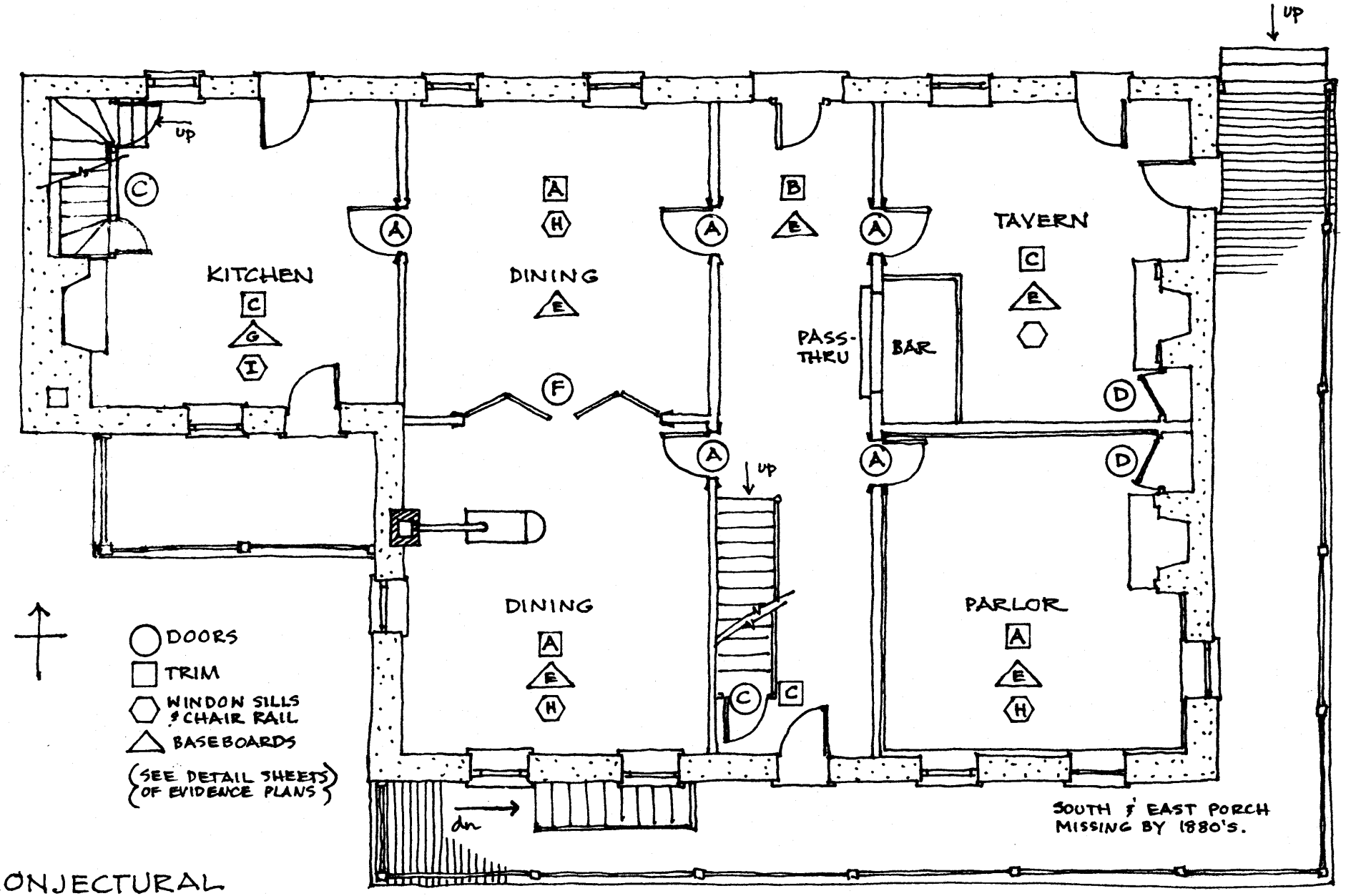
PHB DEC. 1980



54

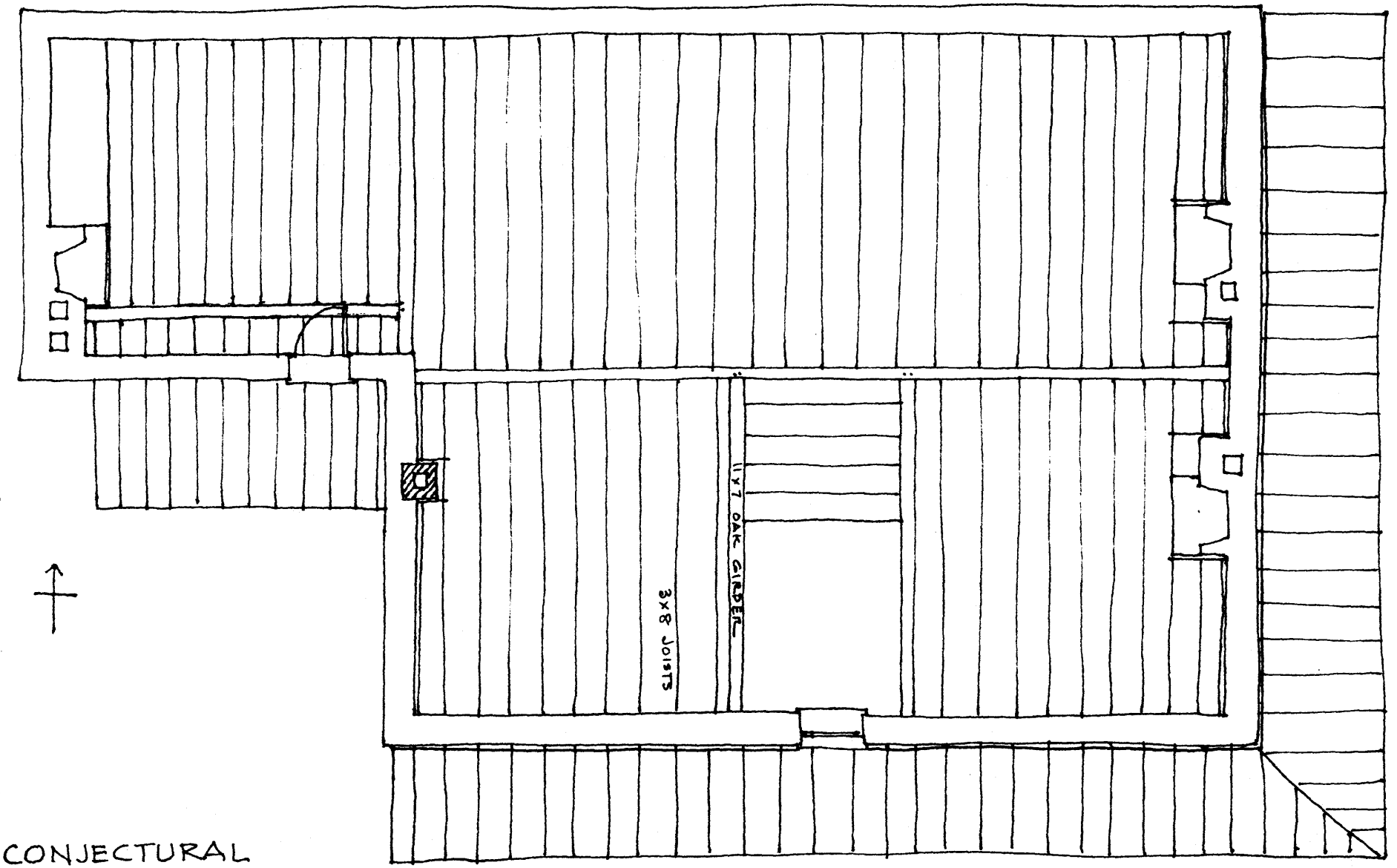
CONJECTURAL
FIRST FLOOR FRAMING — 1831 - 1899
LEMON HOUSE ALPO

PHB DEC. 1980



CONJECTURAL
FIRST FLOOR PLAN — 1831 - 1899
LEMON HOUSE ALPO

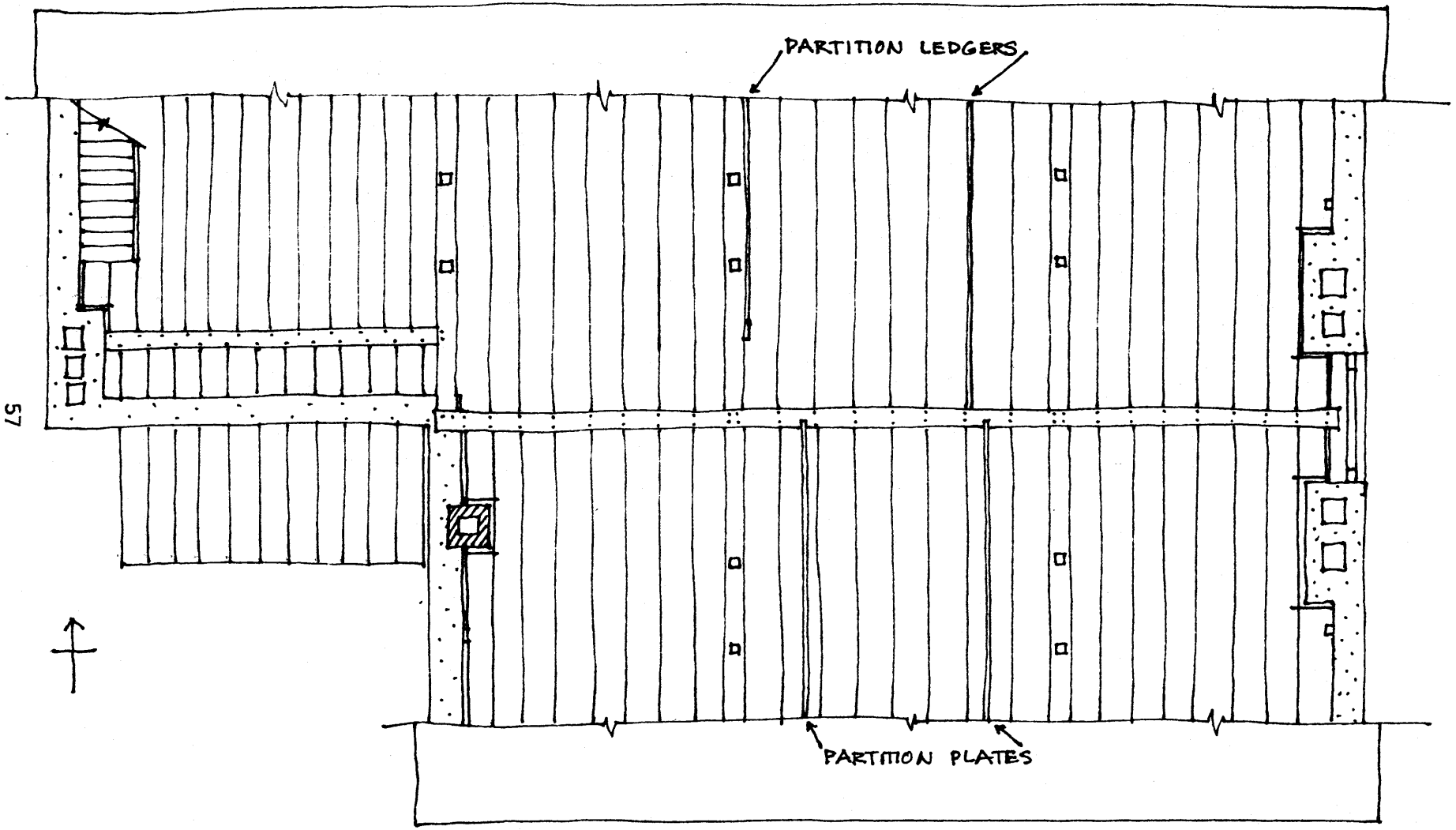
PHB DEC. 1980



56

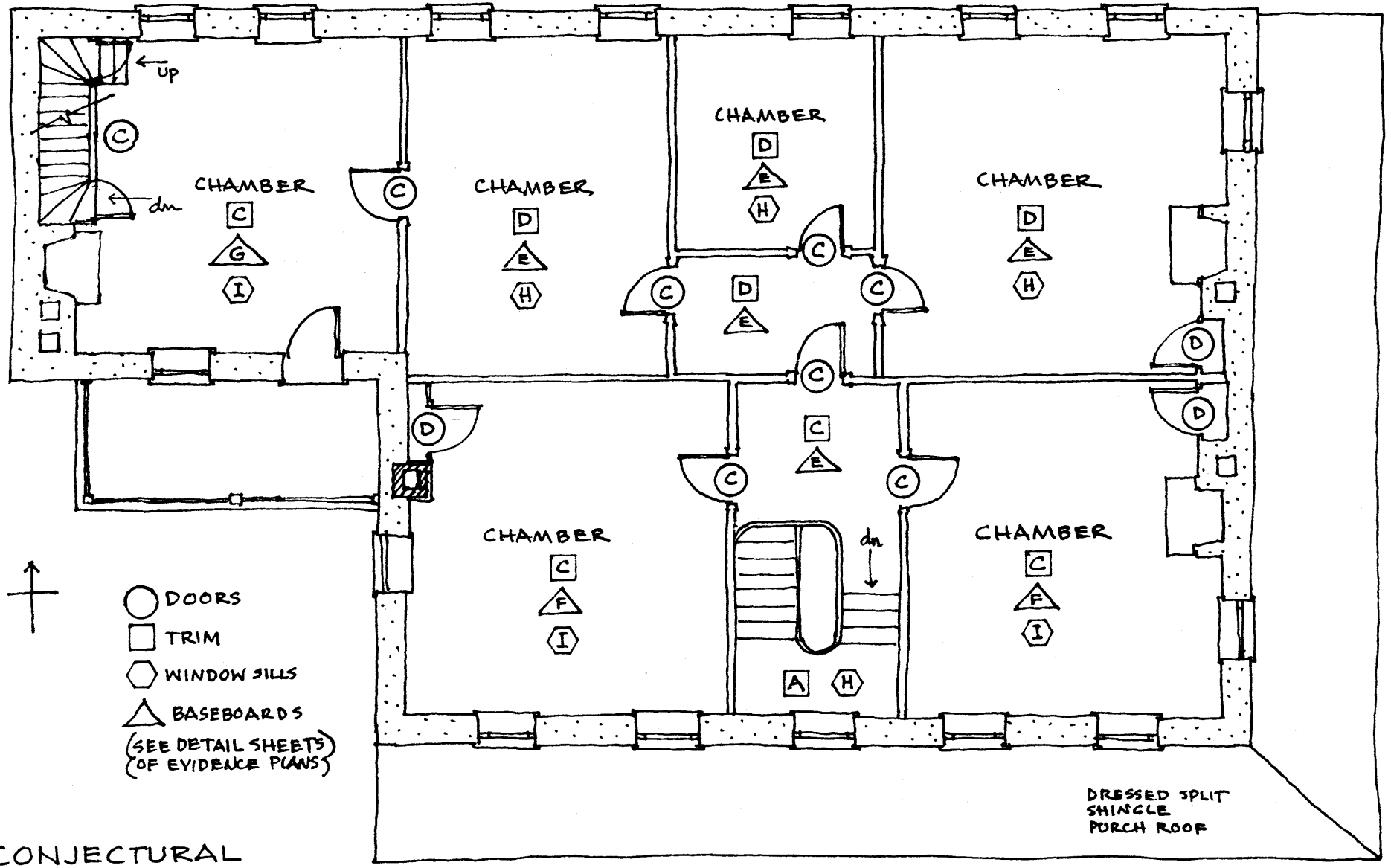
CONJECTURAL
SECOND FLOOR FRAMING — 1831- 1899
LEMON HOUSE ALPO

PHB DEC. 1980



CONJECTURAL
ATTIC FRAMING PLAN — 1831-1899
LEMON HOUSE ALPO

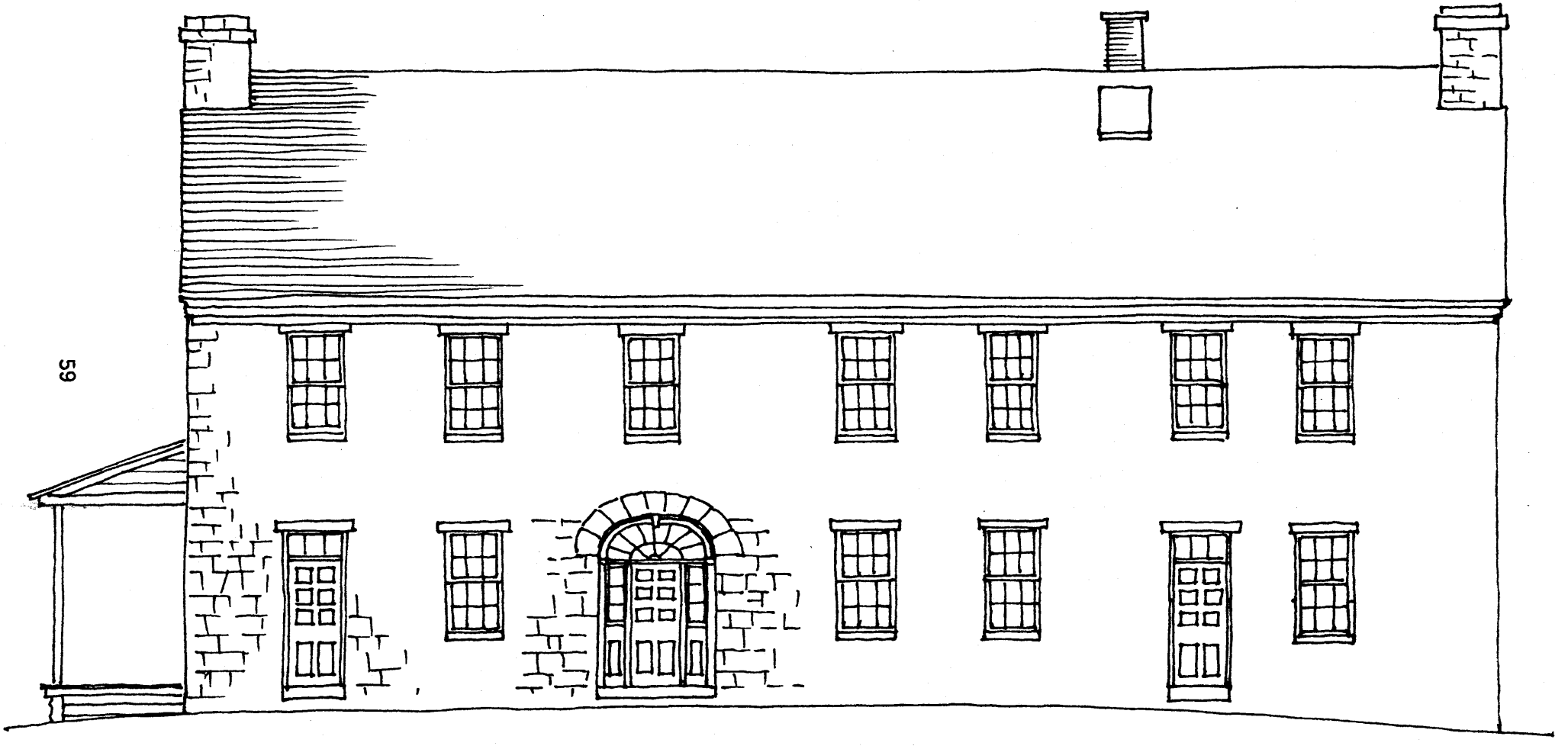
PHB DEC. 1980



58

CONJECTURAL
SECOND FLOOR PLAN — 1831 - 1899
LEMON HOUSE ALPO

PHB DEC 1980



CONJECTURAL
NORTH ELEVATION —— 1831- 1899
LEMON HOUSE ALPO

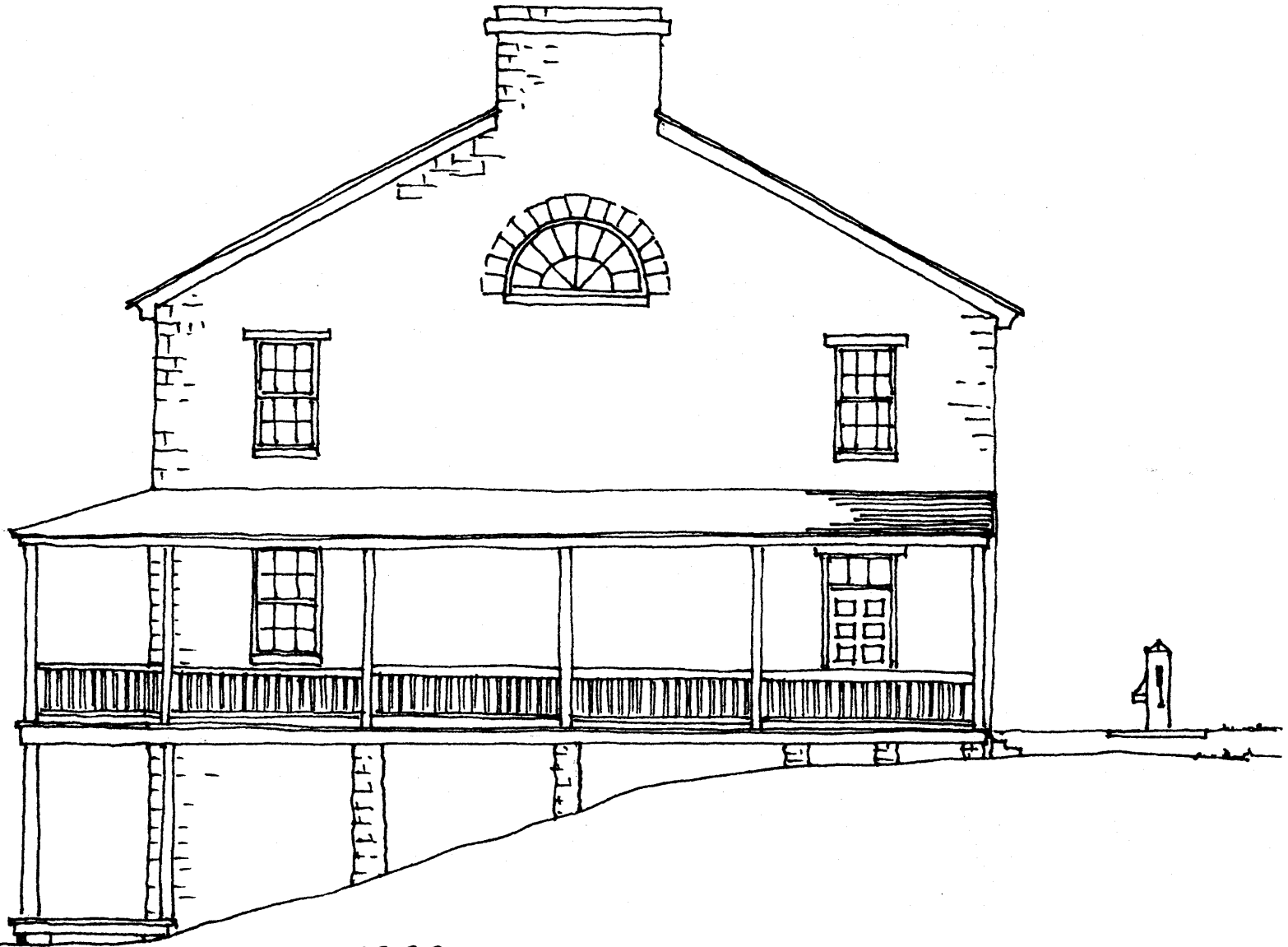
PHB DEC. 1980



CONJECTURAL
SOUTH ELEVATION —— 1831 - 1899
LEMON HOUSE ALPO

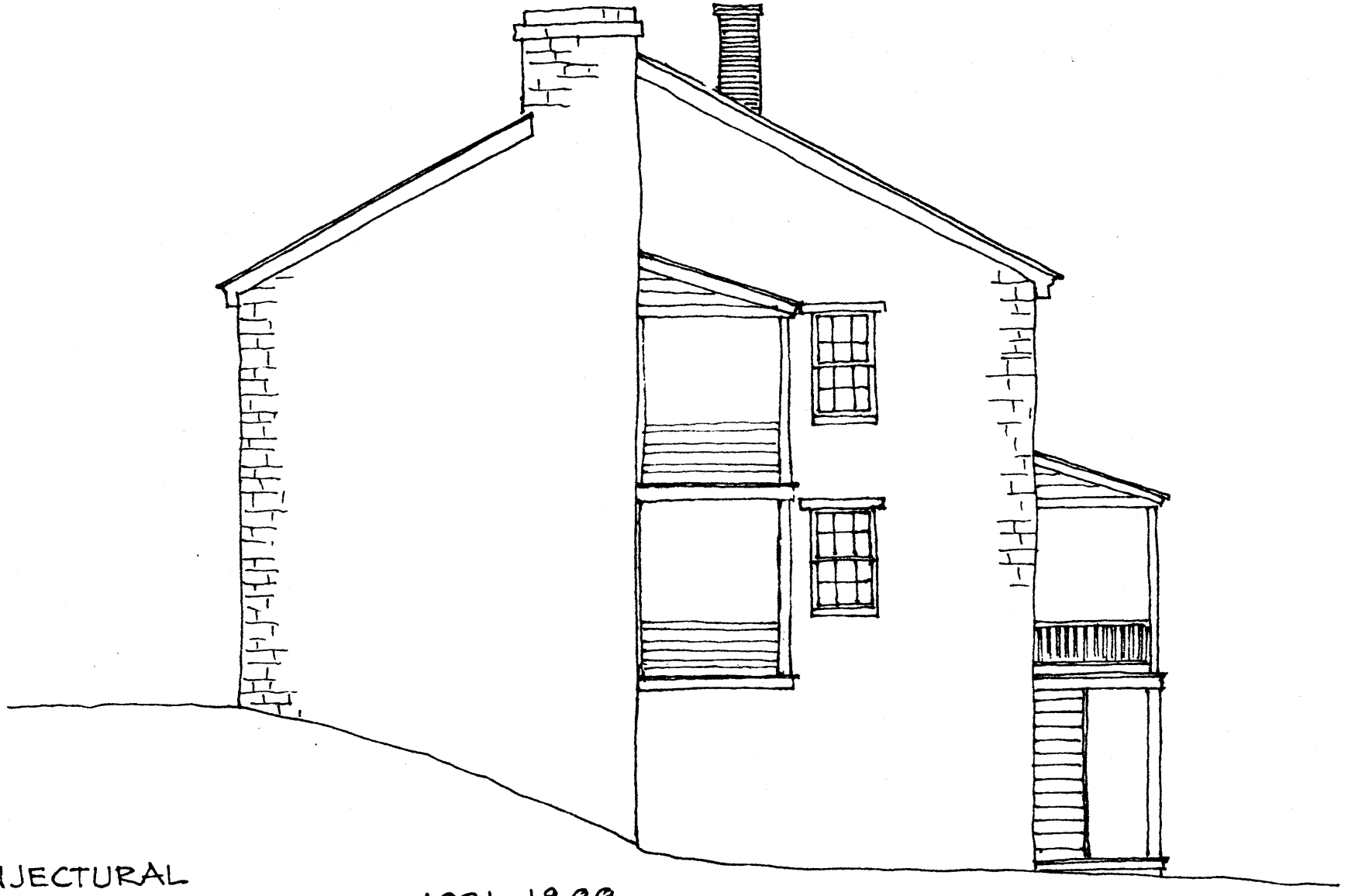
PHB DEC. 1980

60



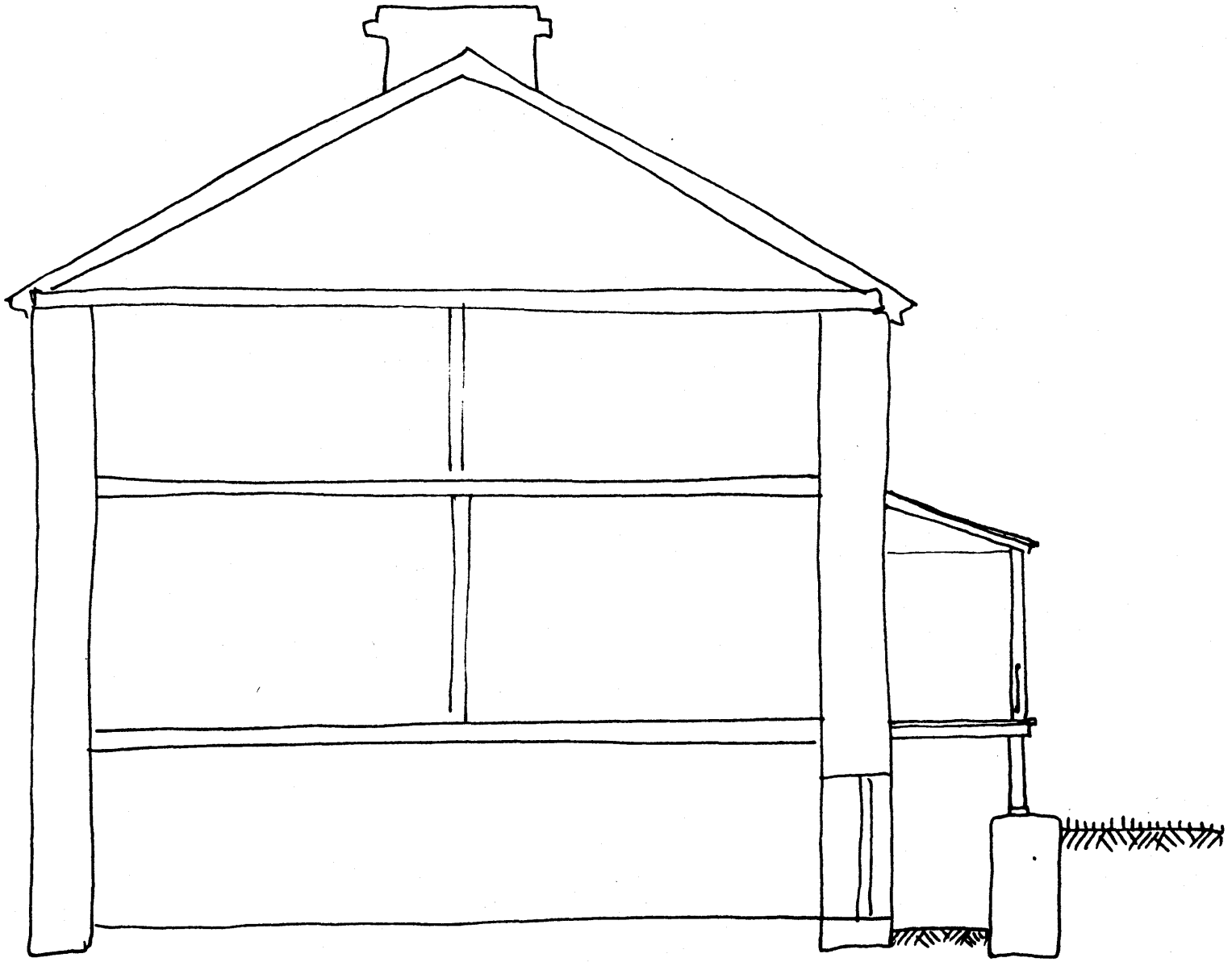
CONJECTURAL
EAST ELEVATION —— 1831 - 1899
LEMON HOUSE ALPO

PHB DEC. 1980



CONJECTURAL
WEST ELEVATION —— 1831-1899
LEMON HOUSE ALPO

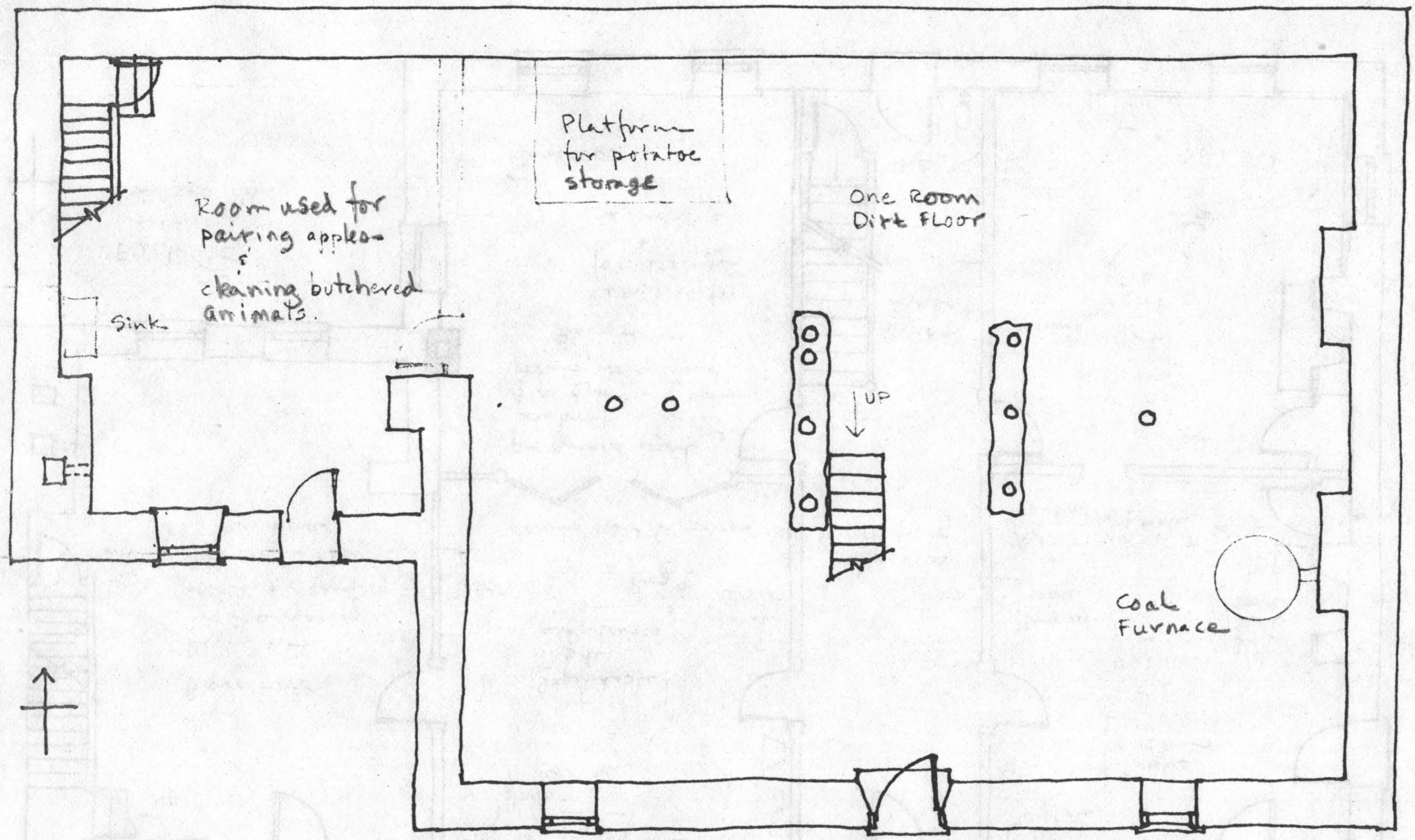
PHB DEC. 1980



SOUTH PORCH
ALTERNATIVE
CONJECTURAL
NORTH - SOUTH SECTION — 1831 - 1899
LEMON HOUSE ALPO

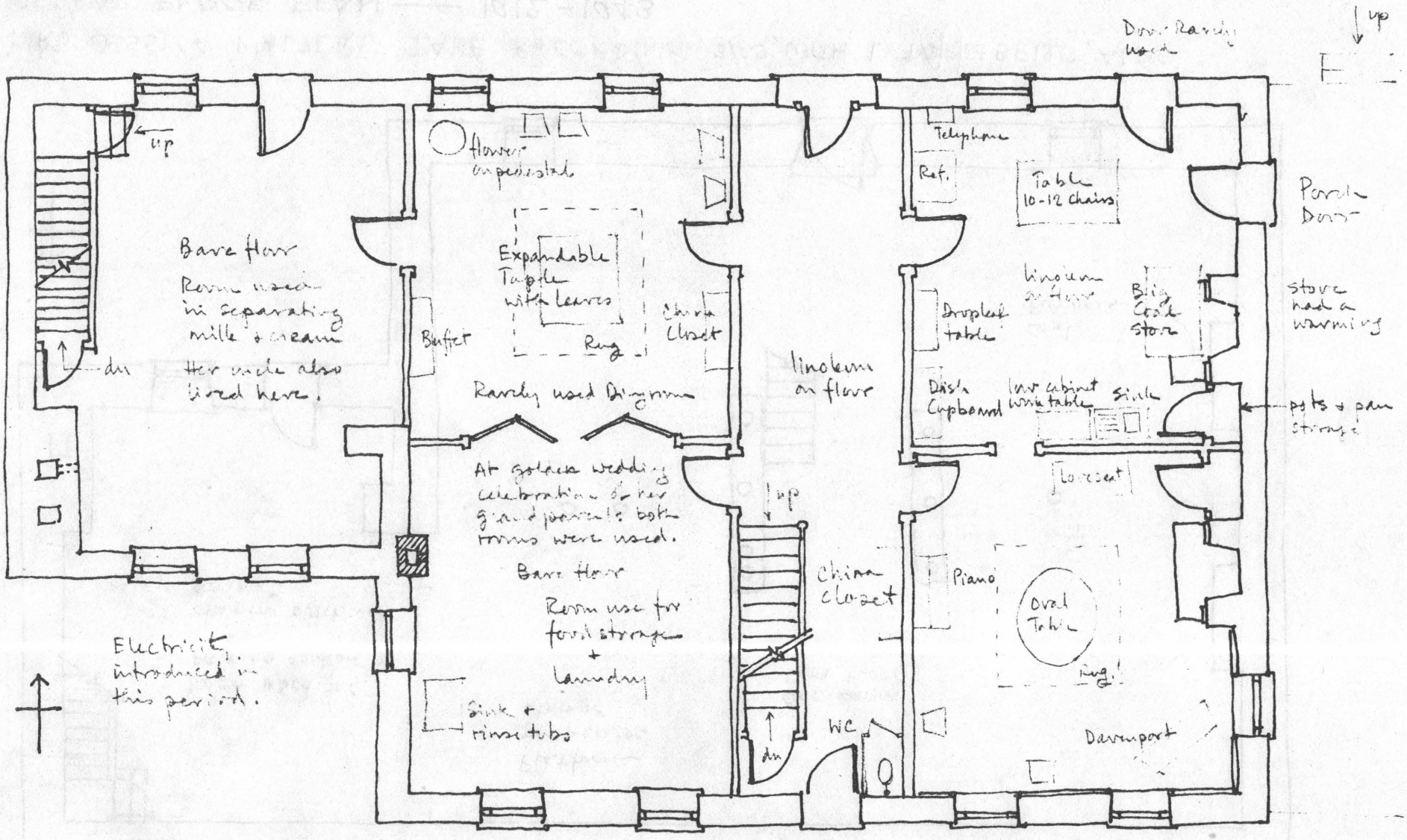
PHB MAY 1981

E. 1912-43 PLANS



MRS JESSICA WALTERS TAPE RECORDING, 3/80, WITH L. TORMBELLO, ALPO.
CELLAR FLOOR PLAN —— 1912-1943
LEMON HOUSE ALPO

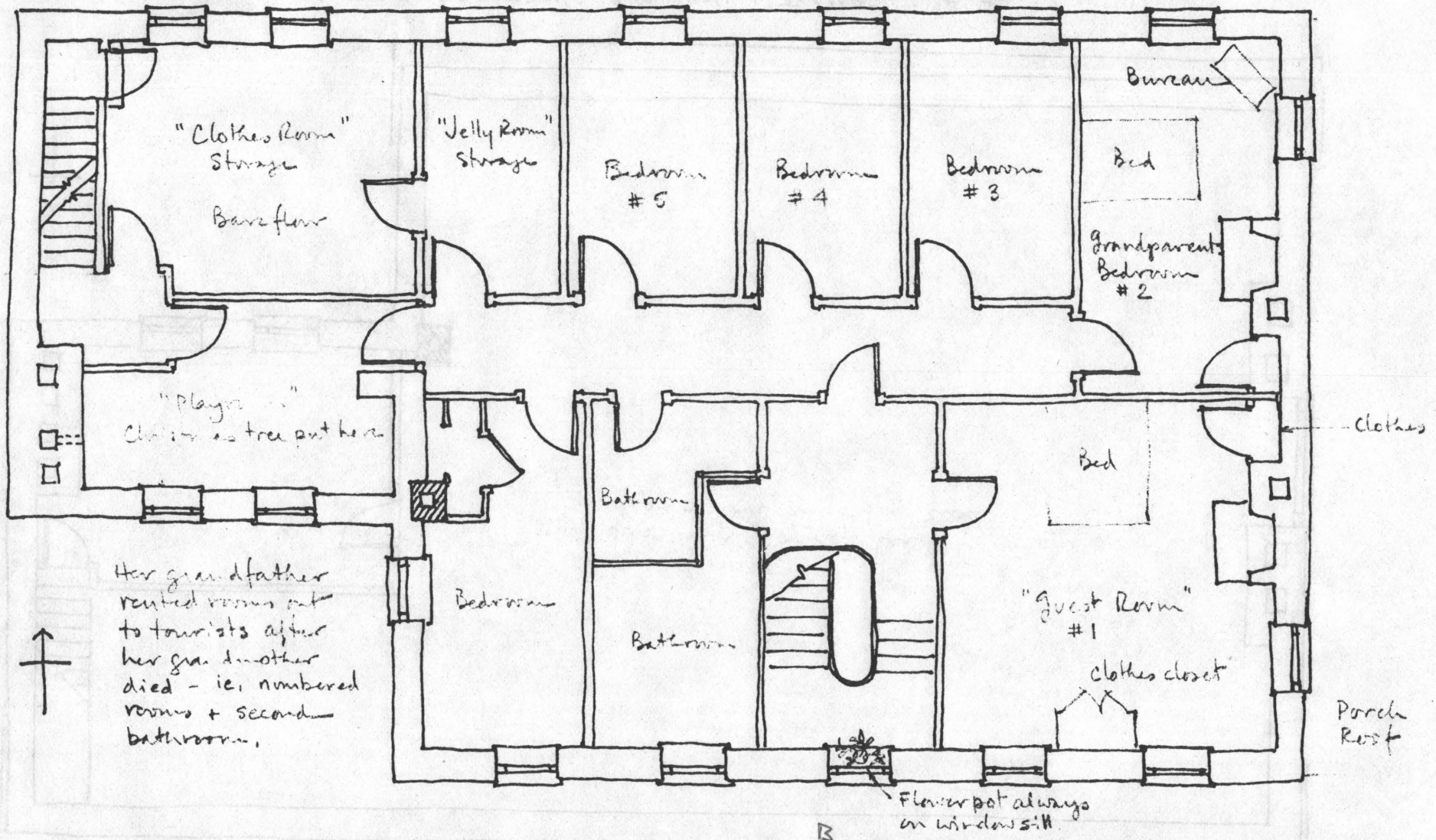
PHB DEC. 1980



MRS JESSICA WALTERS TAPE RECORDING 3/80 WITH L. TROMBELLO, ALPO.

FIRST FLOOR PLAN — 1912-1943
LEMON HOUSE - ALPO

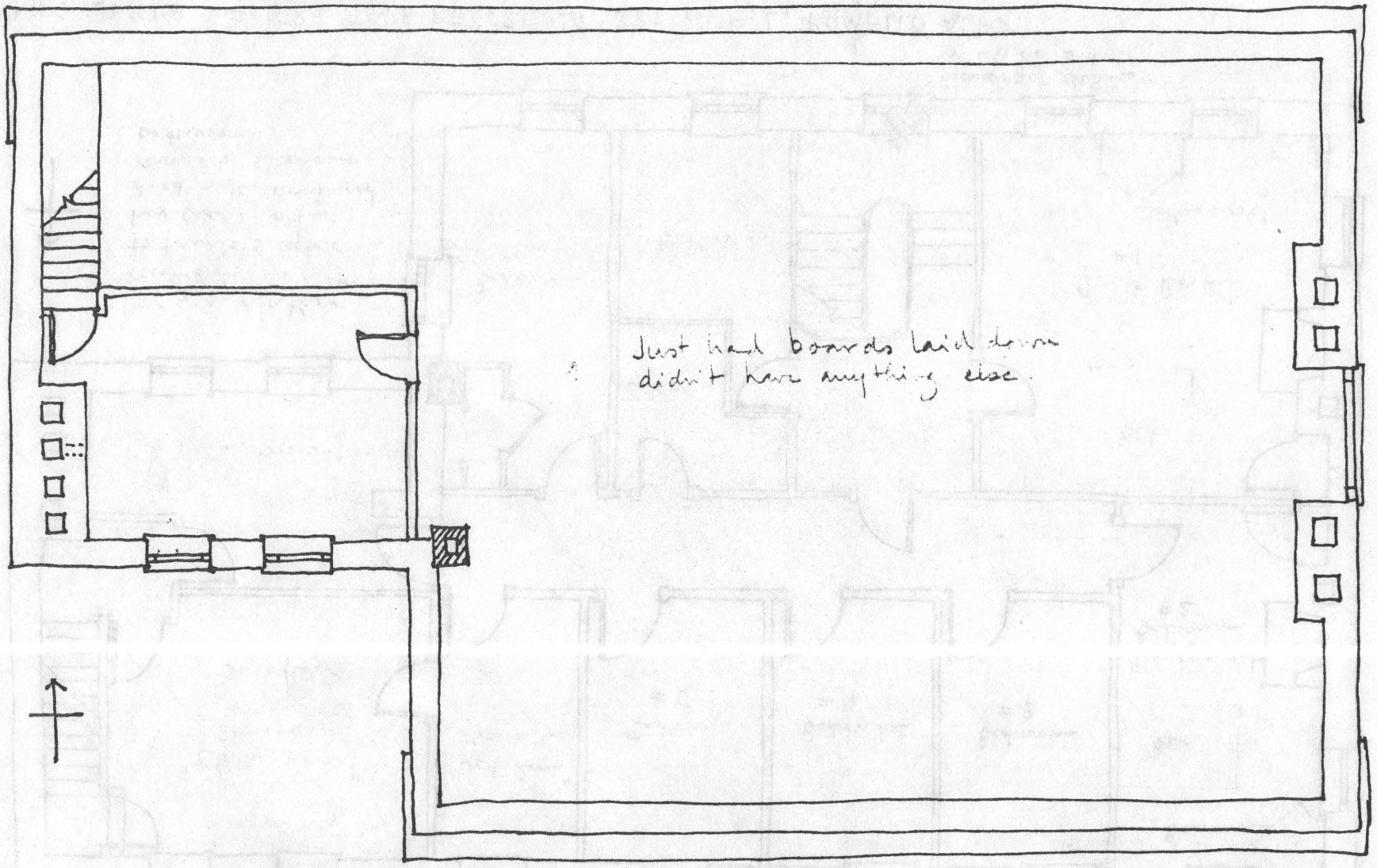
PHB DEC. 1980



MRS JESSICA WALTERS TAPE RECORDING, 3/80, WITH L. TROMELLO, ALPO.

SECOND FLOOR PLAN — 1912-1943
LEMON HOUSE ALPO

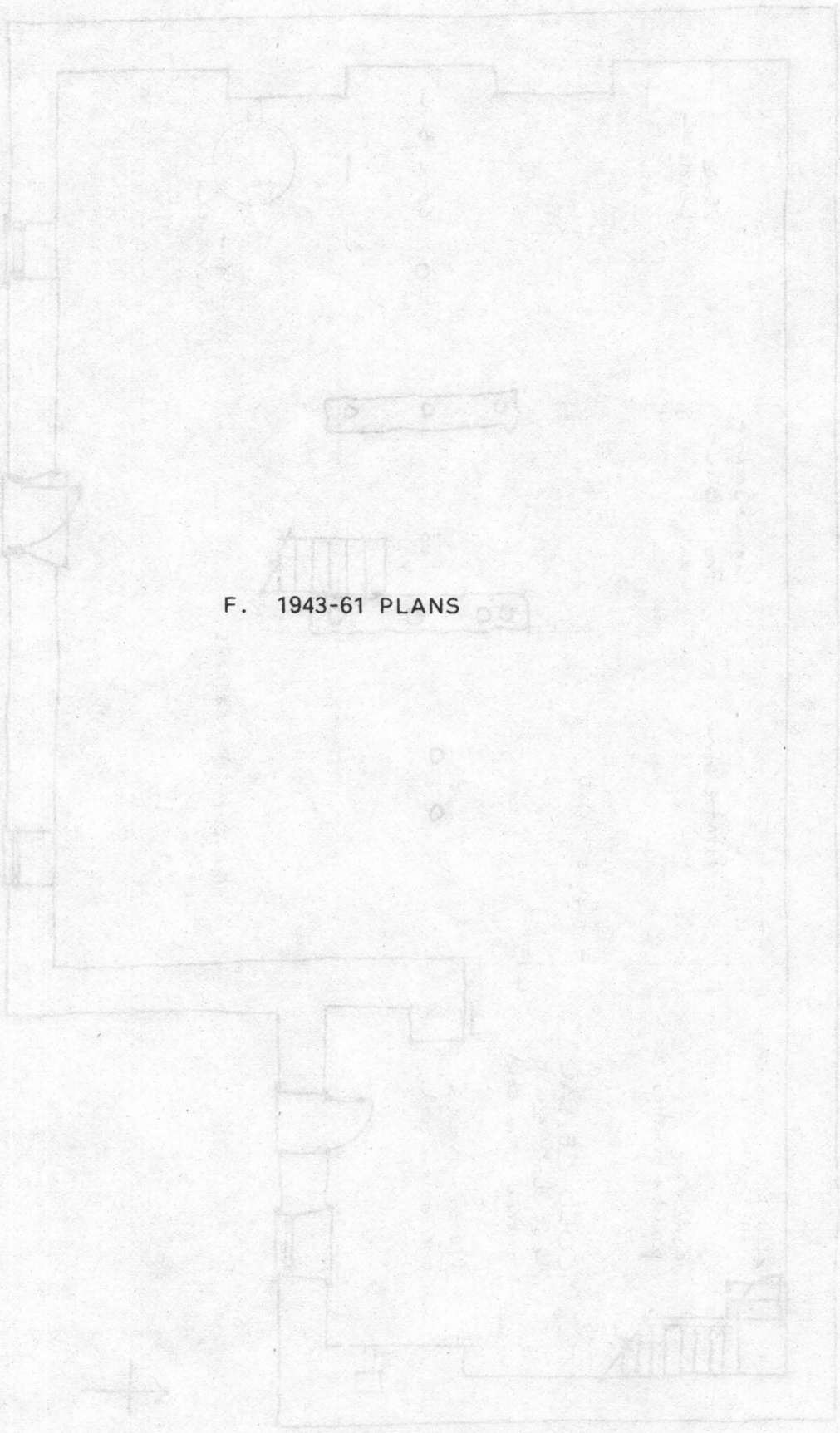
PHB DEC. 1980



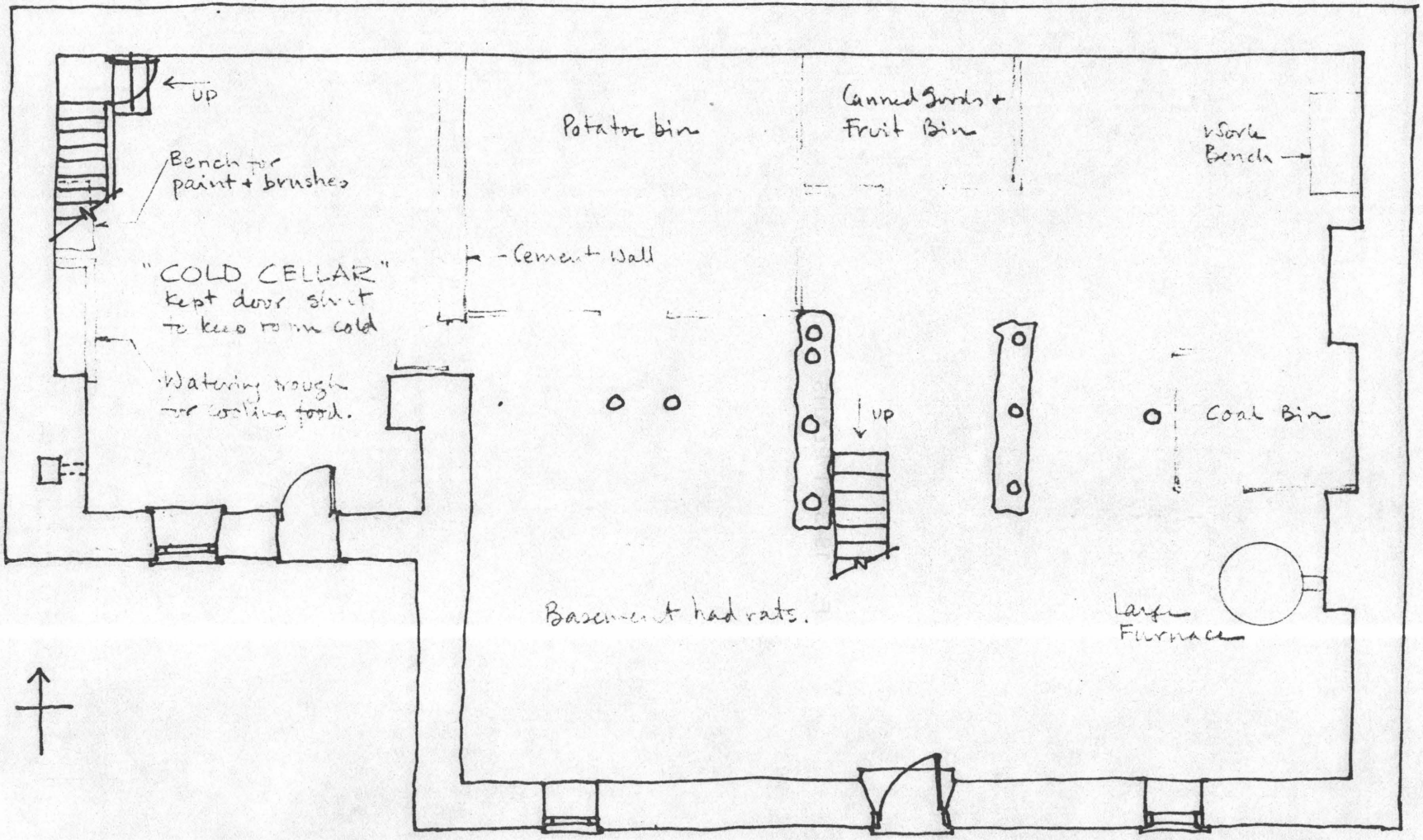
MRS JESSICA WALTERS TAPE RECORDING 3/80, WITH L. TROMBELLO. ALPO

ATTIC FLOOR PLAN — 1912-1943
LEMON HOUSE - ALPO

PHB DEC. 1980



F. 1943-61 PLANS

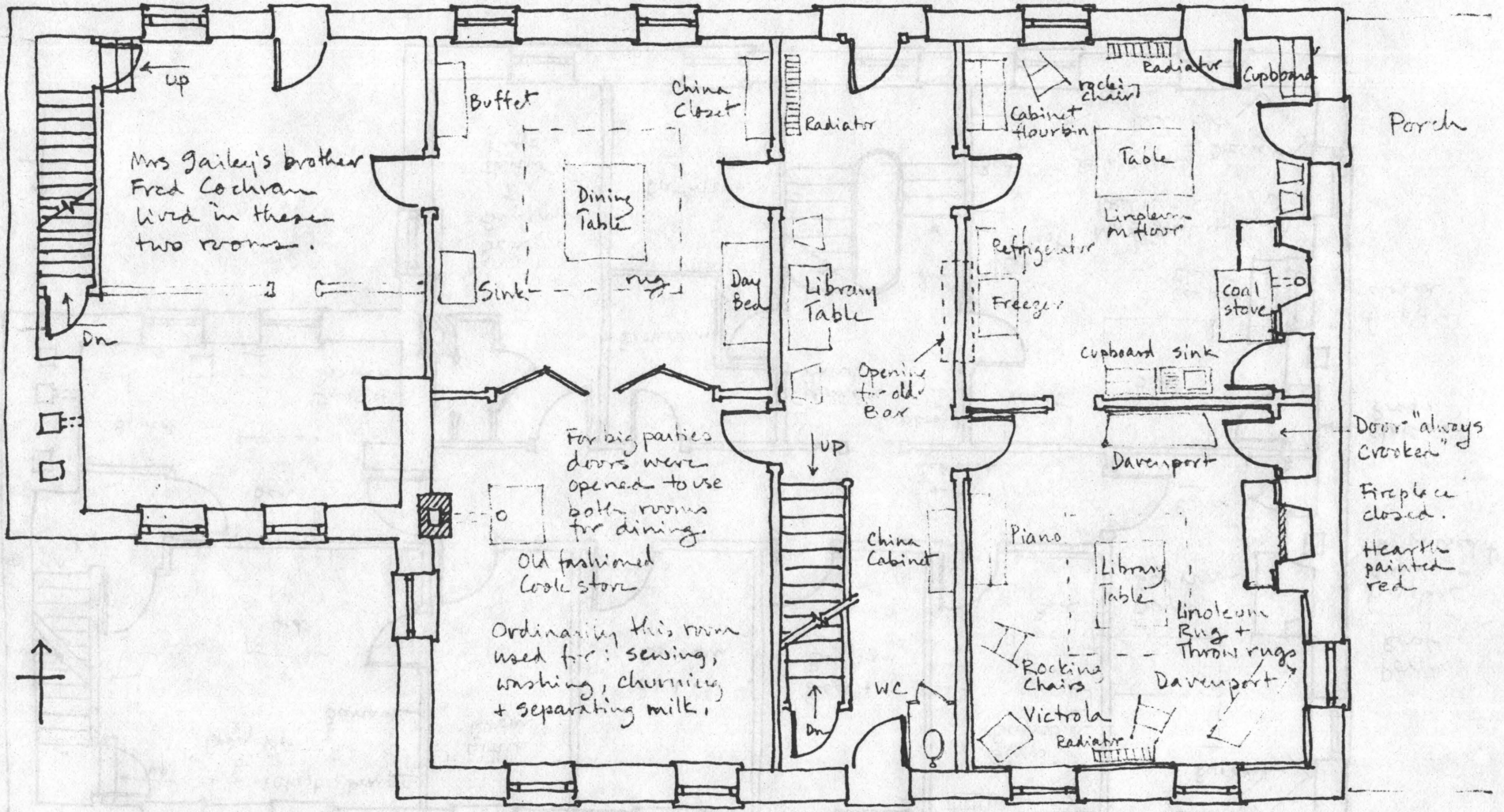


70

MRS ZELLA GAILEY TAPE RECORDING 3/80, WITH L. TROMBELLO, ALPO.

CELLAR FLOOR PLAN —— 1943 - 1961
LEMON HOUSE ALPO

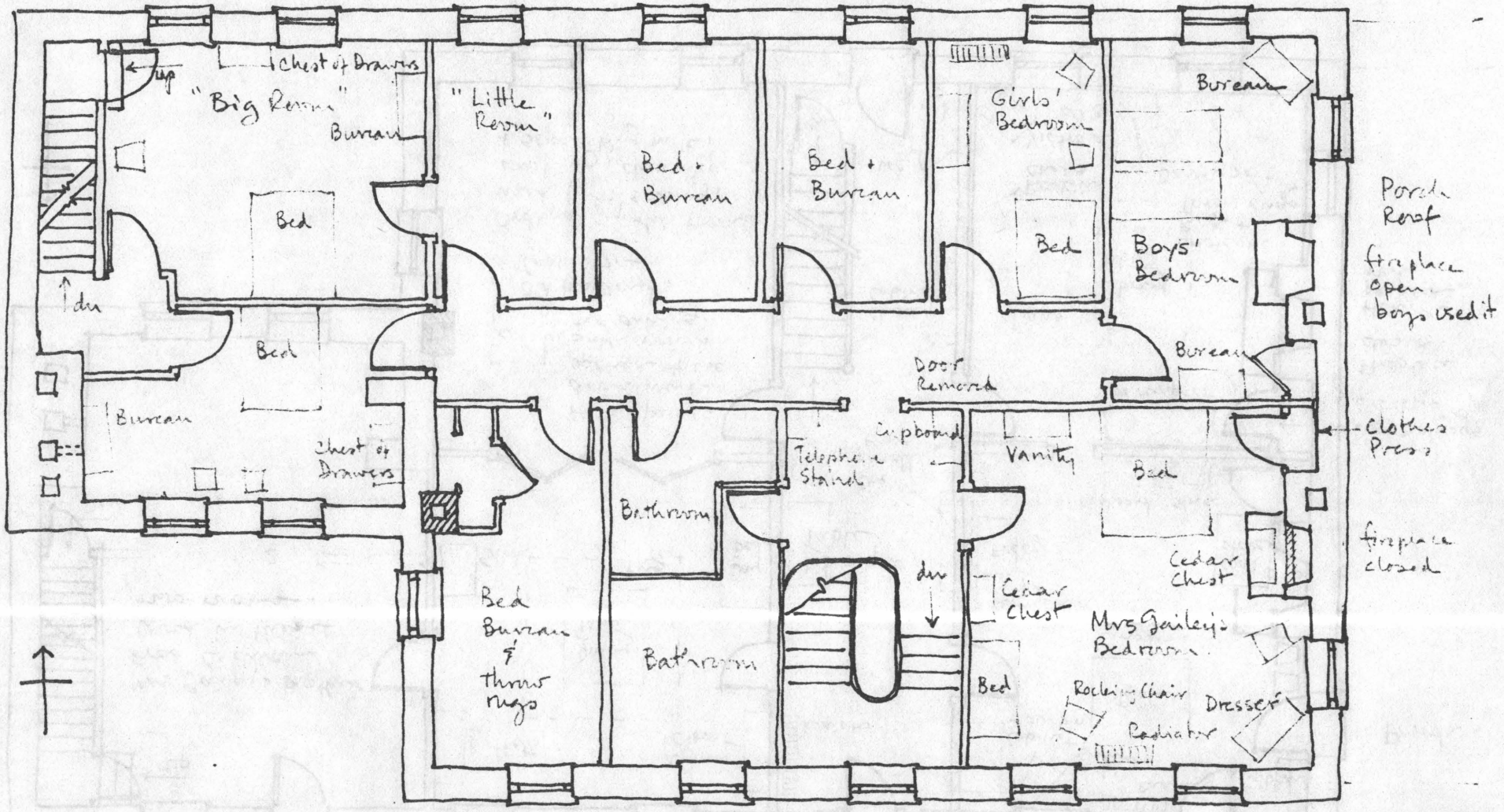
PHB DEC. 1980



MRS ZELLA GAILEY TAPE RECORDING 3/80 WITH L. TROMBELLO, ALPO.

FIRST FLOOR PLAN — 1943 - 1961
LEMON HOUSE - ALPO

PHB DEC. 1980

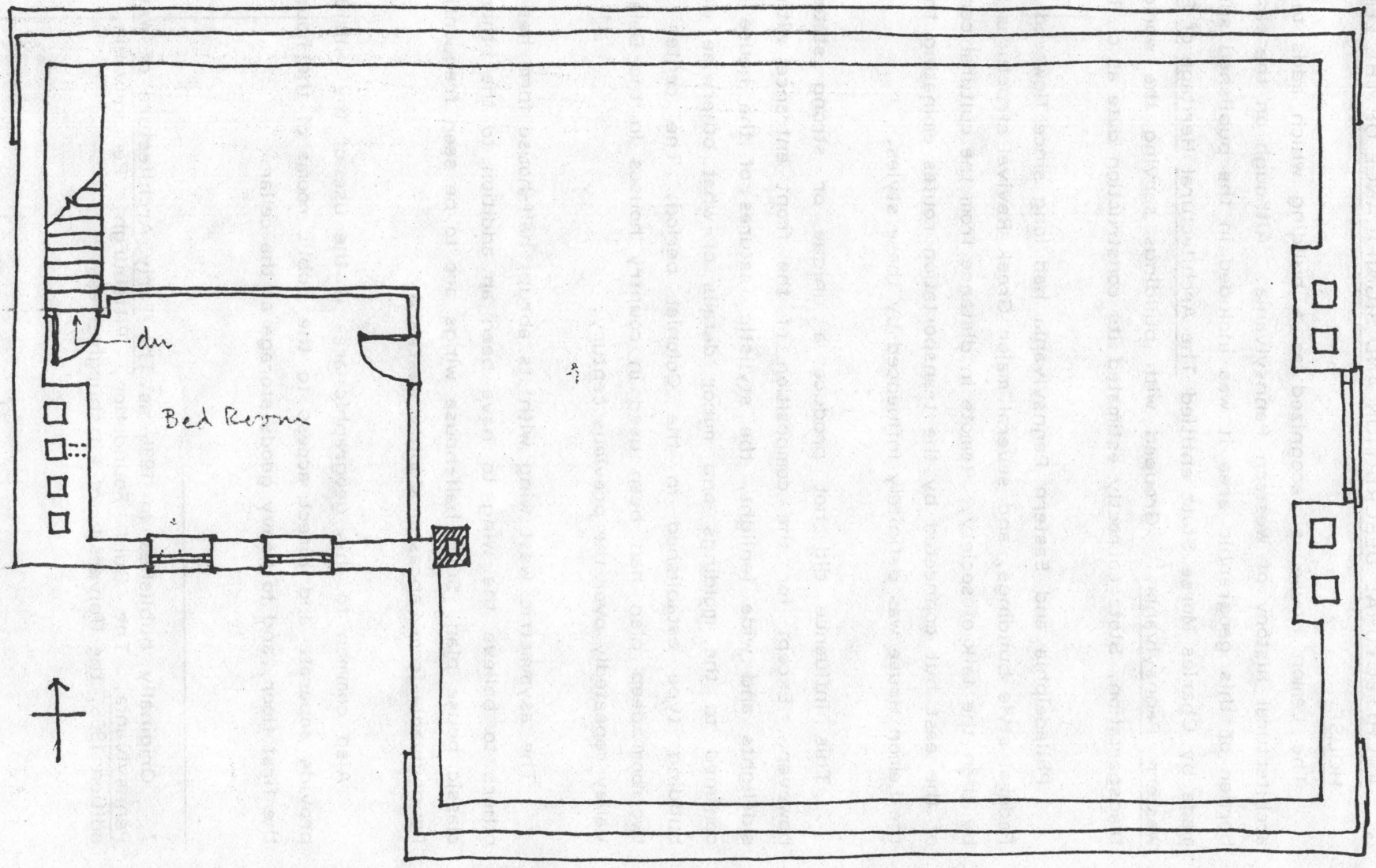


72

MRS ZELLA GAILEY TAPE RECORDING 3/80 WITH L. TROMBELLO, ALPO.

SECOND FLOOR PLAN — 1943 - 1961
LEMON HOUSE ALPO

PHB DEC. 1980



MRS ZELLA GAILEY TAPE RECORDING 3/80, WITH L. TROMBELLO, ALPO.

ATTIC FLOOR PLAN — 1943-1961
LEMON HOUSE - ALPO

PHB DEC. 1980

G. ARCHITECTURAL DESCRIPTION AND SIGNIFICANCE OF THE LEMON HOUSE

The Lemon House is recognized as a building which adds to the architectural history of Western Pennsylvania. Although on the eastern border of this geographic area it was included in the published survey made by Charles Morse Stotz entitled The Architectural Heritage of Early Western Pennsylvania.[7] Grouped with buildings serving the world of transportation, Stotz correctly estimated its construction date as c. 1830.

Philadelphia and Eastern Pennsylvania had long since flowered with Federal style buildings, and several major Greek Revival structures were by then the talk of society. Remote in distance from the cultural centers of the east but connected by the transportation routes eminating there, the Lemon House was definitely influenced by these styles.

This influence did not produce a unique or strong statement however. Except for the composition of the front entrance with its sidelights and wide fanlight, the stylistic features of the house were confined to the moldings and minor details of what otherwise was a building type established in the Colonial period. The center hall, two-room deep plan had been used in country houses in the Delaware Valley repeatedly over the previous century.

The asymmetric west wing with its abrupt half-house form has lead others to believe the wing to have been an addition to the otherwise classic house plan. Such half-house wings are to be seen frequently in Pennsylvania from Lancaster County westward.

Also common to this geographic area is the use of the hillside to provide separate and direct access to the public rooms of the house at the first floor, and to heavy goods storage at the cellar.

---

7. Originally published in 1936 as The Early Architecture of Western Pennsylvania, The Buhl Foundation, Pittsburgh, Pennsylvania, new edition 1966, the University of Pittsburgh Press.

Multiple entrances along the front facade can also be seen in Pennsylvania Germanic houses where the interior divisions demanded separate usage.

With the conformation of the architectural trim bringing forth the style of the Lemon House, it also helped define the use of the various parts of the building. Originally there were four principle trim types. The most elaborate of these, those which have obvious Greek Revival tendencies (Trims A, B, and D, see Evidence Detail Drawings), were used in the more formal rooms, the center hall, the parlor, dining room, and guest bed chambers. The barroom and balance of the house were trimmed with a so called "single architrave," (Trim C), a molding which reflected the simple trim of Philadelphia's eighteenth century, and was therefore appropriate for the more common usage of the barroom, kitchen, and family rooms.

The carpenter employed by Samuel Lemon understood the subtleties of this application of trim and was also able to execute a very creditable, although not elaborate, main entrance, stairway, and gable fanlight. His proportions in assemblying the other principle architectural focal points, the mantelpieces, were far less successful.

This as yet unknown carpenter did not invent any of the architectural compositions. Builders seldom were truly inventive. Stotz's book shows earlier and later buildings with similarly emphasized low arched entrance treatments.[8] Nearby the Lemon House one can see similar entrances at a brick tavern in Newry, a large brick house in Hollidaysburg (south of Route 22), and a stone house, which might have been built by the same good masons and carpenters, in the center of Ebensburg, Cambria County.

---

8. See Stotz, p. 178, the Eagle Hotel in Wateford, Eric County, 1826; p. 182 Johnson Tavern near Mercer, 1831, although its craftsmanship is far cruder; p. 143 John Dickson House near North Girard, 1842; and the McLaughlin House in Hookstown shown on p. 152.

In conclusion, the significance of the Lemon House architecturally is that it typified the western movement of styles. Its architectural significance is not nationally important for itself, but it plays a part in the total picture of our architectural heritage. Locally the building is important as it represents an early cultural achievement.

Unfortunately certain trappings of the building which answered the needs of a tavern and inn have long since disappeared, thus subtracting from the significance of the building from the standpoint of its role. The barroom fixtures and the long porches, where "the air" was taken after dinner, were soon to go once the building ceased to be used as a stop to nourish and refresh the railroad passengers. And, alas, not one of the original support structures remains: the kitchen, the privy, the icehouse, the well, etc.

Incomplete as it is, its mass and siting are imposing, its stonework impressive, and its architectural graces indicative of a mobile and genteel clientele.

H. BUILDING EVIDENCE AND CONDITIONS

I. EXTERIOR

Note: There are references in this section to NPS reports and drawings, the full citations of which are noted in Appendicies 1 and 2.

Foundations and Walls

The main house exterior stone walls are basically in their original form. The stonework of the front facade is laid up with regulated courses of dressed stone while the rear and side walls are of more irregular stone though well fitted.

The west wing has undergone the greatest change in the house today. As confirmed by the old photographs (particularly Illustration No. 3), the wing when first built was only half the depth of the house. Circa 1900 it was extended southward with a new south wall, producing the wing we have today. Appendix 3 details evidence which has led to this conclusion.

The last private owner of the Lemon House, Mr. Byron Roberts, made further alterations to the house's exterior walls by raising the grade along the south above a garage, by adding a west cellar entrance, and a platform, and entrance leading to the second floor apartment. The Allegheny Portage Railroad National Historic Site and the Mid-Atlantic Regional Office have undone some of these alterations. The garage which was added at the south basement level has been removed, and the south slope regraded to its approximate original basement level. The joist pockets of the garage roof have been filled with mortar, and the two cellar windows and door of the main house which were covered have been opened again. The door to the west wing basement in the west exterior wall with its concrete exterior stairs and block retaining walls has been removed and the opening filled in with stonework to match the surrounding wall.

The house stone walls have recently been repointed matching original pointing found within the west wing cellar (see Appendix 6). The south wall of the main house has a pronounced convex

bow. This has been tied into the structural steel reinforcing the first floor framing with 1" tie rods (see Appendix 7).

The west wall of the wing, probably due to the major wing alteration of 1900, also has a convex bow. Voids in this wall have recently been gravity filled with a cement mortar. The north wall has a concave depression at the cornice line but remains uncracked and stable. The east wall has had two severe cracks, one above the first floor door (the lintel is also cracked), and one above the first floor window. Before being repointed these cracks caused leaks, and, in the case of the door, damaged the paneling at the door head. Several window openings also have cracked lintels. These have been reinforced with steel angles (see MARO Drawing No. 423/81007 and Appendix 7).

According to Structural Engineer Nicholas Gianopulos the above faults in the exterior walls probably occurred when the building was unoccupied and in a state of disrepair, when rainwater was able to enter the walls, freeze, expand, and cause movement. As of February 17, 1981, Mr. Gianopulos assures that the walls are now in a stable condition.

Exterior Doors and Frames

Basement Level

At the basement level there are two exterior doors. The door opening at the approximate center of the main house on the south wall is 4' 5" wide. This basement door has an interior wood lintel but no exterior stone lintel. The present door is the second installed at this opening since the garage was removed by the National Park Service. Comparison with old photographs show its design may not be correct. Apparently in the early twentieth century, it had a vertical board exterior face probably backed up by interior battens, with a single lite sash centered vertically in its upper portion. It is very possible that originally this door had no lites at all.

The present wing south basement doorway and frame survived being covered by the raised grade of the Byron Roberts era.

This doorway which is original to the 1900 extended wing, has a stone lintel. The present door was installed by the park in 1980, replacing a paneled and glass (4 lites) combination door which was described in Souder's report (page 2) and undoubtedly dated from c. 1900. This door was 1-3/8" thick and had panel moldings matching the Type B and E doors (see measured drawing No. 423/26000). The stiles and rails had cyma moldings without fillets.

First Floor Level

There are presently five exterior doors at the first floor level. The main entrance (Souder, Door No. 1; Magaziner, Door No. 114) remained as it was in the Souder report until 1980 when it was restored by the park and MARO (see NPS-MARO Drawing No. 423/81007, Sheets 2 of 2). The door at the south end of the central hall (4 or 103), which originally opened into the south porch, is completely original. The east and north doors to the former barroom (5 and 6 or 117 and 116) have their original paneled reveals and transoms, but the doors themselves are MARO restorations. These two doors are closed over from the inside to block out the light of the transom sash from the audio-visual room.

The original pointed ovate molding placed across the transom bar and extending on the paneled reveals of the north door leading to the first floor of the west wing is still incomplete in its length on the reveals. Otherwise, this doorway has been correctly restored with a new door.

Windows and Frames

In looking at the south wall basement level, one notices all three openings, the door and both small windows, are not in any relation to the openings above them. Their asymmetry may have allowed for the placement of an exterior stairway connecting the cellar and first floor levels of the porch (see Conjectural Elevations 1831-99). The sash and frames of the small windows and those of the window in the west wing basement were recently replaced by MARO.

The windows in the west end of the main house at the first and second floors were said by Souder to have been "moved toward

the center when the alterations involving the erection of the west wing were made." Now that we know the house was originally built with a west wing, we can definitely say that these windows have always existed in their present location.

All the sash of the first, second, and third floor windows have been recently replaced by MARO (see Drawing No. 423/81007). The frames are original.

Porches

The south and east porches which were added by Mr. Roberts in the mid-twentieth century have been removed. The present east porch is a platform built by the park using old stone foundations.

There have been two archeological investigations made to gather data on the missing original porches. The first, made in June 1978 under the direction of NPS-DSC Archeologist Bryan L. Aivazian, was reported preliminarily in August 1978: Archeological Investigation Around the Lemon House, Allegheny Portage Railroad National Historic Site. It concluded that the east porch stone foundations were built early in the history of the building. A stone foundation was also uncovered about 6' out from the south house walls, extending to its west end, which is assumed to have been related to the original south porch. Two small holes among the foundation stones were thought to have been post holes or scaffold holes related to the south porch.

The report of the second archeological investigation of 1980 combined results of both digs. This work was done under contract with the University of Pennsylvania, Museum Institute for Conservation Archeology, University Museum, under the direction of Archeologist Michael Parrington (NPS Purchase Order PX 2000-0-D024). The report is entitled Excavations at the Lemon House, Allegheny Portage National Historic Site, Cresson, Pennsylvania in 1978-80. It was submitted in February 1981. This excellent work suggested continuations of the south porch foundations including possible projections of the foundations some 6' east of the house east wall.

From these investigations, it looks as though the old porch may not have been confined to the south side, but that it wrapped around the east side of the house extending to the line of the north wall.[9] Further archeological explorations along the house east wall may well pick up confirmation of this theory. Meanwhile, this theory is presented here in the Conjectural Plans and Elevations of 1831-99. In Appendix 4, there is a collection of porch types to be seen, collected to stimulate further research and to help with future design when the primary resources of data have been thoroughly explored.

Roof

The present roofing material is undressed (taper split) wood shakes, recently applied by MARO. The configuration at the ridge is a twentieth century detail "Boston ridge," a line of horizontally placed shingles on each side of the ridge. All sheathing was replaced c. 1900 when the roof slopes were raised slightly (see Appendix 7 - History of the Lemon House Structural System).

Originally, as the old photographs show, the roof was made of wood shingles. They were probably dressed, and laid on shingle lath instead of solid sheathing. There was no "Boston ridge" originally.

Cornices and Downspouts

It was at first assumed the house had downspouts and gutters because the George Storm painting clearly shows them (see Illustration No. 5). Evidence of earlier downspout anchors was found at the northeast corner of the house, and because there is a joint in the cornice soffit board above, it was suggested that perhaps the downspouts

---

9. Artifacts found associated with the porch foundation walls lead the archeologists to date the south porch as a mid-nineteenth century addition, implying that the first floor south door could also have been an addition. Unequivocally, this south door of the central hall is original as shown by its Type B trim and paint layers (see Samples 14 and 19). It is inconceivable for such a door to be introduced without a porch to meet it.

may have connected to gutters built into the roof. As there is no break in the roof plate to be seen from the attic between the rafters at that corner, the possibility of built-in gutters with downspouts coming down through the soffit is ruled out. Furthermore, Illustration No. 7, pre-1900, shows no such installation. Therefore, it is probable there were no gutters and downspouts originally. Indeed the brick sidewalks in early views look as though they caught and deflected runoff. However, the existing gutters and downspouts should remain for the time being at least, as they carry off the rainwater and do not detract appreciably from the historic scene.

Chimneys

The Storm painting complicates the investigation of the Lemon House in the matter of chimneys. Based on the Storm painting, Architect Norman Souder believed there were originally matching stone chimneys at the east and west walls of the main house. But if the existing brick chimney, according to Souder, replaced a large stone west chimney at the time of the supposed addition of the west wing, why is there a brick chimney also shown in the Storm painting? Appendix 3 explains the evidence which proves that the existing brick chimney is indeed original, built to serve stoves in the southwest rooms of the main house. As he did not realize the confusion he was to perpetrate, the painter George W. Storm oversimplified his subject matter by eliminating the mass of the west wing, and placed the west wing chimney seemingly in the gable of the main house. He then recorded the brick chimney because it was there and simple to render.

Thus the chimneys we have today are: the east original stone fireplace chimney; the original brick stove chimney, albeit its upper projection was rebuilt c. 1900; and the c. 1900 west wing stone chimney which probably served stoves on all floors.

Fences and Other Yard Features

Presently the front yard of the house has a slender picket fence no doubt inspired in type and location by the Storm painting. The old photographs show a picket fence was in place prior to 1900, but it

was not placed exactly as rendered by Mr. Storm. Indeed, an outbuilding stood in the northwest corner of the yard and the fence along the west border was parallel to, but west of, the west wing. In fact that leg of the fence appears to be of high vertical boards.

The use of the north yard outbuilding is not known. But the memories of Lemon House residents (Mrs. Walters and Mrs. Gailey) tell us of an icehouse being south of the house and a bake house northward. We know from early photographs the position and form of the old pump, and we know there must have been a privy.

A review of the old photographs with past residents may sharpen their memories (this should be done soon as they are elderly) and further research into land surveys will aid archeological research in locating and identifying these features and others.

2. INTERIOR

Basement

General Description

Since the writing of the Souder report, the first floor structure has been reinforced with structural steel. The installation (see Appendix 7) was designed by the Philadelphia firm Keast and Hood, Nicholas Gianopulos principle engineer. This efficient reinforcement has cleared the cellar of the myriad of makeshift posts which had accumulated as the old building settled. The 1965-71 measured drawings in Souder's report, and his description of the cellar as he saw it, are the last record of this space when it closely approximated its original appearance as one open dirt floored space. Presently the basement under the main house is divided into a meeting room, hallway, two storage rooms, and an area converted into the men's and women's restrooms.

A concrete floor slab has been poured over the old dirt floor and covered with different finish materials. The meeting room floor is fully carpeted. The floors in the hallway and two storage rooms are resilient tiled. The floor in the restroom area is ceramic tile. All the

basement walls have been furred out with different finish materials. In the meeting room and hallway, they have imitation wood paneling except where the two stone foundation walls under the center hall are left exposed. The walls in the storage rooms are drywall and the walls in the restrooms are ceramic tile.

The entire main house basement has a dropped acoustical ceiling, the panels of which can be removed to view the original framing above.

Changes have also been made in the west wing basement rooms. Beside the addition of the concrete block wall between the main house and wing basement rooms, a steel girder was installed by the park in 1979 reducing the long span of the first floor joists, the wing floor has been finished with concrete (approximately 8" higher than the main house basement floor), and the basement stone walls have been cemented. This last effort at good housekeeping has unknowingly buried evidence of the c. 1900 treatment of this room, and more seriously it has covered, if not destroyed, the only evidence of the pre-1900 exterior pointing of the house exterior walls (in the southeast corner of the main house wall). A sample of this mortar was taken (see Appendix 6).

The west wing basement is used primarily for a utility room and storage. The park is now also enclosing space to serve as a lunchroom for the staff.

Souder's speculation that the present west wing cellar room was used as a "scullery at one time or [a] similar utilitarian function" is probably the case as the 1900 four flue chimney could well have serviced a store for a laundry or summer kitchen. Before the walls were covered with cement one could clearly see that in the 1900 renovation they had been plastered and the openings finished with wood trim. The memory of Mrs. Zella Gailey on tape tells us that the room had a wood floor as well when her in-law's family lived in the west wing from 1907-12.

FIRST FLOOR

General Description and Layout

At present the first floor of the Lemon House serves the park visitor with information and sales in the central hall (100), very good interpretive exhibits in the southeast (102) and southwest (103) rooms, and an audio-visual program in the northeast old barroom (101). The park has been using the northwest room (104) as a workroom. Structural steel was installed under the first floor framing to assure the safety of this active use area (see Appendix 7).

These first floor rooms of the main house are essentially in their original layout. The exceptions are: the northwest (104) and southwest (103) rooms once could be combined to produce one large dining room. Two pair of doors once folded back to open the intervening wall (see Appendix 3 for evidence and a description of these doors); the doorway which once lead from the northwest room (104) to the center hall (100) has been closed over; the doorway which lead from the southwest room (103) to the hall (100) has been shifted southward to enable the Roberts' family to build a thick partition between the northwest and southwest rooms; and a doorway has been added between the southeast old parlor (102) and the northeast barroom (101). It is said there was originally a pass-through from the bar within the northeast room (101) through the partition to the central hallway (100). This further described in the section on walls and ceilings.

The present west wing use is for offices. The 1965-71 record drawings and subsequent drawing NPS 423/41005, 1971 by Tipton, show that this space has undergone several changes since it was built c. 1900. From the present chimney position, we can assume there was a stove in the southwest corner when first built. The partition and transom lighted doorway which once lead to a cellar stair remains along the west wall under the c. 1900 stairs to the upper floors. The original 1831 smaller west wing was probably a one-room kitchen with its fireplace on stores at the southwest chimney, with back stairs leading down to a cellar storeroom or scullery, and up to the bed chambers (see Conjectural Plans 1831-99).

Flooring

The original flooring of 1-1/8" tongue and groove pine in average widths of 6" remains in place in the main house. These floors are now covered with wall-to-wall carpeting or asphalt tile. The pine flooring in the central hall (100) is unfinished. The floor in the southwest (103) and northwest (104) rooms has been sanded and varnished. The floor in the southeast room (102) has had two periods of painted areas surrounding large rugs and some evidence of bare floor use.

The floor in the old barroom (101) was partially destroyed by fire at an unknown date. The areas in front of the fireplace and at the hallway door are burned through, and the joists are charred underneath these areas. This evidence is easily seen from the basement meeting room by removing the acoustical ceiling. It is not known at this time how much actual damage was done to the original floor by this fire, but, from below, the damaged area is no less than 20 percent of the total floor area. The owner at the time of the fire, rather than replace the burned floorboards and joists, decided to cover the entire floor with 3/4" tongue and groove finish flooring running perpendicular to the original floorboards. As a result, at this time, we are unable to examine the original floor for evidence of the original barroom fixtures, and until a meticulous examination can be undertaken, no attempt should be made to design the bar, etc. By the same token, the other rooms' floors will all possibly have evidence of carpets, stove mats, and possibly wear which could indicate certain traffic patterns.

The c. 1900 flooring now in the west wing is completely covered with asphalt tile. The flooring is 3/4" by 3-1/4" tongue and groove pine.

Walls and Ceilings

The walls and ceilings of the original house were coated with a yellow mud plaster ground coat keyed to hand split lath and finished with a thin white coat. All the original plaster ceilings on the first floor have been covered. In the central hall (100), the ceiling has

two layers of composition board applied over the plaster, and the extra thickness is compensated for at the stair landing with extra trim added below the stringer.

In the southwest (103) and northwest rooms (104), the original ceilings were found to have a cover of approximately 2" of homosote, rock lath, and plaster. In the southeast (102) the ceiling still has its original plaster under a wire lath and plaster cover.

The extra weight of the covers, which no doubt hide a deteriorated condition of the original plaster, now adds to the structural problems of the second floor framing.

There is no original plaster in the northeast barroom (101), further investigation can be done, it is not known how much original plaster remains behind the wire lath and plaster cover. Investigation beneath upper layers in the barroom will be particularly important as heresay tells us that there was once a pass-through from the barroom to the central hall.

Former tenant Mrs. Gailey, in a tape recording described finding the opening: "When we tore the paper off it [the opening] came down a little bit from the ceiling . . . a foot and a half or more . . . then the bar was right in here . . . you could see where the board came across where they had a platform to set the bar on, but that wasn't there [any longer]."

This description can be interpreted to mean that the bartender stood within an enclosure on the barroom side of the hall partition and dispensed drinks to the patrons in the barroom over a counter, and to the dining room waiters over the counter of the pass-through in the hall partition.

This pass-through and the bar enclosure is a very important feature, the evidence for which will be forthcoming on the original floorboards, plaster walls, and ceiling.

Comparable bars may be seen in period views such as Illustration No. 39 in Souder's report, "Dancer in a Country Tavern" by John Lewis Krimmel (1789-1821). Stotz, cited previously, on page 174 described the Difibaugh Tavern, near Everett, "where the counter, register desk, and cupboards for bottles and glasses are still intact," On page 185 is a photograph of a no longer existing bar at the White Swan in Uniontown.

The original plaster walls of the central hall (100) remain fairly intact, but have cracked and been patched a number of times. The doorway from the hall (100) to the northwest room (104) is visibly closed and patched with wallboard. One would assume this doorway would match that opposite which leads to the barroom.

The old plaster walls in the southeast (102), southwest (103), and northwest (104) rooms have all been covered. In the southeast room the wire lath and plaster covering was applied directly on the old plaster, as evidenced by the lack of depth at the chair rails. Evidence of wallpaper was found in the closet of this room, perhaps there will be some on the walls as well when uncovered. In the southwest (103) and northwest (104) rooms, the wallcover is furred out from the original wall.

The thick wall between the southwest (103) and northwest (104) rooms as mentioned above, was an addition of Mr. Roberts'. He removed the original wall and replaced it with a double wall bookcase. The northernmost face is in the location of the original partition which contained the folding doors also mentioned before. The original 3 by 8 header of this double doorway still exists.

The wall between the northwest room (104) and west wing when tested with a core bit (the method used throughout the house) proved to be original with mud plaster and split lath. Despite the c. 1900 major change to the west wing, this wall survived, including an original baseboard on its west face which stops just at the present doorway showing its opening to be original as well.

The first floor partitions in the west wing which have been removed were probably 1960-70s. They were stud partitions covered with dry wallboard and, in the case of the restrooms, tile. The partition under the stairway probably dates from 1900.

Doors and Trim

Norman Souder brought out very well in his report that enough of the original trim has survived to definitely distinguish a hierarchy in the treatment of the rooms. The entrance hall (100) and the southeast parlor (102) were trimmed out with more fashionable and elaborate trim than was the northeast barroom (101). The splayed window jambs of all rooms are paneled except in the barroom.

To help in dealing with specific changes to the original trim and doors, they have been given letter designations. Included with the "Evidence Plans" are sketch details showing these designations of the trim and doors. Their locations are shown on the Evidence Plans.

The door to the southwest room (103) from the central hall (100) has been shifted southward. The trim around this door on the hall side is a near copy of the original Type "A" trim used in the southeast parlor room (102). This Type "N" copy trim is also used along with Type "A" trim on the north side of the nonoriginal doorway between the northeast (10)1 and the southeast (102) rooms. The Type "A" trim and the roseblocks at these openings were taken from another location in the house, very probably from the northwest and southwest rooms (dining rooms) of the first floor. This would put the parlor and dining rooms on a par stylistically.

The door to the closet in the barroom (101) has been re-hung to put the badly burned exterior to the interior. The blistered paint is apparent when viewed with a raking light. This damage occurred presumably at the same time as the damage to the floorboards in front of the fireplace.

The folding dining room doors, Type "F" (103-104) are now stored in the attic. All other doors removed during the Roberts alteration which Souder located in the barn, are now missing and presumably lost. This was thought to be true of the trim removed during that same alteration. Two lengths of Type "A" window trim were found in the attic room (now in museum storage), but none was so far found in the barn. It was later discovered that at least some of the missing trim had unfortunately been cut into 8" pieces, stripped of paint, and stored in the basement museum collection.

Because of the applied finish floor in the barroom (101), the baseboard there, Type "E", is true height where it was reset at the new floor level, but is not true height in the places where it was not moved. The central hall (100) and southeast parlor (102), also have original Type "E" baseboards. These have been cut through to accommodate electrical outlets. In the southwest (103) and northwest (104) rooms no original baseboards have survived unless they are back of the furred out walls.

Fireplaces

From evidence found at the second floor northeast hearth which was not available at the time of Souder's report, the hearths for the fireplaces in the barroom (101) and southeast parlor (102) were probably originally painted cement rather than stone slabs. At present, however, the southeast parlor hearth is of concrete and will need to be given a smooth surface to resemble the original hearth.

The mantel in the southeast parlor (102) has been damaged by fire. The owner's solution to the problem was to paint over the charred wood. From the paint layering, the fire probably occurred before 1900. One wonders if this mantel perhaps originated in the barroom (101) where we know there was an extensive fire.

Norman Souder felt the mantel in the parlor and those at the second floor of the same designs did not "reflect the elegance of the woodwork." True, these mantels were made up simply of trim applied

vertically and horizontally in awkward compositions. The fireplace trim profile is really a marriage of Types "A" and "B" window and door trim used in the southwest parlor (102) and central hall (100). All of the trim was probably milled in Harrisburg, Lancaster, or some other city east of the Susquehanna River.

Appendix 3 describes the brick flue for stoves which is original to the southwest dining room (103). This chimney is now encased in wallboard with a round patch approximately 6' from the floor where a stove pipe was once connected.

The c. 1900 west wing stone chimney breast was examined for possible evidence of a fireplace at the first floor level. None was found, indicating that the c. 1900 west wing chimney served stoves for cooking and heating.

Stairways

The main stairway was composed with considerable grace with its continuously curved handrail, slender square ballusters, and wave-like brackets at the outer string.

Its original turned newel seems to have been originally finished with mahogany graining (see Paint Analysis Sample No. 36). The stairs and ballusters have been painted a number of times, but the handrail has never been painted. The sixth tread from the bottom of this staircase lacks the molding under its nosing.

The stairs to the basement beneath the main stair have been rebuilt since the Souder report, but the old rustic wood handrail and structural stringers have been reused. The new treads, risers, and outer string of this basement stair have been stained the color of the imitation wood paneling in the basement.

Hardware

There is no original hardware left in the Lemon House, but in some cases it is rather old. In the central hall (100), the door to the

basement stair has and shows scars of many different items of hardware. The current hardware on this one door includes a cylinder dead bolt, late nineteenth century cast iron thumb latch, small modern barrel bolt, flat plate from a missing lock 2-1/4" by 3-3/4", keyhole from a missing rim lock 2-3/4" by 4", and a cast handle from a thumb latch. This door will need careful examination to determine its original lock/latch type.

The door between the hallway and the barroom (101) has had its lock stile replaced unfortunately removing all evidence of hardware. The stile was replaced presumably due to fire damage, as the remainder of the door shows signs of damaged wood and alligatored paint.

The Type "A" door between the hallway and the southeast parlor (102) has a rim lock approximately 3" by 4-1/2", but shows scars beneath of a rim lock 4" by 7". There is also a keyhole scar below a doorknob scar, indicating this door originally had an iron rim lock with knob latch action and keyed dead bolt.

Except for the hardware described in Appendix 3 for the folding doors between the dining rooms (103 and 104), all evidence of original hardware has been destroyed in these two rooms. The evidence on the door to the southeast parlor must be the restoration source for the other first floor room doors.

The hardware on the window sash and the north exterior doors is modern. Only the south exterior doorway will have evidence of exterior door hardware.' This door was inaccessibly hidden by an exhibit panel when the author studied hardware.

Miscellaneous

There are baseboard heat convectors at the first floor, having once had cast iron radiators similar to those at the second floor. The riser pipes to the second floor are boxed in the corners of the first floor rooms. Similarly the water and soil pipes of the second floor apartment bath and laundry are boxed in. This is a detail which must be perpetuated as the structural girders at the heads of all partitions prevent hiding the pipes within the thickness of the partitions.

SECOND FLOOR

General Description and Layout

The present layout of the second floor contains eleven rooms, a stair landing, and a central east-west corridor. This configuration of rooms dates from c. 1900 when Samuel H. Lemon and his wife renovated the building hoping to operate a resort hotel. Included in this report are sketch plans showing the previous original room configuration, see "Conjectural Second Floor Plan 1831-99." It is major changes such as this which always weaken a structural system such that it is now essential that the long spans of the second floor joists be reinforced (see Recommendations).

Floors

Carpeting covers the floors in the stair landing, the southwest room, the three north offices, the east-west corridor, and the apartment living room. The remaining rooms have sanded and varnished wood floors, except in the present apartment kitchen, bathroom, and laundry rooms. These floors are covered with resilient tile probably on plywood. The actual condition of the floors of the second floor rooms is unknown at this time, and will have to be ascertained when the carpeting is removed.

Walls and Ceilings

Core samples were drilled and determined that the two stair hall partitions are of original mud, plaster, and hand split lath. The partition dividing the west wing from the main house is of the same materials and therefore is original. For the most part the east-west partition along the center line of the house is also original.

The location of the original second floor north room partitions was ascertained by examination from the attic level. The Evidence Drawings show where to see the original plates heading off the stair hall partitions. In contrast to these, and also shown on the attic Evidence Plan, ledgers were nailed to the side of a joist and a north-south girder in the north half of the attic floor framing for the original north room partitions. These plates and ledgers provided nailing for the partition studs.

Confirmation that the present small north rooms date from 1900 was obtained by comparing the nails which fastened the original window trim (Type D) with the transomed doorway trim in these rooms. The window trim Type "D" was fastened with early cut finish nails (see sketch of nails among Evidence Drawings). The doorway trim on the room side is also of Type "D". In contrast to the windows it was fastened with both cut nails of the above type and common head wire nails. Furthermore, there were also empty nail holes in the trim with no corresponding holes in the frame. This all shows that this trim had a previous use at another location and the wire nails show that the present assemblage was made at the end of the nineteenth century or later. The conclusion is that the rooms were changed when the west wing was being expanded c. 1900.

The condition of the plaster on the second floor walls and ceilings varies. There is exposed original 1831 plaster often cracked and patched, 1900 plaster, and more recent composition surface materials which no doubt cover deteriorated old plaster. Light fixtures have been hung in the stair hall and southwest office.

Doors and Trim

The original north rooms may have been those intended as occasional guest rooms of the original tavern. Just as at the first floor there is a hierarchy of trim use in the second floor. In this case the north rooms have the more elaborate and fashionable trim Type "D", whereas the south rooms have the less elaborate, old fashioned Type "C." In addition, the existing original Type "D" doorway trim is 7' 2" long, made originally for transomed doors (the normal door trim is 6' 6" long including an 8" high plinth block). These transomed doors would have provided privacy but also cross draft to the earliest hotel bed chambers as they do now to the c. 1900 rooms. The "Conjectural Second Floor 1831-99" shows what probably was the original distribution of trim and door types.

One of the few surviving original second floor doors which leads from the stair hall to the southwest room presently swings out into

the hall. This door originally swung into the room. Furthermore, in this change, the door hinges were moved to the lock stile. A raking light across the door surfaces brings out the old location and proportions of the missing original hardware.

Fireplaces

Both second floor east rooms have their original mantels. The fireplace opening in the southeast room is closed and its hearth inaccessible. It is assumed that the hearth is of the same smooth painted cement as is found in the northeast room. The jambs of the northeast fireplace are plastered and their opening corners are beveled probably to prevent potential damage to plastered "outside corners."

Miscellaneous

The second floor rooms all have radiators, the supply and return piping of which rises to the attic where it then connects to the next radiator supply or return. This routing was no doubt installed when the first floor radiators were removed and basebaord units substituted in an effort to reduce exposed fixtures and piping.

There is some surface-mounted electric conduit supplementing the hidden wiring system for the needs of the park office and apartment equipment.

ATTIC

General Description

The 1900 west wing renovation included a finished room in the attic. Reached by the west wing stair it is plastered, has simple flat trim, narrow hardwood floor, and provision for connecting a stove to the chimney. As the evidence drawings indicate the ceiling of this room is framed with reused original up and down sawn joists. All the rest of the present west wing framing is circular sawn and connected with common wire nails.

Originally the west wing attic was probably as unfinished as the present main attic. Loose wide floorboards down the center

provide access and some storage space. Otherwise the attic was generally unused.

A discussion of attic framing in relation to the origin of the west wing may be seen in Appendix 3.

MECHANICAL, ELECTRICAL, AND SECURITY SYSTEMS

Mechanical

The house is heated by a natural gas fired hot water system. There are four circulating pumps which divide the heating system as follows: basement, first floor, second floor main house offices, and second floor apartment. The boiler has a capacity of 200,000 BTU, and is approximately fifteen years old.

To conserve energy, storm windows were installed by a MARO contract on the interiors of each opening. Contrary to the design intention, the exterior sash have been taped shut. There is air leakage through the interior storm sash resulting in trapped condensation which potentially could cause decay of the exterior wood sash.

Similarly, despite good intentions, the newly restored panel doors at the exterior openings have warped and presently allow considerable infiltration. Nonhistoric as they may be, added stop strips with weatherstripping would be a wise addition to this exposed house.

Several years ago the attic floor was insulated with a blown-in fiber material which was extremely difficult to work around. To the benefit of all this material was vacuumed out and substituted with 6" vapor barrier-backed fiberglass batts. Now if one must examine the structure, etc., it is possible to easily remove the batts and replace them when through. A good housekeeping measure would be to vacuum the accumulated dirt between the attic joists under the new insulation batts.

Presently water is supplied to the house through a badly corroded 2" line which is effectively equivalent to a 1" line. It is planned to replace this line. At the same time the sewer lines are to be

connected with the town of Cresson sewage system. The park has over the years been operating with an inadequate 500-gallon septic tank, needing frequently to be pumped out, and an inadequate tile field, the leach lines of which are clogged.

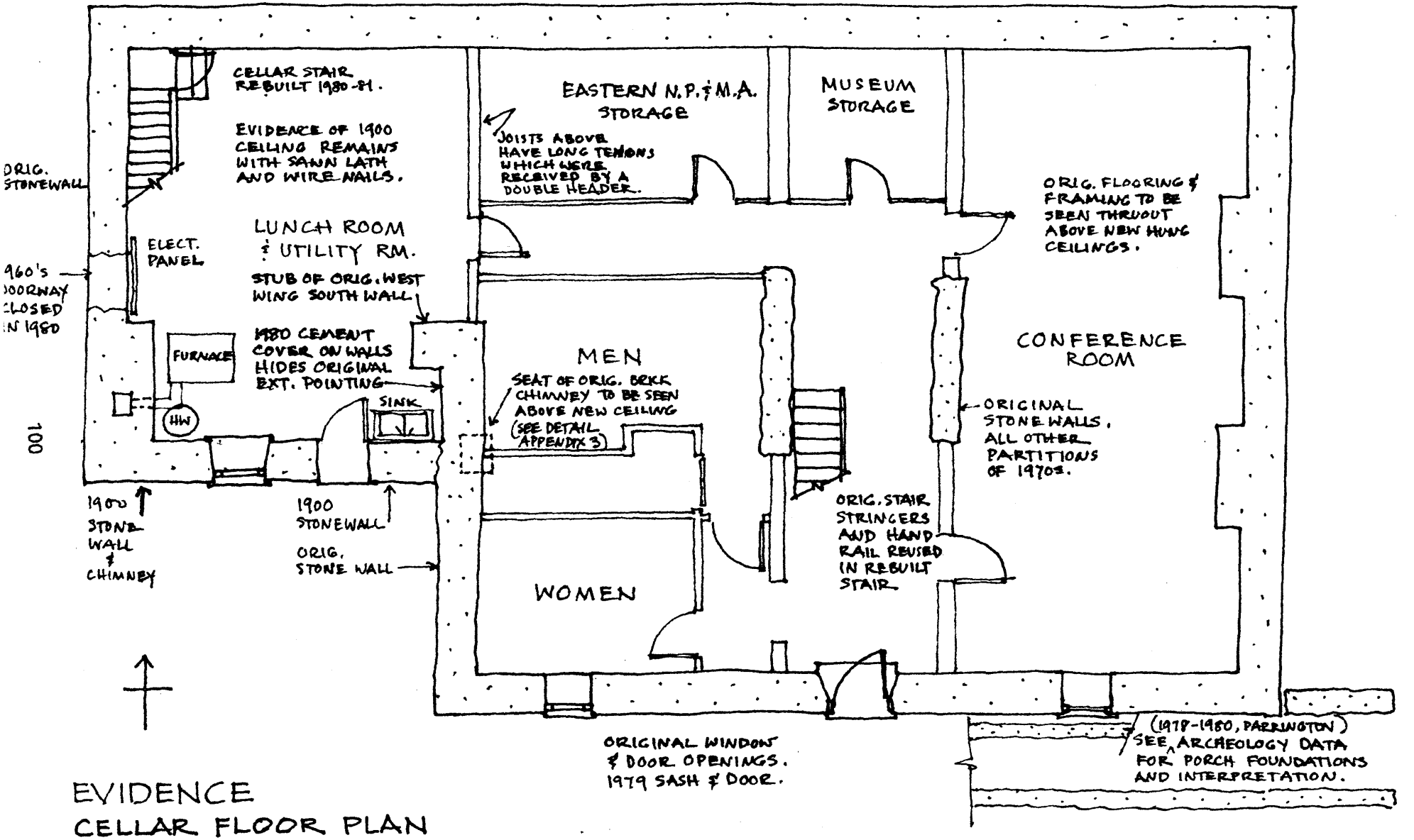
Electrical

The electrical service is 200 amp. New panels, circuit breakers, and some wiring replacement was done under the same contract with the installation of the public restrooms in the basement. In general the circuits are not overloaded, but a few are close to their capacity and have questionable wiring. As a result of the work done during the installation of the present exhibitry, it is said that the second floor stair hall light is now linked to two different circuit breakers. It would be wise for an electrical engineer to check the system.

Security and Fire Detection

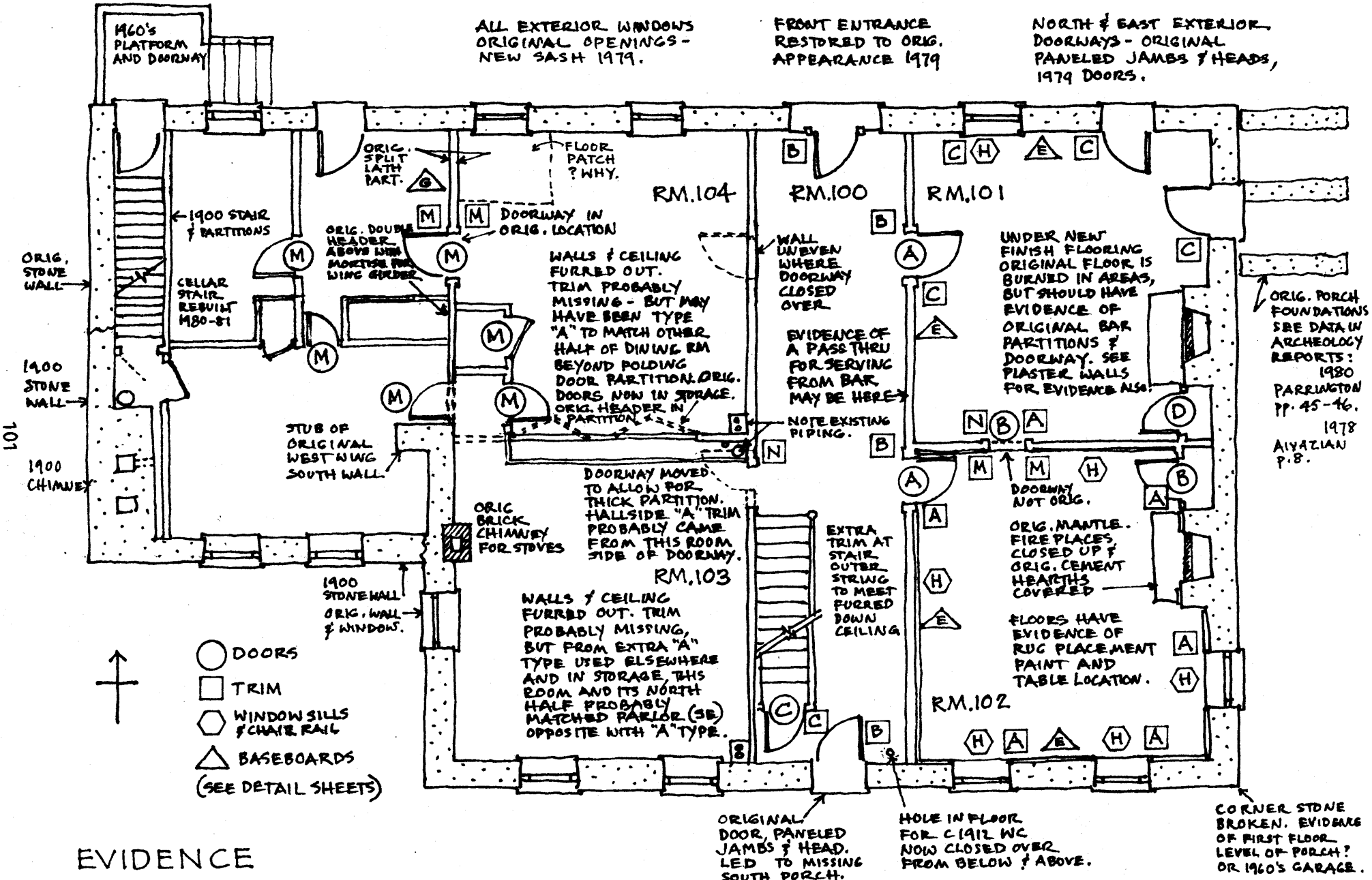
A modern fire and security detection system was installed throughout the house during October 1981.

I. EVIDENCE DRAWINGS, PLANS, AND DETAILS



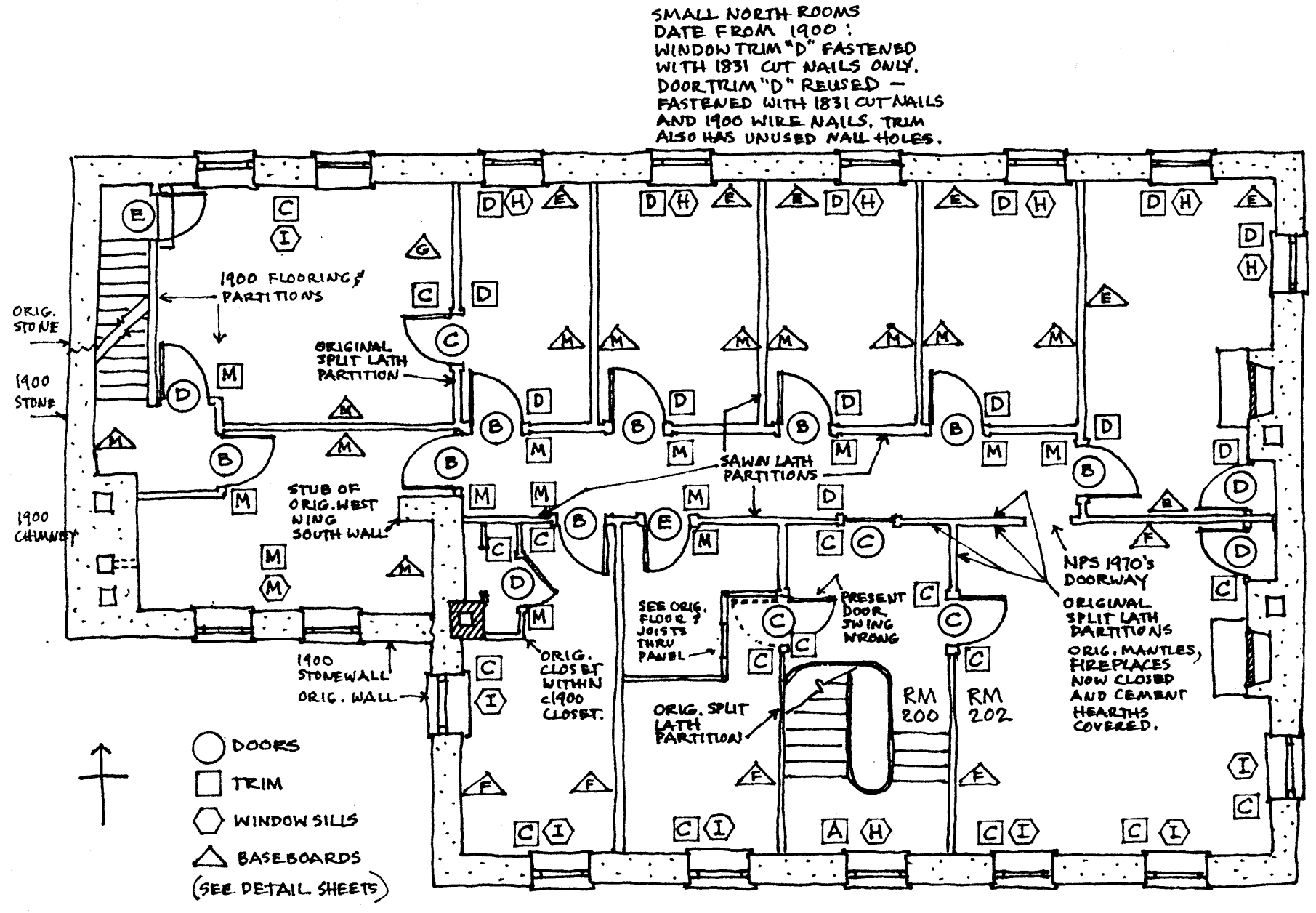
EVIDENCE
CELLAR FLOOR PLAN
LEMON HOUSE ALPO

PHB DEC. 1980



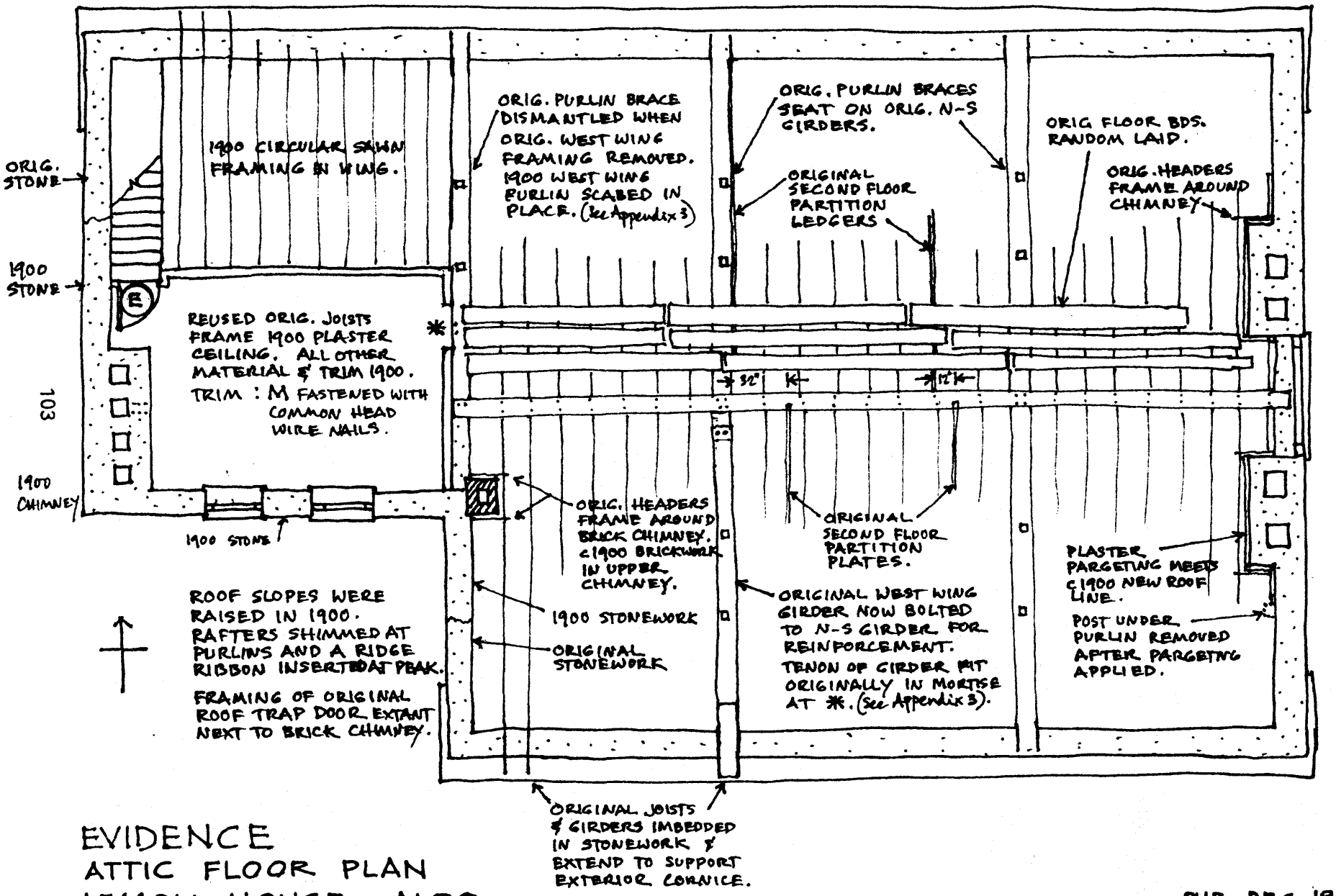
EVIDENCE
FIRST FLOOR PLAN
LEMON HOUSE - ALPO

PHB DEC. 1980



EVIDENCE
SECOND FLOOR PLAN
LEMON HOUSE ALPO

PHB DEC. 1980

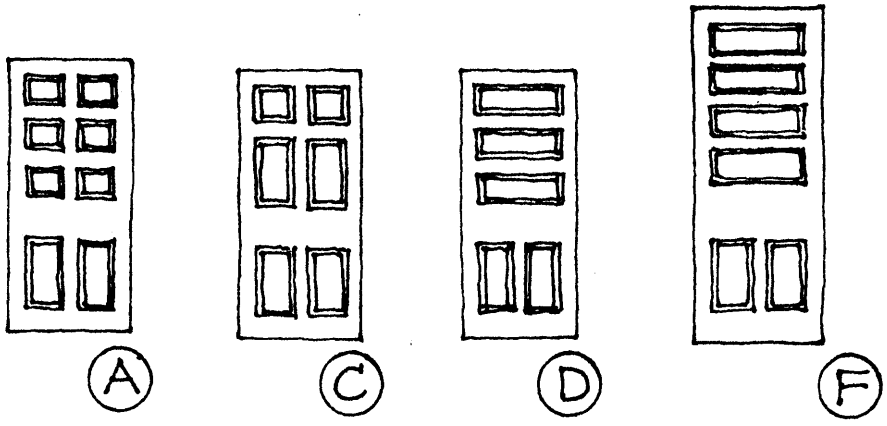


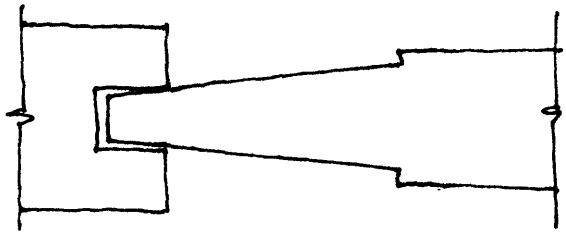
EVIDENCE
ATTIC FLOOR PLAN
LEMON HOUSE - ALPO

PHB DEC. 1980

LEMON HOUSE
ALPO
INTERIOR DOORS

1831



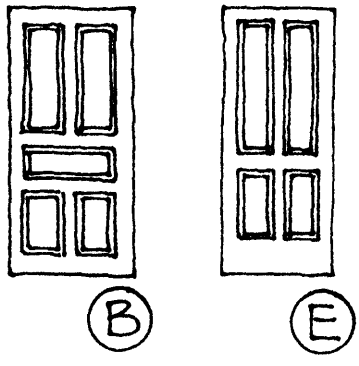


CONSTRUCTION : HAND PLANED, MORTISE & TENONED. CLOSET(D) & DINING ROOM(F) DOORS ARE NOT PINNED. HALL DOORS (A & C) ARE PINNED.

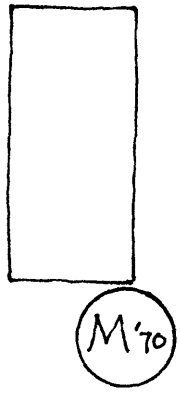
A, C, D & F

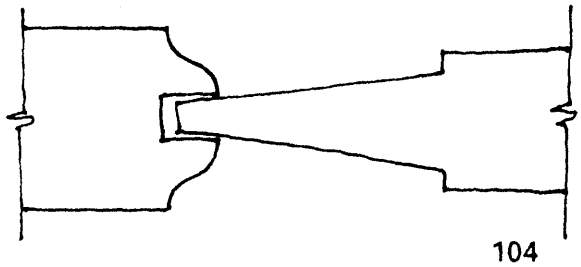
NOTE : ORIGINAL DOORS WERE HUNG ON PAIRS OF 5 KNUCKLE 1" x 3½" LEAF CAST IRON BUTT HINGES (3 SCREWS). AT 1st FL. DOOR TO SERM HAD EVIDENCE OF 4" x 7" RIM LOCK.

1900



1970's



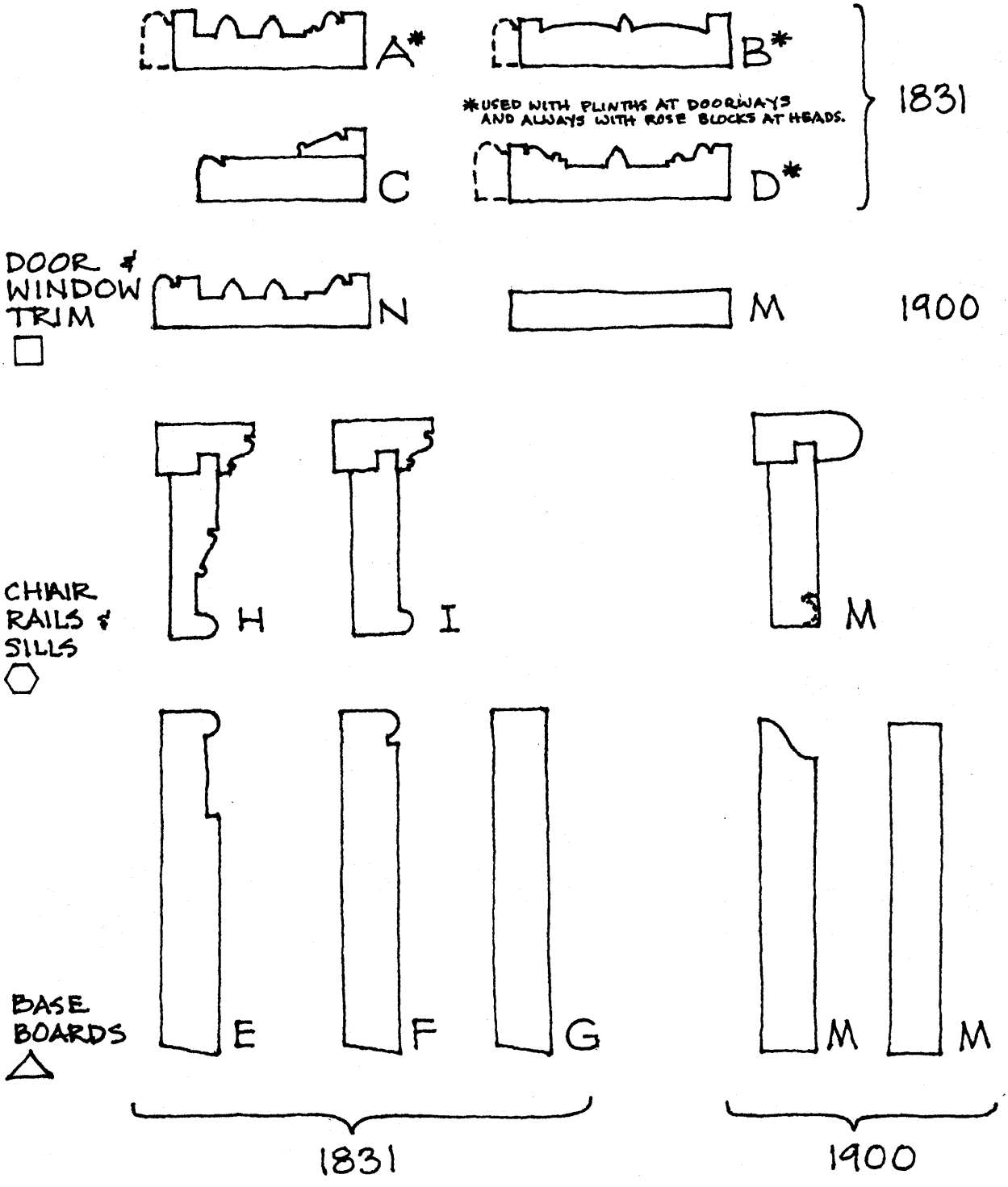


B & E

(DOOR DESIGNATIONS FROM D'WG 423-26000 SHEET 12.)

PHB DEC 1980

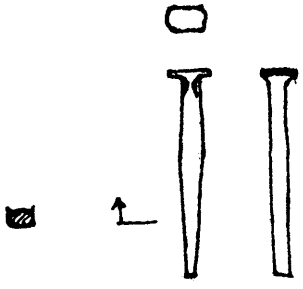
LEMON HOUSE
ALPO
INTERIOR TRIM



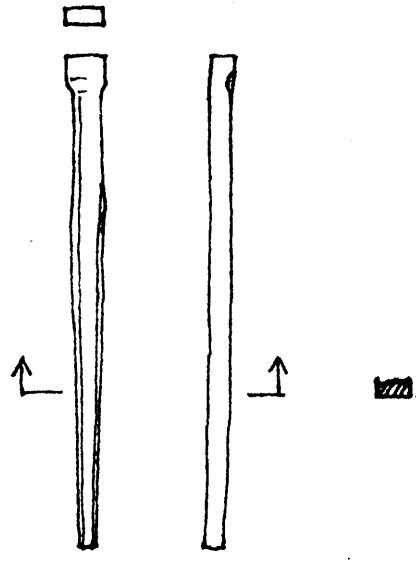
PHB DEC. 1980

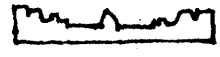
LEMON HOUSE
ALPO

1831 CUT NAILS



LATH NAIL
USED WITH
SPLIT LATH
1ST FL. SW RM
CEILING

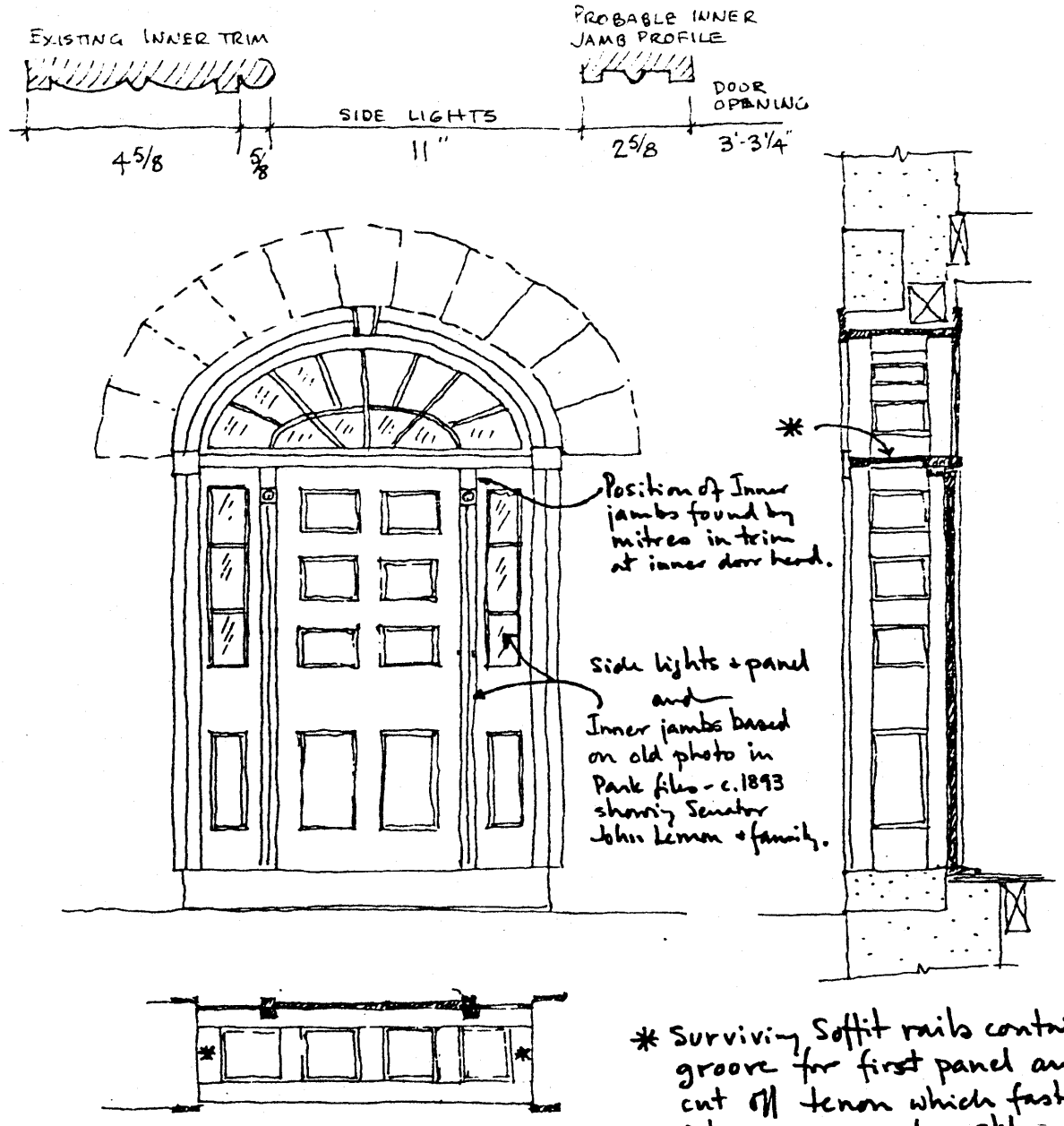


FINISH TRIM NAIL ——
REMOVED FROM 2° FLOOR
NORTH ROOM ORIGINAL WINDOW
TRIM TYPE "D" 

1900 WIRE NAILS



LATH NAIL USED WITH
SAWN LATH AT WEST
WING CEILING.



TRANSOM REFLECTED SOFFIT PLAN

Paneling based on surviving rails at jambs *, and conjectured panel size based on relationship to door paneling.

* Surviving Soffit rails contain groove for first panel and cut off tenon which fastened into missing outer stile. Inner stile probably survives across door head + would confirm panel plan with surviving mortises for other rails.

Lemon House - Allegheny Portage

North Front Entrance -

Probable Restoration Appearance

May 25, 1978

P.H. Batchelor, DSC, NA/NA

J. RECOMMENDATIONS

1. SHORT TERM RECOMMENDATIONS

Structural Rehabilitation

It is imperative that the upper floors of the Lemon House be strengthened. Appendix 7 includes the background of structural work done so far. The proposed work, to be hopefully installed with a fiscal year 81 contract, consists of installing new steel to bisect the long spans of the second floor joists and transferring these loads to the existing first floor structural steel which was designed to receive them. At the roof the main purlins will be reinforced and the attic floor girders which receive the roof loads will also be reinforced. It is further recommended by Structural Engineer Nicholas Gianopulos that the attic no longer be used for miscellaneous storage as the rest of its framing system is not adequate for such use. An exception to this could be the storage of original Lemon House doors and trim which otherwise might be mislaid.

It is proposed that this work be carried out such that the park may continue operations within the building. This work will be timed when visitation is low as there will be interruptions to the exhibitions and audio-visual presentations. The park will hopefully provide alternative interpretation at that time.

The burden will be on the park and the DSC project supervisor, and/or historical architect, to record photographically, by measurements and written description, and salvage, any data or objects discovered during this work which add to the history of the structure.

Room Use

The adaptive use - short term sketch plans included here suggest room use. It will be possible, once the structure is reinforced, to open the main house west rooms to each other as they did originally. It is not suggested to restore and reinstall the folding doors, however, until the time when these rooms can receive comparable restoration of their surfaces and trim.

A very important responsibility of the park is to ensure the safe storage of these folding doors and all original doors and trim removed from the house interiors. These items should best be tagged, or otherwise marked with the following information: where last used; i.e. room, opening, wall, etc., (use compass direction identification); when removed; and by whom.

Doors can be best stored in the attic if they are placed near bearing points. Here these large items will be out of the way yet stored safely within the house. No other materials should be stored in the attic, however. Loose trim should probably be stored with the museum collection in the cellar.

2. LONG TERM RECOMMENDATIONS

If in the future further restoration is considered, a complete restoration of the Lemon House is not recommended. A compromise is necessary. The long term sketch plans illustrate this recommendation. Basically the compromise includes retention of the present west wing structure (which in large part dates from 1900) with the restoration of the 1831 main house. As the sketch drawings convey (with the apartment entrance removed) the character of the present west wing would combine well with the restored main house. The reconstruction of the 1831 main house porches would give meaning to the soaring height of the south wall and its floating hallway door.

If sufficient data can be gathered it might be possible to advance the reconstruction of the exterior porches. Toward this end, it is recommended that the present archeological data be augmented by further investigation along the east side of the house to verify whether or not the south porch originally returned along the east walls.

Room Use

In the long term if the house interior is to have its historic use interpreted by furnished rooms, it is recommended here that the entrance hall be restored as well and the information and sales services be moved into the north end of the double dining room.

There are several reasons why this is recommended. As we no longer have the original west wing kitchen, we will not be able to restore it. Thus there is no strong link of dining room and kitchen to recognize. The function of the dining room can be well established in one of the two rooms, and this might best be done in the room which had the stove and was no doubt used year round, i.e. the south room. The entrance hall should be restored as the pass-through from the bar would be extremely interesting to feature in the hallway. And, the visitor to the restored building should enter as the 1831 visitor did. With this scheme the 1900 west wing first floor can be used as offices for the interpreters, handy to their charge.

The second floor room use largely retains the 1900 room arrangement which as it so happens works well for the short and long term. The only shift of consequence in the long term is the creation of a large superintendent's office by opening up much of the original southwest room. This involves the removal of one 1900 north-south partition.

This recommended long term plan has one drawback. It requires the removal of the tenant apartment and thus a measure of security. However, this can be offset by the installation of automatic fire detection and other security detection systems.

3. IMPACT EVALUATION

Structural Stabilization Impacts

The next phase of structural stabilization of the house framing is essential for the preservation of the Lemon House. If no action is taken the present intensive use will threaten the integrity of this historic structure. The insertion of structural steel supports will effect original fabric by removing plaster and lath at ceilings in line with the steel beams and at walls wherever any partition is to be supplemented with columns. To mitigate this loss, the plaster to be removed will be examined for evidence of original features such as the bar and decorative materials. Any such evidence or materials found will be researched and

recorded. If this work is performed as recommended in fiscal year 81 the present surface materials will be patched. At the time of the long term interior restoration, all the original plaster surfaces must be exposed, researched, and restored. See the section on Short Term recommendations for the one architectural compromise which is unavoidable in performing this work. It is felt that this compromise is acceptable.

Adaptive Use Short Term Impacts

General: The continued use of the building with the short term plans basically will not harm the integrity of the historic structure as long as the above mentioned structural stabilization is carried out. The visitor impact is minimal. The floors are all well carpeted.

Safety: There are two escape exits from the basement and first floors. The second floor where the majority of the staff works has really only one exit and that is an open wood stair. The second exit is for the most part inaccessible as it is within the locked-up private apartment. The long term development will correct this by removing the apartment.

Handicapped: The handicapped can easily gain access to the first floor exhibits and through an exterior entrance to the basement restrooms. The second floor offices are inaccessible to the wheelchair handicapped.

Energy: The building presently has sufficient conservation measures in terms of insulation and storm sash. Air leakage can be decreased with better stops and weatherstripping at the doorways.

Adaptive Use Long Term Impacts

Exterior Restoration Impacts

The reconstruction of the original porch will impact the surviving porch foundation evidence uncovered by archeology. The mitigating measures here must be the archeological record of what is found. A reconstruction always involves varying degrees of conjecture. In this way the porch reconstruction can be said to impact the degree of

integrity of the historic house. On the other hand, not to reconstruct the porch impacts the house by leaving it incomplete, and by denying the visitor the opportunity to enjoy such a rare facility.

Interior Restoration Impacts

General: Again, the very act of restoration necessitates undoing original fabric. In this instance repair or replacement of the barroom floor means the eradication of the evidence it holds. In this case the record of this evidence must mitigate this effect. Visitor usage will impact the remaining original flooring of the house by repeated traffic wear. The only mitigating solution is to lay floor colored carpet in the traffic areas. This compromise must be worked out sensitively so as not to interfere with the main image to be conveyed. The second floor rearrangement, in particular the creation of a larger office for the superintendent in the southwest room, involves the removal of a length of 1900 partition. This will not adversely effect the historic fabric.

Safety: By the elimination of the apartment, a second mode of exit is provided the staff working on the second floor.

Handicapped: In the long term the handicapped visitor will be unable to see the second floor restored bed chamber. This can be most easily mitigated by having photographs of the restored room readily available.

Energy: Same as short term.

4. COMPLIANCE SUMMARY

By virtue of being part of a National Historic Site the Lemon House is on the National Register. An Agency Official 106 Effect Report was submitted April 14, 1978, in anticipation of restoration/preservation work to be performed by MARO. The report was approved August 29, 1978, with the proviso that prior to commencing construction the National Park Service will submit final plans and specifications to the Pennsylvania State Historical Preservation Office (SHPO) and Advisory Council for review and comment.

The scope of restoration listed in the above Effect Report covers in general the work recommended by this study, although the detailed state of knowledge of the building's history has since been refined.

It is assumed that this compliance documentation will serve as a basis for all recommended restoration/preservation work providing the final plans and specifications are first reviewed and commented upon by the Pennsylvania SHPO and Advisory Council.

5. RECOMMENDED RESEARCH YET TO BE DONE

Archeological:

- Investigate for possible porch foundations along the east end of the building - an area about 50' by 8'.

- Investigate grounds for location of features such as: ice house, privy, bake ovens, well, fences, outbuilding in northwest corner of front yard, other possible outbuildings, trees, and location of Samuel Lemon's original log tavern along Route 22. Interview past residents showing them old photographs to trigger their memories on the use of outbuildings shown.

Architectural:

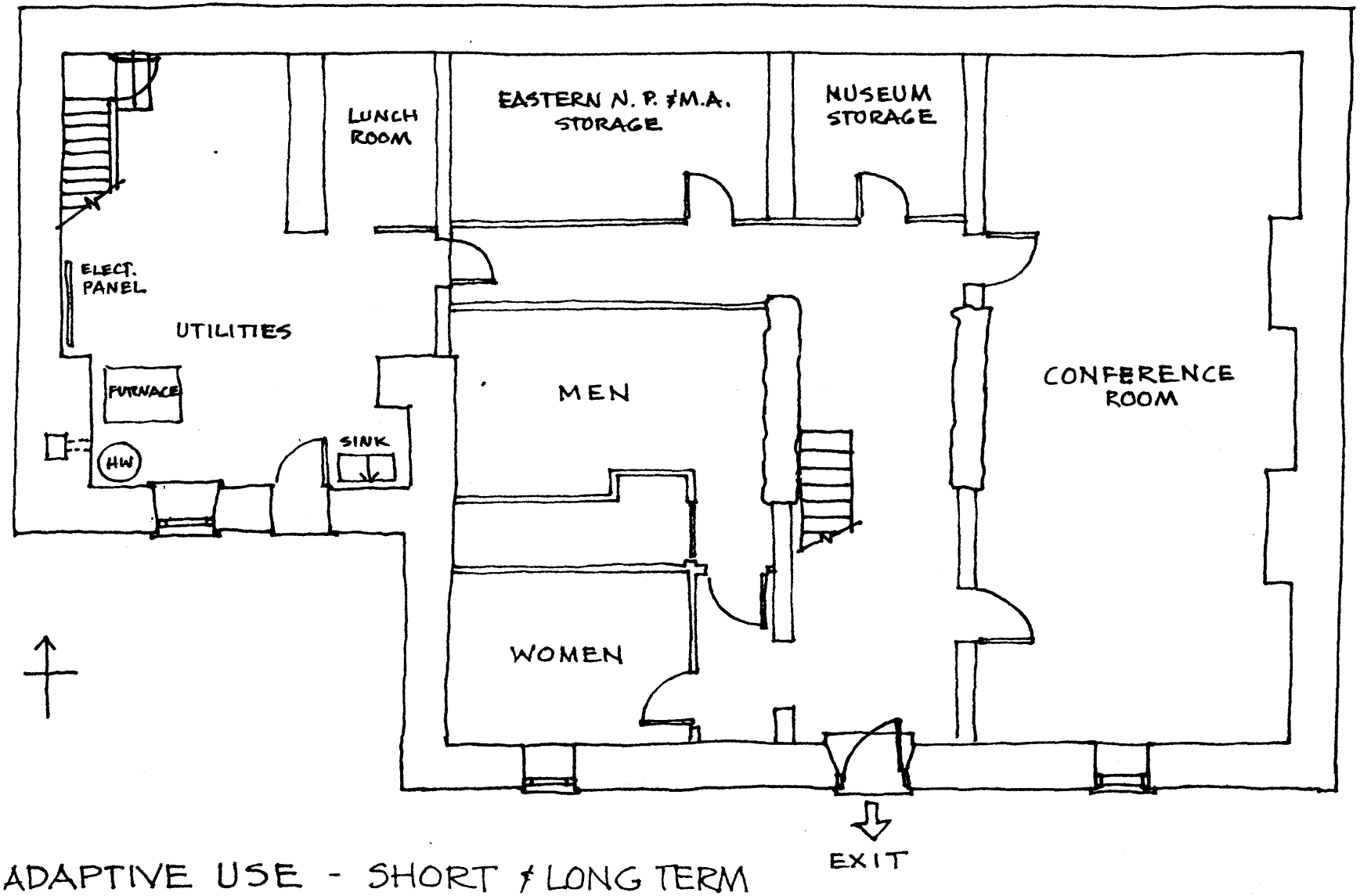
- When the present exhibit and audio-visual installations have been removed, investigate all the main house first floor rooms and southeast second floor rooms for the following items:

  Tavern bar paritions and pass-through to hall
  Tavern mantle outline and hearth
  Evidence on floors of furniture placement
  Evidence of missing trim and doors in all rooms
  Evidence of missing original hardware
  Evidence of paint colors on trim and plaster
  Evidence of wallpaper

- In the geographical area and among graphic material investigate similar buildings for porch types, bars, and trim.

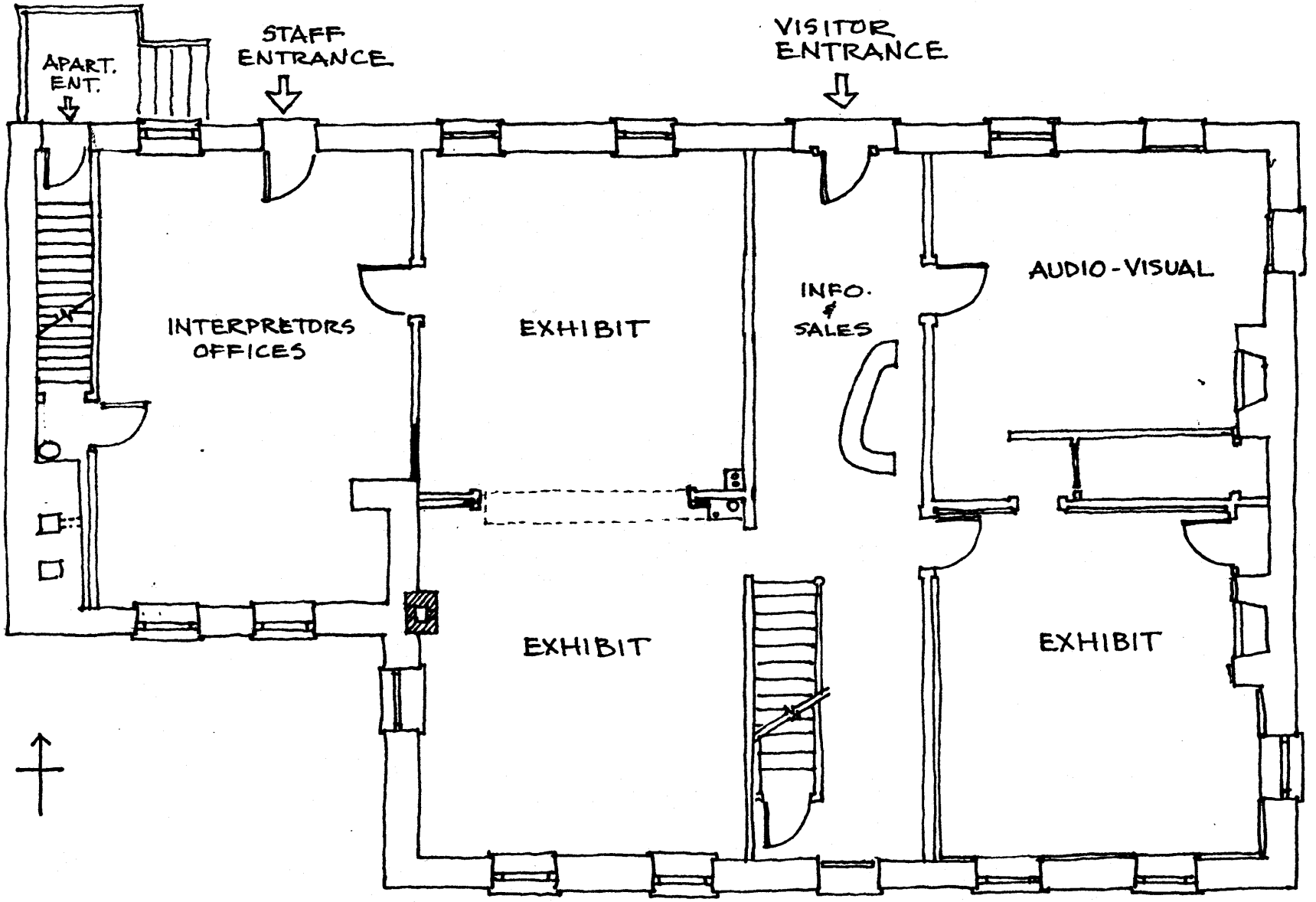
- On the main house exterior south and east walls open up wall to look for possible pockets for porch framing.

- Compare archeological porch evidence with porches of the geographical area.



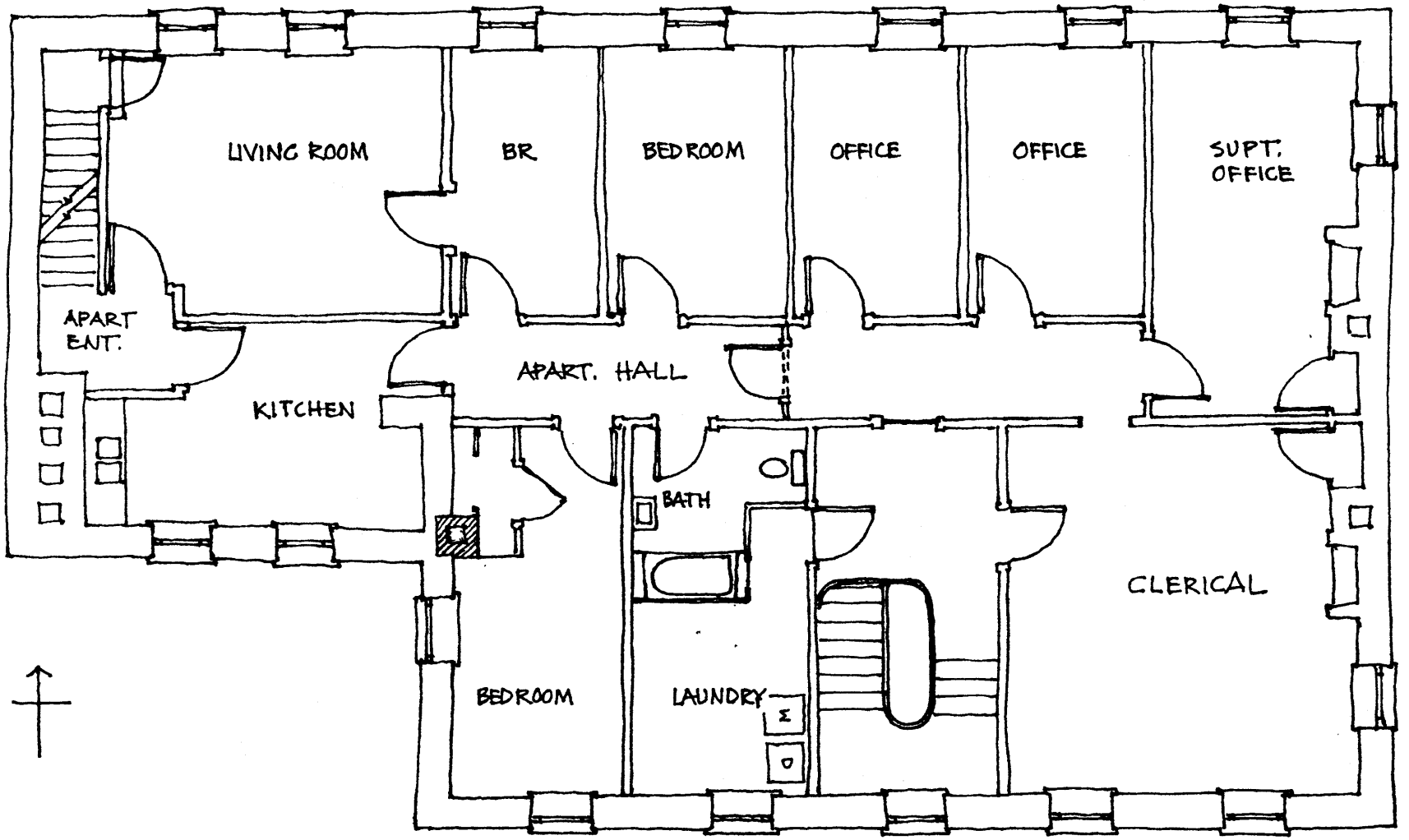
ADAPTIVE USE - SHORT & LONG TERM
CELLAR FLOOR PLAN
LEMON HOUSE ALPO

PHB DEC. 1980



ADAPTIVE USE - SHORT TERM
FIRST FLOOR PLAN Interpreters' Office
LEMON HOUSE - ALPO

PHB DEC. 1980

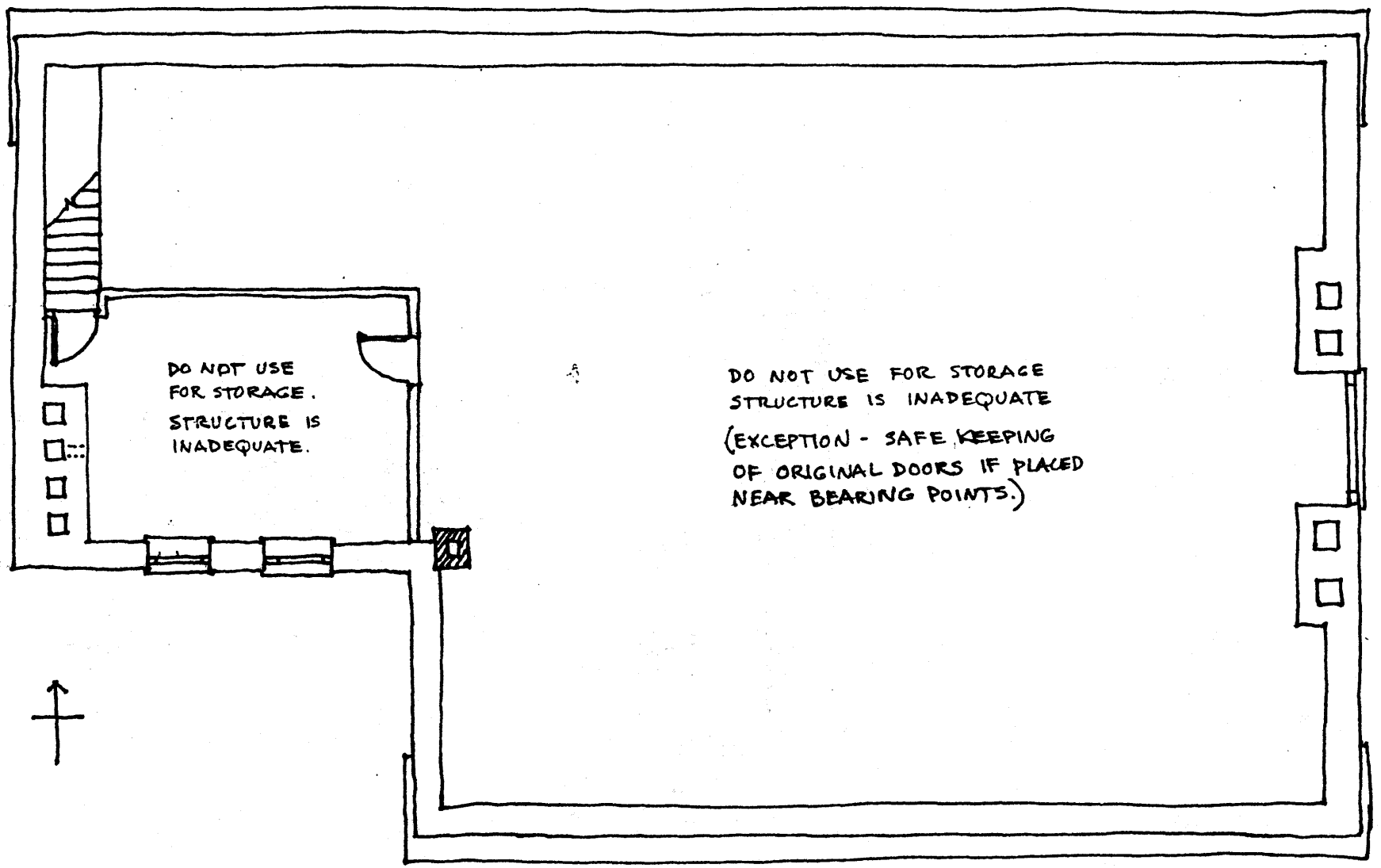


ADAPTIVE USE - SHORT TERM

SECOND FLOOR PLAN

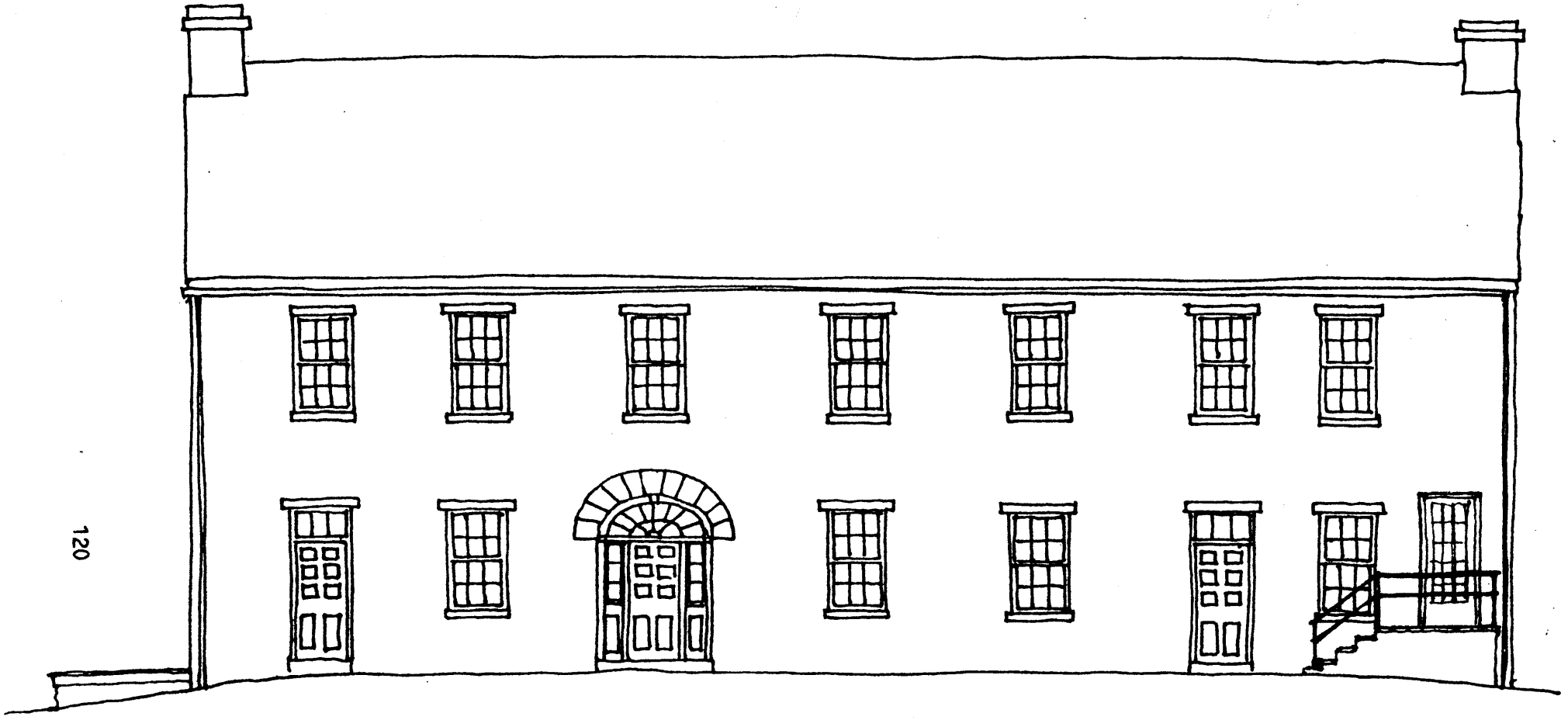
LEMON HOUSE ALPO

PHB DEC. 1980



ADAPTIVE USE - SHORT & LONG TERM
ATTIC FLOOR PLAN
LEMON HOUSE - ALPO

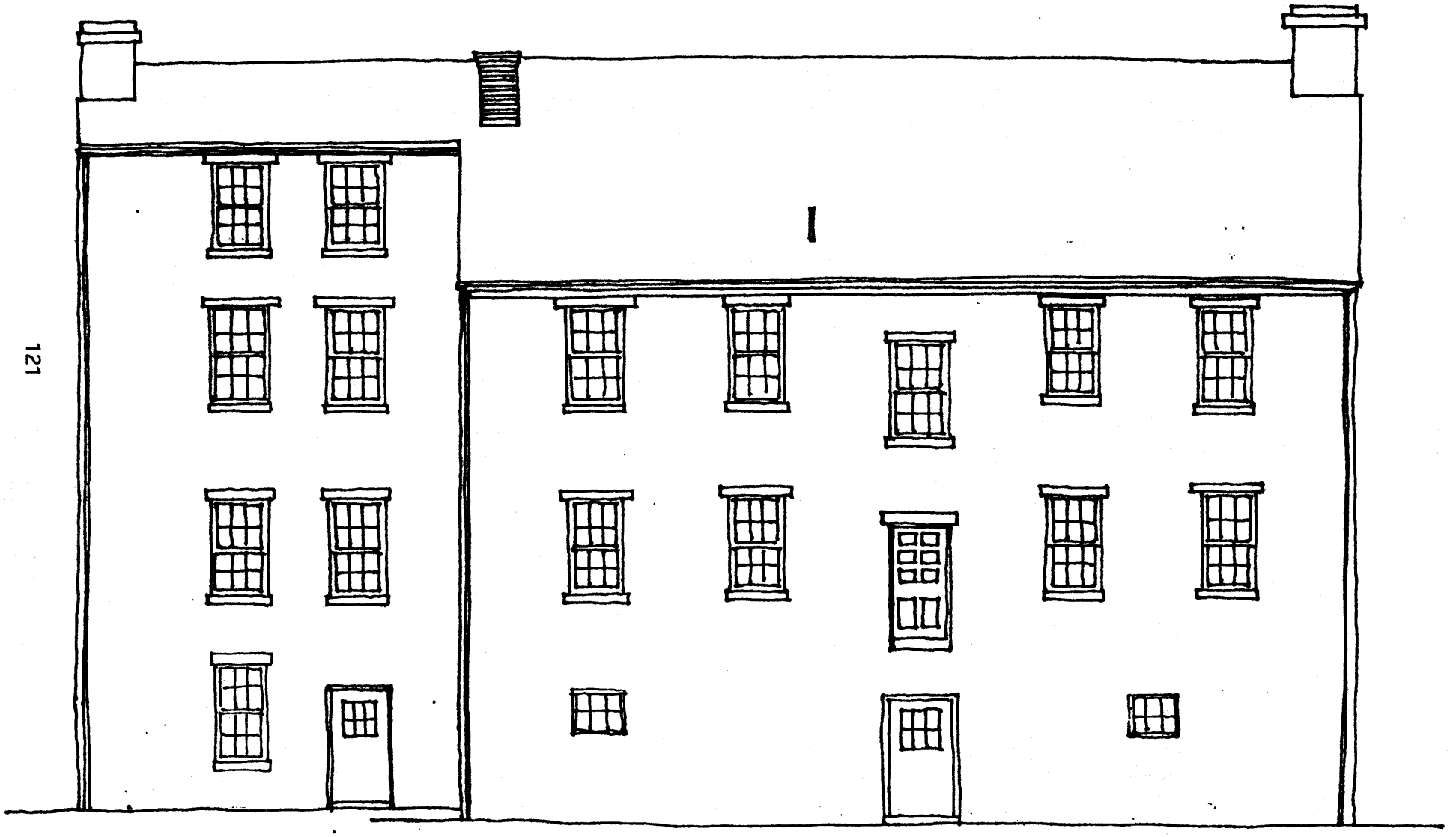
PHB DEC. 1980



120

ADAPTIVE RESTORATION - SHORT TERM
NORTH ELEVATION
LEMON HOUSE ALPO

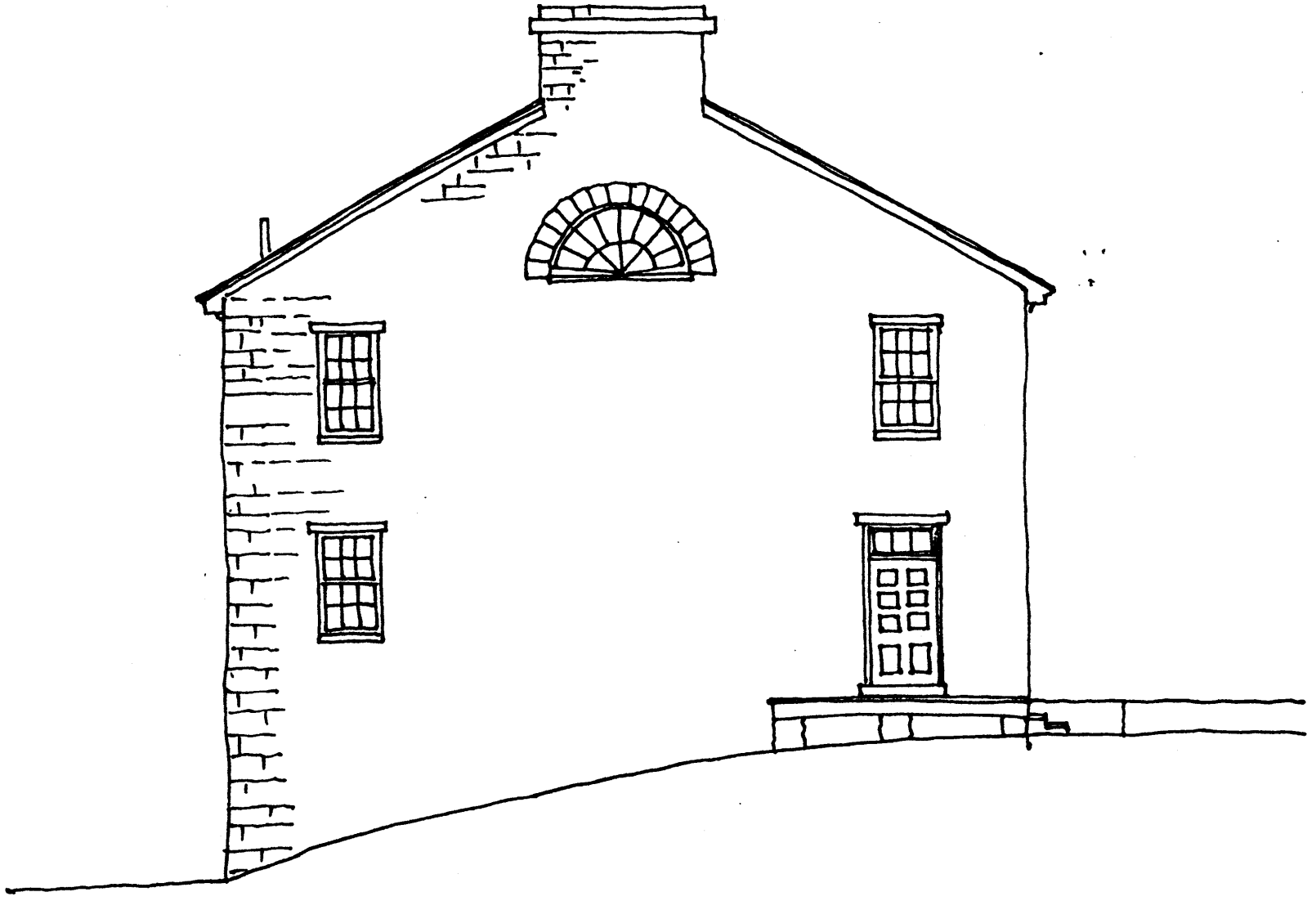
PHB DEC. 1980



SOUTH ELEVATION
LEMON HOUSE ALPO

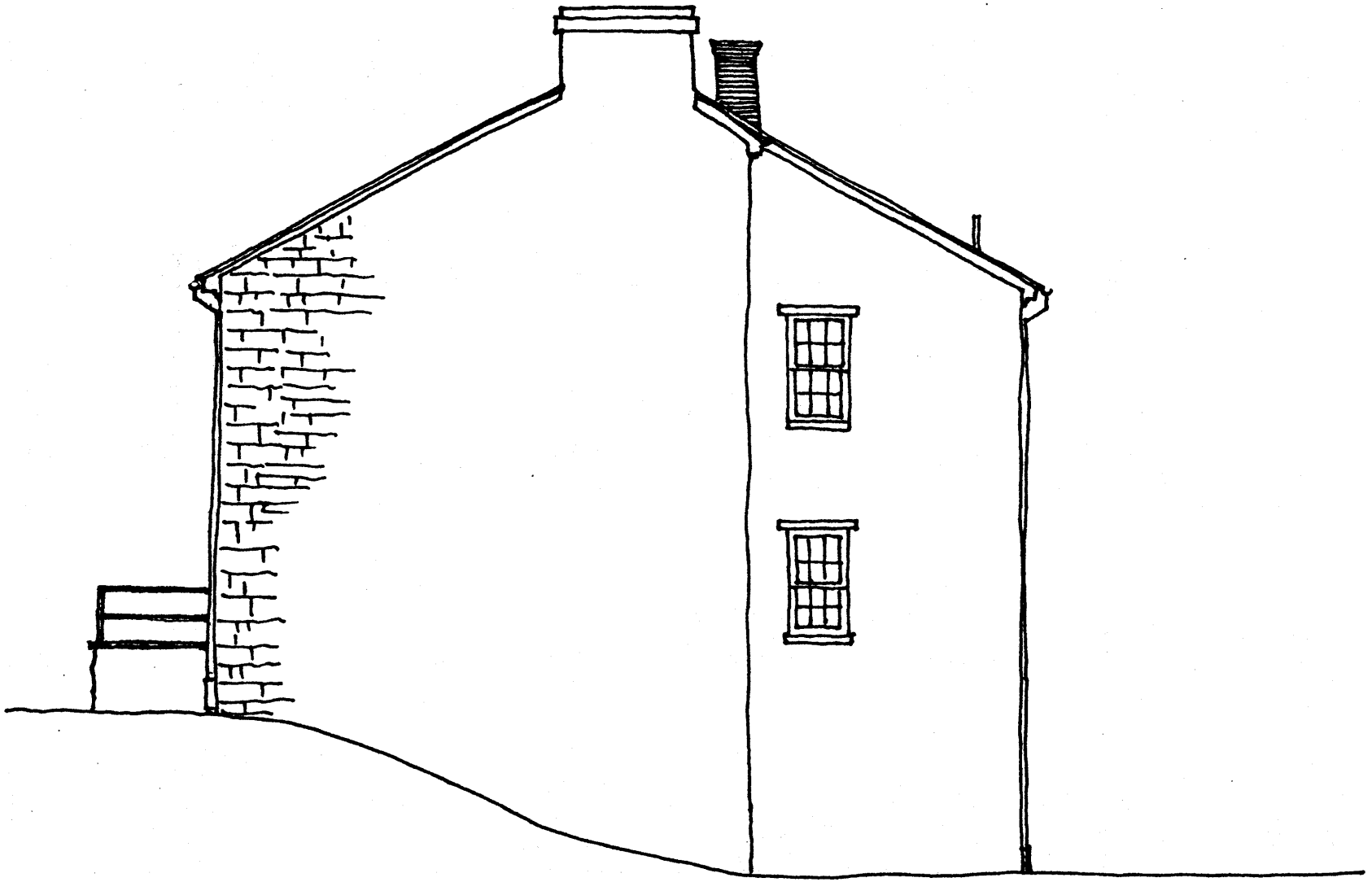
ADAPT. RESTORATION - SHORT TERM

PHB DEC. 1980



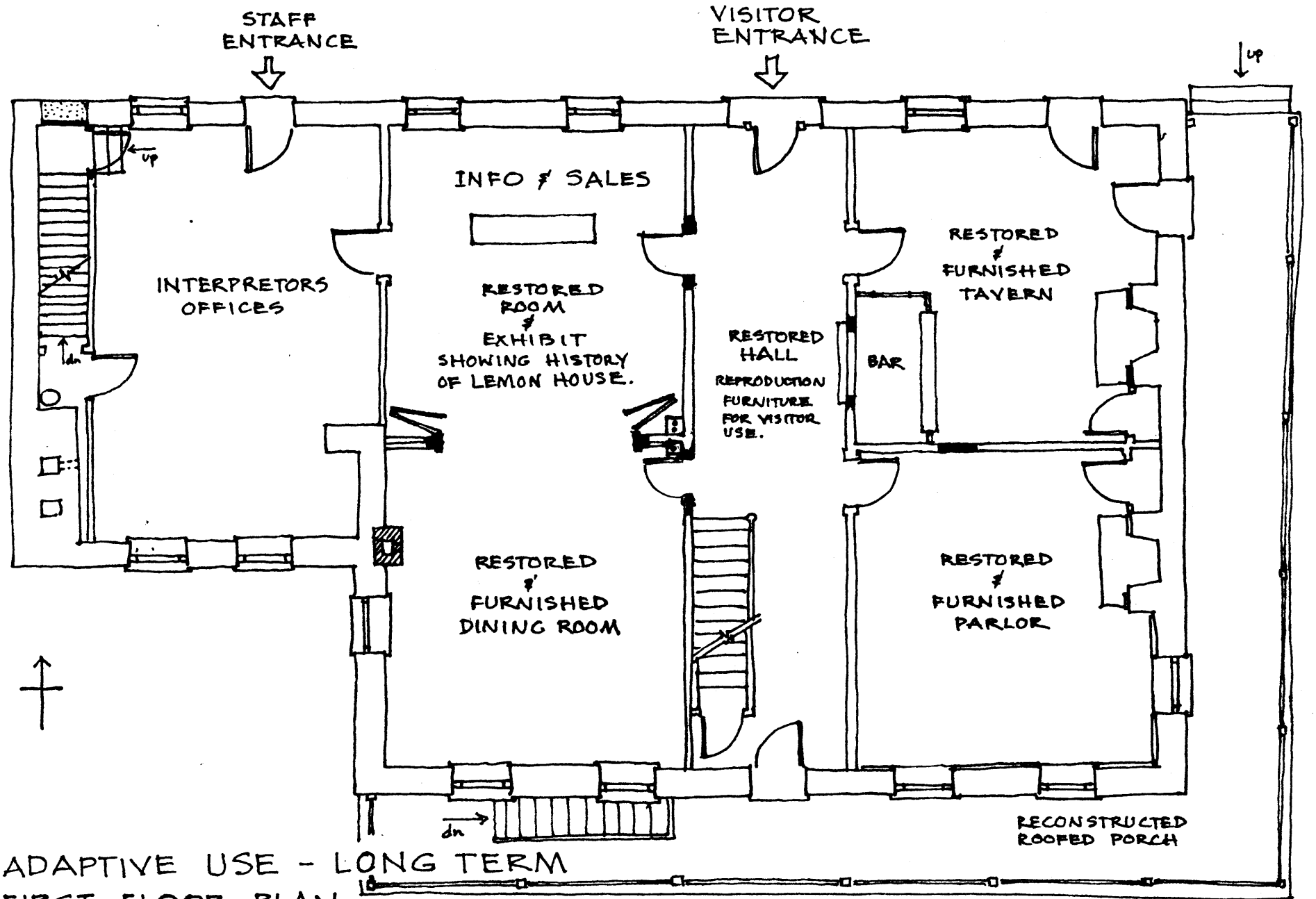
EAST ELEVATION ADAPT. RESTORATION - SHORT TERM
LEMON HOUSE ALPO

PHB DEC. 1980



ADAPTIVE RESTORATION - SHORT TERM
WEST ELEVATION
LEMON HOUSE ALPO

PHB DEC.1980



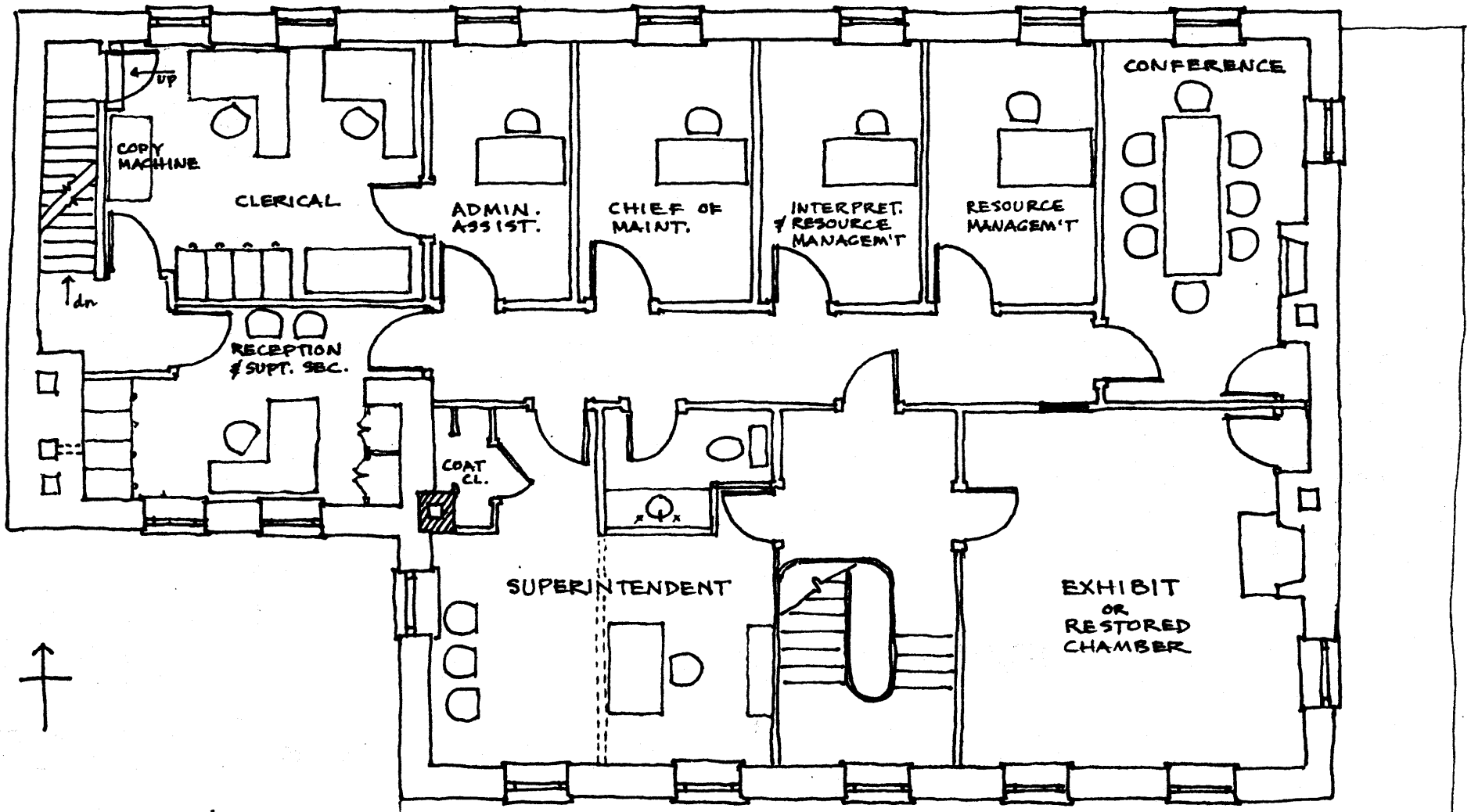
ADAPTIVE USE - LONG TERM

FIRST FLOOR PLAN

LEMON HOUSE - ALPO

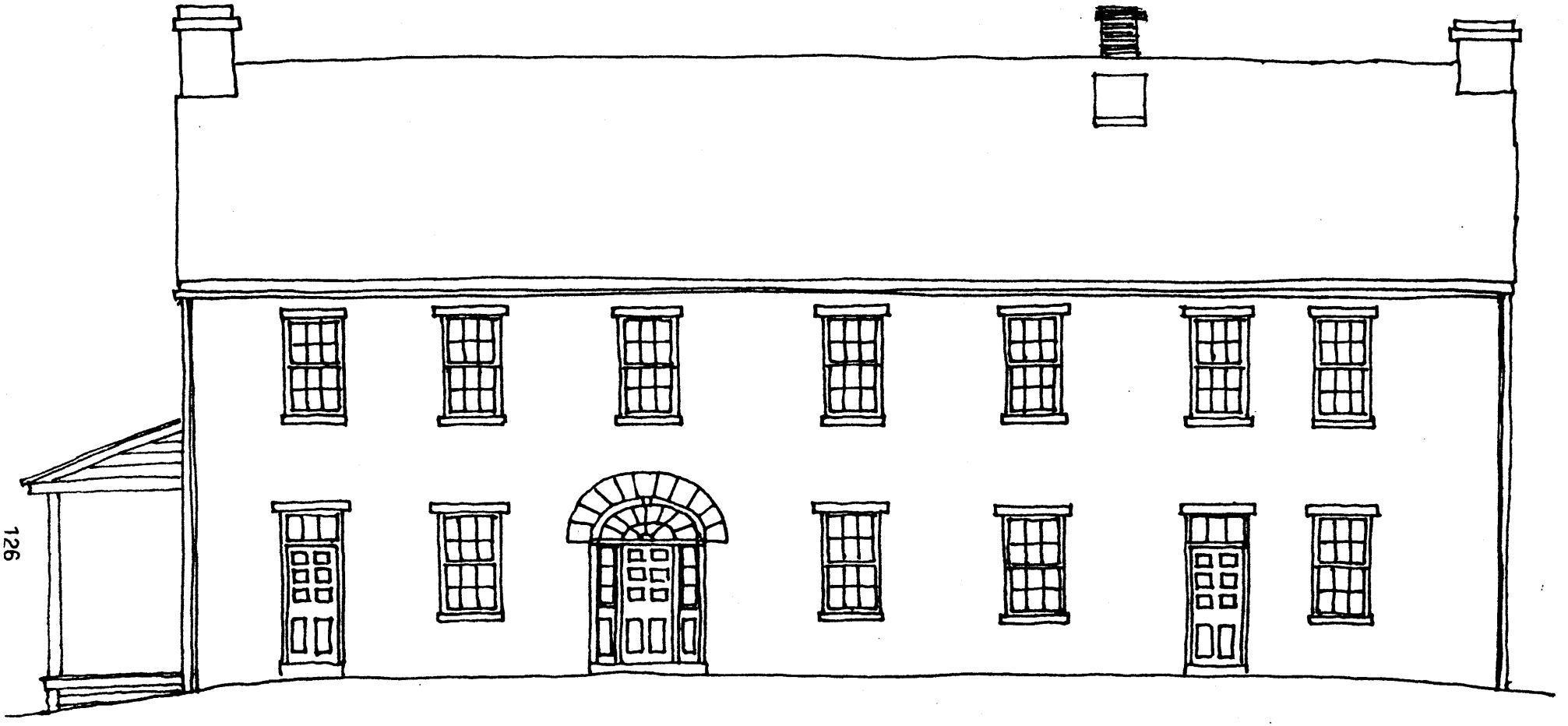
Interpreters' Office

PHB DEC. 1980



ADAPTIVE USE - LONG TERM
SECOND FLOOR PLAN
LEMON HOUSE ALPO

PHB DEC. 1980



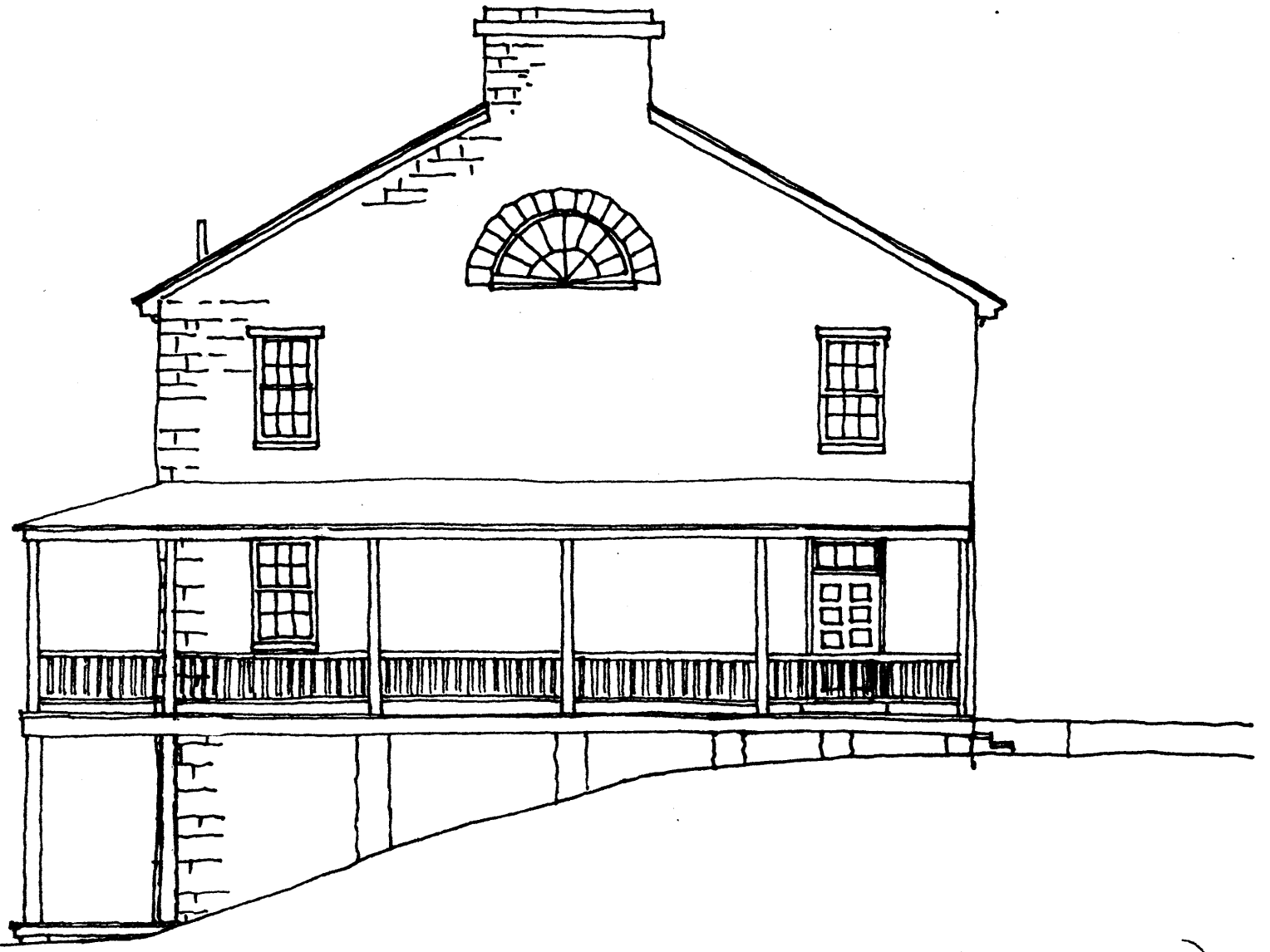
ADAPTIVE RESTORATION - LONG TERM
NORTH ELEVATION
LEMON HOUSE ALPO

PHB DEC. 1980



SOUTH ELEVATION
LEMON HOUSE ALPO

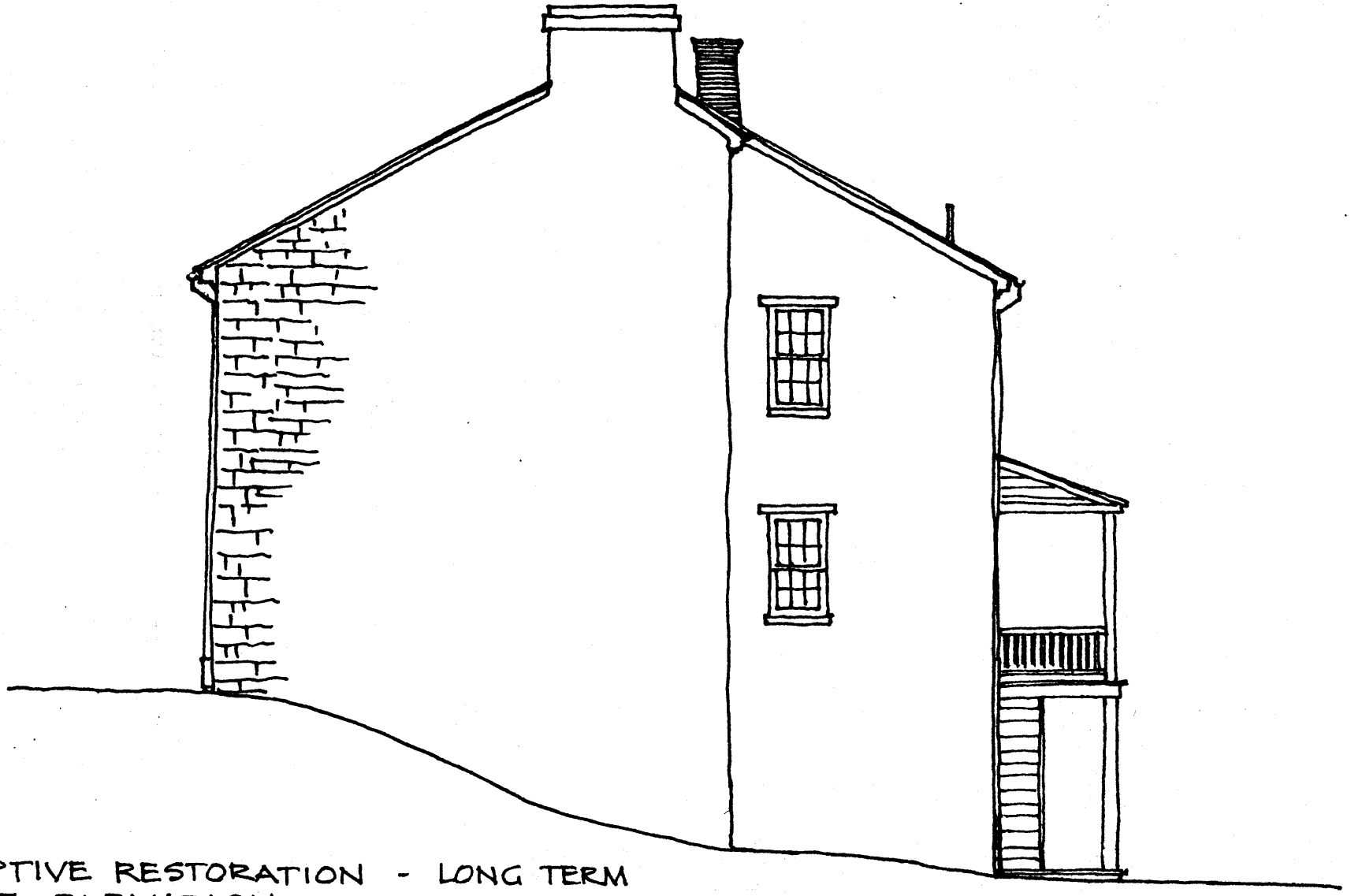
ADAPT. RESTORATION - LONG TERM - (PORCH IS CONJECTURAL)
PHB DEC. 1980



EAST ELEVATION
LEMON HOUSE ALPO

ADAPT. RESTORATION - LONG TERM - (PORCH IS CONJECTURAL)

PHB DEC. 1980



ADAPTIVE RESTORATION - LONG TERM
WEST ELEVATION
LEMON HOUSE ALPO

PHB DEC. 1980

DSC-HFC
Form 802

Page 1 of 1
for this package

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

PACKAGE ESTIMATING DETAIL

REGION	PARK
MARO	Allegheny Portage RR NHS
PACKAGE NUMBER	**PACKAGE TITLE**
102	Adapt and Restore Historic Lemon House

(If more space is needed, use plain paper and attach)

ITEM	QUANTITY	COST
Exterior restoration (long term)		
Porch reconstruction		$ 37,500
Rest of wall at apart. doorway		5,000
Interior restoration (long term)		54,850
Structural stabilization of second floor, attic, and roof		65,000
Total		$162,350
NPS overhead 61 percent of $162,350		99,033
Grand Total		$261,383
Amos Williams and P. H. Batcheler, January 13, 1978		

SUMMARY OF CONSTRUCTION ESTIMATES		CLASS OF ESTIMATE: A ☐ Working Drawings; B ☐ Preliminary Plans; C ☒ Similar Facilities	
Proj. Type		**Totals from Above B & U**	**R & T**
52	Museum Exhibits		XXXXX
55	Wayside Exhibits		XXXXX
62	Audio-Visual		XXXXX
89	Ruins Stabilization		XXXXX
91	Construction		
92	Utility Contracts		XXXXX

ESTIMATES APPROVED (Signature)	(title)	(date)

POST PROFESSIONAL SERVICES ESTIMATES AND SCHEDULING ON BACK OF FORM

K. APPENDICES

APPENDIX 1

REPORTS ON THE LEMON HOUSE

Date	Title	Author
1962, August	Reconnaissance Report Allegheny Portage Railroad, Johnstown-Hollidaysburg, Pennsylvania	Barnes/Wittpenn NPS
1966, June	Comprehensive History of the Pennsylvania Canal System, with Particular Attention to the Allegheny Portage Railroad - Portion: "PLANE #6."	Earl J. Heydinger, NPS
1968, Jan. 31	Lemon House and Coal Mine	Benjamin Levy, NPS, OAHP
1972, July	Historic Structure Report, The Lemon House, Allegheny Portage Railroad National Historic Site Historical Data Section Architectural Data Section	 Anna Coxe Toogood, NPS Norma M. Souder, NPS
1973, May	Historic Resource Study Allegheny Portage Railroad National Historic Site	Anna Coxe Toogood, NPS, DSC.
1978	Archeological Investigations Around the Lemon House, Allegheny Portage, Cresson, Pennsylvania (Draft)	Bryan L. Aivazian, NPS, DSC
1980	Historic Furnishing Plan (Draft) The Lemon House Chapter C, Historic Occupancy	Anna Coxe Toogood [NPS contract]
1980-81	Excavations at the Lemon House, Allegheny Portage National Historic Site,, Cresson, Pennsylvania in 1978 and 1980	Michael Parrington, Museum Institute for Conservation Archeology, University Museum, Philadelphia, Pennsylvania NPS Purchase Order PX-2000-0-D024

APPENDIX 2

NATIONAL PARK SERVICE DRAWINGS OF THE LEMON HOUSE

Drawing Number	Number of Sheets	Date	Title	Comment
423/25000	9	c. 1972	Restoration of Lemon House	Norman Souder proposed
423/25002	4	c. 1971	Restoration of Lemon House	Norman Souder proposed
423/26000	12	1965-71	The Samuel Lemon House [Measured Drawings]	Original tracings at HABS - HCRS listed under: Cambria Co., Cresson Vic., Cresson Twp.
423/41005	2	8/1971	Lemon House Alterations	by Tipton.
423/41017	4	8/1978	Lemon House Adaptive Use	Jeffrey Bentz, DSC
--	4	c. 1978	Lemon House Int. Restoration	Shelly King Roberts proposed plans
423/41012		1/20/78	Lemon House Site Plan and Spot Elevations	L. Robert Kimball and Assoc., Ebensburg, PA.
423/80006A	5	8/19/78	Electrical Rehabilitation Summit Level Lemon House	Wayne Veach, MARO
423/81007	2	4/14/78	Door and Window Treatment	Magaziner, Solon, and Ingle, MARO
423/81009	1	1978	Basement Toilet Rooms	Magaziner, Solon, and Wherley, MARO
--	7	11/10/77	Exhibit Plans	John Schmid - Design, Harpers Ferry contract

APPENDIX 3

EVIDENCE DISCUSSION

LEMON HOUSE

ALLEGHENY PORTAGE RAILROAD NATIONAL HISTORIC SITE

Results of Investigation, March 1-2, 1979, and April 1980,

Historical Architects Shelly King Roberts

and

Penelope Hartshorne Batcheler

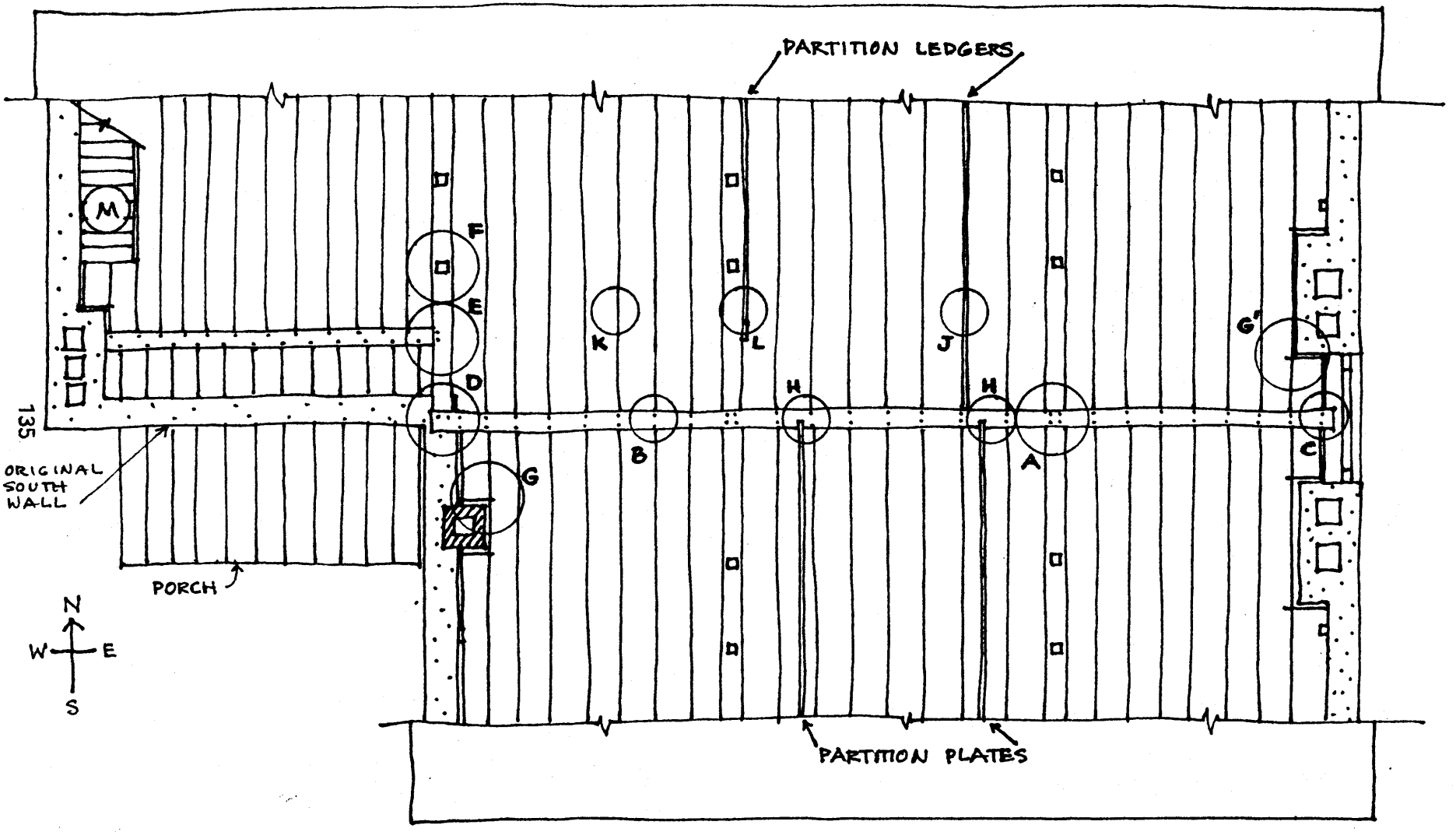
The discovery of the c. 1887 photograph of the Lemon House from the southwest and a basic understanding of the structural system of the house has lead us to conclude that: the present west wing in part was built at the same time as the main house; the present small brick chimney is original--built for stoves in the first floor southwest room; and originally the southwest and northwest rooms could be opened to each other to serve as a large dining room--the kitchen having apparently been in the first floor of the west wing.

As the evidence substantiating these conclusions is inter-related and spread throughout the house, it is grouped here by floor level location rather than by addressing each conclusion separately.

Attic Evidence

Referring to the following attic framing plan drawn with a reconstruction of the original framing system: the main house original framing system includes a centered east-west hand hewn girder into which at third points four north-south hand hewn girders are mortised, tenoned, and double pinned (see "A"). The vertical sawn joists are also mortised, tenoned, and pinned into the center girder (see "B").

The east end of the center girder bears on the east stone gable wall (see "C"). The west end bears on the main house west wall (see "D"). In its north side, mortised, tenoned, and double pinned is the furthest west of the north-south girders (see "D").



CONJECTURAL
ATTIC FRAMING PLAN — 1831-1899 [DATA GATHERED 3/2/79 & 5/80 by P.H. Batcheler & Sk. Roberts]
LEMON HOUSE ALPO

PHB DEC. 1980

At "E" is a large mortise, with two pins still in place although broken. Originally this mortise received the tenon of the extra hand hewn girder section which now lies atop the north-south girder over the southwest room. In its original position (as drawn here) this extra girder extended westward in the west wing, bearing on the west wing west gable wall just north of the chimney. Note that the extra girder has been cut short right through a joist mortise, its length now measuring 18' 6". Originally it would have spanned ± 21' 0". The joist mortises with pin holes (approximately 23" on center) are staggered and indicate the placement of the west wing original joists.

Part of the reason that this 9" by 11" girder is still in the attic is that without a crane or block and tackle and scaffold, it would have been difficult to safely lower to grade. It was far easier to slide it into the main attic. Furthermore, as pointed out by Structural Engineer Nicholas Gianopulos, it readily served as reinforcement to the girder over the southwest room which by 1900 had suffered some loss in strength.

At "F" there is a brace under the west end of the original main house roof purlin. This brace is of the same detail as the normal braces elsewhere in the main house. Also, as at other locations, the purlin above this brace has an offset lap joint (now unused) where one length of purlin was joined to another. Had the house ended at this point the lap joint would not have existed as the purlin would have seated on the supposed west wall as it does at the east gable wall. Therefore, originally this lap joint contained a mated purlin which extended westward to support the west wing roof. Presently the west wing purlin, of different construction character from the originals, merely butts at this joint--indeed it does not touch and is held laterally by a board scab nailed to each with large wire nails. The load of this present west wing purlin is transferred through an original diagonal to the brace reusing the original diagonal tenons, but no attempt was made to replace pins--the holes are empty.

At "G" and "GI" the headers for the small brick chimney match in construction detail those of the east stone chimneys. The headers have

simple through tenons in normal joist mortises (no pins). It is thus concluded that the brick chimney was constructed along with the original main house framing, and that there were no stone fireplace chimneys along the west side of the main house as heretofore supposed. To further verify this, the appropriate joists north and south of the center girder were examined for empty mortises which could have received any such headers for the supposed stone chimneys. No mortises were found. Thus the brick chimney was installed intentionally to serve stoves--a well used heating device by the 1830s. Early photographs show the chimney to have originally been higher than the roof peak. It is laid up with lime mortar until about the roof line above which it is clear that it has been rebuilt with cement mortar in order to install an operable vent. This vents the hot summer air of the attic and when closed the chimney continued to serve as a flue for stoves in the rooms below.

Adjacent and eastward of the westernmost north-south hand hewn girder is an empty joist mortise with a short pin still in it (see "D"). The question is asked, why is it unused, and could it have contained a joist which was removed when the girder was installed to take the place of the supposed main house west wall chimneys now gone? The other bearing point for this missing joist was examined-- i.e. the top of the north wall. No pocket was seen, although the stonework could have been reworked. More convincing was that in the roof board plate no nail holes exist where the plate would have been nailed to its supporting joists as in all other cases. Thus we must conclude that this mortise went unused from the beginning. Note that the joists of the main house all line up with each other and remember that all mortises and tenons were measured, cut, and pre-fit on grade; and were assembled in their final position when the supporting stonework reached the correct level. Perhaps an apprentice cut this mortise on center with its mate and then the master carpenter gave the measurement for the north-south girder mortise. Finding the two so near by, the joist was not employed.

At "H" supplementary joists are let into the center girder to serve as plates atop the original stair hall partitions. Apparently the partitions were built after the house structural framing was completed, thus the plates are merely let into the top of the girder.

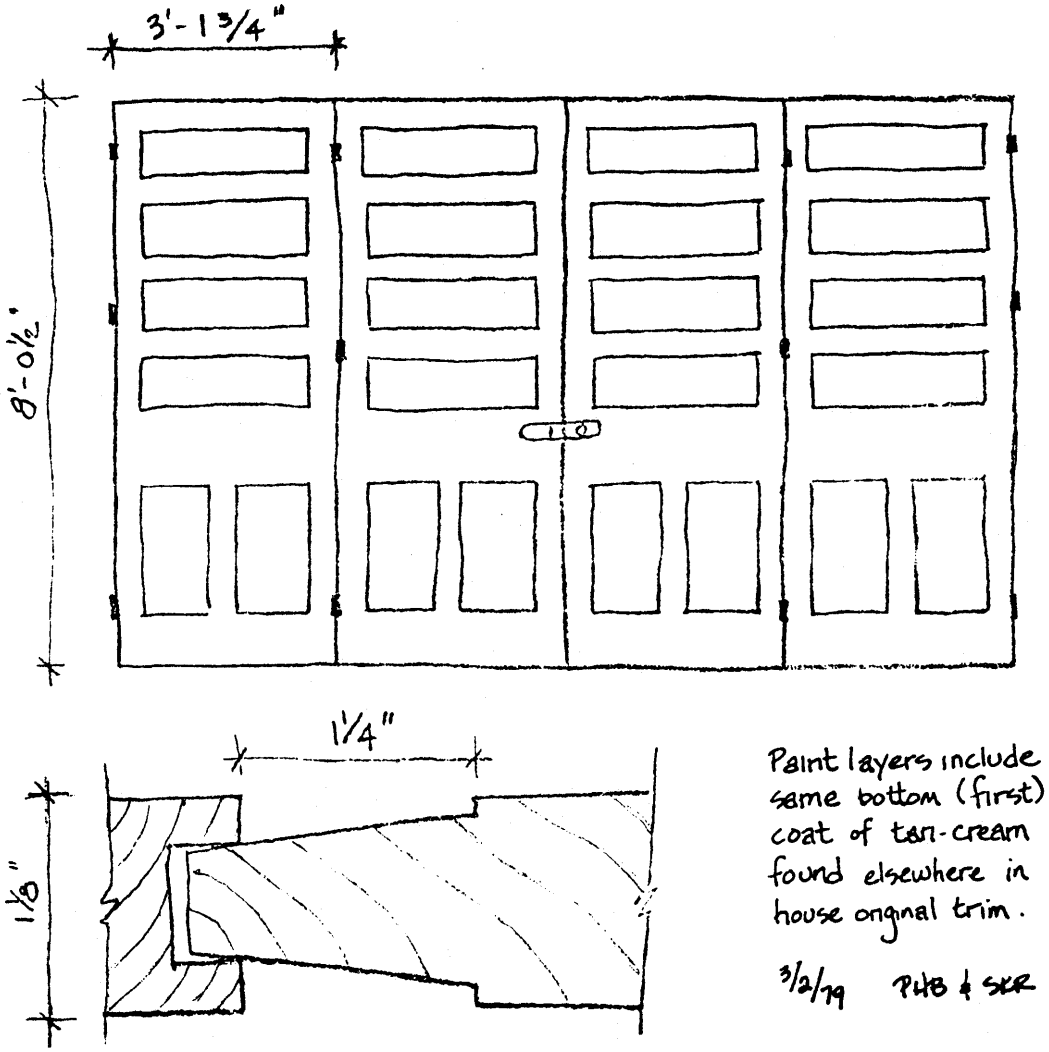
Other original partitions may have been located at normal joists. Possible evidence for these at "J," "K," and "L" can be seen by looking down at the back of the second floor ceiling. At "J" one can see the handsplit lath stop at each side of the joist, and at "K" the lath pattern does not run through and the plaster color to the east is yellow mud while that to the west is relatively white, indicating removal work. At "J," a ledger is nailed to the side of the joist reinforcing the theory that an original partition may have been located here anchored to the ledger. At "L" a similar ledger is attached to the side of the north-south girder strongly indicating that this is likely the location for a partition below.

As no sign of an attic stairway has been located within the main house area--no header, no mortises, and no spacing of joists to allow a stair--we must assume that the attic stairway was located within the west wing originally. Indeed the original stair was probably located where it is today at "M." This would explain the staggered position of the west wing joists on opposite sides of the east-west wing girder (remember that the main house joists all line up with each other).

The west wing girder was not centered in that space because the stair from the second floor to the attic needed a long opening plus a landing area. But the girder was needed because the west wing had too great an area to span without it, and as shown in the c. 1887 photograph the south set of joists cantilered beyond the south exterior wall creating porches.

From this evidence we can conclude that the present circular sawn framing in the west wing is the second framing system for this section of the building.

Two areas of evidence lend an explanation of why the framing system was changed. The 1887 photograph discovered in 1980 shows that the south wall of the west wing as originally built lined up with the ridge pole of the main house, whereas presently the south wall is some 6' to 8' further south.



Four loose doors which originally hung in the partition between southwest and northwest rooms in the main house first floor. (See similar panel motif [Type D] at second floor southeast room closet.)
Note: The doors have been rehung at some time for butt hinges are now at the center stiles as well. Rim locks shown above are determined by paint evidence (one side had the knob for latch action, the other had a keyhole for a dead bolt).

This change in the position of the south wall explains why in the present west wing cellar in the southeast corner on the main house stone wall, one can find exterior pointing of the stonework. This section of the wall was originally an exterior wall.

Such a major change in the stonework explains why it may have been easier to demolish the original framing, replacing it with new along with the relocated stone south bearing wall.

First and Second Floor Evidence

To further confirm that originally there was a west wing, test holes were bored into the partitions between the first and second floor northwest rooms and the west wing. The frame partitions were found to be original, hand-split lath and mud lime plaster matching that taken out of the original ceiling of the north-west main house room (where a ceiling electric fixture was introduced).

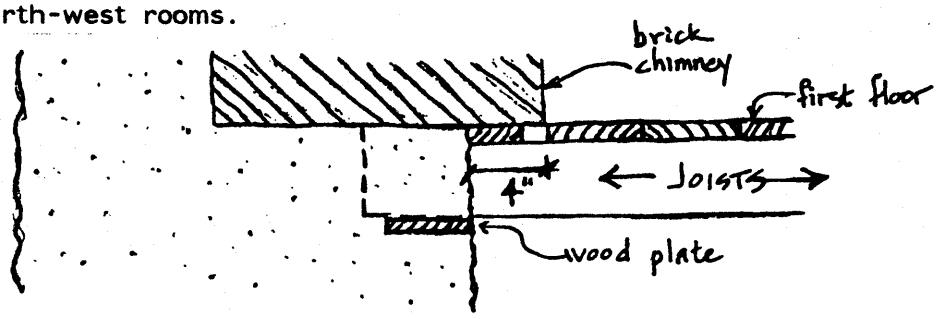
It is now proposed that the first floor room spaces were originally used as follows: northeast - tavern room; southeast - parlor; southwest and northwest - dining spaces; and west wing - kitchen.

The southwest and northwest rooms were said to have had folding doors between them (conversation between seasonal Curator Charles Adams and a former owner). Four large doors were located in storage in the barn (see sketch). Their paint layering includes the same putty or tan/cream color to be seen throughout the house as the first finish color, followed by a dark green layer and then the top light cream and white layers exposed now. The doors were hung with three butt hinges each, and at the lock rails of the two inner doors one can see evidence of a thumb latch which was added during or after the green paint era, and a previous set of two rim locks (one on each door), one containing the keyed dead lock system and one containing a knob and latch system. The knob and rosette remained through the later paint eras as no paint at all can be seen at the rosette locations showing that it was put on from the start.

Thus we can say that the northwest and southwest rooms could be opened into essentially one large room to be used when travelers were more numerous, the southwest room having been used alone (heated by the stove) when travelers were fewer.

To confirm this use, the first floor floorboards were examined from the cellar level. All the floorboards run continuously between the southwest and northwest rooms showing that a wide opening was anticipated when the floors were laid. (To confirm that these floors are original, it would be wise at some time to compare the nails of the west room flooring to those at the east room flooring, where indeed the flooring of the two rooms stops at their dividing partition.)

To confirm that there were stub partitions between the southwest and northwest rooms, from which the four doors hung, a core hole was cut at the southeast corner of the northwest room where we were able to examine the lath of the hall partition as well as the room partition. The stub wall now in place between the rooms (see Drawing No. 423/26000 first floor plan) is now made up of wire lath and gypsum plasterboard. The hall partition has hand-split lath and mud plaster. The main point is that at their juncture the hall wall lath is clean and unused, i.e. there was from the beginning intended to be a stub wall between the southwest and north-west rooms.

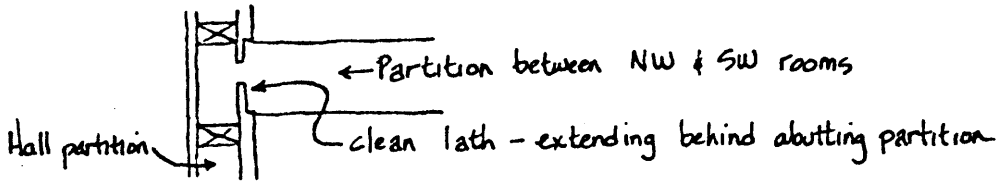


The flooring of the original building measures 1-1/4" thick, and apparently was at first merely scrubbed with no surface finish. This bare wood can be seen where a radiator stood in the entrance hall along the east partition, and in the center of the southeast room, and at the stairway. To show that the stair was originally uncarpeted, one can see that the tread nosings are well worn in the bare wood sections, and when carpets were added later to cover this wear the outer limits of the treads were painted (first a dark red and now a white).

In the southeast room large rugs were introduced after the floor had long been used bare. The first rug was surrounded by dark red paint and the second larger rug was surrounded by a dark ochre paint. Indeed when the floor was bare in this room there was apparently a table in the middle of the room for the bare floor around it shows foot wear in contrast to the unworn floor under the table.

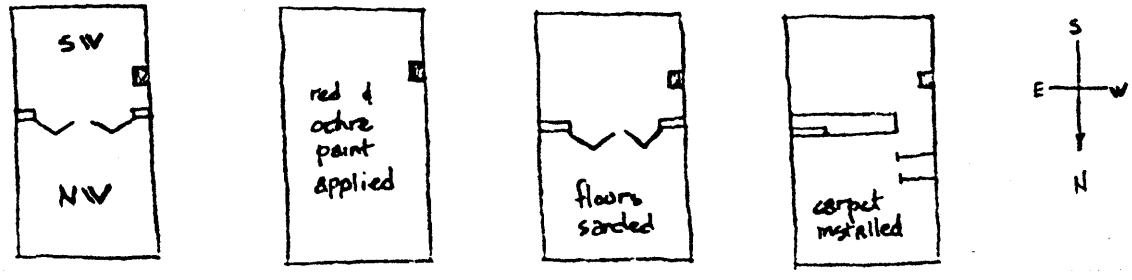
We were unable to reach such evidence in the southwest and northwest rooms as the flooring there has been sanded down, removing ± 1/16" to 1/8" of wood.

However, because the same red and ochre paint was found in line with and under the west stub end of the partition between the northwest and southwest rooms, the sequence of partitions versus no partitions may have been as follows (left to right):



Cellar Evidence

Referring to the history of the small brick chimney again, in the southwest cellar room it is clear that all the joists above are original--beside being vertically sawn their east tenons seat in mortises in the hewn north-south girder and are pinned through. Their west ends extend into the stone west wall where they seat on a thin wood plate. No evidence of mortises is to be found for heading off any projecting chimney masses as at the east room chimneys, further confirming the originality of the small brick chimney. The brick chimney bears all except about 4" on the thicker stone foundation wall. The extra 4" is picked up on a short leg of floorboard.



The framing of the northwest first floor can also be seen from below. It varies from the southwest room in that the west ends of its vertical sawn joists do not bear on a stone wall but instead they tenon into a north-south header spanning between the north stone wall and the return of the original west wing south stone wall (further confirming that the main house was originally integral with a west wing). As these tenons extend beyond the header unusually far it is conceivable that this header may have originally had a mate for double support. The east tenons of these joists appear not to be pinned into the main house north-south girder--no holes are visible in the underside of the girder and some of the joists appear to be pulled out of their mortises somewhat. An explanation for the difference in construction between the northwest and southwest framing, other than different west end bearing conditions, is not known at this time.

Now we can turn to the west wing cellar room. The present first floor framing is all circular sawn and when installed was covered with a plaster ceiling keyed to sawn lath applied with wire lath nails. The nature of the plaster is sandy as opposed to the original mud plaster of the main house. When the wing was renovated it included a stairway to the first floor (under the present stair leading to the second floor). The south door and window were trimmed as the plaster surrounding them has sharp edges which abutted the trim, and nailing blocks are in the jambs (at the doorway the plaster sharp edges at each jamb were 3' 10-1/2" apart). North of and in line with the main house west wall there was apparently a closet wall some 21" thick (the sandy plaster stops in a sharp line on the north face of the original west wing south wall). The north cellar wall was furred out and plastered.

Unfortunately, this evidence of the appearance of the renovated west wing has been removed and/or covered by a coat of cement plaster applied to the walls and ceiling by the park in 1979.

APPENDIX 4

LEMON HOUSE

PORCH RESEARCH

Comparative research to be done:

A survey of porch types and their details must be made. The enclosed data is merely a starting point for a more thorough study.

The design for a reconstruction of the Lemon House south (and east) porch must be based on the following types of information:

Archeological data

Architectural data at Lemon House

- joist pocket locations
- window and door locations indicating position of roofs, floor levels, stairs

Structural methods used in Pennsylvania porches related to archeological and architectural data at Lemon House.

Stylistic level of Lemon House

- fanlighted front door with exterior trim
- square ballustered and ramped rail including stair
- i.e. this was a stylistic house for its location

Who used porch - first floor level, cellar level, and what were their needs?

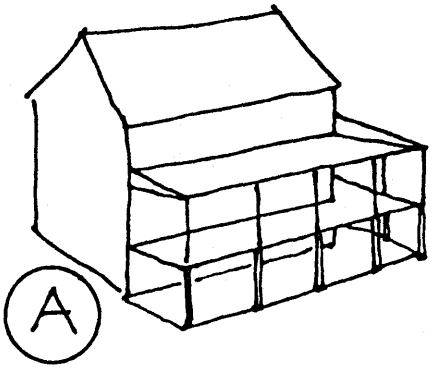
- exterior stairways connecting levels?

APPENDIX 4

LEMON HOUSE

PORCH RESEARCH

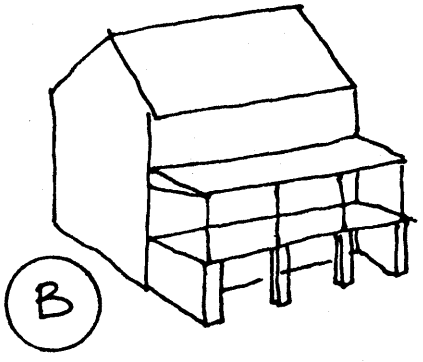
Types of Porches Seen in Southeast Pennsylvania.

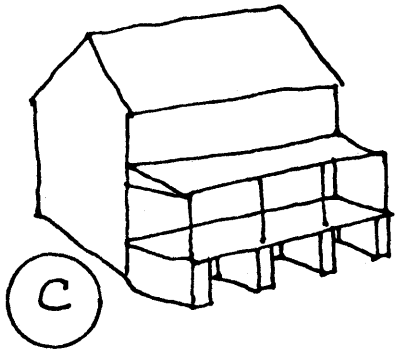


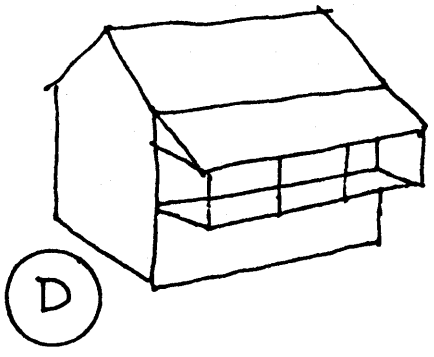
Note: Porch roof of this and other types can be a continuation of main house roof and be one- or two-storied.

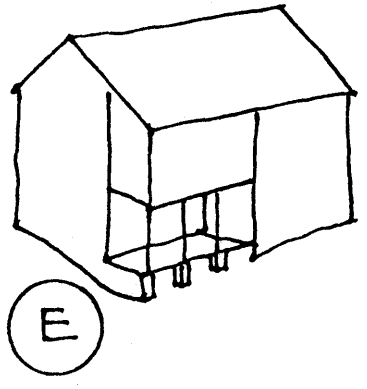
Note: This type can be seen with and without side porch return.

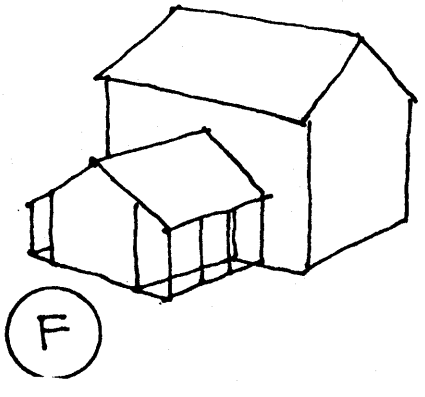
Note: Outside stairways were often built as part of the porches.

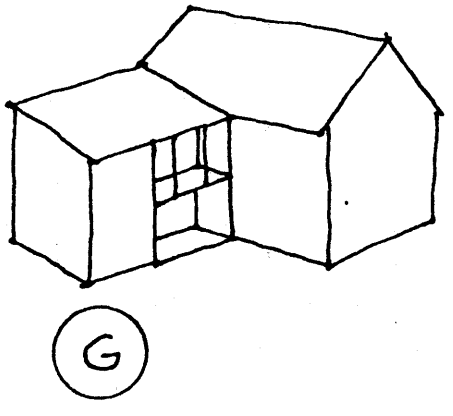












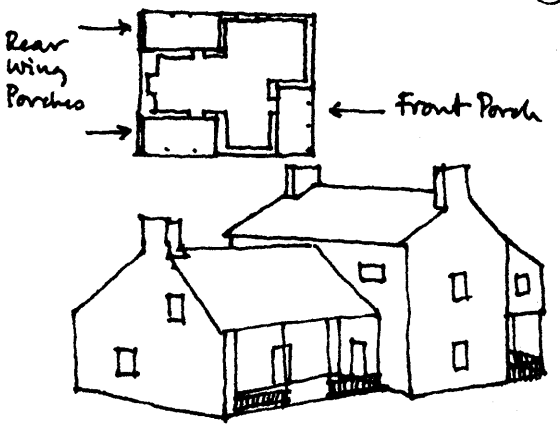
PHB Dec. 1980

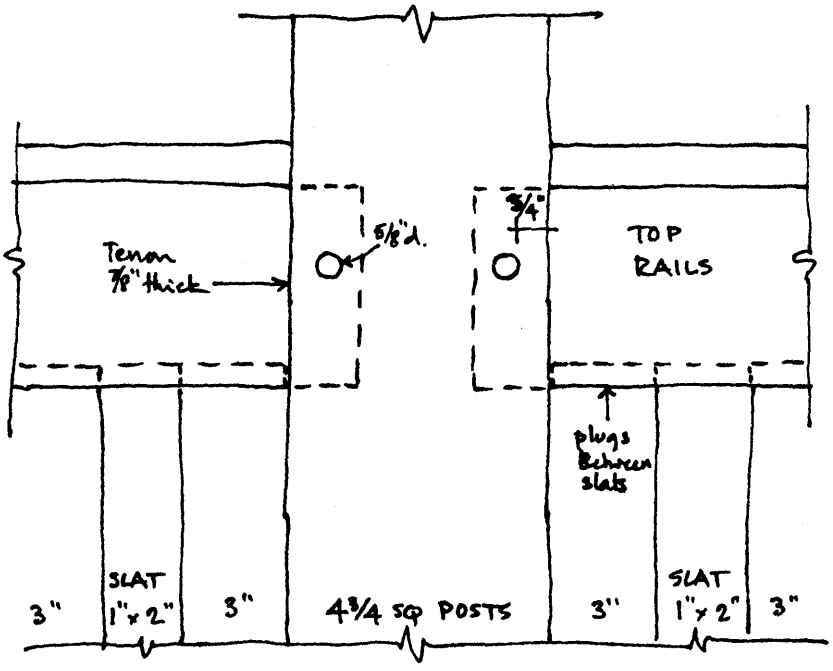
APPENDIX 4

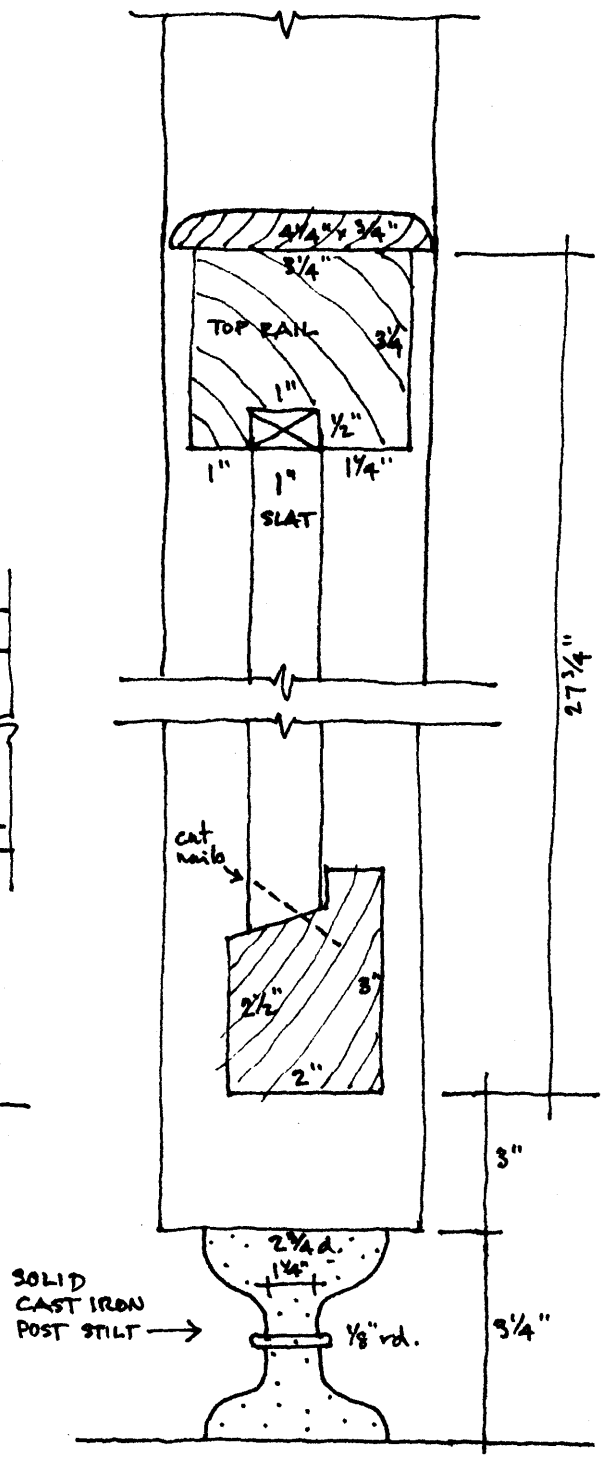
LEMON HOUSE PORCH RESEARCH

Brick house south of Tyrone, Pa. on Route 22 between Route 22 + Pa. R.R. tracks - near Tipton

Porches at rear wing and under 2nd floor frame corner.







RAILING DETAILS

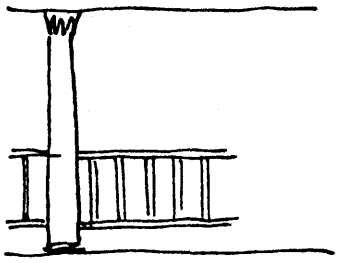
PHB DEC. 1, 1980

APPENDIX 4

LEMON HOUSE

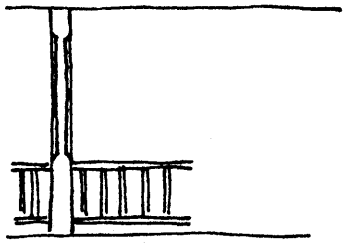
PORCH RESEARCH

Railing Types on Porches of Southeast Pennsylvania.



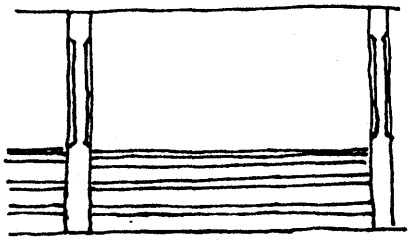
Decorated columns
Turned ballusters.

High Style



Chamfered square columns,
turned, square or slat ballusters.
In later houses slate occasionally
have decorative profiles and are
pierced.

Farm House and Taverns



Chamfered square columns
Horizontal board rails.

Farm House or Rear Porches
of more elaborate buildings

APPENDIX 4

LEMON HOUSE

PORCH RESEARCH

Location of Porch Types in Southeast Pennsylvania.
* Photographs taken by P. H. Batcheler

Blair County

*Type C - Route 866 south of Williamsburg - Royer House rear wing.
High style decorated columns, square balluster rail.

*Type E and F - Route 22 south of Tyrone near Tipton.

Fulton County

*Type A and D - Route 522, north of juncture with Route 30 (above McConnellsburg).

(A) Main house Victorian porch with square ballusters.

(D) Outbuilding early nineteenth century square ballusters.

Franklin County

*Type A - Route 16 between McConnellsburg and Mercersburg.

*Type G - Mercersburg.

*Type A - Route 16 (north side) just west of Waynesboro - includes stair between cellar and first floor levels - square ballusters, chamfered posts.

Chester County

*Type B - Parkesburg, Chester County, north of Pennsylvania railroad tracks.

Perry County

*Type C and G - Millerstown.

Berks County

*Type C - Morgantown on Route 10 south of Pennsylvania Turnpike.

APPENDIX 4

LEMON HOUSE
PORCH RESEARCH

Porch Types in Publications:

Raymond, Eleanor, Early Domestic Architecture of Pennsylvania, New York, 1931.

Plate 58 - Type B - Brandywine Manor, Chester County.
Plate 61 - Type A with grade level flooring - Bulltown, Chester County.
Plate 62 - Type B - Compass, Chester County.
Plate 66 - Type A - Hinkletown, Lancaster County; Elverson, Chester County.
Plate 67 - Type G - Manatawny and Trexlertown, Berks County.
Plate 71 - Type A - York County.
Plate 72 - Type D - Downingtown and Darlington, Chester County.
Plate 73 -
Plate 78 - Type A - Martinville, Lancaster County.
Plate 79 - Type C - Downingtown, Chester County.

Stotz, Charles Morse, The Architectural Heritage of Early Western Pennsylvania, University of Pittsburgh Press, 1966 (reprint).

Pages 46-47 - Type A
Page 50 - Type A (one-storied)
Page 73 - Type F
Page 85 - Type A (one-storied)
Page 88 - Type A (one-storied)
Page 92 - Type A (two-storied)
Page 98 - Type C (two-storied)
Page 184 - Types A and B

APPENDIX 5
PAINT STUDY

APPENDIX 5

LEMON HOUSE PAINT STUDY

Paint samples have been taken by Historical Architect Shelly King Roberts (No. 1-168) and Penelope H. Batcheler (200-253). Microscopic examination of the layering sequence has been made of most of the samples. Shelly King Robert's color notations do not exactly match those of Penelope Batcheler due to samples coming from slightly different locations and thus differing from fading, dirt, wear, etc.

The samples (some of which are included here - exterior, first floor, and second floor) were taken primarily in date trim and plaster. No attempt has been made to determine exact colors to be used in a restoration.

In the 1831 period the trim of the whole house apparently was painted monochrome of a greyish yellow. Thereafter some of the baseboards were painted a contrasting blue-green layer and the mantels black.

At the second floor the greyish yellow was used until 1900 when the rooms were rearranged. This conclusion is based on original door trim which was reassembled in 1900 thereby covering some surfaces, which had previously been exposed (see Sample No. 218 where a transom bar of 1900 abutted and covered trim where it had originally been exposed, Contract No. 218 with No. 216, 217, and 248).

The plaster ceilings of the southeast and southwest rooms appear to have a bottom finish paint of greyish yellow matching the trim. It is possible that the plaster remained unfinished for years before this paint was applied. The southwest room walls may have had wallpaper originally as vestiges of sizing remain under the bottom paint layer (a moderate bluish-green color). Layer areas of the wall must be examined to be certain if this and to hopefully find remains of the paper.

It is recommended that the team charged with restoring the rooms to a particular period must study the samples already taken (to be filed at the park), and the new samples. At this time the hues, chromes, and values should be determined by comparison between many samples of the same rooms.

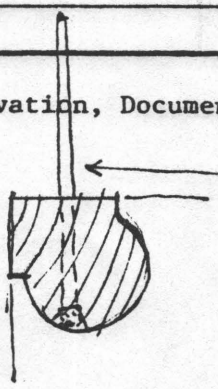
All color numerical references are to the Munsell color system, Munsell Color Company, 2441 North Calvert Street, Baltimore, Maryland 21218.

PAINT ANALYSIS

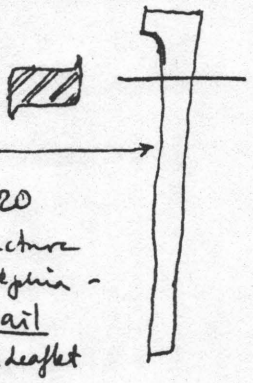
Region: MARO	Park: Allegheny Portage Nat'l Hist. Site
Structure: LEMON HOUSE	Structure #: 1
Sample #: 253	Location of Sample: Exterior
Date Taken: March 6 1979	Exterior window stops from two of main house south windows found in house on trash pile.
By: P. H. Batchelor	
Date Examined: March 6 1979	Substrate: wood
By: P. H. Batchelor	Top Color: White paint

Historic Date	Layer Description (color, varnish dirt, etc.)	Munsell #	Characteristics
1832-4	off white finish - yellowish grey	5 Y 8/1	(several coats)
	greyish brown	7.5 YR 4/2	
	dark blackish green	5 G 2/1	
	light cream - yellowish white	5 Y 10/2	3 coats
	cream - pale yellow	2.5 Y 9/4	thin coat
	light cream - yellowish white	5 Y 10/2	
1978	white		
	NOTE: These two stops (for head of windows) will be returned to the Lemon House to be catalogued for their paint evidence of the exterior trim colors.		

Further Observation, Documentation, Comment or Sketches:



Full Size



Cut finish nail
cross section
side view

dates c. 1805 - 1820
according to manufacture periods in Philadelphia - See Lee H. Nelson, Nail Chronology Technical Leaflet No. 48. Am. Assoc. of State & Local History

PAINT ANALYSIS

Region: MID-ATL...	Park: ALLEGHNY POR
Structure: ...OUSE	Structure #: 1
Sample #: 160	Location of Sample: Exterior
Date Taken: 5/24/72	North wall - far left door - left side reveal on panel
By: SDL	
Date Examined: 6/15/72	Substrate: wood
By: SDL	Top Color: white

Historic Date	Layer Description (color, varnish dirt, etc.)	Munsell #	Characteristics
	wood		
	oil paint		very dirty
	dk brown	7.5 R 3/6	
	lt brown	5GY 3/2	
	red orange	7.5 R 3/6	
	white		
	med brown		
	white		many layers

Further Observation, Documentation, Comment or Sketches:

PAINT ANALYSIS

Region: MID-ATLANTIC	Park:
Structure:	Structure #: 1
Sample #: 22	Location of Sample: 100-S Exterior
Date Taken: 4/25	EXTERIOR OF DOOR ON S. OF 100. TOP RIGHT 1st floor level - south facade center door
By: SDL/MAW	
Date Examined: 6/7/78	Substrate: WOOD
By: SDL	Top Color: white

Historic Date	Layer Description (color, varnish dirt, etc.)	Munsell #	Characteristics
	wood		
	dk. emerald green	7.5GY 3/4	
	[illegible]		
	[illegible]		
	[illegible]		
	[illegible]		

Further Observation, Documentation, Comment or Sketches:

PHB comment Jan 1981
The full surface of this door must be examined to see if indeed this dark green was the original finish - This is the only extant original exterior door.

PAINT ANALYSIS

Region:	Park:
Structure: LEMON HOUSE'	Structure #: 1 INTERIOR
Sample #: 19	Location of Sample: 100-S Central Hall
Date Taken: 4/25	DOOR - INTERIOR RAISED PANEL
By: SDE/MAW	
Date Examined: Feb. 21 1981	Substrate: wood
By: P W Batchelder	Top Color: pale yellow

Historic Date	Layer Description (color, varnish dirt, etc.)	Munsell #	Characteristics
	wood		
	greyish yellow	2.5 Y 8/4	Several layers, handground
	strong yellowish brown	2.5 YR 4/8	with varnish - degraining
	moderate yellowish pink	10 R 7/4	
	greyish reddish brown	10 R 3/2	
	brownish orange	7.5 YR 5/6	} grounding ?
	greyish reddish brown	10 R 3/2	}
	moderate yellowish pink	10 R 7/4	+ varnish
	pale yellow	2.5 Y 9/4	} modern paints
	yellowish white	2.5 Y 9/2	}
	white		several coats }
	moderate yellow	2.5 Y 7/6	}
	pale yellow	5 Y 9/4	3 coats }

Further Observation, Documentation, Comment or Sketches:



PAINT ANALYSIS

Region: MID-ATLANTIC	Park: ALLEGHENY POR
Structure: LEMON HOUSE	Structure #: 1 INTERIOR
Sample #: 14	Location of Sample: 100-5 Central Hall
Date Taken: 4/25	OUTER EDGE OF ROSE BLOCK UPPER LEFT OF DOOR TRIM
By: SDK/MAW	
Date Examined: Feb 81	Substrate: WOOD
By: PMB	Top Color: CREAM-YELLOW

Historic Date	Layer Description (color, varnish dirt, etc.)	Munsell #	Characteristics
	wood		
	tan cream	2.5Y 8/3	several layers
	yellowish gray	2.5Y 8/2	
	gray - clear	N 5/	pigmentless - primer?
	peachy pink	10 R 6/4	
	light orange-yellow	2.5Y 9/4	
	light orange-yellow	2.5Y 9/2	
	white		
	cream-yellow	2.5Y 7/6	
	cream-yellow	5Y 9/4	

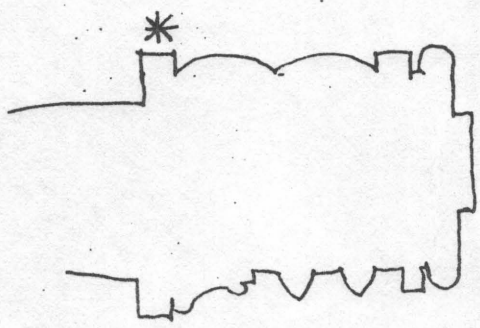
Further Observation, Documentation, Comment or Sketches:

PAINT ANALYSIS

Region: MARO	Park: ALPO
Structure: Lemon House	Structure #: 1
Sample #: 200	Location of Sample: 1st fl. Center Hall
Date Taken: May 24 1978	1st fl. Hall - Door to SE room
By: PHB	Trim - hall side *
Date Examined: Jan 16 81	Substrate: wood
By: PHB	Top Color: white

Historic Date	Layer Description (color, varnish dirt, etc.)	Munsell #	Characteristics
	wood		
1831	prime + finish greyish yellow	2.5Y 7/4±	hand grund - ropey - dirty
	finish greyish yellow	2.5Y 8/4	
	finish greyish yellow	2.5Y 8/4	
	grey	N 5.5/	good bond with lower coat
	greyish red	10 R 5/3	
	finish greyish yellow	2.5Y 8/3	
	finish pale yellow	2.5Y 9/4	
	white finish		
	moderate yellow	2.5Y 8/6	
	light yellow	5Y 8.5/4	
	white		

Further Observation, Documentation, Comment or Sketches:



PAINT ANALYSIS

Region: MID-ATLANTIC	Park:
Structure: LEMON [illegible] E	Structure #:
Sample #: 10	Location of Sample: 100-E Center Hall DOOR TO 102 (SE Rm)
Date Taken: 4/25	
By: SDC	
Date Examined:	Substrate: WOOD
By:	Top Color: CREAM · YELLOW

Historic Date	Layer Description (color, varnish dirt, etc.)	Munsell #	Characteristics
	WOOD		
	TAN · CREAM	2.5 Y 8/3	
	ORANGE - RED	10 R 5/6	
	SHELLACK VARNISH ?		
	DARK ORANGE-RED		
	GRAY		
	DK GREEN (EMERALD)	7.5 GY 4/4	VERY THIN, VARNISH?
	LT GRAY		THICK
	LT TAN RED-BROWN		
	DARK RED-BROWN		GLAZED ? SHINY
	LT ORANGE YELLOW		
	WHITE		CHALKY, THICK
	ORANGE YELLOW		
	CREAM-YELLOW		

Further Observation, Documentation, Comment or Sketches:

PAINT ANALYSIS

Region: ATLANTIC	Park: ALLEGHNY POR
Structure: LEMON HOUSE	Structure #: 1
Sample #: 36	Location of Sample: 100 - STAIR CENTER HALL
Date Taken: 4/25	UNDER BALL FINIAL OF NEWEL
By: SDK/MAW	
Date Examined: 6/7/78 Jan 1981	Substrate: WOOD
By: SDK PBBatchelder	Top Color: NA

Historic Date	Layer Description (color, varnish dirt, etc.)	Munsell #	Characteristics
	WOOD		
	hot red-maroon-	7.5R 5/4	This is probably the undercoat for mahogany graining
	varnish coating		

Further Observation, Documentation, Comment or Sketches:

PAINT ANALYSIS

Region: NI	Park: FOR
Structure: LEMON HOUSE	Structure #: Center Hall
Sample #: 46	Location of Sample: 100 - STNR
Date Taken: 4/25/78	DECORATIVE CURVED BOARD ON STRING-
By: SDK/MAW	
Date Examined: 5/19/78	Substrate: WOOD
By: MAW	Top Color: CREAM - YELLOW

Historic Date	Layer Description (color, varnish dirt, etc.)	Munsell #	Characteristics
	WOOD		
	tan cream	2.5 Y 8/3	crusty cleavage layer
	gray-white		
	peachy-pink		
	dk brown red		
	off white		
	White		
	orange yellow		
	creamy yellow		

Further Observation, Documentation, Comment or Sketches:

PAINT ANALYSIS

Region: MID-ATLANTIC	Park: [illegible] OR
Structure: LEMON HOUSE	Structure #: Center Hall
Sample #: 43	Location of Sample: 100 - STAIR
Date Taken: 4/25	TREAD - FRONT
By: SDK/MAW	
Date Examined: 6/8/[illegible]	Substrate: wood
By: SDK	Top Color: cream white

Historic Date	Layer Description (color, varnish dirt, etc.)	Munsell #	Characteristics
	wood		
	tan cream	2.5 Y 8/3	
	white patches		SPLIT DIRTY
	gray-white		
	med. gray		clear coat
	peachy-pink		
	maroon-rust		splits away
	white		
	white		
	cream yellow		

Further Observation, Documentation, Comment or Sketches:

PAINT ANALYSIS

Region: [illegible]	Park: [illegible]
Structure: LEMON HOUSE	Structure #: 1 Center Hall
Sample #: 44	Location of Sample: 100 - W Stair
Date Taken: 4/25/78	CURVED MOLDING UNDER TREAD
By: SDK/MAW	
Date Examined: 5/19/78	Substrate: WOOD
By: SDK/[illegible]	Top Color: CREAM [illegible]

Historic Date	Layer Description (color, varnish dirt, etc.)	Munsell #	Characteristics
	WOOD		
	tan cream	2.5 Y 8/3	
	gray white		
	dark gray		Spec #43
	peeling paint		
	mastic cement		
	off white		
	white		
	creamy yellow		

Further Observation, Documentation, Comment or Sketches:

PAINT ANALYSIS

Region:	Park: POR
Structure: LEMON HOUSE	Structure #: 1 Center Hall
Sample #: 40	Location of Sample: 102 - STAIR
Date Taken: 4/25	BASEBOARD, BOTTOM OF STAIRS ON EAST SIDE
By: SDK/MM	
Date Examined: 6/8/95	Substrate: WOOD
By: SDK	Top Color: CREAMY YELLOW

Historic Date	Layer Description (color, varnish dirt, etc.)	Munsell #	Characteristics
	WOOD		
	tan creamy	2.5 Y 8/3	
	dark bluish gray	10 BG 3/1	
	brown red		
	med gray		
	peach - pink		
	dk gray-green		very dirty, SPLIT
	white		
	cream-yellow		
	creamy yellow		

Further Observation, Documentation, Comment or Sketches:

PAINT ANALYSIS

Region: MID-ATLANTIC	Park: ALLEGHNY POR
Structure: LEMON HOUSE	Structure #: 1 1st fl. NE Room
Sample #: 129	Location of Sample: 1a - N - Window
Date Taken: 5/23/75	flat board against window sash Left side
By: CDK/PHE	
Date Examined:	Substrate: wood
By: CDK	Top Color: white

Historic Date	Layer Description (color, varnish dirt, etc.)	Munsell #	Characteristics
	wood		
	tan cream	2.5 Y 8/3	eroded
	med dark gray		
	pale lime green		
	med gray		
	brown		discolored in spots.
	pink peach		
	" brick gray		dirty
	pink pearl		
	orange white		
	lt. orange yellow		
	off white		
	orange yellow		
	white		

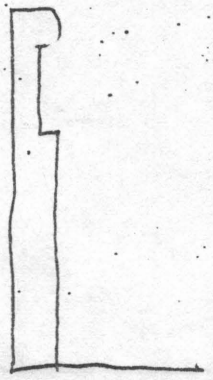
Further Observation, Documentation, Comment or Sketches:

PAINT ANALYSIS

Region: MARO	**Park:** ALPO
Structure: Lemon House	**Structure #:** 1
Sample #: 244	**Location of Sample:**
Date Taken: Jan 22 1981	1st floor - NE Room, South partition original baseboard
By: PH Batchelder	
Date Examined: Feb. 9 81	**Substrate:** wood
By: PHB	**Top Color:** black

Historic Date	Layer Description (color, varnish dirt, etc.)	Munsell #	Characteristics
	wood		
	greenish grey	5 GY 6/1	hand ground paint
	black		
	moderate yellow green	5 GY 6/4	layers above fractured heavily
	pale green [greyish]	5 G 6/1	very thin coat
	black		
	light reddish brown	10 R 5/4	very thin coat
	grayish olive green	2.5 GY 4/2	
	pinkish cream		layers too thin to read colors.
	white		
	white		
	dark cream		
	white		
1980	black		

Further Observation, Documentation, Comment or Sketches:



See Sample 133 which has layer of yellowish grey (2.5 Y 8/3 fair cream) at bottom.

ie. - this layer is missing on this sample.

PAINT ANALYSIS

Region: [illegible]	Park: [illegible]NY POR
Structure: LEMON HOUSE	Structure #: 1
Sample #: 86	Location of Sample: 102-5 1st fl. SE Room
Date Taken: 5/23/78	Left rail next to west window
By: SDC/PHB	top
Date Examined: Jan '81	Substrate: wood
By: ROB	Top Color: light creamy yellow

Historic Date	Layer Description (color, varnish dirt, etc.)	Munsell #	Characteristics
	[illegible]		
	tan cream (several layers)	2.5Y8/3	dirt next layer doesn't bond well
	[illegible]		seem to be same era
	[illegible]		
	brown red	10R3/6	
	[illegible]		
	" " glaze		glaze layer
	creamy yellow		
	white 2 coats		
	cream yellow dark		
	white		
	light creamy yellow		

Further Observation, Documentation, Comment or Sketches:



Note this sample has very good evidence of the original tan cream - 2.5 Y 8/3 (yellowish gray Munsell name)

PAINT ANALYSIS

Region: MID-ATLANTIC	Park: POR
Structure: LIGHT HOUSE	Structure #: 1
Sample #: 87	Location of Sample: 102 - W 1st N. SER
Date Taken: 5/23/79	chair rail middle face
By: SUE/TIM	
Date Examined: 6/12/79 Jan'81	Substrate: wood
By: SUE PEBB	Top Color: cream yellow

Historic Date	Layer Description (color, varnish dirt, etc.)	Munsell #	Characteristics
	white		
	two creams (2 layers)	2.5Y 8/3	fractures here
	grey white	2.5Y 8/2	also finish coat
	bit of brown yellow? no -	grey translucent layer -	
	brown red	10R 4/4	
	bit more red yellow		
	" " " glaze		glaze coat
	cream yellow		
	white bit		
	cream yellow		
	light creamy yellow		

Further Observation, Documentation, Comment or Sketches:

same as 86

good sample of cream + white + grey cream

PAINT ANALYSIS

Region: MID-ATLANTIC	Park: [illegible] FOR
Structure: LEMON HOUSE	Structure #:
Sample #: 57	Location of Sample: 102-E 1st N.SE Room
Date Taken: 3/30	FIREPLACE MANTEL UNDERSIDE ON LEFT
By: SDK	
Date Examined: 6/12/79	Substrate: burned wood
By: SMF	Top Color: cream yellow

Historic Date	Layer Description (color, varnish dirt, etc.)	Munsell #	Characteristics
	burned wood		
	[illegible]		clear varnish thin primer?
	[illegible]		light reddish brown 10 R 5/4
	[illegible]	10 YR 7/6	moderate reddish brown 10 R 3/6
	[illegible]		[illegible]
	[illegible]		
	[illegible]		
	[illegible]		
	[illegible]		
	[illegible]		

Further Observation, Documentation, Comment or Sketches:

fireplace mantel was burned at one point (early)

PAINT ANALYSIS

Region: MID-ATLANTIC	Park: ALLEGHNY POR
Structure: LEMON HOUSE	Structure #:
Sample #: 59	Location of Sample: 102-S 1st fl. SE Rm
Date Taken: 3/30	WINDOW SASH LOWER LEFT OF RIGHT WINDOW
By: SDK	
Date Examined: 6/17 Jan 1981	Substrate: wood
By: SDK PMB	Top Color: cream white

Historic Date	Layer Description (color, varnish dirt, etc.)	Munsell #	Characteristics
	WP?		
	tan [illegible]		[illegible]
	[illegible]		
	dark green		clearish + dirt
	lt. [illegible] salmon pink	10 R 5/4	
	[illegible]		
	lt. peachy pink ←	? I don't see this layer	
	white		dirt specks
	[illegible] yellow		
	cream yellow		

Further Observation, Documentation, Comment or Sketches:

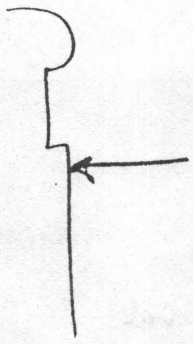
PAINT ANALYSIS

Region: TIC	Park: A[illegible] OK
Structure: LEMON HOUSE	Structure #:
Sample #: 89	Location of Sample: 102 – S 1st SE Room
Date Taken: 5/23/78	Baseboard flat part
By: SDK / RIF	
Date Examined: Jan '81	Substrate: wood
By: PAB	Top Color: light creamy yellow

Historic Date	Layer Description (color, varnish dirt, etc.)	Munsell #	Characteristics
	wood		
	tan cream		dirt top layer is finish
	greenish green (hand ground)	10 G 5/2	several layers, finish, blueish
	dark greenish green	10 G 2/1	
	greenish yellowish brown	10 YR 4/2	undercoat ?
	moderate reddish brown	10 R 3/6	finish
	dark orange yellow	10 YR 6/6	graining
	varnish		
	pale orange yellow	10 YR 8/4	
	white		
	dark yellow		
	light creamy yellow		

Further Observation, Documentation, Comment or Sketches:

Very good sample !

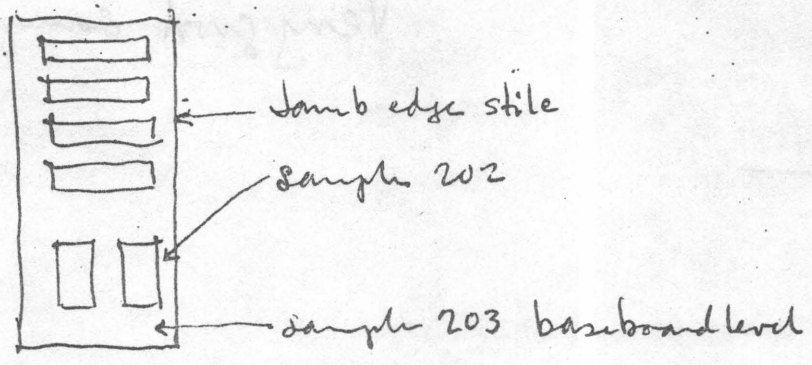


PAINT ANALYSIS

Region: MARO	Park: ALPO
Structure: Lemon House	Structure #: 1
Sample #: 202	Location of Sample: 1st FL SW-NW ROOMS folding doors which came from partition between NW + SW rooms - Dining Room - 1st floor
Date Taken: 12/1/80	
By: P H Batchelder	
Date Examined: Jan 16, 1981	Substrate: wood
By: PHB	Top Color: greyish yellow

Historic Date	Layer Description (color, varnish dirt, etc.)	Munsell #	Characteristics
1831	greyish yellow prime & finish	2.5Y 8/4	
	" " "	2.5Y 8/4	upper coats fracture off easily
	greyish olive green finish	2.5GY 3/2	
	moderate olive brown primer	2.5Y 4/2	
	greyish yellow finish	2.5Y 8/3	
	Note Sample 203 is	the same.	

Further Observation, Documentation, Comment or Sketches:



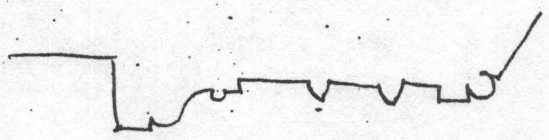
Door #1 of 4

PAINT ANALYSIS

Region: MARO	Park: ALPO
Structure: Lemon House	Structure #: 1
Sample #: 204	Location of Sample: 2nd floor stair landing window trim
Date Taken: May 24 1978	
By: Pat Batcheller	
Date Examined: Jan 16 1981	Substrate: wood
By: PHB	Top Color: white

Historic Date	Layer Description (color, varnish dirt, etc.)	Munsell #	Characteristics
	wood		
1831	grey/pink yellow 2-3 coats	2.5 Y 7/4	
	grey/pink yellow	2.5 Y 8/4	
	grey/pink yellow	2.5 Y 8/4	These layers fracture off lower ones
	grey	N 5.5/	
	grey/pink red	10 R 5/3	finish surface lighter 10 R 5/4
	grey/pink yellow	2.5 Y 8/4	
	white		
	moderate yellow	2.5 Y 8/6	
	light yellow	5 Y 8.5/4	
	white		

Further Observation, Documentation, Comment or Sketches:



Note: Sample 205 - this window sill apron has same layering

PAINT ANALYSIS

Region: MARO	Park: ALPO
Structure: Lemon House	Structure #: 1
Sample #: 206	Location of Sample:
Date Taken: May 24 1978	2nd floor landing of stairhall
By: PH Batcheler	west wall baseboard
Date Examined: Jan 16 1981	Substrate: wood
By: PHB	Top Color: white

Historic Date	Layer Description (color, varnish dirt, etc.)	Munsell #	Characteristics
	wood		
	greyish yellow	2.5 Y 7/4	prime + finish with oily surface
	greenish gray	10 GY 5/1	fractures off lower layer easily
	translucent oil		possibly oil or wax
	grey thin primer	N 6/	very thin layer
	greyish red	10 R 5/3	finish surface lighter 10 R 5/4
	greyish yellow	2.5 Y 8/4	
	white		
	moderate yellow	2.5 Y 8/6	
	light yellow	5 Y 8.5/4	
	white		

Further Observation, Documentation, Comment or Sketches:

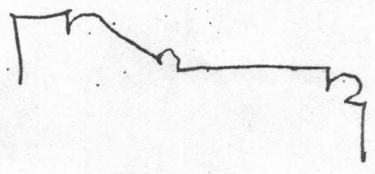


PAINT ANALYSIS

Region: NARO	Park: ALPO
Structure: Lemon House	Structure #: 1
Sample #: 208	Location of Sample: Second floor - SE Room. South window trim of east jamb
Date Taken: May 24 1978	
By: PHBatchelor / S King	
Date Examined: Jan 16 1981	Substrate: wood
By: PHB	Top Color: white

Historic Date	Layer Description (color, varnish dirt, etc.)	Munsell #	Characteristics
	wood		
1831	yellowish grey	2.5 Y 8/2	prime + finish coats
	light reddish brown	10 R 5/4	finish
	moderate yellow	2.5 Y 8/5	finish - alligatored
	white		
	white		

Further Observation, Documentation, Comment or Sketches:



Note Sample 209 - from window sill apron is the same.

PAINT ANALYSIS

Region: MARO	Park: ALPO
Structure: Lemon House	Structure #: 1
Sample #: 210	Location of Sample: 2nd floor SE room base board
Date Taken: May 24 1978	
By: Pat Batchelder	
Date Examined: Jan 16 1981	Substrate: wood
By: PBB	Top Color: white

Historic Date	Layer Description (color, varnish dirt, etc.)	Munsell #	Characteristics
	wood		
	yellowish grey	2.5 Y 8/2	with yellowed surface
	dark grey - black	N 2.5/	ie exposed finish surface
	lighter " "	N 3.5/	
	moderate reddish brown	10 R 3/6	thin undercoat
	" " "	10 R 4/4	finish
	moderate yellow	2.5 Y 8/5	finish
	white		
	white		

Further Observation, Documentation, Comment or Sketches:

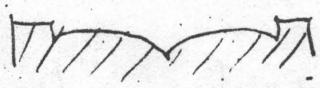


PAINT ANALYSIS

Region: MARO	Park: ALPO
Structure: Lemon House	Structure #: 1
Sample #: 211	Location of Sample:
Date Taken: May 24 1978	2nd floor SE Room
By: P.A. Batchelder	mantle jamb
Date Examined: Jan 16, 1981	Substrate: wood
By: PWB	Top Color:

Historic Date	Layer Description (color, varnish dirt, etc.)	Munsell #	Characteristics
	wood		
	yellowish gray finish	2.5 Y 8/2	with yellowed surface
	black		dimpled surface from heat
	moderate reddish brown	10 R 4/4	finish
	moderate yellow	2.5 Y 8/5	finish
	white		
	white		

Further Observation, Documentation, Comment or Sketches:

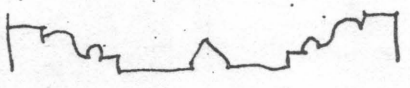


PAINT ANALYSIS

Region: MARO	Park: ALPO
Structure: Lemon House	Structure #: 1
Sample #: 216	Location of Sample:
Date Taken: 11/28/80	2nd floor - room north side opposite stairhall, window trim
By: PHS Batchelder	
Date Examined: Jan 16 '81	Substrate: wood
By: PSBB	Top Color: white

Historic Date	Layer Description (color, varnish dirt, etc.)	Munsell #	Characteristics
	wood		
1831	greyish yellow	2.5 Y 8/4	prime + finish
	yellowish grey	2.5 Y 7/2	fractures off lower layer easily
1900	light greyish olive	10 Y 6/3	
	light grey	N 6.5/	
	white		
	white		
	white		

Further Observation, Documentation, Comment or Sketches:



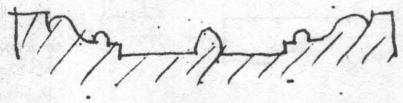
note samples #217 } 2nd fl. room opposite stairway (same room)
219 } trim door trim type D has same layering
This trim + door way has a transom.

PAINT ANALYSIS

Region: NARO	**Park:** ALPO
Structure: Lennon Hse	**Structure #:** 1
Sample #: 220	**Location of Sample:**
Date Taken: May 24 1978	2nd floor E-W Hall - Trim at N. side of door to stairhall door. (on E-W partition)
By: P.H. Batchelor	
Date Examined: Jan 16 1981	**Substrate:** wood
By: PHB	**Top Color:**

Historic Date	Layer Description (color, varnish dirt, etc.)	Munsell #	Characteristics
	wood		
1831	greyish yellow	2.5 Y 8/4	prime + finish
	yellowish grey	2.5 Y 7/2	layers above fracture off easily.
1900	light greyish olive	10 Y 6/3	
	light grey	N 6.5/	
	greyish yellow	2.5 Y 8/4	
	white		
	white		
	white		

Further Observation, Documentation, Comment or Sketches:

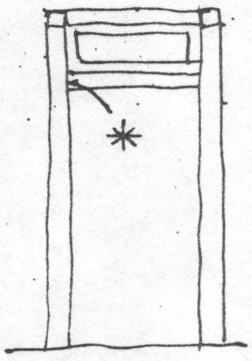


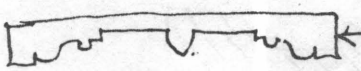
PAINT ANALYSIS

Region: MARO	Park: ALPO
Structure: Lemon Hse	Structure #: 1
Sample #: 218	Location of Sample:
Date Taken: 11/28/80	2nd fl. north room opposite stairhall
By: PB Batchelder	Room side of door - trim *
Date Examined: Jan 16 1981	Substrate: wood
By: PBB	Top Color: greyish yellow

Historic Date	Layer Description (color, varnish dirt, etc.)	Munsell #	Characteristics
	wood		
1831	greyish yellow	2.5 Y 8/4	prime & finish with surface coloring near 10 YR 7/4
	Note: This then was the finish coloring just prior to the rearrangement of the rooms in 1900 - Compare with samples 216, 217 & 219 & 248 to see character & color of post 1900 paints.		

Further Observation, Documentation, Comment or Sketches:





Note this trim proven original by its having some 1831 cut nails along with 1900 wire nails & some nail holes with no corresponding holes in frame.

Sample taken where present transom abuts trim - The fact there is paint present shows trim has been reassembled from a previous use.

PAINT ANALYSIS

Region: MARO	**Park:** ALPO
Structure: Lemon House	**Structure #:** 1
Sample #: 248	**Location of Sample:**
Date Taken: Jan 22 1981	2nd floor E-W Hallway
By: PH Batchelor	1900 door trim - door opposite stairhall
Date Examined: Feb 9 1981	**Substrate:** wood
By: PHB	**Top Color:** white

Historic Date	Layer Description (color, varnish dirt, etc.)	Munsell #	Characteristics
1900	wood		
1900	light greyish olive	7.5 Y 5/2	
	↑	↑	
	yellowish grey	5 Y 7/1	
	greyish yellow	2.5 Y 8/4	
	white		
	white		
	white		

Further Observation, Documentation, Comment or Sketches:

This sample supercedes #221

PAINT ANALYSIS

Region: MARO	**Park:** ALPO
Structure: Lennon Hse	**Structure #:** 1
Sample #: 226	**Location of Sample:** 2nd fl. NW room just east of apt. baseboard north ext. wall
Date Taken: May 24 1978	
By: PHB	
Date Examined: Jan 16 1981	**Substrate:** wood
By: PHB	**Top Color:** white

Historic Date	Layer Description (color, varnish dirt, etc.)	Munsell #	Characteristics
	wood		
1831	grayish yellow	2.5 Y 8/4	prime + finish
	Dark gray	N 3.5/	
	light blue gray green	5 GY 5/1	
1900	light grayish olive	10 Y 5/2	
	yellowish gray	5 Y 7/1	machine ground paint
	white		
	white		
	white		

Further Observation, Documentation, Comment or Sketches:



#226



Sample #227 starts with the layer 10 Y 5/2 as the final finish coat on a light gray primer. As this baseboard is on a 1900 partition this layer dates from that year.

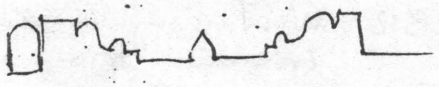
#227 - 2nd fl. NW room just east of apartment west partition base.

PAINT ANALYSIS

Region: MARO	**Park:** ALPO
Structure: Lemon House	**Structure #:** 1
Sample #: 229	**Location of Sample:**
Date Taken: May 24 1978	2nd fl. NW room - west wall, door to west wing, door trim main House side.
By: PAB	
Date Examined: Jan 16 1981	**Substrate:** wood
By: PAB	**Top Color:** white

Historic Date	Layer Description (color, varnish dirt, etc.)	Munsell #	Characteristics
	wood		
1831	greyish yellow	2.5Y 8/4	prime + finish
1900	light grayish olive primer	10Y 6/1.5	several coats (min. 3)
	light grayish olive finish	10Y 6/2	
	yellowish gray	5Y 7/1	
	white		
	white		

Further Observation, Documentation, Comment or Sketches:

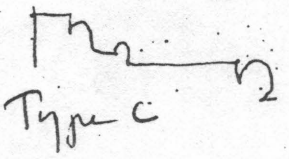


PAINT ANALYSIS

Region: MARO	**Park:** ALPO
Structure: Lemon House	**Structure #:** 1
Sample #: 230 + 231 (same location)	**Location of Sample:** West wing 2nd floor Doorway to main house Door trim - west wing side
Date Taken: May 24 1978 + 11/28/80	
By: PABatchelder	
Date Examined: Jan 16 1981	**Substrate:** wood
By: PHB	**Top Color:** white

Historic Date	Layer Description (color, varnish dirt, etc.)	Munsell #	Characteristics
	wood		
1831	grayish yellow	2.5Y 8/4	prime & finish coats
	grayish red	10 R 5/2	undercoat
	light reddish brown	10 R 5/4	finish
1900	light olive	7.5 Y 6/3	finish
	moderate orange yellow	10 YR 7/6	finish
	pale orange yellow	10 YR 8/2	undercoat
	white		
	white		
	white		
	white		

Further Observation, Documentation, Comment or Sketches:



Type C

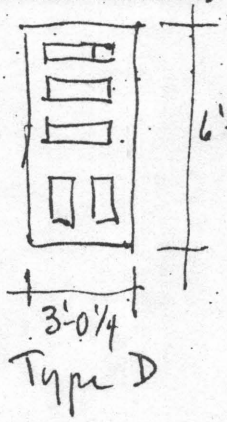
#232 West wing North room window trim type c has same layering except faded.

PAINT ANALYSIS

Region: MARO	**Park:** ALPO
Structure: Lemon House	**Structure #:** 1
Sample #: 233 + 234	**Location of Sample:**
Date Taken: May 24 '78	West Wing - 2nd floor - Door leading from north room to top of stairway
By: PHB/Archivist	
Date Examined: Jan 16 1981	**Substrate:** wood
By: PHB	**Top Color:** white

Historic Date	Layer Description (color, varnish dirt, etc.)	Munsell #	Characteristics
	■ wood of #233		
	light grey primer		very thin
1900	light olive	7.5Y 6/3	finish coat
	moderate orange yellow	10 YR 7/6	finish
	pale orange yellow	10 YR 8/2	undercoat
	whites		+ 2.5Y 8/2
	■ sample of #234 has 18	31 original paint	2.5Y 8/4 (3-4 layers)
	below the light olive	7.5Y 6/3	layer - showing
	that this doorway has	been previously	
	used elsewhere than	with	this 1900 partition.

Further Observation, Documentation, Comment or Sketches:



Type D

PAINT ANALYSIS

Region:	Park:
Structure: LEMON HOUSE	Structure #:
Sample #: 32	Location of Sample: 100-W (entr Hall WALL OLD NEXT TO DOOR TO 103 (SW room) NEAR BASEBOARD
Date Taken: 4/25	
By: SDK/NAW	
Date Examined:	Substrate: lath + PLASTER
By: SDK + PHB Jan 1981	Top Color:

Historic Date	Layer Description (color, varnish dirt, etc.)	Munsell #	Characteristics
	old [illegible] plaster		groundcoat - mud
	white plaster		finish coat
*	blu-green paint	7.5 G 5/1.5	Primer or finish thin 2.5Y 8/4
	paper		fragment pulp paper remains
	[illegible] plaster		
	yellow [illegible]		soft fibrous layer ? composition

Further Observation, Documentation, Comment or Sketches:

*

PAINT ANALYSIS

Region: MARO	**Park:** ALPO
Structure: Lennon House	**Structure #:** 1
Sample #: 236	**Location of Sample:** 1st Floor
Date Taken: P.W. Batcheler / S King	NW room - Ceiling
By: May 24 1978	
Date Examined: PWB Jan 1981	**Substrate:** original plaster
By:	**Top Color:** pulp wallpaper

Historic Date	Layer Description (color, varnish dirt, etc.)	Munsell #	Characteristics
	original plaster ground coat		mud + hair on split lath
	" " finish coat		
	dirty surface		
	light yellowish brown paint	10YR 7/4	
	yellowish grey	10YR 7/2	yellowed surface + dirt
	sizing		white
	wallpaper -		pulp paper

Further Observation, Documentation, Comment or Sketches:

Sample # 235 from this room is a post 1961 plaster + board wall. (S. wall SE corner)

Sample #237 taken from this room at partition between this room + west wing - no finish surfaces - but partition has split lath + mud plaster - ie. original.

PAINT ANALYSIS

Region: MARO	**Park:** ALPO
Structure: Lemon House	**Structure #:** 1
Sample #: 249	**Location of Sample:** 1st Flor
Date Taken: Jan 22 1981	SE Room - ceiling at North partition
By: PHBatcheller	
Date Examined: Feb 9 1981	**Substrate:** plaster
By: PHB	**Top Color:** light blue

Historic Date	Layer Description (color, varnish dirt, etc.)	Munsell #	Characteristics
	mud ground coat plaster		
	white finish coat plaster		
	grayish yellow	2.5 Y 7/4	paint
	white		whitewash
	white		whitewash
	pale purplish blue	7.5 PB 7/4	powdered whitewash

Further Observation, Documentation, Comment or Sketches:

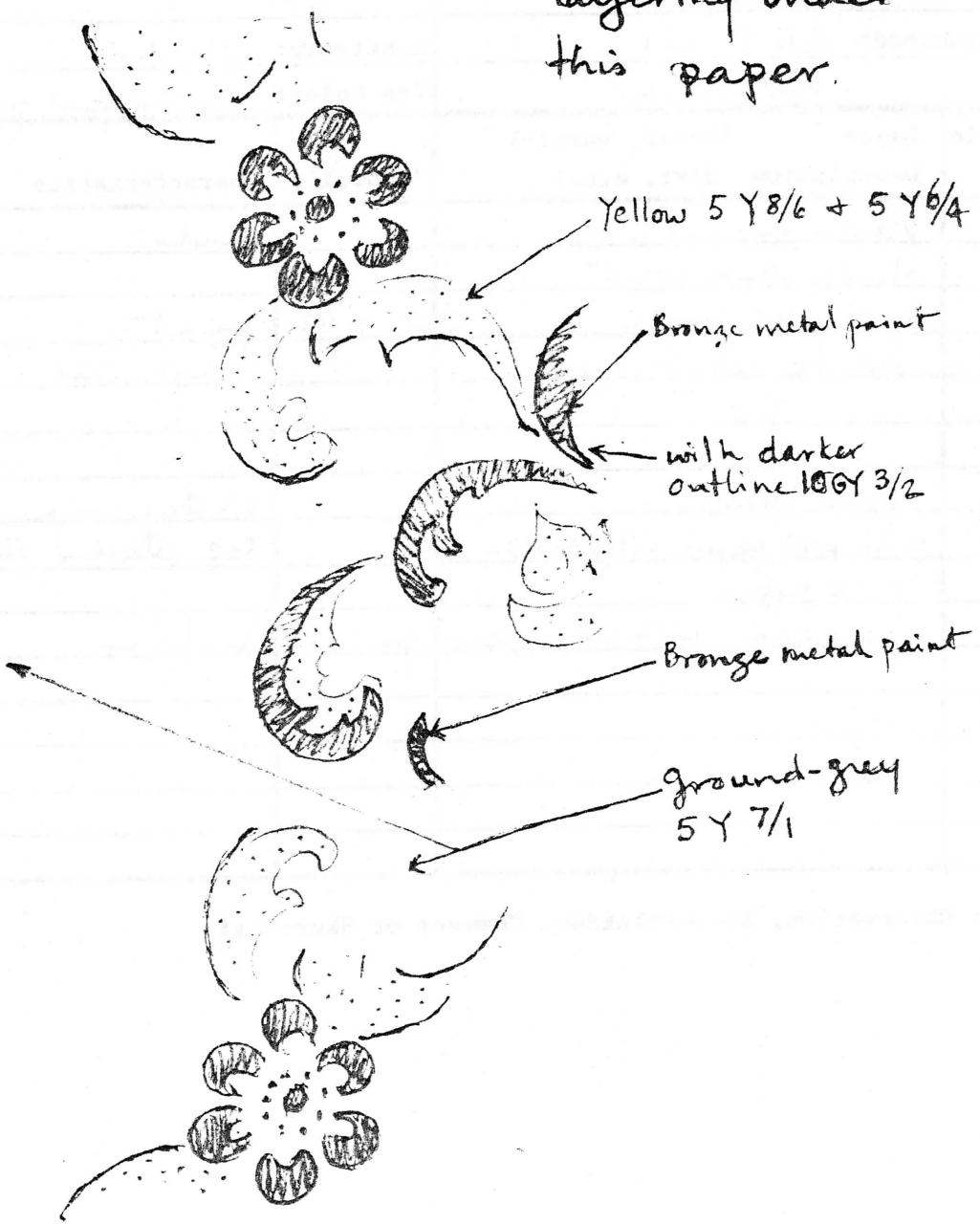
PAINT ANALYSIS

Region: MARO	**Park:** ALPO
Structure: Lemon House	**Structure #:** 1
Sample #: 250	**Location of Sample:** SW Room Ceiling 1st Floor
Date Taken: Jan 22 1981	
By: P.A. Batchelder	
Date Examined: Feb 9, 1981	**Substrate:** plaster
By: PABatchelder	**Top Color:** wallpaper painted green

Historic Date	Layer Description (color, varnish dirt, etc.)	Munsell #	Characteristics
	plaster ground coat		mud
	plaster white coat		
	yellowish grey	2.5 Y 7/2	paint
	white whitewash		whitewash
	"		"
	"		"
	pale yellow		whitewash
	pulp wall paper with design	–	see attached sheet
	pulp paper		
	pulp paper with light green	painted	surface

Further Observation, Documentation, Comment or Sketches:

Lemon House 1st floor
SW Room Ceiling
Bottom wallpaper.
Pulp paper -
See paint color #250
layering under
this paper.



P.A. Batchelor
Feb. 9, 1981

PAINT ANALYSIS

Region: MARO	**Park:** ALPO
Structure: Lemon House	**Structure #:** 1
Sample #: 251	**Location of Sample:**
Date Taken: Jan 22, 1981	1st floor SW room
By: P.H. Batchelor	East wall up near ceiling level
Date Examined: Feb 9, 1981	**Substrate:** plaster
By: PHB	**Top Color:**

Historic Date	Layer Description (color, varnish dirt, etc.)	Munsell #	Characteristics
	plaster mud ground coat		
	plaster white finish coat		
	- vestiges of dried sizing -		there may have been a wallpaper finish which was removed before paint applied
	- moderate blue green	10 G 5/2	
	- white/tan white wash ? (or	dirt)	

Further Observation, Documentation, Comment or Sketches:

PAINT ANALYSIS

Region: MARO	**Park:** ALPO
Structure: Lemon House	**Structure #:** 1
Sample #: 238	**Location of Sample:**
Date Taken: May 24 1978	2nd flr - SW room - partition with Stairhall from room side
By: PHB/Batcheller/Sleig	
Date Examined: Jan 81	**Substrate:** original plaster wall
By: PHB	**Top Color:** yellow bright

Historic Date	Layer Description (color, varnish dirt, etc.)	Munsell #	Characteristics
	orig. mud + hair ground coat		on split lath
	orig white finish coat		dirt layer
	white whitewash		
	bluish grey	5 B 6/2	thick finish coat paint
	pale green	2.5 G 7/2	pale green thin layer
	white		
	pink		
	bright yellow		

Further Observation, Documentation, Comment or Sketches:

PAINT ANALYSIS

Region: MARO	**Park:** ALPO
Structure: Lemon House	**Structure #:** 1
Sample #: 252	**Location of Sample:**
Date Taken: Jan 22 1981	2nd floor E-W Hallway - south side 14'-8" west of East End Wall of house.
By: PH Batchelder	
Date Examined: Feb 9, 1981	**Substrate:** plaster - original
By: PHB	**Top Color:** white

Historic Date	Layer Description (color, varnish dirt, etc.)	Munsell #	Characteristics
1831	plaster mud ground coat		on split lath - original
	plaster white finish coat		
	white		whitewash
	"		"
	soft fibrous & granular filler coat		? material & use
	modern white paint		

Further Observation, Documentation, Comment or Sketches:

APPENDIX 6

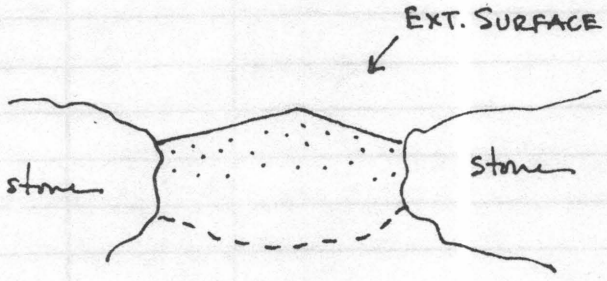
LEMON HOUSE

EXTERIOR WALL POINTING SAMPLE

On May 23, 1978, a sample of exterior pointing was taken in the west wing basement, east wall, south of the original west wing south wall stub. This area of wall was on the outside of the house prior to 1900 when the present sized wing was built.

There is a possibility that this is original pointing. At least it is the earliest extant pointing and was in relatively good condition in 1978. In 1979 this wall area was covered with cement plaster. The resulting condition is unknown.

This sample is filed with paint samples taken at the Lemon House by Shelly King Roberts of Denver Service Center. It is Sample No. 110.



Full Size Section Thru Sample

Material: Pure white lime, applied with a trowel creating raised ridges near the center of the joints. It was apparently a decorative white pointing applied after the walls had been laid up.

APPENDIX 7

STRUCTURAL CONDITIONS AND RECOMMENDATIONS

History of the Lemon House Structural System

The framing plans included in the set of Conjectural 1831-99 Plans of the Lemon House will hopefully help one understand the original structural system of the building.

Basically the building has stone bearing walls with wood framing. The framing is made up of hand-hewn girders and vertically sawn joists. The joists join the girders with mortise and tenon joints usually secured with hand-whittled pins.

A longitudinal partition in the main house at the second floor level picks up the loads of the attic and roof framing and transfers them to the east-west and north-south partitions at the first floor level. The north-south (i.e. hallway) partitions bear on girders which in turn were supported in the center of their spans by posts on cellar stone partition walls. The first floor east-west partitions on the other hand had no adequate support initially. Several joists were grouped beneath the partition at the east half of the building. Apparently not even this measure was taken under the partition with the folding doors at the west half of the main house.

These inadequacies and changes in use and loading very soon called for remedial shoring in the cellar in the form of wood posts, the accumulation of which was to eventually look like a forest (see Drawing No. 432/26000, Basement Plan).

As the cellar floor was merely dirt these posts developed fungus decay and in time allowed the floor structures to settle.

Circa 1900 the west wing was expanded southward and its framing totally replaced. Along with this work the main house roof slopes were steepened with shimming and the insertion of a ridge board, and an attic girder was stiffened by bolting it to a girder salvaged from the original

west wing. The west wing west stone wall, where old to new stonework was joined, was not well tied in and voids developed in the wall thickness.

For a more detailed analysis, see the following Keast and Hood Company of Philadelphia, Pennsylvania, Structural Conditions Report of the May 10, 1976. Remedial measures were recommended by Structural Engineer Nicholas Gianopulos for the removal of the main house cellar shoring posts and provision of permanent steel framing support from the cellar level. These recommendations were incorporated into the structure under a construction contract with MARO.

The second floor joist bearing conditions were examined and Appendix 7 includes a report submitted by Engineers, Berkebile Brothers Inc., of Johnstown, Pennsylvania, in February of 1977.

In 1978, Structural Engineer James J. Wolf, NPS-DSC, investigated and suggested a remedial concept for strenghtening the second floor, attic floor, and roof framing.

The park in January 1979 requested of DSC and MARO sanction for installing Engineer Wolf's recommended steel beam (WF 12 x 27#) under the west wing first floor joists. This was approved by MARO Historical Architect Magaziner by telephone January 4, 1979. Soon after a beam (12 x 40#) was installed.

The Denver Service Center in 1980 contracted with Keast and Hood Company again to prepare contract documents for strengthening the upper floors and roof, the work of which is hereby recommended for action.

May 10, 1976

Mr. Henry J. Magaziner
National Park Service
Division of Planning & Resource Preservation
U. S. Custom House, Room 502
Second and Chestnut Streets
Philadelphia, Pa. 19106

Re: Lemon House
Allegheny Portage Railroad
National Historic Site
Structural Evaluation
Order No. PX4000/6/0482 - 3/24/76

Dear Mr. Magaziner:

Pursuant to the NPS Purchase Order, my visit to the subject site to examine the house and recent discussions between ourselves relative thereto, the following notes, comments, and recommendations are submitted for your consideration.

1. The enclosed photo contact sheets are included to aid in cross referencing the report comments. A reference notation of (4/2) refers to Photo No. 4 of Contact Sheet No. 2. The enclosed sketches indicate the principal structural measures recommended hereinafter as minimum first phase measures toward improving the general physical condition of the house.

2. The PENDER District Office, Ebensburg, Pa., was visited on the morning of April 18, 1976, at which time, the writer discussed with Mr. A. E. Molinski, District Engineer, and Mr. F. Shupian, Mining Engineer, their reports of last December and January relative to the existence and possibilities of mine subsidence

that could affect the Lemon House. The discussion did not develop any significant or relevant points beyond the contents of the aforementioned reports.

3. Following the PENDER meeting, the house was visited, and a meeting took place with Superintendent J. R. Zinck and Mr. R. Gerecke. House and surrounding site were examined with company of Messrs. Gerecke and Shupian. Ground subsidence was observed east of the Gallitzin Road in the direction of the E-Seam Mine Drift and in the old incline engine house foundations. There were no disturbing ground signs in the immediate vicinity of the house or indications in the house fabric that it had been affected by mine subsidence.

4. By reference to the photos, the house is seen to consist of an exterior three-story sandstone masonry wall, which supports two timber framed intermediate floors and roof. In general, the cellar foundation wall is nominally thirty inches thick (12/1), while the upper house walls are nominally eighteen inches thick. Although the wall thicknesses are ample for the plan size and height of the building, the vertical wall planes are slightly distorted inward (4/1), except in a few areas of slight outward bulges.

5. The original cellar foundation wall was constructed with a thickened, wider base footing (12/1). The parged inner wall surface appears free of cracks, fractures, and water penetration. It was not readily apparent whether the parge coat was of early construction or of recent origin. The development of building weights indicates that the average dead load footing pressures are approximately 4 ksf and are not excessive for what appears to be medium firm clay. The type of wall cracking and fracturing that would be indicative of general or abrupt subsidence was not in evidence.

6. A small suspect area of the south wall near the first floor line and the blocked-in cellar window to the west of the outside cellar exit (6/2) was examined and probed for joint soundness (7/2 and 8/2). Removal and lifting of the nonhistoric raised mortar cap pointing disclosed internal joint voids and loose decomposed powdery mortar.

7. The items of principal concern relative to the cellar are the unbuttressed north and south foundation walls, the questionable soundness of the multitude of timber shoring posts, the excessive dampness coupled with inadequate ventilation, and the possibility that the exterior south grade to foundation bottom dimension is less than the three feet normally considered for frost protection.

8. The present inward out-of-plumbness of the north and south cellar walls could likely be attributed to the combined effects of original construction variations, response to numerous lateral frost pressure cycles, and reduced lateral floor edge restraints as the result of large interior floor and partition settlements. The previously mentioned mortar weakness (Item 6) could have contributed to the walls' responding to these influences by the multiple shifting of individual stones in their powdery mortar beds. The resultant exterior joint cracking was most likely repointed in the past, while the presently open joints and cracks are extensions of the old cracks and cracks from recent stone movements related to internal frost pressures combined with normal weathering joint erosion. The few areas of slight outward bulging may represent those zones of greater than usual internal separation and should warrant further exploratory examination. It is quite likely that those wall areas will require eventual removal and reconstruction.

9. The first floor timber framing, which is exposed from the cellar below, is an east-west joist system internally supported by the two parallel central hall timber girders. The exterior joist ends bear into the cellar masonry walls. In many cases, the wall bearing ends are decayed as a consequence of long-term moisture migration through the walls and the lack of adequate cellar ventilation. The girder bearing joist ends are mortised and tenoned and appear sound. The main central hall girders have been shored many times by heavy timber posts, which, over the years, have been subjected to some decay.

10. The girder posts, as well as other posts that were expeditiously placed in the past, constitute a haphazard, although functional, support system for the first floor and the accumulated upper

loads of the second floor, attic, and roof by means of the interior bearing partitions. The evidence of a history of settlement in the interior posted system of girders and partitions can be seen by the out-of-level floors and widened separations at floor-wall junctures, from what appears to be the pulling and deformation of the exterior walls by the shifted floor framing.

11. The conditions of the second floor joist bearings into the north and south walls could not readily be ascertained in detail at the time of the site visit; however, the nature of the bearings can be examined as a matter of routine maintenance by the lifting of one or two floor boards adjacent to the exterior walls. Items of principal concern would be the soundness and length of the bearing ends.

12. The centrally located east-west timber partition, which begins at the first floor and continues to the attic, is the most heavily loaded of the interior partitions since it supports the second floor and attic joists and a major portion of the roof construction. The original first floor framing provided no explicit means of supporting the loads of the east-west partition; however, there are now in the cellar four timber posts of later date that shore the first floor joists supporting the partition. While it is apparent that some principal means of cellar support should be provided for the partition, a part of the partition between the locker room and the southwest corner exhibit room should be carefully examined because of past alterations to it by the previous owners for a customized radio installation.

13. The parallel north-south central hall partitions between the first, second, and attic floors were somewhat adequately supported by the original design and construction. The replacement of the existing cellar posts, etc., should be part of a new coordinated support system that provides stability for both the interior construction and the outer walls, and provides, also, for better cellar space utilization.

14. The attic and roof framing were also casually examined during the visit but without note of obvious distress thereto.

15. The enclosed sketches incorporate a summary of the principal remedial measures which we consider appropriate in providing permanent internal support as well as buttressing of the cellar walls. It is not advisable, at this time, to attempt to develop the need for a thru-building tie rod system until the main upper exterior wall-second floor relationship can be more thoroughly examined. The extent and nature of the wall condition could be better established during that time when remedial pointing of the masonry is underway. A remedial pointing phase is recommended at this time, in lieu of full coverage, until the aforenoted information is developed.

The scope of items noted on the sketches is as follows:

a. New concrete masonry walls to support existing interior timber framing and to buttress cellar walls.

b. New structural steel framing to support existing interior timber framing.

c. New cellar floor slab.

d. Removal of "blocked-in" cellar window openings to provide ventilation.

The dimensions shown are approximate and should be confirmed by the superintendent's staff and/or builders before any work is undertaken.

In closing, it did not appear that the house has been affected by the undermining. The remedial measures proposed herein are done so to provide for coordinated support and buttressing and to permit improved cellar space usage. It is our opinion that the available limited funds for the house can be better utilized in upgrading the existing structure this year on a priority basis, rather than embarking on an extensive subsurface exploratory drilling program in search of collapsed undermining. The drilling program should not be considered as

being unnecessary, but should be scheduled for future expenditure programs. Do not hesitate to contact us for clarification of any part of this report.

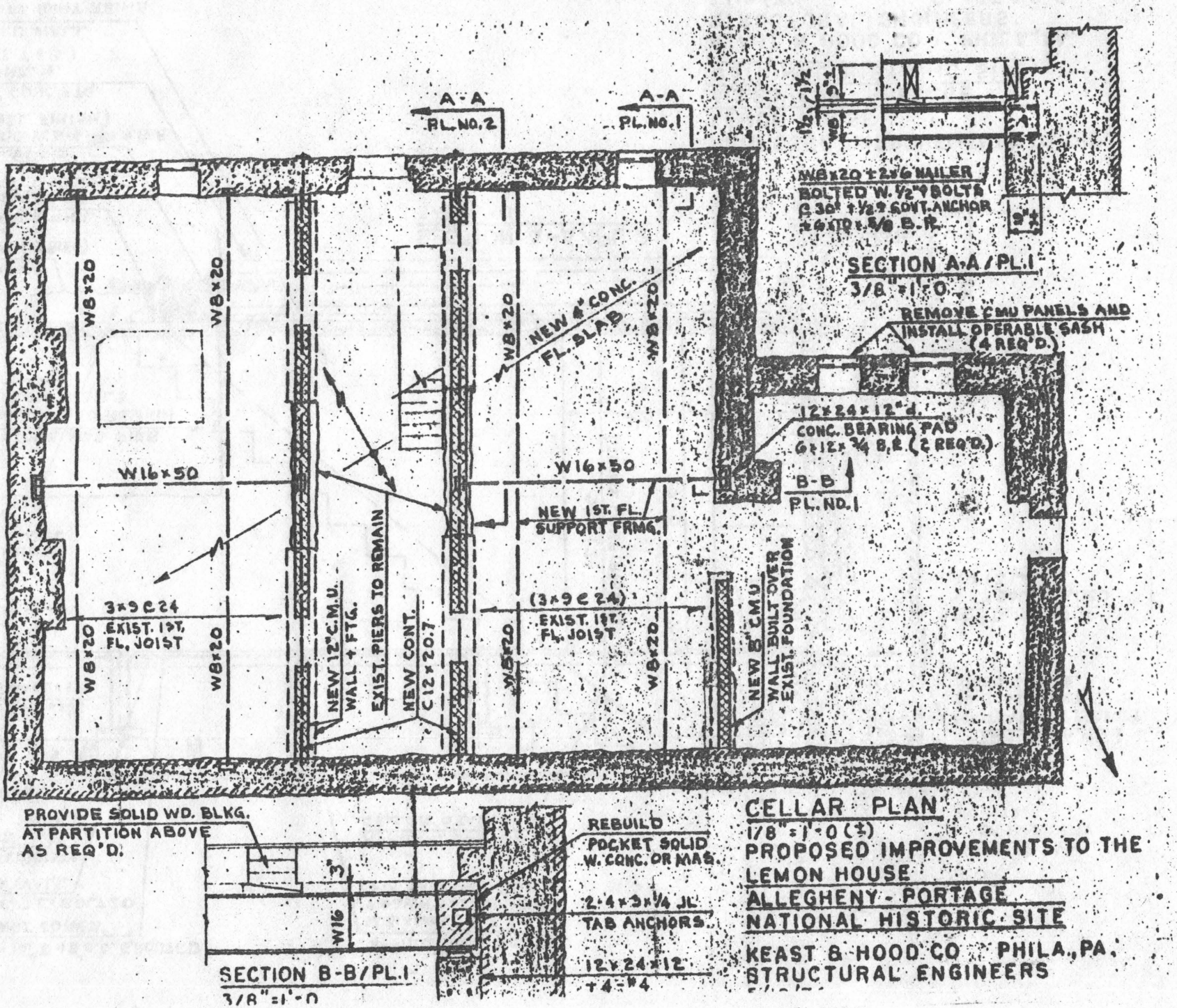
Very truly yours,

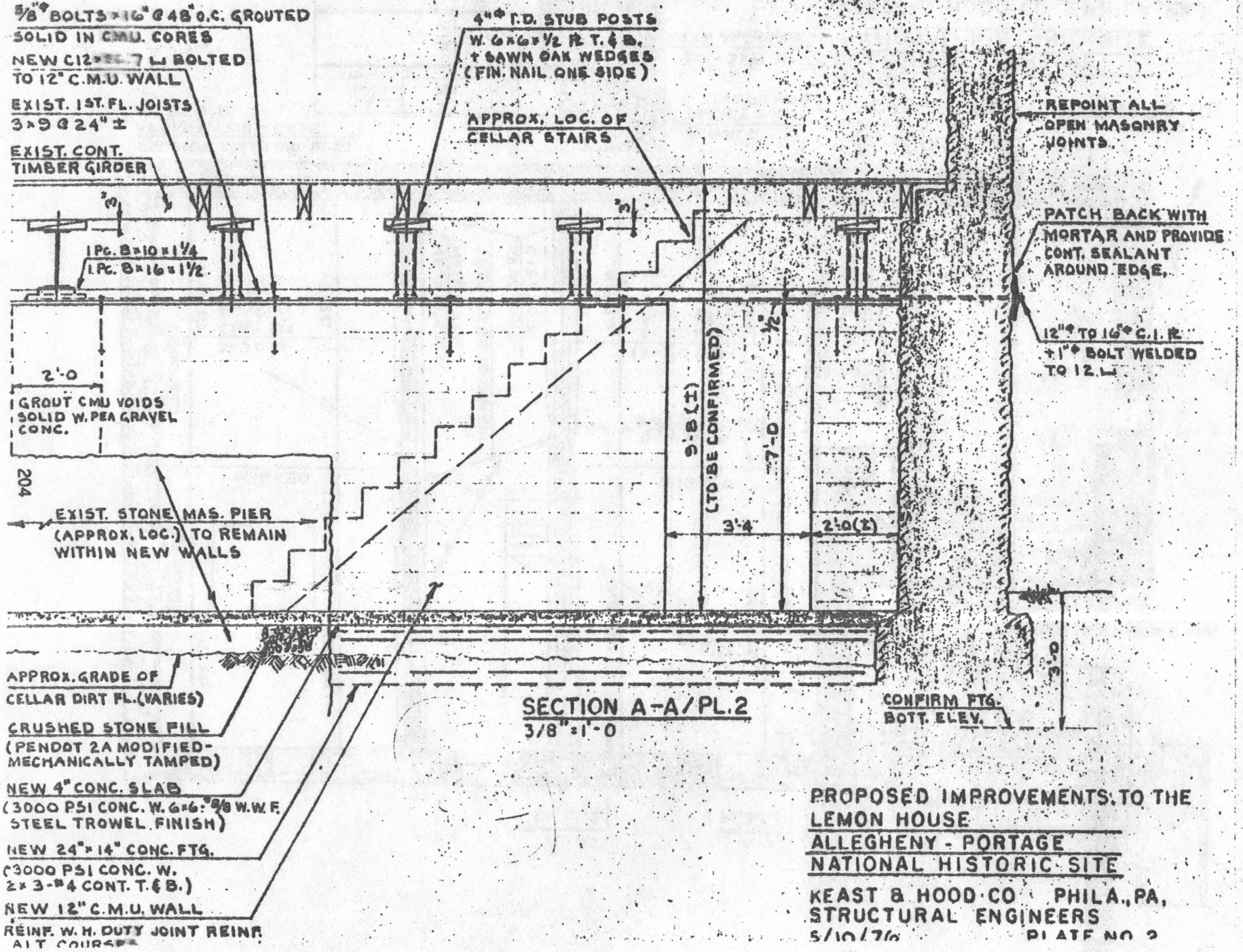
KEAST & HOOD CO.

NLG/v

Nicholas L. Gianopulos

Encs.: Copy of this letter
Photo Sheets 1 and 2 (2 each)
Plates 1 and 2 (2 each)


A-A
PL. NO. 2
A-A
PL. NO. 1
W8x20
W8x20
W8x20
W8x20
NEW 4" CONC. FL. SLAB
W16x50
W16x50
NEW 1ST. FL. SUPPORT FRMG.
3x9 @ 24
EXIST. 1ST. FL. JOIST
(3x9 @ 24)
EXIST. 1ST. FL. JOIST
NEW 12" C.M.U. WALL + FTG.
EXIST. PIERS TO REMAIN
NEW CONT. C12x20.7
W8x20
W8x20
NEW 8" CMU WALL BUILT OVER EXIST. FOUNDATION
W8x20 + 2x6 NAILER BOLTED W. ½" ϕ BOLTS @ 36" + ½" ϕ CONT. ANCHOR + 6x10 x 5/16 B.P.
SECTION A-A / PL. 1
3/8" = 1'-0"
REMOVE CMU PANELS AND INSTALL OPERABLE SASH (4 REQ'D.)
12"x24"x12" d. CONC. BEARING PAD 6"x12"x ¾ B.E. (2 REQ'D.)
B-B
PL. NO. 1
PROVIDE SOLID WD. BLKG. AT PARTITION ABOVE AS REQ'D.
REBUILD POCKET SOLID W. CONC. OR MAS.
2-4"x3"x¼ JL TAB ANCHORS
12"x24"x12"
+4 = #4
W16
SECTION B-B / PL. 1
3/8" = 1'-0"
CELLAR PLAN
1/8" = 1'-0 (±)
PROPOSED IMPROVEMENTS TO THE LEMON HOUSE
ALLEGHENY - PORTAGE NATIONAL HISTORIC SITE
KEAST & HOOD CO. PHILA., PA.
STRUCTURAL ENGINEERS



SECTION A-A / PL. 2
3/8" = 1'-0

PROPOSED IMPROVEMENTS TO THE
LEMON HOUSE
ALLEGHENY - PORTAGE
NATIONAL HISTORIC SITE

KEAST & HOOD CO. PHILA., PA.
STRUCTURAL ENGINEERS
5/10/76 PLATE NO. 2

APPENDIX 7

BERKEBILE BROS., INC.

ENGINEERS AND CONSTRUCTORS

INDUSTRIAL CONSTRUCTION

625 SWANK BUILDING
JOHNSTOWN, PA. 15901
814 536-6739

BUILDING CONSTRUCTION

4 February 1977

Mr. Clyde Bodge
Contracting Officer
National Park Service
Box 247
Cresson, Pa. 16630

RE: Lemon House

Dear Mr. Bodge:

In accordance with specification Section 3-8 page 06100 60F6, we performed the required investigation of the second floor framing with the following results:

*

1. The Floor Joist are 3"x8½" Hemlock at 18" on center, plus or minus 1".
2. Joist are sitting 8" to 8½" in on stone wall.
3. All Joist were solid and in good repair. Hitting them with a hammer made a solid sound.

All of the above was done in the presence of Mr. Robert Gerecke, with the unanimous opinion that no further repair work need be done.

Very truly yours,

BERKEBILE BROS., INC.

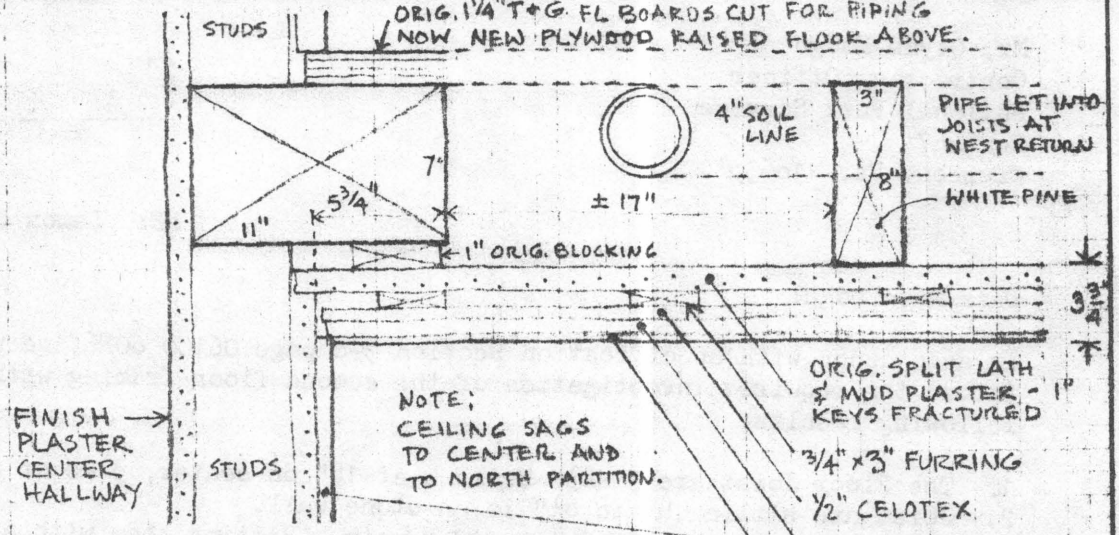
James A. Roberts

JAR:ljs

FORM DSC - 44

APPENDIX 7

Park ALPO , MARO	NATIONAL PARK SERVICE DENVER SERVICE CENTER		Sheet
Area LEMON HOUSE -			of
Project STRUCTURAL STABILIZATION	By P.H. Batchelor	Checked	Pkg.
Feature CEILING CONDITIONS	Date Jan. 22 '81	Date	Account



EAST - WEST SECTION

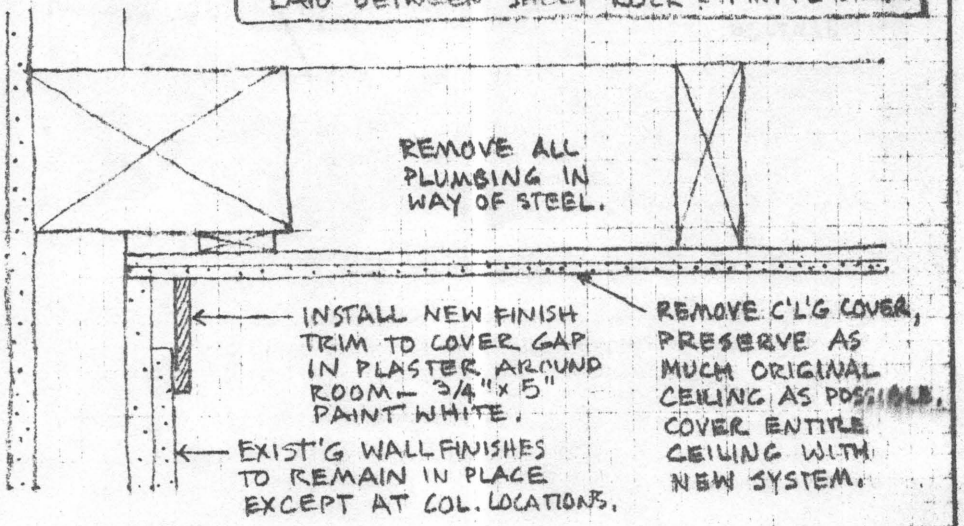
FIRST FL. CEILING EXIST'G CONDITIONS

SW ROOM - EAST PARTITION - CENTER LINE

SCALE 1/8" = 1 INCH

NOTE :

AT WEST WALL OF SW ROOM THE JOISTS ARE 3 x 8¾". AT WALL A STRIP OF EXPANDED METAL LATH HAS BEEN USED TO SPAN CRACK WITH CEILING - LAID BETWEEN SHEET ROCK & FIN. PLASTER.



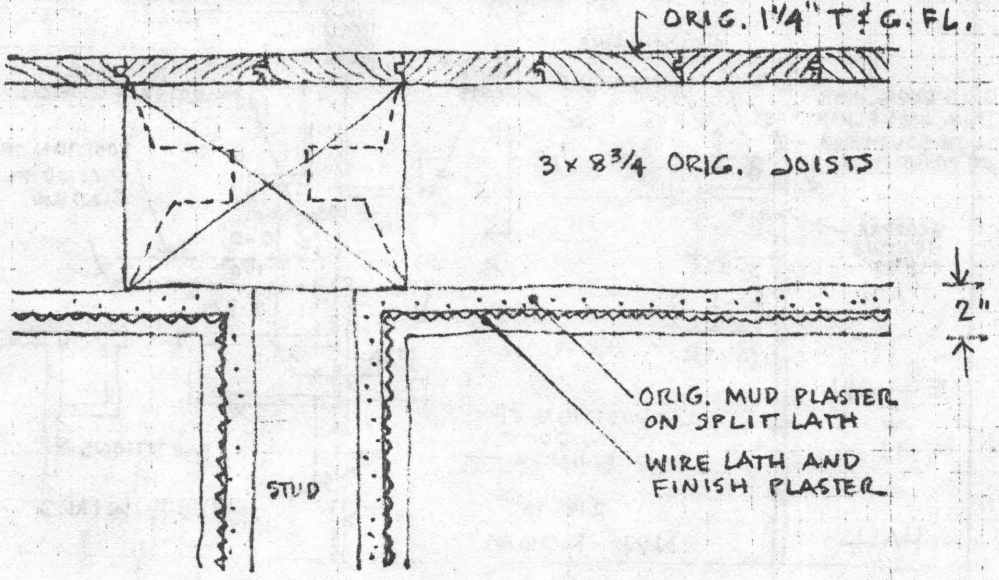
WORK TO BE DONE

PHB FEB 2 '81

FORM DSC - 44

APPENDIX 7

Park	ALPO, MARO	NATIONAL PARK SERVICE DENVER SERVICE CENTER		Sheet
Area	LEMON HOUSE			of
Project	STRUCTURAL STABILIZATION	By P.H. BATCHELER	Checked	Pkg.
Feature	CEILING CONDITIONS	Date Jan 22 1981	Date	Account



NORTH - SOUTH SECTION
PARTITION BETWEEN
NE & SE ROOMS AT CEILING
SCALE 1/8" = 1 INCH

WALL EAST OF DOORWAY TO STAIRHALL :
ORIG MUD PLASTER ON SPLIT WOOD LATH.

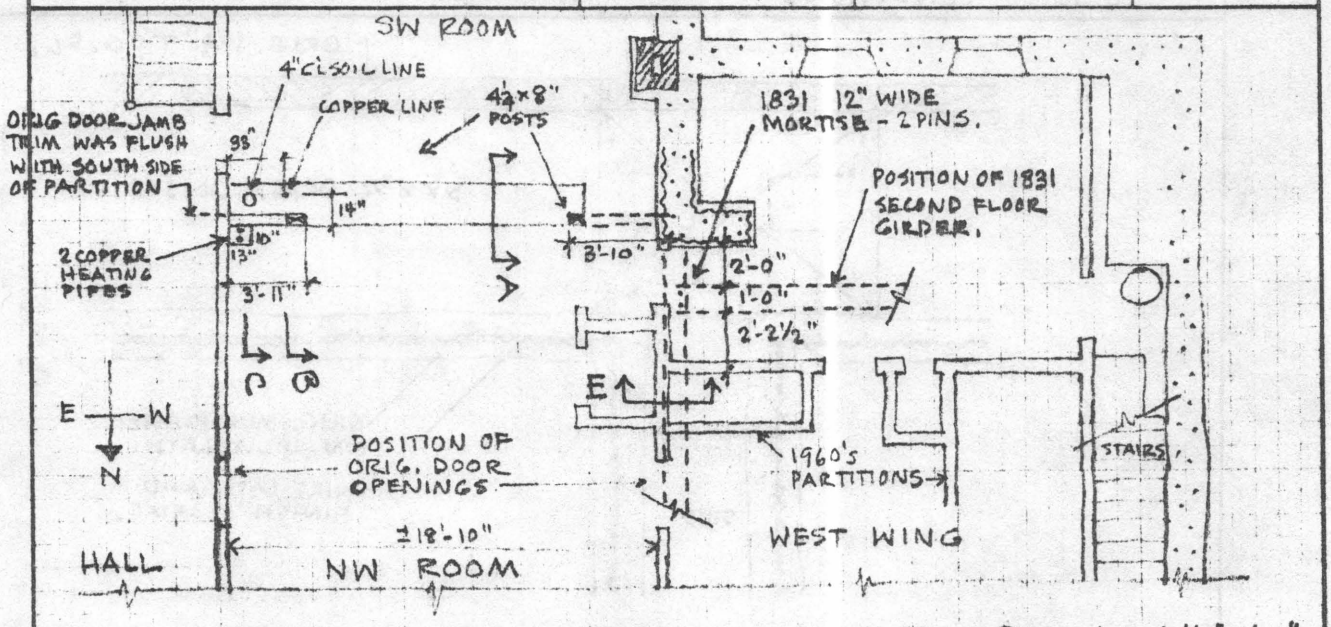
WALL WEST OF DOORWAY TO STAIRHALL :
1900 PLASTER (1/2") ON SAWN WOOD LATH.

WALL CONDITIONS
SECOND FLOOR -
EAST-WEST HALLWAY
SOUTH E-W PARTITION

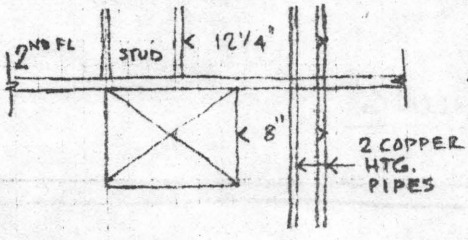
FORM DSC - 44

APPENDIX 7

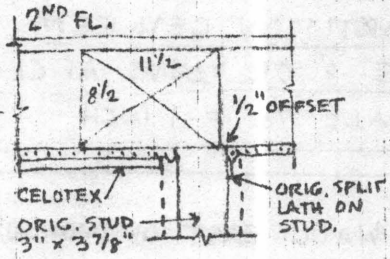
Park ALPO, MARO	NATIONAL PARK SERVICE DENVER SERVICE CENTER		Sheet
Area LEMON HOUSE			of
Project STRUCTURAL STABILIZATION	By PHB + N Gianopulos	Checked	Pkg.
Feature EXIST'G COND & EVIDENCE	Date Dec. 1+2, 1980	Date	Account



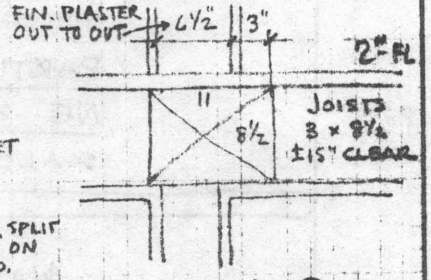
LEMON HSE. PORTION FIRST FL. PLAN ±⅛"=1'-0"



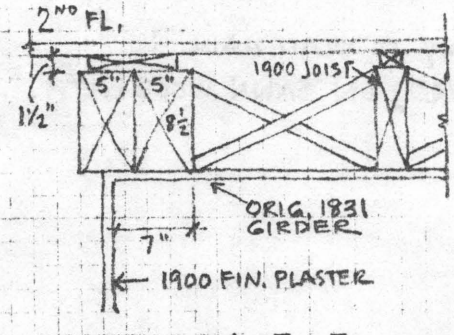
SECTION C - C



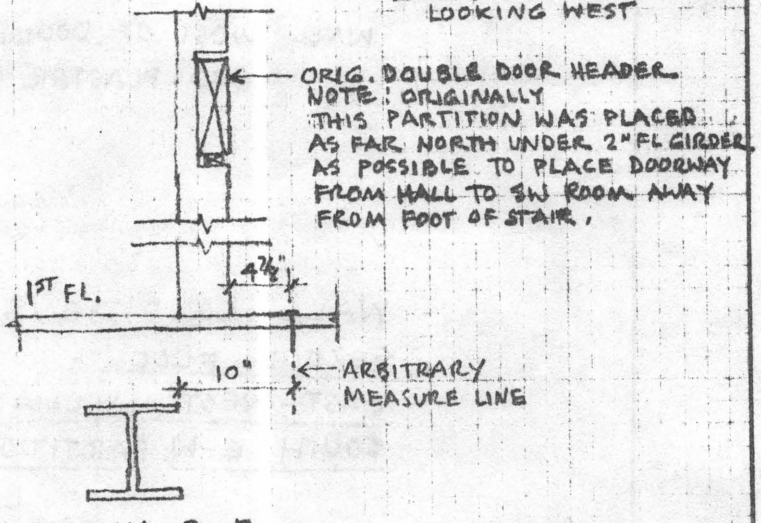
SECTION A - A



SECTION D-D
AT 1971 DOORWAY FROM 2ND FL. SW RM TO N. HALL LOOKING WEST



SECTION E-E



SECTION B-B

United States Department of the Interior

NATIONAL PARK SERVICE

MID-ATLANTIC REGION
143 SOUTH THIRD STREET
PHILADELPHIA, PA. 19106

IN REPLY REFER TO:

H30(MAR/PRP)

DEC 4 198

DENVER Service Center
DEC 7 '81

Memorandum

To: Manager, Denver Service Center

From: Acting Regional Director, Mid-Atlantic Region

Reference: Allegheny Portage Railroad NHS, Pkg. 102

Subject: Review of Draft Report on Lemon House

This is an excellent, well organized, and well written report based on unusually perceptive architectural detective work. This definitely settles the long unanswered question about the west wing. Excepting for its slight southward extension, all of the outer shell is original.

The many sketch plans, elevations and sections by Penny Batcheler are full of information and relate well to the text.

While we can approve all the above, we have difficulty with the reproductions of Illustrations 3 through 15. These reproductions are so poor that it is impossible to relate the citations to them. Since the text is specifically related to the photographs, please send us intelligible copies of the photographs, so that we will be able to review them properly.

While there is no point in revising the Lemon House report to reflect this, there are certain problems mentioned in the report which have been resolved during the many months since the report was written.

1. The problem of moisture's being trapped between the sash (page 92) has been resolved. Sal Marano, ALPO mason, has developed a system to create weep holes for the historic sash, without damaging them.

2. Regarding a second exit from the second floor, the problem has also been solved.

Year of the Visitor

Now that the apartment has been eliminated and the second stairway made accessible to the office staff, that situation has become much improved.

One major problem remains unsolved—the exact configuration of the porch. This should be further researched, as suggested in the report.

Don H. Castleberry

cc:
Superintendent, Allegheny Portage
Assistant Director, Cultural Resources, WASO 560

APPENDIX 9
UNITED STATES GOVERNMENT

memorandum

DATE: December 28, 1981

REPLY TO ATTN OF: Penelope H. Batcheler, Historical Architect, INHP

SUBJECT: Lemon House, ALPO, Additional Evidence of Original Conditions

TO: Supt., ALPO; MARO Historical Architect, DSC Mid-Atlantic/North Atlantic Team; Structural Engineer Nicholas Gianopulos; Project Supervisor Ed Miller.

Trip Report of December 24, 1981 (Courtesy of INHP staff loan)

The present contract for structural stabilization has provided the access needed all along to really open up areas in question.

Supt. Corley and Project Supervisor Ed Miller are to be complimented for spotting evidence which I confirmed on my visit, as follows:

Folding partition between northwest and southwest rooms, first floor

Our DSC research of 1978-79 found that these two rooms were planned originally to open up to each other with a wide opening of four large doors (see Appendix 3 of the HSR architectural data section).

It has now been established that there were six doors providing an opening almost the width of the rooms (finish opening 18' 1/2"). See the attached sketches for the specific evidence.

This discovery, timed as it is in the middle of the contract, will necessitate change orders: 1. redesign the new structural steel to allow for the larger opening; and 2. Install greater sized members, etc. as designed.

It is important in the new design to try to preserve in place as much evidence and original fabric as possible, and to try to achieve the original opening sizes and locations - particularly the six door opening. The original 3 x 9 header above the 18' wide opening should be preserved in place for maximum evidence retention. Where the sagging center of the header projects into the original opening height the projection should be chiseled off.

The design changes should be submitted to DSC and MARO for final approval as soon as possible to avoid delays in the contract.

Evidence of bar fixture in northeast room, first floor

In anticipation of finding evidence of a bar enclosure the contractor set aside for my examination sections of original ceiling plaster from the northeast room, cut from along the line of the new steel. No ridges of paint from the intersection of woodwork showed up. Thus, if there was a bar enclosure it did not intersect this section of the ceiling.

Buy U.S. Savings Bonds Regularly on the Payroll Savings Plan

OPTIONAL FORM NO. 10
(REV. 7-76)
GSA FPMR (41 CFR) 101-11.6
5010-112

There will be no similar evidence to be seen at the wall between the northeast room or hallway as the face of this wall toward the northeast room had been totally replastered with sawn wood lath - probably done c. 1900 with the other major renovations.

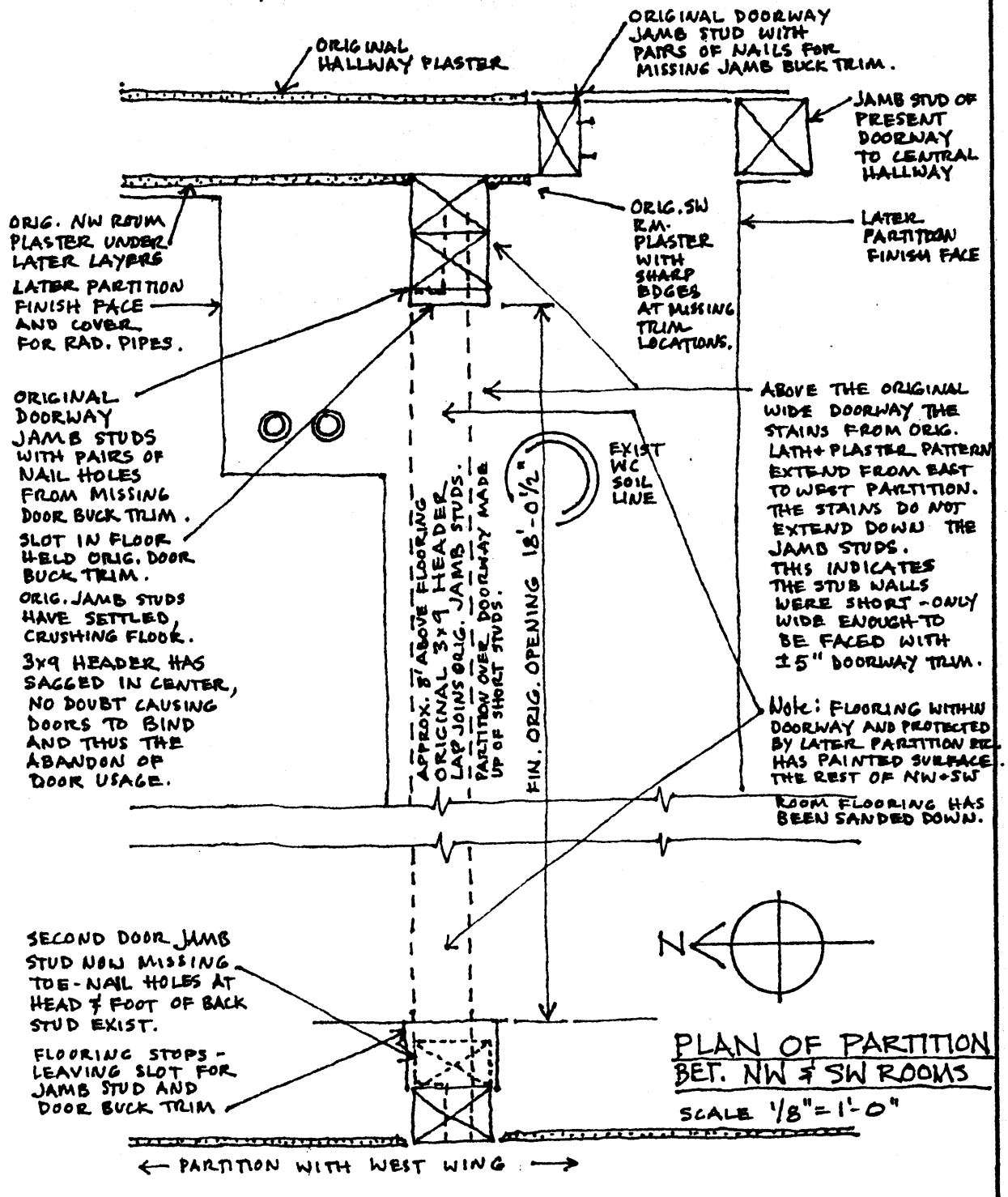
If someday the barroom is to be restored - evidence of a bar enclosure may yet be found by careful examination of the rest of the original plaster ceiling (remove the metal lath and plaster outer layer first and leave original ceiling in place), and by examination of the original flooring.

The "pass-thru" between the barroom and hallway about which Lemon House tenants testified may be yet discovered by the following process: 1. examine original plaster on hall side of the partition by taking core samples of plaster about 5' above floor - to note if there is a plaster patch of different composition than the original mud plaster. If a patch is found then look for its extent and preserve any sharp edges in the original mud plaster which would indicate original trim location.

FORM DSC - 44

Park: Allegheny Portage RR NHS	NATIONAL PARK SERVICE DENVER SERVICE CENTER			Sheet 1 of 2
Area: Lemon House				
Project: Structural Rehab. CX 4000 + 9005	By P.H. Batcheler		Checked	Pkg. 102
Feature: Doorway NW - SW Rooms 1st Fl.	Date 12/24/81		Date	Account

Dimensions based on sketch by E.R. Miller, Project Supervisor, 12/16/81
Evidence collected by E.R. Miller, Randall Cooley + P.H. Batcheler



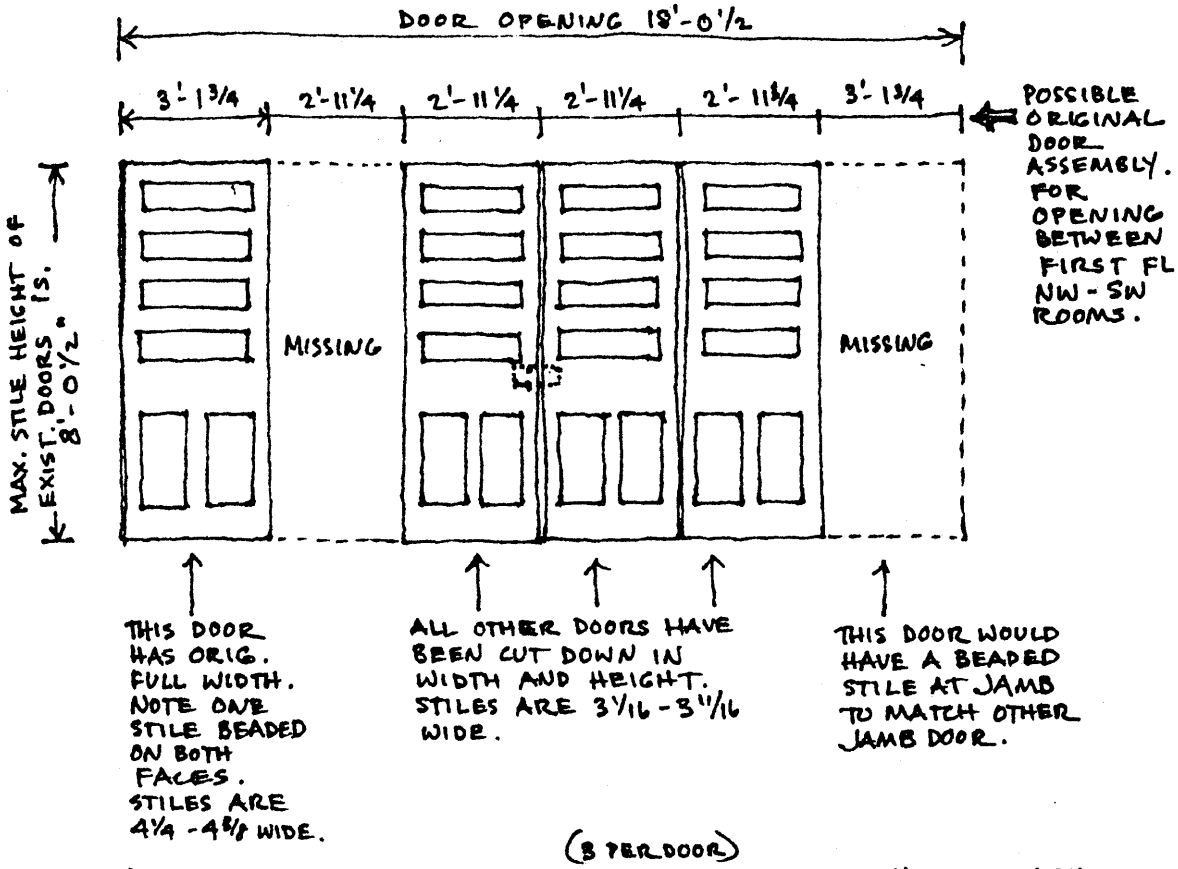
PLAN OF PARTITION BET. NW & SW ROOMS

SCALE 1/8" = 1'-0"

FORM DSC - 44

Park ALPO	NATIONAL PARK SERVICE DENVER SERVICE CENTER		Sheet 2
Area LEMON HOUSE			of 2
Project	By P.H. Batcheler	Checked	Pkg. 102
Feature DOORS FROM NW-SW RM - 1ST FL.	Date 12/24/81	Date	Account

DOORS NOW STORED IN ATTIC OF LEMON HOUSE.



(3 PER DOOR)

ALL BUTT HINGE RECESSES ON DOORS HAVE 3 SCREW HOLES EACH. AT TOP AND BOTTOM RECESSES THERE ARE 3 ADDITIONAL SCREW HOLES EACH, SHOWING SINGLE PAIR OF HINGES USED TO HANG DOORS ORIGINALLY.

WHY ONLY FOUR DOORS SURVIVE ?

AS THE 3×9 HEADER ABOVE DOOR OPENING HAS DEFLECTED IN ITS CENTER IT CAUSED THE DOORS TO BIND. THEY WERE PROBABLY REMOVED AND PERHAPS ONLY FOUR WERE REHUNG AT A LATER DATE RESULTING IN THE DISPOSAL OF TWO.

L. BIBLIOGRAPHY

Reports and Published Sources

Souder, Norman M. Historic Structure Report - The Lemon House - Allegheny Portage Railroad Historic Site, Architectural Data Section. National Park Service, U. S. Department of the Interior, Washington, D.C., 1972.

Stotz, Charles Morse. The Architectural Heritage of Early Western Pennsylvania, A Record of Buildings Before 1860. Pittsburgh, University of Pittsburgh Press, 1936.

Toogood, Anna Coxe. Historic Structure Report - The Lemon House - Allegheny Portage Railroad National Historic Site, Historical Data Section. National Park Service, U. S. Department of the Interior, Washington, D.C., 1972.

Toogood, Anna Coxe. Historic Furnishing Plan, Chapter C, Historic Occupancy, The Lemon House, Allegheny Portage Railroad National Historic Site, Draft, 1980.

Primary Sources

Tape recording Interview about the Lemon House, Larry Trombello with Mrs. Gailey, November 1980, files of the park.

Tape recording Interview about the Lemon House, Larry Trombello with Mrs. Jessica Walters, November 1980, files of the park.

As the nation's principal conservation agency, the Department of the Interior has basic responsibilities to protect and conserve our land and water, energy and minerals, fish and wildlife, parks and recreation areas, and to ensure the wise use of all these resources. The department also has major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

Publication services were provided by the graphics staff of the Denver Service Center. NPS 1889