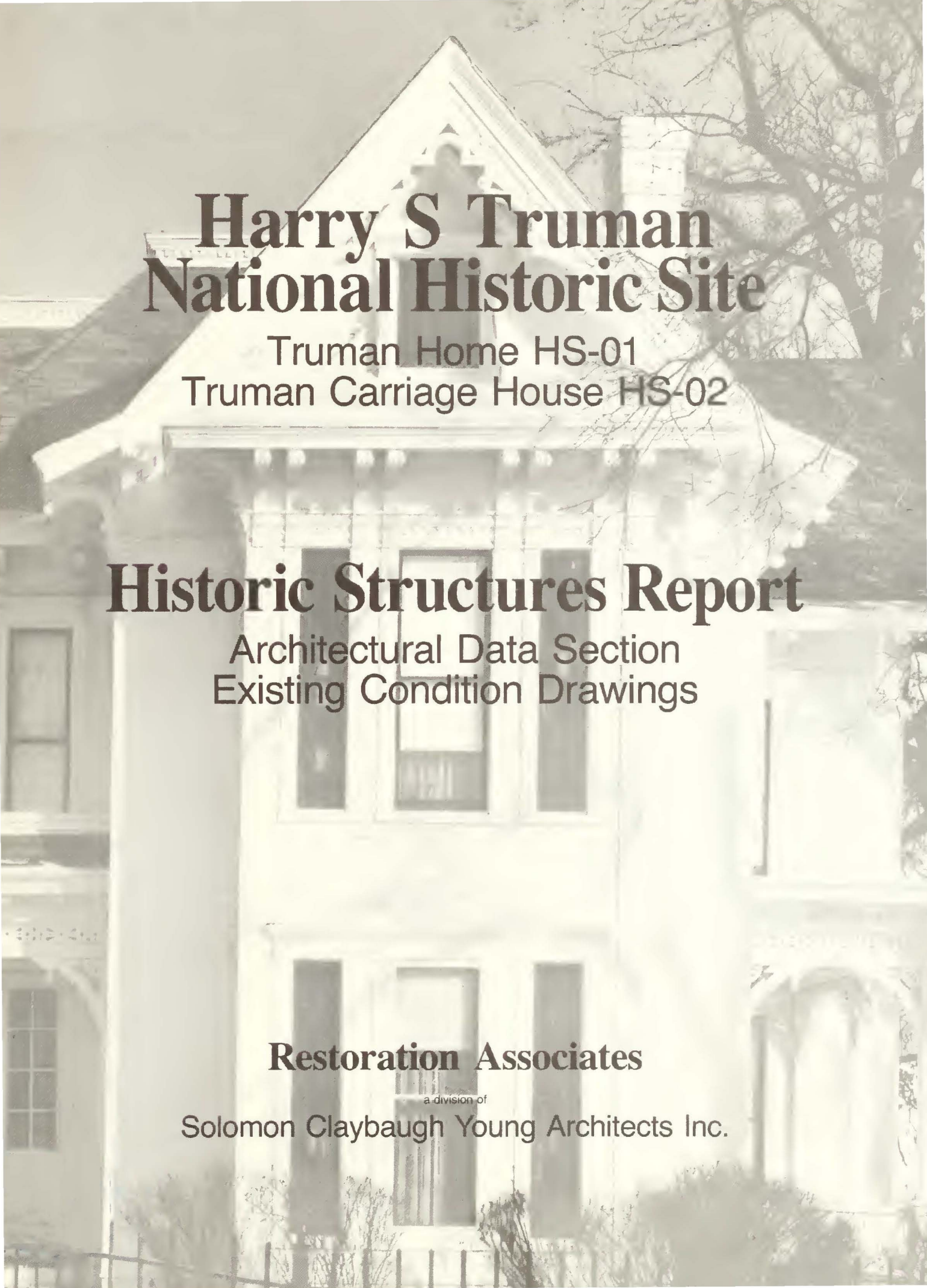

Harry S Truman National Historic Site

Truman Home HS-01
Truman Carriage House HS-02

Historic Structures Report

Architectural Data Section
Existing Condition Drawings

Restoration Associates

a division of

Solomon Claybaugh Young Architects Inc.

HARRY S TRUMAN NATIONAL HISTORIC SITE

INDEPENDENCE, MISSOURI

Historic Structures Report

by:

Restoration Associates
a division of
Solomon Claybaugh Young Architects Inc.
20 West 9th Street Kansas City, Missouri 64105

for:

Office of Planning & Resource Preservation
Division of Cultural Resources Management
National Park Service
United States Department of the Interior
Omaha, Nebraska

Recommended:

Norman J. Reigle — Superintendent, Harry S Truman NHS Date: 4-27-87

Approved:

Don T. Castleberry — Regional Director, Midwest Region Date: 5/1/87

CREDITS

Report prepared by:
Restoration Associates
Principal-in-Charge: Robert J. Claybaugh, AIA
Architectural Historian and Writer: Cydney Millstein
Historical Architect: Douglas R. Wasama, AIA
Project Architect: E. Eugene Young, AIA

Site Survey:
Tuttle-Ayres-Woodward Co.

Mechanical/Electrical Consultant:
Associated Engineering Consultants
Project Engineer: Tony Hitchcock

Structural Consultant:
Harper & Kerr
Project Engineer: Gary Harper

Photography (Primary Exterior Photos):
Zoom Studios

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I. Building Chronology -- Truman Home (HS-01)

The Truman Home (HS-01) and Truman Carriage House (HS-02), 219 North Delaware Street, Independence, Missouri, are on lots 2 and 3 of James F. Moore's Addition. Moore's Addition was platted on September 29, 1847. Soon after the 1849 town incorporation, Moore's Addition was included in Independence.[1] (See Appendix E (e), Map of Independence, 1877.)

James F. Moore, an Independence merchant, purchased approximately forty acres and a portion of Town Lot 38 from Cornelius Davy on August 3, 1839, for $5,000.00.[2] A year prior to the 1849 incorporation of Independence, Moore, through power of attorney, sold off his property, lot by lot.[3]

On August 28, 1848, lots 2 through 6, 8 and 16 through 18 of James F. Moore's Addition were sold to William B. Hay. The nine lots were purchased for $800.00.[4]

In August of 1850, shortly after Hay's business failed, Jackson County Clerk Samuel A. Lucas "issued a writ of fieri facias against William Hay to compensate Hay's creditors."[5] The writ authorized Sheriff George W. Buchanan to advertise Hay's property in advance of selling it at public auction. On September 11, 1850, lots 2 and 3 of Moore's Addition were sold to Independence Mayor Jonathan R. Palmer for $220.00.[6]

Like Hay, Jonathan Palmer suffered from debts. Three weeks after the auction, on October 2, Palmer mortgaged all his property to John B. Slaughter for a $6,000.00 bond. After Palmer defaulted on the bond, Slaughter, a merchant and Palmer's successor as mayor, received legal title to lots 2 through 5 of Moore's Addition. After the Slaughter family moved to St. Louis, they sold their property to James T. Thorton and Francis Hord for $500.00 on February 2, 1857.[7]

Through public auctions and trustee's deeds, lots 2 and 3 changed hands a number of times because of debt-plagued property owners.

James T. and Mary H. Thorton, on November 29, 1859, deeded lots 2 and 3 to Peter Gastel for $350.00. In debt, the Gastels were forced into a three party trustee's deed, with William Chrisman as middleman. Chrisman had paid the Gastels one dollar for lots 2 and 3 to hold in trust for one year (until November 20, 1861). If the debt went unpaid, Chrisman was authorized to sell lots 2 and 3 at public auction.[8]

Interrupted by the events of the Civil War, William Chrisman was prevented from carrying out the provisions of the 1860s trustee's deed, until September 26, 1866, when lots 2 and 3 were sold at auction to James G. English for $425.00.[9]

Then, through a series of complex and shrewd business transactions, George P. Gates (the grandfather of Bess Wallace Truman), a recent

settler from Illinois, paid $700.00 for both lots (2 and 3), on June 20, 1867.[10] To accommodate his family, there is evidence that in the same year, Gates built a two-story, rectangular structure with a small rear addition.[11] (See Fig. 1.1 and Building Chronology Drawings.)

Resembling the massing of a two-story American I-House, the 1867 structure is shown with a medium-hip roof. Recent investigation at the west end of the old attic (301) revealed extant framing of a hip roof with painted fascia board and remnants of a built-in sheet metal gutter. Thus, the east wall of Truman dressing room (209) and hall (208) was originally an exterior wall. The smaller kitchen wing (kitchen 113, pantry 112, butler's pantry 111) is shown with a shallow-pitched, gable roof. A September, 1986 physical investigation revealed that the kitchen wing (113) was balloon framed at the floor joists, north wall. In addition, there is evidence of an intermediate kitchen partition. Presumably, the kitchen wing was constructed as a one-story or one-and-one-half story addition with the roof altered to its existing height and configuration in the remodeling of 1885. (See Fig. 1.2.)

As a prominent and successful Independence businessman who had made his fortune from "Queen of the Pantry Flour," George P. Gates decided to construct a sizable "addition" to his home at 219 North Delaware. (See Fig. 1.3 and Appendix E (f), 1886 map.) Designed by builder and architect James W. Adams for $8,000.00, the house was the most expensive residence built in Independence in 1885.[12] (See Fig. 1.4.) Adams'

two-and-one-half story frame Victorian "addition" to the existing 1867 structure included at the first floor level: living room (104), bedroom (105), vestibule (101), and portions of the central hall (103) and dining room (110).

The second floor level included: master bedroom (204), Truman bedroom (205), storage room (213), alcove (201), and portions of the central hall (202) and bedroom (210).

The 1867 wing (which was damged by a fire that occurred after 1885) remained a kitchen area (113) on the first floor. In all probability, its second floor space (213) was converted into a sewing room/sitting room during Bess Truman's childhood and early married life. It later became a storage area sometime after Elizabeth Gates' death in 1924.[13]

Porches included at the first floor elevation: 104B, 114A, B and C, 101A, and a porch which is now occupied by bathroom 106 and porch 107A. (See Fig. 1.5.)

Recent findings that show physical evidence of the two different periods of construction previously discussed (1867 and 1885) involve the investigation of building materials and techniques, and conclusions drawn from a paint analysis.

Based upon the most recent assumptions of the building's chronology,

several sections of exterior walls of the Truman home were removed and studied. It was found that the east wall of the kitchen wing (113) is constructed of brick nogging without sheathing and uses poplar siding. Samplings from other wall portions, i.e. thin flat studs with sheathing using pine siding, reveal a later period of construction. This sample was taken from the 1885 section of the Truman home. (For further information, see Physical Investigation Report, Truman Home, July, 1984.)

Framing systems and stratigraphies of exterior paint layers also vary with construction dates. While the 1867 portion of the home uses a let-in system of framing, the 1885 portion does not. In addition, the oldest extant siding appears to be on the 1867 structure. The stratigraphies found in samples from the 1867 portion show the greatest number of paint layers -- approximately twenty-three. Paint samples extracted from the 1885 section verify that date.

After marrying David Wallace on June 13, 1883, Margaret (Madge) Gates (George Gates' oldest daughter), claimed 219 Delaware as their address for an unknown period during the late 1880s. Then in 1904, one year after David Wallace committed suicide, Madge and her four children (Bess, Frank, George and Fred) permanently moved into the Gates' mansion.[14]

With this new arrangement, Madge could care for her aging parents. George P. and Elizabeth moved to the first floor bedroom where the

southeast porch (106) was converted into a bathroom. (See Fig. 1.6.) This occurred between 1907 and 1910.[15] In addition, a southeast section of porch was added to kitchen porches 114A and 114B, and a sleeping porch (206) was included at the second-story level.[16]

For almost a century, the home at 219 North Delaware basically remained the same. Only minor alterations were made to fit the needs of the extended family that shared the home. After Bess Wallace and Harry Truman were married in 1919, a year after the death of George Gates, they, too, established their residence at 219 Delaware.[17]

In 1924, after the birth of President and Mrs. Truman's daughter, Mary Margaret, a passageway (206A) was built connecting the Truman's bedroom (205) with the bedroom (210) of their new child.[18] A portion of the second floor sleeping porch was used for the passageway. Also constructed during the 1920s was a backyard pergola (HS-04).[19] (See Fig. 1.7.)

For more than a decade---from the time that Harry Truman won the 1934 Democratic nomination for the United States Senate until 1945 when he became the thirty-third President of the United States---the house at 219 North Delaware was neglected. Although minor in nature, there were several household repairs accomplished, yet by the spring of 1945, the property was in need of major renovation.[20] (See Figs. 1.8 and 1.9.)

Concerned about the appearance of her family home, Bess Truman made arrangements to begin exterior renovation of "The Summer White House" as it was then called. (See Figs. 1.10 and 1.11.) Work at 219 North Delaware included replacing rotted millwork and slate shingles, covering the worn, grey exterior with white paint, and trim areas with Kentucky green.[21] The second floor bath (211) was also remodeled with a new blue porcelain tub, stool, and sink.

The only physical change to the Truman home during the presidential years was the rear porch construction (114A and B). In April 1950, this porch was refloored and extended to the east by six additional feet, supported by brick piers, and screened-in (114C).[22] Based on evidence from paint trim samples, it appears that the last porch extension may have been partially constructed with reused materials from the earlier rear east porch.[23]

In January, 1953, one month after the death of Madge Gates Wallace, Harry and Bess Truman left Washington D.C. as private citizens. The former first family then returned to 219 North Delaware and purchased the home in July.[24] That same year, the Trumans began to make repairs and conduct interior changes to their home. This "modernization" included: wallpapering first and second floor rooms; construction of attic storage space; construction of cabinets in the east wall of Mrs. Truman's dressing room; wall-to-wall carpeting throughout the first floor (except the kitchen); and extensive interior painting.[25] In

addition, shelves were constructed in the library (109) sometime during the 1950s.

In 1954, the old cement floor in the basement's utility area was excavated. Originally, this area was elevated four inches from the remainder of the basement. To permit an increase in headroom and to repair plumbing, an additional four inches was excavated for the base of the new concrete floor.[26]

During the 1970s and 1980s, a few minor alterations were made to the Truman home. The original slate roof was replaced with grey fiberglass asphalt shingles in July, 1969.[27] The rotted front steps (non-original) were replaced, and the rotted balusters on the north side were also replaced, c. 1974.[28] In addition, the damaged pergola which had been reconstructed in 1944, was removed, c. 1970.[29] In December, 1981, the main chimney was tuckpointed.[30]

On February 23, 1972, 219 North Delaware was designated a National Historic Landmark by the United States Department of the Interior and listed in the National Register of Historic Places. Following the death of Mr. Truman, the City of Independence, with the full support of his widow, established the Harry S. Truman Heritage District. (More commonly known as the Harry S. Truman Historic District.)[31]

Following the death of Mrs. Bess Truman on October 18, 1982, the

dictates of her will left the property to "The United States of America to be held and operated by it under the direction of the Archivist of the United States, in conjunction with the Harry S. Truman Library."[32]

Secretary of the Interior James G. Watt signed Designation Order No. 3088 declaring 219 North Delaware the Harry S Truman National Historic Site. Under the auspices of the National Park Service, the property became the Twenty-seventh Presidential Site in the National Park System, on December 12, 1982.[33]

Notes to Chapter One

1. Ron Cockrell, Historic Structures Report: History and Significance. Harry S Truman National Historic Site, Independence, Missouri (Omaha: National Park Service, Midwest Regional Office, 1984), 11. Hereafter cited as "HSR."

2. Ibid., 10.

3. Ibid., 11.

4. Ibid.

5. Ibid., 12.

6. Ibid. It has been suggested that because of the increase in value of lots 2 and 3 (coupled with the fact that with his indebtedness, Hay also lost his home), a structure could have been present on the site as early as 1848. Although the theory speculates that the east wing (the kitchen wing) of the Truman home was built prior to 1850 (and later incorporated into the Gates' mansion), recent findings suggest otherwise. The following items have been observed and strongly indicate that the east wing was built concurrently or as an addition to the 1867 structure: 1) the sill beam of the 1867 main house is located to the east edge of the east foundation 2) the wall between the kitchen and dining room has brick nogging 3) the floor in the kitchen wing expands beyond the first joist. In addition, it was found that the earliest paint sample taken from the east wall of the kitchen wing dates 1867.

7. Ibid., 14.

8. Ron Cockrell, Historic Resource Study: The Trumans of Independence, Harry S Truman National Historic Site, Independence, Missouri (Omaha: National Park Service, Midwest Regional Office, 1985), 16. Hereafter cited as "HRS."

9. HSR., 16-17.

10. Ibid., 18.

11. HRS., 24. George P. and Elizabeth E. Gates probably came to Independence from Illinois in the spring of 1867, or according to a local historian, perhaps George P. Gates came alone to the area to investigate the property. His family (in 1866 in Illinois, Elizabeth had a baby, Myra) could have joined him at a later date. In addition, it is also known that Gates' father and mother were living in Independence in 1866, so it is possible that George P. Gates resided with his parents until their home was built.

It is also important to note that A. Ruger, the artist of Bird's Eye View of Independence came to the area in 1867. The date of publication was not more than one year after the artwork was finished. From this information, one can conclude that when Ruger came to Independence, the

1867 Gates' home was underway or already completed. For information on Ruger see: John W. Reps, Views and Viewmakers in Urbar America 1825-195. Columbia: University of Missouri Press, 1984.

12. HSR., 30-31.

13. Ibid., 93.

14. Ibid., 47-48.

15. Ibid., 48.

16. Ibid., 152.

17. Ibid., 74.

18. Ibid., 76.

19. Ibid., 88.

20. Ibid., 115.

21. Ibid., 116.

22. Ibid., 132, 152.

23. Marie Carden, "Paint Analysis and Recommendations for the Harry S Truman Home National Historic Site, Independence, Missouri" (North Atlantic Historic Preservation Center, National Park Service, Boston, MA, May, 1986, photocopied), 12. It is important to note that at the time of this writing, the information in this reference concerning the kitchen wing and porch is in error.

24. HSR., 178.

25. Ibid., 185-88.

26. Ibid., 198.

27. Ibid., 266.

28. Ibid., 287.

29. Ibid., 258.

30. Ibid., 288.

31. Ibid., 292.

32. Ibid., 295.

33. Ibid.

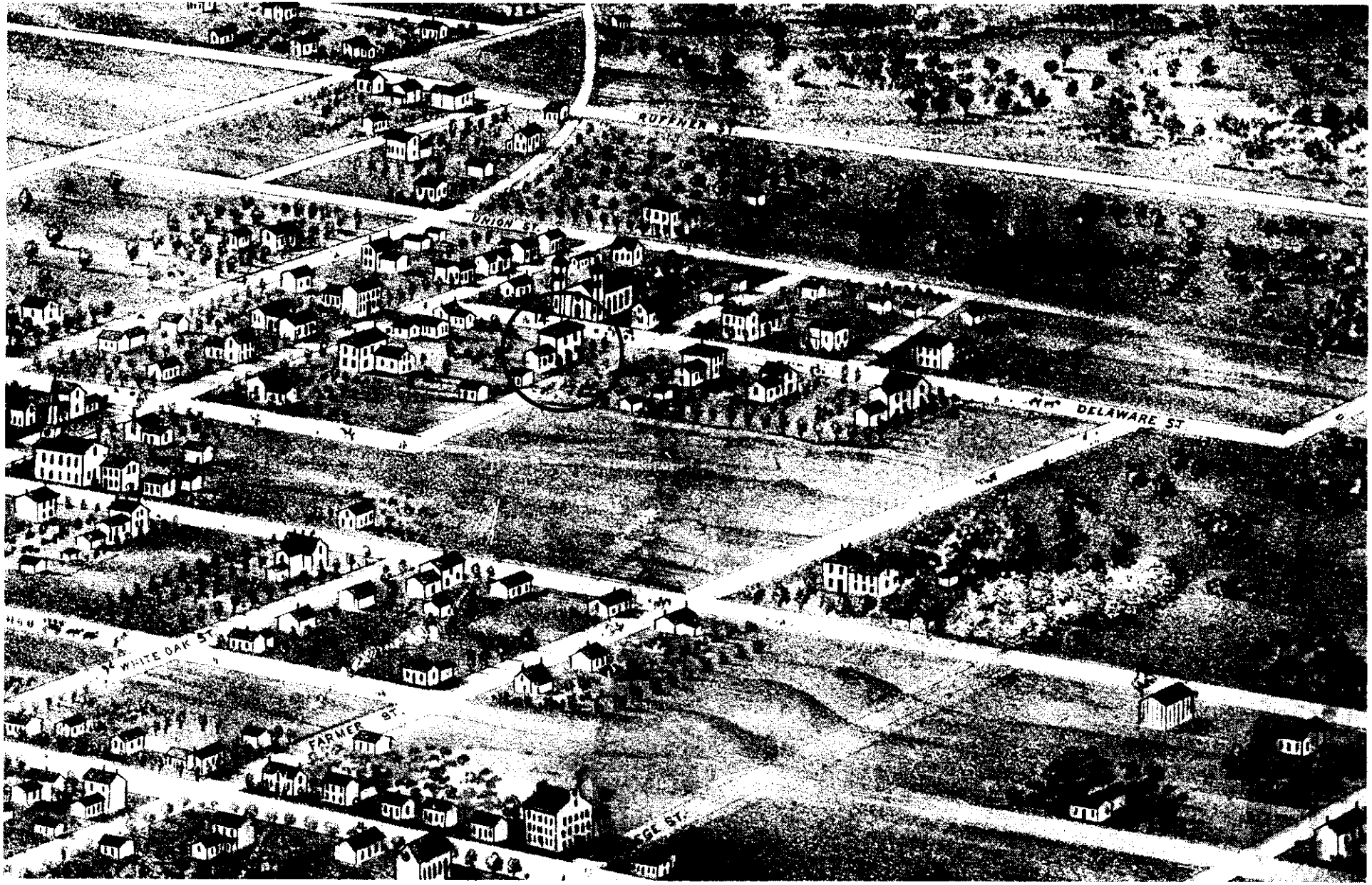


Fig. 1.1 Bird's Eye View of Independence. A. Ruger, 1868. Detail. Credit: Jackson County Historical Society

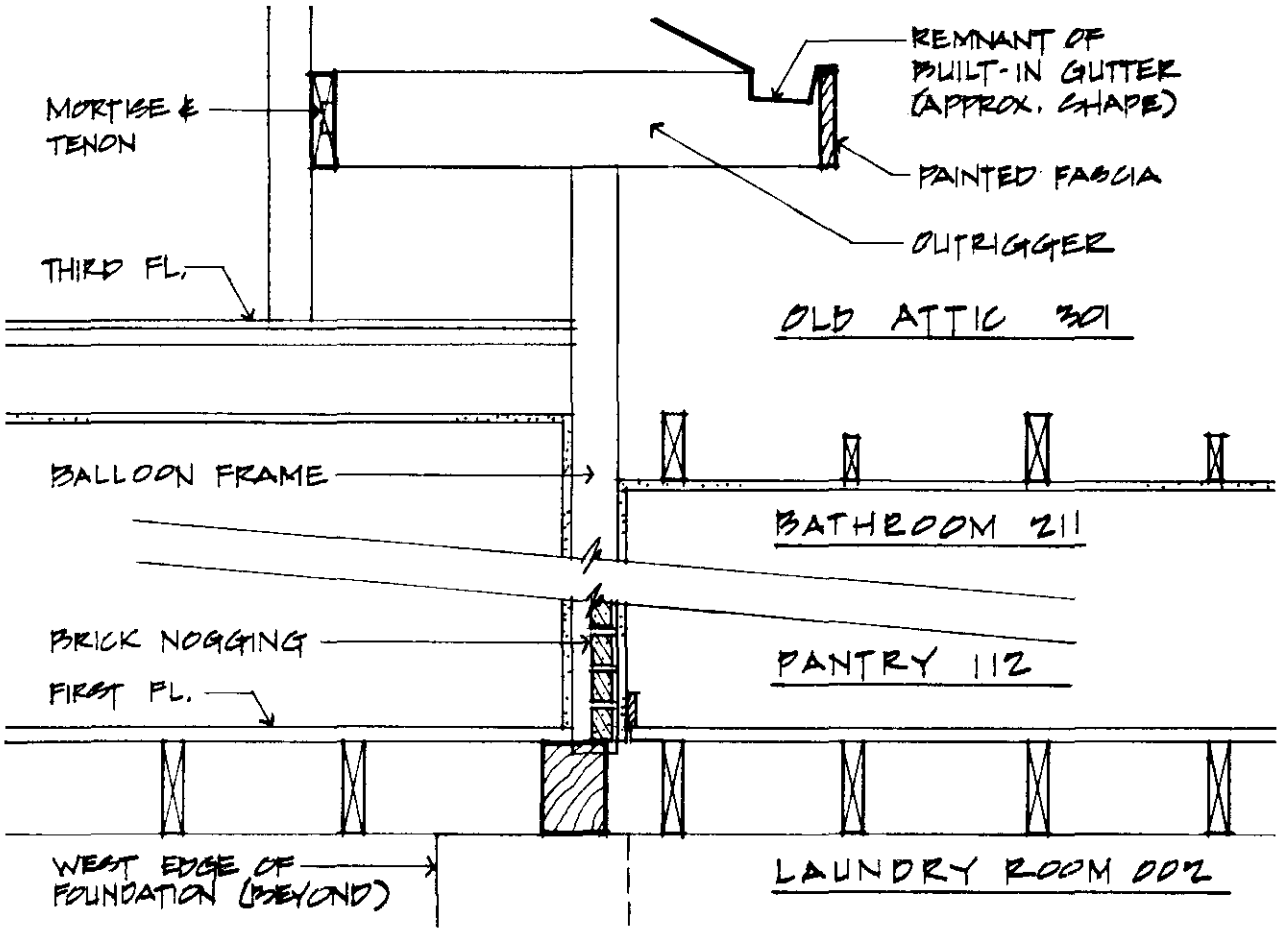
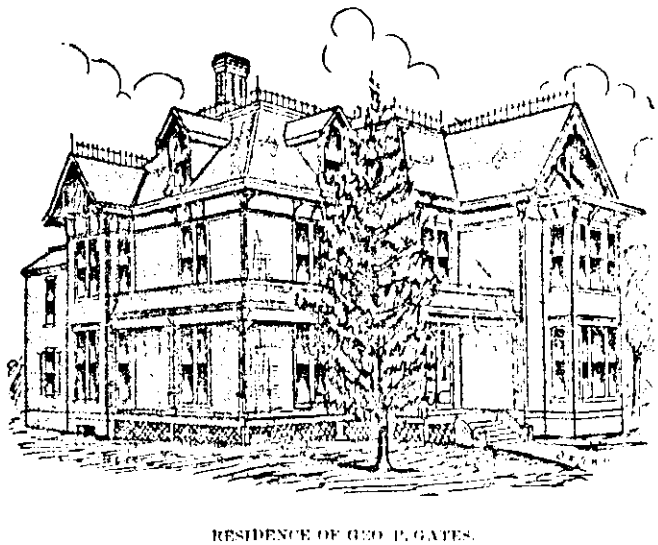


Fig. 1.2 Truman Home. Construction detail of connection between main house and kitchen wing. Credit: Doug Wasama



RESIDENCE OF GEO. P. GATES.

Fig. 1.3 Residence of George P. Gates. Independence Sentinel, Independence, Missouri, January 2, 1886. Credit: Harry S Truman Library (HSTL)

Fig. 1.4 Truman Home, c. 1900. West elevation (looking east). One of a series of the earliest extant photographs of the structure. Note the absence of the roof line decorative grillwork as shown in the 1886 Independence Sentinel. Credit: HSTL

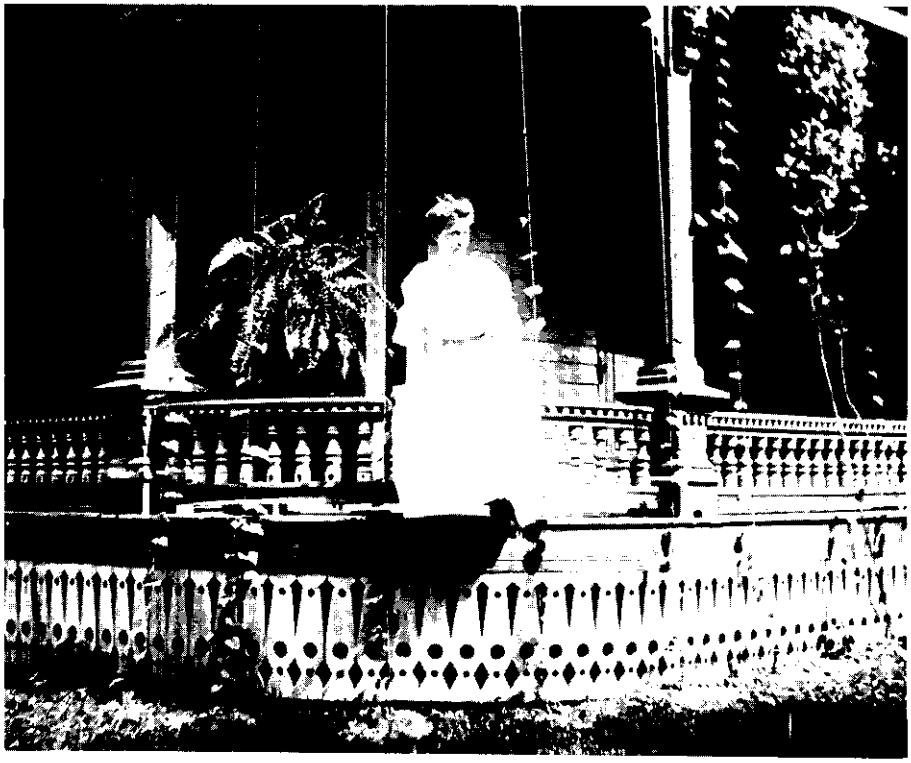


Fig. 1.5 Truman Home, c. 1905. Porch, northwest elevation (looking southeast). Bess Wallace Truman sitting on the original porch balustrade. Credit: HSTL

Fig. 1.6 Truman Home, c. 1900. Southeast elevation (looking northeast). Two unidentified men standing in front of the rear porch that was converted to a bathroom c. 1907-1910. Credit: HSTL

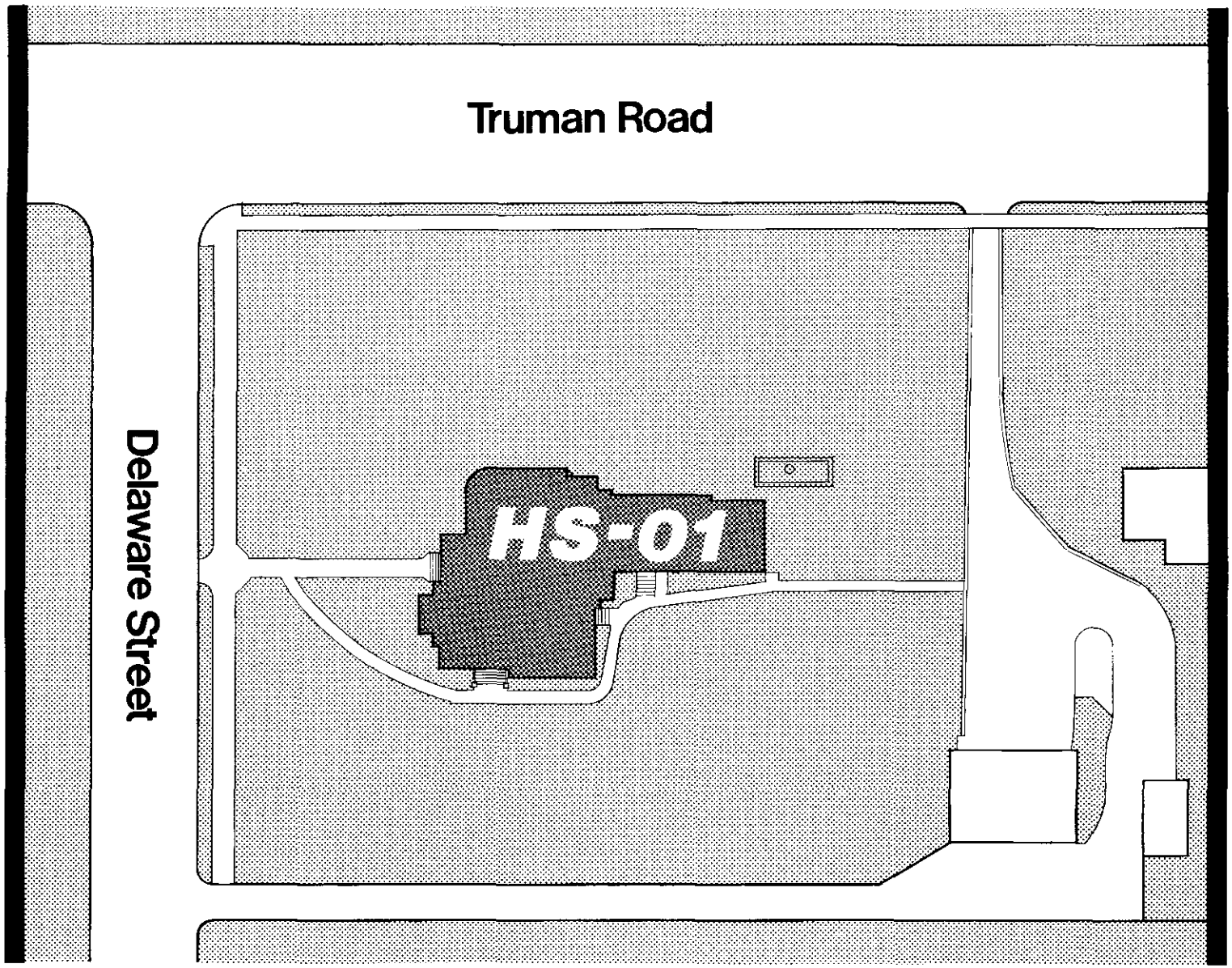
Fig. 1.7 Truman Home, c. 1940. East elevation (looking west). The 1920s pergola is pictured to the right of the rear porch. Credit: HSTL

Fig. 1.8 Truman Home, July 11, 1944. West elevation (looking east). Before 1945 renovation. Credit: HSTL

Fig. 1.9 Truman Home, July 22, 1944. West elevation (looking southeast). Detail showing condition of home prior to 1945 renovation. Credit: HSTL

Fig. 1.10 Truman Home, May 21, 1945. West elevation (looking southeast). Workers begin renovation. Credit: HSTL

Fig. 1.11 Truman Home, June 27, 1945. West elevation (looking east). After 1945 renovation. Credit: HSTL


Truman Road
Delaware Street
HS-01

II. Existing Conditions - Truman Home (HS-01)

Introduction

The Truman residence was constructed over a period of years with numerous additions and revisions to the initial structure. This staged construction is reflected in the various configurations of the structural system throughout the building. The residence is of wood frame construction supported by a stone foundation with framing materials and systems varying in size and detailing depending on the period of construction. Variations in ceiling height due to the popular style at the time of an addition created unusual detailing within the structure in order to achieve a uniform exterior appearance. This is particularly evident within the attic space, where roof and wall framing reflect such detailing.[1]

Architecture and Engineering Team

Architectural investigation and analysis was performed by the staff of Restoration Associates under the direction of E. Eugene Young, AIA. Structural investigation and analysis were performed by the staff of Harper and Kerr Consulting Structural Engineers, P.A., under the direction of Gary Harper. Plumbing and heating, ventilating and cooling system investigation and analysis were performed by the staff of Associated Engineering Consultants under the direction of Tony Hitchcock.

The Architect/Engineer team conducted a detailed field investigation of the Truman home in connection with the field measurement process. The areas investigated included the structural systems, and the heating, ventilating and cooling systems. Specifically excluded from the investigation were site utilities, and the electrical and communication systems.

Recording and analysis of the condition of architectural features are not a part of this report but are noted on the Existing Condition Drawings. This report analyzes the results of the field investigations, describes the current capacities of each system, and identifies serious deficiencies. Recommendations for structural reinforcement of the porches were made at the site by Gary Harper (Harper and Kerr), Gene Young (Restoration Associates) and members of the National Park Service,[2] so that the work could be done prior to opening the house to the general public on May 12, 1984.[3]

Scope of National Park Service Work

During the investigation and analysis of the house, the National Park Service performed various segments of repair work (from 1984-1986) either with their staff or independent contractors. The contract documents for this work were prepared by National Park Service staff. The following is an outline of the scope of National Park Service work:

A. Replacement of the entire electrical system by an electrical contractor. Most of the historic electrical system was left

in place and disconnected, for preservation purposes. Recording of the existing and new electrical system was done by the National Park Service.

B. Replacement of the metal roofing, flashing, gutters and downspouts by a sheet metal contractor.

C. Reinforcement of the wood porches and first floor structural members from the basement was accomplished by National Park Service staff utilizing recommendations of the Architect/Engineer team.

D. Repair of deteriorated exterior wood trim and decorations was completed by a single contractor in November, 1985.

E. Field investigation was completed in 1984 by National Park Service staff in preparation for paint stripping and repainting.[4]

Building Description and Analysis

The asymmetrical, two-and-one-half story, white clapboard structure is a Victorian, Queen Anne landmark. It can be further classified as a spindlework Queen Anne with hipped roof and lower cross gables.

The principal portion of the Truman home is topped by a metal-decked, dentiled "widow's walk" and four gabled dormers fitted with jalousie windows. The trim of the projecting eaves of the main roof features a molded fascia and decorative frieze work adorned with heavily ornamented wooden brackets set directly above the second floor window jamb trim and

corner trim. One-over-one, double-hung windows are predominant.

The prominent west facade is marked by a two-story bay window featuring multipaned colored glass set in wood muntined double hung windows. The bay window is capped by a bell cast sheet metal clad roof with projecting eaves. A multipaned colored glass casement window with a pedimented hood is set within wing walls formed from the bay window roof. A gabled roof with decorative verge boards extends over and above the bay roof. A similarly detailed gabled roof also exists at the south elevation.

From the west bay window a veranda stretches north, then curves east and continues to a two-story north bay window which is characterized by a saw-toothed, horseshoe-shaped ornament set within the plain fascia of the bay window's gable roof. This highly ornamented veranda features a mansard parapet, jigsaw frieze boards, four types of brackets and perpendicular lattice skirts. A second, two-bay porch of the same characteristics, but without a parapet, protects the south entry into the living room. (See Figs. 2.1-2.4.)

The main or west entry into the house is situated just north of the west bay window of the 1885 addition. The double-leaf, nine-foot tall doors feature Eastlake style detailing with etched glass panes. The entry leads to a small ceramic tile floored vestibule bay and finally to another set of Eastlakian enriched doors. These doors open to a central

hall (103) which is adorned with Lincrusta-Walton wainscoting. The primary double-landed, U-shaped stairway at the south wall of the central hall features Lincrusta-Walton along its rake, a highly ornamented wooden baluster, and a newel post capped by a feminine luminiare.

Landscape (For site conditions, see Fig. 2.5.)

Topography

The site of the Truman home slopes gently eastward toward the rear of the structure, from a relatively flat ground at the property's western half. The site slopes approximately 5 percent, falling nine feet from west to east.

Vegetation

The Truman home property contains several species of trees including nine maple (west, north, south of structure); two oak (south of structure); and three Siberian elm (south of structure).

The maple located at the southwest corner of the property, branching over into the alley, is devoid of foliage and branches on the east side except at the crown. Leaves on the west side exhibit small holes and ragged edges. Leaves are wilted, i.e. edges of leaves curl down. The maple directly south of the concrete walk to the main entrance of the Truman home has only one lower branch with foliage remaining (west side

of trunk), in addition to a stub of a limb that has snapped off three to four feet from the trunk. Foliage exhibits good color and appears healthy.

The maple directly north of the walk has a lower branch on the east side which has lost foliage and bark from outer three to five feet. Otherwise, the tree has full shape and foliage exhibits good color and appears healthy. Located south of the historical marker (HS-11), another maple is not as tall or as fully shaped as the other maples lining the west property line.

In addition, there is an assortment of informally planted shrubs and bushes located along the south property line near the alley, along the main elevation of the Truman home and to the north of the rear porch. Peony beds, irises, roses and ornamental grasses appear throughout the lawn with a high concentration of plantings at the eastern edge.

Walkways and Driveways

There are two concrete walks on the Truman property: one leading from the Delaware Street sidewalk to the main entrance and one that leads from the rear drive winding around the south elevation of the structure, finally connecting back to the west walkway. Although the location of the walks is historic, the sidewalk material is not, except for a rear sidewalk extending from kitchen porch steps to the driveway.

An alley on the south end of the property line has been repaved a number of times because of the substandard base of the roadbed. In addition, there is a second asphalt drive on the east end of the property off of Truman Road. Both drives lead to the Carriage house and join at its eastern elevation.

Fences

A five foot high, steel fence (HS-03), including a driveway gate at the northeast corner, fully encloses three sides and partially encloses the east edge of the Truman property. This black painted fence constructed of stock steel tube and bar and set in concrete footings, was erected in November 1949 at the insistence of the Secret Service to protect the Truman property from potential intruders and souvenir hunters.[5] In addition, there is a portion of a chain link gate fence located at the southwest corner of the Carriage house, probably a portion of a gate which spanned the drive between the Carriage house and Wallace garage.

Four pedestrian gates exist at the Carriage house, the west entry, and two at the Wallace home which is to the east of the Truman home. The double-leafed driveway gate and pedestrian gate are inset from the sidewalk with curved fence sections. Both the driveway and west main entry gate locks can be operated electronically from inside the home.

Miscellaneous Structures and Archeological Remains

A thirty-four foot flagpole (HS-08) was installed June 26, 1945 near the

northwest corner of the site.[6] In addition, there are four concrete slabs: two (used for a/c units) at the north end of the Truman home, installed by the National Park Service in 1985, another at the northeast driveway gate and a fourth located to the northeast of the Carriage house. A gas lamp (HS-09); sundial (HS-07); a birdbath (HS-05); and a historical marker (HS-11) are also located on the property.

The remains of historic structures include: the stone and brick foundation of the pergola (HS-04) located at the northeast portion of the property; the site of the Secret Service security booth (HS-06) located west of the Carriage house. A concrete capped cistern (HS-10), installed in 1885 (located under porch 113A), was sealed in 1926. A triangular concrete foundation (HS-12) in the east yard is suspected to have been a flagpole base.

Environmental Considerations

The following, obtained from the National Weather Center in Kansas City, Missouri, are averages for the Kansas City Metropolitan area taken over a 30-year period (1955-1985).

Heating Days (based on 65^{o}) = 5,283

Cooling Days (based on 65^{o}) = 1,333

Average Yearly Rainfall = 35.16 inches

Average Snowfall = 20.4 inches

Humidity = high morning 80%

daytime 60%

late afternoon 60%

Wind = 10.7 mph

Underground Utilities

On-site underground utilities include a buried electrical line for the west gate latch (south of walkway to rain entrance); a buried Southwestern Bell telephone line running southeast from the south elevation of the Truman home installed 1985; buried power and security lines (east-southeast from the Truman home to the Carriage house, 1985); and a buried Independence Power and Light line running due north from the kitchen wing (113) 1985.

A 2 inch steel gas main is located on the south side of Truman Road, running west from Delaware Street to the Secret Service booth site. There are buried telephone cables, conduit and fiberoptic cables within the Truman Road right of way. In addition, there are two 8 inch sanitary sewers: one runs north within North Delaware Street to Truman Road and another runs east and west within the alley. Storm sewer lines are within the Truman Road right of way.

Foundation

The residence is supported by a random-course limestone foundation, the limestone being similar in color and texture to that common to the area. The foundation wall averages approximately eighteen inches in thickness, and the stone and mortar of the foundation wall are basically sound.

However, the interior face of the foundation is powdery to the touch, indicating deterioration due to moisture penetration from the exterior or rising dampness. The foundation walls show a minimum of differential movement and are relatively crack free. Within the original stone work the only major cracks noted were in the south basement room (005), under the living room (104) on both sides of the brick fireplace. One crack west of the fireplace runs diagonally from the upper part of the wall, extending downward approximately three feet following the mortar joints. The crack averages approximately one-quarter inch in width. The widest part of the crack is approximately one-half inch in width and is the result of displaced mortar rather than wall movement.

The second crack in the south room is immediately below the window east of the fireplace. This crack again is more the result of missing mortar than wall movement. The brick foundation under the main fireplace of the living room (104) and master bedroom (204) is very soft, with the surface crumbling to the touch. The mortar is powdery and the whole assembly shows significant evidence of exfoliation. The brick does, however, resist probing beyond the immediate surface.

Numerous small cracks were noted in the plaster finish applied to the stone wall within the remodeled utility area (002), below the kitchen. These cracks were found on the south and east wall of the utility area, generally running from the corners of the windows within this area. The lower portion of the firebox on the east wall of the room has lost the

lower eighteen inches of plaster exposing the brick. This brick is relatively soft to the touch and crumbles upon contact.[7]

First Floor Framing and Condition

The kitchen (113) is thought to be within the original 1867 structure. The basement area under the kitchen (002), having been remodeled as a laundry room (002) in 1954 and also having been reconstructed at the east end due to fire damage (occurring sometime between 1885-1900), reveals a variety of structural detailing. During the remodeling of the utility area, as noted previously, the perimeter walls were plastered. This plaster continues up between the floor joists covering a layer of brick laid on the original stone foundation between the joists. This detail hides the connection between the floor joist and the perimeter beam, so that the nature of this original connection can only be speculated upon.

Based on the structural system found in the north basement room (003) west of the laundry room (002) and on information gained during recent electrical modifications, it has been surmised that this area of the basement is framed with a perimeter 5 x 8 oak beam directly on the stone foundation.

The oak floor joists of the kitchen (113) and pantry areas (111, 112) are notched into pockets chiseled out of the south and north perimeter beams.

At approximately the western limits of the stairway leading from the kitchen to the basement, evidence of a fire can be noted by an original floor joist that has been burned completely through at approximately mid-span. This fire-damaged joist has been reinforced by the addition of a newer joist installed adjacent to the east face of the charred member. To the east of this reinforced joist, all floor joists appear to have been replaced.

The floor of the kitchen and pantry areas is framed using 2 x 8 oak floor joists, only a few of which are laterally braced by 1 x 3 diagonal bridging at mid-span. The newer joists, previously mentioned, are toenailed into a double 2 x 8 header at the stairwell. This header is supported on the west end through a nailed connection by a single 2 x 8 joist spanning the room. Due to this connection and the bending stress placed on the supporting floor joist, the kitchen floor is limited to an estimated working load capacity of approximately 14 pounds per square foot, considerably below the common building code requirements of 40 pounds per square foot for residential construction. A column at the point of intersection of the header and floor joist now accepts the load from the stairway header and increases the allowable live load of this area of the kitchen to approximately 38 pounds per square foot, still below most standard building code requirements. West of this stairwell, the kitchen floor is capable of carrying a live load of approximately 52 pounds per square foot.

The floor of the dining area (110) has been strengthened with the addition (c. 1940s-1950s) of a 6 inch steel I-beam at approximately mid-span of the floor joists. (See Existing Condition Drawings, No. 9, First Floor Framing Plan.) This steel beam has helped the loading capability within the southern section of the room; however, the controlling factor for resisting loading is the reduced shear capacity of the floor joists due to the notched bearing ends. They are set into pockets cut into both sides of the central wood beam. (See Existing Condition Drawings, No. 31, Framing Details, Detail 10.) Two square wood posts at the western end and the recent installation (by the National Park Service in 1984) of two steel pipe columns, 2-1/2 inch in diameter, at the eastern end support the wood beam at intermediate points. The resultant reduction in span compensates for the diminished load capability of the double notched beam over its original longer span. The dining room extends to the south (over basement room 007) beyond the stone foundation wall which designates the southern limits of the framing distinguished by the 5 x 8 wood beams. This portion of the room is framed using a system similar in most of the southern section of the basement which will be discussed later in this report. The critical detail of this room, however, is not the typical detail but the connection of the floor joists supporting this portion of the dining room to the perimeter 5 x 8 wood beam of the northern area. This connection is made by notching the 2 x 8 floor joists to a three inch dimension and setting this notched end into a pocket cut in a 2 x 6 member nailed to the southern face of the perimeter 5 x 8 wood beam (See Existing

Condition Drawings, No. 31, Framing Details, Detail 5.) Several joists have, over time and loading, begun to split at this connection. At some point 1 x 6 tongue and groove boards of various lengths were attached vertically to one or both sides of these joists supposedly to strengthen the joists against the possibility of splitting. The reduced shear capacity of this connection limits the floor in this area of the dining room to a live loading of approximately 22 pounds per square foot, just over half the commonly accepted residential code requirements. Modification of the connection detail would increase the loading capacity of this area in excess of the capacity of the remainder of the dining room (approximately 100 pounds per square foot depending upon exact modification).

The floor of the parlor/music room (108) has also been strengthened by the addition of a 6 inch steel I-beam at approximately mid-span of the original wood floor joists. The music room and the northern one-half of the first floor central hall are connected by a wood beam having the typical connection detail of the northern basement area (notched joists sitting in pockets chiseled out of the original 5 x 8 wood beam). The wood beam in this circumstance, however, has been strengthened by the addition of a 2 x 8 member attached to the underside of the beam at one span and by additional wood columns which have reduced the maximum clear span to approximately four feet. Due to these modifications, the music room is capable of carrying a maximum live load of approximately 107 pounds per square foot.

The central hall (103) of the residence, like the dining room east of it, spans either side of the stone foundation wall separating the north and south basement areas. Constructed at two different periods, the framing system is not continuous, causing the junction of two systems of framing details to be in effect. The south basement area has a perimeter beam construction detail different from the north. The south room perimeter framing is distinguished by 6 x 6 wood beams sitting on a 2 x 8 member which in turn sits on a 1 x 10 bearing directly on the stone foundation. The bottoms of the floor joists are notched three times to clear, respectively, the foundation, the 2 x 8, and then interlocks into a pocket cut into the perimeter 6 x 6 beam. At the point of juncture with the south wall of the northern basement area where the 5 x 8 wood beam is located, this same notched joist detail is in evidence, but the connection to the beam is through a system of 2 x 4's and 2 x 6's nailed to the southern face of the 5 x 8 beam. The central hall floor, due to the limited shear value of this connection of the joist supporting the southern portion of this room and the original 5 x 8 beam, has a maximum live load capability of approximately 28 pounds per square foot. That part of the central hall (103) situated over the northern basement area (004) has loading capabilities similar to the music room -- approximately 110 pounds per square foot.

The floor of the living room (104) is another area of the residence that has been modified with the addition of a 6 inch steel I-beam at approximately mid-span of the floor joists. The maximum allowable live load of

this room is approximately 113 pounds per square foot. An additional structural item, the wood beam supporting the eastern wall of the living room, has failed, which has minimal effect on the loading of the living room but which has major consequences to the second floor's load supporting capabilities. This beam exhibits extensive damage due to splitting at the northern notched connection. This beam carries, via transferal from the above wall, the load from the second floor central hall and thus is of significant structural importance. The wood floor joist immediately east of this beam has also split, most likely due to the transference of load through the floor decking upon failure of the beam. The split floor joist was temporarily shored by a wood column wedged between the floor joist and stones stacked on the basement floor. It is understood that this temporary support was placed by members of the National Park Service to prevent additional damage just prior to the on-site measurements and observations made for this report. In 1984 adjustable steel posts replaced the wooden post.

The floor of the downstairs bedroom, the Gates' bedroom (105) just east of the living room, is structurally composed of wooden joists pocketed into the perimeter wooden sill beams and was determined to have a live load capability of approximately 51 pounds per square foot. The bath adjacent to this bedroom (106) is of a newer construction and due to the relatively short clear span, was found to have a live load of over twice that of the bedroom, a load calculated to be approximately 120 pounds per square foot.[8]

First Floor General Condition

An investigation of portions of the first floor walls indicates that the studs are approximately 16 inches on center,[9] although no physical verification of this was made. Walls and ceilings of the first floor area are generally in good shape showing little distress or movement.

The kitchen area (113) showed slight evidence of cracks over doors and windows in the south and west walls. At these points the wallpaper has separated, indicating a hairline crack. In numerous areas plaster seems to have spalled under the wallpaper or the paper was originally applied over loose areas. Some minor hairline cracking was noted at the ceiling.

The dining room (110) had very few visible cracks, the most obvious of which was one on the south wall just east of the bay window extension. This crack runs vertically parallel to the face of the jog forming the bay and approximately 1/2 inch from the impression of a panel of sheet rock, applied prior to the installation of the last wallpaper project, c. 1954, that has now pulled away from the wall. The north wall of the dining room has a slight bulge, approximately the height of the doorway opening into the library and approximately 2 feet east of that doorway. The ceiling of this room shows some distress under the paper but no evidence appears on the surface.

No major distress was noted within the library (109). The walls of this

room are virtually covered by bookshelves, thus making it difficult to assess structural conditions behind the shelves. There is a discoloration in the paper on the ceiling with a small hairline crack running the length of the discoloration. The limits of the stained area were approximately 12 x 36 inches with the crack running lengthwise.

The parlor/music room (108) showed evidence of water damage in the extreme upper northwest corner, extending approximately 12 inches each way from the wall intersection. Several wallpaper seams had opened up along the western wall, probably due to moisture or temperature differential. There is a ceiling crack near the south corner of the room. There is no sign of cracking under the major openings.

The living room (104) showed minor cracking on the north wall, being most obvious at the eastern trim of the north window of the front bay assembly, then wrapping northerly around the corner. Three other cracks in the same area extend from the baseboard diagonally upwards across the wall at approximately 16 inch centers. The east wall of the living room has two small horizontal hairline cracks, centered approximately between the doorway into the central hall and the doorway to the Gates' bedroom. The southern wall of the living room has a small crack that runs from the upper western corner of the trim surrounding the doorway to the south porch and arches across the wall to a point at the eastern face of the fireplace, approximately level with the point of origin. The crack then continues down the inside corner of the intersection of the fire-

place and the outer wall to the baseboard. A similar crack is found on the western face of this fireplace, running up the inside face of the intersection of the fireplace and the outside wall, crossing the south wall at approximately the upper one-third point of the existing window trim. Another small crack begins at the upper corner of this window trim and runs to the ceiling. The plaster and paper in this area have spalled indicating probable moisture penetration. A hairline crack was noted on the west face of the wall just south of the bay window, running up from the lower inside wall corner to a point approximately two-thirds of the way up on adjacent window frame. This crack then continues around the corner to said window frame. The ceiling of this room has a small crack located in front of the fireplace running approximately parallel to it. Some additional signs of stress show under the ceiling paper.

The Gates' bedroom (105) and bath (106) are in good condition with virtually no evidence of cracks. The bath, however, does have considerable moisture damage in the southeast corner and on the east wall due to water previously leaking through the ceiling from the floor of the sleeping porch (206) above. Storm windows were installed in 1985 behind the sleeping porch screens (206) to prevent water from infiltrating the porch deck and bathroom ceiling.

The foyer (102) appears to be in good condition. This condition is somewhat surprising considering the partial failure of the beam and

joist below this area. Some movement is evident in the wallpaper along the east wall and evidence is found in the ceiling plaster of what appears to be old cracks that have been painted over. The vestibule (101) just west of the central hall has considerable damage in the wall and ceiling plaster, probably due to the wide variations in temperature in this essentially unheated area.[10]

Porches

Four wooden porches are found at the five first floor doorways to the residence. (See Existing Condition Drawings, No. 5, First Floor Plan.)

The kitchen, or rear porch, designated 114A, B, and C, was constructed in phases. Porch (114-A) has a concrete capped stone cistern (HS-10) under it and adjacent to the stairway. The wood joists of the porch have been historically shored by 2 x 4 and 4 x 4 supports wedged between these joists and the cistern, or in some cases between the joists and the soil under the porch. These make-shift supports were not considered as a permanent part of the framing system for the analysis of the load carrying capability of these porches.

The southern portion of this porch (114A), being that portion having additional supports as described above and lying along the south wall of the kitchen, has surface deterioration due to salt and moisture decay. The eastern portion of the same porch, lying east of the east wall of the kitchen, appears to have been constructed in at least two phases.

The initial phase, 114B, is approximately 6 feet in width and was constructed using 2 x 8 timber members having an actual dimension of 1-7/8 inches by 7-3/4 inches. The eastern addition to this area of the porch (114C) has 2 x 8 members with an actual dimension of 1-1/2 inches by 7-1/4 inches. That portion of the porch east of the east kitchen wall is supported on brick piers approximately 12 inches square. The kitchen porch is constructed in such a manner that virtually all connections are toenailed. The weaker section of the kitchen porch (114A), that portion lying south of the kitchen, is weaker due to the inability of these toenail connections to adequately transfer the shear loading of the joists and an intermediate member to the foundation. This section of the porch should not be subjected to a live load of over approximately 5 pounds per square foot. Modifications at the connection points of the joists and intermediate structural members that would allow each structural member to carry a load equal to the full bending capability of the member, would increase the allowable live load capability of this porch to approximately 34 pounds per square foot. Additional strengthening can be accomplished by modifying the temporary supports now in place at joist mid-span to permanent structural members. The other sections of the porch have slightly different loading capacities.

Porch area 114B is calculated at a live load limit of approximately 36 pounds per square foot and area 114C at approximately 42 pounds per square foot.

The small porch (107A) servicing the eastern doorway to the first floor central hall (107A) has a double floor comprised of 2-1/4 inch tongue and groove decking laid on a 7/8 x 5 inch tongue and groove subfloor. This double floor is supported by four small built-up joists composed of 2 x 6 members with 1 x 4 ledgers vertically attached to either side. Fastened to the upper side of the ledgers is 15/16 x 3 inch tongue and groove decking which is 1-7/8 inch below the under side of the subfloor above. (See Drawings: Repainting and Repair of Truman Home 1/16, United States Department of Interior, National Park Service, Midwest Region, Omaha, Nebraska.) Although the span reached by these members is only 4 feet, the live load capacity was determined to be only 30 pounds per square foot. Due to the vertical members attached to either side of what was assumed to be the original structural member, the exact method of connection at the northern end of the member was not determined. If this porch is to be used extensively, modification of this connection may be justified or at a minimum, slight destructive investigation may be undertaken to determine the exact means of connection.

The south porch (104B) servicing the southern doorway from the living room, is similar in construction to the rear porch. As with the kitchen porch, the weakest point of the construction is the connections, particularly at the intermediate span. Due to these connections, this porch is capable of carrying approximately 15 pounds per square foot live load. The existing joists and intermediate members are capable of supporting approximately an 80 pound per square foot live load with

proper modifications to the end connections. The stairway of this porch, which was in a severely deteriorated state due to moisture and possible insect attack, has been replaced.

The front porch (101A) is similar in construction detailing to the south and kitchen porches. Again due to connection details, the allowable live load is limited to approximately 21 pounds per square foot. Joists and intermediate members are capable of supporting approximately 100 pounds per square foot live load with proper modification of the connections and corner details.[11]

Second Floor Sleeping Porch

Storm windows were added to the interior face of the sleeping porch screens by the National Park Service, to prevent rain water from infiltrating the porch deck. The deck was simply constructed over 2 x 4 sleepers which had been nailed through a sheet metal deck. Water infiltration caused the sheet metal to rust and decay badly, and some of the sleepers to rot. Water then penetrated to the bathroom below causing the wallpaper to severely stain. Rather than remove and replace the entire sleeping porch deck and waterproof, storm windows were installed to avoid the extensive damage to historic fabric in repairing the deck. Only a small portion of decking material was replaced. (See Drawing Detail 1 and 2, Sheet 6, from Repainting and Repair of Truman Home (HS-01) Drawings, Truman Home NHS, Independence, Missouri.)

Second Floor Framing and Condition

The floor framing and wall framing systems of the second floor are virtually unknown. An assumption has been made that the general pattern of the first floor is repeated and to some extent this has been verified by an area opened up in bedroom 210 during recent electrical modifications and in an area of bedroom 107 where floor decking is spaced in such a way that several joists are visible. Floor joists, where exposed or otherwise measured, were found to be 2 x 8 members. Floor decking, where exposed in closets and uncarpeted rooms, generally follows a pattern that correlates to a framing system to that on the first floor.

The different time periods of construction and the deviations in room ceiling height become evident at the second floor level. The various rooms on this level vary in floor elevation and are connected by steps. The ceiling of the second floor central hall (202) is distinguished by a level change of approximately 2 feet.

The walls of the second floor seem to be in relatively good shape, particularly surprising considering the partial failure of the beam and joist previously discussed in the south basement room (005).

Within the northwest bedroom (207) a crack was noted on the ceiling running parallel to the west wall and approximately 1/16 of an inch in width at the south end, tapering to a hairline fracture at the north wall. The south wall of this same bedroom has several randomly spaced

diagonal cracks at the extreme upper west corner. The most prominent of these consists of a series of three cracks with plaster damage under the wallpaper. The wallpaper is distressed at the northeast corner of the room; however, paper has not separated.

The west wall of the second floor central hall (202) has minor stressing in the wallpaper although no visible cracks are in evidence. The plaster ceiling of this area adjacent to the stair (202-B) to the attic has separated from the supporting lath and begun to drop down. National Park Service personnel have stabilized this condition by supporting the plaster with screws and large washers fastened into the ceiling joists. Minor cracking was also evident over the stairway from the first floor level over the upper landing. At the western edge of the central hall (202), a small crack crosses the ceiling from the entrance door of the northwest bedroom (207) diagonally across to the entrance of the master bedroom (204).

The areas of distress in the master bedroom (204) were the south wall to the west of the fireplace in that area between the fireplace and the adjacent window and within the ceiling area of the room. A major crack in the ceiling extends approximately from the middle of the fireplace to the middle of the closet door (204-B). Three feet to either side of this crack and parallel to it are cracks of less severity. Also, this area of the ceiling exhibits a noticeable sag. Again, distress was noted in the paper covering walls and ceiling with indications of

plaster separation behind the paper probably caused by moisture penetration from the outside. A water stain was noted on the north wall of this room, approximately 2 feet west of the closet door at the ceiling, with a corresponding drip pattern found on the wallpaper below.

In bedroom 205 also known as the Trumans' bedroom, all the walls are in good condition and noted to be relatively crack free. Some minor cracking was noted on the ceiling running diagonally from the northwest corner to a point south of the east edge of the entrance of the central hall. Three hairline cracks begin from this diagonal crack and run east, parallel to the north wall of the room, diminishing as they continue east.

Bedroom 210 and the passageway (206A) are both in good condition. These walls show no evidence of cracking. Hairline cracks were found in the ceiling of the small bedroom positioned above the area where the floor decking changes direction, approximately 6 feet from the north wall of this room (south of the closet).

Bath 211 has no evidence of cracking but an area of the ceiling adjacent to and south of the bathtub, an area approximately 18 x 36 inches, has sagged about 2 inches.

The Truman dressing room (209) has cracks in the two corners of the fireplace flue chase from the music room (108) below. There is also a

small bulge in the wallpaper adjacent to the west edge of the doorway (208D-1) in the south wall. At this point there is no evidence of recent cracking and appearances present the possibility of the damage having been there at the time the current layer of wallpaper was applied.

The west wall has a diagonal crack in the upper north corner. The east wall has small hairline cracks adjacent to the entrance doorway (209D-1), one running north from the left corner of the upper doorway trim to the adjacent wall and diagonally south up to the ceiling, another running from the right corner of the upper doorway trim.

Room 213 was used for storage and shows little evidence of any movement or cracking; however, it should be noted that three of the walls were hidden by stored artifacts at the time of this inspection. A split in the floor decking, approximately 26 inches west of the top riser of the stairs going down to the kitchen is possibly part of the repair work resulting from the fire damage found in this section of the residence.[12]

Attic Floor Framing and Condition

The main attic area is divided into two levels, 302 and 303, and has approximately 2 feet of elevation differential. This can be explained by the joint which connects the earlier constructed 1867 structure to the 1885 "addition." The lower level floor (302) is distinguished by floor decking laid on 2 x 4 sleepers lying east-west over what appears

to be 2 x 6 ceiling joists running in a north-south direction.

There is evidence of a wood truss within the vertical area between the lower and upper attic levels, noted when decking from the upper level was removed during recent electrical work. Diagonal cords could be seen lying east of the stairway connecting the two levels. The square heads of two lag bolts were noted when the treads of the connecting stairway were removed. The purpose of these bolts is unknown at this time, although it is assumed that they connect to the lower cord of the truss.

The upper level (303) is structurally composed of 2 x 6 floor joists that are notched at the ends to bear on 2 x 2 plates fastened at the base of double 2 x 6 support members. These supporting members align over the north-south wall of the rooms of the second floor.[13]

Roof Framing and Conditions

Attic Roof

Due to the installation of an insulation board and 1 x 8 sheet batten, the exact rafter framing is not known. (See Roof Framing plan.) In the areas that have been exposed, the structural members were found to be 2 x 6 rafters spaced approximately 24 inches on center. These rafters support 1 x 10 roof decking. Various rafters are reinforced at the lower limits by additional 2 x 6 or 1 x 6 members attached to one or both sides of the rafter. A perimeter dogleg rafter assembly is constructed by notching a 1 or 2 x 6 rafter to it over a 1 x 6 plate

sitting on the floor joist (upper level 303) or shot joist (lower level 302), as the case may be. The dogleg rafters gain additional support by the decorative diagonal bracing noted on the exterior elevations.

To compensate for the elevation differential between the attic levels, the lower level (302) has a perimeter short wall constructed of 2 x 4 members. This 2 foot high wall supports a 2 x 6 member approximately 2 feet in length sitting vertically on the short wall and perpendicular to it, similar to a short joist. The free, interior end of this short joist is capped by a continuous 1 x 6 header. This joist-like member is topped by a 1 x 6 lying flat over which the 2 x 6 roof rafters are notched in "bird-mouth" fashion. The assembly as constructed would be unable to resist more than a minimal horizontal thrust from the rafters. At some point additional bracing in the form of 1 x 6, tongue and groove members was attached between the rafters and the floor (ceiling) joists. The bracing is spaced at approximately 4 foot centers and is evident along all three exterior walls of the lower level. These diagonal braces, in conjunction with the stiffness developed by the nailed connections in the short wall, offer the limited resistance to outward thrust caused by the weight of the roof and rafter assembly and any additional loading placed by snow and wind forces.[14]

Attic Dormers

The four window dormers of the attic space reflect two different methods of construction. The north and west window assemblies are of a more

decorative nature and have a dogleg roof similar to the main structure. These two gables are constructed of tapered 2 x 6 rafters supported on 2 x 4 frame walls. The dogleg is formed by a 2 x 4 positioned horizontally and attached to adjacent rafters on either side of the gable. The two east window gables are constructed of 2 x 4 rafters lying flat supported on 2 x 4 frame walls. These eastern gables have no roof overhang.[15]

Kitchen Wing Roof

The attic space (301) over the kitchen and storage area is a more typical gable system of rafters and ceiling joists. This system is composed of 2 x 6 and 1 x 6 members. This area has had extensive fire damage and new rafters have been attached adjacent to the damaged units. This reinforcement is true of virtually every structural member in this area except for the four rafters and joists farthest east which were completely replaced. This roof area is distinguished by a hip roof area beginning at the level of the fascia of the main roof. The moderately sloped area of this roof is constructed using 1 x 6 rafters. Most of this framing appears to be of the same vintage as the replacement joist and rafters, leading to speculation that the original 1 x 6 members were totally destroyed by the fire[16] which, as previously mentioned, occurred sometime between 1885 and 1920.[17]

Roofing Materials

In 1969, "as a result of winter ice damage and a severe July hail storm,

the eighty-year-old original slate roof was beyond repair."[18] As a replacement, the Trumans chose a new type of shingle on the market. They selected royal grey, GAF fiberglass and asbestos 300 pound Fire-guard (two-tab) shingles with a number 9 granual. Since these shingles have been in place for sixteen years, they are nearing the end of their serviceable life. However, production of this type of shingle was discontinued by GAF in 1984. No other shingle manufacturer currently makes two-tab shingles. GAF can produce these shingles on custom order, but requires a minimum quantity of 1,000 squares. About 34 squares are needed to reroof the Truman home.

In March and April of 1984 the flat seam metal roofing, gutters and downspouts were replaced. The old metal roofing was corroded and had been coated with bitumen.

Wall System Framing (See Appendix F.)

Eight sections of exterior walls were investigated in 1984 by the National Park Service. In general, three different wall systems were encountered: walls with brick nogging but without sheathing; walls with studs laid flat forming a 2 inch cavity and sheathing; and walls with both brick nogging and sheathing. From the data collected in the investigation, it was determined that most of the exterior walls are balloon framed.

The sheathing and siding applied over the kitchen wing walls appear to

have been added after 1900. In addition, paint samples taken from this section of the structure, match those from 1885 construction, indicating residing was done. This may correlate with an extensive kitchen wing fire around the same period. The brick nogging dates the construction of the wing as the earliest portion of the structure, but wire nails, rosin sized building paper, and the very clean surface of the sheathing indicates these as replacement materials after the fire.

A similar type of construction exists in the 1867 portion of the structure but without sheathing. To existing knowledge, poplar siding occurs only in this portion of the house. The remainder of the structure's siding is white pine. (See Fig. 2.6.)

The walls of the portion of the house encompassing the living room (104), Gates' bedroom (105), foyer (107), and the southern portion of the dining room (110), are constructed of 2 x 2 studs laminated from 1 x 2 material or 2 x 3-1/2 (laid flat) balloon framed studs forming a 2 inch cavity. Seven-eighths inch tongue and groove sheathing is fastened horizontally with cut nails. No nogging was encountered here.

All sheathing encountered is tongue and groove white pine in good condition. All stud material encountered is oak, in good condition. The brick nogging (laid in shiner course) and mortar joints encountered are in good condition.[19]

Exterior and Interior Stair Systems

The exterior stair systems are in good condition having recently been repaired or replaced and repainted.

The main interior stair (108A) is in basically sound condition although some minor problems exist. There is no evidence of the framing pulling away from the wall or excessive deflection in the outside stringer. When walked upon, creaking of the stair is minimal except at one or two isolated treads. The treads and risers, which are painted or stained black are covered with a grey carpet runner. The newell posts and balusters are stained a very deep mahogany whereas the railing is stained brown. The lower ends of some balusters are loose where they are mortised into the treads. Nosing at the side of the treads displays varying degree of looseness, partially caused by Margaret Truman climbing on them as a child.[20] The finish is worn in limited areas. The base of the lower newell post is split vertically on the west side.

The attic stair (202B) is in fair-to-poor condition, having been damaged at the lower end by water leaking through the roof above which has eroded the finish and exposed the bare wood. This stair is comprised of oak treads and risers stained brown, pine stringers which are grained to resemble oak, walnut turned spindles stained nearly black and a brown stained railing. The turned spindles are quite loose where they fit into the rail or treads and can easily be pulled from their sockets. Carpet rod holders on the treads indicate that these steps were carpeted

sometime in the past.

Exterior Envelope

The siding on the Truman home is clapboard with 4-1/2 inch average exposure and is painted white. On the 1867 portion of the structure the clapboard is poplar except on the kitchen wing which is white pine. The clapboard on the 1885 portion is white pine. The difference in siding materials on the 1867 portion and the kitchen wing may be attributed to a fire that occurred after 1885 (date unknown) and resulted in the original siding being replaced. All siding, millwork, brackets, porch ceilings, and fascia are now in good condition having recently been restored. Work included stripping of most paint finishes to bare wood, woodwork repair, and painting of all exterior surfaces. (See Drawings: Repainting/Repair of Truman Home 4/11/85.)

Windows

All foundation and main structure windows are wood sash and prior to restoration, were in very poor condition with loose glazing, broken glass and rotted sash. Window repair included reputtying, reglazing and replacement of deteriorated window components.[21] Except for broken or missing sash cords at windows 108:W-2 (A and B), 113:W-1, 201:W-1 (A), 204 A:W-2, 205:W-3 and 211:2-1, all windows are now in good condition.

Windows are painted green on the exterior and stained and varnished or painted on the interior depending on location. The bottom rails of some

lower sash exhibit minor water staining, worn finish, or crazing of paint on the interior. The paint of the upper and lower sash (211:W-1) in bathroom 214 is crazed throughout.

Originally each window on the first and second floors except in the kitchen (113), bathroom (211), and storage room (213) had an upper and lower pair of interior shutters as evidenced by the four recesses on the side of each window frame. Each lower and upper leaf would normally be supported by two hinges. Cut-outs for such hinges and their associated screw holes are still visible. Certain cut-outs have been filled in but are still evident.[22]

Wood storm sash are in place on the following windows: 104:W-1, 104A:W-1(B), 105:W-1(A and B), 108:W-1(A and B), 108:W-2(A and B), 109A:W-1(A and B), 109A:W-2, 109A:W-3, and 112:W-1. Storm windows are in good condition and painted white. Storm windows are hung from two metal sash hangers and secured at the sides with metal turn buttons. Parts of the storm window hardware are extant on some other windows. Prefinished bronze color aluminum storm windows were installed in 1985 on the interior side of the east and south elevations of sleeping porch (260) to direct rain water away from the sleeping porch floor.

Wooden framed screens are stored in the Carriage house. The frames are painted green and are in fair condition.

The attic jalousie windows which replaced wooden sash in 1953, are fitted with interior screens.

Doors

The wood exterior entrance doors and wood storm doors are in good operating condition. Both types of doors are painted white. The north jamb of the basement door 002:D-1 was rebuilt in 1985. Constant use had loosened the wall blocking built into the stone foundaton. The screen door 002:D2 was rescreened in 1985.

The interior doors are generally in fair-to-good repair except for three doors that bind and have chipped, nicked, and worn finishes. The west pocket door, 103:D-1(A), at the parlor is jammed and the east pocket door binds as it is opened. This condition is caused by insufficient clearance above the carpet and a slight sag of the lintel over the door opening. Closet door D-2 in master bedroom (204) binds at the bottom and will not close completely. The finish on interior doors is stain and varnish, paint, or pine grained to resemble oak, depending on location.

Exterior Finishes

The Truman home was repainted between October, 1984 and November, 1985, because of the poor condition of exterior finishes. "Examination of the exterior paint finishes in areas directly exposed to the elements revealed severe paint film failure, including cross-grain cracking,

alligatoring, and peeling. Even in places shielded by porches and cornices, moderate paint film failure had occurred. A number of exposed areas, including soffits, fasciae, and siding experienced near total paint failure due to recurrent moisture penetration from deteriorated roofs and built in gutters. . . . more than twenty coats of paint concealed deteriorated woodwork and cladding from direct examination. On much of the projecting millwork, the final layers of paint had been applied so heavily that stalactites in excess of 1/4 inch were apparent due to paint dripping."[23] The scope of the work included thermal removal (heat gun) of most paint from exterior painted wood surfaces to achieve a sound surface for painting; repair or replacement of any deteriorated portions of cornices, brackets, fascia, soffits, siding, barge boards, posts, railings, balusters, porch flooring, ceilings and steps, skirting, lattice, windows and doors; application of caulk; and repainting the exterior including metal roofs. All exterior woodwork, windows and doors received one coat of Pratt & Lambert Permalize alkyd primer and two coats of Pratt & Lambert Permalize alkyd house paint in a gloss finish. Siding, millwork, doors, and storm windows are white. Window sash is green. A grey Pratt & Lambert Effecto enamel was applied to exterior porch floors. White Effecto enamel was used on all exterior metal surfaces including flat seam metal roofs, gutters, downspouts, and built-in gutters.[24]

A paint analysis performed in May, 1986 revealed that the siding was painted a rust-red in 1867 and light green in 1885. The 1867 trim color

was warm grey which was changed to dark green in 1885.[25]

Interior Finishes

The interior building fabric is generally in fair-to-good condition except for certain ceilings - foyer (102)/central hall (103), dining room (110), master bedroom (204), central hall (202), and bathroom (211) - and portions of walls that show major distress, peeling wallpaper, and water stains. The walls are papered throughout whereas the ceilings are either papered or painted. Wallpaper patterns range from simple geometric designs to large floral prints with contrasting border. Areas where peeling wallpaper is a major problem are the Gates' bathroom (106) and the third floor vestibule (304). Only two of the painted ceilings, foyer (102)/central hall (103) and Margaret's childhood bedroom (210) have paint applied directly to the plaster. On the other painted ceilings, paint has been applied over wallpaper, a fabric liner or a 1/8 inch thick fiberboard panel.

The majority of the cracks in the walls and ceilings are minor and should not change to any great extent in the absence of water penetration or structural settlement. (See Existing Condition Drawings, No. 5, First Floor Plan.) Fluctuations of temperature and humidity will cause slight changes in these cracks. Minor cracks should be left "as is," but monitored carefully for any changes that could result in further deterioration. Complete repair of all cracks would necessitate removing and installing new wallpaper throughout the house. Although it

may be possible to replicate the existing patterns, the historic character of the existing fabric would be lost. The sagging ceilings are a result of the failure of the plaster keys between the wood laths with water damage a contributing factor. Stabilization of these ceilings will be required soon.

Carpeting in the dining room (110), and foyer (102)/central hall (103) is in good condition having been installed in the spring of 1984. The new carpet matches the historic carpet in color and weave except for a dark grey sewn-in runner that guides the visitors through the house. The historic carpet was carefully removed and is in storage. The existing carpet throughout the remainder of the house is in relatively good condition, free of severe worn spots or snags.

Encaustic tile in the front vestibule (101) and the three fireplace hearths are in good condition. The light blue, stippled glaze ceramic tile tub surround and wainscoting in bath 211 is sound as is the white ceramic backsplash above the kitchen sink. In the Gates' bathroom (106) the mastic on the yellow ceramic tile and dark green border has begun to fail causing tiles to fall off the wall. The failure of the tiles to adhere to the wall was affected by water leaking through the ceiling from the sleeping porch above. Leaking of water has been repaired. Due to the poor condition of the mastic, tiles will continue to fall off sporadically.

The base, window, and door moldings are in good condition except for certain window sills which display water stains, exposed bare wood and crazed paint. In addition some of these have split longitudinally.

The lincrusta in foyer (102)/central hall (103), foyer (107) and stair (108A) shows some diagonal and horizontal cracks and localized pulling away from the substrate. The section on the north wall of foyer has been coated with a gloss finish, possibly shellac or varnish and there is evidence of a previous repair; underneath the stair, which was poorly executed. There are three small areas which are missing.

The historic ceiling finish in the basement was 16-1/2 inch x 30-1/4 inch x 1/2 inch tongue and groove Cel-O-Tex panels fastened to the underside of 1 x 4 nailers laid perpendicular and secured to the lower edge of the floor joists. The Cel-O-Tex panels were removed in 1983 to permit investigation of electrical wiring above. The 1 x 4 nailers are extant; the panels were too damaged to salvage.

The new attic (302, 303) and window bay (302-A) has a finished ceiling of 4 foot x 8 foot x 5/16 inch sheets of Cel-O-Tex with butt joints and white finish surface. The sheets are full size or trimmed as required and are nailed directly to the underside of the sloped roof rafters or to 1 x 4 nailers fastened to the underside of the sheathing boards at the flat roof. Numerous panels are missing for a variety of reasons; nails used had insufficient head diameter for adequate support, panels

were removed for installation of electrical and security wiring, and the panels in the east dormer (window 302:W-4) of the lower level were lost due to a localized fire in 1985. Debris in the stud space on the north side of the dormer was ignited by a heat gun during the process of exterior paint removal. In anticipation of replacing the asphalt shingle roof (originally scheduled for the fall of 1986, but delayed due to the difficulty of obtaining material to match the historic asphalt shingles), National Park Service personnel have hung visqueen for protection in areas where the Cel-O-Tex panels are missing.

Plumbing Services and Systems

The main water service to the house is provided by a 3/4 inch galvanized steel pipe which enters through the north wall of the basement in the laundry room (002). At this location, a main cut-off valve is installed. From the cut-off valve, the cold water piping, replaced in April, 1985, is then distributed to the domestic hot water heater, bathrooms, kitchen sink, lavatories, washing machine and wall hydrants. All the cold water piping is exposed on the basement ceiling with the exception of the vertical piping to the second floor bath and bedroom lavatory.[26]

The house has a non-historic electric domestic hot water heater located in laundry room (002). This water heater was installed in 1984 for the use of National Park Service personnel at a non-historic basement sink. The historic gas-fired heater, installed in 1974, was drained, but not

disconnected. From the historic hot water heater, the hot water piping is distributed to the bathrooms, kitchen sink, washing machine and lavatories. All the hot water piping is exposed on the basement ceiling with the exception of the vertical piping to the second floor bath and bedroom lavatory.[27]

Waste and Vent System

All the plumbing fixtures in the home have cast iron, lead or galvanized waste piping until the piping penetrates the basement floor where all waste piping becomes cast iron under the concrete slab.

The Gates' bedroom (106) on the first floor has a 4 inch cast iron vent stack up through roof R-6. Bathroom (211) on the second floor has a 2 inch cast iron vent up through the old attic (301) roof.

The lavatory in Truman bedroom (205) on the second floor, the kitchen sink unit in kitchen (113) on the first floor, and the water closet (007) are not vented to the atmosphere.[28]

Gas System

Historic (c. 1885) System

There is evidence of a gas system in the walls and ceilings which supplied gas to fixtures. Known terminations include the dining room (110) chandelier and the music room (108) gas fixture.

Existing System

The main gas service to the house is provided by a 1-1/4 inch black steel pipe which enters through the west wall of the basement in furnace room (004). The main gas service then passes through a main gas cock and pressure reducing valve before entering the gas meter which is located on the west wall of furnace room (004). From the gas meter the gas piping is then distributed to the furnaces, domestic hot water heater, space heater, ranges, and yard lamp through underground copper pipe. All the gas piping is black steel with the exception of one section of pipe which is copper. This copper pipe has been noted on the basement plumbing drawings. All the gas piping is exposed on the basement ceiling with few exceptions.[29]

Heating System

Historic

The original heating system relied on the use of three extant fireplaces (located in rooms 104, 204 and 108), in addition to "an undetermined number of stoves." The exact date in which the central heating plant was installed in the Gates' mansion is not known but it is probable that it occurred between the years 1885-1910. Fuel was first wood, then coal and finally gas.[30]

There is physical evidence of an old gravity-type furnace. (See Existing Condition Drawings, No. 4, Foundation/Basement Plan, Room 005/006.) This area, where the furnace was located, is about 6 inches

lower than the surrounding floor. In this location there is a concrete area with a definite edge that is approximately circular in shape, corresponding to a furnace. In addition, there are bricks that follow the shape of the concrete and remains of asbestos paper that have been nailed to the underside of the joists and flooring directly above the floor area previously described. There is also an underfloor duct that starts at the edge of the recessed area and runs several feet to the east, ending with an opening in the floor.

Two individual gravity-type furnaces (Model 1135, each at 135,000 BTU/HR input LAN-A-15) with a common supply and return plenum were installed sometime during the mid 1950s. In 1959, a modification was made to the furnaces by installing a belt-driven fan inside the return air plenum which converted the heating from a gravity-type to a forced air system.

The house is presently heated by a pair of Carrier, induced-draft gas-fired furnaces located in furnace room (004) replacing the historic gas furnace in 1985. (The metal casing from the historic furnace was salvaged.)

Ductwork

The furnaces supply air to the first and second floors through round and rectangular ductwork to floor and wall supply grilles. On the first floor there are transfer grilles installed in the ceiling of the dining room (110) and kitchen (113), which transfers heat from these areas

through floor grilles in bedroom (210) and storage room (213) on the second floor.

Return air is transferred from the first floor through floor grilles and ductwork to the filters in the furnace. The second floor has no ducted return air system. All ductwork and grilles are historic except those modified near the furnace to accommodate the new system.

A single Honeywell wall thermostat located in central hall (103) historically controlled the space heating temperature for the house. A new thermostat was installed in the music room (108) in 1985.

A small gas space heater is located in kitchen (113). This unit was used for supplementary heat for that area with some heat passing to the storage room above through the ceiling transfer grille.[31]

Gas Yard Lamp and Interior Gas Fixtures

In 1964, Hadco Products, Inc., of Littletown, Pennsylvania, presented the Trumans with a 6 foot "Gettysburg" style gas lamp made of cast aluminum and solid brass accents standing on a concrete pedestal. The gas lamp stands to the east of the main entrance of the Truman home.

Much of the gas tubing to the original overhead lighting system remains extant behind the walls and ceilings. The chandelier in the parlor/ music room (108) remains connected to the historic gas system.[32]

Locations of capped pipe of the historic gas system which extend through the ceiling include the laundry room (002), vestibule (101), butler's pantry (111) and hall (208).

Ventilation System

The house is ventilated by means of a single speed belt-driven fan located in the lower level (302) of the attic. This fan is controlled by a Honeywell timer located at the bottom of attic stair (202B). When the fan is in operation, the air that is exhausted from the house is relieved from the attic space through attic dormer jalousie windows. If the fan is not in operation, the inlet to the fan is covered by a pair of hinged doors at the top of stair (202B).[33]

In addition, a four-bladed ceiling fan (no manufacturer identification) is located on the kitchen porch (114C).

Air-Conditioning System

Historic

Some limited air-conditioning in the house was provided by spot cooling from two window air-conditioning units on the first floor. One air-conditioning unit is located in the west window of the Gates' bedroom (105), and the other is in the north window of the kitchen (113). Both window air-conditioners are factory package units with all controls located on the front of the unit.[34] These units were removed and placed in storage in 1985. The library (109) windows 109A W1:B also had an air

conditioner which was seasonally installed. It was removed before National Park Service acquisition during the fall of 1982.

Non-Historic

In October, 1985, two outdoor condensing units (Carrier, series 38) were installed on new concrete pads, north side of kitchen (113) in an effort to control summer interior humidity and temperature levels.

Electrical Service and Systems

The house currently is serviced by an electrical system installed in 1983-84. The original electrical equipment and wiring have been disconnected and left in place. All original lighting fixtures have been left in place and are operational. The house originally used gas lighting, one fixture of which is still in place in the parlor/music room (108). The house was converted to electric service sometime between 1886 and 1907.

The house is presently utilizing a 200 Ampere, single phase, 110/220 volt, residential service which is fed underground from a power pole located along the south edge of Truman Road. The meter housings, historic and non-historic, are located on the north side of the house. The original aerial service conductors and service entrance equipment have been disconnected and left in place adjacent to the new service.

The in-place service switchgear consists of one main 200 Ampere distribution panel and four sub-panels located on the north wall of laundry room (002). The four sub-panels supply respectively: basement; first floor; second floor; garage, gates and porchlights. Historic service panels are located immediately west of the new equipment and consist of a main 110 Ampere breaker panel and one sub-panel.

The original wiring is comprised of open type knob and tube and some non-metallic sheathed cable. All exposed original wiring in basement and attic areas have been disconnected and left in place. In-place wiring was run in electrical metallic tubing and flexible metallic tubing which was fished between existing wall spaces during 1983-1984 electrical renovation.

The majority of receptacles and wall switches are original 2-wire type. Some receptacles and wall switches were replaced with U.L. listed types in 1984. An electric hot water tank was also added at this time. The original attic ventilating fan is functional and controlled by a Honeywell timer located at the base of attic stairway. Bathrooms (106) and (211) both utilize wall mounted 110 volt electric space heaters.

Lighting fixtures throughout the house are functional, original units, except on the west wall of the kitchen where new switches were installed to operate yard lamps since the switch boxes on the south wall were inaccessible. These are now disconnected. Two switches, one at the west

gate and one at the foyer (102) painted red, are unidentifiable. Lighting is predominately incandescent with fluorescent wall strips in the bathrooms and a single ceiling fixture in the kitchen. Bedrooms (105, 201, 205, 207, 210), living room (104), music room (108), and entryway (103) utilize incandescent wall sconces with supplemental table and floor lamps. Exterior lighting is incandescent with one pendant fixture on the east porch and west porch ceiling, in addition to a lamp at the southeast corner of the kitchen porch.[35]

Lightning Protection System

A lightning protection system was installed in August, 1985 on the Truman home (HS-01), the Carriage house (HS-02), and the specimen oak southeast of the Gates' bathroom (106). It consists of 3/8 inch diameter by either 15 inch or 48 inch long copper point, nickel plated terminal rods connected by copper cable, leaded, to 1/2 inch diameter by 10 foot long copperclad steel ground rods. The shorter terminal rods are located at the ridge of each gable - main roof and dormers - of the Truman home as well as the ridge of each gable and the center of the cupola of the Carriage house. The longer terminal rods are used on the chimneys of the home and four 30 inch terminal rods - one primary at the apex and three secondary - are located in the upper branches of the specimen oak. The home is grounded at four exterior locations; the northeast corner of the library (109), the northwest corner of front porch (101-A), the southwest corner of living room (104) and the southeast corner of the Gates' bathroom (106). The terminal rods

located in the specimen oak also connect to this ground rod as well as to a ground rod approximately 25 feet southeast of the trunk of the tree. The ground rods for the Carriage house are located at its northeast and southwest corners and are interconnected with the weathervane. The grounding cable on the house is painted white and is interconnected with the metal roof.

The historic telephone service (abandoned) connects to the house on the south elevation. Two overhead cables are secured to porcelain insulators on metal angles, one above the other. Approximately 8 inches to the east of each insulator is a second porcelain insulator identical to the first, but without any wire connection. The two cables drop parallel with the east side of the Gates' bedroom (105) window. One cable enters the house through a hole in the water table. The other enters a metal conduit which extends from the water table to grade and is anchored at the water table with a metal strap. The abandoned service terminates in the east end of the basement (006). The two overhead cables connect to a pole in the south alley, southeasterly from the point of entry into the house.

In addition, a butler bell system could be activated from the Gates' bedroom (105) to ring bells in the Truman bedroom (205) and in the

kitchen (113). Bess Truman could summon a nurse by pressing a button on the end of a 15 to 20 foot cord.

Notes to Chapter Two

1. Restoration Associates, a division of Solomon Claybaugh Young Architects, Inc., "Analysis of Condition Report HS-1 Truman Home, Truman Home National Historic Site" (Kansas City, February 14, 1985, bound copy), 2.1. Hereafter cited as "ACR."

2. Members of the National Park Service staff include: Skip Brooks, Facility Manager; Alan O'Bright, Historical Architect; Michael Lee and Lee Jamison, Exhibit Specialists (Restoration).

3. ACR., 1.1; 1.2.

4. Ibid., 1.3.

5. Ron Cockrell, Historic Structures Report: History and Significance. Harry S Truman National Historic Site, Independence, Missouri (Omaha: National Park Service, Midwest Regional Office, 1984), 146. Hereafter cited as "HSR."

6. Ibid., 128.

7. ACR., 2.2.

8. Ibid., 2.3A.

9. Michael Lee and Alan O'Bright, "Physical Investigation Report Truman Home (HS-01) Harry S Truman National Historic Site" (United States Department of the Interior, National Park Service Midwest Region, Omaha, Nebraska, July 24-26, 1984, photocopy), 3. Hereafter cited as "PIR."

10. ACR., 2.3B.

11. Ibid., 2.4.

12. Ibid., 2.5.

13. Ibid., 2.6.

14. Ibid., 2.7A.

15. Ibid., 2.7B.

16. Ibid., 2.7C.

17. Existing physical evidence substantiating this theory is as follows: 1) The roof over the kitchen wing (113) was altered from a gable to a gambrel in 1885 [or thereafter but prior to 1907], to be consistent with the roof(s) on the other sections of the existing house. Although the upper portion of the gambrel had to be replaced as a result of the fire, the collar beams and companion vertical supports at the

western end are charred. These charred collar beams are not extant from the 1867 gable roof because they do not lap either side of the lower roof rafters, but are in line with them; a position only plausible with the gambrel configuration. Consequently, the fire could only have occurred after 1885. 2) Porcelain insulators for the knob and tube electric wiring have been nailed to the charred rafters. The insulators are in good condition and do not exhibit any cracking or blistering associated with intense heat or smoke damage -- indicating that the knob and the tube wiring was installed after the fire. Electricity generated by the city was available approximately in 1902. A private electric company may have furnished power prior to 1901 when its generating facility was destroyed by fire. However, 219 North Delaware was most likely outside the limits of its service. Knob and tube wiring was no longer used after 1915-1920.

18. HSR., 265.

19. PIR., 2-3.

20. Steve Harrison, interview with Doug Wasama at the Truman home, September, 1986.

21. Alan O'Bright, "Exterior Woodwork Number 2, Preservation Tech Notes," (United States Department of the Interior, National Park Service Midwest Region, Omaha, Nebraska, June 18, 1986, photocopy), 2-3. Hereafter cited as "Preservation Tech Notes."

22. Recent National Park Service investigation found that two windows in the kitchen wing were removed for replacement and these had square weights made of cast-iron. The windows (112:W1 and 113:W1) were on the first floor north side next to the basement stairs and pantry. Other windows replaced in the home were generally on the second floor and had round weights.

23. Preservation Tech Notes., 2-3.

24. National Park Service, "Exterior Painting and Repair of Truman Home (HS-01), Harry S Truman National Historic Site, Independence, Missouri." (nd, photocopy), 1-6.

25. Marie Carden., 14.

26. ACR., 4.2.

27. Ibid., 4.3.

28. Ibid., 4.4.

29. Ibid., 4.1.

30. HSR., 303-304.

31. ACR., 5.1.

32. HSR., 257-258.

33. ACR., 5.2.

34. Ibid., 5.3.

35. M. A. Panethiere, "Electrical Report, Harry S Truman House" (Kansas City: Associated Engineering Consultants, March 31, 1986, photocopy), 1-2.

36. Ibid., 2.

37. Ibid.

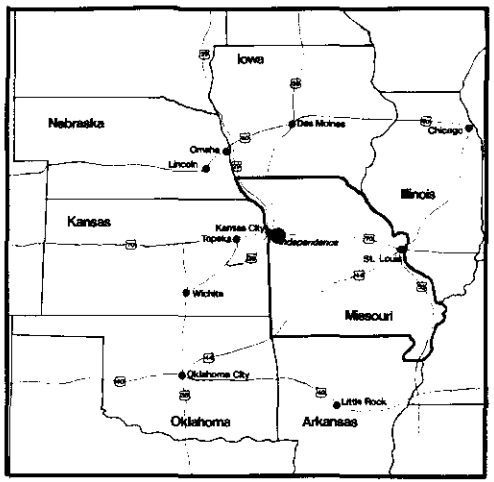
Fig. 2.1 Truman Home, February-Marcn 1986. West elevation (looking east). Credit: Zoom Studios

Fig. 2.2 Truman Home, February-March 1986. North elevation (looking south). Credit: Zoom Studios

Fig.2.3 Truman Home, February-March 1986. East elevation (looking west). Credit: Zoom Studios

Fig. 2.4 Truman Home, February-March 1986. South elevation (looking north). Credit: Zoom Studios

Fig. 2.6 Brick Nogging, Truman Home. North elevation, July 1984. Credit: National Park Service, Midwest Region



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REGIONAL MAP

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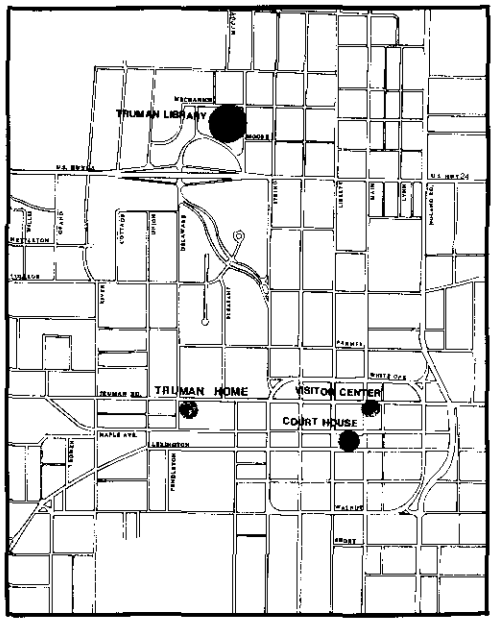

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CITY MAP

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REVISED		PREPARED	RECOMMENDED	UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE PLANNING AND RESOURCE PRESERVATION MIDWEST REGIONAL OFFICE	DRAWING NO. 492 80005
DATE	INITIAL	SC STONES RAFIZADEH DRAWN	SUPERINTENDENT DATE		SHEET 1
		CHECKED	ACTG. CHIEF, CULTURAL RESOURCES MANAGEMENT DATE	EXISTING CONDITION DRAWINGS TRUMAN HOME (HS-1), TRUMAN GARAGE (HS-2), HARRY S TRUMAN NATIONAL HISTORIC SITE INDEPENDENCE, MISSOURI	OF 55
		DATE	CONCURRED ACTG. ASSOCIATE REGIONAL DIRECTOR DATE		DATE: 6/3/86
			APPROVED REGIONAL DIRECTOR DATE		

4 MECHANICAL SYMBOLS

- DIAMETER
- RETURN AIR DUCT - RECTANGULAR
- SUPPLY AIR DUCT - RECTANGULAR
- SUPPLY AIR DUCT - ROUND
- THERMOSTAT
- TC — TIME CONTROL SWITCH
- EXPOSED HORIZONTAL PIPING
- HIDDEN HORIZONTAL PIPING
- PIPING UP
- PIPING DOWN
- CAPPED
- CLEAN-OUT
- DRUM TRAP
- 45° ELBOW
- 90° ELBOW
- WALL HYDRANT
- REDUCER
- TEE
- UNION
- GAS REGULATOR
- ELECTRIC GAS VALVE
- CUT-OFF VALVE

3 MATERIALS

- EARTH
- GRAVEL
- PRE-CAST CONCRETE
- CONCRETE
- CONCRETE BLOCK
- BRICK
- FIRE BRICK
- STONE
- METAL (LARGE SCALE)
- METAL (SMALL SCALE)
- METAL STUD
- ROUGH WOOD CONSTRUCTION
- WOOD BLOCKING
- WOOD STUD PARTITION
- GLASS (LARGE SCALE)
- GLASS (SMALL SCALE)
- FINISH WOOD
- PLYWOOD
- MARBLE
- TERRAZZO
- PLASTER OR GYP BOARD
- ACOUSTICAL TILE
- BATT INSULATION
- RIGID INSULATION
- POURED FILL INSULATION
- SHEATHING
- GLASS IN ELEVATION
- SHEET METAL IN ELEVATION
- ASPHALT
- LOG

2 SYMBOLS

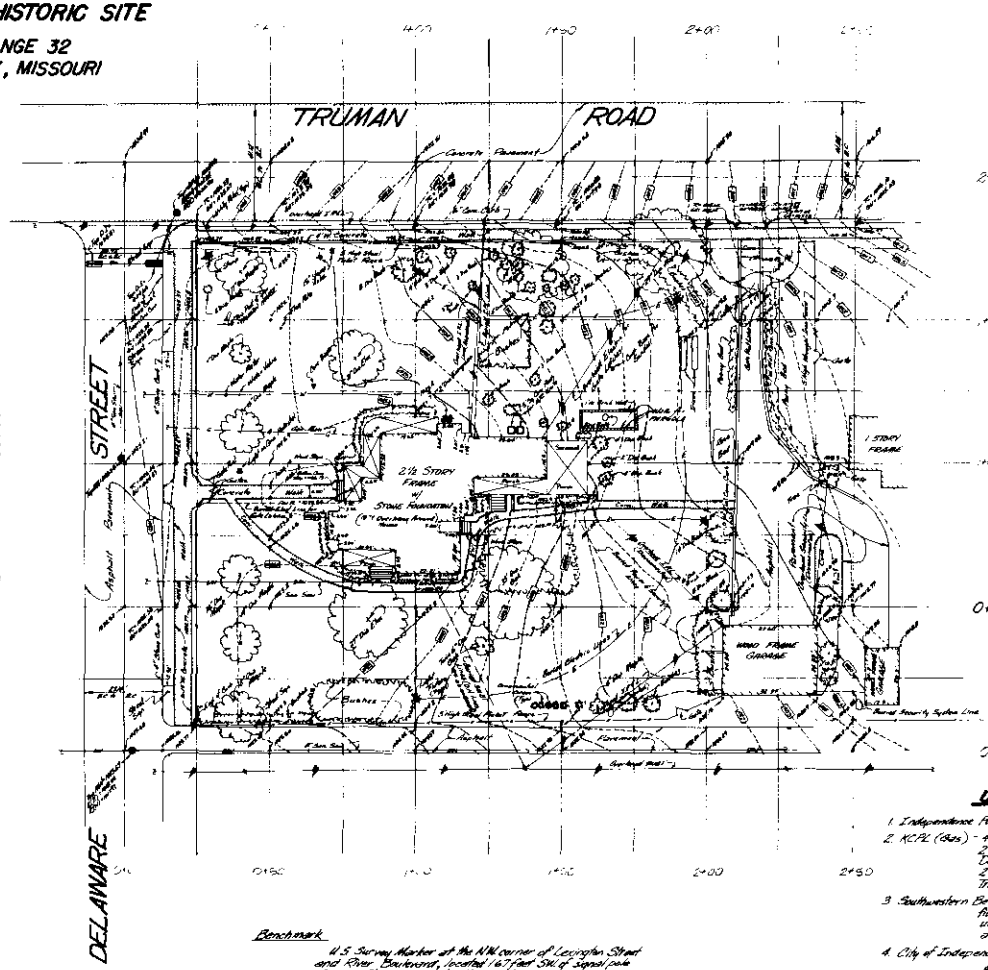
- DRAWING TITLE — 2 FLOOR PLAN; 1/4" = 1'-0" (SCALE)
- CROSS REFERENCE — RE A6 SA1 (SHEET NO.; DETAIL)
- ROOM MARK — EQUIPMENT ROOM; 207 RE (ROOM TITLE; CROSS REF TO INTERIOR; ROOM NO; FIRST NO INDICATES FLOOR)
- DOOR MARK — 123
- WINDOW MARK — A
- REVISION MARK — 1
- HEIGHT ELEVATION DATUM MARK — 2nd FIN FLR ELEV
- DETAIL MARK — 1/A6 (DETAIL NO.; SHEET NO.)
- WALL SECTION — 2/A6 (DETAIL NO.; SHEET NO.)
- BUILDING SECTION — 3/A6 (DETAIL NO.; SHEET NO.)
- WATER LINE — W
- GAS LINE — G
- STORM SEWER — STS
- SANITARY SEWER — SAN
- PARKING LIGHT POLE & BASE — 2 FIXTURES SHOWN
- MANHOLE WITH INVERT ELEVATION — MH; IE
- BENCH MARK
- COLUMN LINE OR REFERENCE GRID — A (GRID LINE (BROKEN)); 1 (REFERENCE LINE)
- EXISTING CONTOUR — 134
- FINISH CONTOUR — 143
- FIRE HYDRANT
- WATER METER
- ELECTRICAL LINE — E
- TELEPHONE LINE — T
- PROPERTY LINE — PL
- MATCH LINE
- SPOT ELEVATIONS — 0'
- LIGHT FIXTURE

1 ABBREVIATIONS

A	AREA
ABBREV	ABBREVIATION
AC	AIR CONDITIONING
ACT	ACTUAL
ADD	ADDITION
AFF	ABOVE FINISHED FLOOR
AGGR	AGGREGATE
ALM	ALARM
AMT	AMOUNT
ASPH	ASPHALT
AVG	AVERAGE
B	BOTTOM
BD	BOARD
BET	BETWEEN
BI	BLACK IRON
BLDG	BUILDING
BM	BEAM
BRK	BRICK
C CONC	CAST CONCRETE
CEM	CEMENT
CI	CAST IRON
CIP	CAST IRON PIPE
CIR BKR	CIRCUIT BREAKER
CLG	CEILING
CO	CLEANOUT
COL	COLUMN
CONC	CONCRETE
CONC B	CONCRETE BLOCK
CONTR	CONTRACTOR
CU FT	CUBIC FEET
CU YARD	CUBIC YARDS
CW	COLD WATER
DEM	DEMOLISH
DET	DETAIL
DIA	DIAMETER
DIM	DIMENSION
DR	DRAIN
DS	DOWNSPOUT
EA	EACH
EL	ELEVATION
EXT	EXTERIOR
FF	FINISHED FLOOR
FIX	FIXTURE
FL	FLOOR
FND	FOUNDATION
FR	FRAME
FT	FEET
GAL	GALLON
GALV	GALVANIZED IRON
GAS	NATURAL GAS
GL	GLASS
GOVT	GOVERNMENT
GP	GAS PIPE
GYP	GYPSUM
HDW	HARDWARE
HT	HEIGHT
HTG	HEATING
HW	HOT WATER
HWH	HOT WATER HEATER
ID	INSIDE DIAMETER
INS	INSULATION
INT	INTERIOR
JSTS	JOISTS
LG	LONG
LIN FT	LINEAR FEET
M	METER
MATL	MATERIAL
MET	METAL
NATL	NATIONAL
NIC	NOT IN CONTRACT
NOM	NOMINAL
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OPNG	OPENING
OPP	OPPOSITE
PLAS	PLASTER
PRE	PRESERVE
PREFAB	PREFABRICATED
PTD	PAINTED
QTY	QUANTITY
R	RISER
RAD	RADIATOR
RD	ROUND
REC	RECONSTRUCT
REM	REMOVE
REP	REPAIR
RES	RESTORE
RET	RETAIN
REV	REVISION
RF	ROOF
RG	RETURN AIR GRILLE
RGH	ROUGH
R|K	REPLACE IN KIND
SAL	SALVAGE
SB	SPLASH BLOCK
SC	SILL COCK
SG	SUPPLY AIR GRILLE
SHT	SHEET
SHT MTL	SHEET METAL
SM	SURFACE MOUNT
SP	STEAM PIPE
SPEC	SPECIFICATION
SQ	SQUARE
STL	STEEL
TG	TRANSFER GRILLE
T&G	TONGUE AND GROOVE
THK	THICK
TOJ	TOP OF JOIST
TR	TREAD
TYP	TYPICAL
V	VENT
W/	WITH
W/O	WITHOUT
WC	WATER CLOSET
WD	WIDTH
WL	WASTE LINE
WP	WOOD POST
WS	WATER SUPPLY
WSG	WALL SUPPLY AIR GRILLE
YD	YARDS

PREPARED	DRAWING NO. 492 80005
DESIGNED RAFIZADEH	
DRAWN	SHEET 2
CHECKED	OF 65
Feb. 13, 85 DATE	

TOPOGRAPHICAL SURVEY
OF
HARRY S TRUMAN NATIONAL HISTORIC SITE
SECTION 3, TOWNSHIP 49, RANGE 32
INDEPENDENCE, JACKSON COUNTY, MISSOURI



LEGEND

- Manhole
- Utility Pole
- Top of Curb
- Gutter
- Independence Power & Light
- Southwestern Bell Telephone
- Denotes Concrete Pavement
- Shrubbery
- Trash
- Light Fixture
- Buried Electric Lines

GENERAL NOTES

1. Information as shown for underground utilities has been compiled from the records of various utility companies, surveys and the National Park Service Staff, and does not constitute a record of any field measurements or locations by us. Where precise locations of underground utilities are needed prior to excavation or connections, the various utility companies concerned are to furnish a crew to point out locations at the job site.
2. Elevations are base on Missouri State Coordinate Monument.
3. 50 foot cross-section intervals.
4. 0'-6" foot contour intervals.
5. As of February 13, 1986, we have made no investigation for, or locations of, possible usable subsurface areas on private land or public ways, including, but not limited to, utility vaults of any nature, utility or pedestrian tunnels, under walk area ways, under alley area ways, fuel storage bins or tanks, elevator pits, and all or any combination of the above, except as shown, noted and described hereon.

The Tuttle-Ayers-Woodward Co.

By _____

MISSOURI L.S. 19 SURVEYOR LAND SURVEYOR

UTILITY NOTES

1. Independence Power & Light - service to this site is underground.
2. KCPL (Gas) - 4"C.I. main on N. side of Truman Rd running E. & W.
   2" Steel main on S. side of Truman Rd running W. from Delaware St. to Secret Service Booth site, 60 feet W. of WHR.
   2" Steel main on W. side of Delaware Street running South from Truman Rd. to Maple St.
3. Southwestern Bell Telephone Co. - There are buried cables, conduits and fiberoptic cables within the Truman Rd. R.O.W. and underground service to the existing building from aerial lines in the alley.
4. City of Independence
   8" Sanitary sewer runs N. within Delaware St. to Truman Rd.
   8" Sanitary sewer runs E. & W. in the alley.
   Storm sewer lines are with Missouri State Highway R.O.W.

Benchmark

U.S. Survey Marker at the N.W. corner of Lexington Street and River Boulevard, located 167 feet S.W. of Signal pole.
S.C.M. - State Coordinate Monument
Elevation = 1014.79

222539
3-49-32

THE TUTTLE-AYERS-WOODWARD CO.
A DIVISION OF SHAFER, KLINE & WARREN, P.A.
CIVIL ENGINEERING - SURVEYING
LAND PLANNING - LANDSCAPE ARCHITECTURE
KANSAS CITY, MISSOURI

Restoration Associates
A division of
Solomon Claybaugh Young Architects Inc.
20 West 9th Street
Kansas City, Missouri 64105
816 842 2292

HS - 1 TRUMAN HOME
HARRY S TRUMAN N.H.S.

REVISED	PREPARED	DRAWING NO
5-27-86	DESIGNED	492 80005
7-2-86	DRAWN WDC	
7-16-86	CHECKED PAL	SHEET 3
	DATE 2-5-86	OF 55

1 EXTERIOR ELEVATION – NORTH

SCALE : 1/4" = 1'-0"

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20 West 9th Street
Kansas City, Missouri 64105
816 842 2292

SCALE : 1/4"= 1'-0"

4 0 4 8
SCALE OF FEET

EXISTING CONDITION

HS- 1 TRUMAN HOME

HARRY S TRUMAN N. H. S.

REVISED	PREPARED	DRAWING NO.
	DESIGNED	492 80005
	FULTON DRAWN	
	CHECKED	SHEET 13
	Feb. 13, 85 DATE	OF 88

1 EXTERIOR ELEVATION – WEST

SCALE : 1/4" = 1'-0"

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Kansas City, Missouri 64105
816 842 2292

SCALE : 1/4" = 1'-0"

0 2 4 8
SCALE OF FEET

EXISTING CONDITION

HS-1 TRUMAN HOME

HARRY S TRUMAN N. H. S.

REVISED	PREPARED	DRAWING NO.
	DESIGNED	492 80005
	FULTON DRAWN	
	CHECKED	SHEET 14
	Feb 13 85 DATE	OF 65

1 EXTERIOR ELEVATION – SOUTH

SCALE : 1/4" = 1'-0"

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20 West 9th Street
Kansas City Missouri 64105
816 842 2292

SCALE : 1/4" = 1'-0"

4 0 4 8
SCALE OF FEET

EXISTING CONDITION

HS-1 TRUMAN HOME

HARRY S TRUMAN N. H. S.

REVISED	PREPARED	DRAWING NO.
	DESIGNED	492 80006
	FULTON DRAWN	
	CHECKED	SHEET 15
	Feb. 13, 85 DATE	OF 56

1 EXTERIOR ELEVATION – EAST

SCALE : 1/4" = 1'-0"

Restoration Associates

a division of

Solomon Claybaugh Young Architects Inc.

20 West 9th Street

Kansas City, Missouri 64105

816 842 2292

SCALE : 1/4" = 1'-0"

4 0 4 8

SCALE OF FEET

EXISTING CONDITION

HS-1 TRUMAN HOME

HARRY S TRUMAN N. H. S.

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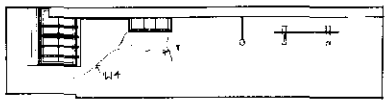
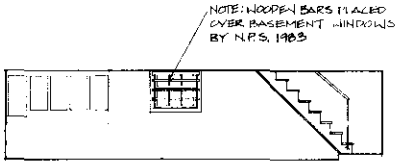
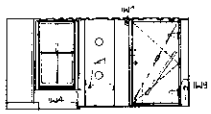
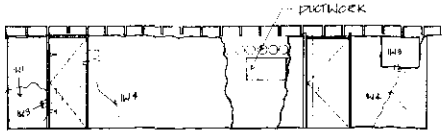
	DRAWN FULTON	
	CHECKED	SHEET 16
	DATE Feb. 13, 85	OF 84

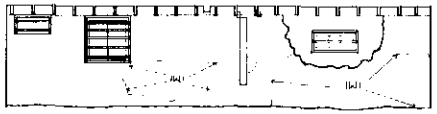


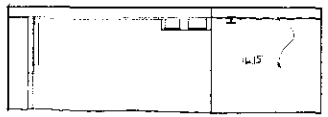




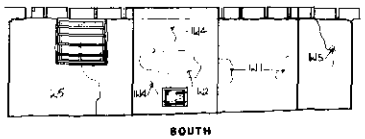
2 LAUNDRY ROOM 002

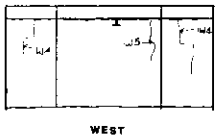


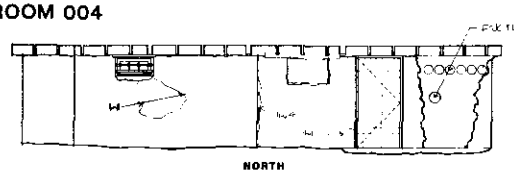




3 FURNACE ROOM 004







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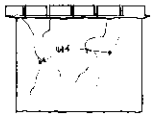

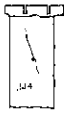

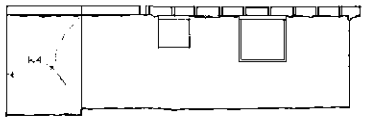

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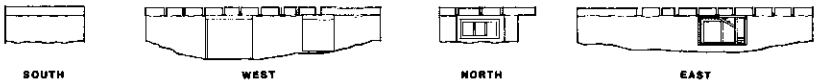
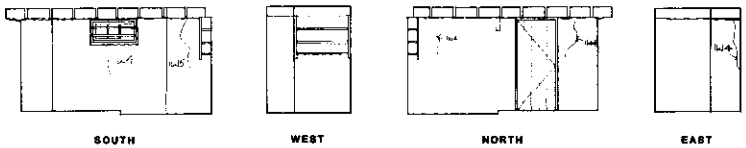


6 CRAWLSPACE 006-A



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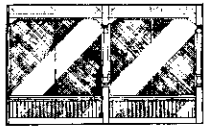

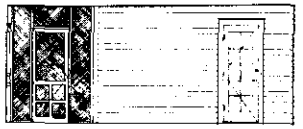

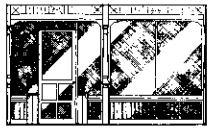

8 KITCHEN PORCH 114-B

1 EXISTING CONDITION LEGEND

WALLS

- 1w1 STONE - POWDERY SURFACE
- 1W2 BRICK - POWDERY SURFACE
- 1W3 LOOSE MASONRY
- 1W4 MINOR CRACK
- 1W5 MAJOR CRACK
- 1W6 BULGE IN PLASTER
- 1W7 MISSING PLASTER
- 1W8 CHIPPED PAINT
- 1W9 WATER STAINED
- 1W10 SOOT
- 1W11 SCORCHED PAINT
- 1W12 LOOSE JOINT
- 1W13 CHIPPED OR MISSING TRIM
- 1W14 WRINKLED WALL PAPER
- 1W15 LOOSE WALL PAPER
- 1W16 MISSING CEILING PANELS
- 1W17 WORN VARNISH

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Kansas City, Missouri 64105
816 842 2292

BASEMENT

SCALE : 1/4" = 1'-0"

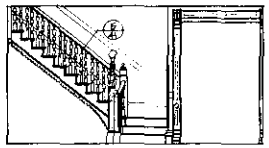
4 0 4 8
SCALE OF FEET

EXISTING CONDITION

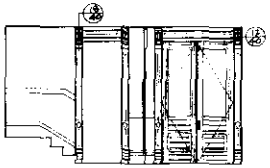
HS-1 TRUMAN HOME

HARRY S TRUMAN N. H. S.

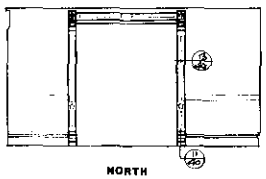
REVISED	PREPARED	DRAWING NO.
	DESIGNED RAFFLADER	492 80005
	DRAWN	
	CHECKED	SHEET 21
	Feb. 13, 85 DATE	OF 55



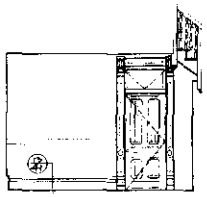
SOUTH



WEST

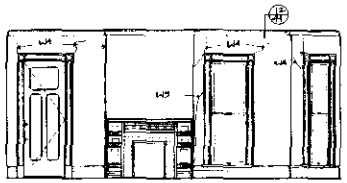


NORTH



EAST

2 CENTRAL HALL 103



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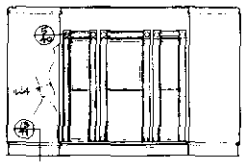

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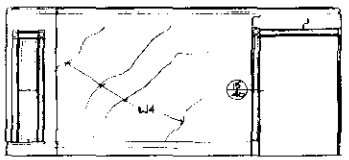

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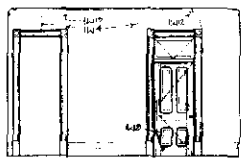
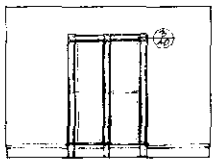


EAST

3 LIVING ROOM 104



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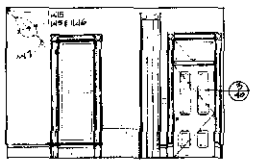

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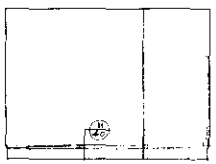

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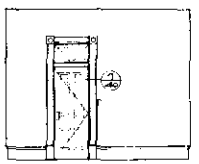
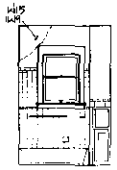


EAST

4 GATES BEDROOM 105



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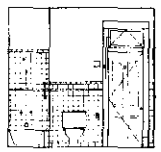

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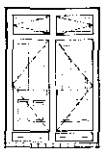

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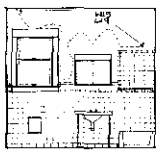

EAST

5 GATES BATHROOM 106

SOUTH

WEST

NORTH

EAST

6 CLOSET 106-A

1 EXISTING CONDITION LEGEND

WALLS

- 1W1 STONE - POWDERY SURFACE
- 1W2 BRICK - POWDERY SURFACE
- 1W3 LOOSE MASONRY
- 1W4 MINOR CRACK
- 1W5 MAJOR CRACK
- 1W6 BULGE IN PLASTER
- 1W7 MISSING PLASTER
- 1W8 CHIPPED PAINT
- 1W9 WATER STAINED
- 1W10 SOOT
- 1W11 SCORCHED PAINT
- 1W12 LOOSE JOINT
- 1W13 CHIPPED OR MISSING TRIM
- 1W14 WRINKLED WALL PAPER
- 1W15 LOOSE WALL PAPER
- 1W16 MISSING CEILING PANELS
- 1W17 WORN VARNISH

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20 West 9th Street
Kansas City, Missouri 64105
816 842 2292

FIRST FLOOR

SCALE : 1/4" = 1'-0"

4 0 4 8

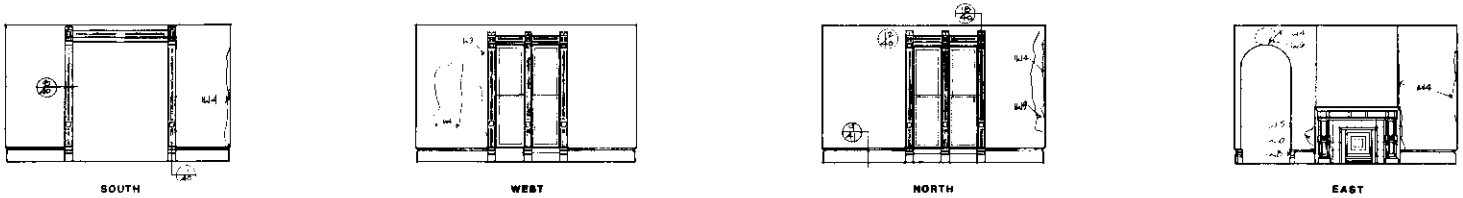
SCALE OF FEET

EXISTING CONDITION

HS-1 TRUMAN HOME

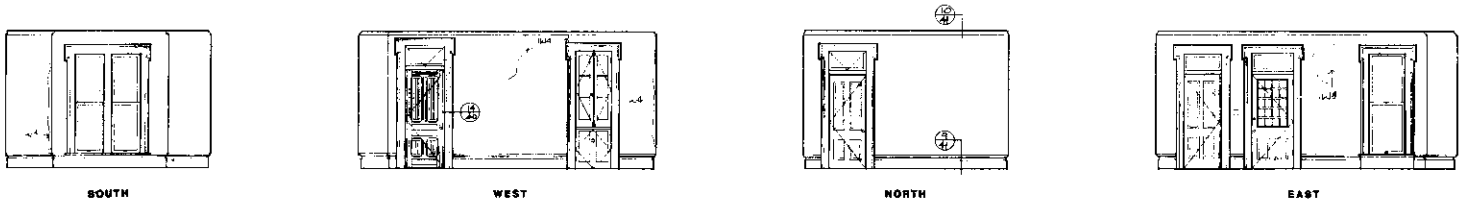
HARRY S TRUMAN N. H. S.

REVISED	PREPARED	DRAWING NO
	DESIGNED	492 80005
	RAFIZADEH DRAWN	
	CHECKED	SHEET 22
	Feb 13 '81 DATE	OF 68

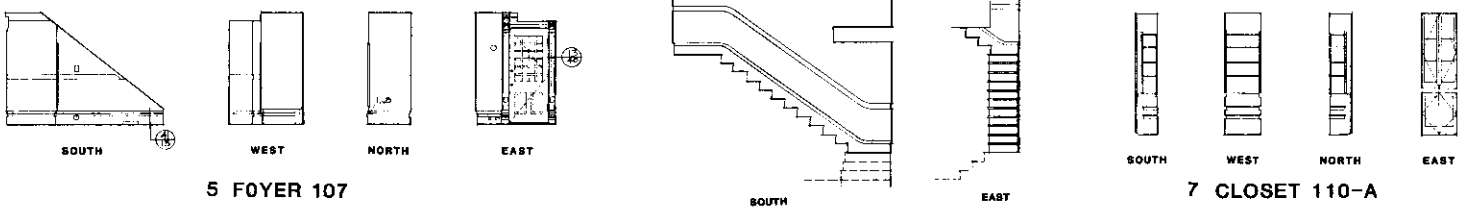


2 PARLOR/MUSIC ROOM 108

3 LIBRARY 109



4 DINING ROOM 110



5 FOYER 107

6 STAIR 108-A

7 CLOSET 110-A

1 EXISTING CONDITION LEGEND

WALLS

- W1 STONE - POWDERY SURFACE
- W2 BRICK - POWDERY SURFACE
- W3 LOOSE MASONRY
- W4 MINOR CRACK
- W5 MAJOR CRACK
- W6 BULGE IN PLASTER
- W7 MISSING PLASTER
- W8 CHIPPED PAINT
- W9 WATER STAINED
- W10 SOOT
- W11 SCORCHED PAINT
- W12 LOOSE JOINT
- W13 CHIPPED OR MISSING TRIM
- W14 WRINKLED WALL PAPER
- W15 LOOSE WALL PAPER
- W16 MISSING CEILING PANELS
- W17 WORN VARNISH

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20 West 9th Street
Kansas City, Missouri 64105
816 842 2202

FIRST FLOOR

SCALE : 1/4" = 1'- 0"

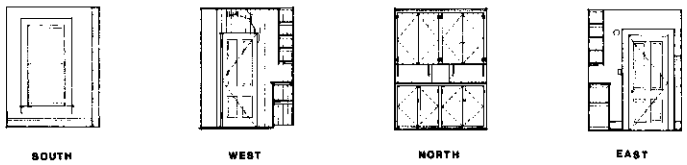
SCALE OF FEET

EXISTING CONDITION

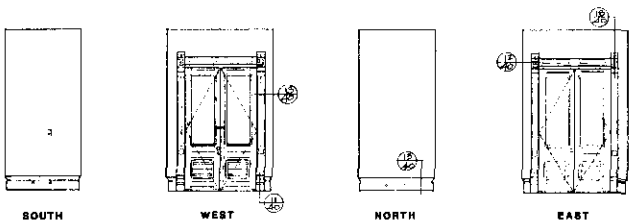
HS-1 TRUMAN HOME

HARRY S TRUMAN N. H. S.

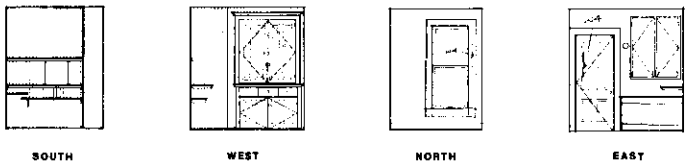
REVISED	PREPARED	DRAWING NO
	DESIGNED RAFTEADER	492 80005
	DRAWN	
	CHECKED	SHEET 23
	DATE Feb. 13, 85	OF 55



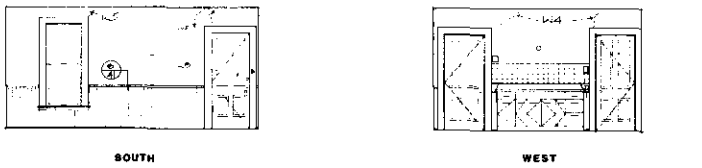
2 BUTLER'S PANTRY 111



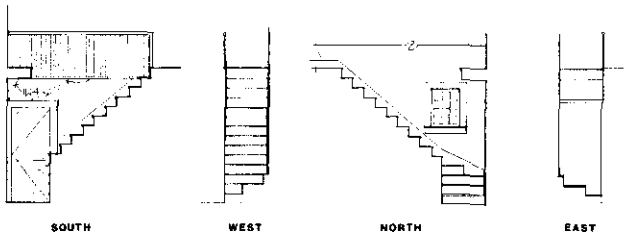
3 VESTIBULE 101



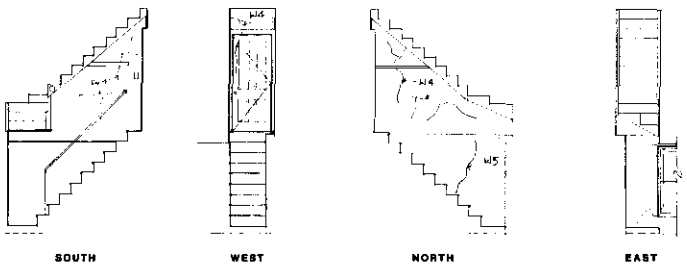
4 PANTRY 112



5 KITCHEN 113



6 STAIR HALL 113-A



7 STAIR HALL 113-B

1 EXISTING CONDITION LEGEND

WALLS

1W1 STONE - POWDERY SURFACE
1W2 BRICK - POWDERY SURFACE
1W3 LOOSE MASONRY
1W4 MINOR CRACK
1W5 MAJOR CRACK
1W6 BULGE IN PLASTER
1W7 MISSING PLASTER
1W8 CHIPPED PAINT
1W9 WATER STAINED
1W10 SOOT
1W11 SCORCHED PAINT
1W12 LOOSE JOINT
1W13 CHIPPED OR MISSING TRIM
1W14 WRINKLED WALL PAPER
1W15 LOOSE WALL PAPER
1W16 MISSING CEILING PANELS
1W17 WORN VARNISH

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20 West 9th Street
Kansas City, Missouri 64105
816 842 2292

FIRST FLOOR
SCALE : 1/4" = 1'-0"

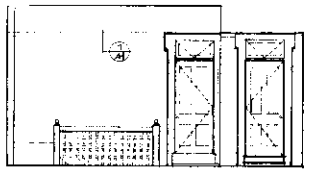
4 0 4 8
SCALE OF FEET

EXISTING CONDITION

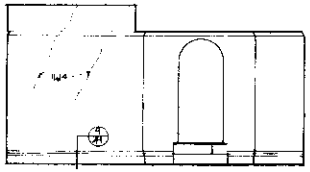
HS-1 TRUMAN HOME

HARRY S TRUMAN N.H.S.

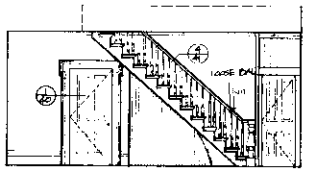
REVISED	PREPARED	DRAWING NO.
	DESIGNED	492 80005
	RAPIZADEH DRAWN	
	CHECKED	SHEET 24
	Feb. 13, 85 DATE	OF 55



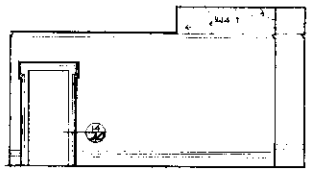
SOUTH



WEST

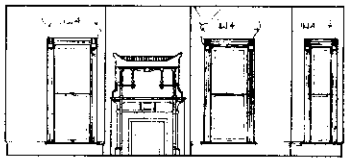


NORTH



EAST

2 CENTRAL HALL 202



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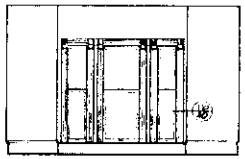

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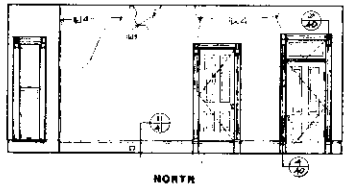
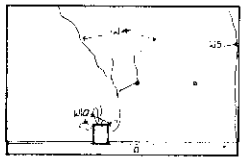
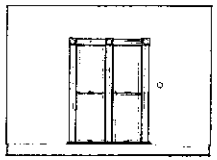


NORTH



EAST

3 MASTER BEDROOM 204



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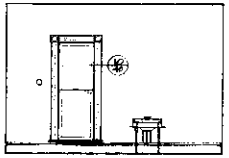

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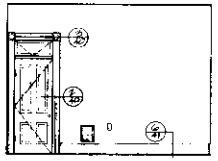
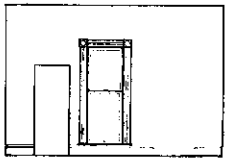
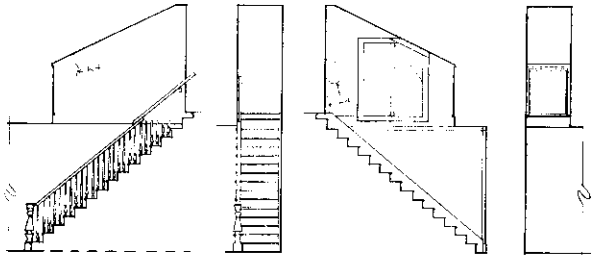


NORTH



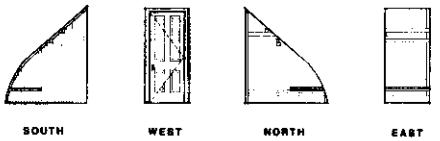
EAST

4 TRUMAN BEDROOM 205



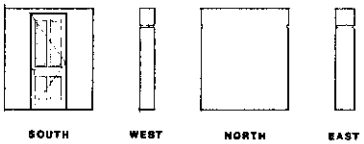
SOUTH WEST NORTH EAST

5 STAIR 202-B



SOUTH WEST NORTH EAST

6 CLOSET 202-C



SOUTH WEST NORTH EAST

7 CLOSET 204-B

1 EXISTING CONDITION LEGEND

WALLS

1W1 STONE - POWDERY SURFACE
1W2 BRICK - POWDERY SURFACE
1W3 LOOSE MASONRY
1W4 MINOR CRACK
1W5 MAJOR CRACK
1W6 BULGE IN PLASTER
1W7 MISSING PLASTER
1W8 CHIPPED PAINT
1W9 WATER STAINED
1W10 SOOT
1W11 SCORCHED PAINT
1W12 LOOSE JOINT
1W13 CHIPPED OR MISSING TRIM
1W14 WRINKLED WALL PAPER
1W15 LOOSE WALL PAPER
1W16 MISSING CEILING PANELS
1W17 WORN VARNISH

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20 West 9th Street
Kansas City, Missouri 64105
816 842 2292

SECOND FLOOR
SCALE : 1/4" = 1'-0"

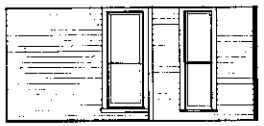
4 0 4 8
SCALE OF FEET

EXISTING CONDITION

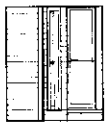
HS-1 TRUMAN HOME
HARRY S TRUMAN N.H.S.

REVISED	PREPARED	DRAWING NO.
	DESIGNED	492 80005
	DRAWN RAFIZADEH	
	CHECKED	SHEET 25
	DATE Feb. 13, 85	OF 35

SOUTH



WEST

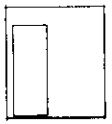


NORTH

EAST

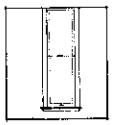
2 SLEEPING PORCH 206

SOUTH



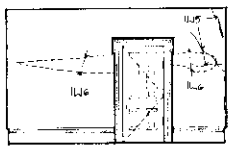
WEST

NORTH



EAST

9 PASSAGEWAY 206-A



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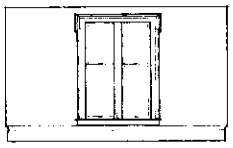

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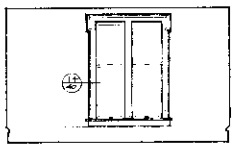
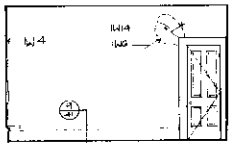
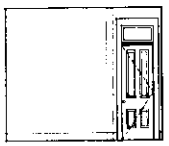


NORTH



EAST

4 BEDROOM 207



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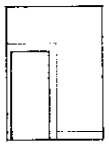

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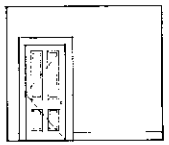
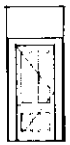
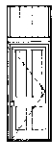


NORTH



EAST

5 HALL 208



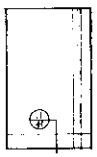
SOUTH

WEST

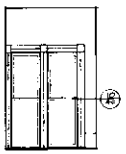
NORTH

EAST

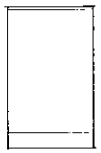
6 LINEN CLOSET 208-A



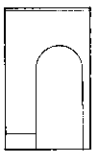
SOUTH



WEST



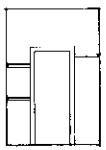
NORTH



EAST

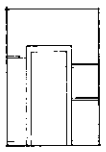
7 ALCOVE 201

SOUTH



WEST

NORTH



EAST

8 CLOSET 209-B/C

1 EXISTING CONDITION LEGEND

WALLS

1W1 STONE - POWDERY SURFACE
1W2 BRICK - POWDERY SURFACE
1W3 LOOSE MASONRY
1W4 MINOR CRACK
1W5 MAJOR CRACK
1W6 BULGE IN PLASTER
1W7 MISSING PLASTER
1W8 CHIPPED PAINT
1W9 WATER STAINED
1W10 SOOT
1W11 SCORCHED PAINT
1W12 LOOSE JOINT
1W13 CHIPPED OR MISSING TRIM
1W14 WRINKLED WALL PAPER
1W15 LOOSE WALL PAPER
1W16 MISSING CEILING PANELS
1W17 WORN VARNISH

Restoration Associates
a division of
Solomon Claybaugh Young Architects Inc.
20 West 9th Street
Kansas City Missouri 64105
816 842 2292

SECOND FLOOR

SCALE : 1/4" = 1'-0"

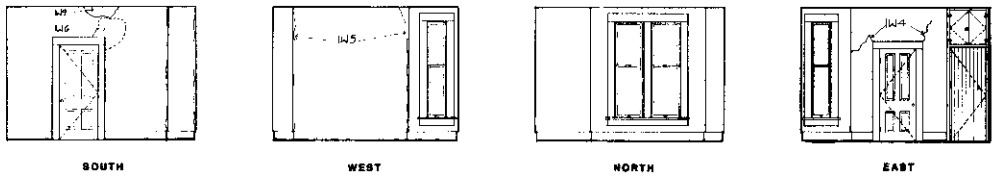
4 0 4 8
SCALE OF FEET

EXISTING CONDITION

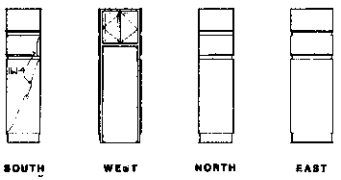
HS-1 TRUMAN HOME

HARRY S TRUMAN N. H. S.

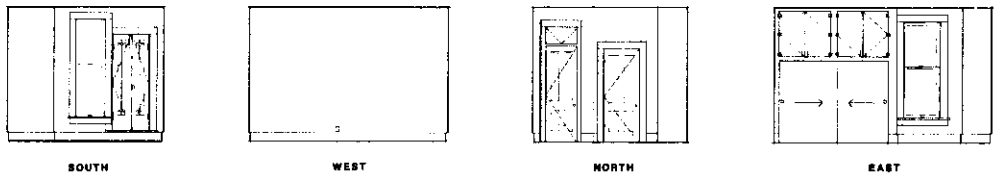
REVISED	PREPARED	DRAWING NO
	DESIGNED RAPTZADER	492 80005
	DRAWN	SHEET 26
	CHECKED	OF 55
	Feb. 13, 85 DATE	



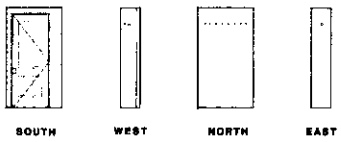
2 TRUMAN DRESSING ROOM 209



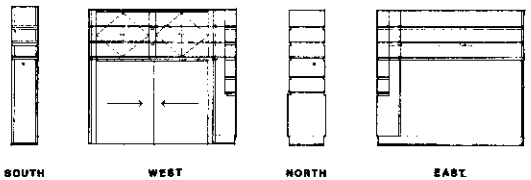
3 CLOSET 209-D



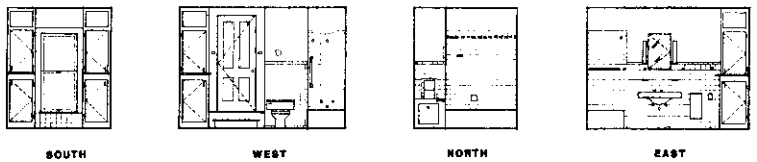
4 BEDROOM 210



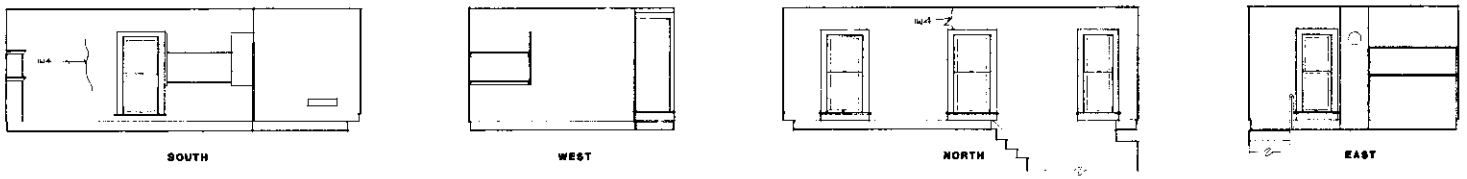
5 CLOSET 210-A



6 CLOSET 210-B



7 BATHROOM 211



8 STORAGE ROOM 213

1 EXISTING CONDITION LEGEND

WALLS

- W1 STONE - POWDERY SURFACE
- W2 BRICK - POWDERY SURFACE
- W3 LOOSE MASONRY
- W4 MINOR CRACK
- W5 MAJOR CRACK
- W6 BULGE IN PLASTER
- W7 MISSING PLASTER
- W8 CHIPPED PAINT
- W9 WATER STAINED
- W10 SOOT
- W11 SCORCHED PAINT
- W12 LOOSE JOINT
- W13 CHIPPED OR MISSING TRIM
- W14 WRINKLED WALL PAPER
- W15 LOOSE WALL PAPER
- W16 MISSING CEILING PANELS
- W17 WORN VARNISH

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SECOND FLOOR

SCALE : 1/4" = 1'-0"

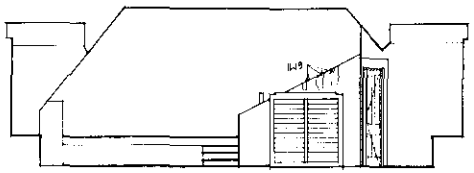
4 0 4 8
SCALE OF FEET

EXISTING CONDITION

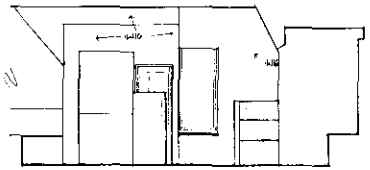
HS-1 TRUMAN HOME

HARRY S TRUMAN N. H. S.

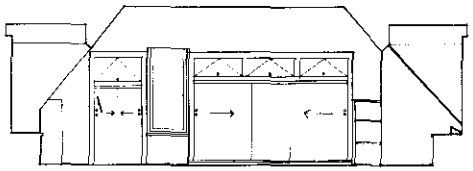
REVISED	PREPARED	DRAWING NO.
	DESIGNED	492 80008
	DRAWN	
	CHECKED	SHEET 27
	DATE Feb 13 85	OF 58



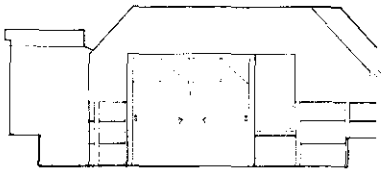
SOUTH



WEST

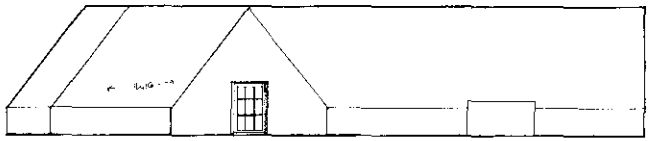


NORTH

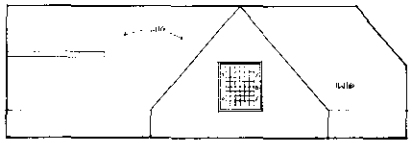


EAST

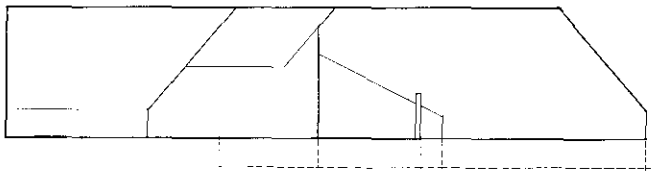
2 LOWER LEVEL (NEW ATTIC) 302



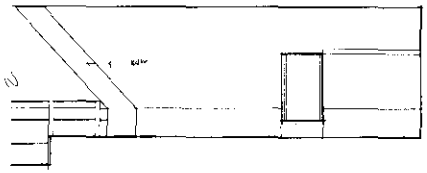
SOUTH



WEST

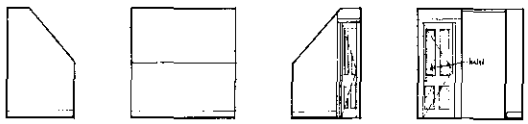


NORTH



EAST

3 UPPER LEVEL (NEW ATTIC) 303



SOTH WEST NORTH EAST

4 VESTIBULE 304

1 EXISTING CONDITION LEGEND

WALLS

- 1w1 STONE - POWDERY SURFACE
- 1W2 BRICK - POWDERY SURFACE
- 1w3 LOOSE MASONRY
- 1W4 MINOR CRACK
- 1w5 MAJOR CRACK
- 1W6 BULGE IN PLASTER
- 1W7 MISSING PLASTER
- 1W8 CHIPPED PAINT
- 1W9 WATER STAINED
- 1W10 SOOT
- 1W11 SCORCHED PAINT
- 1W12 LOOSE JOINT
- 1W13 CHIPPED OR MISSING TRIM
- 1W14 WRINKLED WALL PAPER
- 1W15 LOOSE WALL PAPER
- 1W16 MISSING CEILING PANELS
- 1W17 WORN VARNISH

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SCALE : 1/4" = 1'-0"

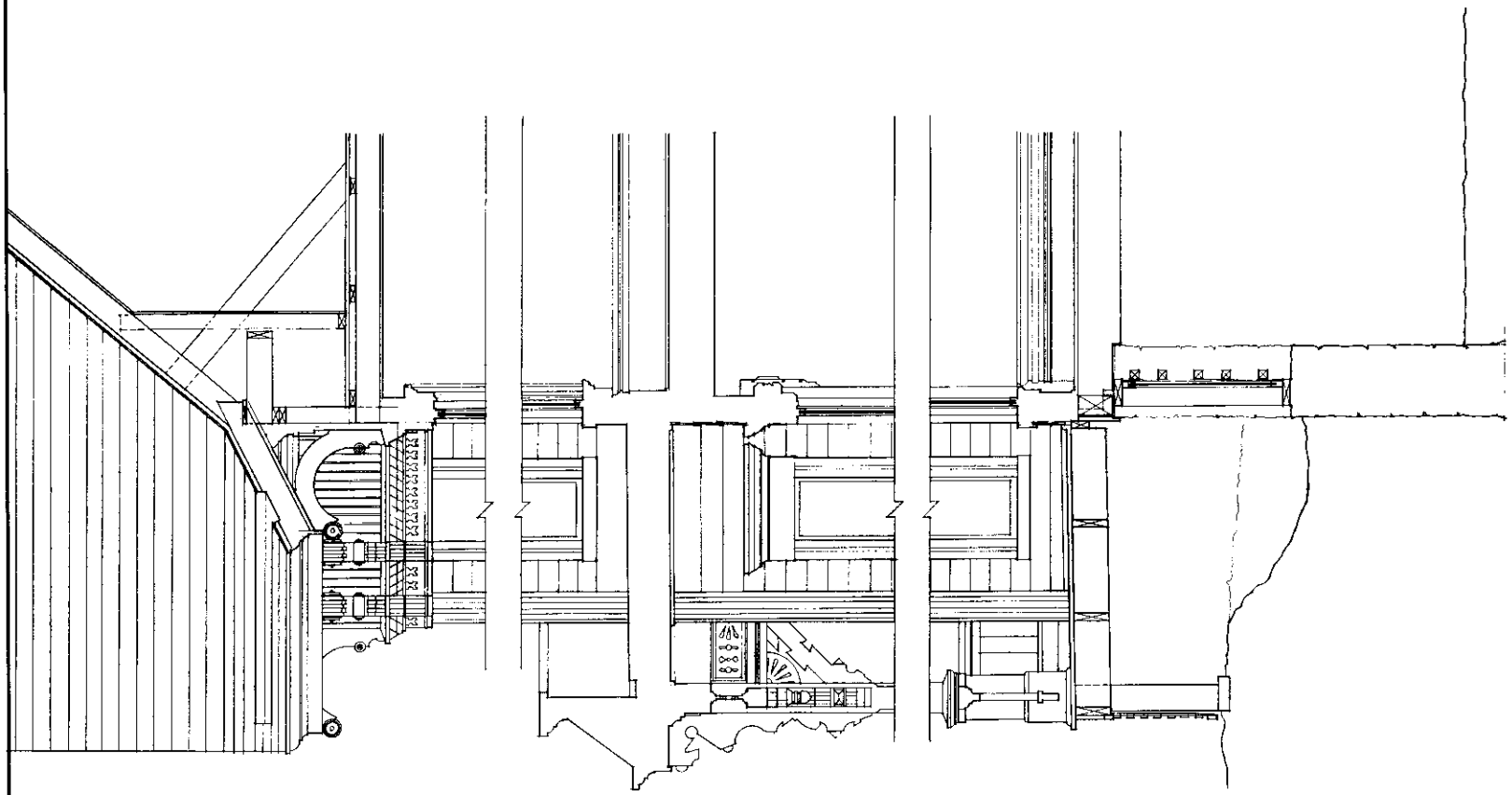
4 0 4 8
SCALE OF FEET

EXISTING CONDITION

HS-1 TRUMAN HOME

HARRY S TRUMAN N. H.S.

REVISED	PREPARED	DRAWING NO
	DESIGNED RAPTZADEH	402 80005
	DRAWN	
	CHECKED Feb. 13, 85 DATE	SHEET 28 OF 55



1 DETAIL SECTION THRU NORTH WALL

SCALE : 1" = 1'-0"

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Kansas City, Missouri 64105
816 842 2292

SCALE : 1" = 1'-0"

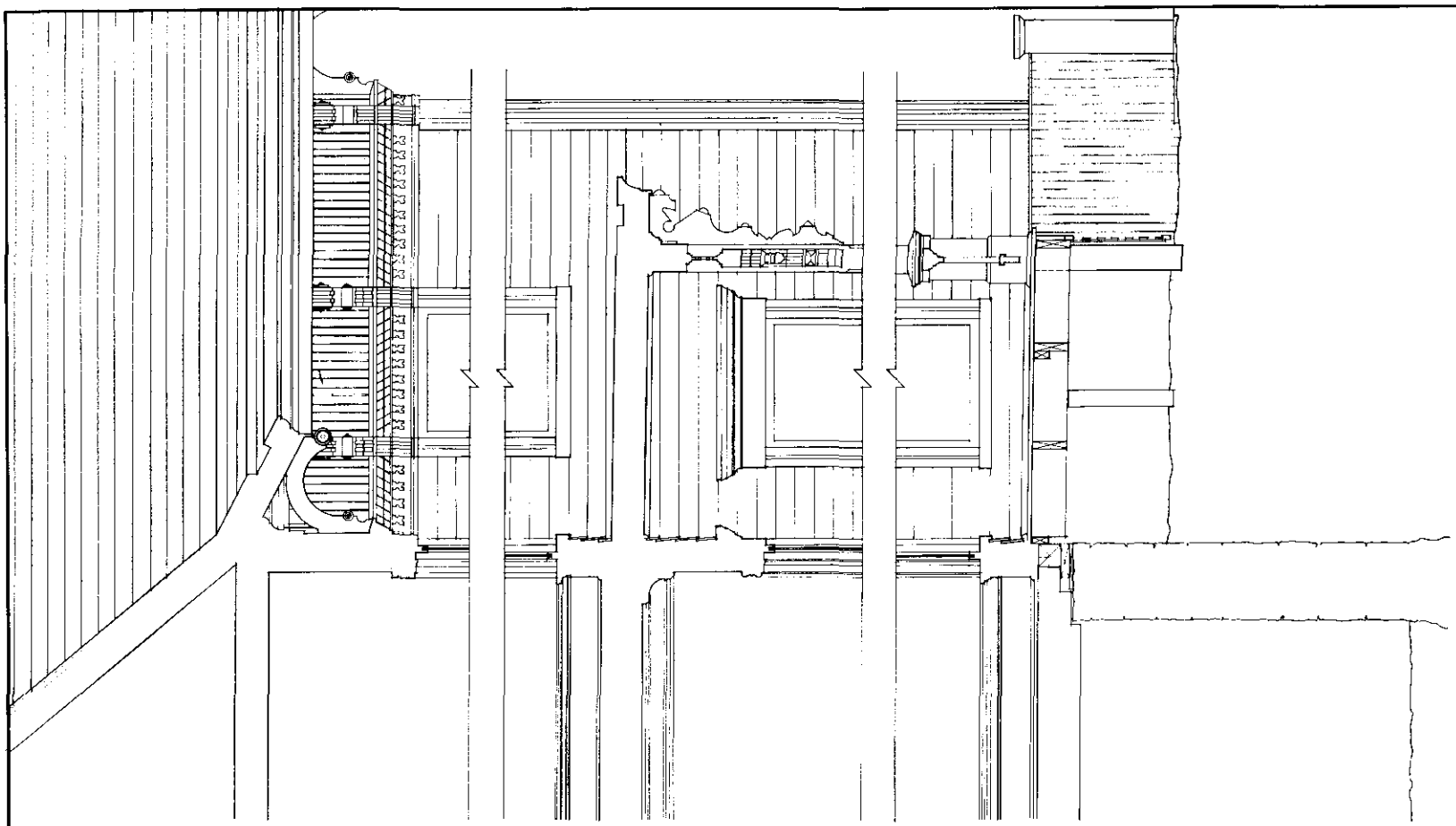
0 1 2
SCALE OF FEET

EXISTING CONDITION

HS-1 TRUMAN HOME

HARRY S TRUMAN N. H. S.

REVISED	PREPARED	DRAWING NO.
	DESIGNED	492 80008
	FULTON DRAWN	
	CHECKED	SHEET 29
	Feb. 13, 85 DATE	OF 56



1 DETAIL SECTION THRU SOUTH WALL

SCALE : 1" = 1'-0"

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Kansas City, Missouri 64105

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SCALE : 1" = 1'-0"

2 0 1 2

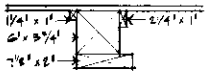
SCALE OF FEET

EXISTING CONDITION

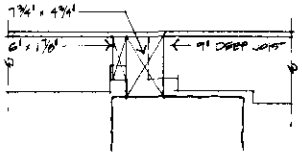
HS-1 TRUMAN HOME

HARRY S TRUMAN N. H. S.

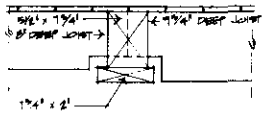
REVISED	PREPARED	DRAWING NO.
	DESIGNED	492 / 80005
	FULTON DRAWN	
	CHECKED	SHEET 30
	Feb. 13, 85 DATE	OF 50



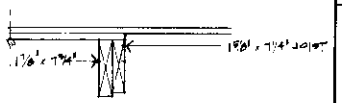
1 BEAM SECTION



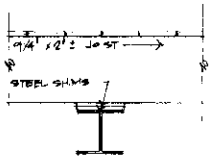
5 SECTION



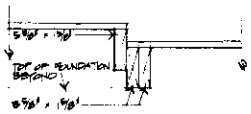
9 BEAM SECTION



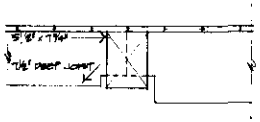
13 JOIST SECTION



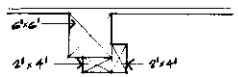
2 BEAM SECTION



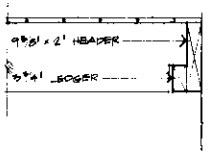
6 JOIST SECTION



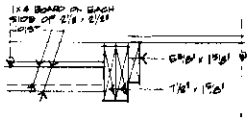
10 BEAM SECTION



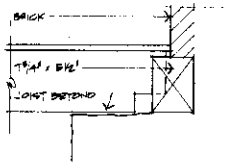
14 BEAM SECTION



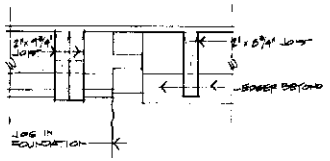
3 LEDGER SECTION



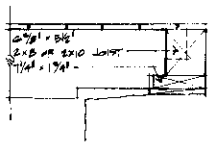
7 JOIST SECTION



11 SILL SECTION

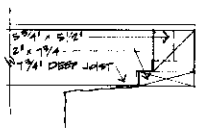


15 JOIST SECTION & SILL DETAIL

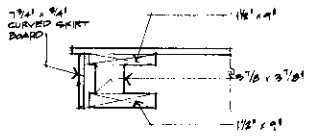


4 SILL SECTION

8 BEAM SECTION



12 SILL SECTION



16 PORCH CURVE SECTION

FIRST FLOOR FRAMING DETAILS

1 1/2" 1'-0" REF. SHEET 9

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816 842 2292

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

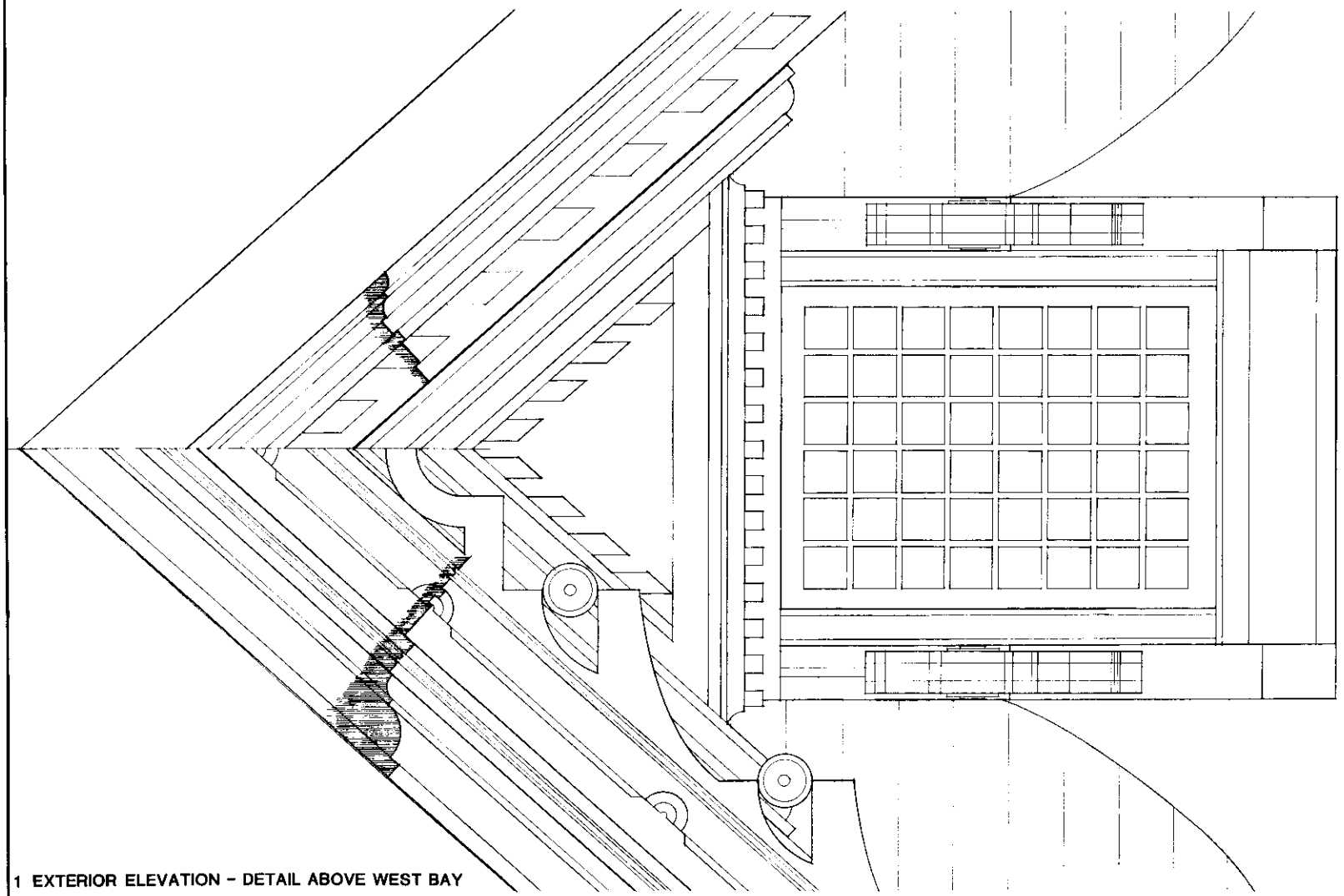
SCALE IN FEET

EXISTING CONDITION

HS-1 TRUMAN HOME

HARRY S TRUMAN N. H. S.

REVISED	PREPARED	DRAWING NO.
	DESIGNED TOUNG	492 80005
	DRAWN	
	CHECKED	SHEET 31
	Feb. 13, 85 DATE	OF 55



1 EXTERIOR ELEVATION - DETAIL ABOVE WEST BAY

SCALE : 3" = 1'-0"

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Solomon Claybaugh Young Architects Inc.
20 West 9th Street
Kansas City, Missouri 64105
816 842 2292

SCALE : 3" = 1'-0"

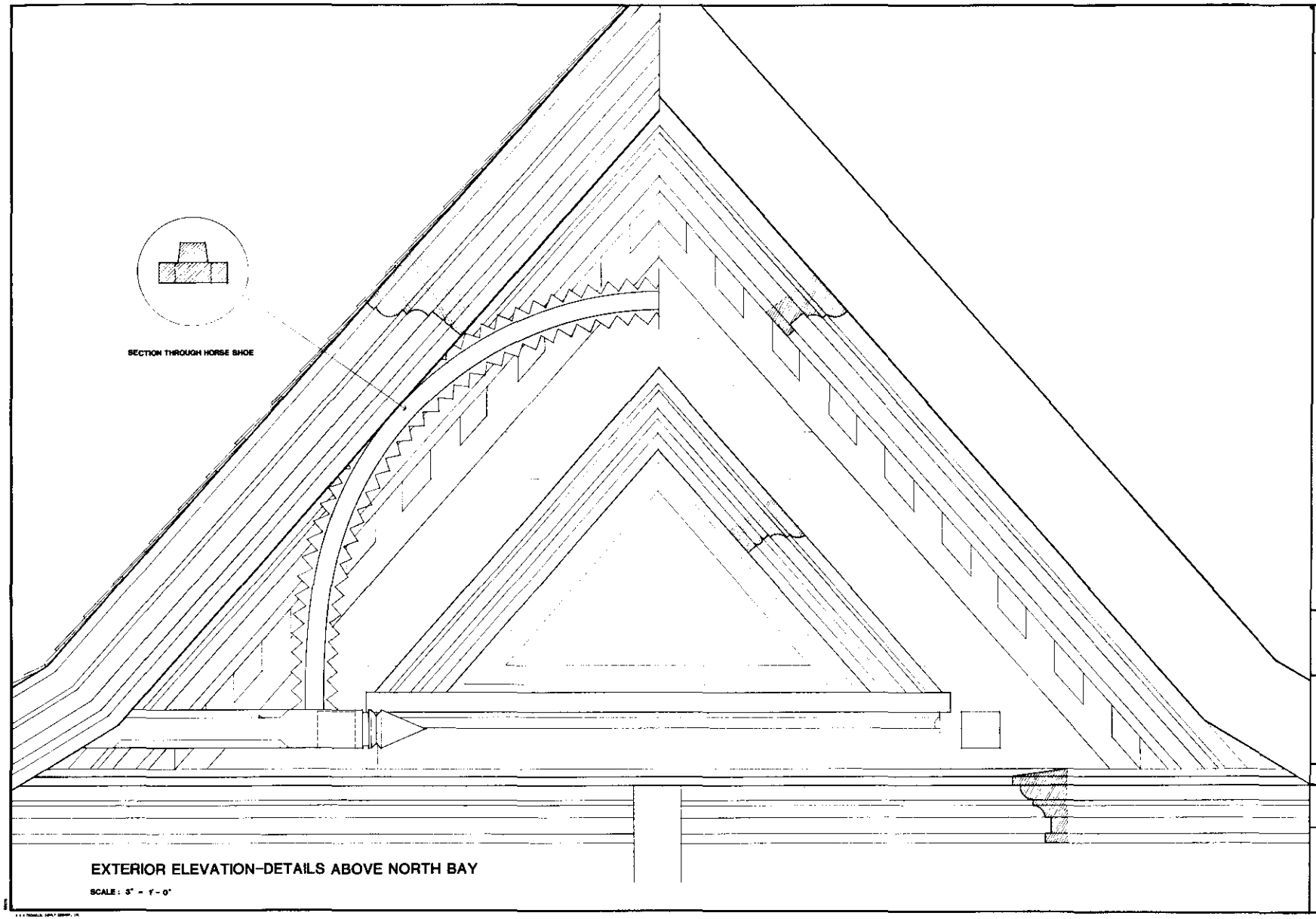
0 6" 1' 2'
SCALE OF FEET

EXISTING CONDITION

HS-1 TRUMAN HOME

HARRY S TRUMAN N. H. S.

REVISED	PREPARED	DRAWING NO.
	DESIGNED FULTON	492 80008
	DRAWN	
	CHECKED	SHEET 32
	Feb. 13, 85 DATE	OF 86



EXTERIOR ELEVATION–DETAILS ABOVE NORTH BAY

SCALE : 3" = 1'-0"

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a division of
Solomon Claybaugh Young Architects Inc.
20 West 9th Street
Kansas City, Missouri 64105
816 842 2292

SCALE : 3" = 1'-0"

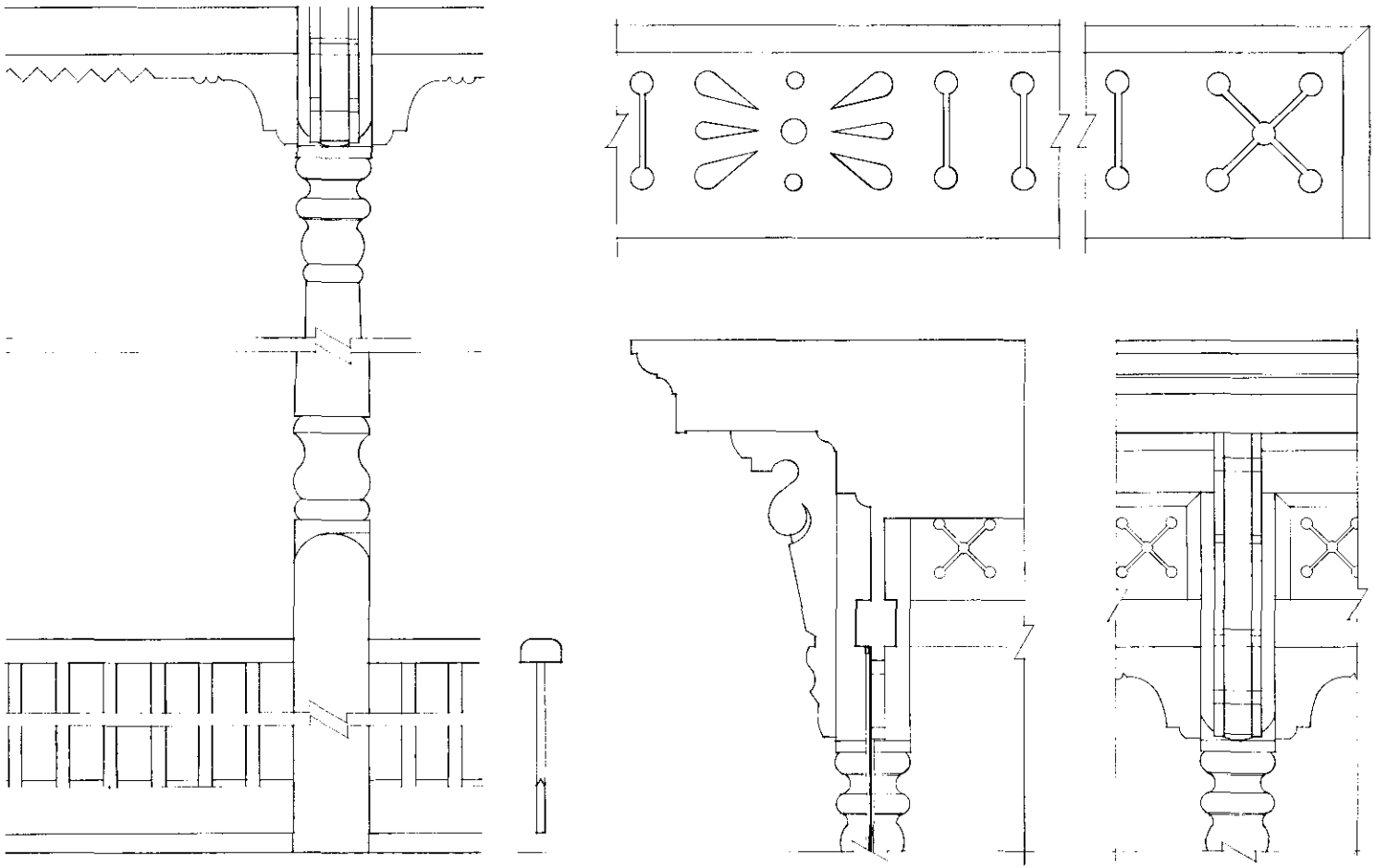
0 3" 6" 1'
SCALE OF INCHES

EXISTING CONDITION

HS-1 TRUMAN HOME

HARRY S TRUMAN N. H. S.

REVISED	PREPARED	DRAWING NO.
	DESIGNED RAFTZADEH DRAWN CHECKED Feb. 13 85 DATE	482 80005 SHEET 33 OF 85



1 EXTERIOR DETAILS – WOODWORK & TRIM AT KITCHEN PORCH

SCALE : 3" = 1' - 0"

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a division of

Solomon Claybaugh Young Architects Inc.

20 West 9th Street

Kansas City, Missouri 64105

816 842 2292

SCALE : 3" = 1' - 0"

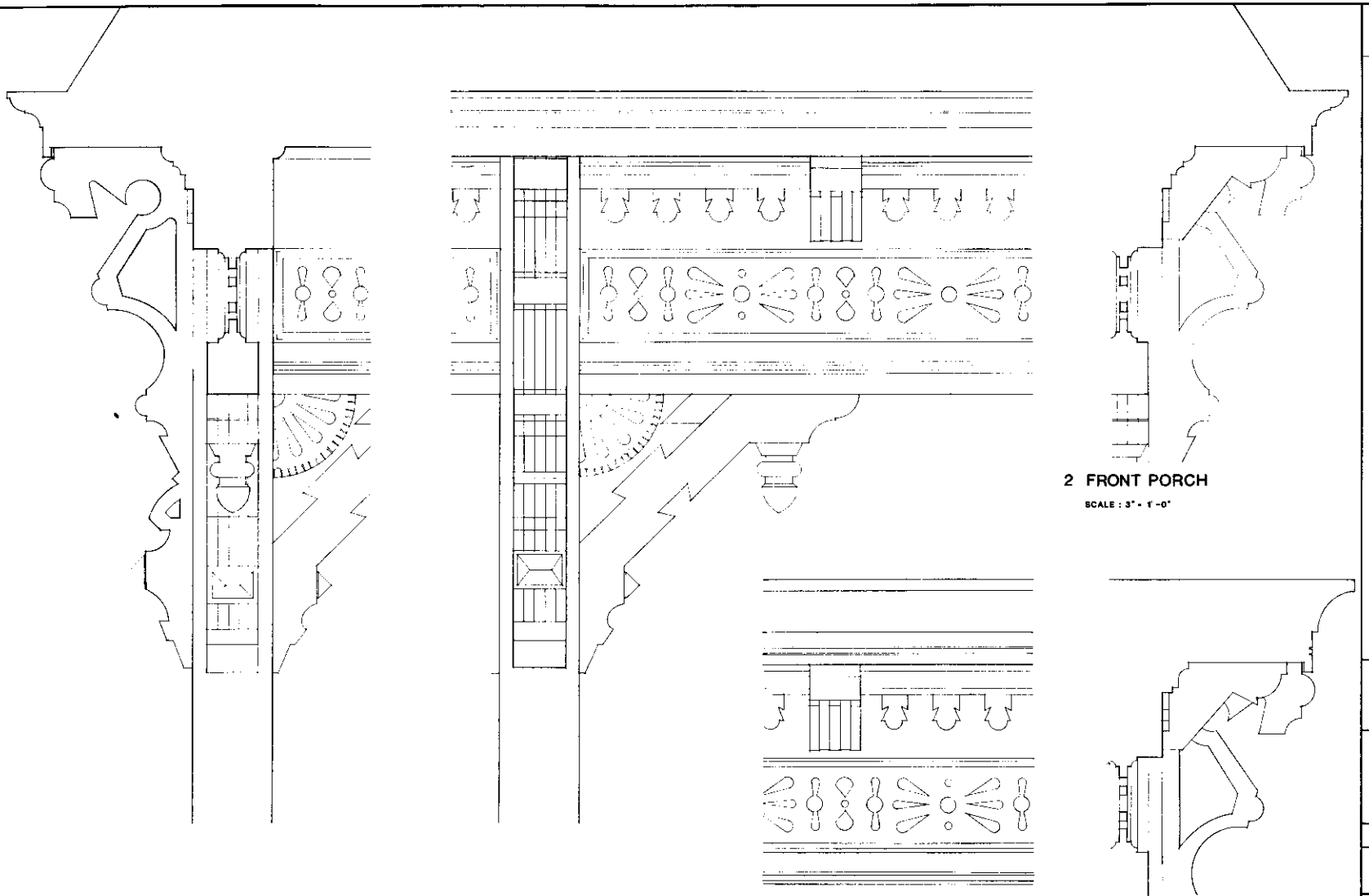
SCALE OF FEET

EXISTING CONDITION

HS-1 TRUMAN HOME

HARRY S TRUMAN N. H. S.

REVISED	PREPARED	DRAWING NO.
	DESIGNED	492 s0005
	DRAWN FULTON	
	CHECKED	SHEET 34
	DATE Feb 13, 85	OF 56



1 EXTERIOR DETAILS - WOODWORK & TRIM AT FRONT & SOUTH PORCHES

SCALE : 3" = 1'-0"

2 FRONT PORCH

SCALE : 3" = 1'-0"

3 SOUTH PORCH

SCALE : 3" = 1'-0"

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Solomon Claybaugh Young Architects Ltd.

20 West 9th Street

Kansas City, Missouri 64105

816 842 2292

SCALE : 3" = 1'-0"

4" 0 4" 8"

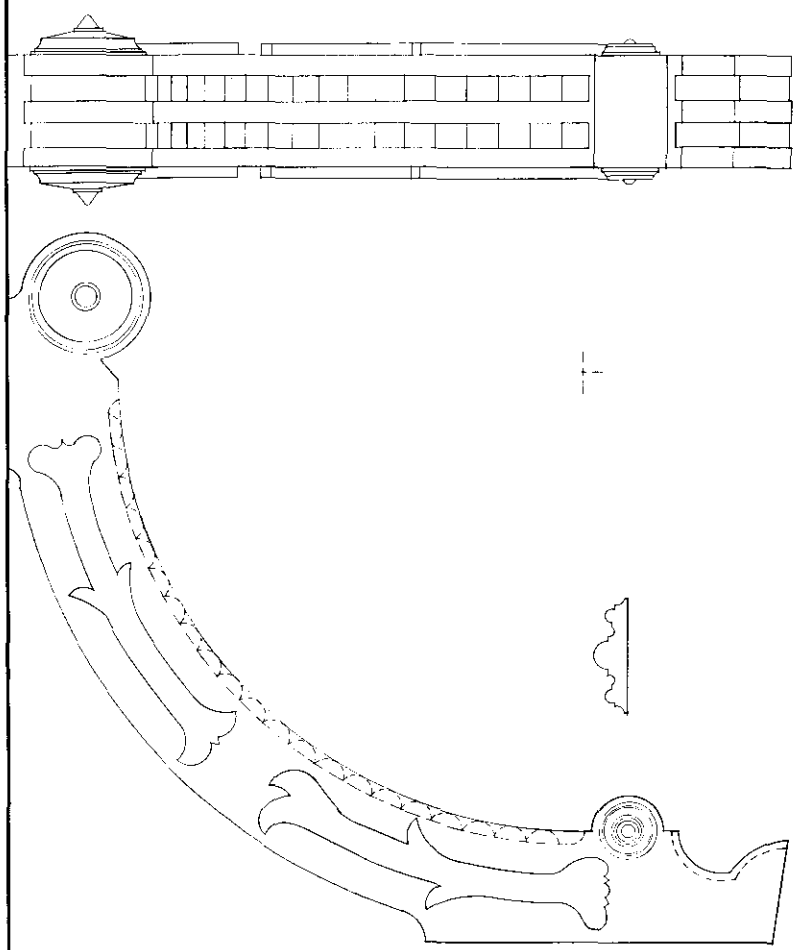
SCALE OF FEET

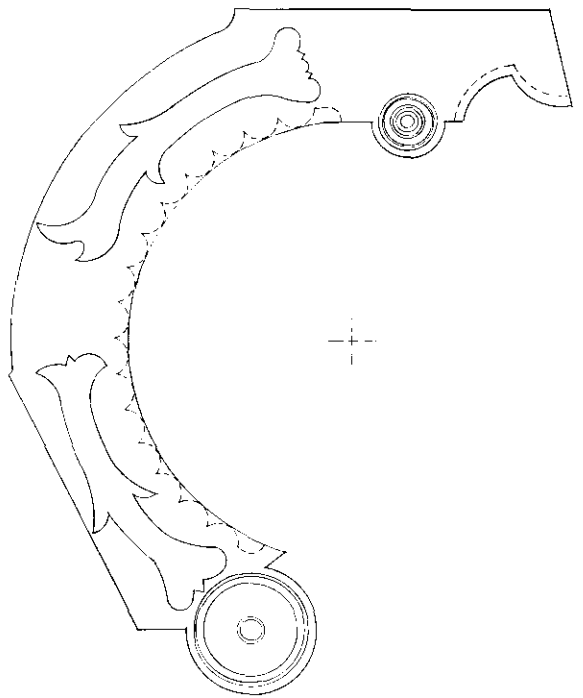
EXISTING CONDITION

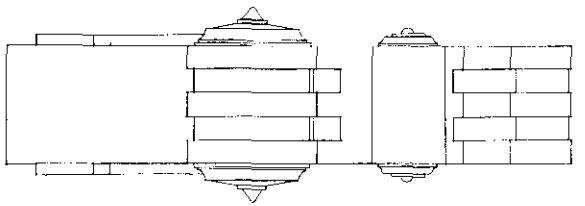
HS-1 TRUMAN HOME

HARRY S TRUMAN N. H. S.

REVISED	PREPARED	DRAWING NO
	DESIGNED FULTON	492 60005
	DRAWN	
	CHECKED	SHEET 35
	Feb. 13, 85 DATE	OF 55







1 MISC. SPECIAL EXTERIOR DETAILS OF BRACKETS

ONE HALF SCALE

Restoration Associates

a division of

Solomon Claybaugh Young Architects Inc.

20 West 9th Street

Kansas City, Missouri 64105

816 842 2292

SCALE : 3" = 1'-0"

0 6" 9"

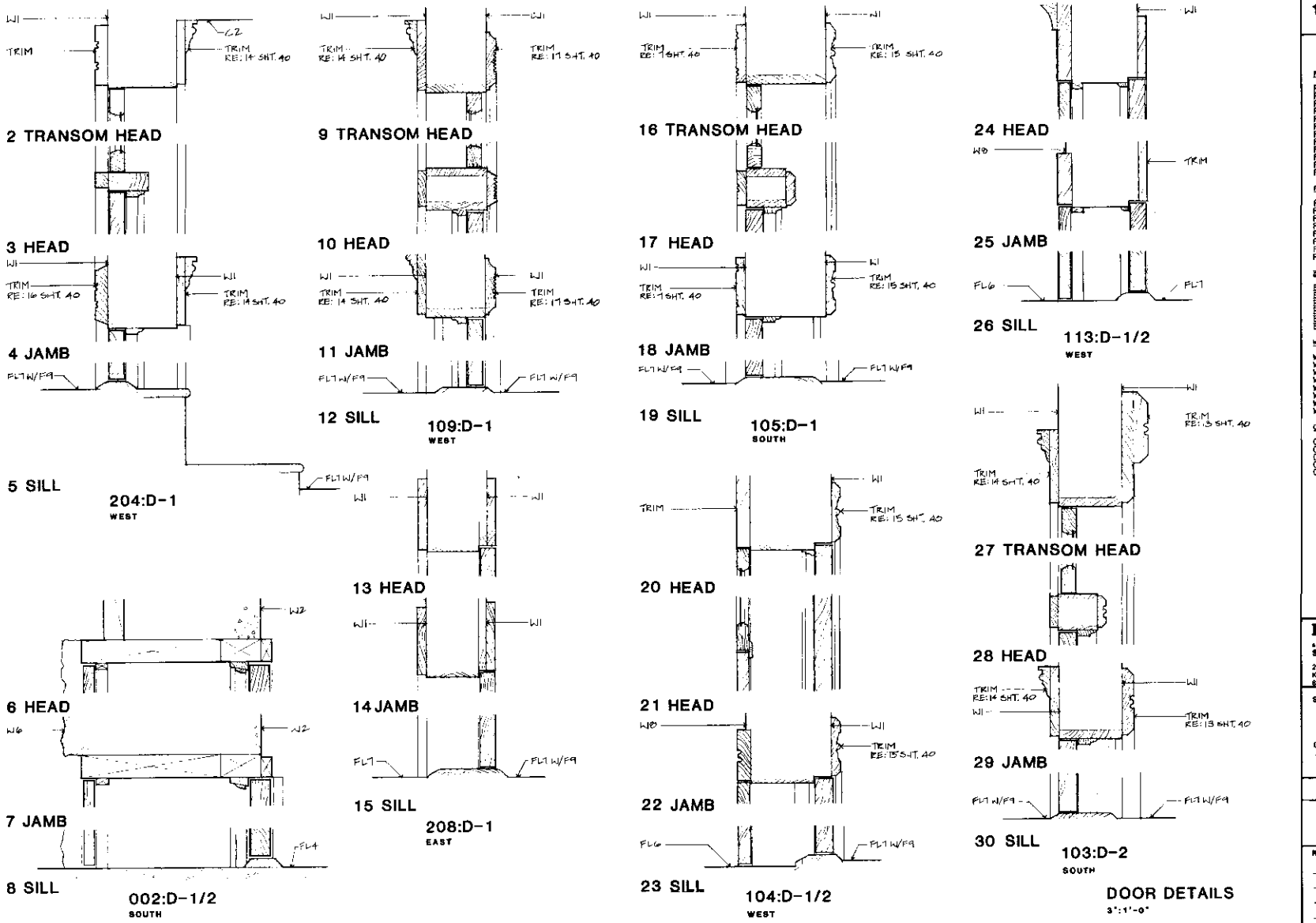
SCALE OF FEET

EXISTING CONDITION

HS - 1 TRUMAN HOME

HARRY S TRUMAN N. H. S.

REVISED	PREPARED	DRAWING NO.
	DESIGNED FULTON	482 80005
	DRAWN	
	CHECKED	SHEET 36
	Feb. 13, 83 DATE	OF 55



1 SYSTEMS NOTES

FINISHES

F1 NO FINISH
F2 PAINT
F3 STAIN
F4 VARNISH
F5 PAINTED WALLPAPER
F6 WHITE WASH
F7 WALLPAPER
F8 PLASTIC TILE
F9 CARPET
F10 LINCRUSTA
F11 LINOLEUM
F12 CERAMIC TILE

FLOOR MATERIAL

FL1 WOOD PLANKS
FL2 EARTH
FL3 STONE
FL4 CONCRETE SLAB
FL5 TILE PATTERN HARDBOARD
FL6 NOM. 1" X 3" T&G WOOD
FL7 NOM. 1" X 6" T&G WOOD
FL8 BRICK

BASE MATERIAL

B1 NO BASE
B2 PLAIN 1 X WOOD
B3 PLAIN 1 X WOOD W/¼ ROUND SHOE
B4 1 X WOOD W/TOP MOULD
B5 QUARTER ROUND SHOE
B6 CERAMIC TILE

WALL MATERIAL

W1 PLASTER W/WOOD LATH
W2 CONCRETE
W3 NOMINAL 1 X T&G WOOD
W4 NOMINAL 1 X WOOD
W5 BEAVER BOARD
W6 STONE
W7 EXPOSED STRUCTURE
W8 WOOD LAP SIDING

CEILING MATERIAL

C1 EXPOSED STRUCTURE
C2 PLASTER ON WOOD LATH
C3 NOM. 1 X T&G WOOD
C4 BEAVER BOARD
C5 1 X WOOD PLANKS

Restoration Associates
a division of
Solomon Claybaugh Young Architects Inc.
20 West 9th Street
Kansas City, Missouri 64105
816 842 2290

SCALE: 3" = 1'-0"

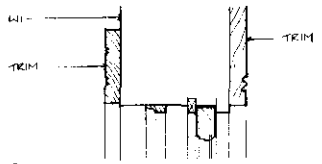
SCALE OF INCHES

EXISTING CONDITION

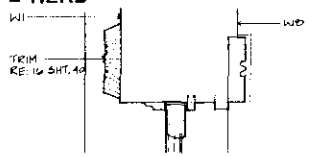
HS-1 TRUMAN HOME

HARRY S TRUMAN N. H. S.

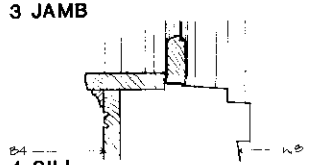
REVISED	PREPARED	DRAWING NO
	DESIGNED FARCH	492 60006
	DRAWN	
	CHECKED	SHEET 37
	Feb. 13, 85 DATE	OF 55



2 HEAD



3 JAMB

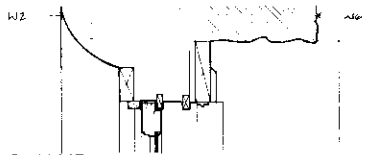


4 SILL

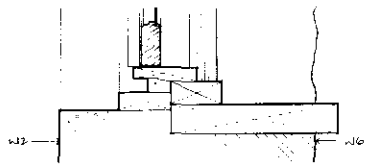
204A:W-1

INTERIOR EXTERIOR

5 HEAD

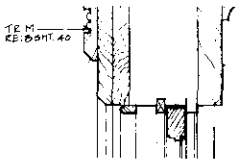


6 JAMB

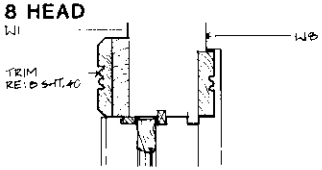


7 SILL

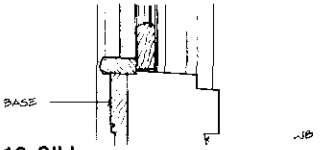
002:W-3



8 HEAD



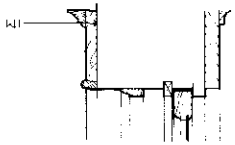
9 JAMB



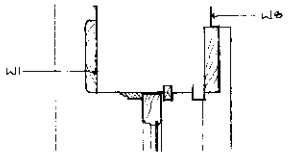
10 SILL

108:W-2

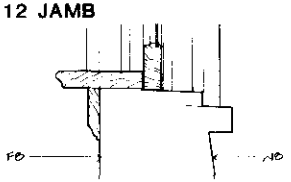
INTERIOR EXTERIOR



11 HEAD

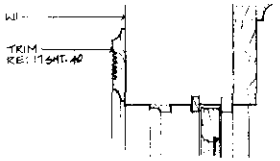


12 JAMB

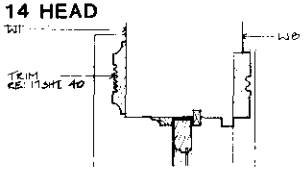


13 SILL

106:W-2



14 HEAD



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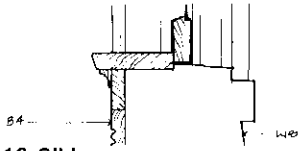
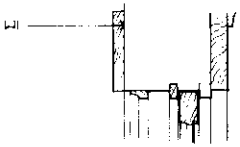


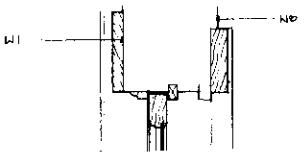
16 SILL

109A:W-2

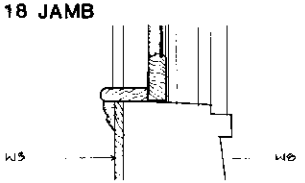
INTERIOR EXTERIOR



17 HEAD

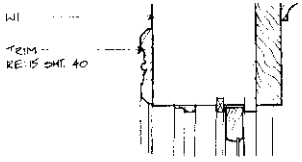


18 JAMB

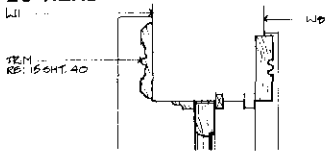


19 SILL

113:W-2



20 HEAD



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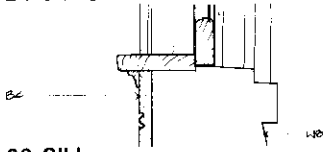
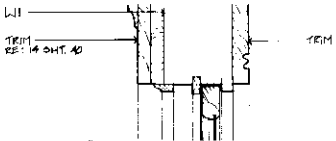


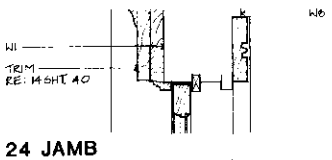
22 SILL

104:W-1

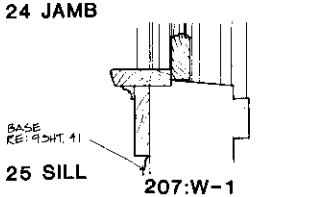
INTERIOR EXTERIOR



23 HEAD



24 JAMB



25 SILL

207:W-1

WINDOW DETAILS

3":1'-0"

1 SYSTEMS NOTES

FINISHES

F1 NO FINISH
F2 PAINT
F3 STAIN
F4 VARNISH
F5 PAINTED WALLPAPER
F6 WHITE WASH
F7 WALLPAPER
F8 PLASTIC TILE
F9 CARPET
F10 LINCRUSTA
F11 LINOLEUM
F12 CERAMIC TILE

FLOOR MATERIAL

FL1 WOOD PLANKS
FL2 EARTH
FL3 STONE
FL4 CONCRETE SLAB
FL5 TILE PATTERN HARDBOARD
FL6 NOM. 1" x 3" T&G WOOD
FL7 NOM. 1" x 6" T&G WOOD
FL8 BRICK

BASE MATERIAL

B1 NO BASE
B2 PLAIN 1 X WOOD
B3 PLAIN 1 X WOOD W/k ROUND SHOE
B4 1 X WOOD W/TOP MOULD
B5 QUARTER ROUND SHOE
B6 CERAMIC TILE

WALL MATERIAL

W1 PLASTER W/WOOD LATH
W2 CONCRETE
W3 NOMINAL 1 x T&G WOOD
W4 NOMINAL 1 X WOOD
W5 BEAVER BOARD
W6 STONE
W7 EXPOSED STRUCTURE
W8 WOOD LAP SIDING

CEILING MATERIAL

C1 EXPOSED STRUCTURE
C2 PLASTER ON WOOD LATH
C3 NOM. 1 x T&G WOOD
C4 BEAVER BOARD
C5 1 X WOOD PLANKS

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Kansas City, Missouri 64105
816 842 2292

SCALE: 3" = 1'-0"

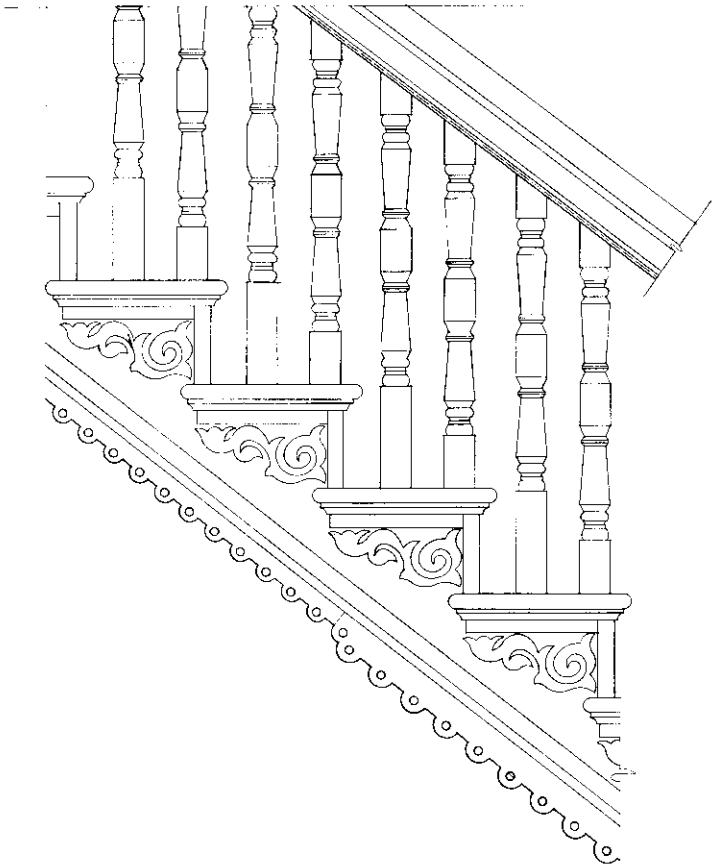
0 3" 6" 1'-0"
SCALE OF INCHES

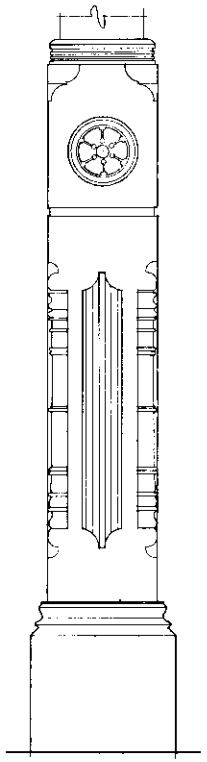
EXISTING CONDITION

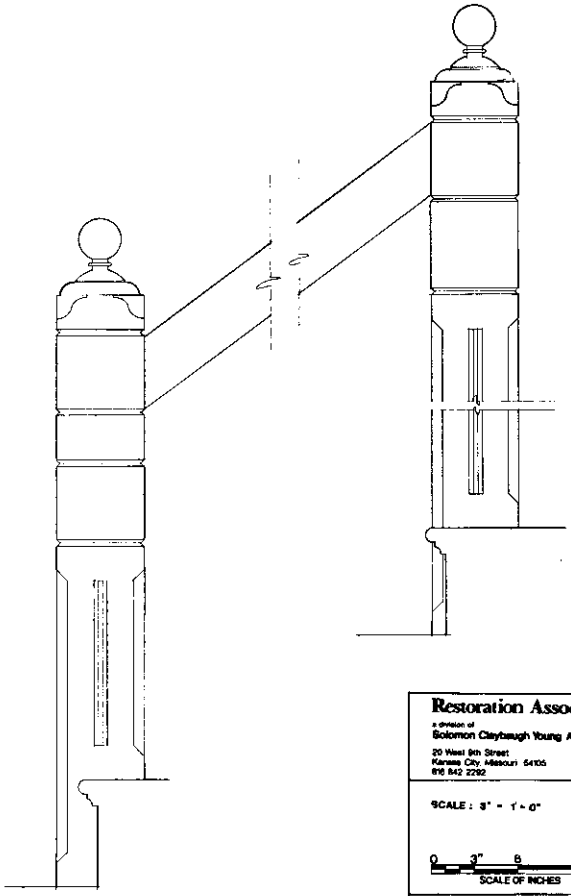
HS-1 TRUMAN HOME

HARRY S TRUMAN N. H. S.

REVISED	PREPARED	DRAWING NO.
	DESIGNED	492 #0006
	DRAWN	
	CHECKED	SHEET 38
	Feb 13, 81 DATE	OF 55







STAIRWAY DETAILS

SCALE : 3" = 1'-0"

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Solomon Claybaugh Young Architects Inc.

20 West 9th Street
Kansas City, Missouri 64105
816 842 2292

SCALE : 3" = 1'-0"

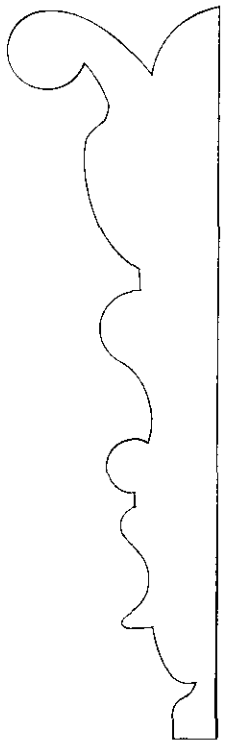
0 3" 6 1'
SCALE OF INCHES

EXISTING CONDITION

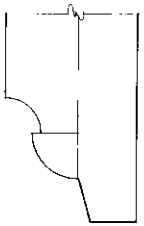
HS-1 TRUMAN HOME

HARRY S TRUMAN N. H. S.

REVISED	PREPARED	DRAWING NO.
	DESIGNED	492 80006
	DRAWN RAFIZADEH	
	CHECKED	SHEET 39
	DATE Feb. 13, 85	OF 85

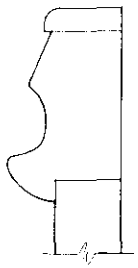


1 DOOR CORNER
101:D-1



2 CORNER BLOCK
109

3 CORNER BLOCK
105 205

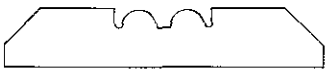


4 CORNER BASE
204

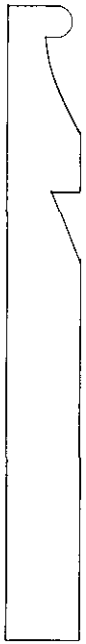
5 CORNER BLOCK
104

6 CORNER BLOCK
204

7 CASING 105

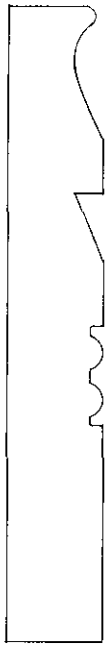


8 CASING 108

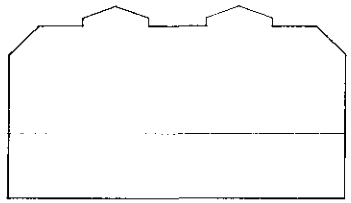


9 CORNER BASE 109

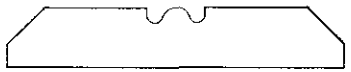
10 CASING 201 205



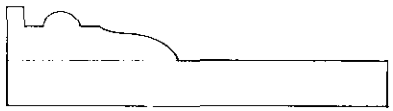
11 CORNER BASE 101 102 103 107 108



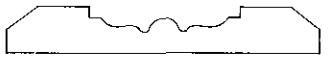
12 CORNER BLOCK
101 102 103 107 108



13 CASING 101 102 103 107

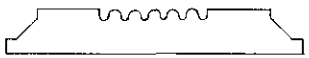


14 CASING 110 202 207

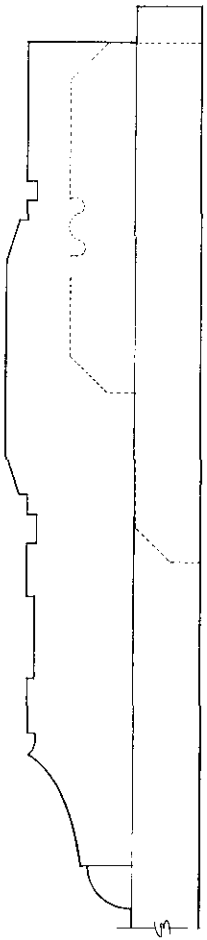


15 CASING 104

16 CASING 204



17 CASING 109



18 CORNER BLOCK
101 102 103 107 108

DOOR & WINDOW MOULDING PROFILES
FULL SIZE

Restoration Associates
a division of
Solomon Claybaugh Young Architects Inc.
20 West 9th Street
Kansas City, Missouri 64105
816 842 2292

FULL SIZE

SCALE OF INCHES

EXISTING CONDITION

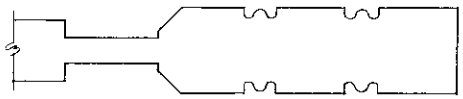
HS-1 TRUMAN HOME

HARRY S TRUMAN N. H. S.

REVISED	PREPARED	DRAWING NO
	DESIGNED FANCK	492 #0005
	DRAWN	
	CHECKED	SHEET 40
	Feb 13, 85 DATE	OF 58

1 DOOR PANEL

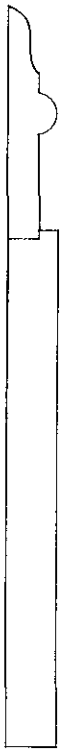
2 DOOR PANEL



3 DOOR PANEL

6 BASE
205

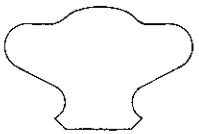
7 PICTURE MOULDING
202



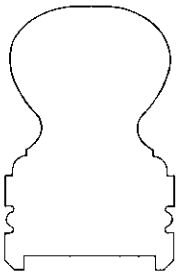
9 BASE
103 110 202 207

11 BASE
105 201 204

13 BASE
101 102 103
104 107 109

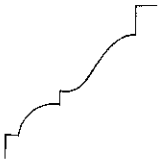


4 HANDRAIL
202-B

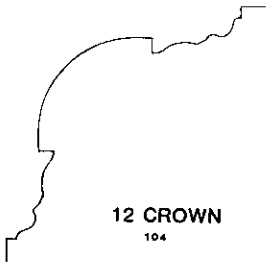


5 HANDRAIL
106-A

8 WAINSCOT CAP 113



10 CROWN
110



12 CROWN
104

MISCELLANEOUS MOULDING PROFILES

FULL SIZE

Restoration Associates
a division of
Solomon Claybaugh Young Architects Inc.
20 West 9th Street
Kansas City, Missouri 64105
816 842 2292

FULL SIZE

0 1" 2"
SCALE OF INCHES

EXISTING CONDITION

HS-1 TRUMAN HOME

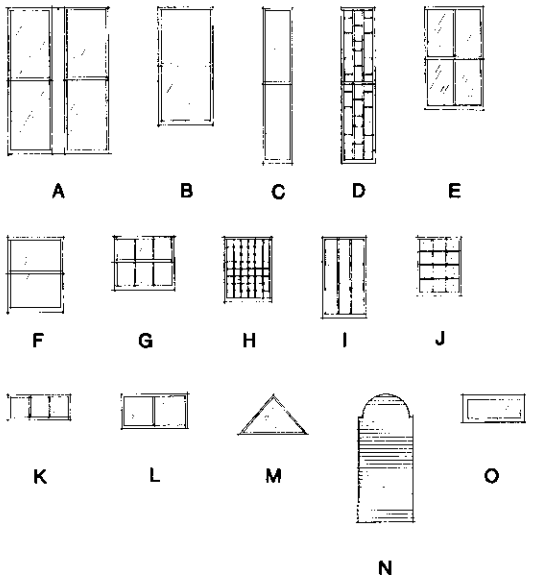
HARRY S TRUMAN N. H. S.

REVISED	PREPARED	DRAWING NO
	DESIGNED FARIN	492 80008
	DRAWN	
	CHECKED Feb. 13, 85 DATE	SHEET 41 OF 66

1 WINDOW SCHEDULE

MARK	TYPE	FRAME WIDTH	FRAME HT.	GLASS	DETAILS HEAD	DETAILS JAMB	DETAILS SILL	HDWR.	NOTES
002:W-1	K	2'-10"	1'-3½"	3 PANE 2'-10" x 1'-3½"	—	—	—		
002:W-2	E	2'-6"	3'-1½"	3 PANE 2'-6" x 3'-1½"	5 SHT.38 ALUM.	6 SHT.38 ALUM.	7 SHT.38 ALUM.		
002:W-3	B	2'-5"	4'-6"	3 PANE 2'-5" x 4'-6"	5 SHT.38 ALUM.	6 SHT.38 ALUM.	7 SHT.38 ALUM.		
002:W-4	B	2'-11"	2'-6½"	3 PANE 2'-11" x 2'-6½"	5 SHT.38 ALUM.	6 SHT.38 ALUM.	7 SHT.38 ALUM.		
003:W-1	K	2'-0"	1'-3½"	3 PANE 2'-0" x 1'-3½"	—	—	—		
004:W-1	K	2'-1"	2'-3½"	3 PANE 2'-1" x 2'-3½"	—	—	—		
004:W-2	—	2'-3½"	1'-2"	—	—	—	—		
005:W-1	K	2'-3½"	2'-3"	3 PANE 2'-3½" x 2'-3"	—	—	—		
005:W-2	L	2'-11"	2'-9"	3 PANE 2'-11" x 2'-9"	—	—	—		
006:W-1	—	2'- "	2'-9"	—	—	—	—		
006A:W-1	V	3'-0"	4'-9"	3 PANE 3'-0" x 4'-9"	—	—	—		
007:W-1	K	2'-10"	1'-3½"	3 PANE 2'-10" x 1'-3½"	—	—	—		
104:W-1	D	2'-0¼"	7'-1"	1 PANE 2'-0¼" x 7'-1"	20 SHT.38	21 SHT.38	22 SHT.38		
104:W-2	O	2'-9¼"	10'-6"	1 PANE 2'-9¼" x 10'-6"	20 SHT.57	—	21 SHT.57		
104A:W-1(A)	D	1'-4½"	7'-1"	1 PANE 1'-4½" x 7'-1"	20 SHT.38	21 SHT.38	22 SHT.38		EA. COLORED PANE 3⅜" x VAR.
104A:W-1(B)	D	2'-6¾"	7'-1"	1 PANE 2'-6¾" x 7'-1"	20 SHT.38	21 SHT.38	22 SHT.38		
04A:W-1(C)	D	1'-4¼"	7'-1"	1 PANE 1'-4¼" x 7'-1"	20 SHT.38	21 SHT.38	22 SHT.38		EA. COLORED PANE 3⅜" x VAR.
04A:W-2	C	1'-4¾"	7'-1"	1 PANE 1'-4¾" x 7'-1"	20 SHT.38	21 SHT.38	22 SHT.38		
04A:W-3	C	1'-4¾"	7'-1"	1 PANE 1'-4¾" x 7'-1"	20 SHT.38	21 SHT.38	22 SHT.38		
105:W-1(A)	A	2'-1¾"	7'-1"	1 PANE 2'-1¾" x 7'-1"	20 SHT.38	21 SHT.38	22 SHT.38		
105:W-1(B)	A	2'-1¾"	7'-1"	1 PANE 2'-1¾" x 7'-1"	20 SHT.38 ALUM.	21 SHT.38 ALUM.	22 SHT.38 ALUM.		
05:W-2	B	2'-6"	7'-1"	1 PANE 2'-6" x 7'-1"	20 SHT.38 ALUM.	21 SHT.38 ALUM.	22 SHT.38 ALUM.		
06:W-1	F	2'-2"	3'-5"	1 PANE 2'-2" x 3'-5"	6 SHT.38	12 SHT.38	13 SHT.38		TRANSLUCENT GLASS
106:W-2	F	2'-6"	3'-6"	1 PANE 2'-6" x 3'-6"	5 SHT.38	12 SHT.38	13 SHT.38		TRANSLUCENT GLASS
108:W-1(A)	A	2'-1¼"	7'-1"	1 PANE 2'-1¼" x 7'-1"	8 SHT.38	9 SHT.38	10 SHT.38		
108:W-1(B)	A	2'-1¼"	7'-1"	1 PANE 2'-1¼" x 7'-1"	8 SHT.38	9 SHT.38	10 SHT.38		
108:W-2(A)	A	2'-1¼"	7'-1"	1 PANE 2'-1¼" x 7'-1"	8 SHT.38	9 SHT.38	10 SHT.38		
108:W-2(B)	A	2'-1¼"	7'-1"	1 PANE 2'-1¼" x 7'-1"	8 SHT.38	9 SHT.38	10 SHT.38		
109A:W-1(A)	A	2'-1¼"	7'-1"	1 PANE 2'-1¼" x 7'-1"	14 SHT.38	15 SHT.38	16 SHT.38		
109A:W-1(B)	A	2'-1¼"	7'-1"	1 PANE 2'-1¼" x 7'-1"	14 SHT.38	15 SHT.38	16 SHT.38		
109A:W-2	C	1'-4¾"	7'-1"	1 PANE 1'-4¾" x 7'-1"	14 SHT.38	15 SHT.38	16 SHT.38		
109A:W-3	C	1'-4¾"	7'-1"	1 PANE 1'-4¾" x 7'-1"	14 SHT.38	15 SHT.38	16 SHT.38		
110:W-1(A)	A	2'-1¼"	7'-1"	1 PANE 2'-1¼" x 7'-1"	20 SHT.38	21 SHT.38	22 SHT.38		
110:W-1(B)	A	2'-1¼"	7'-1"	1 PANE 2'-1¼" x 7'-1"	20 SHT.38 ALUM.	21 SHT.38 ALUM.	22 SHT.38 ALUM.		
110:W-2	B	2'-6¾"	7'-1"	1 PANE 2'-6¾" x 7'-1"	20 SHT.38 ALUM.	21 SHT.38 ALUM.	22 SHT.38 ALUM.		
111:W-1	B	2'-6¾"	5'-9"	1 PANE 2'-6¾" x 5'-9"	1 SHT.38	18 SHT.38	19 SHT.38		
112:W-1	B	2'-6¾"	5'-9"	1 PANE 2'-6¾" x 5'-9"	1 SHT.38	18 SHT.38	19 SHT.38		
113:W-1	B	2'-6¾"	5'-9"	1 PANE 2'-6¾" x 5'-9"	1 SHT.38	18 SHT.38	19 SHT.38		
13:W-7	B	2'-6¾"	5'-9"	1 PANE 2'-6¾" x 5'-9"	1 SHT.38	18 SHT.38	19 SHT.38		
113A:W-1	U	2'-0"	1'-7¾"	3 PANE 2'-0" x 1'-7¾"	17 SHT.38 ALUM.	18 SHT.38 ALUM.	19 SHT.38 ALUM.		
201:W-1(A)	A	2'-8"	6'-9"	1 PANE 2'-8" x 6'-9"	2 SHT.38	3 SHT.38	4 SHT.38		
201:W-1(B)	A	2'-8"	6'-9"	1 PANE 2'-8" x 6'-9"	2 SHT.38 ALUM.	3 SHT.38 ALUM.	4 SHT.38 ALUM.		
204:W-1	B	2'-6¾"	6'-9"	1 PANE 2'-6¾" x 6'-9"	2 SHT.38	3 SHT.38	4 SHT.38		
204:W-2	B	2'-6¾"	6'-9"	1 PANE 2'-6¾" x 6'-9"	2 SHT.38	3 SHT.38	4 SHT.38		
204A:W-1(A)	D	1'-4¼"	6'-9"	1 PANE 1'-4¼" x 6'-9"	2 SHT.38	3 SHT.38	4 SHT.38		EA. COLORED PANE 3⅜" x VAR.
204A:W-1(B)	D	2'-2¾"	6'-9"	1 PANE 2'-2¾" x 6'-9"	2 SHT.38	3 SHT.38	4 SHT.38		
204A:W-1(C)	D	1'-4¼"	6'-9"	1 PANE 1'-4¼" x 6'-9"	2 SHT.38	3 SHT.38	4 SHT.38		EA. COLORED PANE 3⅜" x VAR.
204A:W-2	C	1'-4¾"	6'-9"	1 PANE 1'-4¾" x 6'-9"	2 SHT.38	3 SHT.38	4 SHT.38		
204A:W-3	C	1'-4¾"	6'-9"	1 PANE 1'-4¾" x 6'-9"	2 SHT.38	3 SHT.38	4 SHT.38		
205:W-1(A)	A	2'-8"	6'-9"	1 PANE 2'-8" x 6'-9"	2 SHT.38	3 SHT.38	4 SHT.38		
205:W-1(B)	A	2'-8"	6'-9"	1 PANE 2'-8" x 6'-9"	2 SHT.38 ALUM.	3 SHT.38 ALUM.	4 SHT.38 ALUM.		
205:W-2	B	2'-6¾"	6'-9"	1 PANE 2'-6¾" x 6'-9"	2 SHT.38 ALUM.	3 SHT.38 ALUM.	4 SHT.38 ALUM.		
205:W-3	B	2'-6¾"	6'-9"	1 PANE 2'-6¾" x 6'-9"	2 SHT.38 ALUM.	3 SHT.38 ALUM.	4 SHT.38 ALUM.		
206A:W-1	B	2'-1¾"	6'-9"	1 PANE 2'-1¾" x 6'-9"	2 SHT.38 ALUM.	3 SHT.38 ALUM.	4 SHT.38 ALUM.		
207:W-1(A)	A	2'-1¾"	6'-9"	1 PANE 2'-1¾" x 6'-9"	23 SHT.38	24 SHT.38	25 SHT.38		
207:W-1(B)	A	2'-1¾"	6'-9"	1 PANE 2'-1¾" x 6'-9"	23 SHT.38	24 SHT.38	25 SHT.38		
207:W-2(A)	A	2'-2"	6'-9"	1 PANE 2'-2" x 6'-9"	23 SHT.38	24 SHT.38	25 SHT.38		
207:W-2(B)	A	2'-2"	6'-9"	1 PANE 2'-2" x 6'-9"	23 SHT.38	24 SHT.38	25 SHT.38		
209A:W-1(A)	A	2'-1¾"	6'-9"	1 PANE 2'-1¾" x 6'-9"	14 SHT.38 ALUM.	15 SHT.38 ALUM.	16 SHT.38 ALUM.		
209A:W-1(B)	A	2'-1¾"	6'-9"	1 PANE 2'-1¾" x 6'-9"	14 SHT.38 ALUM.	15 SHT.38 ALUM.	16 SHT.38 ALUM.		
209A:W-2	C	1'-4¾"	6'-9"	1 PANE 1'-4¾" x 6'-9"	14 SHT.38 ALUM.	15 SHT.38 ALUM.	16 SHT.38 ALUM.		
209A:W-3	C	1'-4¾"	6'-9"	1 PANE 1'-4¾" x 6'-9"	14 SHT.38 ALUM.	15 SHT.38 ALUM.	16 SHT.38 ALUM.		
210:W-1	B	2'-6¾"	6'-9"	1 PANE 2'-6¾" x 6'-9"	2 SHT.38 ALUM.	3 SHT.38 ALUM.	4 SHT.38 ALUM.		
210:W-2	B	2'-6¾"	6'-9¾"	1 PANE 2'-6¾" x 6'-9¾"	2 SHT.38 ALUM.	3 SHT.38 ALUM.	4 SHT.38 ALUM.		
211:W-1	B	2'-6¾"	5'-5"	1 PANE 2'-6¾" x 5'-5"	1 SHT.38 ALUM.	18 SHT.38 ALUM.	19 SHT.38 ALUM.		TRANSLUCENT GLASS
213:W-1	B	2'-6¾"	5'-5"	1 PANE 2'-6¾" x 5'-5"	1 SHT.38 ALUM.	18 SHT.38 ALUM.	19 SHT.38 ALUM.		
213:W-2	B	2'-6¾"	5'-5"	1 PANE 2'-6¾" x 5'-5"	1 SHT.38 ALUM.	18 SHT.38 ALUM.	19 SHT.38 ALUM.		
213:W-3	B	1'-6¾"	5'-9"	1 PANE 1'-6¾" x 5'-9"	1 SHT.38 ALUM.	18 SHT.38 ALUM.	19 SHT.38 ALUM.		
213:W-4	B	2'-6¾"	5'-5"	1 PANE 2'-6¾" x 5'-5"	1 SHT.38 ALUM.	18 SHT.38 ALUM.	19 SHT.38 ALUM.		
213:W-5	B	1'-6¾"	5'-5"	1 PANE 1'-6¾" x 5'-5"	1 SHT.38 ALUM.	18 SHT.38 ALUM.	19 SHT.38 ALUM.		

MARK	TYPE	FRAME WIDTH	FRAME HT.	GLASS	DETAILS HEAD	DETAILS JAMB	DETAILS SILL	HDWR	NOTES
302:W-2	N	2'-6"	2'-11½"	1 PANE 2'-6" x 2'-11½"	—	—	—		
302:W-3	N	2'-6"	2'-4½"	1 PANE 2'-6" x 2'-4½"	—	—	—		
302:W-4	N	2'-6"	2'-4½"	1 PANE 2'-6" x 2'-4½"	—	—	—		
302A:W-1	M	5'-1"	1'-3"	1 PANE 2'-5½" x 1'-3" WITH 2'-7½" x 1'-3" WITH	—	—	—		
303:W-1	H	2'-4"	2'-11"	1 PANE 2'-4" x 2'-11"	—	—	—		
303:W-2	I	2'-11"	5'-5"	1 PANE 2'-11" x 5'-5"	—	—	—		
303:W-3	N	2'-6"	2'-2½"	1 PANE 2'-6" x 2'-2½"	—	—	—		



2 WINDOW TYPES

NO SCALE

3 WINDOW MOULDING SCHEDULE SPECIAL TYPES

ROOM	CASING DETAIL	CORNER BLOCK DETAIL	CORNER BASE DETAIL
104	15 SHT. 40	5 SHT. 40	—
105	7 SHT. 40	3 SHT. 40	—
108	8 SHT. 40	2, 8 SHT. 40	11 SHT. 40
109	17 SHT. 40	2 SHT. 40	—
110	14 SHT. 40	—	—
201	10 SHT. 40	—	—
204	16 SHT. 40	6 SHT. 40	—
205	10 SHT. 40	3 SHT. 40	—
207	14 SHT. 40	—	—

Restoration Associates
a division of
Solomon Claybaugh Young Architects Inc.
20 West 9th Street
Kansas City, Missouri 64105
816 842 2262

EXISTING CONDITION

HS-1 TRUMAN HOME

HARRY S TRUMAN N. H. S.

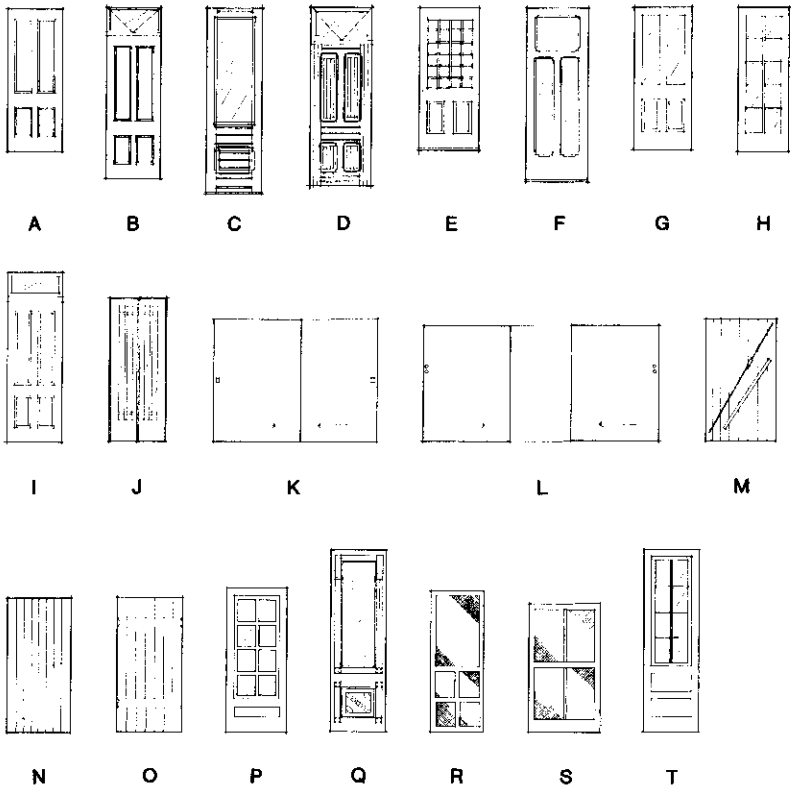
REVISED	PREPARED	DRAWING NO.
	DESIGNED FARON	492 80005
	DRAWN [illegible]	SHEET 42
	CHECKED Feb. 13, 85 DATE	OF 88

1 DOOR SCHEDULE

MARK	TYPE	BETWEEN ROOM NOS.		LEAF WIDTH	LEAF HT.	LEAF THK.	MATERIAL DOOR	MATERIAL FRAME	DETAILS HEAD	DETAILS JAMB	DETAILS SILL	NOTES
002:D-1	M	002	001	3'-5"	5'-10"	1 3/4"	WD	WD	6 SHT. 37	7 SHT. 37	8 SHT. 37	
002:D-2	S	002	001	2'-5 1/2"	5'-10"	1 3/4"	WD	WD	6 SHT. 37	7 SHT. 37	8 SHT. 37	
003:D-1	N	003	001	2'-6"	6'-4 1/2"	7/8"	WD	WD	—	—		
004:D-1	O	004	005	5'-0"	6'-3"	7/8"	WD	WD	—	—	—	
101:D-1(A)	Q	101	101-A	2'-6"	8'-6"	1 3/4"	WD	WD	20 SHT. 37 SURR.	23 SHT. 37 SURR.	25 SHT. 37 SURR.	
101:D-1(B)	Q	101	101-A	2'-6"	8'-6"	1 3/4"	WD	WD	20 SHT. 37 SURR.	23 SHT. 37 SURR.	25 SHT. 37 SURR.	
101:D-2(A)	T	101	101-A	2'-6"	8'-6"	1 3/8"	WD	WD	20 SHT. 37 SURR.	23 SHT. 37 SURR.	25 SHT. 37 SURR.	
101:D-2(B)	T	101	101-A	2'-6"	8'-6"	1/8"	WD	WD	20 SHT. 37 SURR.	23 SHT. 37 SURR.	25 SHT. 37 SURR.	
101:D-3(A)	G	101	102	2'-6"	8'-6"	1 3/4"	WD	WD	15 SHT. 37 SURR.	18 SHT. 37 SURR.	19 SHT. 37 SURR.	ETCHED GLASS
101:D-3(B)	G	101	102	2'-6"	8'-6"	3/4"	WD	WD	15 SHT. 37 SURR.	18 SHT. 37 SURR.	19 SHT. 37 SURR.	ETCHED GLASS
102:D-1	POCKET	102	104				WD	WD	—	—	—	NONFUNCTIONAL, ELEV. UNKNOWN
103:D-1(A)	POCKET	103	104				WD	WD	—	—	—	NONFUNCTIONAL, ELEV. UNKNOWN
103:D-1(B)	POCKET	103	104				WD	WD	—	—	—	NONFUNCTIONAL, ELEV. UNKNOWN
103:D-2	D	103	110	2'-10"	6'-9"	1 5/8"	WD	WD	21 SHT. 37	24 SHT. 37	26 SHT. 37	
104:D-1	F	104	104-B	2'-10"	8'-1"	1 3/4"	WD	WD	20 SHT. 37	23 SHT. 37	25 SHT. 37	TRANSLUCENT GLASS
104:D-2	P	104	104-B	2'-9"	6'-11"	1 3/8"	WD	WD	21 SHT. 37	24 SHT. 37	26 SHT. 37	
105:D-1	D	105	104	2'-10"	6'-10"	1 5/8"	WD	WD	20 SHT. 37	23 SHT. 37	25 SHT. 37	
106:D-1	B	106	105	2'-6"	6'-6"	1 3/8"	WD	WD	20 SHT. 37 SURR.	23 SHT. 37 SURR.	25 SHT. 37 SURR.	
107:D-1	B	107	107-A	2'-8"	6'-8"	1 3/8"	WD	WD	20 SHT. 37 SURR.	23 SHT. 37 SURR.	25 SHT. 37 SURR.	
109:D-2	P	107	107-A	2'-8"	6'-8"	1/8"	WD	WD	20 SHT. 37 SURR.	23 SHT. 37 SURR.	25 SHT. 37 SURR.	
109:D-1	B	109	110	2'-7"	6'-7"	1 3/8"	WD	WD	19 SHT. 37	18 SHT. 37	19 SHT. 37	
110:D-1	E	110	114-A	2'-10"	6'-9 1/2"	1 3/8"	WD	WD	24 SHT. 37 SURR.	26 SHT. 37 SURR.	27 SHT. 37 SURR.	
110:D-2	P	110	114-A	2'-10"	6'-10 1/4"	1 3/8"	WD	WD	24 SHT. 37 SURR.	26 SHT. 37 SURR.	27 SHT. 37 SURR.	
111:D-1	A	111	113	2'-8"	6'-8"	1 3/8"	WD	WD	15 SHT. 37 SURR.	16 SHT. 37 SURR.	15 SHT. 37 SURR.	
111:D-2	I	111	110	2'-6 3/4"	6'-7"	1 1/8"	WD	WD	24 SHT. 37 SURR.	26 SHT. 37 SURR.	27 SHT. 37 SURR.	
113:D-1	G	113	114-A	2'-8"	6'-7 1/2"	1 3/4"	WD	WD	24 SHT. 37	26 SHT. 37	27 SHT. 37	
113:D-2	P	113	114-A	2'-7 1/2"	6'-6 1/2"	1 1/8"	WD	WD	24 SHT. 37	26 SHT. 37	27 SHT. 37	
113:D-3	H	113	114-B	2'-4 1/2"	6'-0 5/8"	1 3/8"	WD	WD	24 SHT. 37 SURR.	26 SHT. 37 SURR.	27 SHT. 37 SURR.	
113:D-4	A	113	113-A	2'-6"	6'-8"	1 3/8"	WD	WD	15 SHT. 37 SURR.	16 SHT. 37 SURR.	15 SHT. 37 SURR.	
113:D-5	A	113	113-B	2'-8"	6'-8"	1 3/8"	WD	WD	15 SHT. 37 SURR.	16 SHT. 37 SURR.	15 SHT. 37 SURR.	
113:D-6	A	113	112	2'-8"	6'-8"	1 3/8"	WD	WD	15 SHT. 37 SURR.	16 SHT. 37 SURR.	15 SHT. 37 SURR.	
114-A:D-1	R	114-A	114-B	2'-4 1/2"	6'-1 3/4"	1 1/8"	WD	WD	—	—	—	
114-B:D-1	R	114-B	EXT.	2'-5 3/4"	6'-5 3/4"	1 1/8"	WD	WD	—	—	—	
202:D-1	A	202	202-C	2'-6"	6'-5"	1 1/8"	WD	WD	—	—	—	
202:D-2	A	202	208-A	2'-4 1/2"	6'-6"	1 1/8"	WD	WD	—	—	—	
204:D-1	B	204	202	2'-6"	6'-8"	1 3/8"	WD	WD	13 SHT. 37	4 SHT. 37	5 SHT. 37	
204:D-2	A	204	204-B	2'-6"	6'-6"	1/8"	WD	WD	—	4 SHT. 37 SURR.	15 SHT. 37 SURR.	
205:D-1	B	205	202	2'-8"	6'-8"	1 3/8"	WD	WD	13 SHT. 37 SURR.	4 SHT. 37 SURR.	6 SHT. 37 SURR.	
207:D-1	A	207	202	2'-10"	6'-9 1/2"	1 3/8"	WD	WD	13 SHT. 37 SURR.	4 SHT. 37 SURR.	15 SHT. 37 SURR.	
207:D-2	A	207	207-A	2'-2 1/2"	6'-5 1/4"	1 3/8"	WD	WD	—	—	—	
208:D-1	A	208	209	2'-8"	6'-7"	1 3/8"	WD	WD	5 SHT. 37	14 SHT. 37	15 SHT. 37	
208:D-2	A	208	211	2'-8"	6'-8"	1 3/8"	WD	WD	5 SHT. 37 SURR.	14 SHT. 37 SURR.	15 SHT. 37 SURR.	
209:D-1	A	209	213	2'-0"	6'-6"	1 3/8"	WD	WD	5 SHT. 37 SURR.	14 SHT. 37 SURR.	15 SHT. 37 SURR.	
210:D-1	B	210	208	2'-8"	6'-7 1/2"	1 3/8"	WD	WD	5 SHT. 37 SURR.	14 SHT. 37 SURR.	5 SHT. 37 SURR.	
210:D-2	A	210	210-A	2'-6"	6'-6"	1 1/4"	WD	WD	—	—	—	
210:D-3	J	210	208-A	2'-6"	6'-8"	1 3/8"	WD	WD	13 SHT. 37 SURR.	16 SHT. 37 SURR.	5 SHT. 37 SURR.	
210:D-4	K	210	210-B	7'-6 1/2"	8'-9"	3/4"	WD	WD	—	—	—	
302:D-1	A	302	304	2'-8 1/2"	6'-8 1/2"	1 3/8"	WD	WD	18 SHT. 37 SURR.	18 SHT. 37 SURR.	15 SHT. 37 SURR.	
302:D-2	K	302	V-4	1'-8"	5'-1"	3/4"	WD	WD	—	—	—	
302:D-3	L	302	V-4	1'-0"	5'-4"	3/4"	WD	WD	—	—	—	
302:D-4	K	302	V-4	4'-0"	5'-4"	3/4"	WD	WD	—	—	—	

2 DOOR TYPES

NO SCALE



3 DOOR MOULDING SCHEDULE SPECIAL TYPES

ROOM	CASING DETAIL	CORNER BLOCK DETAIL	CORNER BASE DETAIL
101	13 SHT. 40	12, 18 SHT. 40	11 SHT. 40
102	13 SHT. 40	12, 18 SHT. 40	11 SHT. 40
103	13 SHT. 40	12, 18 SHT. 40	11 SHT. 40
104	15 SHT. 40	5 SHT. 40	———
105	7 SHT. 40	5 SHT. 40	———
107	13 SHT. 40	12, 18 SHT. 40	11 SHT. 40
108	8 SHT. 40	12, 18 SHT. 40	11 SHT. 40
109	17 SHT. 40	2 SHT. 40	9 SHT. 40
110	14 SHT. 40	———	———
202	14 SHT. 40	———	———
204	16 SHT. 40	6 SHT. 40	4 SHT. 40
205	10 SHT. 40	3 SHT. 40	———
207	14 SHT. 40	———	———

Restoration Associates
a division of
Solomon Claybaugh Young Architects Inc.
20 West 9th Street
Kansas City, Missouri 64105
816 842 2292

EXISTING CONDITION

HS-1 TRUMAN HOME

HARRY S TRUMAN N. H. S.

REVISED	PREPARED	DRAWING NO.
	DESIGNED FASON	492 80005
	DRAWN	
	CHECKED	SHEET 43
	Feb. 15, 85 DATE	OF 58

2 ROOM SCHEDULE

MARK	ROOM NAME	ROOM DIMENSION (E) EAST WEST	(E) NORTH SOUTH	(E) CLG. HT.	FLOOR (E) MATL.	(E) FINISH	(N) MATL.	SQ. FT.	BASE (E) MATL.	(E) FINISH	WALLS SOUTH (E) MATL.	(E) FINISH	(N) MATL.	(N) FINISH	SQ. FT.	WEST (E) MATL.	(E) FINISH	(N) MATL.	(N) FINISH	SQ. FT.	NORTH (E) MATL.	(E) FINISH	(N) MATL.	(N) FINISH	SQ. FT.	EAST (E) MATL.	(E) FINISH	(N) MATL.	(N) FINISH	SQ. FT.	CEILING (E) MATL.	(E) FINISH	(N) FINISH	NOTES
001	LOWER PORCH	16'-5"	18'-7"	6'-3"	FL-6	F-		266	B1	—	—	—			—	—	—			—	—	—			—	—	—			C1	F2		
002	LAUNDRY RM.	15'-10"	21'-0"	9'-5"	FL-4	F1		310	B1	—	W2	F2			—	—	—			—	W2	F2			52	W2	F2			40	C1	F1		
003	———	12'-11"	21'-0"	9'-5"	FL-4	F1		200	B1	—	W6	F6			134	—	—			—	W6	F6			82	W6	F6			58	C1	F1		
004	FURNACE RM.	12'-2"	21'-6"	6'-1"	FL-1	F1		260	B1	—	W6	F6			54	W6	F6			154	W6	F6			82	—	—			—	C1	F1		
005	———	23'-5"	14'-2"	8'-0"	FL-2	F1		333	B	—	W6	F6			140	W6	F6			93	W6	F6			15	—	—			—	C1	F1		
006	———	12'-2"	23'-5"	6'-8"	FL-2	F1		290	B1	—	W6	F6			80	W6	F6			57	W6	F6			19	W6	F6			42	C1	F1		
006A	———	5'-6"	16'-4"	2'-3"	FL-2	F-		90	B1	—	W6	F6			11	W6	F6			26	W6	F6			4	W6	F6			29	C1	F1		
007	———	13'-3"	5'-9"	8'-6"	FL-4	F1		64	B1	—	W2	F6			43	W6	F6			99	W6	F6			65	W6	F6			39	C1	F1		
008	———	5'-10"	6'-6"	———	FL-2	F1		38	B1	—	W6	F6			—	W6	F6			—	W6	F6			—	W6	F6			—	C1	F1		
009	———	32'-5"	29'-2"	9'-0"	FL-2	F1		937	B1	—	—	—			—	—	—			—	—	—			—	—	—			—	C1	F1		
010	———	14'-0"	6'-1"	9'-0"	FL-2	F1		107	B1	—	—	—			—	—	—			—	—	—			—	—	—			—	C1	F1		
011	———	31'-6"	5'-9"	8'-0"	FL-2	F1		176	B1	—	—	—			—	—	—			—	—	—			—	—	—			—	C1	F1		
101	VESTIBULE	5'-3"	11'-4"	11'-2"	FL-1	F12		59.4	B4	F4	W1	F2			58.8	W1	F2			24.6	W1	F2			58.8	W1	F2			24.6	C2	F2		
101-A	FRONT PORCH	32'-5"	29'-2"	10'-8"	FL-1	F2		901.5	B1	—	—	—			—	—	—			—	—	—			—	—	—			—	C3	F2		
102	FOYER	5'-6"	6'-2"	9'-0"	FL-1	F9	F9	35.1	B4	F4	—	—			—	W1	F1/F6			4.1	W1	F1/F12			38.8	—	—			—	C1	F2		
103	CENTRAL HALL	2'-0"	7'-10"	9'-0"	FL-1	F9	F9	20.4	B4	F4	—	—			—	W1	F1/F10			4.8	W1	F1/F10			28.1	W1	F1/F10			110.1	C2	F2		
103-A	STAIR	2'-0"	9'-10"	(...)"	FL-1	F9		5.1	B4	F4	W1	F1/F1			48.0	W1	F1/F3			38.7	—	—			—	—	—			—	C2	F2		
104	LIVING ROOM	19'-5"	5'-11"	0'-0"	FL-1	F8		115.1	B4	F4	W1	F1			115.1	W1	F1			91.9	W1	F1			141.4	W1	F1			3.2	C2	F1		
104-A	WINDOW BAY	3'-6"	8'-11"	0'-0"	FL-1	F9		32.5	B4	F4	W1	F1			26.0	W1	F1			28.2	W1	F1			20.0	—	—			—	C2	F1		
104-B	S. PORCH	11'-8"	6'-1"	10'-0"	FL-6	F2		107.5	B1	—	—	—			—	—	—			—	—	—			—	—	—			—	C3	F2		
105	GATES BEDRM.	14'-0"	15'-0"	12'-6"	FL-1	F9		206	B4	F4	W1	F1			162.2	W1	F1			81.9	W1	F1			141.0	W1	F1			94.0	C4	F5		
106	GATES BATHRM.	6'-4"	10'-2"	9'-0"	FL-1	F12		64.4	B6	F2	W1	F1/F6			69.9	W1	F1/F6			66.6	—	—			—	W1	F1/F6			23.2	C2	F1		
106-A	CLOSET	6'-9"	3'-0"	9'-0"	FL-1	F2		5.0	B1	—	W1	F2			—	W1	F2			15.2	W4	F3			43.3	W1	F2			15.2	C5	F2		
107	FOYER	10'-10"	5'-6"	9'-0"	FL-1	F9	F9	41.7	B4	F4	W1	F1/F6			55.4	W1	F1/F6			20.7	W1	F1/F6			33.2	W1	F1/F10			14.0	C2	F2		
107-A	PORCH	6'-11"	5'-8"	10'-5"	FL-6	F3		39.4	B1	—	—	—			—	—	—			—	—	—			—	—	—			—	C3	F2		
108	PARLOR/MUSIC RM.	19'-4"	15'-4"	9'-6"	FL-1	F9		297.0	B1	F1	W1	F1			97.9	W1	F1			45.4	W1	F1			95.4	W1	F1			97.9	C1	F1		
109	LIBRARY	15'-6"	11'-6"	9'-0"	FL-1	F9		141.7	B4	F2	W1	F1			97.5	W1	F1			62.2	W1	F1			93.6	CHELV6	CHELV6			90.2	C4	F2		
109-A	WINDOW BAY	7'-10"	3'-5"	9'-0"	FL-1	F9		26.6	B4	F2	—	—			—	W1	F1			15.2	W1	F1			37.0	W1	F1			15.2	C4	F2		
110	DINING ROOM	14'-0"	20'-0"	9'-0"	FL-1	F9	F9	278.9	B1	F1	W1	F1			84.0	W1	F1			128.1	W1	F1			32.8	W1	F1			96.5	C2	F1		
111	BUTLERS PANT.	6'-4"	6'-4"	8'-11"	FL-1	F11		39.1	B5	F2	W1	F2			31.0	W3	F1			30.0	W3	F2			53.8	W1	F1			29.3	C2	F2		
112	PANTRY	8'-4"	7'-1"	8'-5"	FL-1	F11		50.1	B5	F2	W3	F2			56.6	W3	F2			66.6	W1	F1			30.2	W1	F1			41.3	C2	F1		
113	KITCHEN	12'-4"	14'-8"	8'-5"	FL-1	F1		206	B5	F2	W1/W3	F1/F2			70.6	W1	F1/F2			70.4	W1/W3	F1/F2			104.0	W1/W3	F1/F2			70.6	C2	F1		
113-A	STAIR HALL	9'-11"	9'-0"	———	FL-1	F2		26.5	C2	F2	W1	F2			50.2	—	—			—	W1	F2			25.5	W1	F2			24.9	———	———		
113-B	STAIR HALL	9'-6"	3'-0"	———	FL-1	F2		20.5	B1	—	W1	F2			33.4	—	—			—	W1	F2			31.0	—	—			—	———	———		
114-A	KIT. PORCH	25'-9"	9'-1"	8'-9"	FL-6	F2		258.6	B1	—	—	—			—	—	—			—	—	—			—	—	—			—	C3	F2		
114-B	KIT. PORCH	14'-0"	20'-6"	9'-5"	FL-6	F2		201.0	B1	—	—	—			—	—	—			—	—	—			—	—	—			—	C3	F2		
201	ALCOVE	5'-10"	6'-2"	9'-9"	FL-1	F12		34.0	B4	F4	W1	F1			56.0	W1	F1			23.4	W1	F1			52.0	W1	F1			21.9	C2	F2		
202	CENTRAL HALL	20'-3"	22'-6"	11'-3"/9'-4"	FL-1	F9		476.5	B4	F4	W1	F1/F2			146.9	W1	F1/F2			39.7	W1/W3	F1/F4			14.1	W1	F1/F2			184.1	C1	F2		
202-B	STAIR	10'-8"	3'-0"	11'-3"	FL-1	F1		32.0	B2	F1	W1	F1			58.5	—	—			—	W1	F1			38.1	—	—			14.2	C2	F2		
202-C	CLOSET	5'-4"	5'-0"	6'-11"	FL-1	F2		5.0	B5	F4	W3	F2			21.5	—	—			—	W1	F2			21.5	W1	F2			8.0	C2	F2		
204	MASTER BEDRM.	9'-5"	5'-11"	10'-1"	FL-1	F1		213	B4	F2	W1	F1			128.2	W1	F1			7.1	W1	F1			44.9	W1	F1			104.3	C4/C2	F2		
204-A	WINDOW BAY	5'-5"	8'-1"	10'-4"	FL-1	F1		32.5	B5	F2	W1	F1			20.0	W1	F1			84.8	W1	F1			20.0	—	—			—	C4/C2	F5/F2		
204-B	CLOSET	6'-0"	1'-5"	6'-11"	FL-1	F2		8.3	B		1'	F2			25.1	W1	F2			7.0	W1	F2			42.0	W1	F2			1.3.9	C2	F2		
205	TRUMAN BEDRM.	5'-11"	14'-11"	10'-6"	FL-1	F9		201.1	B4	F2	W1	F1			105.1	W1	F1			130.6	W1	F1			153.8	W1	F1			115.6	C2	F2		
206	SLEEPING PORCH	11'-4"	11'-9"	11'-9"	FL-6	F2		131.2	B1																									
206-A	PASSAGE WAY	3'-9"	8'-3"	11'-9"	FL-6	F2		31.0	B		W1	F2			15.5	W1	F1			39.7	W1	F1			8.0	W1	F1			36.7	C2	F2		
207	BEDROOM	15'-8"	15'-3"	9'-1"	FL-1	F1		23.1	B4	F2	W1	F1			105.5	W1	F1			98.9	W1	F1			98.9	W1	F1			119.2	C2	F2		
207-A	CLOSET	1'-5"	2'-6"	9'-1"	FL-1	F2		3.5	B1		W1	F2			4.0	W1	F2			5.0	W1	F2			14.0	W1	F2			24.0	C5	F2		
208	HALL	10'-9"	6'-6"	9'-1"	FL-1	F9		46.5	B2		W1	F1			71.0	W1	F1			36.8	W1	F1			12.5	W1	F1			9.0	C2	F2		
208-A	LINEN CLOSET	2'-10"	2'-3"	9'-1"	FL-1	F9		5.9	B1		W4	F2			6.1	W1	F2			21.4	W1	F2			28.5	W1	F2			2.4	C2	F2		
209	TRUMAN DR. RM.	12'-10"	9'-5"	9'-1"	FL-1	F2		118.1	B8	F2	W1	F1			95.3	W1	F1			80.3	W1	F1			46.5	W1	F1			36.9	C4/C2	F2		
209-A	WINDOW BAY	7'-10"	5'-5"	9'-1"	FL-1	F2		26.8	B8	F2	—	—			—	W1	F1			19.1	W1	F1			43.1	W1	F1			14.1	C4/C2	F2		
209-B/C	CLOSET	2'-6"	6'-5"	9'-1"	FL-1	F2		16.0	B2	F2	W1	F2			13.1	W1	F2			16.5	W1	F2			23.7	W1	F2			5.9.6	C2	F2		
209-D	CLOSET	2'-3"	2'-10"	9'-1"	FL-1	F2		4.1	B3	F2	W1	F2			21.4	—	—			—	W1	F2			21.4	W1	F2			17.9	C2	F2		
210	BEDROOM	10'-8"	15'-0"	9'-1"	FL-1	F2		13.1.3	B3	F2	W1	F1			54.6	W1	F1			121.9	W1	F1			65.0	W1	F1			34.1	C2	F2		
210-A	CLOSET	4'-0"	1'-5"	9'-1"	FL-1	F1		4.5	B1	—	W4	F2			10.3	W4	F2			11.2	W4	F2			26.6	W4	F2			3.4	C2	F2		
210-B	CLOSET	2'-6"	9'-4"	9'-1"	FL-1	F2		17.4	B3	F2	W1	F2			9.6	W1	F2			4.2	W1	F2			20.2	W1	F2			9.5.0	C2	F2		
211	BATHROOM	7'-0"	4'-3"	8'-5"	FL-1	F1		29.7	B6	F12	W1	F1/F12			7.6	W1	F1/F12			45.9	W1	F1/F12			58.4	W1	F1/F12			16.8	C2	F1		
213	STORAGE RM.	14'-5"	14'-3"	8'-6"	FL-1	F2		205.7	B3	F2	W1	F1			80.1	W1	F1			91.7	W1	F1			49.3	W1	F1			104.3	C2	F3		
301	OLD ATTIC	26'-0"	7'-0"	———	FL-1	F1		182	B1	—	—	—			—	—	—			—	—	—			—	—	—			—	C1	F1		
302	LOWER LEVEL	31'-4"	23'-6"	10'-7"	SL-5	F1		518	B5	F3	W5	F1			28	W5	F1			211	W5	F1			209	W5	F1			191	C4	F1		
302-A	WINDOW BAY	2'-0"	3'-4"	———	FL-1	F1		6.0	B1	—	—	—			—	W1	F1			—	W1	F1			—	W1	F1			—	C1	F1		
303	UPPER LEVEL	49'-6"	15'-3"	9'-0"	FL-5	F1		635	B5	F3	W5	F1			135	W5	F1			202	W5	F1			249	W5	F1			272	C4	F1		
304	VESTIBULE	7'-3"	21'-1"	7'-1"	FL-5	F1		150.6	B5	F2	W1	F1			29.2	W1	F1			61.6	W1	F1			19.1	W1	F1			11.9	C2	F1		

1 SYSTEMS NOTES

FINISHES
- F1 NO FINISH
- F2 PAINT
- F3 STAIN
- F4 VARNISH
- F5 PAINTED WALLPAPER
- F6 WHITE WASH
- F7 WALLPAPER
- F8 PLASTIC TILE
- F9 CARPET
- F10 LINCRUSTA
- F11 LINOLEUM
- F12 CERAMIC TILE

FLOOR MATERIAL
- FL1 WOOD PLANKS
- FL2 EARTH
- FL3 STONE
- FL4 CONCRETE SLAB
- FL5 TILE PATTERN HARDBOARD
- FL6 NOM. 1" X 3" T&G WOOD
- FL7 NOM. 1" X 6" T&G WOOD
- FL8 BRICK

BASE MATERIAL
- B1 NO BASE
- B2 PLAIN 1 X WOOD
- B3 PLAIN 1 X WOOD W/¼ ROUND SHOE
- B4 1 X WOOD W/TOP MOULD
- B5 QUARTER ROUND SHOE
- B6 CERAMIC TILE

WALL MATERIAL
- W1 PLASTER W/WOOD LATH
- W2 CONCRETE
- W3 NOMINAL 1 X T&G WOOD
- W4 NOMINAL 1 X WOOD
- W5 BEAVER BOARD
- W6 STONE
- W7 EXPOSED STRUCTURE
- W8 WOOD LAP SIDING
- W9 ¼ INCH PLYWOOD

CEILING MATERIAL
- C1 EXPOSED STRUCTURE
- C2 PLASTER ON WOOD LATH
- C3 NOM. 1 X T&G WOOD
- C4 BEAVER BOARD
- C5 1 X WOOD PLANKS

(E) EXISTING
(N) NEW

Restoration Associates
a division of
Solomon Claybaugh Young Architects Inc.
20 West 9th Street
Kansas City, Missouri 64105
816 842 2292

EXISTING CONDITION

HS-1 TRUMAN HOME

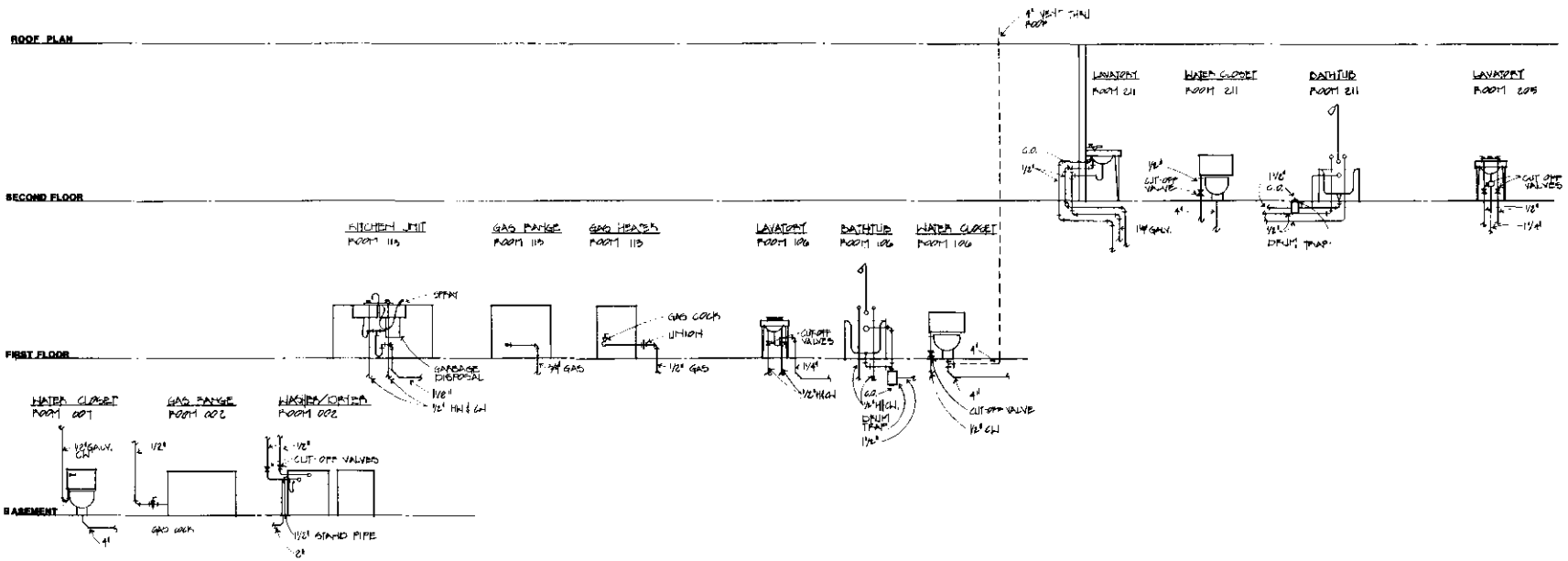
HARRY S TRUMAN N. H. S.

REVISED	PREPARED	DRAWING NO
	DESIGNED FARUK	192 80006
	DRAWN	
	CHECKED	SHEET 44
	DATE Feb 13 83	OF 55

DESCRIPTION	MANUFACTURER	MODEL NUMBER	TECHNICAL DATA	LOCATIONS	REMARKS
HOUSE GAS FURNACE	INDEPENDENT STOVE & FURNACE CO.	NONE	2 GAS BURNERS, MODEL 1135, EA. @ 135,000BTU/HR INPUT LAU-A-15 BLOWER CO., DAYTON 1/3 HP BLOWER MOTOR WITH V-BELT DRIVE. A-16"X25"X1" THROWAWAY FILTERS.	FURNACE ROOM 004	
DOMESTIC HOT WATER HEATER	A.O. SMITH PERMAGLASS HYDRASTEEL	PGG-40	50,000 BTU/HR INPUT 40 GALLON STORAGE TANK, 92 GPH RECOVERY @100° RISE 4"Ø FLUE VENT.	003	VERTICAL TANK
ATTIC VENTILATION FAN.	HUNTER ZEPHER COOLING UNIT	A-48	1/2 HP-18,000 C.F.M.	NEW ATTIC	-
GAS HEATER	GIPSY	250-BS	HEATING CAPACITY 25,000 BTU/HR INPUT 4"Ø FLUE VENT	KITCHEN 113	-
GAS RANGE	HARDWICK	NO IDENTIFICATION TAG	4 BURNER	KITCHEN 113	-
GAS RANGE	DETROIT MICHIGAN STOVE CO.	A6647CVGXJ	-	LAUNDRY ROOM 002	GAS VALVE ON BACKSIDE OF RANGE
WINDOW AIR CONDITIONING UNIT	GENERAL ELECTRIC THINLINE	AGJE810AAXTL	COOLING CAPACITY 10,000 BTU/HR 12.0 AMPS-115 VOLT	GATES BEDROOM 105	-
WINDOW AIR CONDITIONING UNIT	FEEDERS	ACL18E/D	COOLING CAPACITY 18,000 BTU/HR 13.7 AMPS. 208V 2810 WATTS.	KITCHEN 113	-
GARBAGE DISPOSAL	SEARS ROEBUCK & CO.	No. 1/5	6.5 AMPS.-115V.	KITCHEN 113	-
WASHER	SEARS ROEBUCK &CO.	KENMORE 700	1/3 HP MOTOR	LAUNDRY ROOM 002	-

DESCRIPTION	MANUFACTURER	MODEL NUMBER	TECHNICAL DATA	LOCATIONS	REMARKS
DRYER	WHIRLPOOL	LXE5500A0	1/3 HP MOTOR	LAUNDRY ROOM 002	ELECTRIC
KITCHEN UNIT	AMERICAN STANDARD	SINK P-6535 FITTINGS A-6113-1	-	KITCHEN 113	-
WATER CLOSET	KOHLER	WELL WORTH K-3705	-	007	COLOR-WHITE
BATH TUB	CRANE	CRITERION TUB 2-80 FITTINGS 9-20	-	GATES BATHROOM 109	COLOR-GREEN
LAVATORY	CRANE	CRITERION LAVATORY 1-80 FITTINGS 8-1	-	GATES BATHROOM 106	COLOR-GREEN
WATER CLOSET	CRANE	DREXAL 3-122	-	GATES BATHROOM 106	COLOR-GREEN
LAVATORY	CRANE	YORKSHIRE LAVATORY 1-295 FITTINGS 8-121	-	TRUMAN BEDROOM 205	COLOR-GREEN
BATH TUB	AMERICAN STANDARD	TUB-P-2187 FITTINGS-N1010 N1700-16	-	BATHROOM 211	COLOR-BLUE
LAVATORY	AMERICAN STANDARD	LAVATORY-F-90 FITTINGS N2101	-	BATHROOM 211	COLOR-BLUE
WATER CLOSET	AMERICAN STANDARD	F-2000	-	BATHROOM 211	MASTER ONE PIECE

1 MECHANICAL SCHEDULE



2 PLUMBING RISER DIAGRAM

NO SCALE

Restoration Associates
a division of
Solomon Claybaugh Young Architects Inc.
20 West 9th Street
Kansas City, Missouri 64105
816 842 2292

EXISTING CONDITION

HS-1 TRUMAN HOME

HARRY S TRUMAN N. H. S.

REVISED	PREPARED	DRAWING NO.
	DESIGNED FULTON	492 50005
	~~DRAWN~~ ~~CHECKED~~	SHEET 45
	Feb. 13, 85 DATE	OF 55

III. Existing Conditions -- Truman Carriage House (HS-02)

Introduction and Description

This white, 1-1/2 story, heavy timber framed structure with a shallow limestone foundation, measures approximately 24 x 32 feet. Its date of construction is unknown, but probably dates to the late 1860s or 1870s. The barn was adapted as a garage before 1914 to house the Gates' automobile.[1] The gable roof is sheathed in dip stained wooden shingles and crowned with a louvered square cupola at the center of the ridge. A gablet is centered on each roof leaf at the eave line. The south gablet features two loft doors. Loft doors also exist at the main gable ends. Two siv-pane fixed windows and two shuttered openings mark the east and west facades respectively at the ground floor. The structure has a concrete slab floor. Overhead rolling garage doors enclose the two-car bays. Vertical board and batten siding is the predominant sheathing material. (See Figs. 3.1-3.4.)

Topography

Drainage around the structure is generally very poor. At the south elevation adjacent to the alley, soil and gravel has been built up to obtain positive drainage away from the Carriage house. Unfortunately, the exterior grade now rises above the interior grade of the concrete floor slab. This has led to severe deterioration of the siding, foundation sill and structural post bases. It appears that the exterior grade has been raised at least 20 inches along the south elevation with

layers of refuge waste, gravel and soil.

The west elevation shares some of the same problems as the south elevation. The soil has been built-up 2 inches above the top of the foundation wall. Tall, thick bushes along the west elevation have compounded moisture problems by reducing ventilation and sun exposure. The only downspout on the building drains rain water at the northwest corner. Negative slope causes water to pond in this area.

The sub-structure at the north elevation is completely encased in concrete slabs. There is good drainage from the structure here.

The grade along the east elevation is approximately 1 foot below the top of the foundation wall. Moisture problems are not apparent; there is a slight slope away from the building towards the driveway.[2]

Foundation Wall (See Appendix G.)

During a 1985 physical investigation of the foundation, several pits were excavated to determine the condition of the wall. The foundation wall was found to be of rough cut limestone laid up in a soft lime and sand mortar. The depth of the foundation wall is 24 inches in the eastern half and 30 inches in the western half. The thickness of the wall was not determined and no spread footings were found. It is unknown whether a foundation wall supports the interior partition and posts 3, 4, and 5 as a concrete slab was poured over the entire interior

floor surface in the mid 1950s.

The stone foundation is in good condition overall. However, there are a couple of deteriorated areas which must be addressed. At the northwest corner, there is practically no bearing beneath posts 1 and 2. The top 12 to 18 inches of the wall had been removed presumably in the repair of the posts, but was never rebuilt. Post 1 is supported by a fragment of concrete block and post 2 has no bearing at all.

A few top stones have been moved out of alignment at the east elevation. The stones appear to have been pushed out prior to the concrete slab installation.

The entire south and west foundation elevations are backfilled with soil. However, the foundation wall is in good condition at the sample pits.[3]

Foundation Sills

The foundation sills throughout the Carriage house are severely deteriorated. (See Fig. 3.5.) Two contributing factors for the deterioration are poor grading and the interior concrete slab. The slab had been poured over the sills using the interior surface of the siding as a form. This construction method entombed the sills allowing no escape route for moisture. Rotting is so extreme along the south elevation that little could be found of the original sill. All of the

sills have lost any of their structural bearing capabilities.[4]

Garage Floor

The concrete floor is a later addition to the facility and appears to be a 3 to 4 inch overlay covering the original floor. The ground floor of the eastern portion is constructed of hand hewn heavy timber posts set over a 4 x 6 inch foundation sill. The western addition is of dimensioned posts set over a 6 x 6 inch sill. The concrete floor was poured around the vertical columns and external siding such that it covers the original connections to the foundations.[5] Because the bases of all the posts are in poor condition, it is difficult to determine connective systems. Along the north elevation, it is possible that the steel garage door track channels are literally providing support for those posts at the south and north elevations. Also, it is assumed that the tongue and groove siding at the south elevation now plays a major structural role in supporting posts 11 through 14.[6]

Floor/Ceiling System Framing

As was evident in the Truman home, many of the joints were found to be of mortise and tenon construction which, although considerably high in craftsmanship, greatly restrict the ultimate strength of the connecting members. Beams are found to be high in bending moment capacity but weak in connection shear values. It will be important to limit the loading of the loft floors. These areas should not be utilized as temporary or permanent storage for anything other than what is now present.

It should be noted that the loft floor on the east side of the garage is approximately 1-1/2 feet lower than the loft floor of the west area. Probably due to the addition of the west bay to the original east structure, the additional vertical elevation required on the east side to construct the roof at a uniform level causes a discontinuity in the structural framework. This could be subjected to severe lateral pressures.[7]

The southeast corner of the western bay of the facility shows evidence of a fire which has charred the floor joists of the loft area and several of the vertical eastern and southern wall members of this area. This burned area affects the first seven joists as counted from the south end of this area. The charred areas effectively reduce the cross sectional dimensions of these members from 2 x to 1 x material and reduce the height of the joists by a minimum of 1 inch. This greatly reduces the cross-sectional areas and section modulus of these members. The lost decking in this area is also charred, thus reducing its strength.[8]

Roof System Framing

6 x 6 inch horizontal members cap columns and separate vertical 6 x 6 inch members and continue upward from the horizontal member to support the plates upon which the various roof rafters are set. Probably due to the addition of the west bay to the original east structure, the additional vertical elevation required on the east side to construct the

roof at a uniform level causes a discontinuity in the structural framework. This could be a serious concern should the structure be subjected to severe lateral pressures.[9]

Roofing Materials

The roof consists of a single layer of wood shingles, stained green. The roofing is approaching the end of its life expectancy as evidenced by lifted and curled shingles, missing shingles and water stains on the underside of the roof sheathing. The ridge is covered with a sheet metal hip roll. Where the gablets intersect the main roof the valleys are the open type, uniform in width, and flashed with sheet metal.

The cupola is capped with a cross gable roof covered with wood shingles, stained green with closed valleys. A bronze wind vane surmounted with a figure of a horse in stride is located at the ridge of the north gable. A continuous 5 inch K style galvanized metal gutter is located along the full length of the cove at the north side but stops approximately 18 inches short of the west end which allows rain water to drip onto the ground causing soil erosion and splashup. The gutter is fastened to the fascia with spikes and ferrules and where it spans the gablet it is supported on two simple metal brackets. The brackets exhibit some oxidation resulting in rust stains on the siding below each one.

A 4 inch diameter downspout is located at the west end of the north elevation and connects to a 6 inch long horizontal section which empties

directly onto the ground. The lack of a splash block, a loose connection between the downspout and the horizontal extension, and the gutter stopping short of the west edge of the roof are causing soil erosion and deterioration of the foundation wall at the northwest corner.

No gutter exists on the south elevation. Lack of proper roof drainage and site grading which is sloped towards the south wall instead of away from it has caused the lower ends of the siding to decay. A gutter and downspout should be installed on this elevation and the site regraded to facilitate drainage away from the building.

Wall System Framing (See Appendix G.)

Vertical structural members consist of 6 x 6 or 8 x 8 wood members.[10] The bases of all posts are generally in poor condition. (See Fig. 3.6; A, B, C, and D.) Deterioration causes are the same as with the foundation sills. In addition, there is evidence that termites have also contributed to decay.[11]

The vertical structural members of the eastern bay extend through the floor of the loft approximately 2-1/2 feet. The column adjacent to the west opening of the garage door within the western bay was found to be suspended. The column is basically supported at the base by the garage door track which is bearing on the concrete floor of the bay. The angle brackets which originally supported the track are now supporting the

column and are showing bending stresses due to this loading. The column adjacent to the west, although not having ideal foundation bearing, is supported and appears to be carrying the vertical loads of this corner of the building. The easterly wall of the Carriage house appears to have pulled outward to the east from the existing slab by approximately 1-1/2 inches as may be evidenced by the voids in the concrete slab previously filled by 2 x 4 vertical members. This movement may have been caused in part by the fact that the entire garage assembly leans to the east approximately 3 inches as measured from the upper plate of the garage to the base at ground level. The stress in the east wall caused by this movement has been partially relieved by the base of the wall kicking out.[12]

Exterior Envelope and Finishes

Some evidence of rot and/or termite damage within the lower areas of the western and southern elevations of the structure was noted. The exterior surfaces of these sides are relatively close or in direct contact with the surrounding soil causing severe problems with regard to drainage and subsequent moisture and insect infestation. This is an item that should be remedied as soon as possible as the ultimate damage done could be severe. The exterior sheathing of this structure is the main structural item resisting lateral stresses. As deterioration of the lower portions of these boards takes place, the lower connections lose effectiveness thus seriously eroding the structure's ability to resist wind loading.[13]

The Carriage house is sheathed in 3/4 x 11-3/4 to 12-3/4 inch board and batten siding or 3/4 x 3-1/4 or 5-1/4 inch tongue and groove[14] wood siding painted white. The east and west elevations are sheathed entirely with board and batten. The siding on the west elevation is in fair condition. The lower edge of the boards has decayed because it is in contact with the soil, a few battens are split, and a portion of the first board is missing at the southwest corner. Otherwise all boards and battens are intact.

The siding on the east elevation exhibits numerous open joints and missing or non-original battens. Relative to the west elevation, it is in poor condition. The edge is not in direct contact with the soil and is in sound condition.

North elevation wood siding either side of the overhead doors is 3/4 x 5-1/4 inch tongue and groove placed vertically, while the siding above each door is 3/4 x 3-1/4 inch also placed vertically. The tongue and groove siding extends approximately 9 feet above grade to a simple square molding or wood drip. Siding above the cove is board and batten.

The siding on the south elevation is 3/4 x 5-1/4 inch vertical tongue and groove extending to the same height as the north elevation capped by a metal drip or simple square molding. It is sound except for the lower 6 to 10 inches which is in contact with the ground. Above the tongue and groove is board and batten siding.

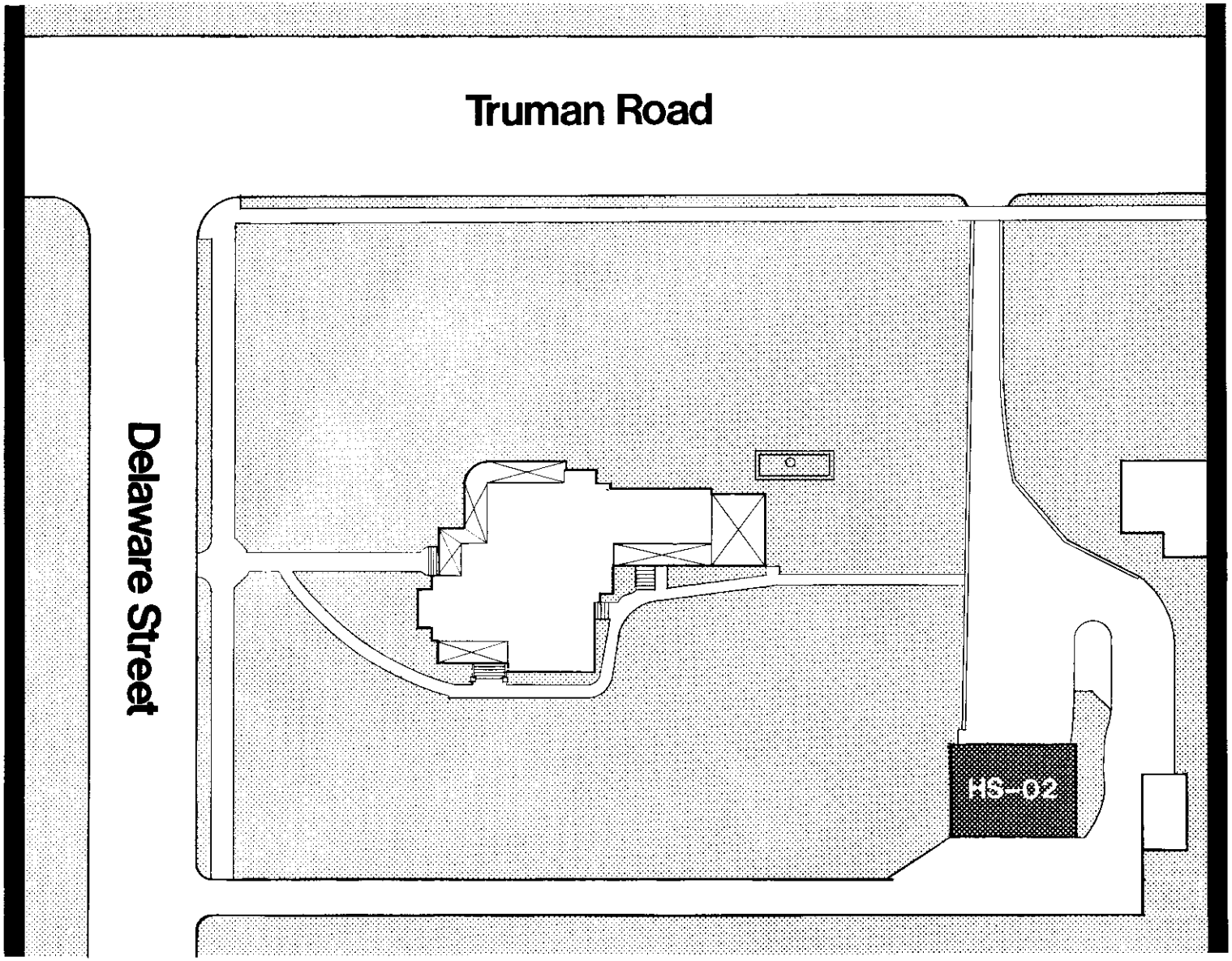
The cupola is clad on the east and west sides with 3/4 x 5-1/4 inch tongue and groove wood siding placed horizontally. A horizontal louver forms the north and south elevations.

All siding and louvers are painted white. The paint is peeling and extensively alligatored and crazed. Paint should be hand stripped from all exterior surfaces and new paint applied.

Windows

The west elevation has three shuttered windows, two placed symmetrically approximately 3 feet above grade level and one centered in the gable. The two-panel, louvered shutters are in the closed position. The shutters on the two lower windows are painted green, whereas the shutters on the upper window are painted white. Originally the louvers rotated but because of the build up of paint layers at the pivot point, the louvers are immobile. The condition of the shutters is poor. Round pegs have worked loose from the mortise and tenon resulting in loose joints where the lower stiles engage the bottom rails. Paint has peeled from 30 to 40 percent of the shutters and the bare wood has weathered grey and exhibits substantial checking. The hinges, two for each leaf, are heavily encrusted with paint.

Window casing at the jambs on the west elevation is plain wood 1-1/8 inches thick x 4-1/2 inches wide. The casing at the head is an unbroken pediment capped by a simple crown. The lower portion of the crown (cove


Truman Road
Delaware Street
HS-92

molding) is missing from the pediment of the north side of the north window.

The sash at the loft window is double hung, six-over-six light, painted white. The upper sash is boarded over on the interior with nominal 5 inch tongue and groove boards. Only the frame is extant on the lower windows, the sash having been removed previously (date unknown). The frames are boarded over on the inside with nominal 5 inch tongue and groove siding.

The casing and sash at the lot window in the gable of the east elevation is similar to the upper window on the west elevation except that the upper sash is boarded over from the exterior with nominal 5 inch tongue and groove boards. Although the east lot window is not presently fitted with shutters, they were installed at one time as evidenced by remains of a hinge that matches the hinges on the west elevation.

The two lower windows have no finish framing or casing. Openings were cut into the board and batten siding. A single three-over-three light sash, painted green, rests on a 3/4 inch wood sill and is held in place with wood stops top and bottom fastened to the structural frame. The sills of both windows are severely checked and slope inward. The bottom rail and lower portions of the stiles are in poor condition.

Doors

The door at grade level on the east elevation consists of 3/4 x 5 inch tongue and groove wood boards fastened to a wood "Z" frame, and has two strap hinges secured to the siding boards at the south side of the opening. Like the windows, the doorway is devoid of casing and a finished frame. The top of the opening lacks any drip cap or flashing to protect the top edge of the door. Three siding boards adjacent to the door on the north side are loose and require refastening.

On the south elevation, two doors provide access to the loft. Both doors are board and batten and appear to be cut from the wall siding. The openings are without sills, casing, finished frame and drip cap or flashing at the head. The doors are secured with strap hinges and open toward each other. The west door is missing half of one board and one batten. The lower ends of the boards on both doors are split, checked, and require repair.

The two 7 foot x 13 foot 8 inch rolling overhead doors on the north elevation are in good condition except for the lower roller guides and pulleys which exhibit surface rust. The garage doors are paneled with the top panel glazed and are painted white. The doors are binding due to the shifting of the structure.

Interior Finishes

The interior is of severely peeling whitewash. The wood siding, both

board and batten and tongue and groove exhibits minor water stains at the joints but is in sound condition.

The ceiling joists and boards are painted silver. This paint was sprayed on, evidenced by thin coverage on boards not damaged by fire and was done presumably to seal the wood charred by the fire.

The loft is unpainted except for the vertical siding at the change of floor levels.

Electrical Service and Systems

Service to the Carriage house was run underground in 1985 from the Truman home. The original aerial conductors from an alley pole have been disconnected and left in place. The Carriage house utilizes wall switched overhead porcelain incandescent fixtures.

The building appears to have had four electrical systems, the oldest evidenced by four evenly spaced holes, inside and out, of a size typically used for porcelain tubes and screw-in insulators. This is located on the south wall. Wiring was probably knob and tube. Still extant is a set of safety switches on the south wall with a cut-off ground wire and an armored cable to an inside junction box near the center of the west wall. This has been disconnected.

The third type of electrical service is the existing aerial line to the

porch corner. This service was disconnected in 1985 when the Carriage house was rewired. Also extant, but disconnected, is an Independence Power and Light temporary service line.

Security Systems

The Carriage house fire and security devices, installed in 1985, are tied to the main house panel. An intrusion alarm utilizes infrared motion detectors inside the Carriage house and at the southeast corner to monitor access from the alley.

Fire detection is accomplished with heat detectors and two types of smoke detectors: photo-electric and ionization.

Historic Security System

There is evidence of an historic electric-eye system across the driveway evidenced by holes in the siding at the southeast corner and interior shelf. There is also an exterior box at the northeast corner and aerial wire from the northeast corner to the tree next to the Wallace house.

Notes to Chapter III

1. Ron Cockrell, Historic Structures Report: History and Significance, Harry S Truman National Historic Site, Independence, Missouri (Omaha: National Park Service, Midwest Regional Office, 1984), 341.

2. National Park Service, "Physical Investigation Report and Treatment Proposal, Truman Carriage House (HS-02) Foundation, Harry S Truman National Historic Site, Independence, Missouri" (Omaha, Cultural Resources Management Division, 1985, photocopy), 1-2. Hereafter cited as "PIR (HS-02)."

3. Ibid., 2.

4. Ibid., 2-3.

5. Lawrence S. Graham, P.E., "Truman Garage, Independence, Missouri" (Kansas City, Harper and Kerr Consulting Structural Engineers, P.A., July 26, 1985, photocopy), 3. Hereafter cited as "Truman Garage."

6. PIR (HS-02), 3.

7. Truman Garage, 2.

8. Ibid., 3.

9. Ibid., 1-2.

10. Ibid., 1.

11. PIR (HS-02), 3.

12. Truman Garage, 1, 3.

13. Ibid., 2.

14. PIR (HS-02), 1.

Fig. 3.1 Truman Carriage House, Fall 1985. North elevation (looking south). Credit: Zoom Studios

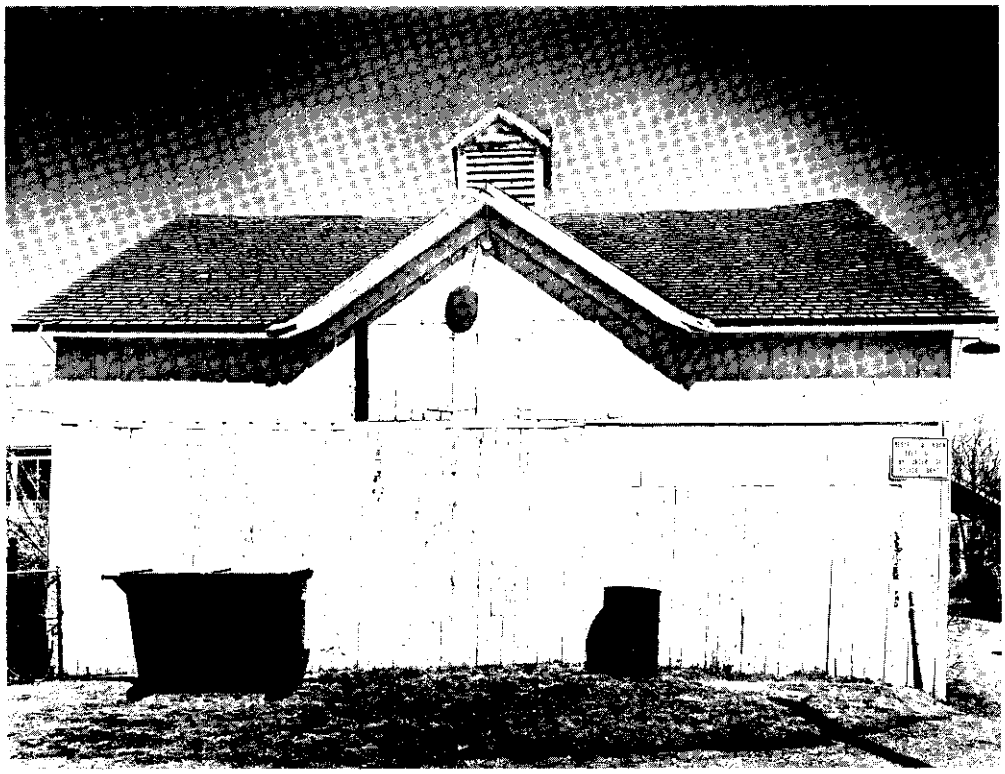


Fig. 3.2 Truman Carriage House, Fall 1985. South elevation (looking north). Credit: Zoom Studios

Fig. 3.5 Sill Beam at Post #17, Truman Carriage House. December 1985. West elevation. Credit: National Park Service, Midwest Region

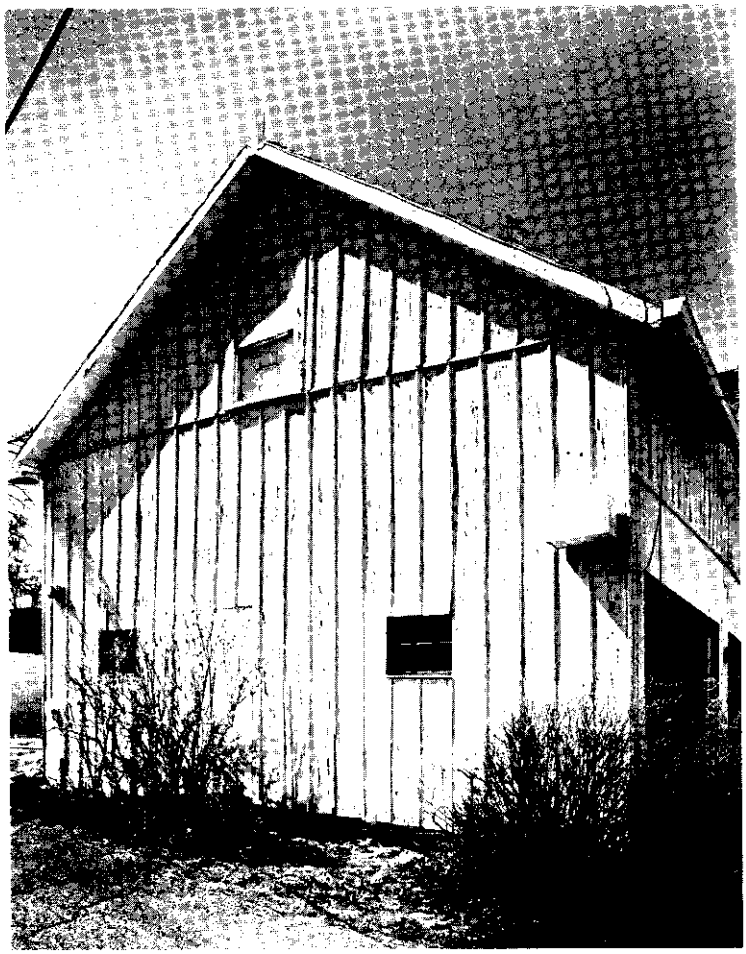
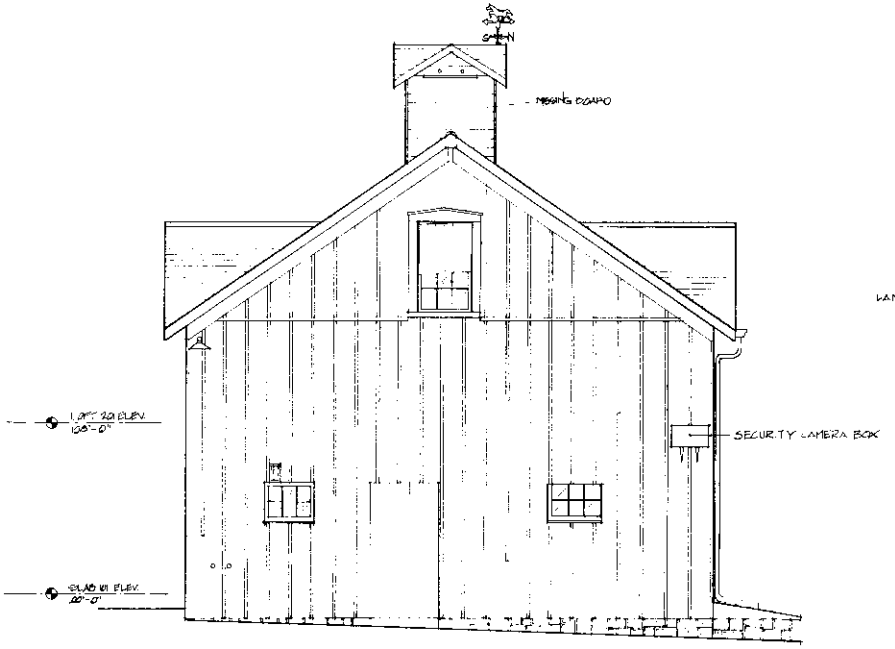


Fig. 3.3 Truman Carriage House, Fall 1985. East elevation (looking west). Credit: Zoom Studios

Fig. 3.4 Truman Carriage House, Fall 1985. West elevation (looking east). Credit: Zoom Studios



1 EXTERIOR ELEVATION EAST

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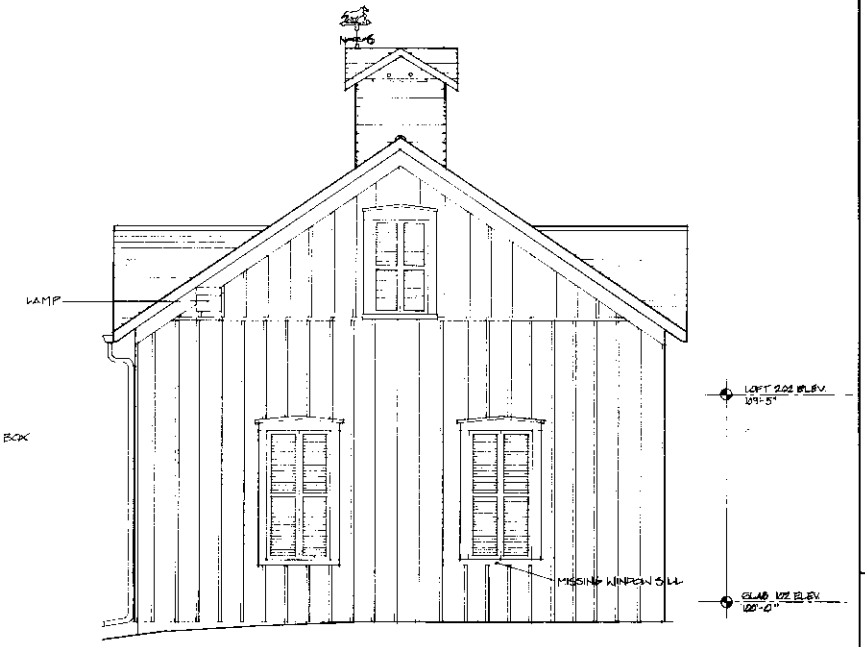

2 EXTERIOR ELEVATION WEST

SCALE: 3/8"=1'-0"

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SCALE : 3/8" = 1'-0"

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SCALE OF FEET

EXISTING CONDITION

HS - 2 TRUMAN GARAGE

HARRY S TRUMAN N. H. S.

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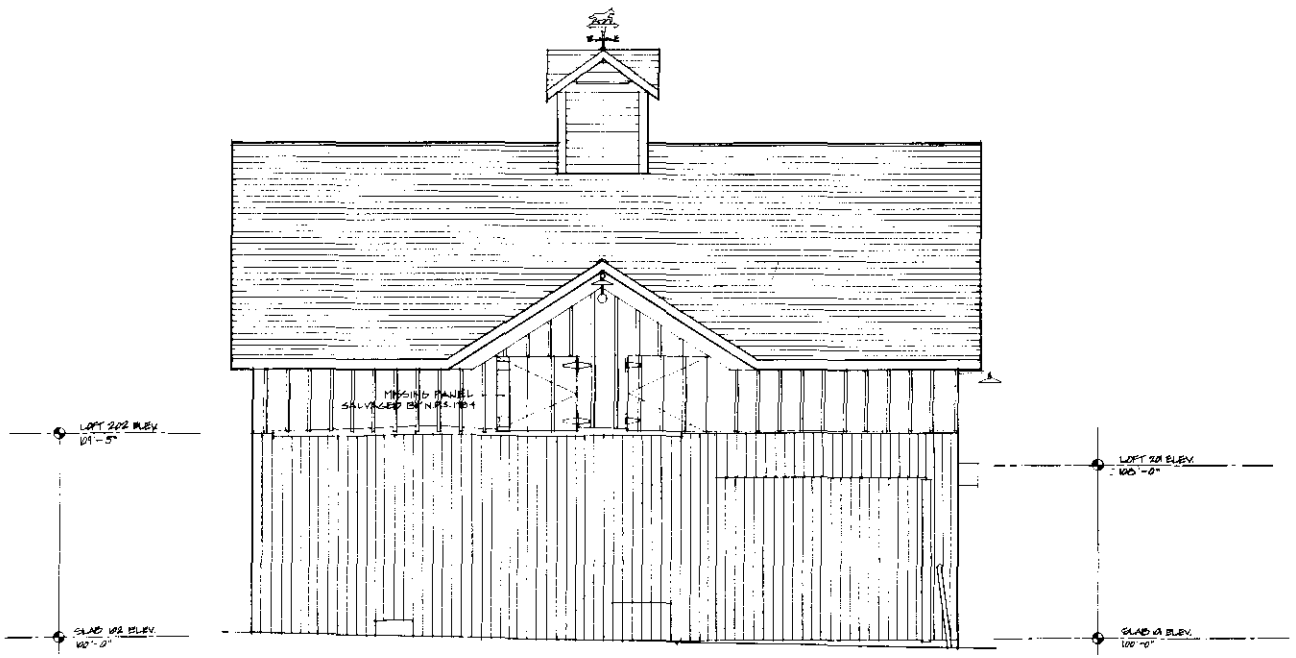

EXTERIOR ELEVATION SOUTH

SCALE: 3/8"=1'-0"

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Kansas City, Missouri 64105
816 842 2292

SCALE : 3/8" = 1'-0"

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EXISTING CONDITION

HS - 2 TRUMAN GARAGE

HARRY S TRUMAN N. H. S.

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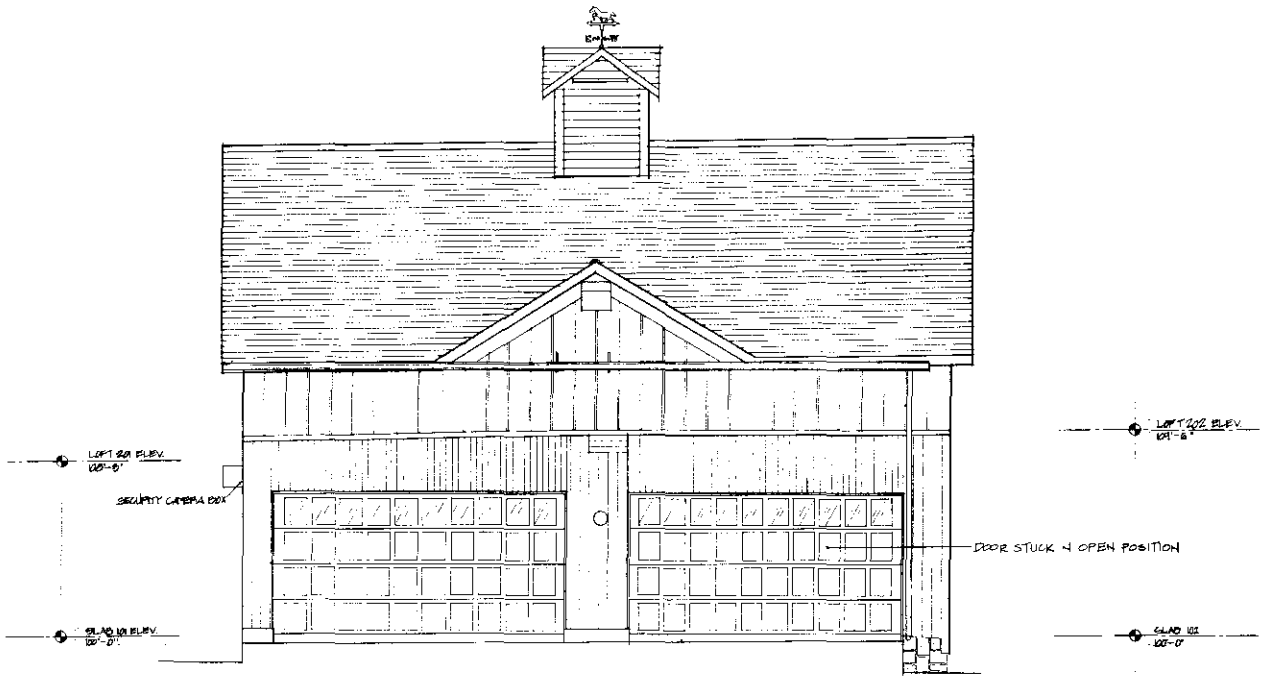

EXTERIOR ELEVATION NORTH

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Kansas City, Missouri 64105
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SCALE : 3/8" = 1'- 0"

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SCALE OF FEET

EXISTING CONDITION

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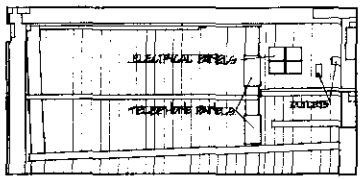

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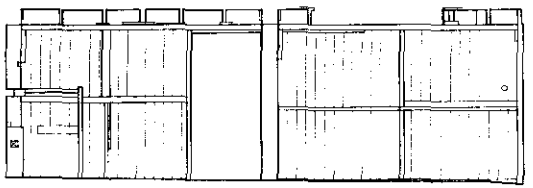

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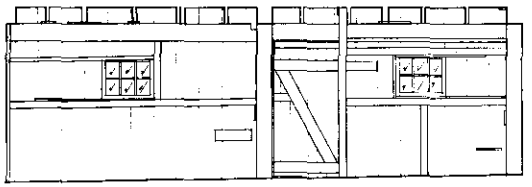

EAST

2 GARAGE BAY 101

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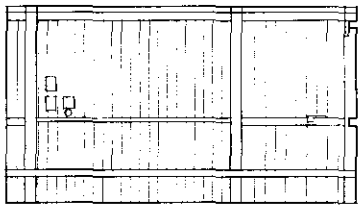

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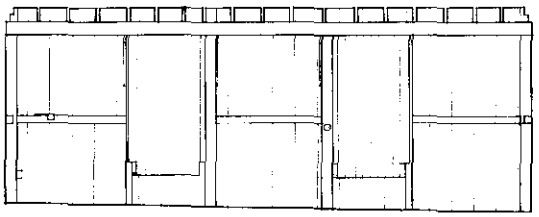

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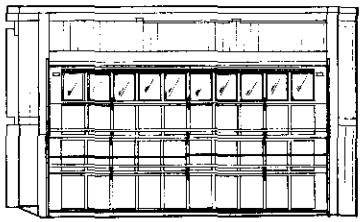

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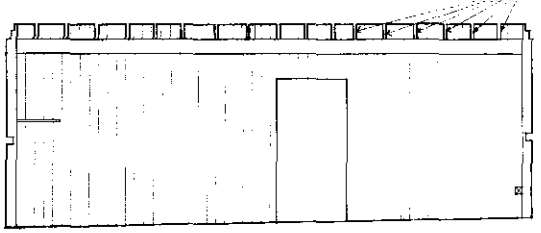

EAST

3 GARAGE BAY 102

SCALE : 3/8" = 1'-0"

1 EXISTING CONDITION LEGEND

WALLS

1W1 STONE - POWDERY SURFACE
1W2 BRICK - POWDERY SURFACE
1W3 LOOSE MASONRY
1W4 MINOR CRACK
1W5 MAJOR CRACK
1W6 BULGE IN PLASTER
1W7 MISSING PLASTER
1W8 CHIPPED PAINT
1W9 WATER STAINED
1W10 SOOT
1W11 SCORCHED PAINT
1W12 LOOSE JOINT
1W13 CHIPPED OR MISSING TRIM
1W14 WRINKLED WALL PAPER
1W15 LOOSE WALL PAPER
1W16 MISSING CEILING PANELS
1W17 WORN VARNISH

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SCALE : 3/8" = 1'-0"

SCALE OF FEET

EXISTING CONDITION

HS-2 TRUMAN GARAGE

HARRY S TRUMAN N. H. S.

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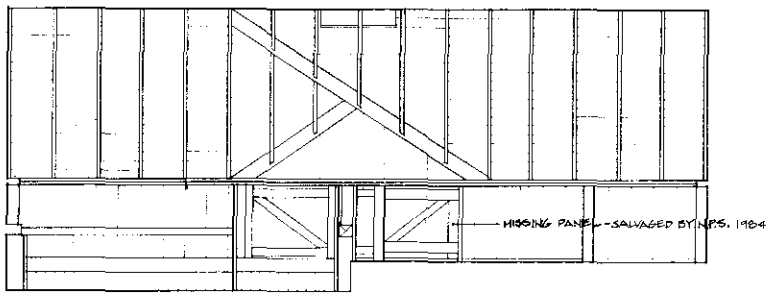

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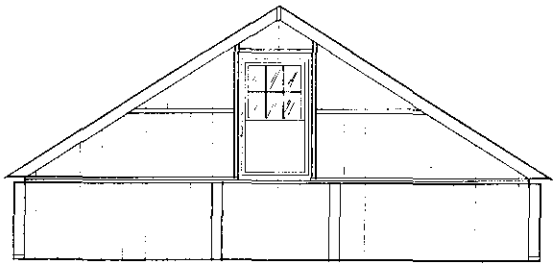

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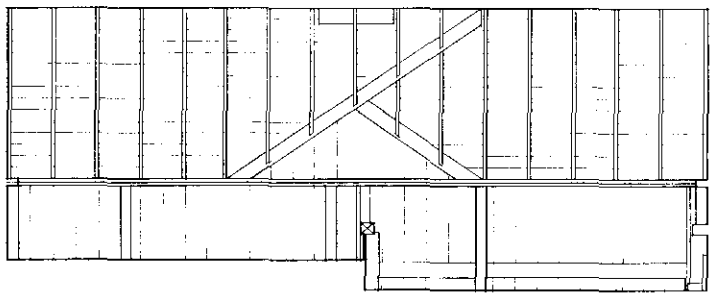

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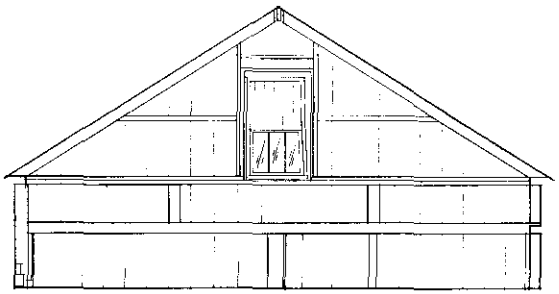

EAST

2 INTERIOR ELEVATIONS – LOFT

SCALE : 3/8" = 1'- 0"

1 EXISTING CONDITION LEGEND

WALLS

- 1W1 STONE - POWDERY SURFACE
- 1W2 BRICK - POWDERY SURFACE
- 1W3 LOOSE MASONRY
- 1W4 MINOR CRACK
- 1W5 MAJOR CRACK
- 1W6 BULGE IN PLASTER
- 1W7 MISSING PLASTER
- 1W8 CHIPPED PAINT
- 1W9 WATER STAINED
- 1W10 SOOT
- 1W11 SCORCHED PAINT
- 1W12 LOOSE JOINT
- 1W13 CHIPPED OR MISSING TRIM
- 1W14 WRINKLED WALL PAPER
- 1W15 LOOSE WALL PAPER
- 1W16 MISSING CEILING PANELS
- 1W17 WORN VARNISH

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SCALE : 3/8" = 1'- 0"

4 0 4
SCALE OF FEET

EXISTING CONDITION

HS - 2 TRUMAN GARAGE
HARRY S TRUMAN N. H. S.

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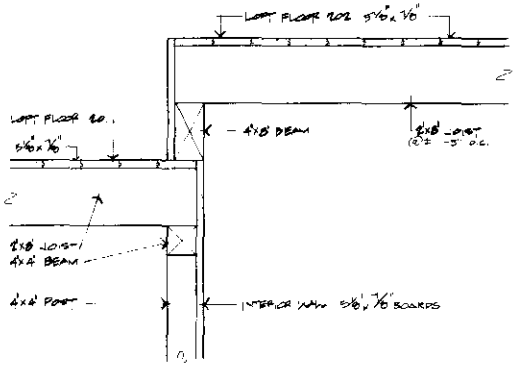
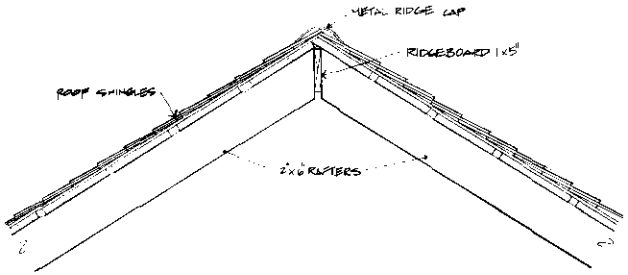


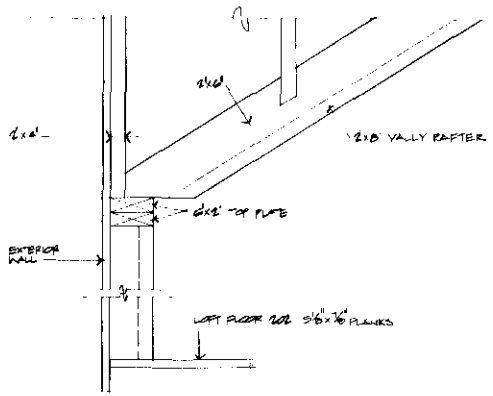
1 LOFT FLOOR SECTION

RE.: 1 SHT 3



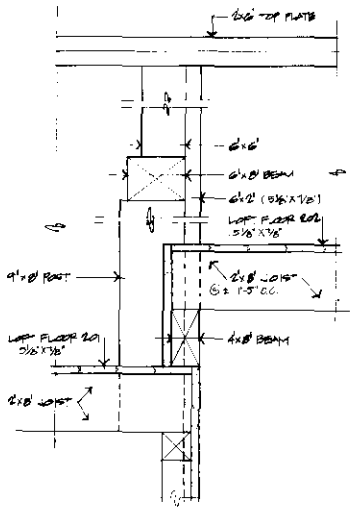
2 RIDGE SECTION

RE.: 2 SHT 3



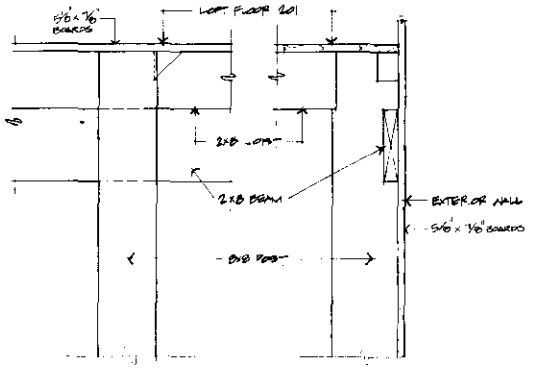
3 VALLEY RAFTER DETAIL

RE.: 2 SHT 3



4 LOFT & BEAM SECTION

RE.: 1 SHT 3



5 POST & BEAM DETAIL

RE.: 3 SHT. 3

Restoration Associates
a division of
Solomon Claybaugh Young Architects Inc.
20 West 9th Street
Kansas City, Missouri 64105
816 842 2292

SCALE : 3" = 1'-0"

0 3" 6" 1'
SCALE OF INCHES

EXISTING CONDITION

HS - 2 TRUMAN GARAGE

HARRY S TRUMAN N. H. S.

REVISED	PREPARED	DRAWING NO
	DESIGNED BATIZANDO	492 80006
	DRAWN	
	CHECKED	SHEET 11
	DATE Sept. 23, 85	OF 11

IV. Design Development and Recommendations

A. TRUMAN HOME (HS-01)

Introduction

The intent of the recommendations is to adequately stabilize the structure, make the building watertight, and preserve the building fabric as it existed during the Truman occupancy in the retirement years (post 1953) until Bess Truman's death in October, 1982. Cosmetically, it is recommended the interior of the house should not be restored to pristine condition. Cracks, bulges and water stains were present while the Trumans occupied 219 North Delaware. The cosmetic imperfections are a manifestation of certain events that occurred at the home, particularly the winter ice damage and severe July hail storm of 1969 as well as the Trumans' informal approach to the decorative treatment of the house and their sometimes limited financial resources. Thus the cracks, bulges, and water stains are significant in the historical interpretation of the house.

There are certain deteriorated conditions that if left unchecked, will eventually result in the loss of historic building fabric. Recommendations are provided for the treatment of these conditions by stabilizing the existing materials rather than by replacement of new materials that are made to look like the old. Minor cracks and bulges should be left as is for the near future but carefully monitored to assess any change in condition that would result in loss of building fabric.

Recommendations for Restoration Work

Outlined below are recommendations for treatment of the Truman house.

Topography

Regrade certain areas of the site adjacent to the house to promote drainage of water away from the building:

a) underneath front porch (101A), south porch (104B), kitchen porch (114A); and porch (114B-C).

b) at the north side of house particularly in vicinity of air-conditioning condenser units.

Install a surface drain between the air-conditioner condensing units and north wall of house. Connect to a 3 inch diameter p.v.c. pipe lead underground to the lower grade to the northwest.

Install a French drain parallel to face of front porch (101A) and lead to lower plateaus of site to the northeast.

Reposition existing splashblock so that it is under downspout at north side of front porch (101A).

Provide window wells at the basement windows (002:W4, 003:W-1, 004:W-1, 005:W-2) where soil is encroaching on the window frames.

There should be a termite examination on a regular basis.

Vegetation

A tree surgeon should be engaged to examine the maples and oak on the site in order to determine the health of the trees, and whether they are infested with pests or disease. Recommended treatment including pruning if needed, could be suggested.

Pavements

Dismantle brick paving underneath kitchen porch (114B-C) and stockpile for reuse. Approximately 20 percent of the bricks are severely spalled or cracked and will require replacement. Regrade area so that it slopes away from east foundation wall. Install a French drain at the east end and connect to a three-inch p.v.c. pipe lead to the lower portion of the site or driveway to the east. Relay brick to match existing pattern. In addition, there is a problem with the downspout at the northeast corner. Add leader to drain water from the structure.

Foundation

Repoint loose, cracked, or open mortar joints in exterior and interior foundation wall to match existing width, texture, color, and tooling. Replace damaged or missing stone.

Roof

Install cricket at back side of south chimney. Clean out leaves and debris from gutters. Install additional scupper at flat spot of built-in gutter, southeast corner of upper roof. Scrape off peeling paint at

same location, prime and paint. When asphalt shingles are replaced, consideration should be given to installing an elastomeric eave flashing manufactured by W. R. Grace and Company underneath the new shingles. In addition, install heat cables along the built-in gutter to minimize back-up of water under shingles during ice storms or heavy snow fall.

Floors

Reinforce floors in dining room (110) and central hall (103) so that squeaking of floors does not become more acute and public perceives floors as structurally sound. Install 2 x 2 ledgers tight to underside of floor on each side of floor joists. Fasten to joists with wood screws but leave flooring unconnected to new ledger. Add support blocking under seam at north side of storage room (213) where boards exhibit considerable deflection when walked upon. Remove three or four boards to gain access to joist space and renail in original position. Reinforce floors in central hall (202) and attic (303) above master bedroom (204) by installing new joists, full length, alongside the existing joists.

Plaster

Reattach sagging ceilings in dining room (110), eastern portion of bedroom (204); bathroom (211), and central hall (202) at opening to stair (202B), by injecting specially formulated acrylic-resin-based adhesives into the space between the lath and plaster. (Application of this technique, materials used and formulations are documented in

"Adhesives for the Reattachment of Loose Plaster" by Morgan Phillips, APT Journal Vol. XII No. 2, 1980, p. 37-63.) The flooring above the dining room (110) and bedroom (204) will have to be temporarily removed to gain access to the side of the plaster ceiling. Bathroom (211) is accessible since an unfinished attic is above it. Stabilize cracking plaster walls by injection into crack from room side of specially formulated acrylic-resin-based adhesives as noted above. Precautions should be taken to prevent adhesive from bleeding onto wallpaper. Specific locations requiring treatment are as follows:

- east side of fireplace, living room (104);
- northwest corner of music room (108);
- northeast corner of bedroom (207);
- northwest and northeast corner of bedroom (209).

Stabilize bulges in walls at the following locations:

- south and southern portion of east walls, bedroom (207);
- south wall near upper left hand corner of window W-1, bedroom (204);
- south wall of Truman dressing room (208) near west side of door (D-1).

Repair peeling wallpaper and cracked plaster in Gates' bathroom (106). Wallpaper should be carefully peeled back to point of adhesion; existing adhesive residue removed, cracked plaster removed, and existing wallpaper reattached. (Another possible solution is replacement.)

Reattach loose wallpaper seams with water soluble paste (such as wheat starch) injected behind paper with syringe.

Tile

Remove all ceramic tile in Gates' bathroom (106), remove mastic from tile and walls, and reset with new mastic in original position. Total removal and resetting is recommended rather than resetting only those tiles that have fallen off to assure that falling tiles will not be a continual problem.

Temperature and Humidity Control

Heat is needed in the vestibule to prevent further deterioration of crazed paint on walls. Install a small non-obtrusive electric heater.

Maintain a constant relative humidity of 35 percent in the winter time, if possible.

Lincrusta

Reattach either side of major cracks by injecting specially formulated acrylic-resin-based adhesive into crack. Precautions should be taken to prevent adhesive from bleeding onto lincrusta.

Plumbing Systems

A spring 1985 inspection of the non-historic domestic hot water heater, indicated some rusting out on the top and bottom at the steel jacket.

It was also found that galvanized pipe, used in some sections of the hot and cold water piping system had electrolytic build-up at the copper pipe connections. A few isolated areas where the pipe was leaking were also found. These items have since been replaced and updated. (See Appendix B).

To date, there are some sections of the waste piping system that have galvanized and lead piping installed. These sections of pipe should be replaced with cast-iron pipe if the waste system is to be activated. The exact routing of the underfloor waste piping could not be traced without removing plumbing fixtures and possibly removing part of the basement floor slab.

The technical data for all of the major mechanical equipment items in the house are shown in the mechanical schedule on the Existing Conditions Drawings.[1]

Electrical System

During the 1983-84 electrical renovation, some of the historic two-wire type plugs and switches were replaced. The remaining two-wire plugs and switches should be replaced with U. L. listed types and should be properly grounded.

The ceiling mounted lighting fixture located in storage room (213) consists of a brass base with a turn switch socket suspended by a brass

chain. The wire connecting the socket to the base appears to be brittle. This wire should be replaced with one of similar color and texture for historic purposes.

There is one outlet located on the east wall of kitchen (113) that has not functioned since the 1983-84 renovation. It should be determined whether or not this was reconnected to the new system and repairs made as necessary.[2]

Overall condition of in-place electrical, fire, security and communications systems is excellent. Routine maintenance should be performed on attic ventilation fan motor and porch ceiling fan motor even though these may not be in current use. The furnace blower and air conditioning condensing unit motors should be inspected and maintained regularly.

Heating and Cooling System

These have been replaced and updated in 1985. (See Appendix B.)

Evaluation of Visitor Impact

The condition of the Harry S Truman home was found to be generally good. The materials used in construction are for the most part as structurally sound as they were when installed. The problems discovered during the course of investigation and subsequent structural analysis were inherent in the methods of construction detailing. Most of these would pass

unnoticed and cause no major difficulties if the residence were to continue to be used as a private home; however, as an edifice of national interest and being subjected to loads similar to those placed on structures open to the public, it is recommended that those areas of the structure noted to have significantly reduced live load capacities be modified. It is felt that these modifications could be accomplished with a minimal visual impact upon the Truman home, the majority of these modifications being connection modifications or placement of additional support members in the basement area, under the porches, or within the attic spaces, areas that are unlikely to be open for general public inspection.

Recommendations (Visitor Impact)

The front porch is being used as an area for holding those persons waiting to join tour groups to view the residence during inclement weather. It is therefore recommended that modifications be made to this porch to increase the live load capabilities up to a uniform loading of 100 pounds per square foot. The other porches should be modified through the "exit pathway" if they are in fact designated as exits. With minor modifications to the several areas described in the report, the first floor is capable of sustaining a live load in excess of the residential 40 pounds per square foot, a loading which can be safe with tour groups limited to eight people that are escorted through the home and not allowed to accumulate in one area or by inviting the total number of people in the home.

Evaluation of Energy Conservation Measures

The physical investigation of the Truman home has disclosed that it would be very costly to remove exterior wall cladding for the purpose of installing a vapor barrier for interior climate control. All siding, sheathing, and brick nogging would need to be removed to install a membrane. If the siding were to be removed, a majority of it would have to be replaced due to splitting and damage caused by removal. There would also be a problem with running a continuous membrane over existing studs and bypassing porch roofs. The removal and replacement of the above mentioned materials would also alter the historical integrity of the structure.

Evaluation of Handicapped Access

Access for the handicapped visitor into the Truman home has yet to be developed. The visitor will need to travel up a 6 inch high curb, over an historic sidewalk constructed from large flat slabs of stone, and up another 6 inch step leading to the home itself. The home sits anywhere from 3 to 7 feet above grade with the front entrance being the least distance at 2 feet 4 inches above the front sidewalk. Four alternatives have been proposed by the National Park Service for making the home accessible to the handicapped visitor. Briefly these are outlined below.

Permanent Ramp

Uniform Federal Accessibility Standards require a ramp that is no

steeper than a 1:12 slope with handrails mandatory on lengths greater than 6 feet. Space sufficient to construct a ramp of a length required to meet a 1:12 slope is not available except at the west entrance on the front porch (101). Although there is sufficient room here for a ramp 30 feet in length, the sidewalk would have to be widened and a permanent ramp with handrails at this location would certainly have an adverse impact on the historic and aesthetic character of the home.[3]

Portable Ramp

Suspension of Uniform Federal Accessibility Standards would allow consideration of a single 36 inch x 10 foot portable aluminum ramp at the front entrance. However, the 1:4 slope may make it difficult for an adult to push an occupied wheelchair up the ramp and the absence of handrails - necessary to maintain portability - would require that a second employee walk beside the ramp to ensure that the wheelchair does not roll off the side. Advance notice is required for its operation.[4]

Stair Trac

A stair trac is a portable, battery powered, stair climbing device. A wheelchair and its occupant are strapped onto the frame of the device and then operated by a National Park Service employee, it ascends or descends stairs on steel belted rubber tracks. Its use can be emotionally unsettling for the disabled person and it may require a second employee to assist in case the device slips or slides. Advance notice is required for its operation.[5]

Wheelchair Lift

A permanent wheelchair lift could be located at the south porch (104-B). It would not require advance notice for its operation, but an employee would be required to operate it at the beginning and end of the tour and escort the wheelchair user through the living room (104) which is not normally open to visitors. A disabled person would probably feel comfortable using this device. It would create an intrusion into the historic scene that possibly could be softened somewhat through design.[6]

Recommendations for Handicapped Access

Stair Trac

The stair trac does not offer an advantage over a ramp or lift when its many attendant negative aspects are taken into account. "It takes considerable time to secure a wheelchair to the stair trac and access the disabled visitor up or down the steps, thereby possibly delaying tours and unnecessarily exposing the visitor to inclement weather. The process of being "strapped in" in the presence of other visitors is very embarrassing to the disabled person. It is extremely awkward for persons wearing skirts or dresses. The ascending or descending of stairs strapped to this device can be a very frightening experience for the disabled person when he/she has no direct control over its operation. It can be a safety hazard, particularly in winter conditions, and unlike a ramp or lift, it does not accept all models of wheelchairs."[7]

Consideration should be given to suspending Uniform Federal Accessi-

bility Standards and using a portable ramp at the front porch (101-A) or installing a permanent lift at the south porch (104-B) or preferably, at the north side of porch (114-B).

Portable Ramp

With careful attention to detail, a two piece, portable, aluminum ramp with integral curb at each side but without handrails, could be fabricated such that it would store under the porch and be accessed through a hinged (50 ss invisible hinges) section of the lower tread and two risers. The ramp could be held in place by two or three short pins that would fit into unobtrusive bushings recessed into the wooden deck of the porch. At a slope of 1:4 to 1:5, depending on its actual length, it would be practical for an employee to push a wheelchair up or down the ramp. Since the stair trac system requires two employees for its use, the differences between the two systems are the problems for the disabled user and the risk of liability inherent in the stair trac.

Wheelchair Lift

The wheelchair lift has the advantage of ease of use but at the expense of greater intrusion on the historic character of the home. An alternative to the south porch location is to place a lift at the north side of kitchen porch (114-B). It could be accessed at door (114B-D.1) at the porch and from the north side of the brick patio underneath. This location would require a lift with a travel of about 7 feet. Its presence, as viewed from the north and east, could be softened with the

addition of some landscaping. Installation would require cutting an opening in the brick wall at the north side of lower porch (005) and may impact adversely on the remains of the pergola. It is also recommended to consider the possibility of installing a lift at the southwest corner of kitchen porch (114A), but this would require modification of the structure's fabric, thereby compromising its historic character.

Recommendations for Further Research

Historical Research

Current research and analysis, including the examination of land values from the 1840s through the 1860s rejects the existence of any pre-1867 structure as part of the Truman home. Additional research, however, may disclose information which may lead to the substantiation of a pre-1867 structure.

Floor/Ceiling System Framing

Further investigation is recommended in the configuration of framing between the first and second floors, north and south elevation of kitchen wing to determine if second floor was built at a later date than the first floor.

Wall Structural Systems

Further study is recommended in the areas of structural stability. Other areas of investigation should include: the north facade of the

kitchen wing (113); the Gates' bathroom (106) addition; the foyer (102); the dining room (110) bay window; and the bay windows of the living room (104) and library (109).

It is also recommended that a better means of viewing the wall cavities be employed. Dental mirrors and a flashlight were very clumsy and the viewing depth limited when only a 2-1/2 inch view hole is used. A fiber optics view scope, or equal means, may work satisfactorily.[8]

In addition, a radiographic inspection should be made of the upper north and south walls of the kitchen wing to verify the theory that these walls were extended upwards after their original date of construction and the roof rebuilt (probably 1885) at the height and configuration as it exists today. A portable X-ray unit, used by veterinarians to examine cows and horses in pastures has been successfully used to document the structure of plank houses in Ithaca, New York. (Application of X-ray radiography equipment and materials used are documented in "Radiographic Inspection of Plank House Construction" by Mary Joan Kevlin, APT Journal Vol. XVIII No. 3 1986, p. 40-47.) This diagnostic technique is fast, non-destructive, and with proper precautions is safe. A licensed radiologic technologist should be involved with the operation.

Wallpaper

Throughout the home, a wallpaper study is recommended in order to

determine existing layering and to research historic patterns.

Investigation of Structure of Stair to Second Floor

Determination of the stair load capacity is essential prior to any future consideration of allowing public access to the second floor.

The stair structure is inaccessible, therefore the condition or load capacity of the stairs cannot be determined. Radiographic inspection could yield useful information about the stair structure, but we believe that cutting out portions of the first floor floorboards from below to allow direct access to the structure would yield more accurate information.

Site Archeology at Foundation Walls

If implemented, several recommendations made in this report would involve ground disturbance around the perimeter of the structure. If the areas under the porches are regraded and a French drain installed, it is recommended that archeological investigation precede these actions.

Introduction to Cost Estimates

Since the restoration work required for this project is specialized and often unfamiliar to craftsmen, the cost estimates should be utilized as a guide to establish work priorities and general cost range. The following include General Contractor's overhead and profit as well as that of the subcontractor's. The estimates are based on June 1, 1986 costs. Inflation factors should be applied as appropriate when the work is contemplated.

Cost Estimate

TRUMAN HOME (HS-01)

Element Description	Deficiency	Recommendation	Quantity	Cost
1. Grading/ Sitework	Areas of negative drainage, includes under porch, tree condition.	Regrading, drainage improvement, tree treatment and pruning (all trees).	-	$14,000
2. Brick Paving Lower Porch 001	Brick paving deteriorated and doesn't drain.	Remove, grade and relay brick. Replace damaged brick.	274 s.f.	$ 5,100
3. Stone Foundation	Cracked and open mortar joints.	Tuckpoint with matching mortar.	300 s.f.	$ 2,500
4. Roof Repair	Peeling paint and detail deficiency.	Add cricket and scupper and paint where required.	-	$ 2,270
5. Floor Board/ First Floor	Squeezing floor boards, Room 110, 103, and 213.	Reinforce from below.	300 s.f.	$ 3,381

TRUMAN HOME (HS-01)

Element Description	Deficiency	Recommendation	Quantity	Cost
6. Plaster Ceilings	Sagging plaster ceilings, Room 110, 202, 204 and 211.	Reattach plaster with adhesives from above.	805 s.f. (4 rooms)	$17,625
7. Plaster Walls	Cracked and loose plaster.	Adhesive injection of plaster.	- Allowance	$10,000
8. Wall Tile	Loose and missing ceramic wall tile Room 106	Remove and reinstall wall tile.	114 s.f.	$ 2,126
9. Wallpaper and Lincrusta	Loose and damaged material and water damaged plaster in Room 106.	A. Repair and reattach existing with adhesive.	- Allowance	$10,000
		B. Replace wallpaper in Room 106.	-	$ 8,000
10. Floor Replacement	Deficient live load capacity of 2nd floor hall and ceiling over Room 204.	Increase live load capacity by doubl- floor joists.	-	$ 4,664
11. Temperature and Humidity Control	Lack of heat in vestibule. Ability to control humidity during winter.	Install heater in vestibule 101, humidity control on furnace.		$ 1,000
12. Plumbing	Existing galvanized and lead piping.	Replace where possible with cast iron.	Allowance	$10,000
13. Electrical	Miscellaneous outlets and wire replacement.	Replace as required.	Allowance	$ 5,000
	TOTAL			$95,666

B. TRUMAN CARRIAGE HOUSE (HS-02)

Introduction

Due to the structural configuration of this facility and the determination that the existing structural members are showing only minor above grade deterioration from various causes, it is the opinion that the Carriage house is not in any immediate danger with respect to normal day-in, day-out loading applications. However, there are several areas or items which could receive some immediate attention and add a substantial safety factor against possible damages which could be incurred by the failure of this structure and subsequent damage to the materials stored within.[9]

Recommendations for Restoration

Outlined below are recommendations for treatment of the Carriage house.

Topography

A swale along the south elevation should be installed so that water flows away from the face of the structure, eliminating direct contact of the wood siding with the soil. Likewise, the site of the east and west elevations should be regraded to promote positive drainage away from the face of the structure. There should be a termite examination on a regular basis.

Vegetation

Leaves that have accumulated in the interior of the Carriage house should be removed. Shrubbery facing the west elevation of the structure should be trimmed back from the face of the building to prevent wet leaves from resting against the siding and to promote drying of the lower portion of the building and adjacent ground after rainfall.

Foundation and Structural Posts

The foundation of the Carriage house is in an extreme state of decay. Action must soon be taken to abate the progressive rate of settlement and the causes of deterioration before additional structural and cosmetic problems develop. Although an aggressive, overall restoration is not planned before the fiscal year 1987, it is recommended that repairs be made to the foundation and primary structural posts.

It is recommended that a partial concrete sill be slipped beneath each structural post in place of a wooden sill. In this way, the problem of sill decay would not occur. Siding could be fastened to a treated 2 x 4 anchored to the finished surface of the interior concrete slab. Post bases should be repaired using structural epoxy and fiberglass rods. In order to complete these repairs, siding will have to be temporarily removed and shallow holes excavated at each post. Portions of the concrete slab would have to be removed around posts 3, 4, 5 and 20 only to expose the base. The foundation wall should be stabilized at the bearing point of each reconstructed post base. Salvaged siding and trim

should be fastened back into place as existed.[10]

It is also recommended that the cracked concrete apron along the north elevation be replaced and expansion joints installed where the apron abuts the garage floor and driveway.

Wall System Framing

Assuming the hidden connections in the structure are similar to those visible, the garage has little ability to resist lateral forces such as those experienced during wind loading and to some extent the horizontal reaction produced by the gravity force and the eastward lean. It would be highly beneficial to install X-bracing to the vertical members, both in the garage and loft areas. In the upper area these should be 12 gauge by 3 inch wide metal bands attached to the existing columns using bent 1/8 inch steel plates secured to the column by four 1/2 inch diameter screw lags. In the lower garage area the connections would be similar to the above but a 12 gauge by 4 inch wide metal brace should be used. These braces should be installed on the perimeter columns of the east, south and west walls. The diagonal X-bracings would also minimize any further leaning of the structure to the east.[11]

Roof Systems

It is recommended to securely fasten the downspout (located at the north elevation) into the elbow. In addition, it is recommended to replace a 6 foot horizontal section with a 10 foot long section, and to install a

splashblock to minimize erosion where water empties onto the ground.

The roof is approaching the end of its life expectancy and should be replaced. New shingles and flashing should be installed, and shingles should be stained green. Replacements should match existing materials. To assure that the new shingles can adequately breathe and new flashing is properly seated, it is essential to remove existing wood shingles, valley and hip flashing.

A new gutter, downspout and splashback should be installed at the south elevation to remedy poor drainage. However, if a gutter and downspout were not extant during the Truman era, and maintaining a gutterless appearance is paramount, a French drain could be installed along the south wall to mitigate the impact of rainwater falling directly to the ground below the cove.

Floor/Ceiling Structural Systems

It is recommended to install vertical support in the loft to support the lower ends of the existing valley rafters on the north and south sides. Loading of loft floors should be limited.[12]

Building Envelope

Replace missing board, east side of cupola, or install lexan.

Replace all split battens with new wood to match existing. If replace-

ment is necessary where plain square battens occur, replace with in-kind.

Replace two lower window sills on the east elevation and set so that sills slope outward. If maintaining material integrity is critical, sills could be repaired with epoxy filler, epoxy consolidated where required, and repositioned to slope outward. Consolidate the bottom rail and lower portions of the stiles on the two lower windows.

Install a metal drip at top of the low windows and doors on the east elevation and above the loft doors on the south elevation. Consolidate the lower ends of the boards on the loft doors and replace the missing board.

Refasten the loose boards on the north side of the door at the east elevation.

Replace the missing cove molding at the pediment of the north window on the west elevation.

Cover holes in board and batten for previous electric service with clear polycarbonate glazings screwed into interior face of siding.

Consolidate decayed lower ends of wood siding.

Exterior/Interior Finishes

Strip paint from siding, trim, eaves, soffits, windows and shutters. Caulk gaps in siding. Prime and paint using historically accurate colors (See Appendix A, Marie Carden, Paint Analysis). Exterior and interior paint chromochronolgy should be done to verify colors, particularly on shutters.

Security System

Consideration should be given to locating an additional manual fire pull.

Recommendations for Further Research

Exterior and interior paint chromochronology.

Introduction to Cost Estimate

Since the restoration work required for this project is specialized and often unfamiliar to craftsmen, the cost estimates should be utilized as a guide to establish work priorities and general cost range. The following include General Contractor's overhead and profit as well as that of the subcontractor's. The estimates are based on June 1, 1986 costs. Inflation factors should be applied as appropriate when the work is contemplated.

Cost Estimate

CARRIAGE HOUSE (HS-02)

Element Description	Deficiency	Recommendation	Quantity	Cost
1. Grading/ Sitework	Grade in contact with wood, negative drainage, vegetation in contact.	Regrade to below wood and for positive drainage, replace vegetation, 6 bushes, and resod.	-	$ 4,575
2. Foundation/ Structure Posts	Wood sill and structure posts rotted.	Consolidate in place with concrete and epoxy.	20 Posts/ 114 ft. Sill	$ 5,000 NPS Labor
3. X-Bracing	Lack of lateral stability.	Install metal bands to stabilize wood frame.	-	$ 3,500
4. Roofing/ Flashing	Wood shingles and metal flashing deteriorated.	Replace with new wood shingles dipped in green stain, and metal flashing, gutters and downspouts.	1,150 s.f.	$11,000

Cost Estimate -- continued

CARRIAGE HOUSE (HS-02)

Element Description	Deficiency	Recommendation	Quantity	Cost
5. Carpentry	Deteriorated wood trim	Replace and/or consolidate wood trim and add metal drips over windows.	-	$ 4,000
6. Painting	Existing paint peeled and cracked.	Strip existing paint and re-paint exterior.	1,905 s.f.	$ 5,676
7. Concrete Apron	Deteriorated concrete apron at garage doors.	Replace with new concrete apron.	120 s.f.	$ 1,000
8. Fire Protection	No fire alarm pull station.	Add fire alarm pull station.	1	$ 500
TOTAL				$35,251

Notes to Chapter IV

1. Restoration Associates, a division of Solomon Claybaugh Young Architects, Inc., "Analysis of Condition Report HS-1 Truman Home, Truman Home National Historic Site" (Kansas City, February 14, 1985, bound copy), 4.5.

2. M. A. Panethiere, "Electrical Report, Harry S Truman House" (Kansas City: Associated Engineering Consultants, March 31, 1986, photocopy), 2-3.

3. United States Department of Interior. "Alternative to the Stair-Trac for the handicapped access of Harry S Truman National Historic Site" (National Park Service, Omaha, Nebraska, May 29, 1986 photocopy) 1.

4. Ibid.

5. United States Department of Interior. "Handicap Access Survey of Harry S Truman National Historic Site" (National Park Service, Denver, Colorado, March 22, 1985 photocopy) 5-7.

6. Ibid., 7-9.

7. Ibid., 5-8.

8. Michael Lee and Alan O'Bright, "Physical Investigation Report Truman Home (HS-01) Harry S Truman National Historic Site" (United States Department of the Interior, National Park Service Midwest Region, Omaha, Nebraska, July 24-26, 1984, photocopy), 4.

9. Lawrence S. Graham, P.E., "Truman Garage, Independence, Missouri" (Kansas City, Harper and Kerr Consulting Structural Engineers, P.A., July 26, 1985, photocopy), 4. Hereafter cites as "Harper and Kerr."

10. National Park Service, "Physical Investigation Report and Treatment Proposal, Truman Carriage House (HS-02) Foundation, Harry S Truman National Historic Site, Independence, Missouri" (Omaha, Cultural Resources Management Division, 1985, photocopy), 4.

11. Harper and Kerr, July 26, 1985., 4.

12. Ibid., 5.

Appendix A

National Park Service Reports and Fabric Analysis (for complete reference, see Bibliography)

1. Paint Analysis and Recommendations for the H.S.T. Home
   May, 1986 by Marie Carden

2. Physical Investigation Report - Truman Home (HS-01)
   July 24-26, 1984 by Michael Lee and Alan O'Bright,
   National Park Service, Midwest Regional Office

3. Physical Investigation Report and Treatment Proposal
   Truman Carriage House (HS-2) Foundation
   December 3-5, 1985 by Alan O'Bright,
   National Park Service, Midwest Regional Office

4. Analysis of Condition Report
   HS-1 Truman Home
   February 14, 1985 by Restoration Associates

5. Truman Garage Structural Report
   Letter dated February 24, 1986 by Harper & Kerr

6. Handicap Access Survey of Harry S. Truman National Historic Site
   November 7, 1984 by Outdoor Recreation Planner, Professional
   Support Division, National Park Service, Denver Service Center

7. Harry S. Truman House, Electrical Report
   March 31, 1986 by M. A. Panethiere (AEC)

8. Truman Residence, Carriage House Wiring
   July 12, 1985 by John Mueller, Electrician

9. Exterior Woodwork Number 2 Preservation Tech Notes, June 18,
   1986, by Alan O'Bright (photo copy)

Appendix B

Chronological List of Work Completed by the National Park Service

1. CX6000-4-0020, $44,900.00. Roof Repair, March-April 1984. Penn Perry Inc., Wexford, PA. Repair/replacement of flat seam metal roofing, built-in gutters and downspouts.

2. CX6000-4-0028, $12,655.00. Rehabilitate Electrical System, Truman home, Dec. 1983-April 1984. Watkins Electric Co., Independence, MO.

3. CX6000-4-0062, $3,900.00. Sidewalk Repair, April 1984. Hamilton Concrete Construction, Indeperdence, MO. Partial replacement of sidewalk inside of fence.

4. PX1100-4-115, 7, 716.07. Visitor use carpet, April 1984. Robert T. Baker, Kansas City, Missouri. Historic wall-to-wall carpeting was removed from spaces 102, 103, 107, and 110. Historic carpet was moved to storage at Truman Library. New natural and grey colored nylon carpet from the floorcoverings division of Dan River Inc. was installed in the spaces listed above as well as a platform into space 109, a runner through 111 and 113. Grey indoor-outdoor carpet was installed on back porch (space 114E). The above purchase order was amended later in April for an additional $1,113.21. Modifications to grey visitor path were made by PX 6460-4-0079, $180.00 in September, 1984 and PX 6460-5-0051, $135.00 in September, 1985.

5. PX6460-5-0030, $1,258.82. Plumbing, April 1985. Evans Plumbing & Heating, Independence, MO. Replaced existing water pipes in Truman home basement using type K hard drawn copper pipe; replaced in-ground hydrant near water meter; and repaired leaking 4" lead drain pipe.

6. PX6460-5-0018, $352.62. Hot Water Heater, May 1985. Evans Plumbing & Heating, Independence, MO. Installed Dayton 6 gallon, electric, 120 volt, 15 7/8"H x 15" diam. water heater; cabinet with double bowl stainless steel sink and faucet w/spray in basement of Truman home; and drained existing 40 gal. water heater but did not disconnect it.

7. PX6460-5-0033, $1,180.00. Rewire Carriage house, June-July 1985. MDG Company, John Mueller owner, Independence, MO. Rewired Carriage house; disconnected existing aerial electrical service at the power pole; disconnected existing aerial branch circuits; installed underground conduit, 2-1/2" inside diameter PVC; galvanized electrical metal tubing; copper wire w/insulation rating of 600

volts; outlet, pull, and junction boxes. All service was connected to existing panelboard in Truman home basement. Disconnected aerial lines remained in place.

8. PX6000-4-0641, $4,497.09. Lightning Protection System, August 1985. A.C. Lightning Security Inc., Maryville, MO.

9. CX6000-4-0097, $233,220.00. Repainting/Repair of Truman home, Including Masonry Restoration and Window Repair, October 1984-November 1985. Campos Construction Co., Omaha, NE. (Cost includes all modifications)

10. CX6000-4-0097, $9,031.00 (Modification #5 of Repainting/Repair of Truman home contract). Heating/Air Conditioning, October 1985. Subcontracted from Campos Construction Co. by Morton Heating & Air Conditioning, Independence, MO. Installed two Carrier outdoor condensing units, series 38 on concrete pads on north side of kitchen (space 113). Installed two Carrier 58DH/SS induced-draft gas-fired furnaces, upflow, in furnace room (space 003) replacing historic gas furnace.

11. CX6000-5-0042, $25,164.00. Security Systems, October 1985-March 1986. Sentry Protective Alarms, Inc., Overland Park, Kansas. Fire detection system consists of control panel w/16 zones; heat, photoelectric and ionization detectors, and interior and exterior audible alarms. Intrusion detection system consists of control panel w/8 zones; infra-red passive detectors; local exterior and interior audible alarms.

12. PX6460-6-0039, $1,965.00. Exterior Security Lighting, May 1986. John Mueller, Independence, MO. Installed four (4) metal halide flood lamps with PVC underground conduit and installed four (4) photoelectric cells for existing exterior lighting.

Appendix C

Anticipated Work by the National Park Service

1. Reroof Truman Home

Material - Match existing asphalt shingles.
(NOTE: Historic shingles were installed in 1969. The shingles were discontinued by GAF in 1984. No shingle manufacturer currently makes two-tab shingles. A minimum of 1,000 squares is required for a GAF custom order. The Truman home requires about 34 squares of asphalt shingles.

Cost - Two-tab shingles - $50,000 - $100,000
Three-tab shingles - $15,000
Slate shingles - $60,000

Date - Possibly in 1988.

2. Repair Rotted Posts in Carriage House (HS-02)

Material - Epoxy consolidation as per "Physical Investigation Report and Treatment Proposal, Truman Carriage House (HS-2) Foundation" dated December 1985.

Cost - Work performed by National Park Service staff (Alan O'Bright and Michael Lee).
Materials cost estimated at $5,000.

Date - Fall, 1986.

3. Paint Steel Picket Fence

Material - Repaint to match existing.

Cost - $14,000

Date - Fall, 1986.

Appendix D

List of Site Structures

List of Classified Structures (LCS)
Park Historic Architecture Division
National Park Service, FTS-343-8149

Park/Region Report

Struc Num: HS-01 Org. Code: 6460 IDLCS: 23694

Park:	Harry S. Truman National Historic Site	Region:	Midwest Region	
StrucName:	Truman Home	Period:	Historic	
StrucComp:	Wood	Mgt. Cat.:	A Must Be Preserved	
StrucType:	Building	Nr Stat:	Entered on Register	05/31/85
CurrntUse:	Museum/Collection Storage	Legal Int:	Fee Simple	
Mgt.Agree:		Level of Estimate:	Estimator:	
Stabilization:	NPS Responsibility	Approved Ult. Treatment:	No Approved Treatment	
Cyclic Maintenance:	NPS Responsibility	Stabilization Cost:		/
Routine Maintenance:	NPS Responsibility	Approved Treatment Cost:		/
Approved Ult. Treatment:	NPS Responsibility	Approval Document:		

Struc Num: HS-02 Org. Code: 6460 IDLCS: 23695

Park:	Harry S. Truman National Historic Site	Region:	Midwest Region	
StrucName:	Truman Carriage House	Period:	Historic	
StrucComp:	Wood	Mgt. Cat.:	A Must Be Preserved	
StrucType:	Building	Nr Stat:	Entered on Register	05/31/85
CurrntUse:	Museum/Collection Storage	Legal Int:	Fee Simple	
Mgt.Agree:		Level of Estimate:	Estimator:	
Stabilization:	NPS Responsibility	Approved Ult. Treatment:	No Approved Treatment	
Cyclic Maintenance:	NPS Responsibility	Stabilization Cost:		/
Routine Maintenance:	NPS Responsibility	Approved Treatment Cost:		/
Approved Ult. Treatment:	NPS Responsibility	Approval Document:		

Struc Num: HS-03 Org. Code: 6460 IDLCS: 23696

Park:	Harry S. Truman National Historic Site	Region:	Midwest Region	
StrucName:	Truman Fence	Period:	Historic	
StrucComp:	Metal	Mgt. Cat.:	A Must Be Preserved	
StrucType:	Fence	Nr Stat:	Entered on Register	05/31/85
CurrntUse:		Legal Int:	Fee Simple	
Mgt.Agree:		Level of Estimate:	Estimator:	
Stabilization:	NPS Responsibility	Approved Ult. Treatment:	No Approved Treatment	
Cyclic Maintenance:	NPS Responsibility	Stabilization Cost:		/
Routine Maintenance:	NPS Responsibility	Approved Treatment Cost:		/
Approved Ult. Treatment:	NPS Responsibility	Approval Document:		

Struc Num: HS-04 Org. Code: 6460 IDLCS: 23697

Park:	Harry S. Truman National Historic Site	Region:	Midwest Region	
StrucName:	Truman Pergola	Period:	Historic	
StrucComp:	Brick	Mgt. Cat.:	A Must Be Preserved	
StrucType:	Other	Nr Stat:	Entered on Register	05/31/85
CurrntUse:		Legal Int:	Fee Simple	
Mgt.Agree:		Level of Estimate:	Estimator:	
Stabilization:	NPS Responsibility	Approved Ult. Treatment:	No Approved Treatment	
Cyclic Maintenance:	NPS Responsibility	Stabilization Cost:		/
Routine Maintenance:	NPS Responsibility	Approved Treatment Cost:		/
Approved Ult. Treatment:	NPS Responsibility	Approval Document:		

Struc Num: HS-05 Org. Code: 6460 IDLCS: 23698

Park:	Harry S. Truman National Historic Site	Region:	Midwest Region	
StrucName:	Truman Birdbath	Period:	Historic	
StrucComp:	Concrete	Mgt. Cat.:	A Must Be Preserved	
StrucType:	Other	Nr Stat:	Entered on Register	05/31/85
CurrntUse:		Legal Int:	Fee Simple	
Mgt.Agree:		Level of Estimate:	Estimator:	
Stabilization:	NPS Responsibility	Approved Ult. Treatment:	No Approved Treatment	
Cyclic Maintenance:	NPS Responsibility	Stabilization Cost:		/
Routine Maintenance:	NPS Responsibility	Approved Treatment Cost:		/
Approved Ult. Treatment:	NPS Responsibility	Approval Document:		

Struc Num: HS-06 Org. Code: 6460 IDLCS: 23699

Park:	Harry S. Truman National Historic Site	Region:	Midwest Region	
StrucName:	Truman Secret Service Security Booth Site	Period:	Historic	
StrucComp:	Fabric	Mgt. Cat.:	A Must Be Preserved	
StrucType:	Other	Nr Stat:		
CurrntUse:		Legal Int:	Fee Simple	
Mgt.Agree:		Level of Estimate:	Estimator:	
Stabilization:	NPS Responsibility	Approved Ult. Treatment:	No Approved Treatment	
Cyclic Maintenance:	NPS Responsibility	Stabilization Cost:		/
Routine Maintenance:	NPS Responsibility	Approved Treatment Cost:		/
Approved Ult. Treatment:	NPS Responsibility	Approval Document:		

Struc Num: HS-07 Org. Code: 6460 IDLCS: 23700

Park:	Harry S. Truman National Historic Site	Region:	Midwest Region	
StrucName:	Truman Sundial	Period:	Historic	
StrucComp:	Concrete	Mgt. Cat.:	A Must Be Preserved	
StrucType:	Other	Nr Stat:	Entered on Register	05/31/85
CurrntUse:		Legal Int:	Fee Simple	
Mgt.Agree:		Level of Estimate:	Estimator:	
Stabilization:	NPS Responsibility	Approved Ult. Treatment:	No Approved Treatment	
Cyclic Maintenance:	NPS Responsibility	Stabilization Cost:		/
Routine Maintenance:	NPS Responsibility	Approved Treatment Cost:		/
Approved Ult. Treatment:	NPS Responsibility	Approval Document:		

Struc Num: HS-08 Org. Code: 6460 IDLCS: 23701

Park:	Harry S. Truman National Historic Site	Region:	Midwest Region	
StrucName:	Truman Flagpole	Period:	Historic	
StrucComp:	Metal	Mgt. Cat.:	A Must Be Preserved	
StrucType:	Other	Nr Stat:	Entered on Register	05/31/85
CurrntUse:		Legal Int:	Fee Simple	
Mgt.Agree:		Level of Estimate:	Estimator:	
Stabilization:	NPS Responsibility	Approved Ult. Treatment:	No Approved Treatment	
Cyclic Maintenance:	NPS Responsibility	Stabilization Cost:		/
Routine Maintenance:	NPS Responsibility	Approved Treatment Cost:		/
Approved Ult. Treatment:	NPS Responsibility	Approval Document:		

Struc Num: HS-09 Org. Code: 6460 IDLCS: 23702

Park:	Harry S. Truman National Historic Site	Region:	Midwest Region	
StrucName:	Truman Gas Lamp	Period:	Historic	
StrucComp:	Metal	Mgt. Cat.:	A Must Be Preserved	
StrucType:	Other	Nr Stat:	Entered on Register	05/31/85
CurrntUse:		Legal Int:	Fee Simple	
Mgt.Agree:		Level of Estimate:	Estimator:	
Stabilization:	NPS Responsibility	Approved Ult. Treatment:	No Approved Treatment	
Cyclic Maintenance:	NPS Responsibility	Stabilization Cost:		/
Routine Maintenance:	NPS Responsibility	Approved Treatment Cost:		/
Approved Ult. Treatment:	NPS Responsibility	Approval Document:		

Struc Num: HS-10 Org. Code: 6460 IDLCS: 23703

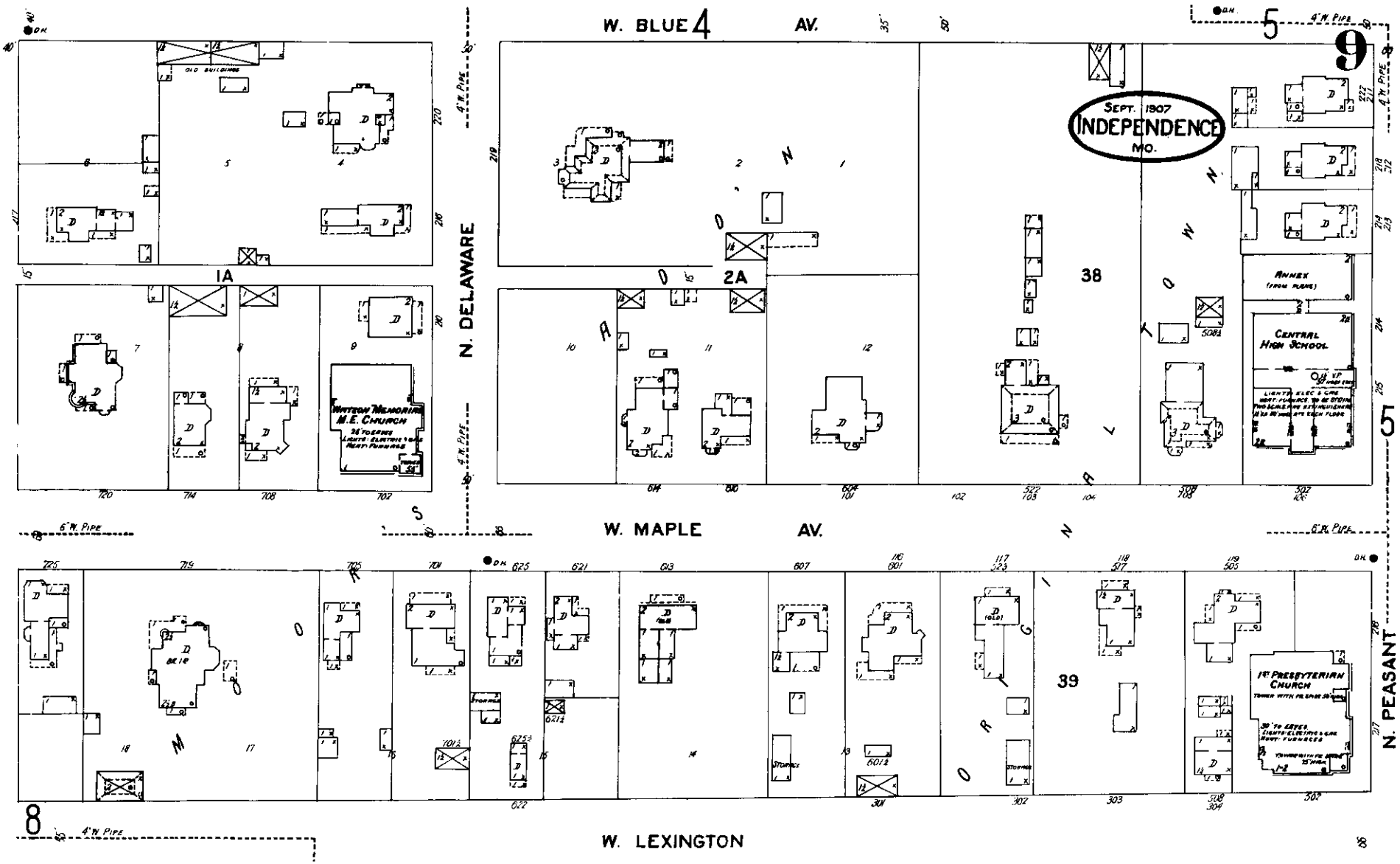
Park:	Harry S. Truman National Historic Site	Region:	Midwest Region	
StrucName:	Truman Cistern	Period:	Historic	
StrucComp:	Brick	Mgt. Cat.:	A Must Be Preserved	
StrucType:	Other	Nr Stat:	Entered on Register	05/31/85
CurrntUse:		Legal Int:	Fee Simple	
Mgt.Agree:		Level of Estimate:	Estimator:	
Stabilization:	NPS Responsibility	Approved Ult. Treatment:	No Approved Treatment	
Cyclic Maintenance:	NPS Responsibility	Stabilization Cost:		/
Routine Maintenance:	NPS Responsibility	Approved Treatment Cost:		/
Approved Ult. Treatment:	NPS Responsibility	Approval Document:		

Struc Num: HS-11 Org. Code: 6460 IDLCS: 23704

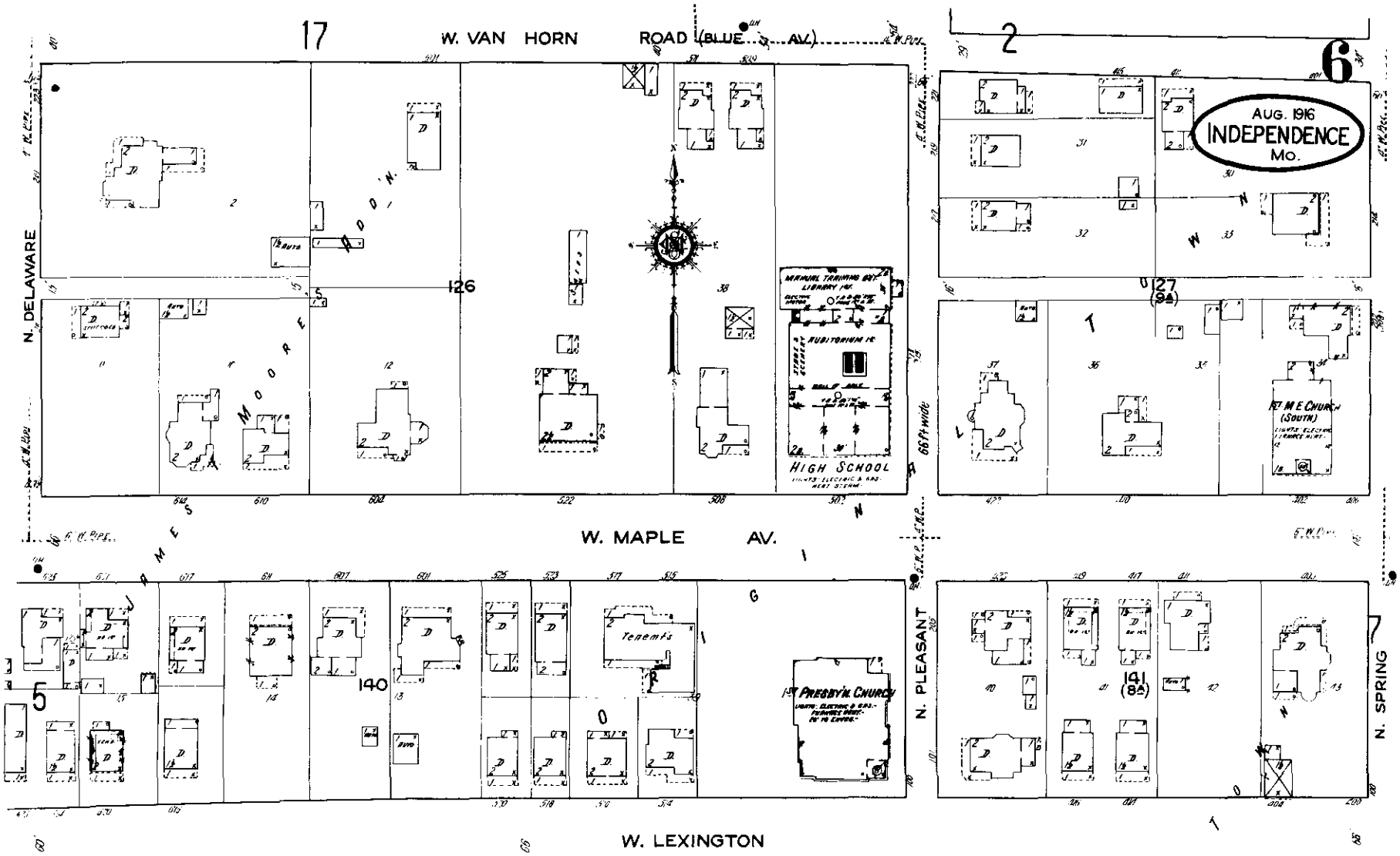
Park:	Harry S. Truman National Historic Site	Region:	Midwest Region	
StrucName:	Historical Marker	Period:	Period	
StrucComp:	Metal	Mgt. Cat.:		
StrucType:	Other	Nr Stat:	Undetermined NR Status	
CurrntUse:		Legal Int:	Fee Simple	
Mgt.Agree:		Level of Estimate:	Estimator:	
Stabilization:	NPS Responsibility	Approved Ult. Treatment:	Preservation	
Cyclic Maintenance:	NPS Responsibility	Stabilization Cost:		/
Routine Maintenance:	NPS Responsibility	Approved Treatment Cost:		/
Approved Ult. Treatment:	NPS Responsibility	Approval Document:		

Struc Num: HS-12 Org. Code: 6460 IDLCS: 23705

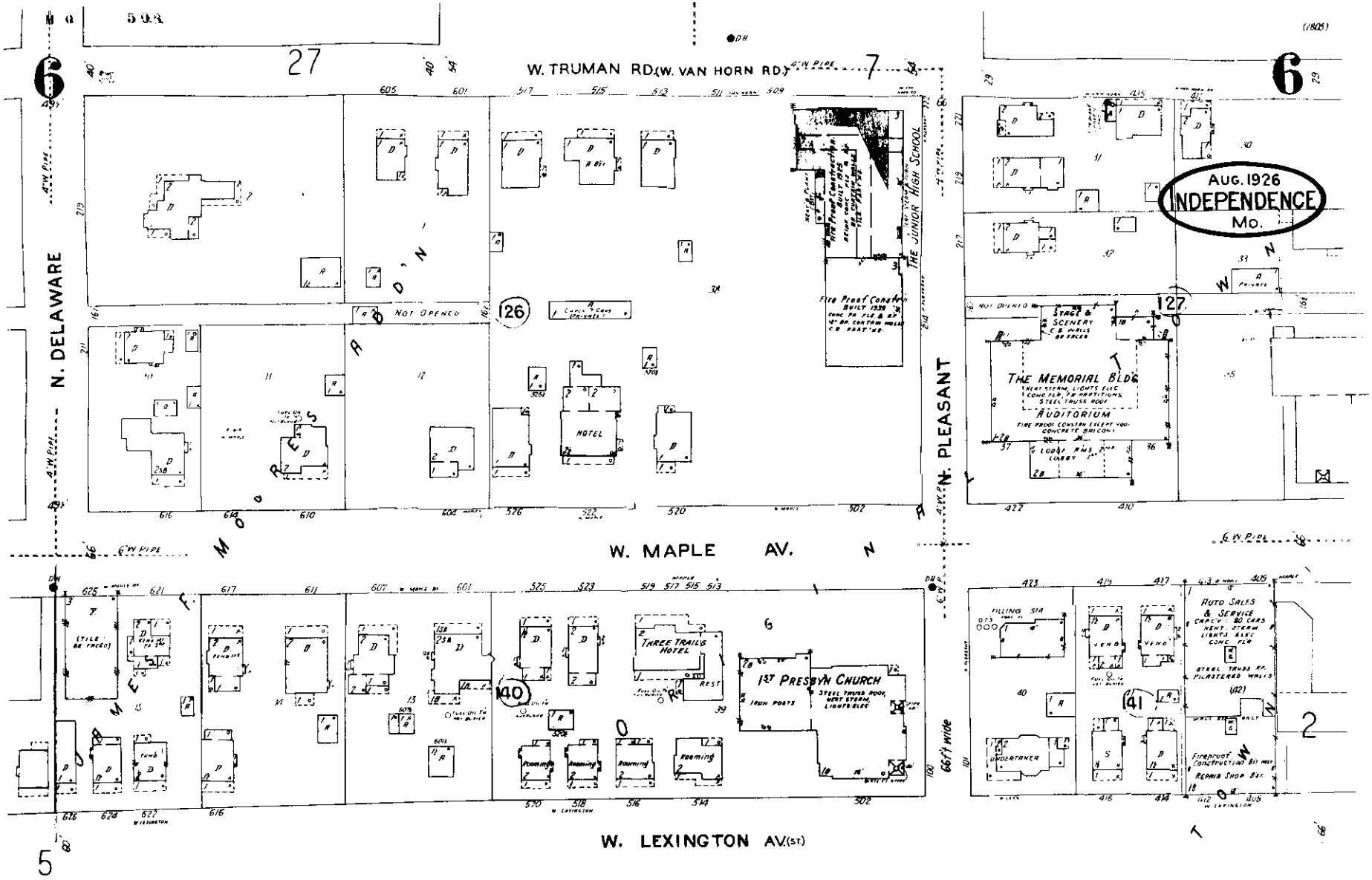
Park:	Harry S. Truman National Historic Site	Region:	Midwest Region
StrucName:	Concrete Foundation	Period:	Historic
StrucComp:	Concrete	Mgt. Cat.:	A Must Be Preserved
StrucType:	Other	Nr Stat:	Undetermined NR Status
CurrntUse:		Legal Int:	Fee Simple
Mgt.Agree:		Level of Estimate:	Estimator:
Stabilization:	NPS Responsibility	Approved Ult. Treatment:	Preservation
Cyclic Maintenance:	NPS Responsibility	Stabilization Cost:	/
Routine Maintenance:	NPS Responsibility	Approved Treatment Cost:	/
Approved Ult. Treatment:	NPS Responsibility	Approval Document:	



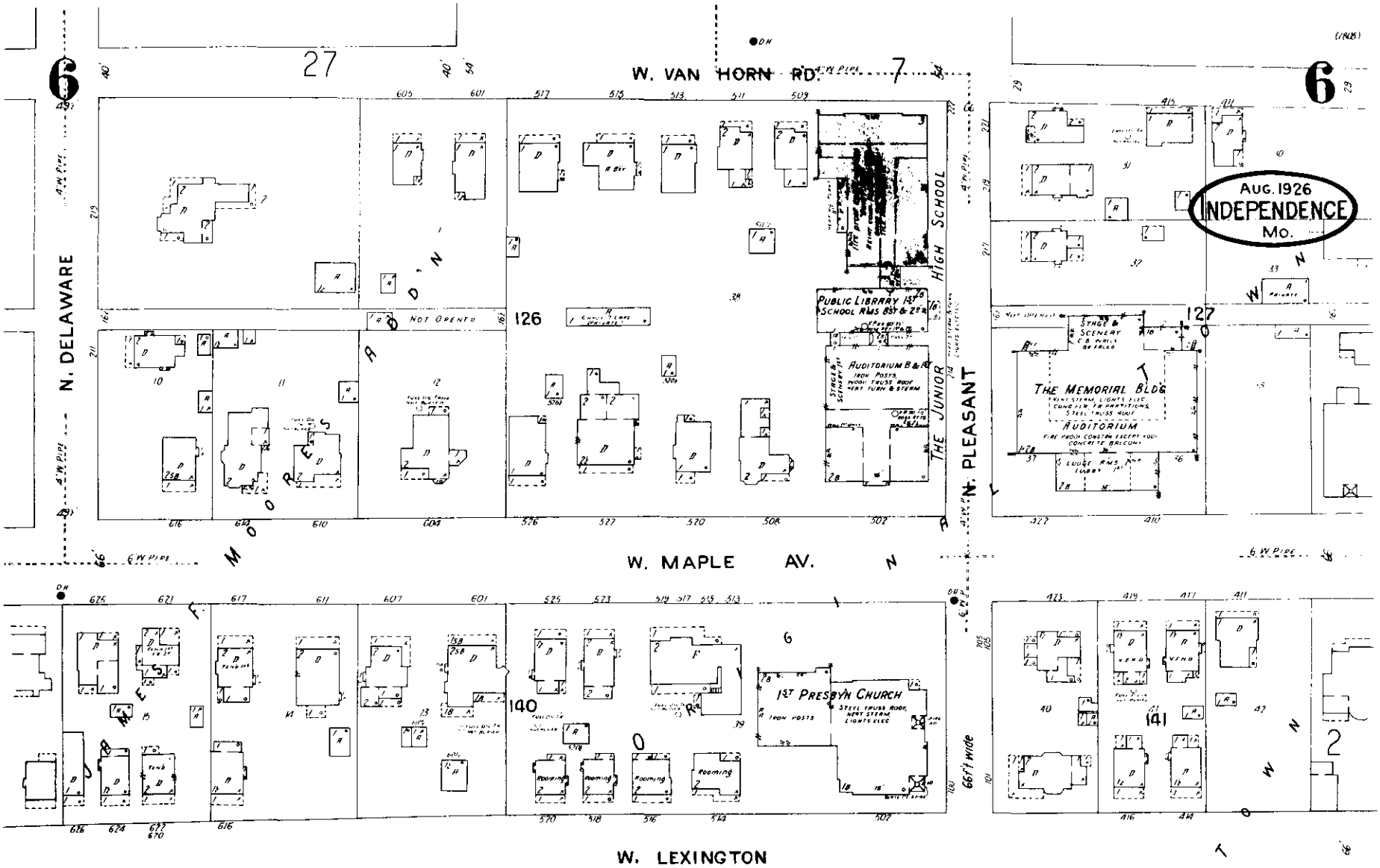
Appendix E. (a)Sanborn Map of Independence, Missouri; September, 1907.



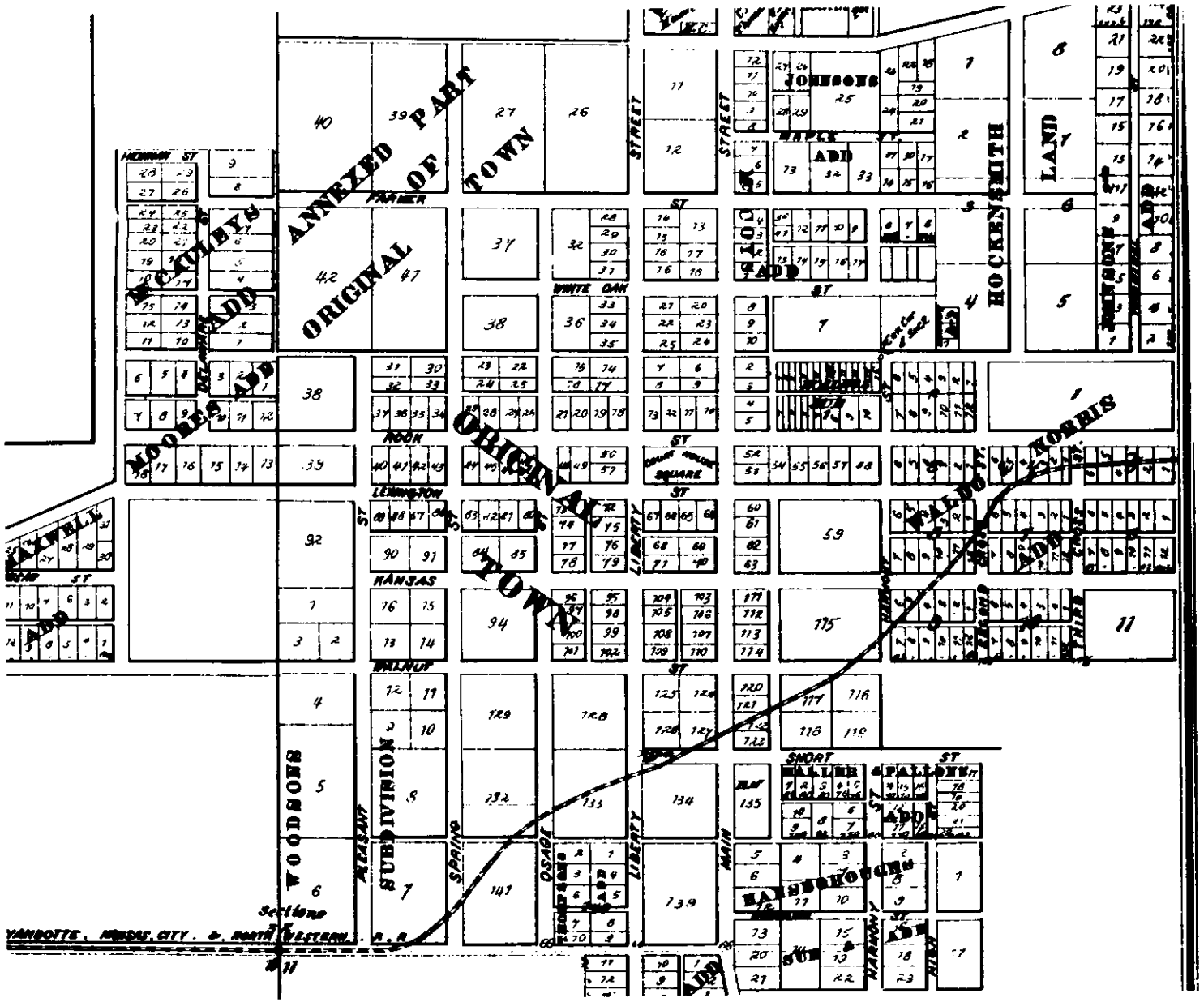
Appendix E. (b)Sanborn Map of Independence, Missouri; August, 1916.



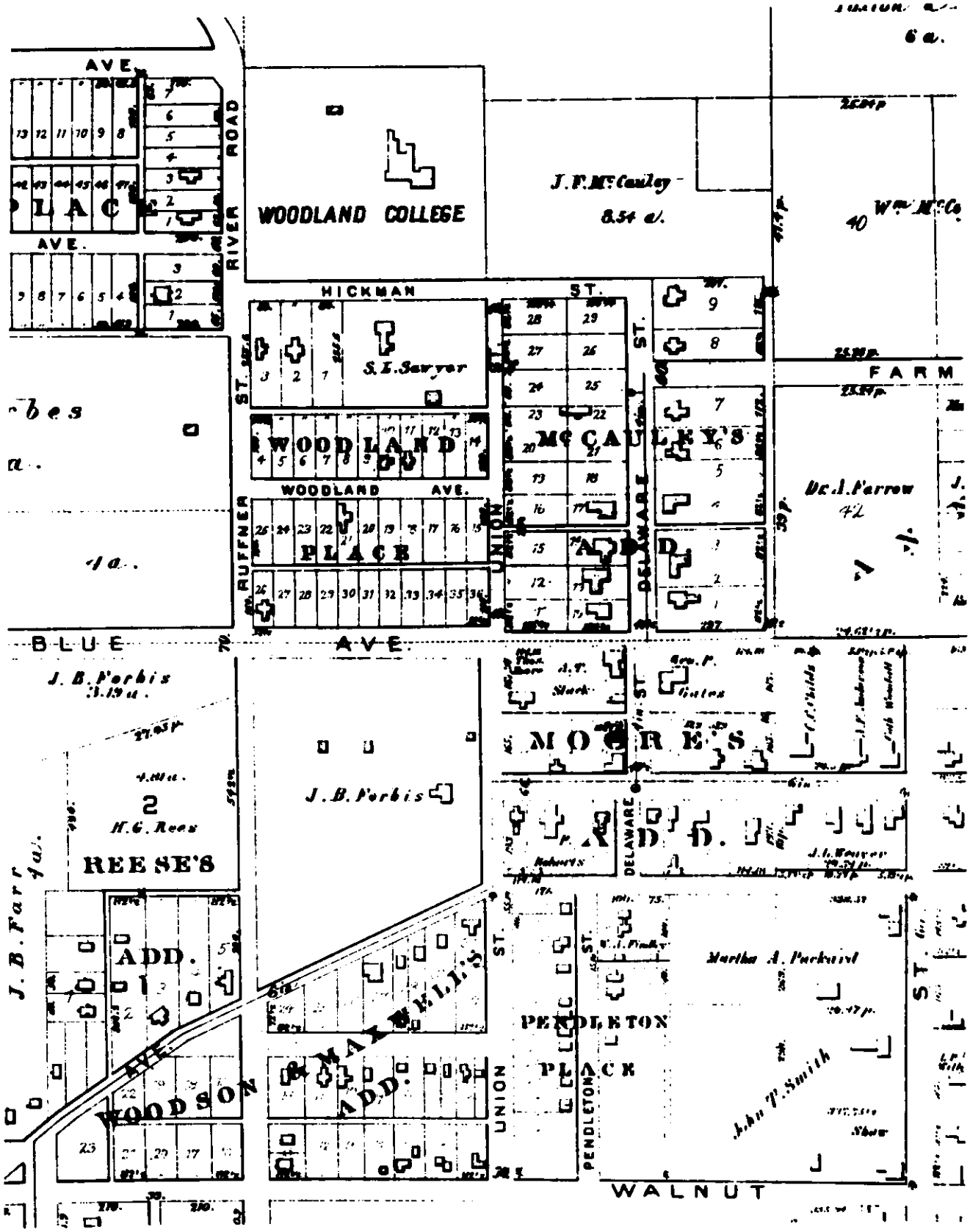
Appendix E. (c)Sanborn Map of Independence, Missouri; August, 1926.



Appendix E. (d)Sanborn Map of Independence, Missouri; August, 1926.



Appendix E. (e)Map of Independence. From An Illustrated Historical Atlas Map of Jackson County, Missouri; 1877.



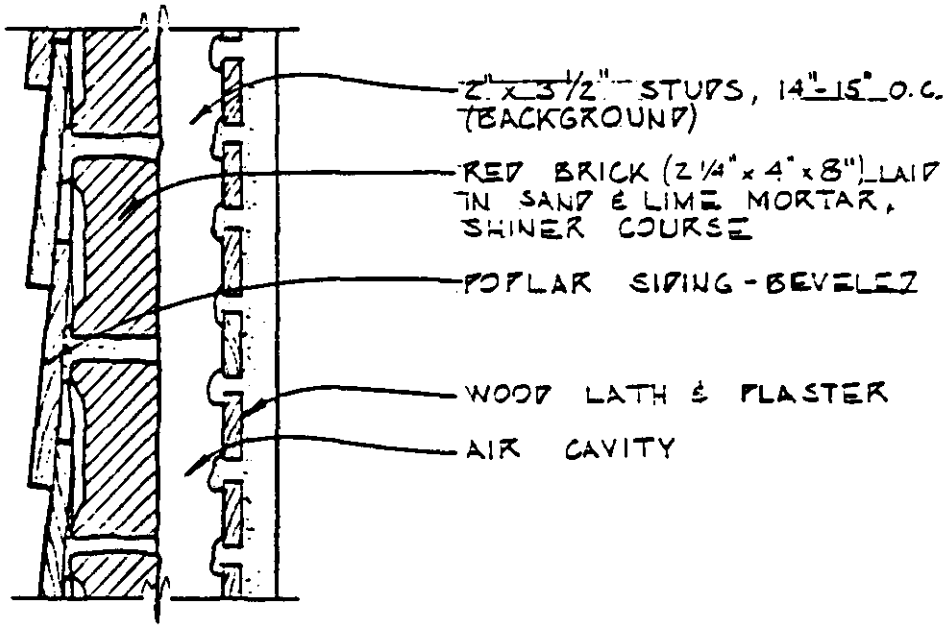
Appendix E. (f)Map of Independence. From Atlas of the Environs of Kansas City in Jackson County, Missouri; 1886.

TABLE 'A' : PHYSICAL INVESTIGATION
TRUMAN HOME (HS-01)

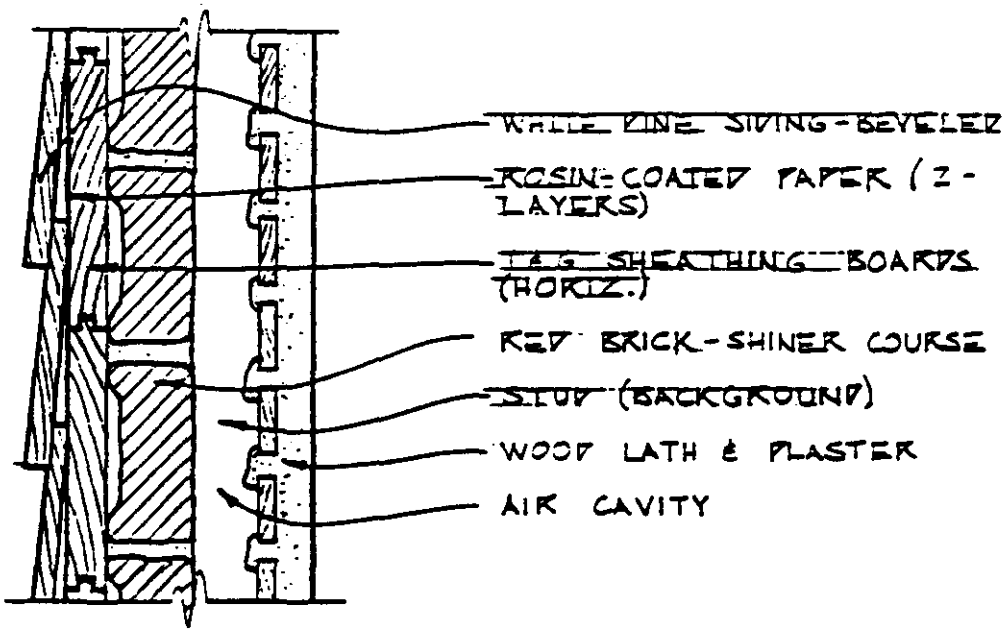
LOCATION MARK	WOOD SIDING			WD. SHEATHING		NOGGING	PET.	REMARKS
	DIM.	SPEC.	SHAPE	DIM.	SPEC.			
S-W1	1/2" x 5 1/2"	W. P.	BEV.	7/8"-T&G	W. P.	NO	—	T & G SHEATHING (HORIZ.) W/ CUT NAILS; 2" x 4" (?) STUDS LAID FLAT, OAK; DIAG. WOOD LATH.
S-W2	1/2" x 5 1/2"	POPLAR	BEV.	—	—	YES	A	BRICK NOGGING IN SINNER COURSE
S-W3	1/2" x 5 1/2"	W. P.	BEV.	7/8"-T&G	W. P.	NO	—	BALLOON FRAME (22' STUDS); STUDS 16" O.C.; 2" WALL CAVITY.
S-N1	1/2" x 5 1/2"	POPLAR	BEV.	—	—	YES	C	LIFTED SIDING ONLY; BALLOON FRAME.
S-E1	1/2" x 5 1/2"	W. P.	BEV.	7/8"-T&G	W. P.	NO	—	T&G HORIZ. SHEATHING W/ CUT NAILS; 2-INCH WALL CAVITY.
S-S1	1/2" x 5 3/8	W. P.	BEV.	7/8"-T&G	W. P.	NO	D	T&G HORIZ. SHEATHING W/ CUT NAILS.
S-S2	1/2" x 5 3/8"	W. P.	BEV.	7/8"-T&G	W. P	YES	B	2-LAYERS ROSIN-COATED BUILDING PAPER OVER 1x HORIZ. SHEATHING W/ WIRE NAILS. APPEARS RECENT.
S-S3	3/8" x 5 1/2"	W. P.	BEV.	7/8"-T&G	W. P.	NO.	—	2" x (4"-?) STUDS @ 16" O.C.

W. P. = WHITE PINE; BEV. - BEVELED

Appendix F. (a)Table A, from "Physical Investigation Report, Truman Home [PIR(HS-01)]," July 24-26, 1984.
Credit: Michael Lee, Alan O'Bright

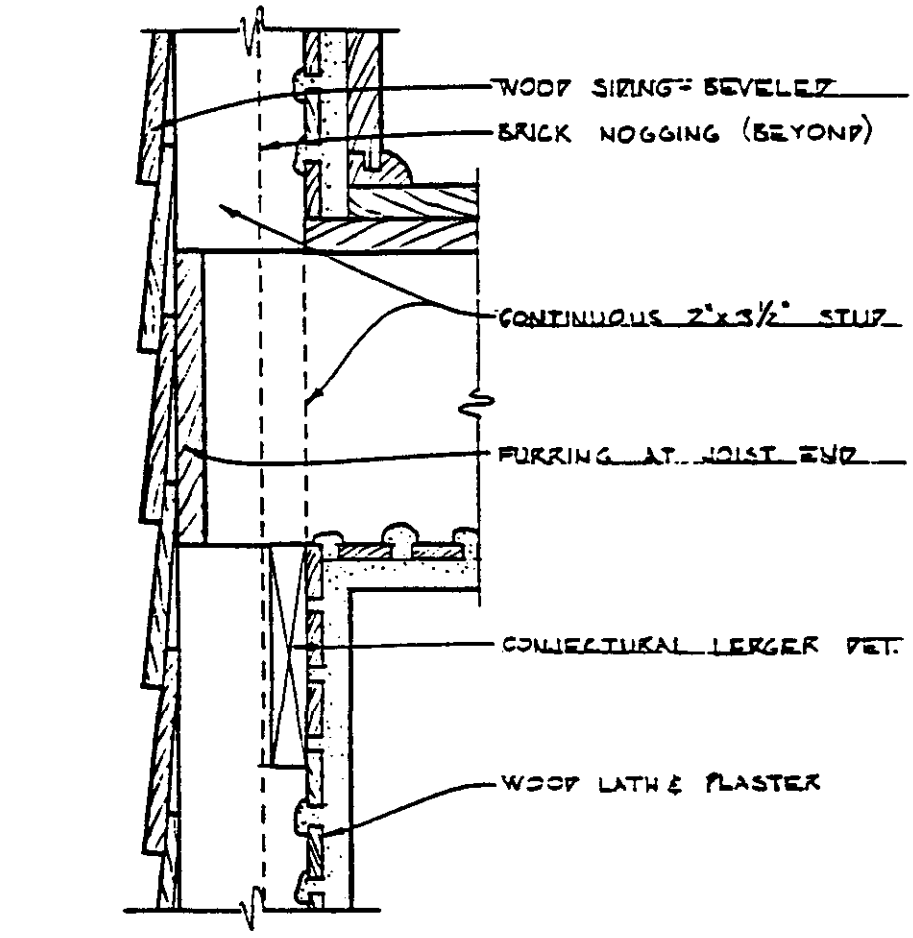


SCALE: 3" = 1'-0" (A) WALL SEC. DETAIL

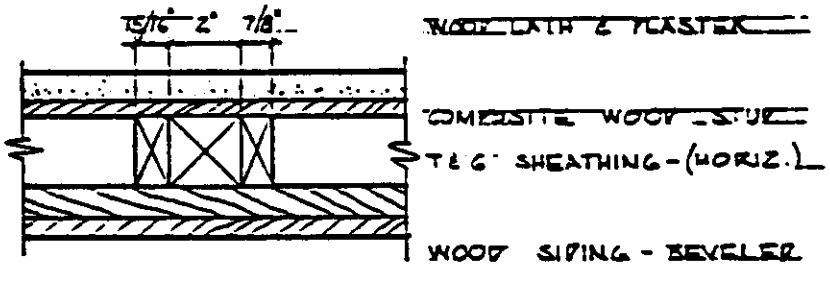


SCALE: 3" = 1'-0" (B) WALL SEC. DETAIL

Appendix F. (b)Wall Section Details. PIR(HS-01).



SCALE: 3" = 1'-0" (C) WALL SEC. DETAIL AT 2ND FLOOR



SCALE: 3"=1'-0" (D) WALL SEC DETAIL PLAN

Appendix F. (b)Wall Section Details. PIR(HS-01).

EXTERIOR ELEVATION - NORTH

SCALE : 1/4" = 1'-0"

Appendix F. (c)Sample locations. PIR(HS-01).

EXTERIOR ELEVATION - WEST

SCALE : 1/4" = 1'-0"

Appendix F. (c)Sample locations. PIR(HS-01).

EXTERIOR ELEVATION - SOUTH

SCALE : 1/4" = 1'-0"

Appendix F. (c)Sample locations. PIR(HS-01).

EXTERIOR ELEVATION - EAST

SCALE : 1/4" = 1'-0"

Appendix F. (c)Sample locations. PIR(HS-01).

CARRIAGE HOUSE (HS-2) HARRY S TRUMAN NHS

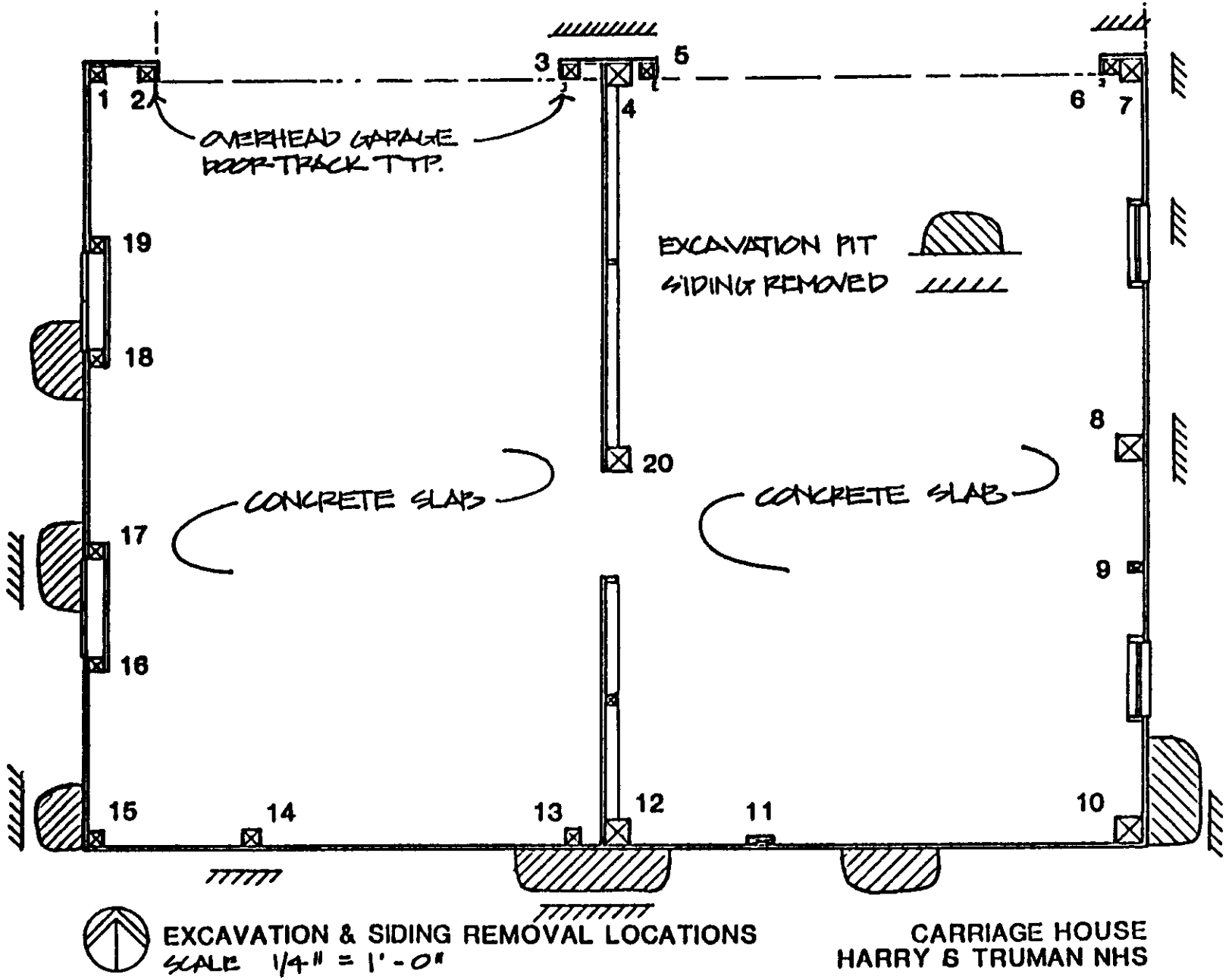
POST BASE CONDITION SCHEDULE

MARK	DIMENSIONS	BEARING CONDITION				DETAIL	NOTES
		GOOD	FAIR	POOR	VERY POOR		
1	6x6				●		NFB, NSB
2	6x6				●		NFB, NSB
3	5 1/2 x 5 3/4				●		NSB, ROT
4	9x9 HH				●		NSB, ROT
5	5 1/2 x 5 3/4				●		NSB, ROT
6	5 1/2 x 5 3/4				●	5	NSB, ROT
7	9x9 HH			●		5	NSB, ROT
8	8 1/2 x 8 1/2 HH		●			4	NSB, ROT, T
9	4x4						NE
10	8 1/2 x 8 1/2 HH				●		NSB, ROT, T
11	2x8						NE
12	8 1/2 x 8 1/2 HH				●	2,3	NSB, ROT
13	5 1/2 x 5 3/4				●	3	NSB, ROT
14	5 1/2 x 5 3/4				●		NSB, ROT
15	5 1/2 x 5 3/4			●		1	ROT, T
16	4x4						NE
17	5 1/2 x 5 3/4			●		1	NSB, ROT
18	5 1/2 x 5 3/4			●		1	NSB, ROT
19	4x4						NE
20	9x9 HH				●		NSB(?), ROT

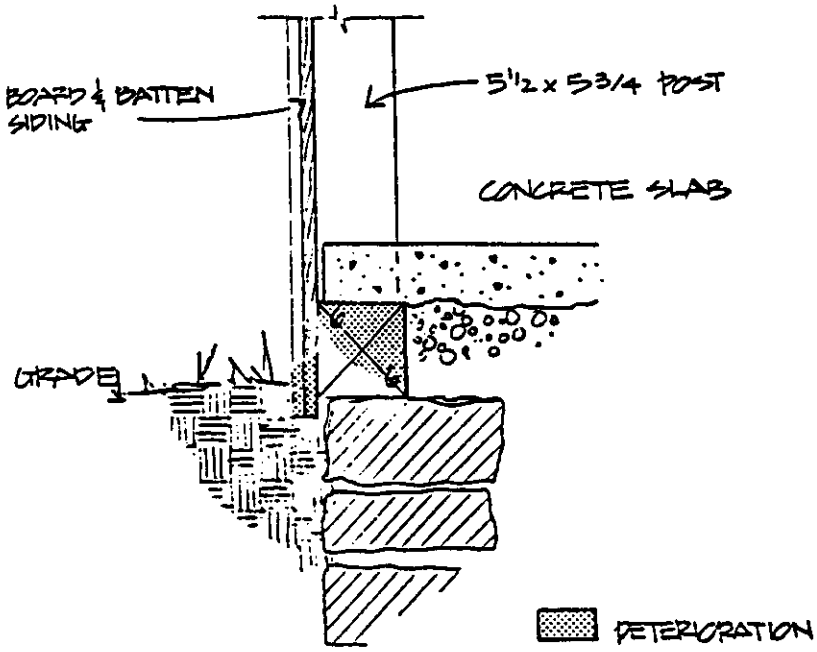
KEY

HH	HAND HEWN	ROT	ROTTED BASE
NFB	NO FOUNDATION BEARING	T	TERMITE DAMAGE
NSB	NO SILL BEARING	NE	NOT EXAMINED.

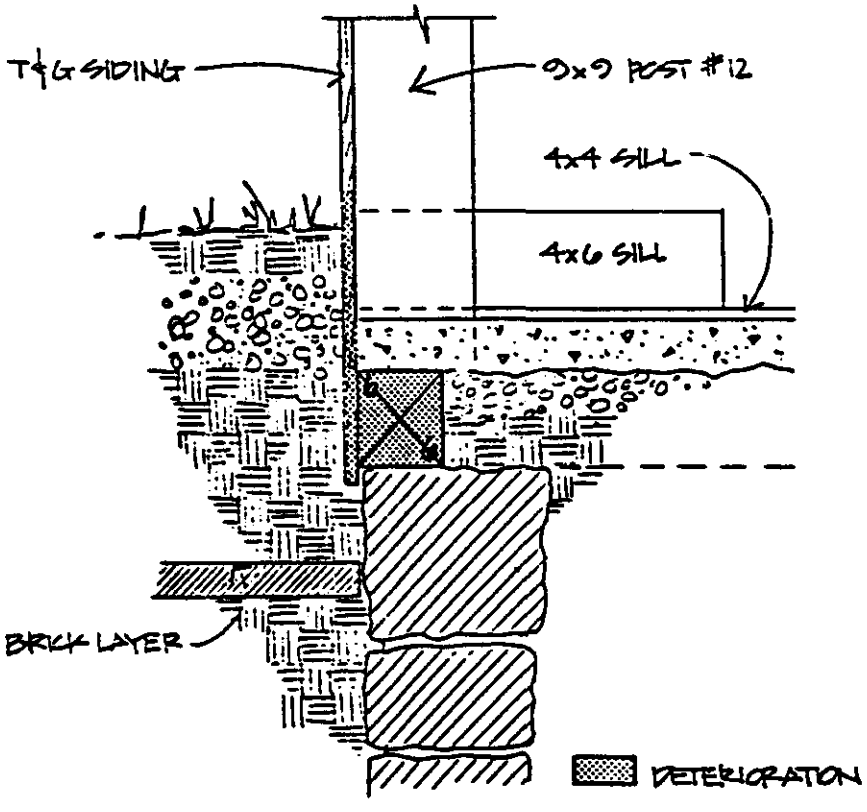
Appendix C. (a)Post Base Condition Schedule, from "Physical Investigation Report & Treatment Proposal, Truman Carriage House [PIR(HS-02)]," April, 1986. Credit: National Park Service, Midwest Region.



Appendix G. (b)Post Location Key. PIR(HS-02).

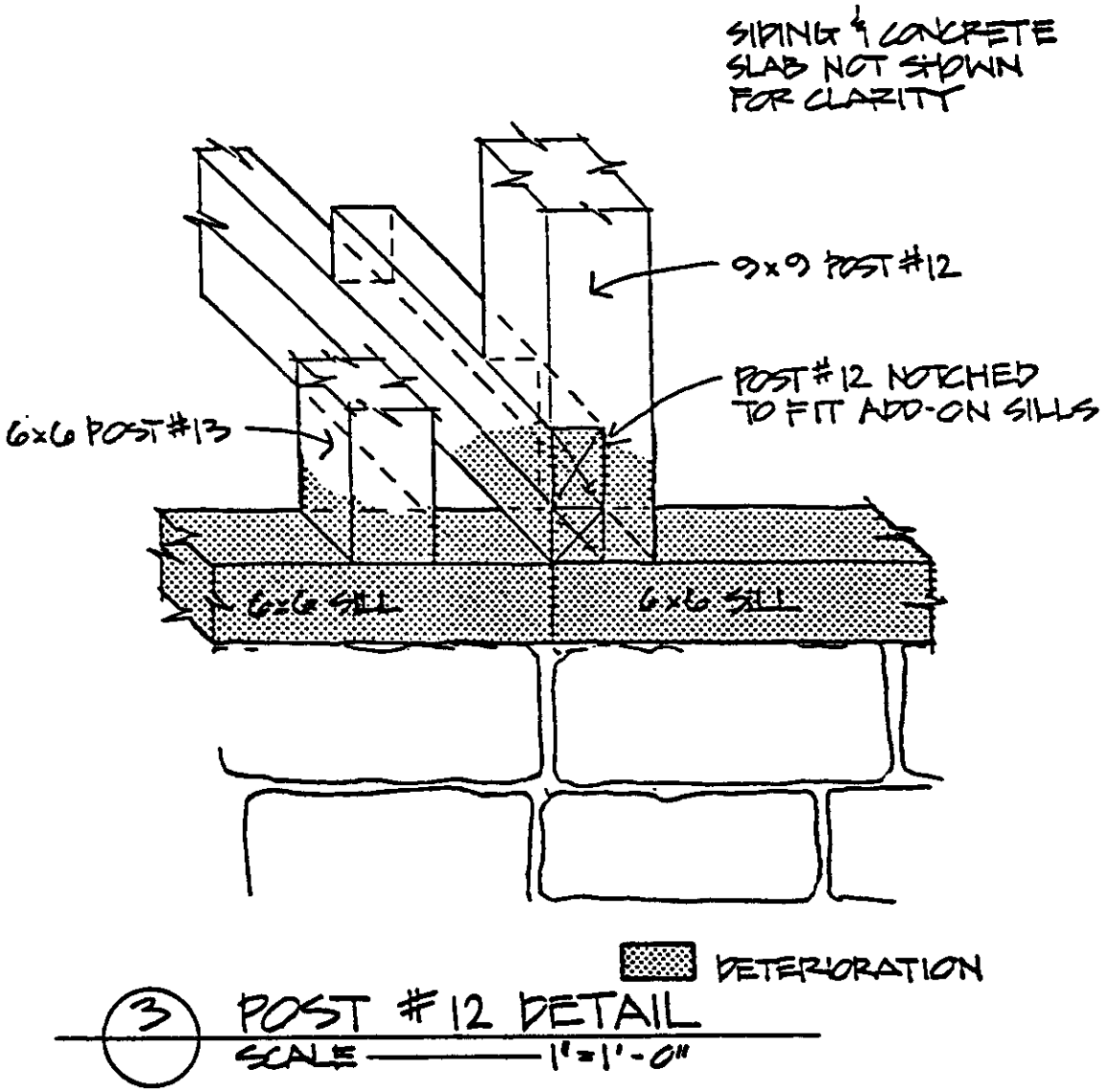


1 WEST ELEV. - TYP. SILL DETAIL
SCALE 1 1/2" = 1'-0"

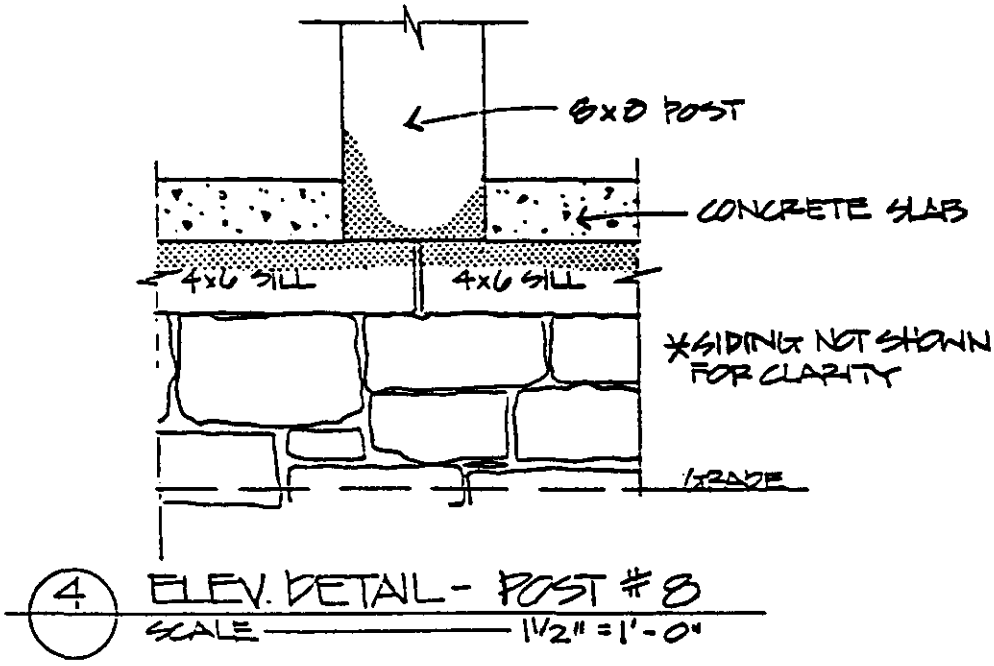


2 SOUTH ELEV. SILL DETAIL
SCALE 1 1/2" = 1'-0"

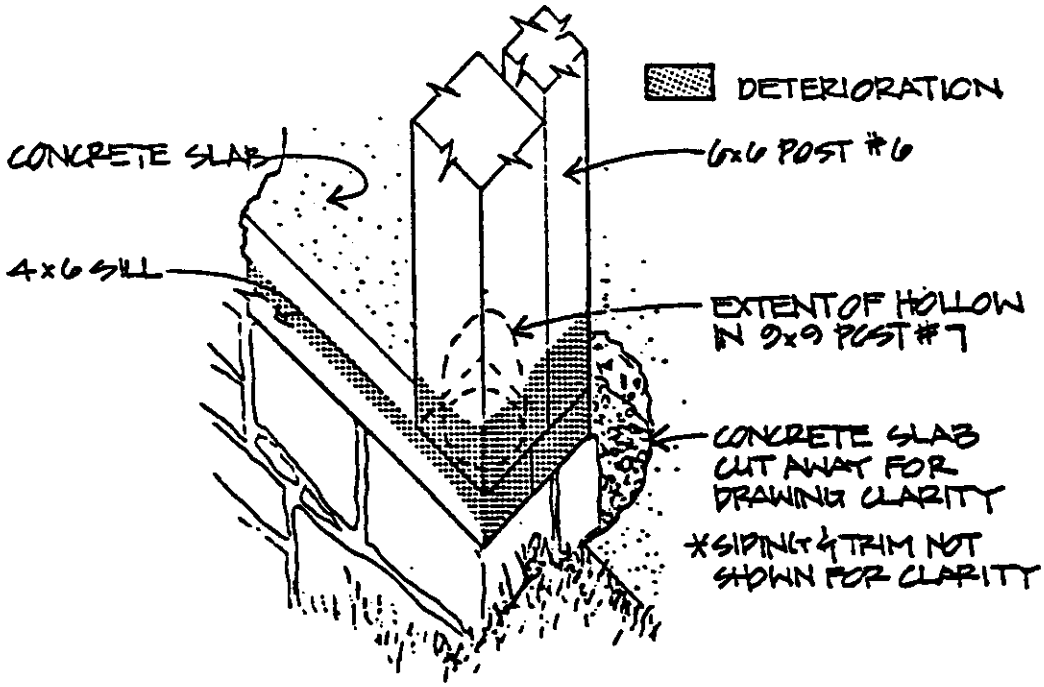
Appendix G. (c)Post Base Details. PIR(HS-02).



Appendix G. (c)Post Base Details. PIR(HS-02).

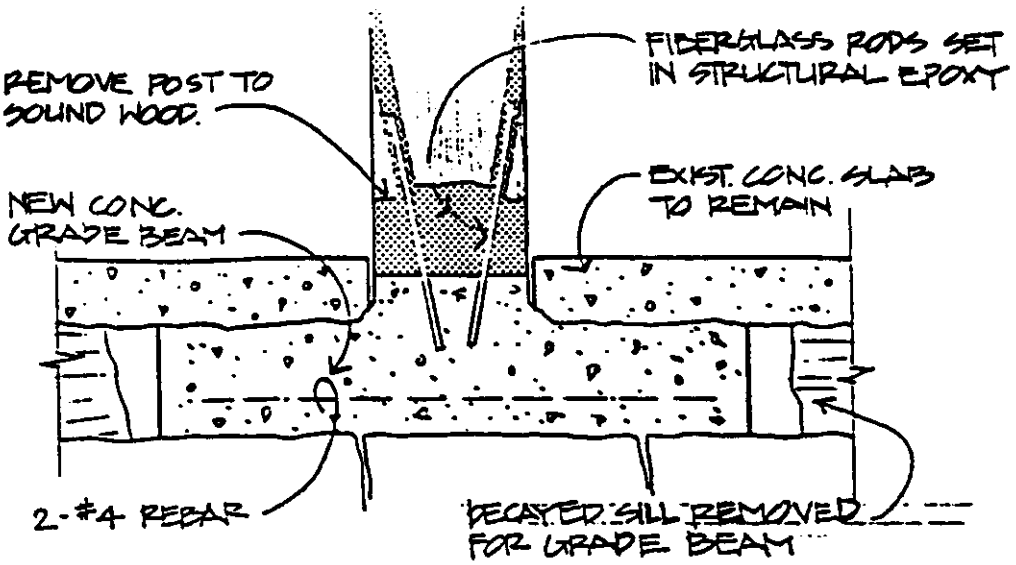


4 ELEV. DETAIL - POST #8
SCALE — 1 1/2" = 1'-0"

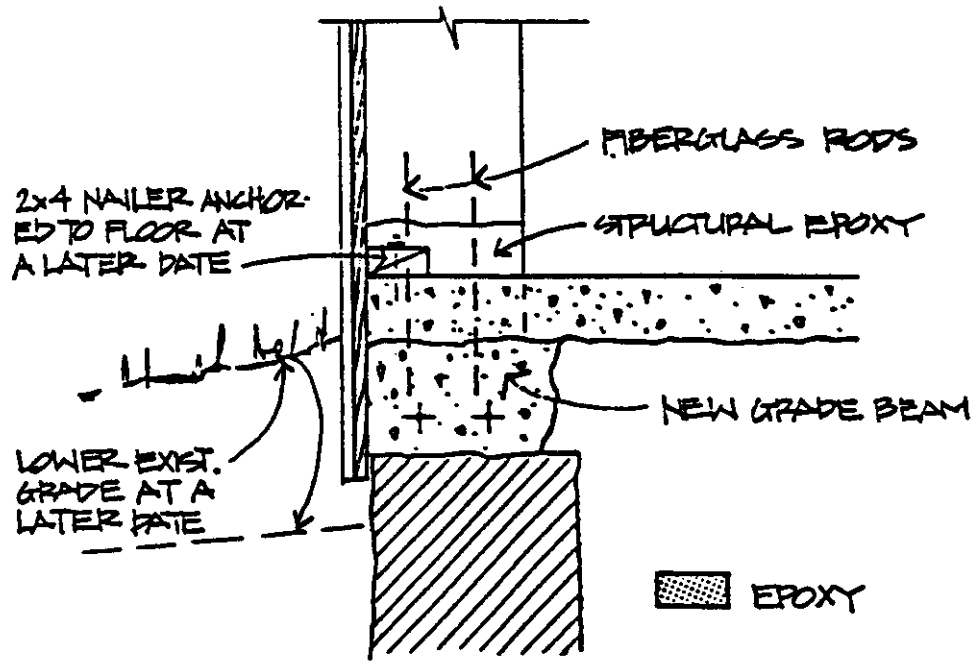


5 NORTHEAST CORNER DETAIL
SCALE — 1" = 1'-0"

Appendix C. (c)Post Base Details. PIR(HS-02).



6 POST REPAIR PROPOSAL-TYP. ELEV. SEC.
SCALE 1½" = 1'-0"



7 POST REPAIR PROPOSAL-TYP. SECTION
SCALE 1½" = 1'-0"

Appendix G. (c)Post Base Details. PIR(HS-02).

Appendix G. (d)Post #10, southwest corner.
PIR(HS-02).

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