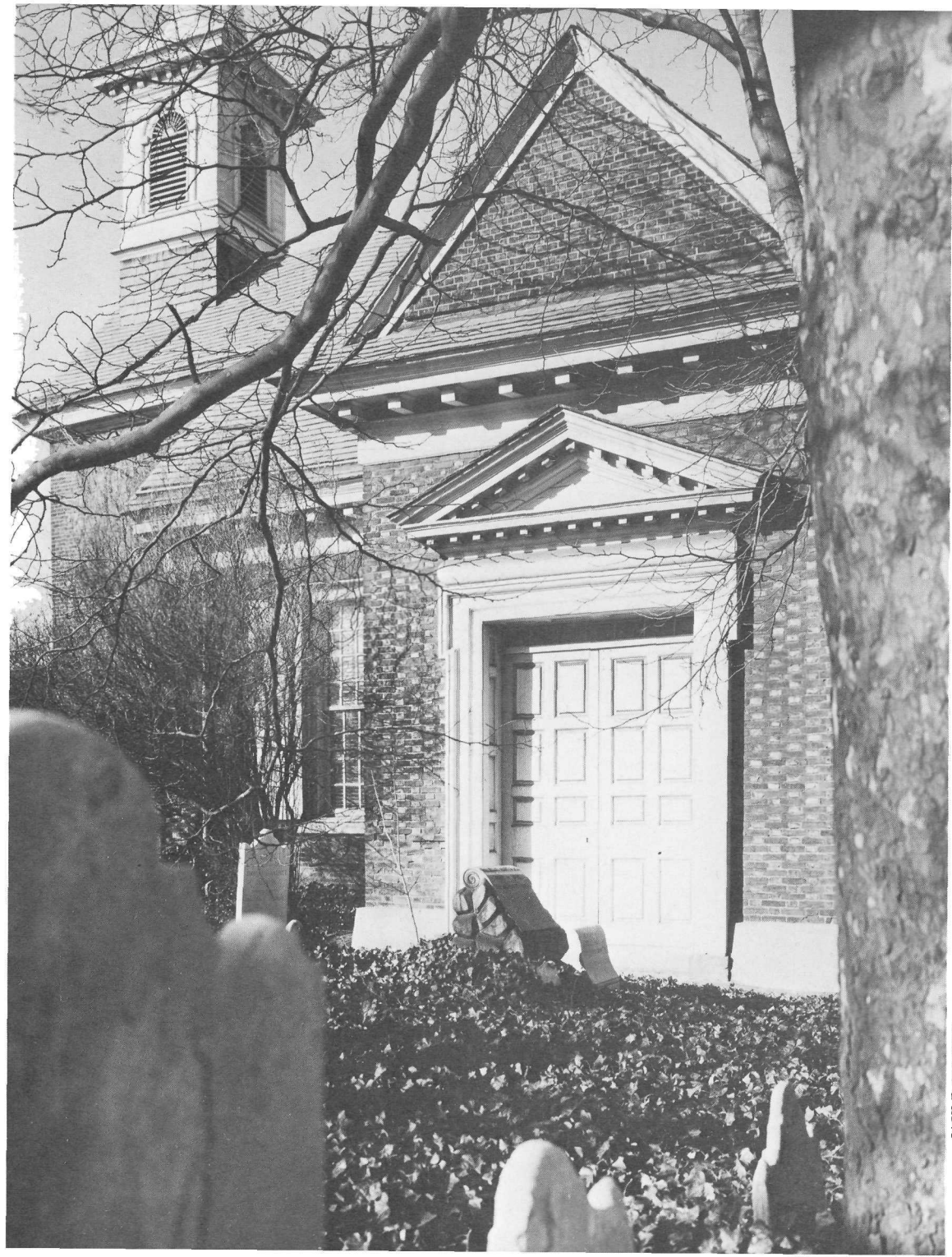


**RECORDING
HISTORIC
BUILDINGS**

RECORDING HISTORIC BUILDINGS



*Gloria Dei
(Old Swedes' Church),
Philadelphia, Pa.*



JACK E. BOUCHER

THE HISTORIC AMERICAN BUILDINGS SURVEY

**RECORDING
HISTORIC
BUILDINGS**

1970

COMPILED BY HARLEY J. McKEE

U.S. DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE

As the Nation's principal conservation agency, the Department of the Interior has basic responsibilities for water, fish, wildlife, mineral, land, park, and recreational resources. Indian and Territorial affairs are other major concerns of America's "Department of Natural Resources." The Department works to assure the wisest choice in managing all our resources so each will make its full contribution to a better United States—now and in the future.

U. S. DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

FOREWORD

In this era of accelerating change, accurate and thorough records of historic American architecture are among the essential tools for scholarly study and historic preservation. We have become deeply aware, in recent years, that our man-made environment must embody both memory and hope—the living memory of our past accomplishments and the confident hope that the future will continue to take inspiration from the best of the past. Our architectural heritage is a significant part of that environment. From the first rude shelter to the modern skyscraper, the buildings erected in our country reflect the enduring resourcefulness, improving modes of life, and changing architectural tastes of the American people. It is highly important that records be made of these historical links between past and future generations.

The Historic Sites Act of 1935, P.L. 74-292 (49 Stat. 666), formally recognized the need for such records by authorizing the National Park Service of the Department of the Interior to conduct surveys; to secure and preserve drawings, plans, photographs, and other data relating to historic buildings; to enter into cooperative agreements; and to develop an educational program concerning historic buildings. Since the 1930's the Historic American Buildings Survey has produced measured drawings, photographs, and written data for a national architectural archive. The program is administered by the National Park Service of the Department of the Interior and is conducted in cooperation with the American Institute of Architects and the Library of Congress, which is the repository of the records.

This book has been compiled to serve the needs of those concerned with recording historic structures. It is designed both as an aid to persons already involved in the problems of architectural recording and to encourage others to become involved. Only a productive partnership between Federal, State, and local governments and private individual initiative and effort can assure the adequate recording and successful preservation of our great national patrimony of historic architecture.

This book states the principles and standards for recording historic architecture by the Historic American Buildings Survey, known by its acronym as HABS. Based upon more than 30 years of HABS experience, it is the latest in a series begun in 1934 when field instructions were compiled into *Specifications for the Measurement and Recording of Historic American Buildings and Structural Remains*. These specifications, revised in 1958, formed the basis for an enlarged and rewritten *Historic American Buildings Survey Manual* published in several sections: "Measured Drawings," "Photographs," "Written Data," and "Criteria" in 1961; "Index Cards" in 1962; and revised "Criteria" in 1964.

The present edition incorporates important new material reflecting not only the development of HABS practices but the need for compiling State and regional catalogs. Because of the ever widening scope of HABS subjects, new sections have been included to discuss the HABS Inventory, landscape architecture, area studies, historic districts, history of planning, civil engineering, and industrial archeology. Emphasis is given to principles and standards rather than arbitrary instructions, making this book useful to all who record historic structures professionally, as well as those who make records for the National Park Service.

ACKNOWLEDGMENTS

We wish to express our appreciation to the many persons who have kindly given criticism and advice during the preparation of this book, particularly to Orin M. Bullock, Jr., Carl Feiss, Kenneth Hudson, Barclay G. Jones, Donald H. Parker, Cervin Robinson, and Robert M. Vogel. This volume could not have been successfully compiled without the invaluable aid and assistance of the personnel of the Historic American Buildings Survey and of its chief, James C. Massey and others in the Division of Historic Architecture and the Office of Archeology and Historic Preservation of the National Park Service. Grateful acknowledgment is also made of material previously published under the direction of Charles E. Peterson. The typography and design of this book are by James True.

H. J. McK.

CONTENTS

1	Introduction
7	Organizing a Survey
21	Measured Drawings
63	Photographs and Graphic Material
97	Documentation
119	Specialized Recording Techniques
149	Catalogs
157	Bibliography
163	Index

INTRODUCTION

THE HISTORIC AMERICAN BUILDINGS SURVEY

The Historic American Buildings Survey is our public record of the building art in America. It is both an agency continuously studying architecture of historic importance and a notable national collection of drawings, photographs, and documents which preserve and proclaim the heritage of our manmade environment. It was begun in 1933 by architects of the National Park Service with Federal relief funds.¹ The American Institute of Architects found local manpower and the Library of Congress received the records and arranged the collection for use. In 1934 a formal agreement between those three parties was ratified and the cooperation between them has continued. In 1935 Congress, in the "Historic Sites Act" (P.L. 292), declared that "it is a national policy to preserve for public use historic sites, buildings and objects of national significance for the inspiration and benefit of the people of the United States," and authorized the Secretary of the Interior, through the National Park Service, to perform certain functions: "Secure, collate, and preserve drawings, plans, photographs and other data of historic and archaeological sites, buildings and objects."

A significant part of the HABS records was made during the 1930's, under the administration of a nationwide recording system. As economic conditions improved, many of the field offices were closed but work continued in others such as Boston, New Orleans, and New Jersey. In 1940 greater diversity was given to the collections by four mobile field parties.

¹Programs of the Federal Emergency Administration of Public Works, the Civil Works Administration, the Federal Emergency Relief Administration, and the Works Progress Administration.

At right, Mission San Francisco de Asis, San Francisco, Calif. This drawing, made in 1934, makes clear the order underlying the arrangement of complex ornamental forms.

Gaillard House, New Orleans, La. HABS photograph attributed to Leslie, c. 1940.

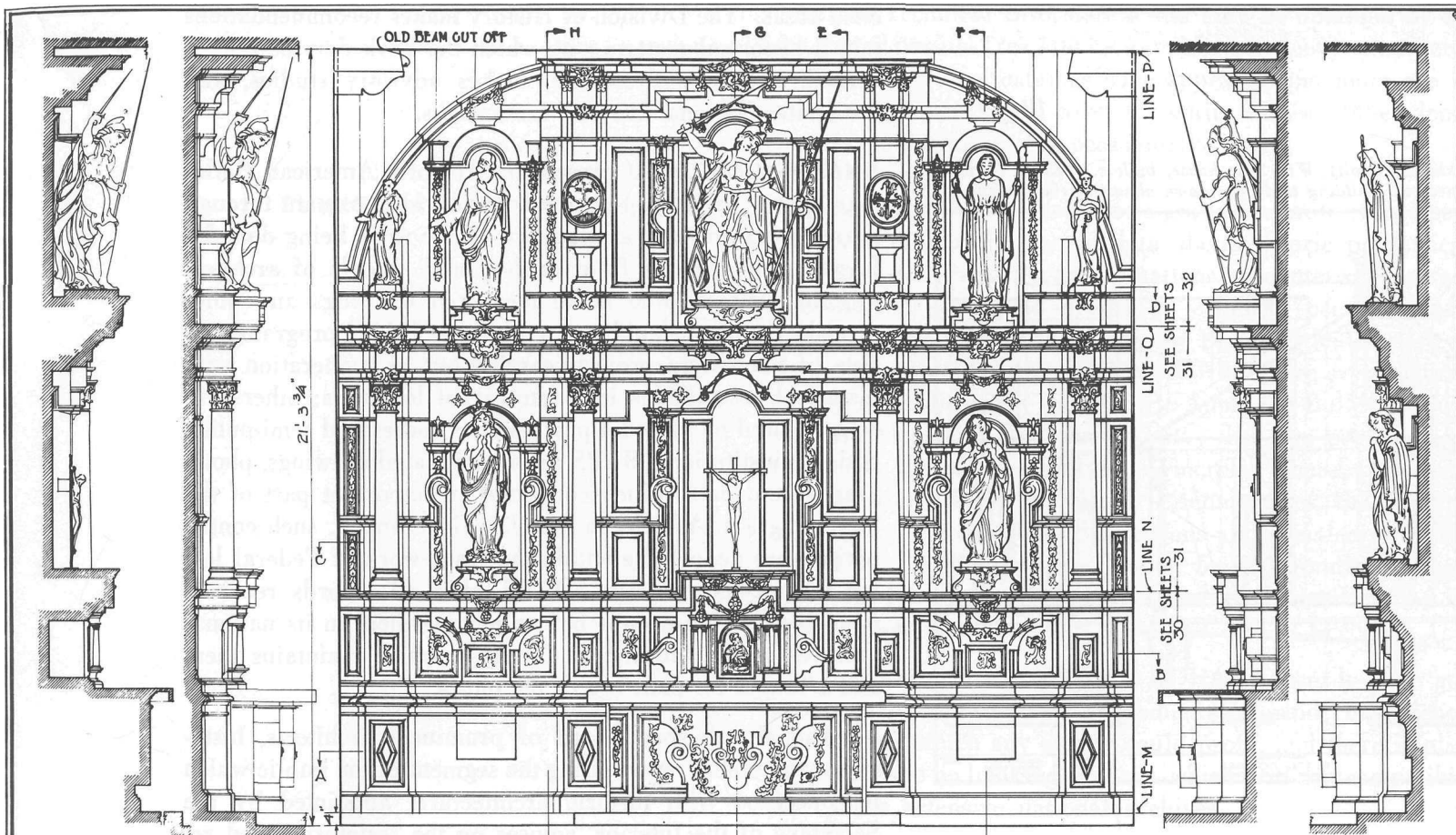


During World War II and again during the Korean Conflict a limited amount of work was carried on and the collections were further enlarged by donation of records. In 1951 the National Park Service resumed this program by making HABS records of its own buildings and by 1957 "Mission 66" made possible a resumption of normal HABS activity. Since then much of the recording has been done by architectural faculties and students in summer, and by cooperative projects with local historical organizations and preservation groups.

NATIONAL PARK SERVICE PROGRAMS. In 1966 Congress, in the "National Historic Preservation Act" (P.L. 89-665), enlarged the scope of the national preservation policy. Under this act, the Secretary of the Interior is authorized "to expand and maintain a national register of districts, sites, buildings, structures and objects significant in American history, architecture, archeology, and culture . . . to establish a program of matching grants-in-aid to the States for comprehensive statewide historic surveys" and establish a national Advisory Council on Historic Preservation.

Within the National Park Service, the Office of Archeology and Historic Preservation administers the Historic American Buildings Survey and several programs concerned with historic preservation. The National Register maintains and expands a national list, assists in administering grants to the States and to the National Trust for Historic Preservation, and advises other Federal agencies whenever properties on its list may be affected by federally supported projects.

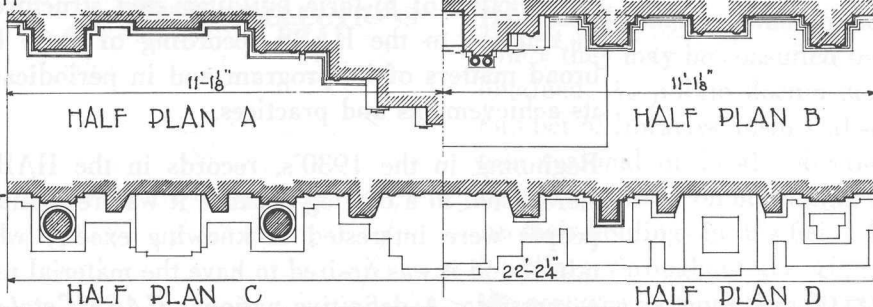
Programs in the Division of Historic Architecture include those of the Restorations Branch, which conducts research and plans and conducts restoration of historic structures under the control of the National Park Service, and those of the Historic American Buildings Survey. Programs in the Division of Archeology include basic investigations in areas controlled by the National Park Service, publication of technical reports, and sponsorship of archeological salvage in threat-



SECTION G-G SECTION H-H

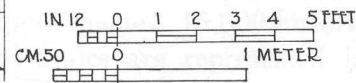
SECTION E-E SECTION F-F

STRUCTURE AND ORNAMENT ARE HARD WOOD, PROBABLY OAK OF CONSIDERABLE AGE; ENTIRE SURFACE IS RICHLY PAINTED AS FOLLOWS; BACKGROUND, GRAY, BLUE, ETC.; MOULDINGS AND CARVING, GOLD LEAF; COLUMNS, MARBLEIZED; STATUES, PAINTED IN COLORS.



REDEDOS
IN SANCTUARY
ROOM 103

FOR LOCATION SEE SHEETS 2 AND 6.
FOR DETAILS SEE SHEETS 30 TO 38



AL. MANTE DEL.



W. P. A. U. S. DEPARTMENT OF THE INTERIOR (5-1715)
OFFICE OF NATIONAL PARKS, BUILDINGS, AND RESERVATIONS
BRANCH OF PLANS AND DESIGN

NAME OF STRUCTURE
MISSION SAN FRANCISCO DE ASIS-SAN FRANCISCO, CALIFORNIA.

SURVEY NO.
CAL-113

HISTORIC AMERICAN
BUILDINGS SURVEY
SHEET 29 OF 39 SHEETS

INDEX NO.

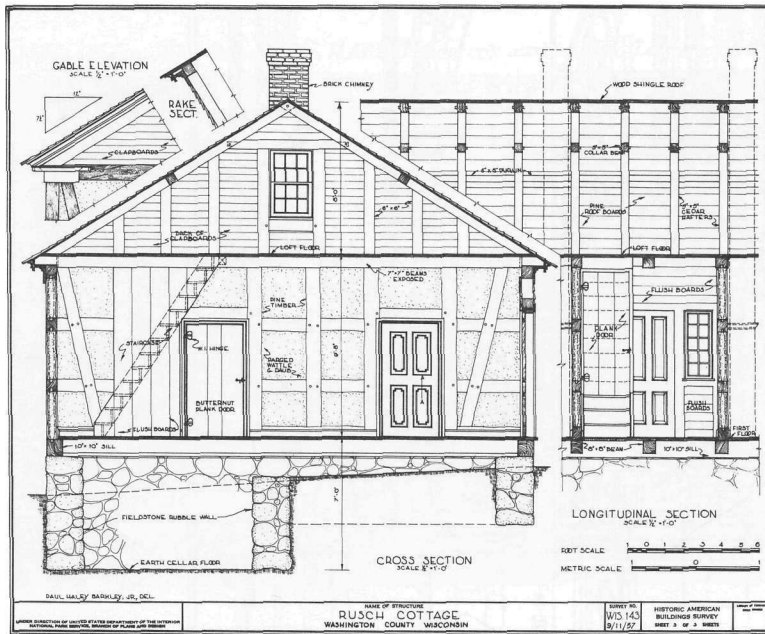
ened areas. The Division of History makes recommendations on all historical matters with which the Park Service is concerned, carries on research, makes advisory studies, and designates National Historic Landmarks.

HABS PROGRAM. At present the Historic American Buildings Survey carries on a broad nationwide program through shared-fund projects, a large part of the work being done by faculty and students from professional schools of architecture in summer, who make measured drawings and other records. Another significant part of the HABS program consists of photo-data projects carried out in cooperation with historical associations in a number of localities; others are co-sponsored by national professional bodies and semi-public national institutions. HABS receives donated drawings, photographs, and data, which constitute an important part of the total program. As gifts to the U.S. Government, such contributions are deductible within the framework of Federal law for income-tax purposes. HABS edits all records received from cooperating groups before placing them in its national archives in the Library of Congress, which maintains them and arranges for their use by the public.

A national Advisory Board of prominent architects, historians, and others representing the segment of the public which is concerned with historic architecture, appointed by the Secretary of the Interior, advises on the restoration and reconstruction of historic buildings and structures, especially in relation to the HABS recording of these buildings, on broad matters of its program and in periodically reviewing its achievements and practices.

Beginning in the 1930's, records in the HABS collections were listed in a catalog because it was recognized that many people were interested in knowing exactly what they contained and it was desired to have the material used as widely as possible. A definitive national *HABS Catalog* was issued in 1941 and the *HABS Catalog Supplement* in 1959. Both were reprinted in 1968 by Clearinghouse for Federal Scien-

Rusch Cottage, Kirrchayn Vicinity, Wis. This house, built c. 1845 by German immigrants, brings medieval building traditions down almost to the present.



tific and Technical Information and may be obtained by all interested persons (*see* **BIBLIOGRAPHY**). In recent years several State and regional catalogs have appeared and more are in preparation, which will cover the entire Nation. Other documentary publications are occasionally issued.

PURPOSE OF THIS PUBLICATION

This book has been prepared as a guide for professional persons who obtain and record data about historic properties; the text deals primarily with situations encountered by someone who will secure the services of technical specialists such as photographers and draftsmen for their particular part of the survey. The national standards for intensive architectural surveys, established by the Historic American Buildings Survey, are largely based upon quality; they are presented in this book, therefore, mainly as principles whereby one can choose wisely, in his particular circumstances, the manner of attaining the objective. Suggestions and practices are presented as HABS recommendations for the conditions they represent but they may need to be adapted when applied in other circumstances.

The uniform size and character of HABS records offer advantages in archival care, reproducibility, and convenience of use from which any survey could profit, and there is also an advantage in making records which will be compatible with these extensive national archives.

HABS COLLECTIONS

HABS collections are maintained in the Library of Congress, where they may be consulted by the public and reproductions obtained. As public documents, their use is encouraged. A number of libraries, historical societies and universities maintain regional or local collections of HABS records, in the form of prints or on microfilm, and others are invited to build up their holdings in this field. Approximately 15,000 historic buildings throughout the United States are represented in the archives by more than 30,000 measured drawings, 45,000 photographs, and 22,000 pages of architectural and historical data.

Reproductions of HABS records may be obtained at moderate cost from the Photo-Duplication Service in the following forms: Ozalid prints of measured drawings, contact prints or enlargements of photographs, and Xerox or photostat copies of written data. Persons wishing to order copies are advised to address the Prints and Photographs Division, Library of Congress, Washington, DC 20540, for detailed estimates. Microfilm copies are available by States or group of States only from the Historic American Buildings Survey, Office of Archeology and Historic Preservation, National Park Service, Washington, DC 20240.

ORGANIZING A SURVEY

ARCHITECTURAL SURVEYS

Steps to be taken when organizing a survey, and major aspects to be considered in planning for it, are summarized below. The processes of making a survey and the making of records are discussed in detail throughout the following parts of this book.

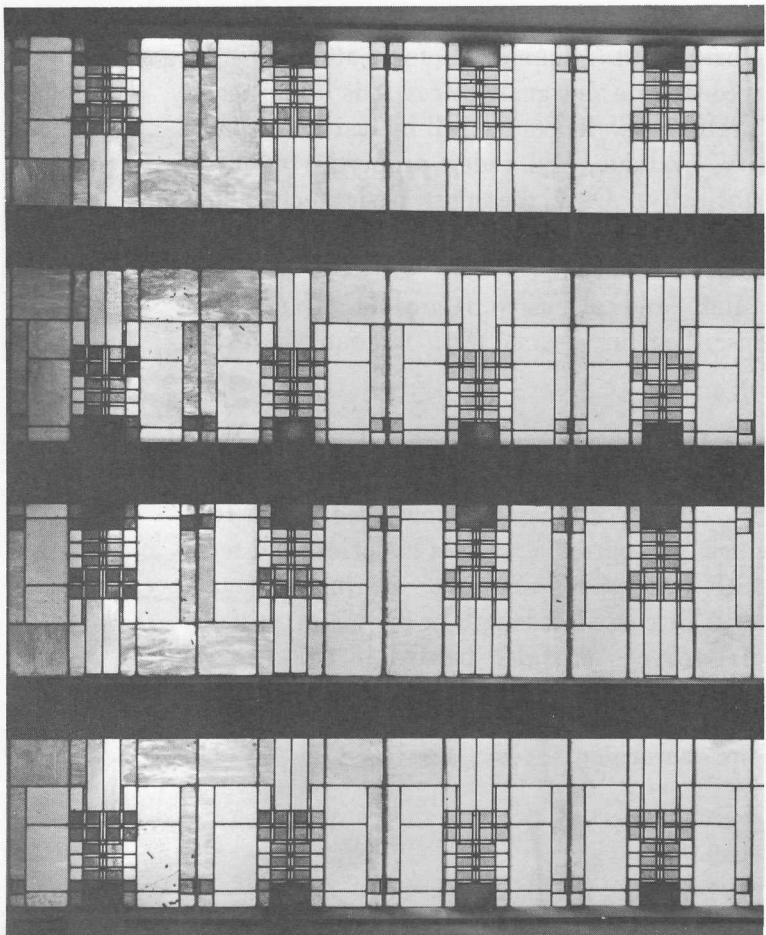
A survey serves a number of purposes indispensable to preservation, publication, and research in the history of architecture, by discovering, studying, and recording historic buildings, structures, and remains. Before attempting to make detailed records in a designated area it is often necessary to take a preliminary inventory, all-inclusive in scope, to locate, identify, evaluate, and index properties architecturally and historically. Only the most basic facts about each structure are recorded during an inventory, but this information is a good basis for selecting the ones deserving more detailed study and extensive recording. The HABS Inventory is described in SPECIALIZED RECORDING TECHNIQUES.

To produce more thorough records, an intensive survey can be made, choosing areas and properties for detailed attention according to criteria discussed below (see pp. 8-16). Measured drawings, photographs, written histories, and technical architectural descriptions are made during an intensive survey; each is discussed at length in the major parts of this book. Special surveys are also treated in SPECIALIZED RECORDING TECHNIQUES.

Some publications concerning surveys are listed in the BIBLIOGRAPHY.

PLANNING A SURVEY

First Congregational Church of Austin, Chicago, Ill. Detail of skylight. Guenzel and Drummond were the architects of this church, built in 1906. It illustrates an aspect of Chicago's place in the evolution of modern architecture.



HAROLD ALLEN

Once the geographical limits of the area to be surveyed have been determined, the nature of the survey will depend upon whether it is to be broad or specialized as to types, what historic periods are to be included, how intensive the study will be and what kinds of records are to be made. The amount of money or assistance available, as well as the qualifications of the persons taking part, are important in estimating how much work can be done.

SCOPE OF SUBJECTS TO BE RECORDED. This will be determined by the purpose of the survey and the interests of those who will make it. The Historic American Buildings Survey collects information on a wide range of American buildings selected both because of their intrinsic merit and their interest to architects, historians, preservationists and others, and disseminates it for their use. Its purpose is to give a complete résumé of the building art by including all use-types, construction types, and periods. HABS includes workingmen's houses, outbuildings, mills, factories, bridges, and even provisional structures, such as shacks, that so often played an important role in our early history. HABS, as a whole and for individual projects, aims for a balance of subjects as well as the inclusion of all types.

HISTORIC PERIODS. Good buildings—and important ones—have been erected by every generation in history. In matters of taste there is no style either so elaborate or severe, so “academic” or “spontaneous,” that may not be highly regarded by future generations. HABS makes a conscious effort to evaluate periods and styles objectively.

There is a natural interest in an area's earliest buildings and for that reason HABS emphasizes the recording of those periods. These early structures are often the rarest types and are the most likely to be in a poor state of preservation, making it all the more important to consider them for recording. The term “early,” of course, is relative; it has a different connotation in Kansas or Oregon than in Massachusetts or Puerto Rico.

Buildings which occupy a significant place in the development of the architecture of a region or of the whole Nation, those which illustrate the distinctive contribution of cultural or ethnic groups, and especially those contributing to the evolution of modern architecture comprise another important category.

As a rule HABS does not record works of living architects or buildings less than 50 years old. Exceptions can be made for highly important structures (as: commercial and industrial examples subject to rapid obsolescence) endangered by radical changes or the threat of demolition, and it is always well to be alert to this possibility. The selection of a terminal date for a given project may depend on the area under consideration, for each has its own principal eras of construction and its own notions about delimiting historical periods.

AVOIDING DUPLICATION. It is important to determine what, if anything, has been previously recorded or published in the given area. Structures which have been covered adequately may, as a rule, be eliminated from further consideration, although occasionally additional recording may be desired. Often the restoration of a building or newly discovered information justify addenda. Sometimes previously made records, if not generally available, should be photocopied.

PLANNING PROJECTS

Planning for a survey should take into account general objectives, the kinds and number of properties to be recorded and the means to be employed. Often the amount of money and other resources are determined by others (as by governmental appropriation) and the practical problem is to allocate them in such a way as to obtain maximum results, by deciding upon the number of projects, the area to be covered by each, its size or composition, and the character of records to be made.

ARCHITECTURAL IMPORTANCE. The existence in an area of a number of unrecorded structures, which possess intrinsic merit, notably illustrate their type or period, represent known

architects, builders, or craftsmen, or have a significant place in the development of construction, building type, or style, makes a strong case for the allocation of a recording project.

DETERIORATION AND THREAT OF DEMOLITION. An area where a number of historic buildings are deteriorating, or where extensive demolition is anticipated, deserves a high priority.

LOCAL COOPERATION. A large part of HABS recording is done through cooperation with historical and preservation organizations, and with some basis of matching funds; priority is given to recording projects in areas where such resources are found. Historical research, preservation activity, interest in recording and the ability of local persons to apply HABS technical advice are important factors.

HABS attention can aid local groups in their effort to preserve their buildings by contributing to their understanding and appreciation, and by calling attention to their importance. A good set of measured drawings helps achieve more accurate restoration results later, and expert observations noted on drawings identify features otherwise likely to escape notice.

GEOGRAPHIC DISTRIBUTION. In a national collection of records, each part of the whole Nation ought to be represented since the early buildings of an area are important in the context of its history. Similarly, State, regional, and city programs need to take the geographical distribution into account. Areas where but little recording has been done, or where the historic architecture has been inadequately published, deserve special consideration.

NEW FIELDS OF SCHOLARLY STUDY. It is important to keep abreast of expanding scholarly interests by taking into account such new directions as urban design, industrial archeology, and periods of architecture which have previously attracted little attention. From time to time it is well to take a fresh look at the subjects being recorded.

CRITERIA FOR SELECTING STRUCTURES

First Regiment Infantry Armory, Chicago, Ill. Taken in 1967 while the building was being demolished, this photograph effectively reveals the basic structural elements.



RICHARD NICKEL

HISTORIC DISTRICT AND AREA STUDIES. Sometimes many of the structures in a block or other area form a group which is interesting for its homogeneity, diversity, or because it represents a culture; often an area is legally designated as a historic district to promote its protection and preservation. Structures in such a district deserve to be considered for recording and, in exceptional cases, it may prove desirable to record them all. Even when only part of the structures are to be recorded, it is advantageous to consider the entire area as a unit.

In general, when the structures are more interesting as a group than individually, they should be considered for recording as an area study.

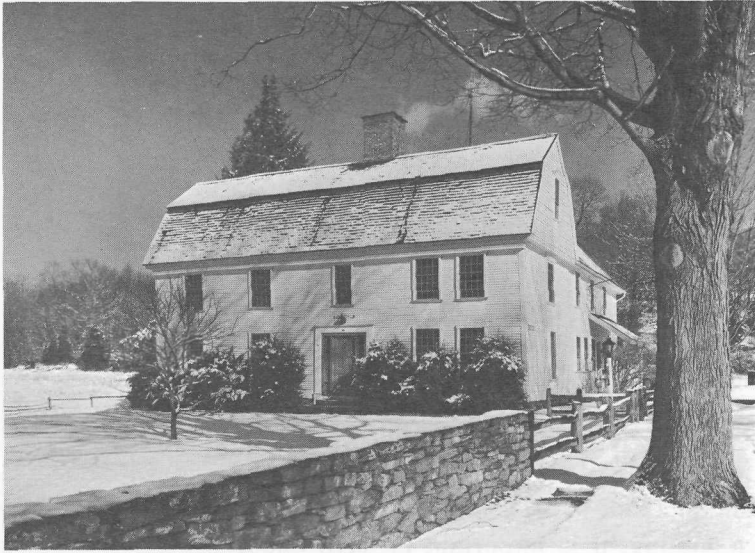
THREAT OF DESTRUCTION OR MODIFICATION. A significant structure, imminently threatened, demands special attention. If a building is about to be demolished or its character changed by remodeling, it is important to have photographs made, if not drawings. Equal concern should be felt if restoration is contemplated. A record of the structure in its existing state is needed so that after restoration one can know exactly what has been done to it.

In general, recording a building which is carefully maintained is less urgent than recording one threatened by destruction or change.

ACCESSIBILITY AT SPECIAL TIMES. Access to a building during demolition, remodeling, or restoration often makes it possible to find important details exposed, which would not otherwise be observable (as: framing, openings that have been filled, removed features silhouetted on walls). At times just those features which become visible during work are recorded while the opportunity is present.

STATE OF THE STRUCTURE. Buildings which have remained as they were originally, are highly desirable to record because they illustrate exactly a given period. Their value is further enhanced if the setting and auxiliary build-

Bradford-Huntington House, Norwichtown, Conn. The primary interest of this country house is architectural.



JACK E. BOUCHER

Ford's Theatre, Washington, D.C. Presidential Box. President Lincoln was shot here; that fact gives the building predominant historical interest.



JACK E. BOUCHER

ings also remain unchanged. Sometimes a building which has had many additions, especially when their history is known, illustrates a whole sequence of periods and styles, and is of great interest to record for that very reason.

HISTORICAL DATA AVAILABLE. The present state of historical knowledge about a given structure is an important factor, since it is preferable to record those about which the most facts are known or are likely to be ascertained. This includes information about the chain of title to the site, names of architect and builder, original plans, specifications, contract agreements, construction vouchers, etc., as well as documentary evidence concerning additions and remodeling.

HISTORICAL AND ARCHITECTURAL INTEREST. For the purposes of selection, history and architecture ought to be given equal weight. Some buildings with important historical associations have little or no architectural interest; the reverse is also true. If two buildings are of equal architectural interest, preference should be given to the one with the most known history.

HABS is becoming increasingly concerned with recording major buildings: early or pioneering examples of a building type or style, those illustrating marked development or transition, and those at the culmination or end of a series. The works of noted architects and builders are also given special attention. Evidence of coherent, consistent planning and design, harmonious proportions, good scale, well designed interiors, refined detailing, and skilled craftsmanship serve to indicate the architectural interest of a structure. This worth is enhanced by ingenious structural devices or combinations of building materials, and the presence of accessory structures completing the ensemble.

INDUSTRIAL SIGNIFICANCE. Increasing interest in the development of technology and awareness of the importance of industry in the evolution of our national culture have served to focus attention on the physical remains of the early industrial age. The new profession of industrial archeology

Wye House, Miles River Neck, Talbot County, Md. This mansion and highly interesting accessory buildings, in a spacious setting, present an illuminating glimpse into the late 18th century.



JACK E. BOUCHER

Nantucket, Mass. General aerial view.



JACK E. BOUCHER

Coke Oven, Old Irontown, Utah. This early industrial remain was built in 1869 by the Union Iron Works, which had been organized the year before.



KENT FAIRBANKS

Chesapeake and Ohio Aqueduct over Catoclin Creek, Point of Rocks, Md.



JACK E. BOUCHER

studies and interprets a wide range of such objects, sites, and buildings. It is important to record them as a significant part of our national development.

CIVIL ENGINEERING. Some historians have long been concerned with structures whose interest is not purely architectural. At present the increasing attention being given by civil engineers to the history of their profession justifies a substantial expansion of recording activity for structures which occupy an important place in that history. Examples which illustrate the application of improved and mechanized techniques of construction, innovations in the use of materials, development of transportation, improvement of health and living standards by means of public works, daring enterprise, and the contributions of noted engineers are important to record.

FRAGMENTS. Interesting *parts*, such as frontispieces or fine paneling, that have been separated from the rest of the fabric, may be separately recorded. Similarly, when some rare, important, or beautiful detail is encountered in a building otherwise devoid of interest, the detail should be recorded even though a full record is not made of the rest.

TYPICALITY AND CULTURAL INTEREST. Although two buildings are seldom alike in all particulars there are some which can be considered especially representative of a series, kind, region, period, culture, or way of life, and therefore valuable. Simple structures such as workmen's houses or slave quarters can be as important to record as more elaborate and fashionable ones, in this respect. To demonstrate typicalness or to illustrate a culture, a structure which is as complete as possible should be selected.

RARITY. Structures which are uncommon in character, or which have uncommon features, are often of great interest and deserve the close attention of anyone making a survey. The same is true of good examples of a kind which was once numerous, but of which only a few remain.

David Stocker House, Truro, Mass. This small house embodies the salient characteristics of a Cape Cod dwelling.



RECORDS

Hampton Plantation, Slave quarters No. 3, Towson, Md.



Occasionally, unique buildings are found; they should be given a place in the records.

ASSISTANCE TO HISTORIANS AND PRESERVATIONISTS.

Research and publication on the history of American architecture are matters of basic concern. The interchange between scholars and historical institutions is widely recognized as mutually beneficial. Scholars make use of material from a collection in their study and writing, bringing it to the attention of a wider public, and often contribute data of considerable value, as well. When making a survey, therefore, it is wise to consider buildings known to be of particular interest to scholars, among others.

The same case can be made for structures of particular interest to preservationists. The recognition given to a building by recording it can be instrumental in saving it from demolition.

To plan a survey in detail one must consider what records will be made of each particular structure. Ideally, each is treated in proportion to its historical importance, although this is not always feasible. Arbitrary limits must sometimes be set.

Measured drawings constitute the highest and most complete type of record; they should be made for the most important buildings, and when restoration is contemplated. They require the services of an architect or experienced draftsman. Precise scale drawings are made, showing the building exactly at it is, in any desired amount of detail. Whenever it is necessary to record floor plans, layouts, dimensions, the exact proportions of a facade or unusual structural information, they are made. Drawings should be accompanied by photographs and documentation.

Photographs are needed even more when no drawings are made; they are used in combination with written information to record all kinds of historic structures. Photographs,

both exterior and interior, are the most readily obtainable visual records. They depict general aspects and specific details equally well, and can also show the setting. Complex forms and ornamental details can be photographed as readily as simple ones. Photographs should be taken with a view camera on large-size negatives by a professional photographer. Copies of other graphic records and documents constitute valuable additions to the record. Good photographic material is eminently usable for exhibitions and for publication.

History, whether brief or extensive, is *always* important; it forms an essential part of the survey records. The physical history of a structure, its ownership, associated people and events—all should be related accurately, on the basis of documented evidence.

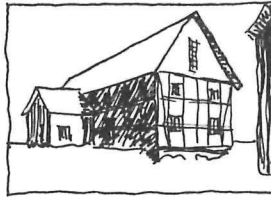
A concisely written architectural description of basic forms, notable features, construction and materials should form part of every record. The more important and unusual a structure is, the more its architectural description should be developed in detail, to supplement the photographs (and measured drawings, if there are any) and to describe features not otherwise clear.

The following illustrative cases show what records HABS made in particular instances, and what factors influenced the choice of records:

ST. MICHAEL'S EPISCOPAL CHURCH, Charleston, S.C.; recorded on 11 sheets of measured drawings, seven exterior and four interior photographs, four pages of history, and nine pages of architectural description.



Analysis: This church was built in the mid-18th century and was a major architectural achievement in the colonies. It is rectangular, has a notable tower and little ornamental detail except the pulpit and gallery. Significant structural details of the roof and spire form an important part of the drawings. The history was briefly stated because an excellent monograph is available.



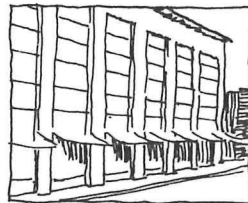
LANGHOLFF HOUSE AND BARN, Watertown Vicinity, Wis.; recorded on six sheets of measured drawings, three exterior and one interior photographs, one page of history, and three pages of architectural description.

Analysis: This mid-19th-century dwelling perpetuates a type common in prehistoric central Europe. It is similar to German *Fachwerkbau* construction. The measured drawings devoted considerable attention to structural details.



WILLIAM J. ROTCH HOUSE, New Bedford, Mass.; recorded with three exterior and four interior photographs, two photocopies of early watercolors, two pages of history, 11 pages of transcript of the original specifications, and four pages of architectural description.

Analysis: This house was designed by A. J. Davis and Wm. R. Emerson; engraved illustrations and a brief description were published in A. J. Downing, *The Architecture of Country Houses*, in 1850. Because of these contemporary plans, no measured drawings were made and the original specifications served for most of the architectural description. The watercolors which were copied depicted features now lost because of changes.



LEITER II BUILDING, Chicago, Ill.; recorded by one interior and two exterior photographs, and three pages of written data.

Analysis: This eight-story office building, erected in 1889–90 from plans of Jenney and Mundie, architects, is interesting as a link between more important buildings demonstrating the evolution of the steel skeleton frame. Largely repetitive in form and detail, its significant features could be covered briefly.



EARNEST LOG HOUSE, Chuckley Vicinity, Tenn.; recorded with one exterior photograph and two pages of written information.

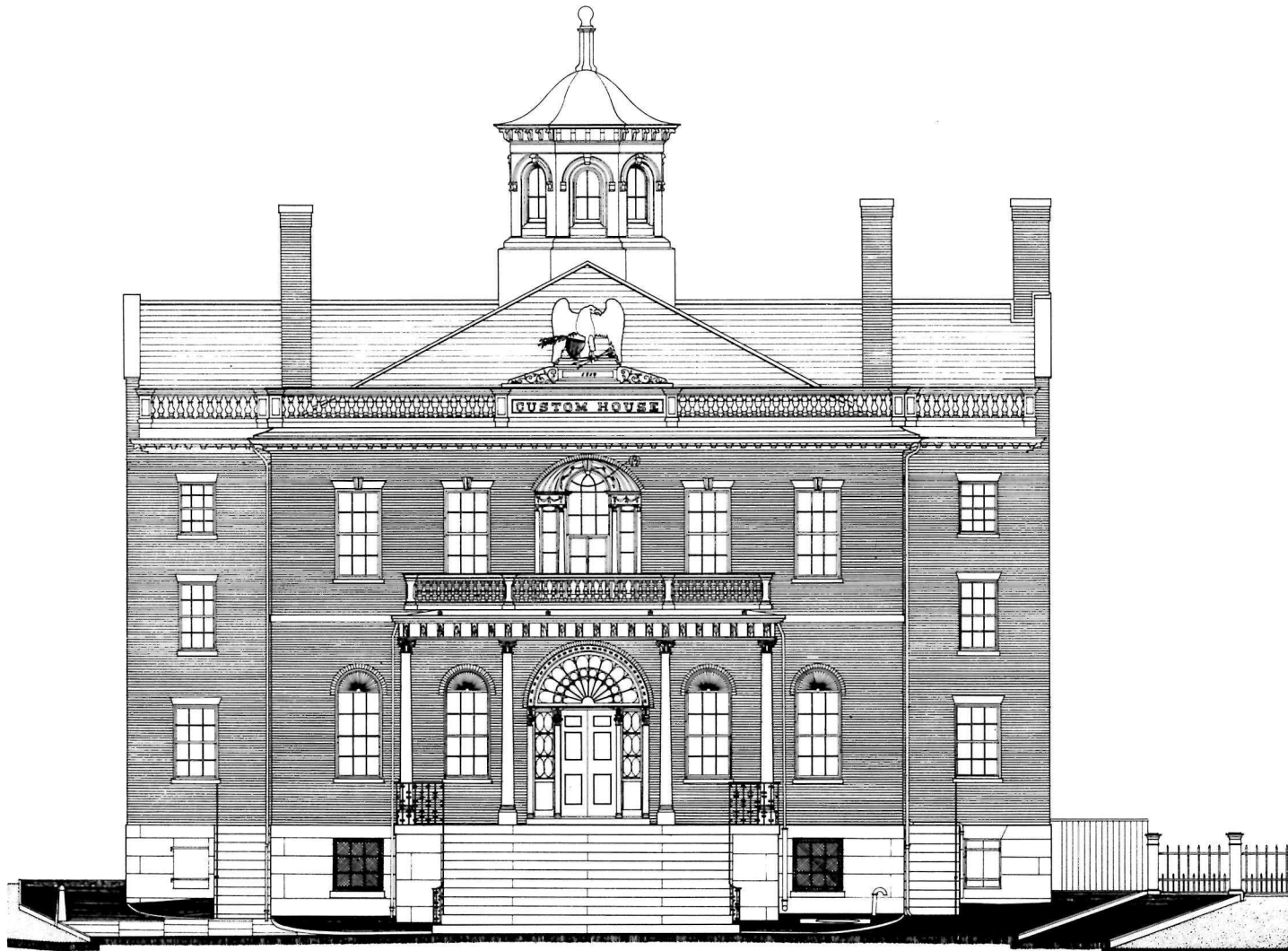
Analysis: This simple rectangular building of squared-log construction could be covered in a minimum record. Although

Louis Sullivan's Chicago Stock Exchange, now threatened by demolition.



CERVIN ROBINSON

one-photograph recordings are special cases, in this instance a single view was adequate to show the points of interest: the height of the building and its wall construction (supplemented by written description).

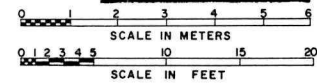


SOUTH ELEVATION

LARRY D. NICHOLS, DEL.

eagle carved by Joseph True - presented in 1826

window sills & lintels on front are marble



SUMMER STUDENT TEAM
FOR E.O.D.C., PHILADELPHIA
UNDER DIRECTION OF UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE, BRANCH OF PLANS AND DESIGN

NAME OF STRUCTURE
CUSTOM HOUSE AND PUBLIC STORES
178 DERBY STREET SALEM, MASSACHUSETTS

SURVEY NO.

HISTORIC AMERICAN
BUILDINGS SURVEY
SHEET 5 OF 17 SHEETS

LIBRARY OF CONGRESS
PHOTODUPLICATION SERVICE

MEASURED DRAWINGS

GENERAL

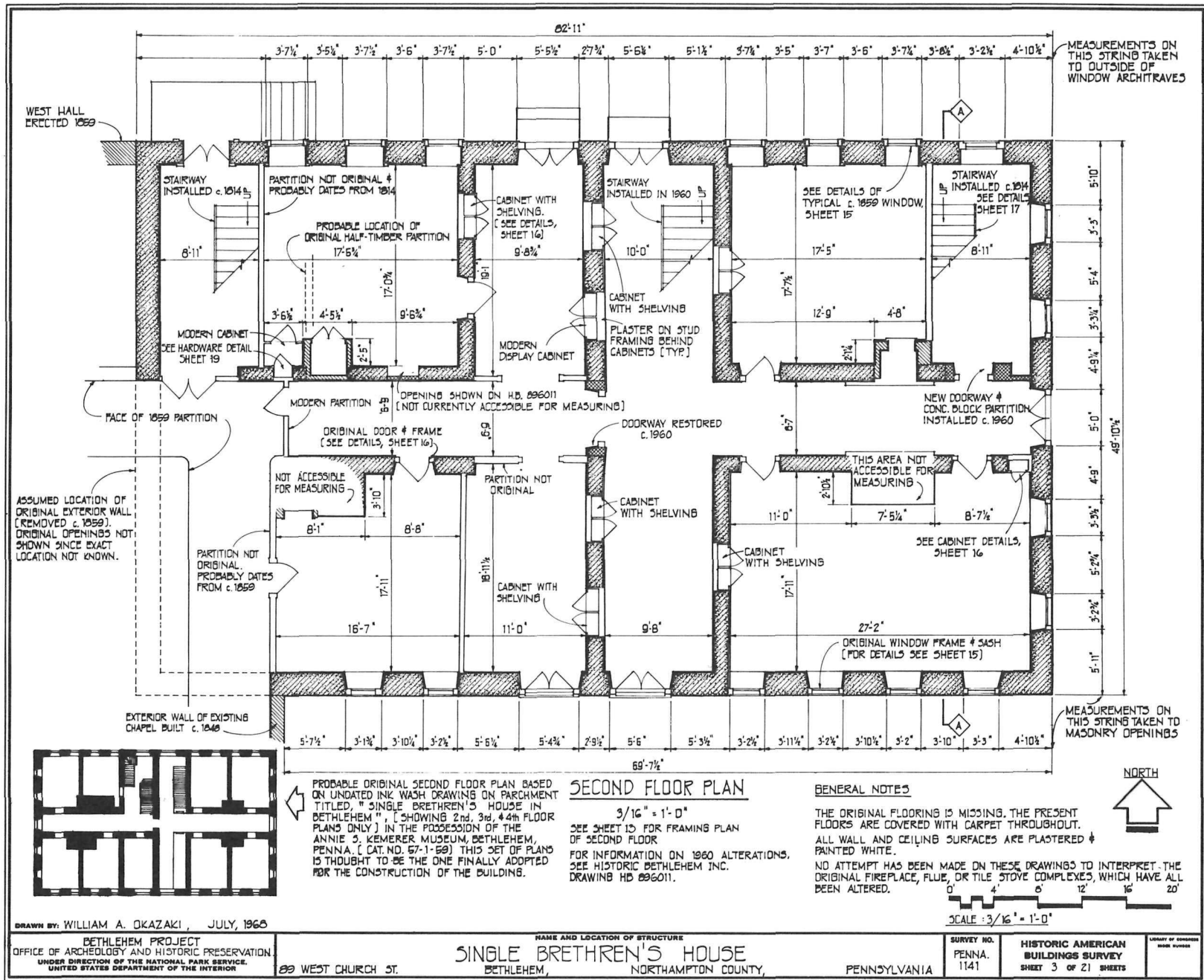
Measured drawings are the ultimate in recording; they should be made for structures of outstanding interest whenever the means are available. Such drawings, made by measuring each part of the subject, are accurate, to scale, show proportions accurately, are measurable, highly informative, and can emphasize or de-emphasize parts according to their historic importance. Aspects which cannot be portrayed by photographs (as: floor plans, general sections) or those normally hidden from the eye (as: construction details) can be recorded by drawing. Dimensions and notations can be included to any desired extent. Drawings are comparatively costly to make, however, and their accuracy depends on the competence of the draftsman or architect.

Being made of an existing structure, measured drawings are the reverse of architects' "working drawings," which are made in order to construct buildings. The number of drawings needed to record a given building will depend on factors to be discussed later in this part of the book. The exact way in which a drawing is made depends on the purpose for which it is intended. Those made for use in restoration work should be minutely dimensioned, often copiously annotated, include many structural details, and give great attention to irregularities (as sagging floors, walls out of plumb, and weathering of materials), so that a literal reconstruction of each part is possible.

Graphic representation to illustrate books and lectures can be simpler, giving emphasis to the pictorial and historical qual-

The building at left owned by the U.S. Government, is considered highly important; it is part of the Salem Maritime National Historic Site. There are 17 sheets in the set: title sheet, basement plan, first and second floor plans, four sheets of elevations, two sheets of general sections, first floor framing plan, roof framing plan, structural details, portico and three sheets of decorative details.

The south (front) elevation shows the facade accurately in all of its details, emphasizing pictorial quality. No dimensions are given on this sheet but they can be obtained from others. Notations are minimized. Heavier silhouette lines make the front portions appear to advance; on receding portions the material indications are also lighter. Openings are accented with heavier outlines. Drawn in ink.



ity of elevations, showing few dimensions (or even none) on floor plans and minimizing structural aspects, especially common details which can be understood from verbal description. They should be drawn with great care, however, and provided with graphic scales for the convenience of persons wishing to ascertain the approximate size of secondary parts. Instead of having notes on drawing sheets, authors generally prefer to place verbal material in the text.

HABS drawings tend to approach the illustrative type in character but they also make free use of general sections and structural details whenever they are needed, taking care to emphasize their pictorial and historical character. HABS wants its records to be used widely and effectively, and believes that thoughtful planning of measured drawings will help to realize this aim.

Unless it is feasible to record literally everything about a given subject, one must judge what is of interest about it, taking into account the type of survey, the importance of the building and the potential usefulness of the drawings. During the 1930's many architects liked to use authentic period details when constructing new buildings, so HABS measured drawings made then were replete with large-scale decorative details and full-size molding profiles. At present a principal use of HABS material appears to be by architectural historians, art historians, teachers, and authors of books. This is a strong consideration when making measured drawings today.

There are several methods of obtaining the measurements of a structure, as summarized below and discussed at greater length later in this part of the book. The method used in a given instance should be noted on the drawings.

PRECISE HAND MEASUREMENT is the best method and is the one usually followed. It is done by a measuring party whose members sketch or draw the building in a field notebook and measure it part by part. Accurate dimensions are obtained with a steel tape or rule, often with the aid of a line level or surveyor's level; moldings are recorded with a profile gage or "molding comb." These data are taken down as field notes and verified by checking.

MEASURING FROM PHOTOGRAPHS is a simpler alternative method; its greatest usefulness is in reducing the amount of work when recording decorative elements and complex parts of a building as a supplement to hand measurement. Photographs are taken in direct elevation, incorporating a scale stick. Dimensions are taken by hand and from the print by reference to the scale stick, or the photographs can be enlarged to correspond to a conventional architectural scale.

PHOTOGRAMMETRY requires special equipment and operators trained in its use. Usually pairs of photographs (stereopairs) are taken from measured station points and interpreted on a plotting machine; measurements can also be taken from a single photograph. Photogrammetry is a precise method but an expensive one; it is usually reserved for special cases.

SKETCHING is not used for making records when accuracy is demanded. An accomplished draftsman can sometimes take a few basic measurements by hand and place the other features on the sketch "by eye." Sketches are most useful as a supplement to photographic or written records; sketch floor plans, particularly, are useful when no measured drawings are employed.

ADAPTATION from other drawings is sometimes practiced. If their condition is good, photographic means can often be employed. If the drawings are faded or badly torn they may be redrawn; they should be checked for accuracy at the building. Blueprints are often in a condition necessitating redrawing, as well.

Single Brethren's House, Bethlehem, Pa. Drawn for restoration study, this plan of the second floor was amply dimensioned.

PLANNING

The size of a set of drawings (number of sheets) is a basic decision. An average house can be done in five to eight sheets and a medium-sized church or public building in seven to 12 sheets. “Completeness” is a relative term; the old St. Louis, Mo., Court House was covered in 17 sheets in 1934, but for restoration purposes 32 more sheets were made in 1937, 1940, and 1941.

After a preliminary survey one must depend on experience and judgment to estimate how much can be accomplished with the available resources, and decide whether to draw a few buildings comprehensively or more buildings in less detail. The cost of making each sheet varies, but the 1968 figures given below will help in estimating:

- \$100 to \$300 per sheet, occasionally higher, for HABS drawings made by student architects.
- \$200 to \$500 per sheet by private architectural firms.
- \$300 to \$600 per sheet by architectural photogrammetry.

In planning one also considers the productivity of draftsmen and the complexity of each structure to be drawn.

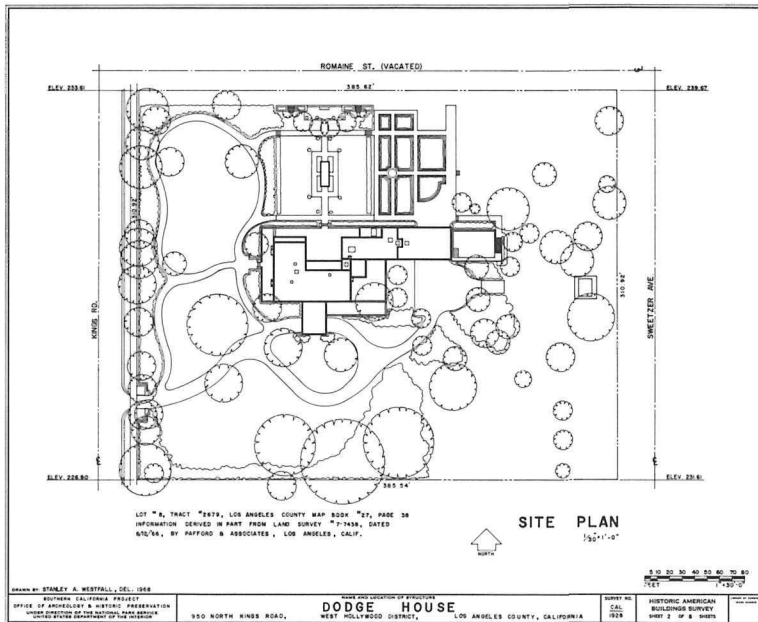
Several kinds of drawings are usually necessary:

LOCATION PLAN. This is a map enabling one to find the property with reference to significant highways, towns, or natural bodies.

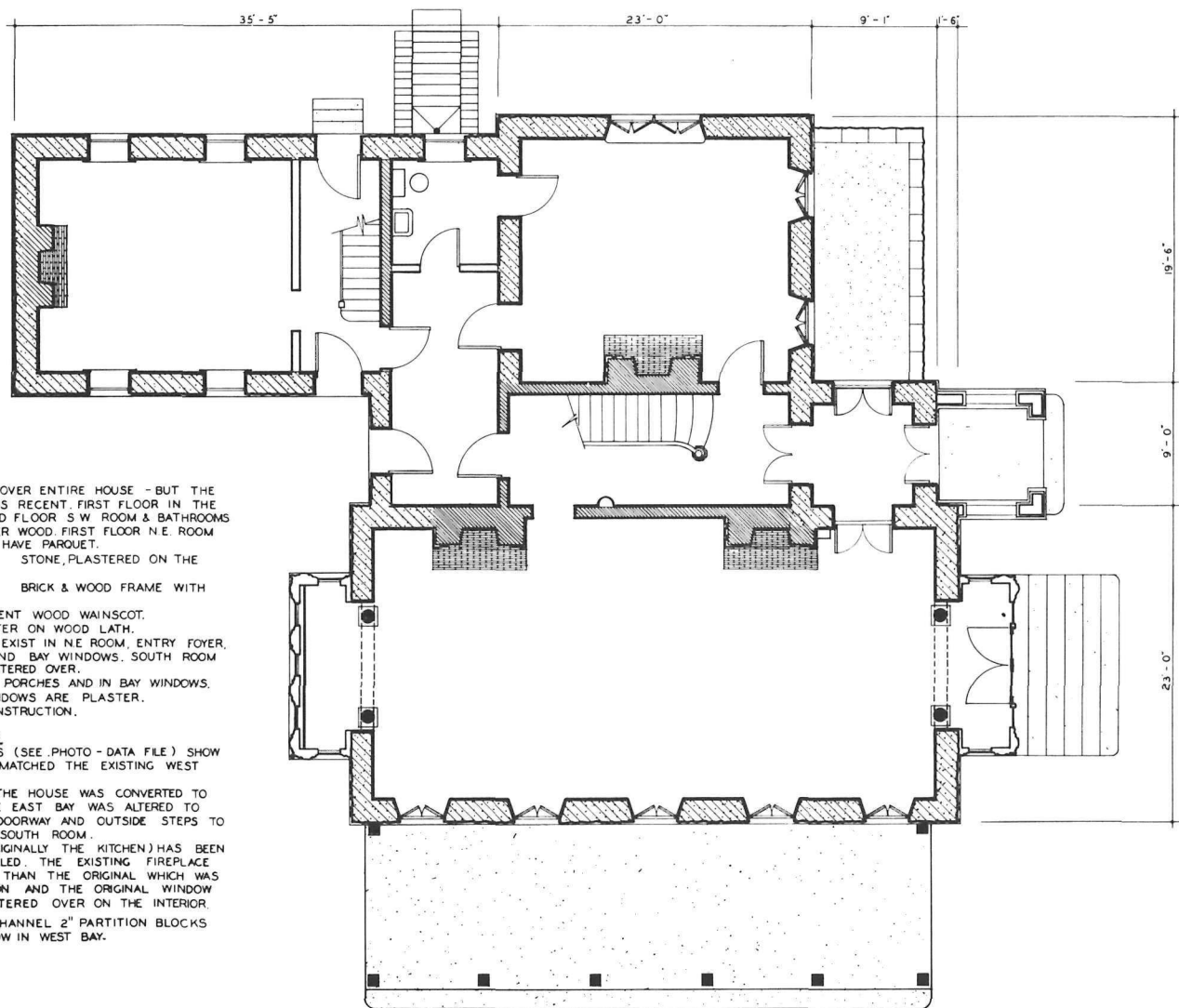
PLOT PLAN. When the structure forms part of a group or if there are gardens of historical importance the features of interest in the immediate environment are shown—usually those within the lot line of the property.

FLOOR PLANS. To record the shape, room layout, location of doors, windows, and stairways, and indicate structural supports, each significant level should be shown on a plan. Plans are basic for describing a building graphically.

EXTERIOR ELEVATIONS. An elevation is a drawing of a facade of a building (or a wall of a room) projected on a vertical plane; such drawings are necessary for accurate



Notes help to interpret this relatively complex plan. Drawn in pencil.



FINISHES

FLOORS : WOOD OVER ENTIRE HOUSE - BUT THE FIRST FLOOR APPEARS RECENT. FIRST FLOOR IN THE WEST WING, SECOND FLOOR S W ROOM & BATHROOMS HAVE LINOLEUM OVER WOOD. FIRST FLOOR N.E. ROOM & MAIN STAIR HALL HAVE PARQUET.

EXTERIOR WALLS : STONE, PLASTERED ON THE INTERIOR.

INTERIOR WALLS : BRICK & WOOD FRAME WITH PLASTER FINISH.

N.E. ROOM HAS RECENT WOOD WAINSCOT.

CELLINGS ARE PLASTER ON WOOD LATH.

INTERIOR CORNICES EXIST IN N.E. ROOM, ENTRY FOYER, MAIN STAIR HALL AND BAY WINDOWS. SOUTH ROOM CORNICE NOW PLASTERED OVER.

WOOD COLUMNS ON PORCHES AND IN BAY WINDOWS. ARCHES IN BAY WINDOWS ARE PLASTER.

STAIRS : WOOD CONSTRUCTION.

RESTORATION NOTES

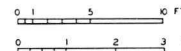
EARLY PHOTOGRAPHS (SEE PHOTO - DATA FILE) SHOW ORIGINAL EAST BAY MATCHED THE EXISTING WEST BAY.

IN 1922-23 WHEN THE HOUSE WAS CONVERTED TO CEMETERY USE, THE EAST BAY WAS ALTERED TO PERMIT A DOUBLE DOORWAY AND OUTSIDE STEPS TO A CHAPEL IN THE SOUTH ROOM.

THE WEST WING (ORIGINALLY THE KITCHEN) HAS BEEN EXTENSIVELY REMODELED. THE EXISTING FIREPLACE IS MUCH SMALLER THAN THE ORIGINAL WHICH WAS WALK-IN PROPORTION AND THE ORIGINAL WINDOW FRAMES ARE PLASTERED OVER ON THE INTERIOR.

METAL LATH AND CHANNEL 2" PARTITION BLOCKS OFF TRIPLE WINDOW IN WEST BAY.

FIRST FLOOR PLAN
SCALE : $\frac{3}{16} = 1'-0"$



DRAWN BY: P. E. NELSON 7 - 67

ST. LOUIS COUNTY SURVEY
OFFICE OF ARCHAEOLOGY AND HISTORIC PRESERVATION
UNDER DIRECTION OF THE NATIONAL PARK SERVICE,
UNITED STATES DEPARTMENT OF THE INTERIOR

NAME AND LOCATION OF STRUCTURE
"OAKLAND" - LOUIS A. BENOIST HOUSE
7801 GENESTA, AFFTON, ST. LOUIS COUNTY, MISSOURI

SURVEY NO.
MO-1182

HISTORIC AMERICAN
BUILDINGS SURVEY
SHEET 3 OF 12 SHEETS

LIBRARY OF CONGRESS
PAGE NUMBER

This house is an early work of the "Prairie School" architect, Walter Burley Griffin. Drawn in pencil at 3/16" scale, this plan nearly fills the sheet. Dimensions of major parts are given; they are kept close to the border. An alteration key and notes explain changes made to the building. The living-room ceiling and roof overhang are indicated by dotted lines.

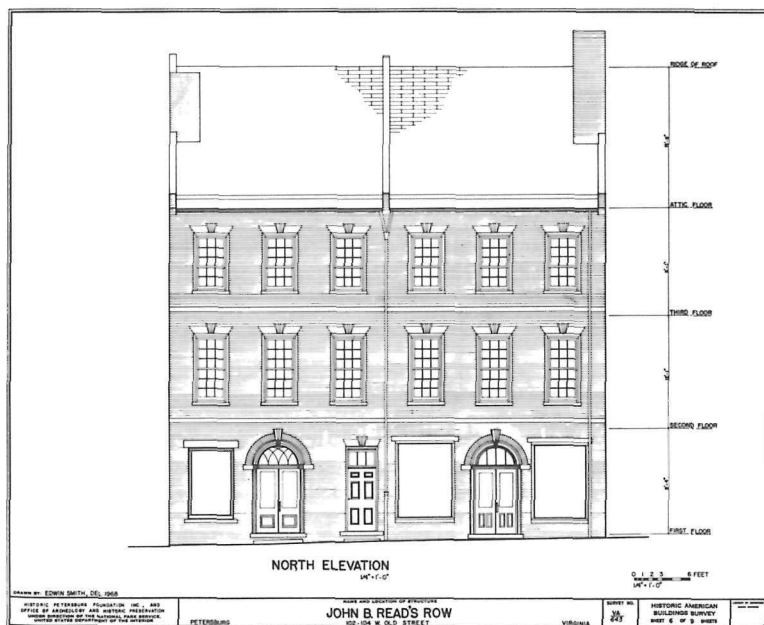
representation of the exterior of a building. Buildings of exceptional importance are usually drawn from all sides; other important ones often demand two elevations, or at least the main front. In other cases when good exterior photographs can be taken, elevation drawings may not be considered necessary.

GENERAL SECTIONS. A section is an elevation drawing of an imaginary vertical plane passing through the building. When one desires to show the construction of a building, or when there are a number of significant levels to be recorded, one or more general sections are needed. They are useful in delineating stairways, and often provide key room elevations. Simple structures of conventional nature can usually be adequately recorded without general sections, or with a single one.

DECORATIVE DETAILS. Details are of two kinds—structural and decorative; for the first, drawings are needed, but decorative details can often be satisfactorily recorded in photographs. As a rule, HABS does not now draw details which can be photographed well, unless they are of great importance. Sometimes, if a large set of drawings is being made for an outstanding building, traditionally favored elements such as stairways, doorways, mantels, room elevations, paneling, moldings, and hardware are drawn as details. In some buildings, a detail may be considered the only feature worthy of measurement. The makeup and construction of a decorative detail should be shown whenever possible.

STRUCTURAL DRAWINGS. Structural details of uncommon character should usually be drawn. Features such as floor or roof framing need to be drawn in plan (roofs often in section, also) and the joints detailed at larger scale. Entire frames are sometimes drawn, either in plan and elevation, or as a structural isometric. Isometric details in general are particularly effective in making structural elements clear, even to a lay observer, and "exploded" views enable each part of an assembly to be fully comprehended.

This elevation records two simple units. Drawn in ink.



This elaborate house, "Bishop's Palace," was designed by Nicholas Clayton, architect, and built 1887-93. Drawn in ink.



SOUTH ELEVATION

0 5 20 FEET

DRAWN BY: LARRY D. JOHNSTON

UNDER DIRECTION OF THE NATIONAL PARK SERVICE,
UNITED STATES DEPARTMENT OF THE INTERIOR

1406 BROADWAY

NAME AND LOCATION OF STRUCTURE
WALTER GRESHAM HOUSE
GALVESTON, GALVESTON, COUNTY
TEXAS

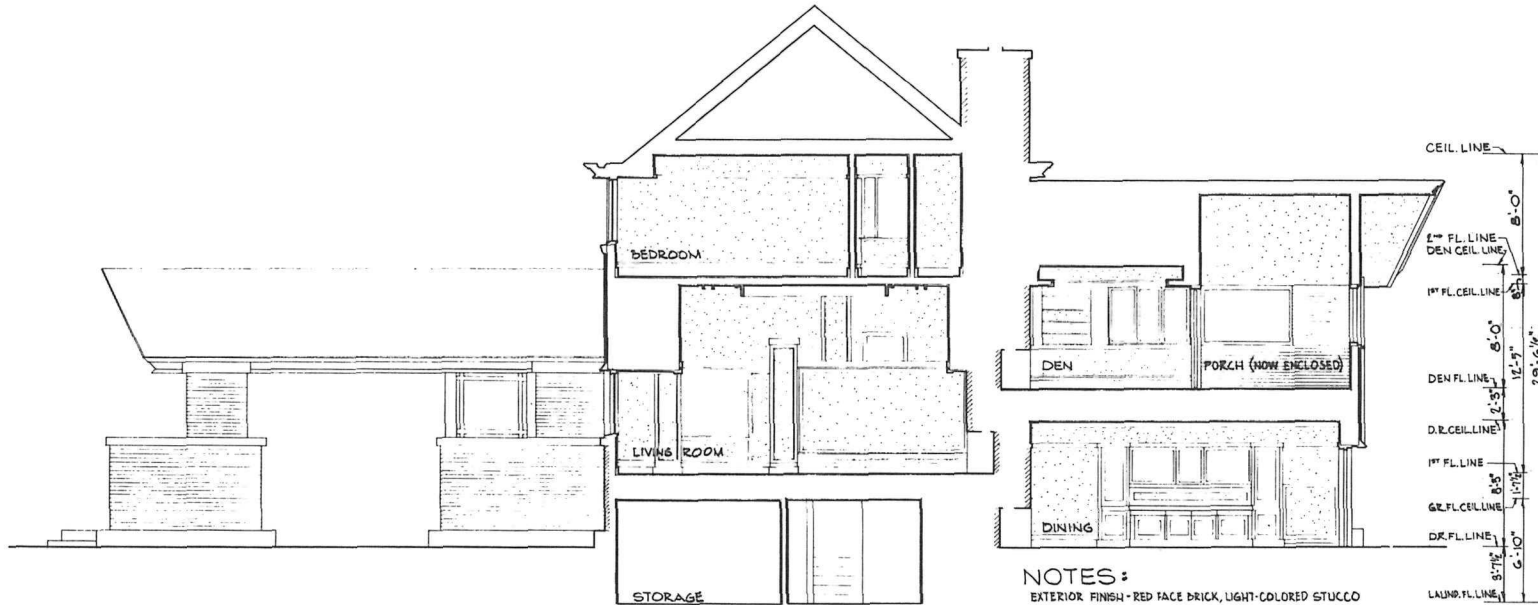
SURVEY NO.
TEX
2103

HISTORIC AMERICAN
BUILDINGS SURVEY
SHEET 7 OF 11 SHEETS

LIBRARY OF CONGRESS
INDEX NUMBER

This general section explains the relationship between several significant floor levels and indicates the interior character. Height dimensions are concentrated

in one place, each level being identified by name on the dimensioning. Notes refer to original color schemes. Drawn in pencil.



CROSS SECTION

SCALE: 3/16" = 1'-0"

NOTES:

EXTERIOR FINISH - RED FACE BRICK, LIGHT-COLORED STUCCO
 // DARK-BROWN WOOD TRIM, CONC. BASE, SILLS, HEADS & COPINGS
 INTERIOR FINISH - LIGHT-CREAM, PEBBLE-FINISH SAND PLASTER
 // DARK-STAINED OAK TRIM.
 ORIGINAL CONDITIONS FROM ARCHITECTURAL RECORD,
 JUNE, 1908.

DRAWN BY: J. WILLIAM RUDD

MEASURED BY J. RUDD & E. POPKO - JULY 10, 1908
 DRAWN BY J. WILLIAM RUDD - JANUARY, 1907
 UNDER DIRECTION OF THE NATIONAL PARK SERVICE,
 UNITED STATES DEPARTMENT OF THE INTERIOR

NAME AND LOCATION OF STRUCTURE

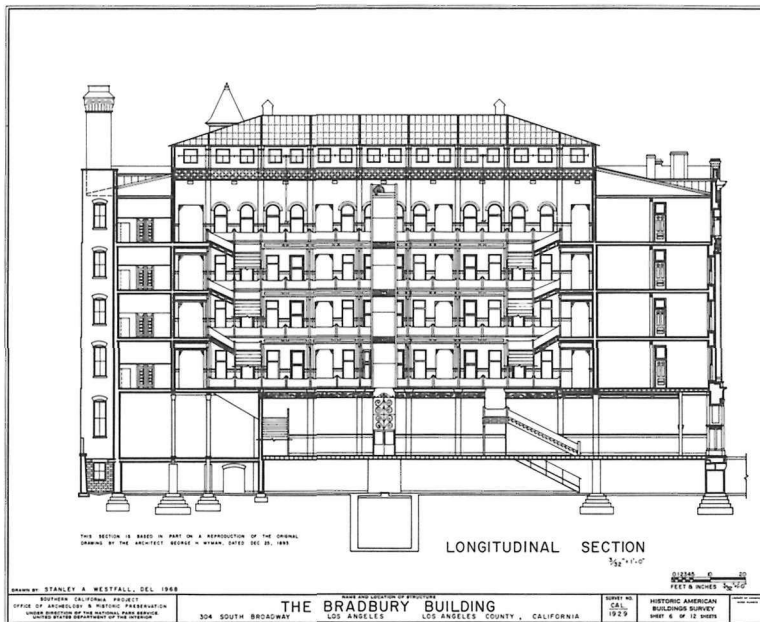
WILLIAM H. EMERY HOUSE
 248 ARLINGTON
 ELMHURST, ILLINOIS



SURVEY NO.

HISTORIC AMERICAN
 BUILDINGS SURVEY
 SHEET 6 OF 7 SHEETS

UNIVERSITY OF CHICAGO
 RESEARCH NUMBER



George H. Wyman was the architect of this 1893 office building, whose principal feature is a skylighted interior court containing exposed ironwork. Drawn in ink.

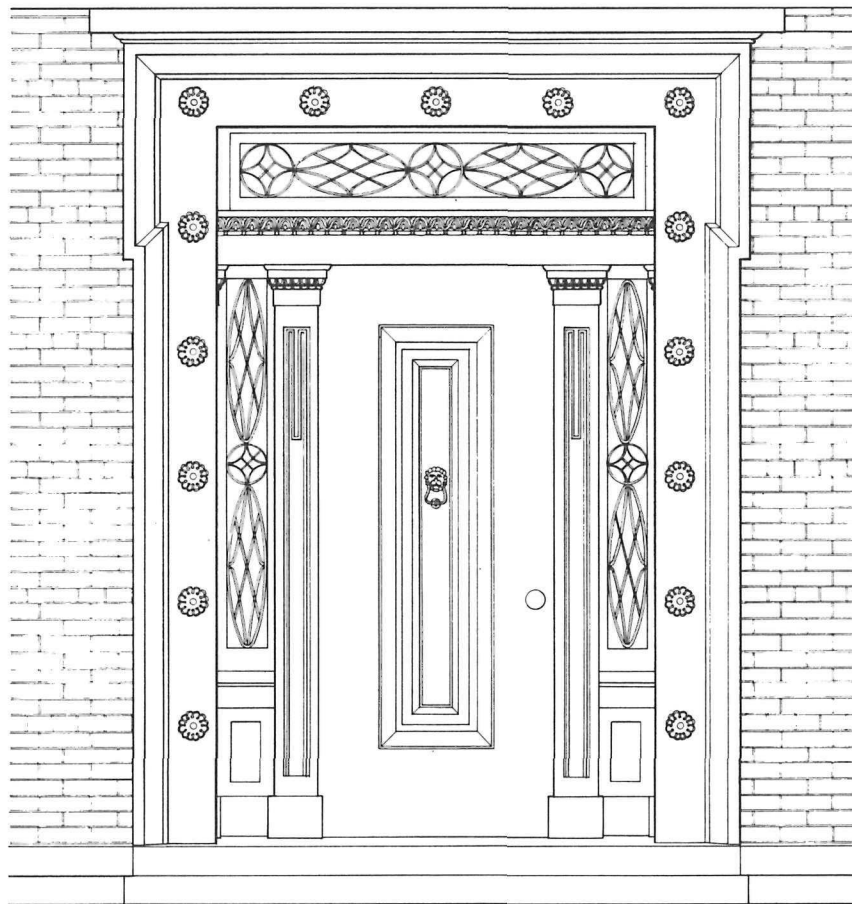
“RESTORED” DRAWINGS. Although not common to surveys, drawings are sometimes made, in the course of historical study, of a building as it is thought to have been at a given prior date; these are called conjectural (or tentative) restorations. They may “restore” a portion now missing (as an entry or a porch), reveal a portion now covered or otherwise altered (as an earlier facade), or indicate a plan layout. Several drawings in chronological sequence may illustrate the physical history of a structure; in such a case transparent overlays are sometimes employed.

OTHER DRAWINGS. At times, special views, such as reflected ceiling plans or “cut away” drawings, are needed to depict significant features. Separate plans are commonly made to show mechanical installations in a factory or the heating, plumbing, and wiring of a building.

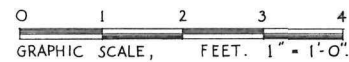
When determining what drawings to include, one considers what features of a structure most deserve recording, scales at which drawings will be made, sheet composition and the order of sheets. HABS sets begin with a title sheet, which contains the location plan, a historical statement about the structure, credits (names of those who had a key responsibility in preparing for and executing the drawings) and dates of measuring and drawing. When a single complex of closely related structures is being recorded, one master title sheet may suffice (avoiding needless duplication). After the title sheet come plot plan, floor plans, elevations, general sections, and details. It is customary to make a separate set of drawings for each auxiliary structure.

Sheet composition depends partly on design and partly on generally accepted conventions; clarity and legibility are important in addition to a pleasing appearance. Overcrowding is to be avoided, as are bizarre effects. Dimensions and titles should not crowd the drawings too closely, since wide spacing lends itself well to reproduction in books or articles—

The sheet at right presents a major exterior detail at large scale. Drawn in pencil.



ELEVATION . SCALE, 1"=1'-0"
 DETAIL OF MAIN ENTRANCE



DRAWN BY: HARLEY J. McKEE
 SYRACUSE H.A.B.S. FIELD OFFICE
 CENTRAL NEW YORK PROJECT, 1966
 UNDER DIRECTION OF THE NATIONAL PARK SERVICE
 UNITED STATES DEPARTMENT OF THE INTERIOR

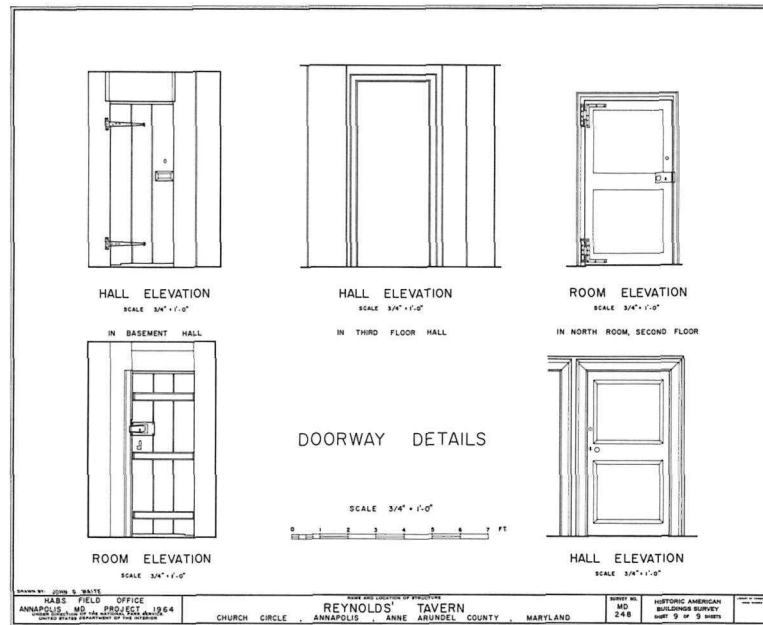
NAME AND LOCATION OF STRUCTURE
 LINDLEY M. MOORE HOUSE
 16-22 LAKE VIEW PARK, ROCHESTER, MONROE COUNTY, NEW YORK.

SURVEY NO.
 NY-
 5432

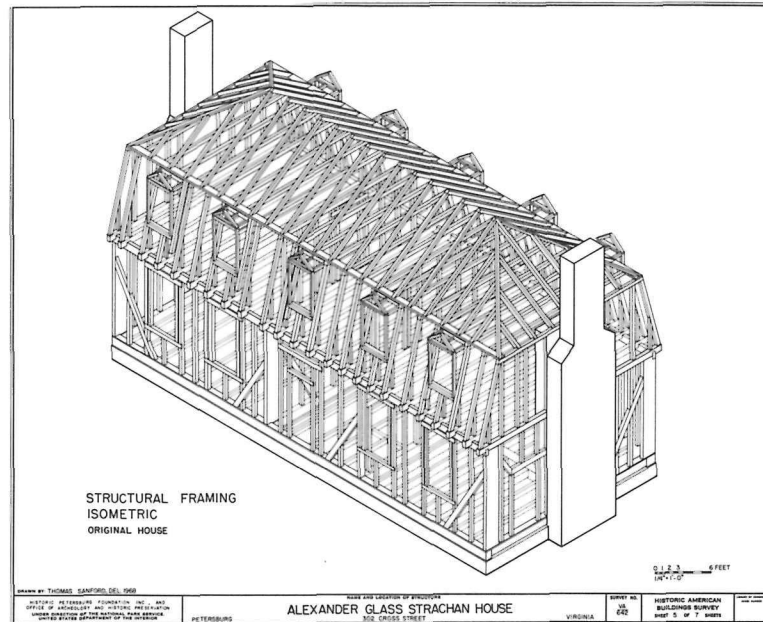
HISTORIC AMERICAN
 BUILDINGS SURVEY
 SHEET 6 OF 8 SHEETS

LIBRARY OF CONGRESS
 PHOTODUPLICATION SERVICE

Here several very old interior doors are detailed. Drawn in ink.

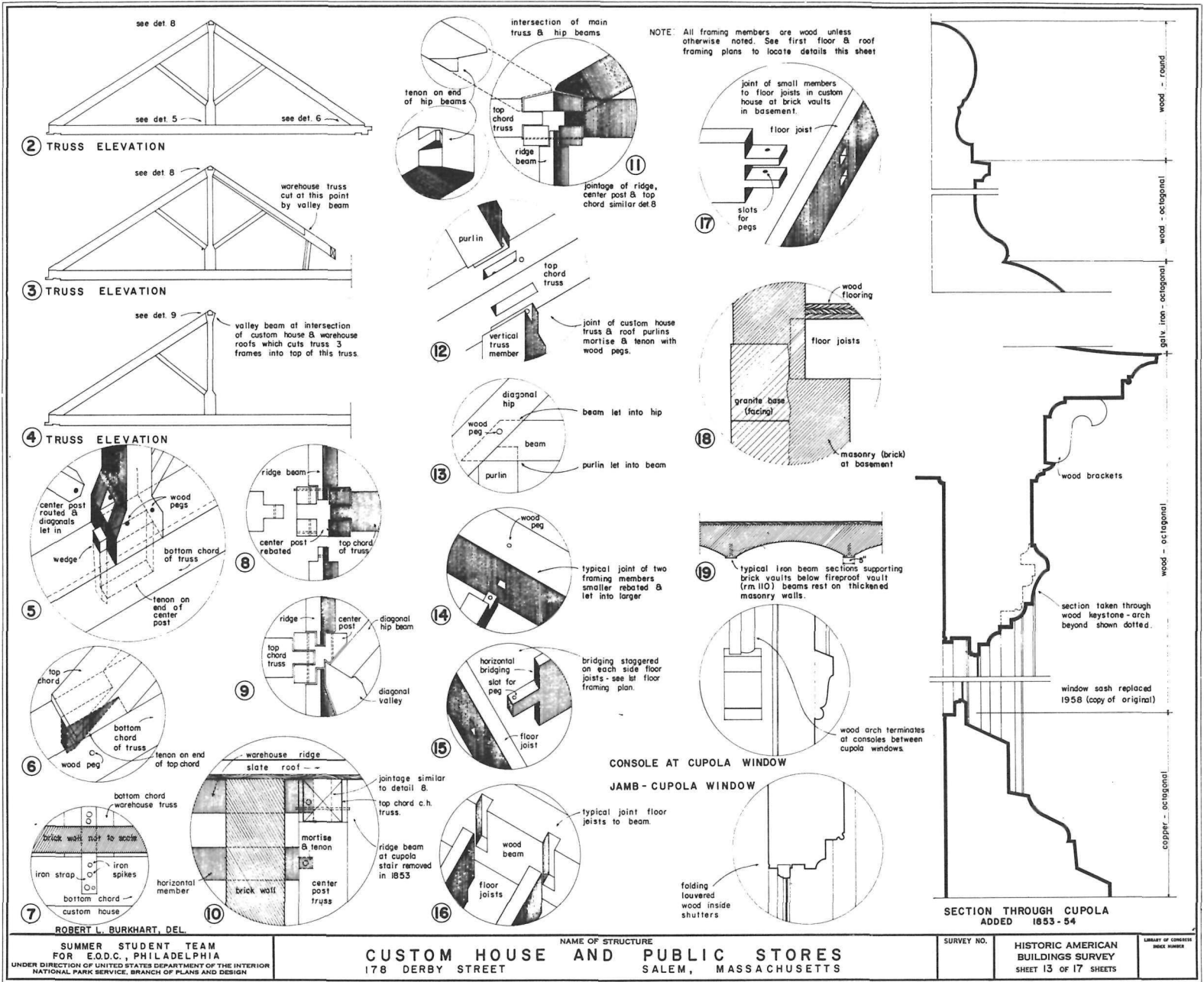


This sheet demonstrates how clearly a structural frame can be shown by an isometric view. Drawn in ink.



Far right, a sheet of construction details employing elevations, sections, and isometric projection. Separation of members allows jointing to be seen in full. The emphasis being pictorial, scales and dimensions are omitted, but notes are given an important place. Drawn in ink.

The construction shown on this sheet should be understood by a layman but it is also meaningful to a technical specialist.



ROBERT L. BURKHART, DEL.

SUMMER STUDENT TEAM
FOR E.O.D.C., PHILADELPHIA
UNDER DIRECTION OF UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE, BRANCH OF PLANS AND DESIGN

NAME OF STRUCTURE
CUSTOM HOUSE AND PUBLIC STORES
178 DERBY STREET
SALEM, MASSACHUSETTS

SURVEY NO.

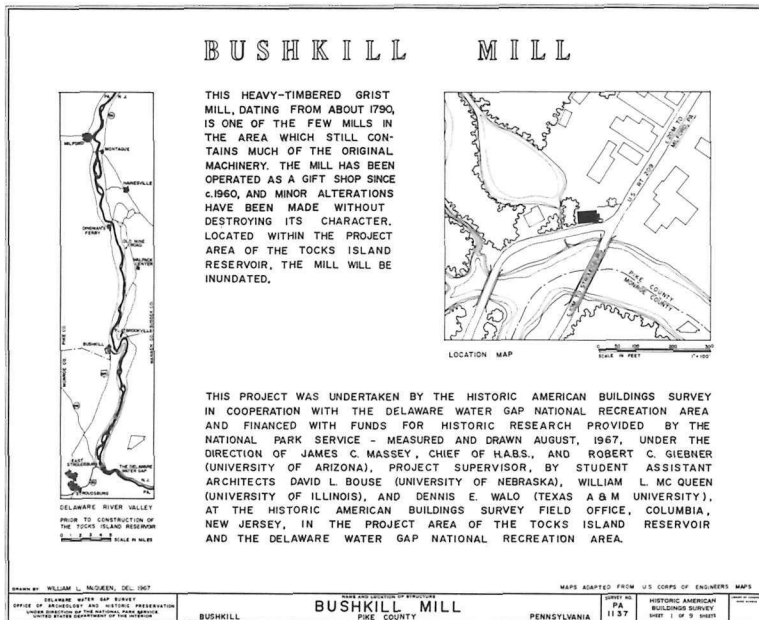
HISTORIC AMERICAN
BUILDINGS SURVEY
SHEET 13 OF 17 SHEETS

LIBRARY OF CONGRESS
BOOK NUMBER

At right, a series of dated drawings at small scale trace the physical history of this house and its accessory buildings.

MEASURING

An old gristmill, built c. 1790, which still contains much of the original machinery. The title sheet shows the whole river-valley area at small scale and the immediate environs of the mill at larger scale. It includes a statement of the importance of the mill, the auspices under which the survey was undertaken, and the names of the participants. The lettering is mechanical. Drawn in ink.



either the sheet as a whole, or in portions. HABS sheets are usually horizontal (with binding edge at left); when vertical orientation is necessary the binding edge is at the top.

The measurement of a building, far from being a mechanical process, demands considerable technical competence. Only by completely understanding the structure to be measured and by knowing exactly what drawings will be made can one proceed efficiently to take all necessary dimensions. This often requires preliminary study of the building. While measuring, one should be particularly alert for visible traces of earlier or original construction which has been removed or altered; such physical evidence should be measured and otherwise noted.

BY HAND. There are no simple rules covering the process of measuring or the number of persons required. The normal HABS measuring party consists of three persons, two to measure while the third records dimensions in a field notebook. Often two can work efficiently: one measuring and the other taking notes, and even one person alone can measure relatively small elements, such as details. From three to six persons will make up a flexible team, which can be divided into two measuring parties.

It is generally advisable to complete sketching the larger elements (floor plans, elevations, sections) before measuring; details being measured by one person can often be sketched and measured in a single operation. Reference snapshots (at this stage, and later, when drawing) can be a valuable help.

The choice of reference (datum) lines and planes is of fundamental importance. When floors, outside walls, corners, and water tables are straight and true it is convenient and accurate to measure to them; when they are not, other reference lines must be established by means of chalklines, a plumbline, or by using a surveyor's level (see p. 39). The relative position of reference lines and planes needs to be measured at an early stage.



1799



1806



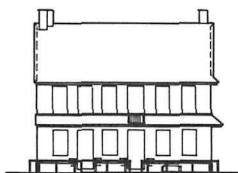
1750



1809

Frame Extension 1819

Elevations show progressive stages of development of the house. . . . Information for Plot Plan and elevations has been compiled from the "Memoirs" of Chas. Jones Wister and from written records now in the possession of Dr. Jas. Wister - 5430 Germantown Ave. Philadelphia, Penna.



South Elevation-1744



East Elevation

1744

Observatory (Frame)-1834
Smoke House (brick)-1744

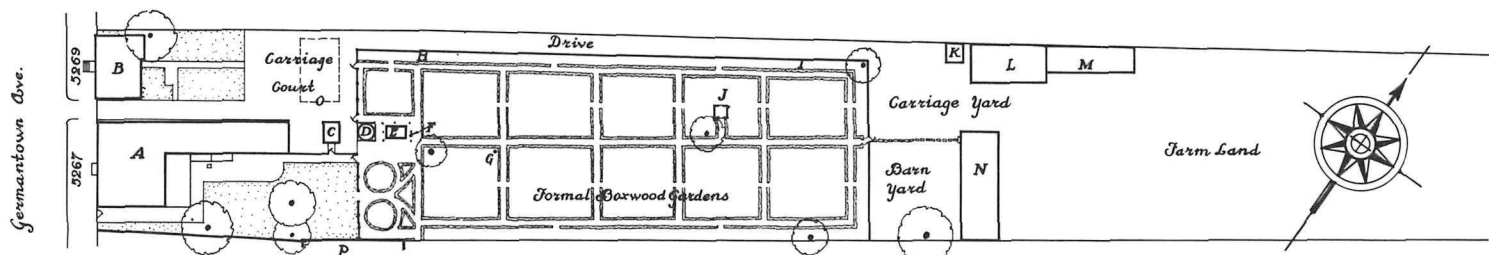
Orig. Wistaria Vine

Ice House (brick)-1809



North Elevation-1744

Elevations are at Scale-1



Plot Plan
Scale-2

A "Wister's Big House"
B Tenant House
C Latrine
D Smoke House & Observatory
E Ice House
F Original Wistaria Vine

G Rain Gage
H Ruins of Old Cold Frame
I Former Site of Apiary
J Summer House
K Pigeon House
L Carriage Shed

M Shed
N Barn
O Site of Darns until 1799
P Site of Christopher Sauer's Printing House.
Del. - Chas. & Grossman

Feet 0 10 20 30 40 50

Meters 0 5 10 Scales No.1

Feet 0 50 100 150

Meters 0 5 10 15 20 25 Scales No.2

U.S. DEPARTMENT OF THE INTERIOR
OFFICE OF NATIONAL PARKS, BUILDINGS, AND RESERVATIONS
BRANCH OF PLANS AND DESIGN

NAME OF STRUCTURE
"Wister's Big House" - Germantown Penna.

SURVEY NO.
7-1
3/28/34

HISTORIC AMERICAN
BUILDINGS SURVEY
SHEET 1 OF 10 SHEETS

INDEX NO.

Use of a surveyor's level: HABS team at Independence Hall, Philadelphia, Pa.



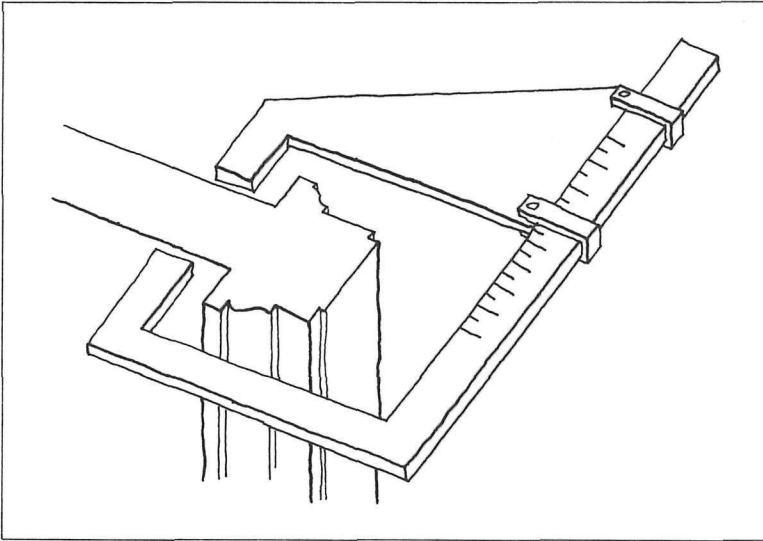
Allowable tolerances should be defined before taking actual measurements, taking into account the scale at which drawings will be made, the nature of the building and the texture of materials. It is relatively simple to determine the position of a carefully worked surface (plaster, marble) but more difficult to define a significant surface on a rough rubble wall; in the latter case one would hardly express dimensions in small fractions of an inch. It is common practice in dealing with architectural subjects to take measurements to the nearest one-quarter inch for general drawings and smaller fractions for details, but this rule can be modified to fit the occasion.

To keep measuring data in order, HABS employs a field notebook ($8\frac{1}{4}$ inches by $10\frac{1}{2}$ inches, containing cross-ruled sheets) in which sketches, dimensions, and notes are recorded; several notebooks are used, if necessary, for a given structure. Larger data or detail sheets, when used, are folded and fastened into the notebook, along with reference photographs, rubbings, and other related material. The structure, measuring party, and date(s) should be identified on the cover of the notebook. Each sketch should be titled and the (approximate) scale noted. If codes are used there should be a key to the symbols at the beginning of the notebook.

Cumulative or "running" measurements, taken by holding the end of a tape at a corner or other datum point, and reading successively all desired points along the line without moving the tape, avoid the accumulation of small errors. "Zero" points are chosen with regard to convenience during later checking and drafting. Through and overall measurements should be taken except where this is clearly impossible; *it is better to obtain direct measurements than to determine them by roundabout means*, although the presence of obstacles may at times make such indirect measurements necessary.

It is necessary to keep the tape level (or vertical, as the case may be) and tightly stretched, to obtain accurate dimensions. Measurements taken on the plans are normally done with the

Homemade wall calipers.



tape at a constant height. If necessary, a level chalkline may be snapped along the walls as a guide.

One should note all characteristics of finish materials needed to draw them properly (as width of siding, logs, roof covering). The number of stone, brick, or siding courses should be determined by counting, and equated to overall measured dimensions. For irregular materials, maximum and minimum sizes (at the very least) are needed, with samples of the textures and jointing, in order to "indicate" the material on the finished drawings. When these materials are to be drawn at large scale, photographs of them make handy working references.

The thickness of partitions and walls is a critical dimension. It can usually be obtained at openings but this is often complicated by trim; thus a pair of large calipers is very convenient (see left). Floor thickness can often be obtained at stair wells or through holes for pipes or ducts.

One cannot assume that a building or a room is exactly rectangular; if it is, the diagonals will be the same length. Openings and panels may be checked in a similar way. Rooms of an irregular shape can be measured from a reference line on the floor.

Roof pitch, usually expressed in a ratio (as 8/12) of rise to horizontal run, is often most readily found by applying a protractor and plumbline along the under side; although this reading is obtained in degrees it can easily be converted to a ratio.

SPECIAL METHODS. A profile gage (see illustration left) is the most convenient device for obtaining the profile of moldings. One with thin metal laminations which slide, held together with a long adjustable screw, is made by the Zina Goodell Corporation, Salem, Mass. Another with stiff sliding wires is the Osborne Template Former. When using a gage on moldings of soft material one must be careful to avoid scratching or damaging the moldings; sometimes a protective film of plastic wrap is inserted.

Use of a profile gage.



Molding profiles can also be obtained by fitting a strip of flexible metal to the molding surface, removing it, and tracing the profile onto paper. Lead foil is good for this purpose if it can be obtained; aluminum foil is commonly available and can be folded into a workable number of thicknesses. Sculptor's clay can also be used. When obtaining profiles by any of these materials, it is necessary to establish the key points by measurement, usually by the aid of a level and plumbline.

To check the accuracy of profiles after they have been traced onto paper, prepare a template on stiff paper or cardboard and hold it against the moldings, correcting it until it fits exactly. For special purposes accurate profiles may be obtained by casting with plaster of paris or with latex (not described herein). Sometimes moldings are exposed at an end or at an open joint; when buildings are being demolished or restored, their moldings can sometimes be recorded from traced or sawn samples. This is the most accurate way.

Whatever method is used, one must first select a representative portion to record. Pieces which are distorted by wear or by excessive painting are virtually useless for obtaining profiles; paint should be removed whenever possible. When trim or cornices have been warped or bent, their condition should be noted, but as a rule for survey purposes, they will be drawn as originally intended.

Whenever possible, the actual jointing and construction of wooden moldings, the size of the pieces, etc., should be recorded. If this can be determined only in part, it should be shown to the degree that accurate observations can be made.

RUBBINGS AND IMPRESSIONS. Outlines of inscriptions and low-relief ornamental features can be obtained quickly at full size, by rubbing. A piece of paper is secured in place over the desired detail, and is rubbed over with a wax crayon (or other suitable marking device); the outlines will show clearly.

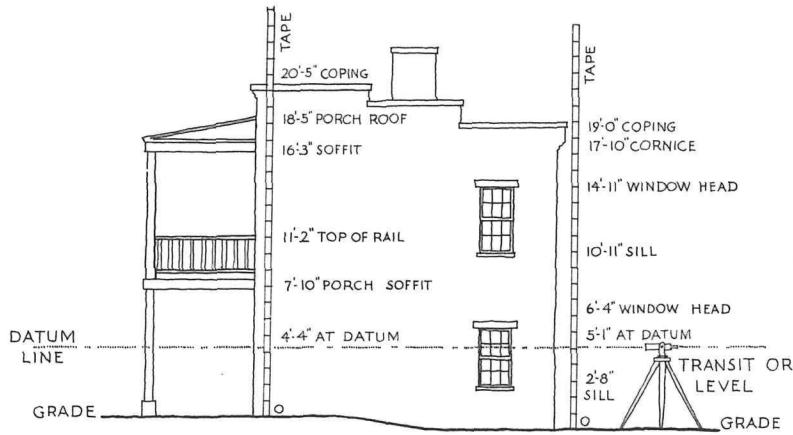
Useful impressions of small ornamental details can sometimes be made with aluminum foil; such "replicas" are easily damaged. Casts are sometimes made by archeologists, using latex. Modeling clay can be used for small impressions. Photographs and photogrammetry can be used to advantage for ornamental features (see pp. 40-44).

INACCESSIBLE FEATURES can sometimes be approximated by comparison with others which can be reached. Counting units of known size like brick, stone, or clapboard courses is quite reliable. The key dimensions of a cornice, for example, can sometimes be measured from inside the building, and the smaller divisions approximated by relative proportions. When more than one method is used, one result can serve as a check on the other. These methods should never be relied upon when more accurate ones can be used; approximations should always be identified on notes or drawings. Inaccessible spaces and rooms should be simply so noted.

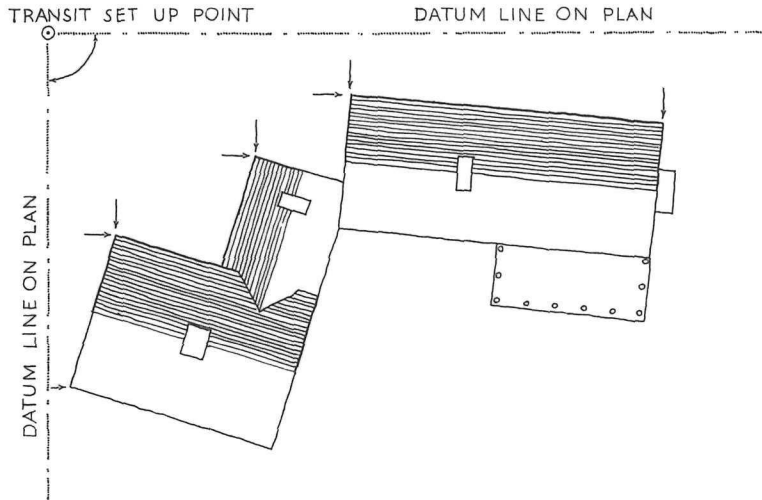
SURVEYOR'S LEVEL. This equipment is virtually indispensable in measuring structures whose walls are not at right angles, which are not level, or, in general, where irregularities are present. The operator familiar with the surveyor's level can obtain results of great accuracy. It consists essentially of a telescope mounted on a tripod which can be turned about a vertical axis (see illustration, p. 40). With it are used a steel tape graduated in feet and inches, and a carpenter's folding rule graduated in feet and inches on one side, and feet and tenths on the other. A leveling rod, preferably of the self-reading type, may be used instead of the folding rule. Some representative situations are indicated in the brief descriptions below and in the diagrams on page 40.

Relating levels inside and outside a building. Set up the level where one can sight through open doors or windows. While an assistant holds the end of the rule on desired points, successively, the operator reads the measurements through the telescope.

Use of a transit or surveyor's level for recording building elevations.



Use of a transit or surveyor's level for recording the angle or relationship of parts of an irregular building.



Buildings on sloping sites, without good horizontals, and buildings settled out of line. In these cases the horizontal plane of the surveyor's level makes a convenient reference level. While assistants hold a tape or rule vertically at the desired points, the operator can read (through the telescope) their height above or below this reference plane. Heights can also be read by the assistants and called out to the operator.

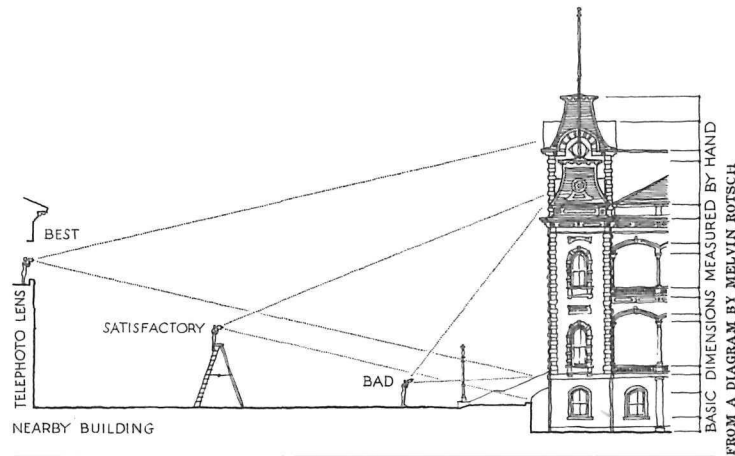
Irregularly shaped plans. Set up the instrument at a convenient point and mark a reference line along the floor, extending from the surveyor's level as far as possible. Other reference lines, perpendicular to it, at measured distances, can also be marked. From these, measurements may be made with a tape. Heights may also be obtained, in the manner described above.

Ruined foundations or archeological remains. From a conveniently chosen station point one can take angular bearings and measure horizontal distances with a tape to all desired points on the structure. Heights can also be read from a vertical rule or rod. If desired, the structure can be related to known reference points, by turning angles and measuring distances.

Site plans can be measured in the same way.

WITH PHOTOGRAPHS. This method is most appropriate for simple buildings of secondary importance, for those involving considerable repetition, such as a factory, and for decorative details of elaborate design, which can be drawn with exceptional facility from suitable photographs. It is not necessary to use this system in its entirety; it can (and usually should) supplement hand measurement of selected features, when these lie in or near a single plane. The planned use of work photographs can reduce the amount of time-consuming hand work without an inordinate sacrifice of accuracy. Plan measurements are taken by hand and recorded in the field notebook in the usual manner; a few basic heights (as: roof ridge, cornice line, window heads and sills, door heads, belt

Taking photographs to aid hand measurement.



Working photograph: Detail of a large element.



courses, water table, and grade lines) are measured by hand and others are scaled from the photographs.

The making of work photographs involves the use of a long range pole marked in 1-foot intervals and a shorter scale stick marked in feet and inches; a long broad cloth tape marked in 1-foot intervals which can be hung from the roof is also useful for complete elevations. When natural elevated station points cannot be used, photographs are taken from stepladders (14 foot or 16 foot for exterior use, 6 foot or 8 foot for interior use) from a height approximately halfway between the top and bottom of the building (or portion) being recorded. The range pole or tape is strategically placed to form a scale in the major plane being delineated. The camera is pointed to give a direct elevation view; if there are obstacles, a facade can be taken in sections.

The accuracy of this whole process depends upon keeping "perspective" to a minimum: avoiding distortions caused by tilting the camera, or the lesser distortion of vertical dimensions caused by a "rising front." This is why the camera must be placed high enough to be kept level when photographing the vertical walls of a building.

Dimensions may be taken from a print by using dividers to refer to the scale stick. If proportional dividers are used, they can be adjusted to give readings on an architect's scale; when photographs are enlarged to a convenient architectural scale, dimensions can be obtained directly.

Even simple snapshots are useful in counting brick courses, balusters, patterned units, and repetitive elements in general.

ARCHITECTURAL PHOTOGRAMMETRY. This is an excellent method of accurate measurement for all kinds of structures; the photographic records can be quickly made, and stored until it is convenient to make the drawings, if necessary. In the United States, photogrammetry has been employed sparingly for architectural purposes, perhaps because of cost, being chiefly restricted to buildings having

Working photograph: Detail of a small element.



At right, a small ornate building measured by architectural photogrammetry.

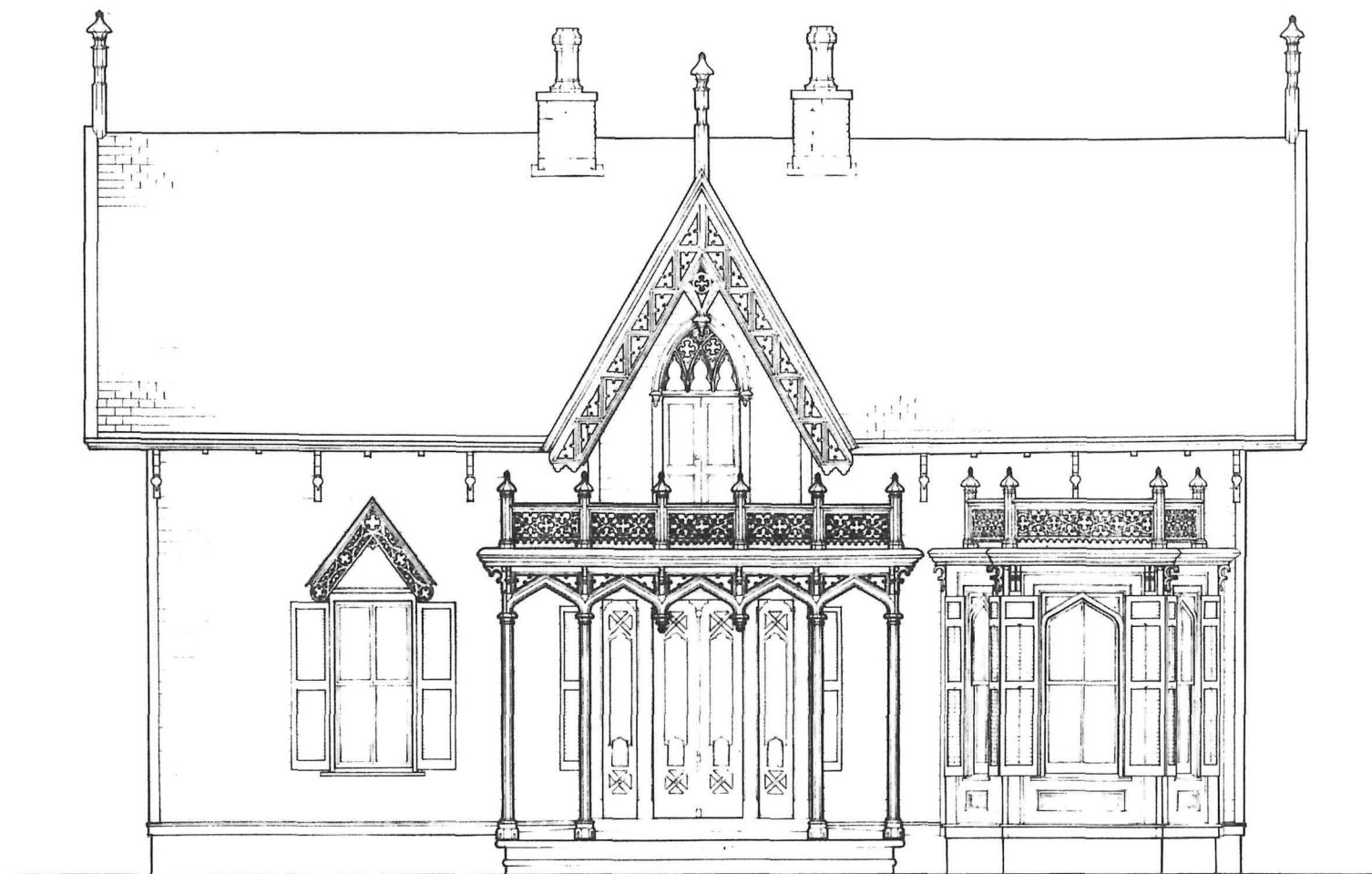
complex form or detail, those difficult of access or dangerous to measure by hand, and situations demanding a speedy recording. There are three ways in which photographs can be processed to yield measurements, as summarized below.

Stereophotogrammetry is the normal method used today. It employs two photographs taken at successive camera stations, normally with camera axes parallel, for creation of a three-dimensional projected or optical model which can be scaled or measured in all directions and, in such plotting machines as the Wild A 7 Autograph, drawn directly in orthographic projection. Photographic coverage determines the number of stereopairs required to record a building.

Stereopairs with bases parallel to the elevations of a building are convenient for the orthographic drawing of the elevations. Stereopairs on the diagonal of the building (with survey control in depth) provide the best orientation and the best determination of inaccessible dimensions on the building. A traverse may be surveyed around a building and white targets set to stakes as survey control for aerial photography to record concealed portions of the roof and for general site plan.

Single-picture measurement employs a precise instrument known as a rectifier to project a single photograph, with correction of the tilts, rotation, and obliquity of the camera to major planes. This allows measurement or direct drawing of detail such as mural painting and joints of essentially plane surfaces; it may also be done from old photographs and can be important in restoration work.

Analytical photogrammetry combines the measurement of two pictures taken from known camera positions, with geometric calculation of the major dimensions of the structure photographed. Though replaced by the more efficient methods of stereophotogrammetry in modern projects, the geometric procedures of analytical photogrammetry can be used for the reconstruction of damaged or vanished structures from a variety of photographic material.



SOUTH ELEVATION

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

MATERIALS -
 FOUNDATION - STONE
 COLUMNUS - WOOD
 TRUSSERY & SIDING - WOOD
 ROOF - ASPHALT SHINGLES

SCALE IN FEET
 SCALE IN METERS

DETL. CHAS W TUEBES 1938

Wells & Glavin ARCHITECTURE Project Supervisor
 THE OHIO STATE UNIVERSITY
 UNDER DIRECTION OF UNITED STATES DEPARTMENT OF THE INTERIOR
 NATIONAL PARK SERVICE, BRANCH OF PLANS AND DESIGN

NAME OF STRUCTURE
PETER NEFF COTTAGE (CA. 1890), KENYON COLLEGE - GAMBIER, OHIO
 THIS DRAWING PRODUCED BY THE PROCESS OF ARCHITECTURAL PHOTOGRAMMETRY FROM PHOTOGRAPHIC STEREOPAIRS TAKEN MAY, 1970

SURVEY NO.
 40
 40

HISTORIC AMERICAN
 BUILDINGS SURVEY
 SHEET 1 OF 1 SHEETS

COPYRIGHT OF DRAWING
 BLOCK NUMBER

At right, Grant's Monument was measured by architectural photogrammetry; it would have been difficult and hazardous to measure the upper portions by hand.

Architectural photogrammetry requires the services of an expert trained in both architecture and photogrammetry, with the proper equipment. Some publications describing its use are listed in BIBLIOGRAPHY.

[The above has been excerpted from an explanation of architectural photogrammetry prepared for HABS by Perry E. Borchers, Professor of Architecture and Research Supervisor, The Ohio State University. The Engineering Experiment Station of The Ohio State University, Columbus, Ohio, is one source for photogrammetric recording.]

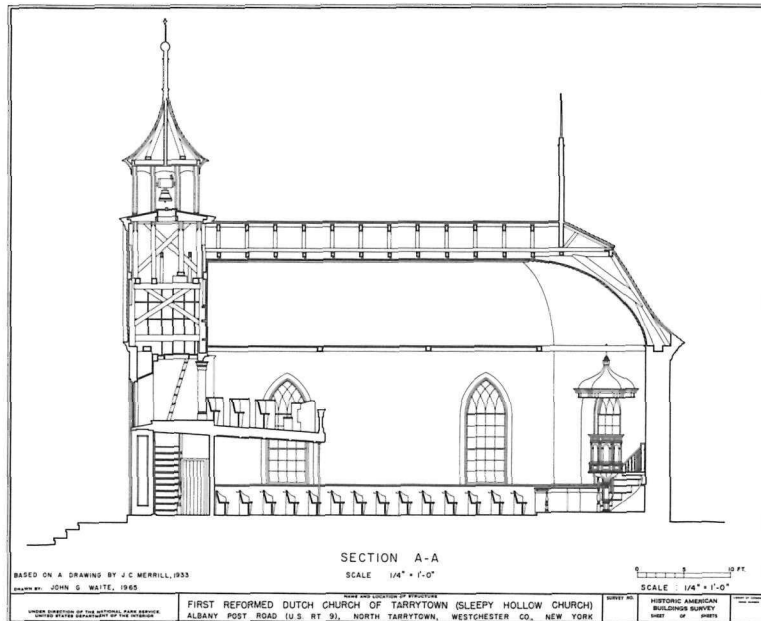
ADAPTATION OF DRAWINGS. If there are accurate drawings of a historic structure in existence, they can often be adapted for survey purposes, saving much of the labor which might have been expended in measuring it. Original architect's drawings, other old ones and more recent measured drawings in poor condition can be made into survey drawings by photography at full size, another scale, or on small sheet film. They may also be redrawn. Adaptation is of great value if the structure has been demolished or is otherwise unavailable for measurement.

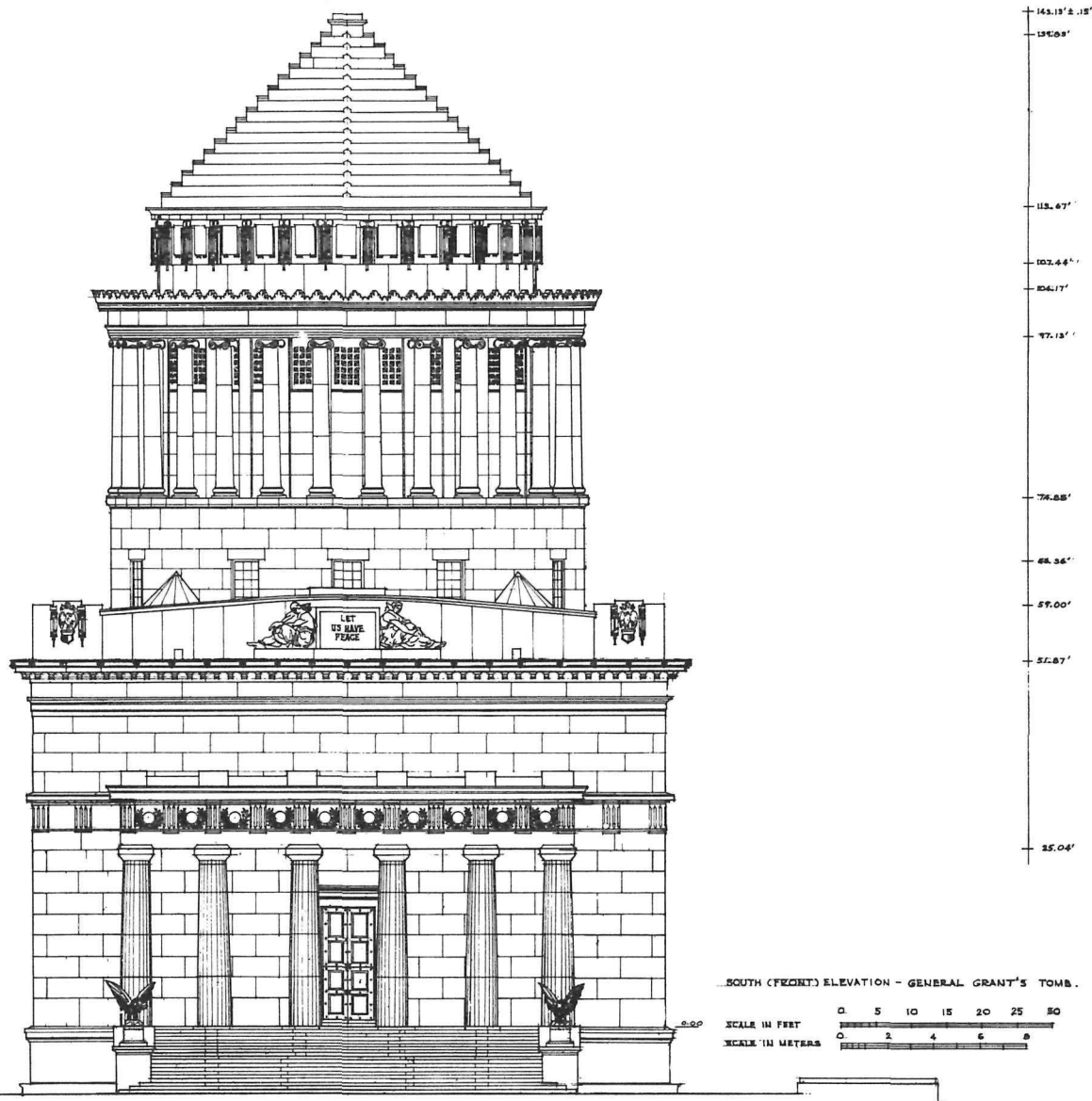
Depending on the nature and condition of the drawings which are available, there are several ways in which they may be handled:

Tracing is the traditional method. The whole original may be traced, or certain portions can be selected; the composition of the sheet can be modified as desired. A new drawing may be made at a different scale, selecting and modifying if necessary to obtain the desired result. If working from blueprints or photostats, one cannot take accurate scaled measurements because of shrinkage; only figured dimensions are to be trusted.

Photographic copying of drawings which are suitable for reproduction offers several possibilities. They may be copied at full size on sheet film and printed on plastic film, copied at a reduced scale (as a $\frac{1}{4}$ -inch scale drawing copied at $\frac{1}{8}$ -inch

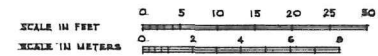
Redrawn from earlier partially completed drawings.





PHOTOGRAPHED MARCH 20-21, 1963 WITH
 CALLEO-SANTONI PHOTOGRAPHOLITE PROCESS
 PLOTTED ON WILD A-7 AUTOSKOPH AT THE
 OHIO STATE UNIVERSITY
 SUPERVISOR - PERRY E. BENCHERS
 RESEARCH ASSOCIATE - DELLAS H. HARDER
 WITH ALAN R. McDONALD, ROBERT L. DEBILKTS.
 DELINEATED BY - HENRY B. LAU

SOUTH (FRONT) ELEVATION - GENERAL GRANT'S TOMB.



PREPARED AT THE SCHOOL OF ARCHITECTURE & LANDSCAPE
 ARCHITECTURE, THE OHIO STATE UNIVERSITY, COLUMBUS, OHIO.
 UNDER DIRECTION OF UNITED STATES DEPARTMENT OF THE INTERIOR
 NATIONAL PARK SERVICE, BRANCH OF PLANS AND DESIGN

RIVERSIDE PARK

NAME OF STRUCTURE
GRANT'S TOMB - General Grant National Memorial

RIVERSIDE DRIVE AT 122ND STREET

NEW YORK

NEW YORK

SURVEY NO.
 NY-5429

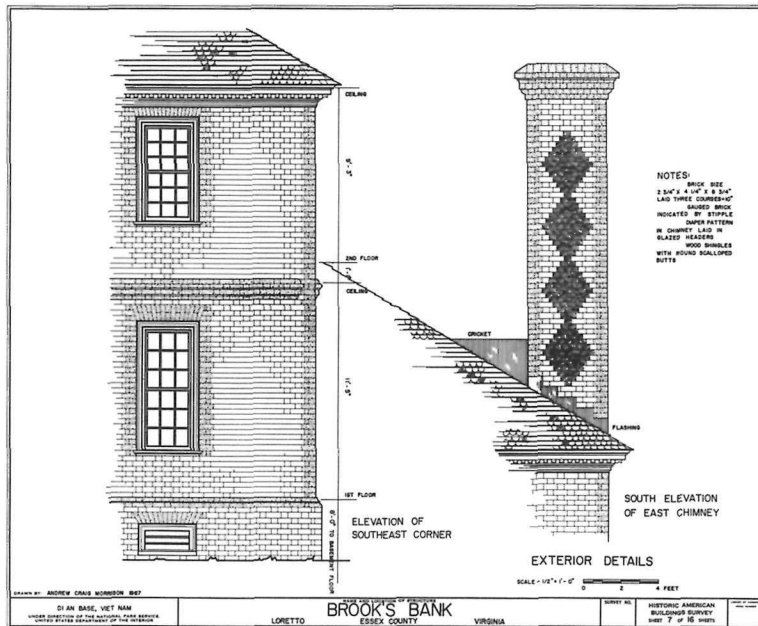
HISTORIC AMERICAN
 BUILDINGS SURVEY
 SHEET 3 OF 8 SHEETS

LIBRARY OF CONGRESS

At right, a general section drawn in pencil on tracing paper.

DRAFTING TECHNIQUES

Exterior details at intermediate scale, drawn in ink on a polyester base.



scale), or copied at a common size (negative 8" x 10", 5" x 7", 4" x 5"). They may be adapted by making a negative, masking out undesired features (as new construction) and then printing on plastic film. Another method of adapting is to cut up a full-size negative and reassemble the desired portions into a new composition.

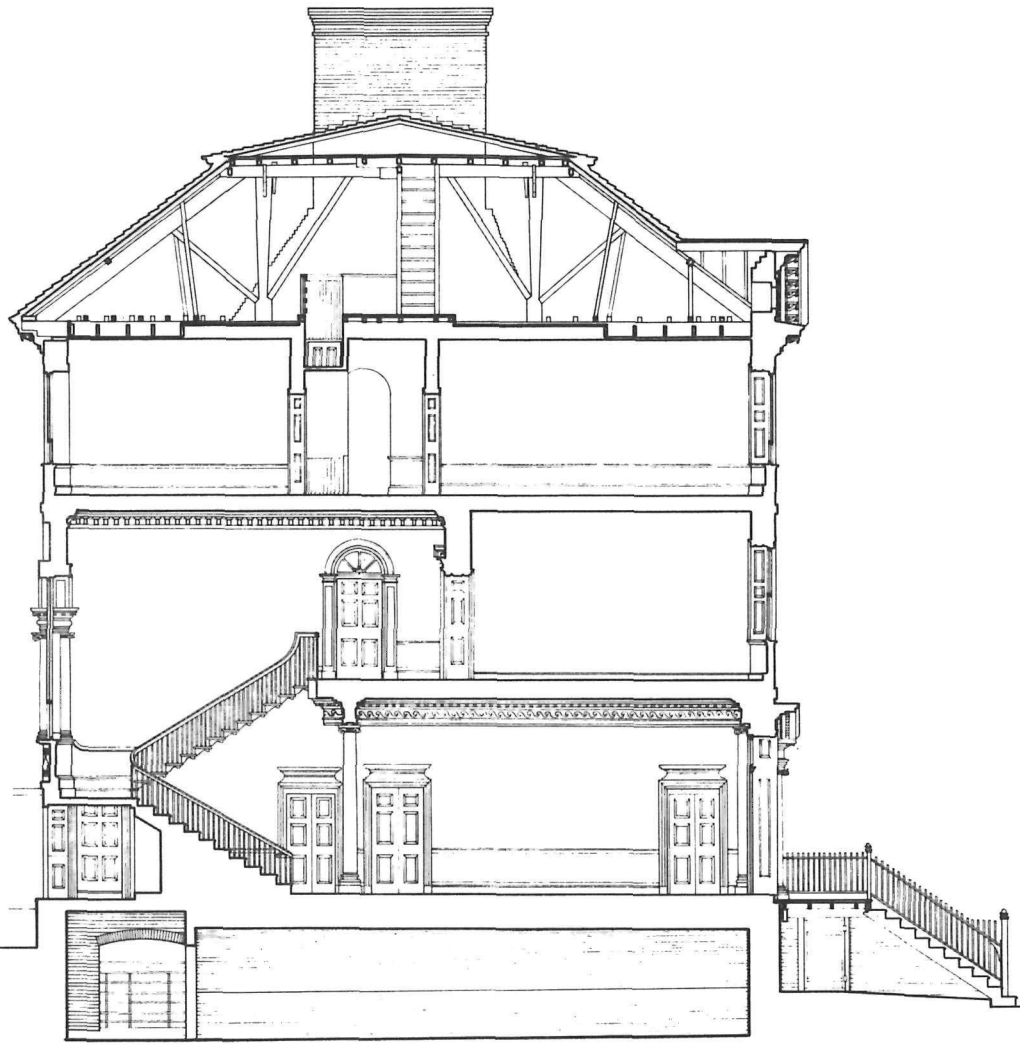
HABS SHEETS. Various bases are used for drawings. HABS drawings, being archival, should be done on quite durable materials. Tracing paper (such as Clearprint) should be used for pencil drawings; traditionally, paper of 100 percent rag content is used for drawing purposes. Polyester sheets (such as Mylar or Cronar) are the recommended base for ink drawings. For these a special type of ink is needed. They are 19" x 24" and have a printed border and trim lines; inside the border the size is 15 1/2" x 20". This standard HABS sheet is a convenient size to reduce for reproduction in books or periodicals.

NATURE OF SURVEY DRAWINGS. Measured drawings have much in common with architects' contract or "working" drawings but there are some important differences. Contract drawings are made to direct the construction of new buildings; their basic dimensions are given to points established at an early stage and covered up as construction proceeds. They define and allocate construction to be bid competitively, with the completeness and rigidity of a legal document.

Measured drawings start from an existing structure; measurements for them are taken between material lines or points on the surface. In elevation they tend to repeat elements and indication of materials more generously than do architects' contract drawings, giving a greater emphasis to pictorial quality. Architects' contract drawings are often crowded with a maximum of plans, details, and notes; for HABS purposes plenty of space is left around each drawing.

DRAFTING FOR REPRODUCTION. Drawing in outline is the usual HABS method of representing plans, elevations, general sections, and most details, although in certain cases

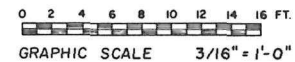
CHIMNEY
7'-2"
RIDGE
53'-11"
GRADE
6'-3"
FLOOR



RIDGE 15'-1"
CEILING 10'-5 1/2"
FLOOR 1'-2 1/2"
CEILING 11'-2 1/2"
FLOOR 1'-2 1/2"
13'-0"
FLOOR 6'-5"
GRADE 58'-7"

TRANSVERSE SECTION

SCALE 3/16" = 1'-0"



OMITTED:
MODERN NW PORCH

DRAWN BY: MARTIN J. BROCKSTEDT
HABS FIELD OFFICE
ANNAPOLIS, MD., PROJECT, 1964
UNDER DIRECTION OF THE NATIONAL PARK SERVICE,
UNITED STATES DEPARTMENT OF THE INTERIOR

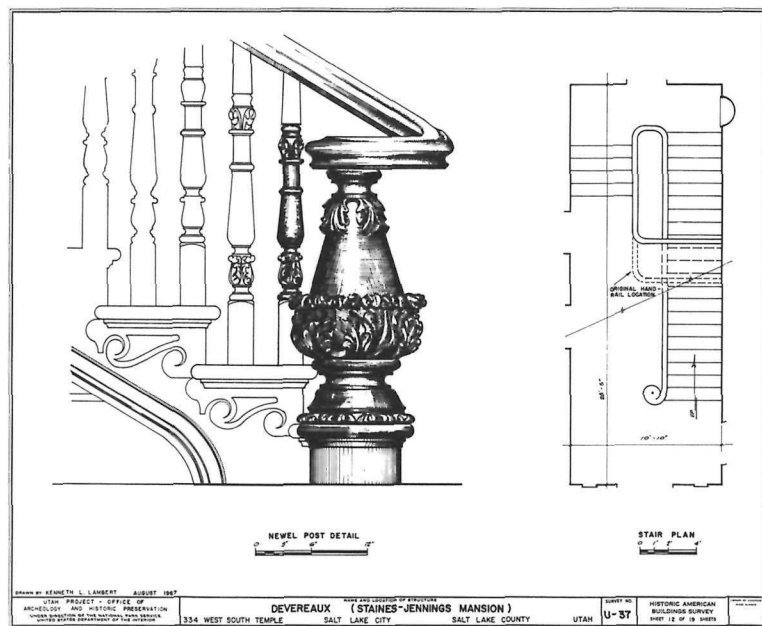
NAME AND LOCATION OF STRUCTURE
22 MARYLAND AVENUE, ANNAPOLIS, ANNE ARUNDEL COUNTY, MARYLAND.

SURVEY NO.
MD-243

HISTORIC AMERICAN
BUILDINGS SURVEY
SHEET 6 OF 7 SHEETS

LIBRARY OF CONGRESS
INDEX NUMBER

Roundness of newel post emphasized by "rendering." Drawn in ink.



At right, a pencil drawing.

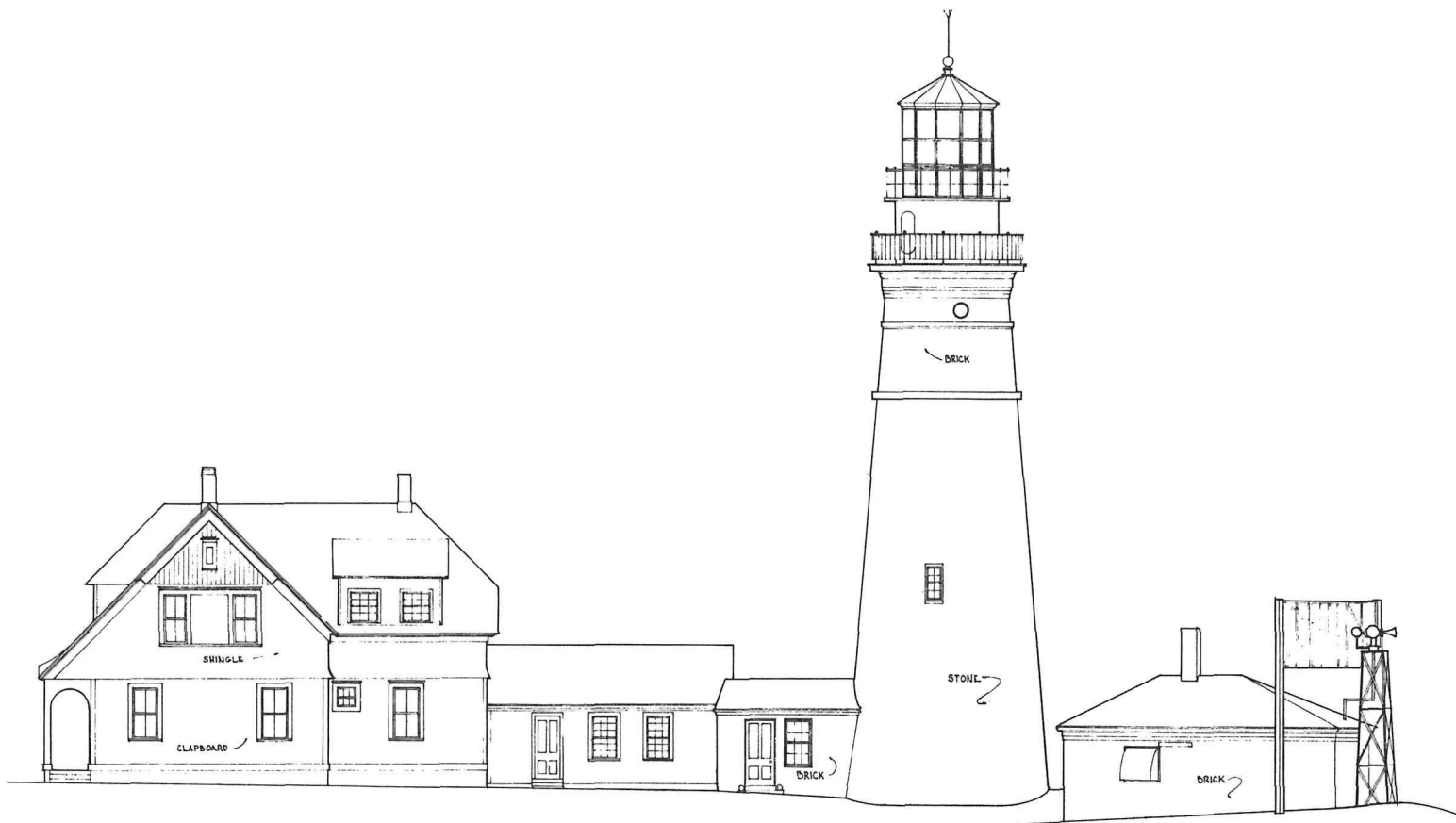
special details are "rendered," in line or stipple. The need for clarity when the drawing is reduced for publication must be kept in mind. Lines should be firm and uniform in tone, avoiding gradation; expression can be given with lines of different width. Parallel lines should be kept far enough apart to avoid "running together" when the drawing is reduced. The distinction between one line and another of slightly differing width may be lost in reproduction: either they will become coarser or one may be lost altogether.

Hand-lettered figures and words less than 1/10 inch high become too small to "read" well when drawings are reduced to half their size. HABS prefers to have the smallest letters and figures a minimum of 1/10 inch when made "by hand," and mechanically lettered notes and dimensions at least 8/100 inch.

PENCIL DRAWING. A finished pencil drawing on HABS Clearprint paper is photographed full size onto a "master negative," which is contact printed onto a sensitized polyester plastic sheet (such as Du Pont Cronar) to make a "master positive." Prints of HABS drawings obtained from the Library of Congress are made from this positive without the necessity of handling the original pencil drawing, which is kept for future re-photography. Some draftsmen prefer to use special pencils directly on plastic sheets.

To make a pencil drawing which will reproduce well on the master positive, where it closely resembles an ink drawing, several points have to be kept in mind. Lines should be definite, crisp and clean; "fuzzy" lines will look ragged and may make a heavy black smear if they are close to other lines. Graphite smudges and poor erasures sometimes show up on the master positive.

Lead about one grade harder than when drawing for black-line or ozalid reproduction should be used; "fading" or grading of lines is to be avoided. If possible, each draftsman should examine and compare an original pencil drawing and a print made from the master positive.



SOUTH-EAST ELEVATION

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

DRAWN BY: DAVIS L. JAHNCKE JR., DEL., 1965

PORTLAND U.S. FIELD OFFICE
H.A.B.S. MAINE SURVEY NO. 3
UNDER DIRECTION OF THE NATIONAL PARK SERVICE,
UNITED STATES DEPARTMENT OF THE INTERIOR

CAPE ELIZABETH

NAME AND LOCATION OF STRUCTURE
PORTLAND HEAD LIGHT
CUMBERLAND COUNTY

MAINE

SURVEY NO.
ME-123

HISTORIC AMERICAN
BUILDINGS SURVEY
SHEET 3 OF 3 SHEETS

LIBRARY OF CONGRESS
PHOTO NUMBER

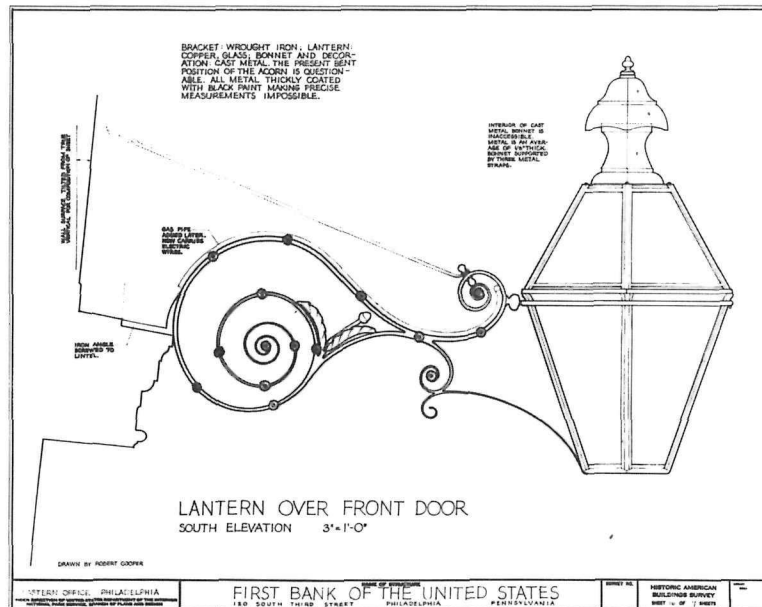
1/8" = 1'-0" 0 5 10 15

At right, a major interior feature drawn with acetate ink on a polyester sheet.

INK DRAWING. Most HABS drawings currently are made with acetate ink on polyester sheets; drawings so made are durable and prints are made from the original without the necessity for preparing a master positive. When drawing in ink, one should attempt to be as precise as an engraver. The draftsman can see the exact effect of his drawing at any time. Those accustomed to the use of a ruling pen can vary the width of line at will to achieve either strong or delicate effects.

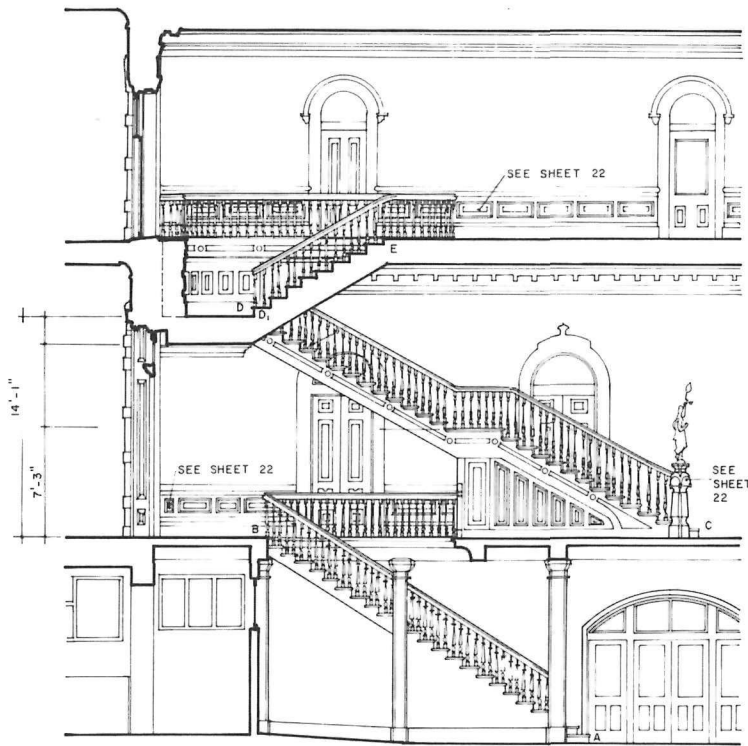
When “mechanical” pens such as a rapidograph are used, enough different sizes must be at hand to obtain all of the widths of line that will be needed; effects of great delicacy are rarely achieved with these pens but they have the advantage of harmonizing with mechanical lettering devices (such as LeRoy), which are generally used on ink drawings to obtain uniform titles and notations. Freehand ink lines demand great skill and control by the draftsman.

Drawn in pencil. This detail of a lantern and its supporting bracket was made one-fourth actual size. No dimensions were given because at this scale accurate measurements can be taken from the drawing. Notes describe the materials.



GRAPHIC QUALITY. The apparent weight of a line, whether the print is made from a master positive or directly from an ink drawing, will vary only with its width. Silhouettes of elevations, cut outlines in a section and large-scale details are made heavy for accent. Outlines of openings should be moderately heavy, while joints in materials and dimension lines should be lighter (narrower) than lines used for normal representation. Close silhouettes can be heavier than more distant ones, to give the illusion of depth. Sometimes one accents the “shadow side” corner lines. These are conventional tricks known to most draftsmen, but when they are done by one who really knows how, they can be very effective.

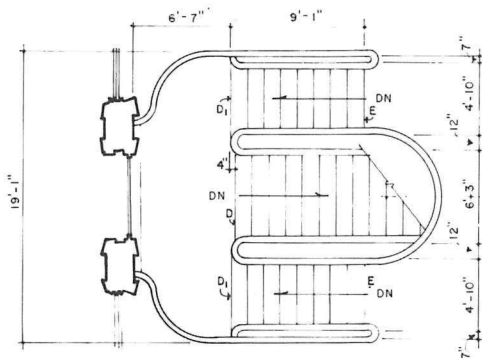
INDICATING BUILDING MATERIALS. Normally building materials are indicated on plan drawings, on elevations, and where seen in elevation on section drawings, but for survey purposes when the indication becomes too intrusive it can be omitted from the drawings, or shown only on a portion of the drawings (but must be described elsewhere in the records). When shown on elevations, materials should be drawn to scale. This indication need not cover the entire surface but



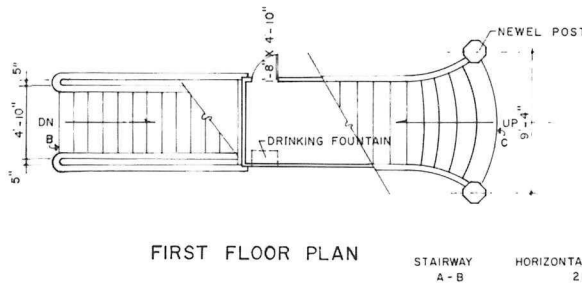
CROSS SECTION FACING PUNCHBOWL STREET



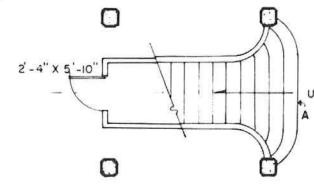
CROSS SECTION FACING HOTEL STREET



SECOND FLOOR PLAN

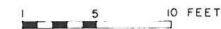


FIRST FLOOR PLAN



BASEMENT PLAN

STAIRWAY	HORIZONTAL DISTANCE
A - B	21' - 8"
C - D	30' - 2"
D ₁ - E	9' - 1"



CENTRAL STAIRWAY

DRAWN BY: JOHN SPANGENBERG
 WESTERN OFFICE - NATIONAL PARK SERVICE AND
 DEPT. OF ACCT. & GEN. SERV., STATE OF HAWAII
 UNDER DIRECTION OF THE NATIONAL PARK SERVICE,
 UNITED STATES DEPARTMENT OF THE INTERIOR

HONOLULU

NAME AND LOCATION OF STRUCTURE
IOLANI PALACE
 CITY AND COUNTY OF HONOLULU

HAWAII

SURVEY NO.
HA-1

HISTORIC AMERICAN
 BUILDINGS SURVEY
 SHEET 21 OF 22 SHEETS

enough should be included to establish its character and to look well on the sheet.

When roofs or oblique planes “foreshorten” materials, it is better to omit them than to darken the area by running the lines close together. Only materials which have been observed should be drawn—spaces of unknown construction should be left blank.

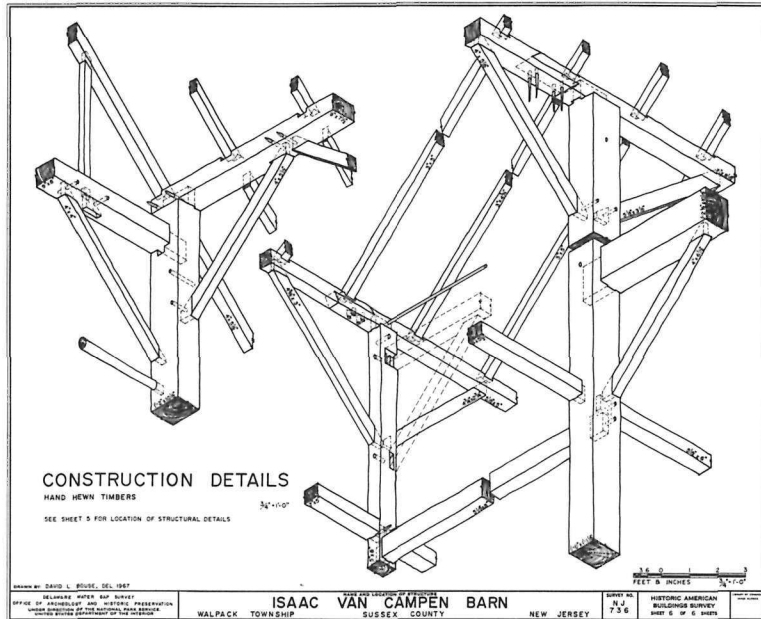
When using symbols for building materials, a standard reference book should be consulted (as *Dictionary of Architectural Abbreviations, Signs and Symbols*; see BIBLIOGRAPHY).

DIMENSIONING. While drawings for restoration use should be fully dimensioned, those for general survey or illustrative purposes may show few dimensions. On plans, window and door openings should be dimensioned to convenient real points (not conventional centerlines); similarly, walls and partitions should be dimensioned to the finished face. Posts or columns are usually dimensioned to the centerline when small, but larger ones should be dimensioned to the face. The overall size of a room or other major element should always be given when a string of smaller dimensions is placed between terminal points.

When general dimensions are placed on drawings intended for illustration, they should be kept far enough out to allow their being cropped off in the reproduction. Approximate or computed dimensions should always be distinguished from actual measurements by adding “plus-or-minus” symbols to the figures.

NOTES ON DRAWINGS. On survey drawings, notes should be included only when necessary to relate a fact that cannot be made clear elsewhere in the records (as physical evidence of original construction, now removed). When used, notes should be placed at the side of the building rather than on it, and referred to the appropriate location by numbers, arrows, or symbols, giving a key to explain the symbols if necessary.

Structural details drawn in acetate ink on polyester.



TITLES. Each drawing sheet should contain the name of the structure and each drawing on a sheet should be given its appropriate title and statement of its scale. Elevation drawings should be designated by compass directions (as North Elevation, Southeast Elevation) or by name and compass direction (as East Front Elevation). Each sheet should be numbered and the total number of sheets in the set noted. Each sheet should contain the name of the delineator(s) and the date (year); if it has been re-drawn, both the original and the later delineator should be credited. The name of the organization making or sponsoring the drawings, the address of the structure, and the survey identification number are also needed. (HABS numbers are assigned by the Historic American Buildings Survey, Office of Archeology and Historic Preservation, National Park Service, Washington, D.C.)

GRAPHIC SCALES. Each drawing sheet should contain a graphic scale (in feet and inches) corresponding to each scale appearing on the sheet.

NORTH ARROW. A directional north arrow or compass should be placed on every sheet which contains a map or a plan.

OMISSION OF ADDED OR ALTERED FEATURES. Survey drawings are made to record conditions at the time of measurement and normally, therefore, show the whole of the structure. Sometimes an addition (as a store display window on the front of a house) distorts the historical character of the subject or covers up important historical features. In these cases it is best to omit the offending addition and explain the fact in a note, or to draw it lightly in outline.

CONJECTURAL RESTORATIONS. At times there is sufficient physical evidence to establish the original appearance or plan of a building which has been remodeled or enlarged. HABS occasionally includes a restored elevation or a restored plan in a set of measured drawings, or shows the evolution of a building by a series of conjecturally restored drawings.

RESTORED PARTS ON MEASURED DRAWINGS. When parts of a building which were important to its character, have been removed, it is desirable to draw them if there is enough physical evidence to do so with absolute assurance. It should always be clear on the drawing which parts are still in existence and which have been removed; the evidence should likewise be noted. The principles of indication which apply to this case are: a. Existing portions are drawn with solid lines. b. Nonexistent portions, including restored parts, are drawn with dotted lines.

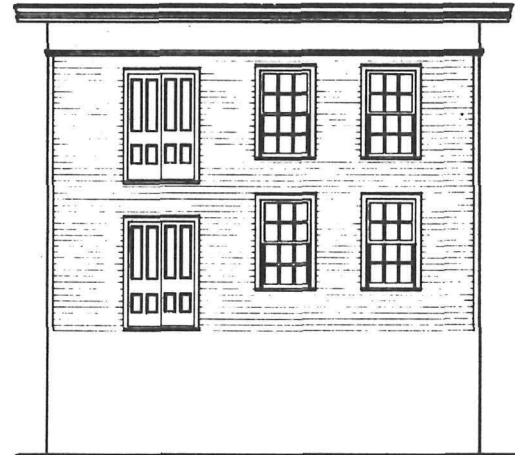
EMPHASIS ON HISTORICAL FEATURES. In a drawing, greater or lesser emphasis can be given by contrast and "weight" of line. Often used to suggest the third dimension, this device is also effective in distinguishing between different portions of a structure according to their historical value or interest. Those having the greatest interest are usually drawn with heavier lines (either solid or dotted, as the case may be). Recent additions, especially those of an intrusive nature, are drawn lightly to minimize their importance in an otherwise historical structure. Similarly, a building dating from several historical periods can be drawn to make these relationships evident at a glance.

ILLUSTRATIONS OF HABS MEASURED DRAWINGS. The HABS drawings reproduced throughout this book have been chosen to illustrate many principles of recording historic architecture. The comments alongside the drawings summarize the circumstances under which they were made, to assist the reader in his observation of the way in which principles have been applied.

The original facade of this early waterpower mill had been covered by an addition, but its upper portion was intact and could be measured. Drawn in pencil.



EXISTING WEST ELEVATION
SCALE: 3/16"=1'-0"



PARTIAL ORIGINAL WEST ELEVATION
RESTORED FROM PHYSICAL EVIDENCE.
SCALE: 3/16"=1'-0"

0 5 10 15 FEET
GRAPHIC SCALE: 3/16"

DRAWN BY: MARCUS TRUMBO

CENTRAL MICHIGAN PROJECT, 1965
EAST LANSING FIELD OFFICE
UNDER DIRECTION OF THE NATIONAL PARK SERVICE,
UNITED STATES DEPARTMENT OF THE INTERIOR

NAME AND LOCATION OF STRUCTURE

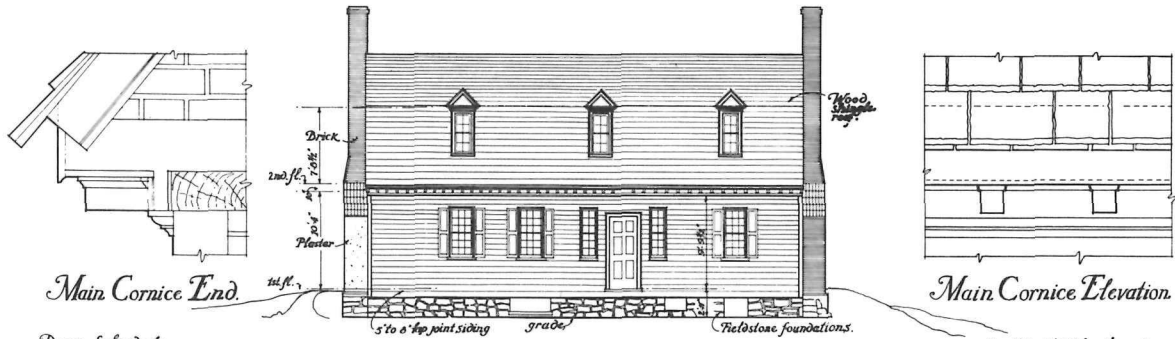
HORNER'S ORIGINAL MILL
CANAL STREET AND NORTH MAIN STREET, EATON RAPIDS, EATON COUNTY, MICHIGAN

SURVEY NO.
MICH-
226

HISTORIC AMERICAN
BUILDINGS SURVEY
SHEET 4 OF 8 SHEETS

UNIVERSITY OF MICHIGAN
ARCHIVE CENTER

A single sheet which presents the most basic information about a building.
For some purposes this might suffice.

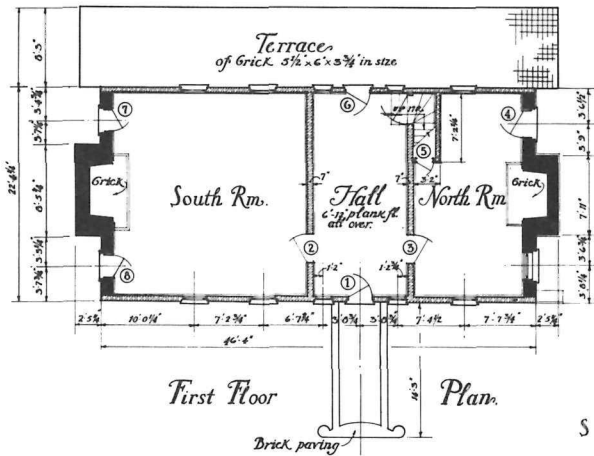


Door Schedule

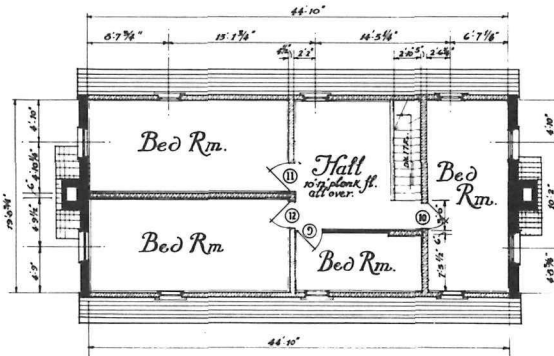
No.	Size.	Pans.
1	3'0 1/2" x 7'5 1/2" x 1 3/4"	6
2	2'10" x 6'0" x 1"	6
3	2'9 1/4" x 6'0" x 1"	6
4	5'1" x 6'4" x 1 1/4"	6

East Elevation

5	2'6" x 5'0 3/4" x 1"	2
6	3'0 1/4" x 1 1/4"	6
7	7'0" x 6'5" x 1"	6
8	2'10" x 6'5" x 1"	6
9	2'9 1/4" x 6'5" x 1"	4
10	2'10 1/4" x 6'5 1/2" x 1"	4



First Floor Plan.

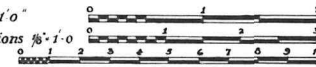


Second Floor Plan.

Wofsey Chase
John W. Stenhouse Dels. &c.



Scale for Details 1 1/2" = 1'-0"
Scale for Plans & Elevations 1/8" = 1'-0"
Metric Scale



U.S. DEPARTMENT OF THE INTERIOR
OFFICE OF NATIONAL PARKS, BUILDINGS, AND RESERVATIONS
BRANCH OF PLANS AND DESIGN

Prince George Co.

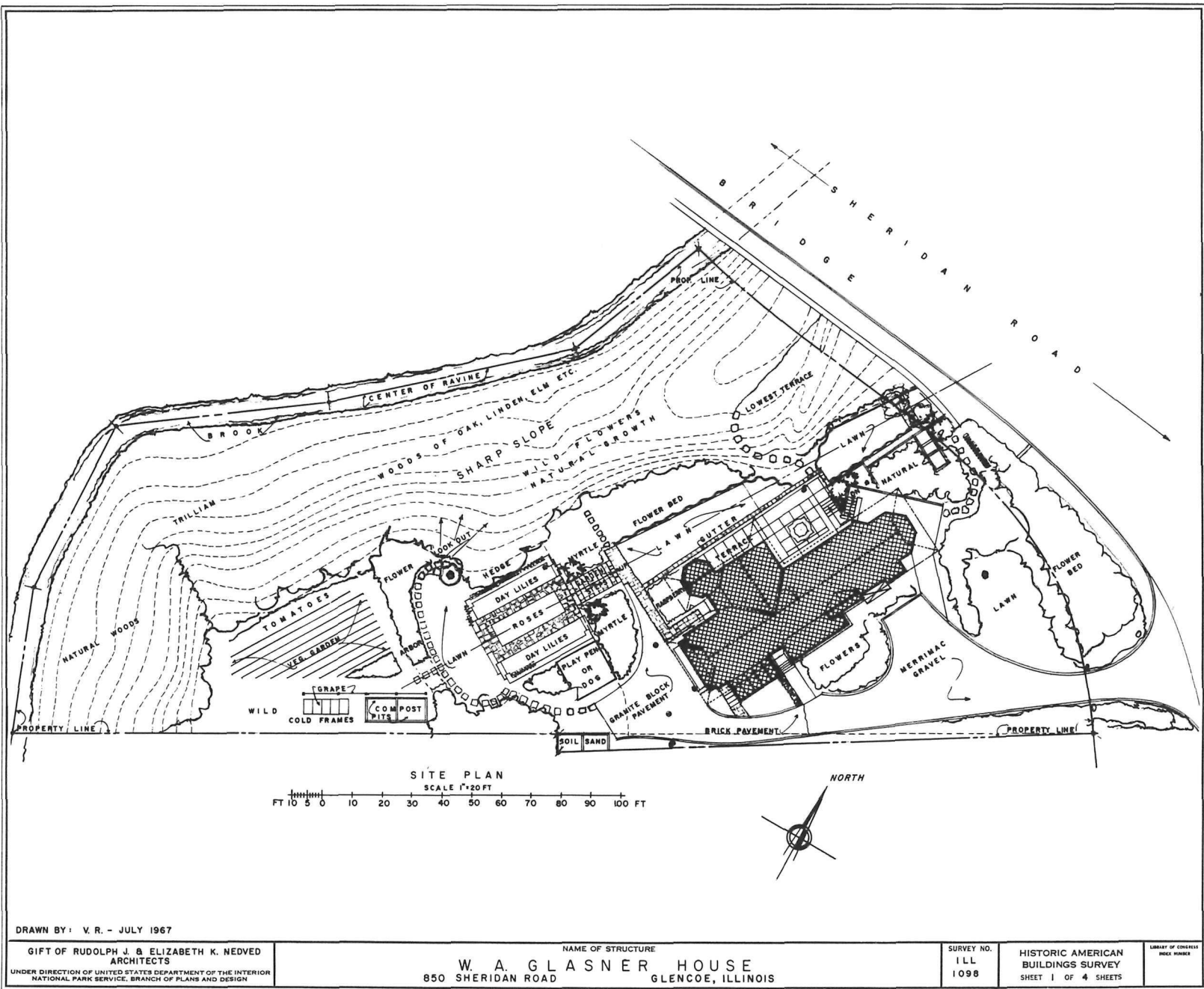
NAME OF STRUCTURE
The LYLES HOUSE

Maryland.

SURVEY NO.
10-7

HISTORIC AMERICAN
BUILDINGS SURVEY
SHEET 1 OF 5 SHEETS

INDEX NO.



DRAWN BY: V. R. - JULY 1967

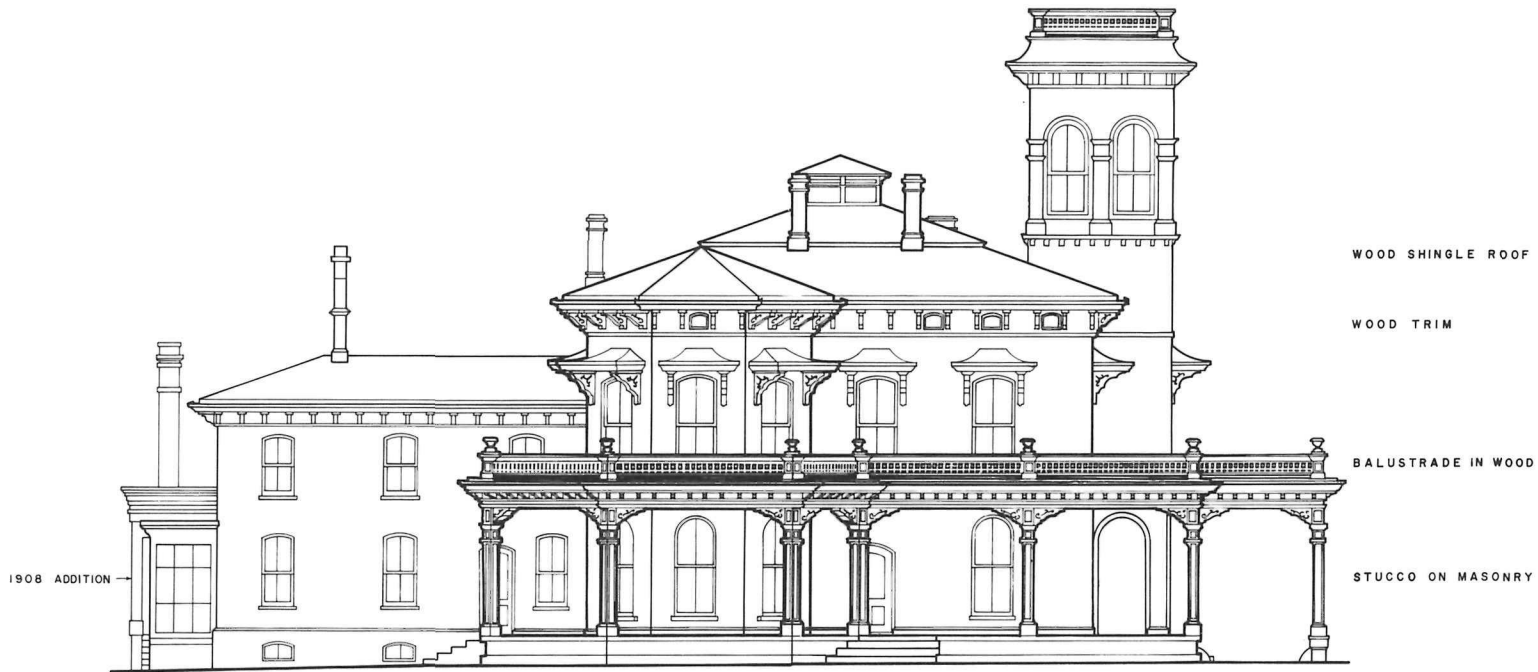
GIFT OF RUDOLPH J. & ELIZABETH K. NEDVED
ARCHITECTS
UNDER DIRECTION OF UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE, BRANCH OF PLANS AND DESIGN

NAME OF STRUCTURE
W. A. GLASNER HOUSE
850 SHERIDAN ROAD
GLENCOE, ILLINOIS

SURVEY NO.
ILL
1098

HISTORIC AMERICAN
BUILDINGS SURVEY
SHEET 1 OF 4 SHEETS

LIBRARY OF CONGRESS
INDEX NUMBER



SOUTHEAST ELEVATION

SCALE 0 ————— 24 FEET
 METRIC 0 ————— 7 CENT.

DRAWN BY: HOWARD SPECTOR

WESTERN OFFICE
 NATIONAL PARK SERVICE
 UNDER DIRECTION OF THE NATIONAL PARK SERVICE,
 UNITED STATES DEPARTMENT OF THE INTERIOR

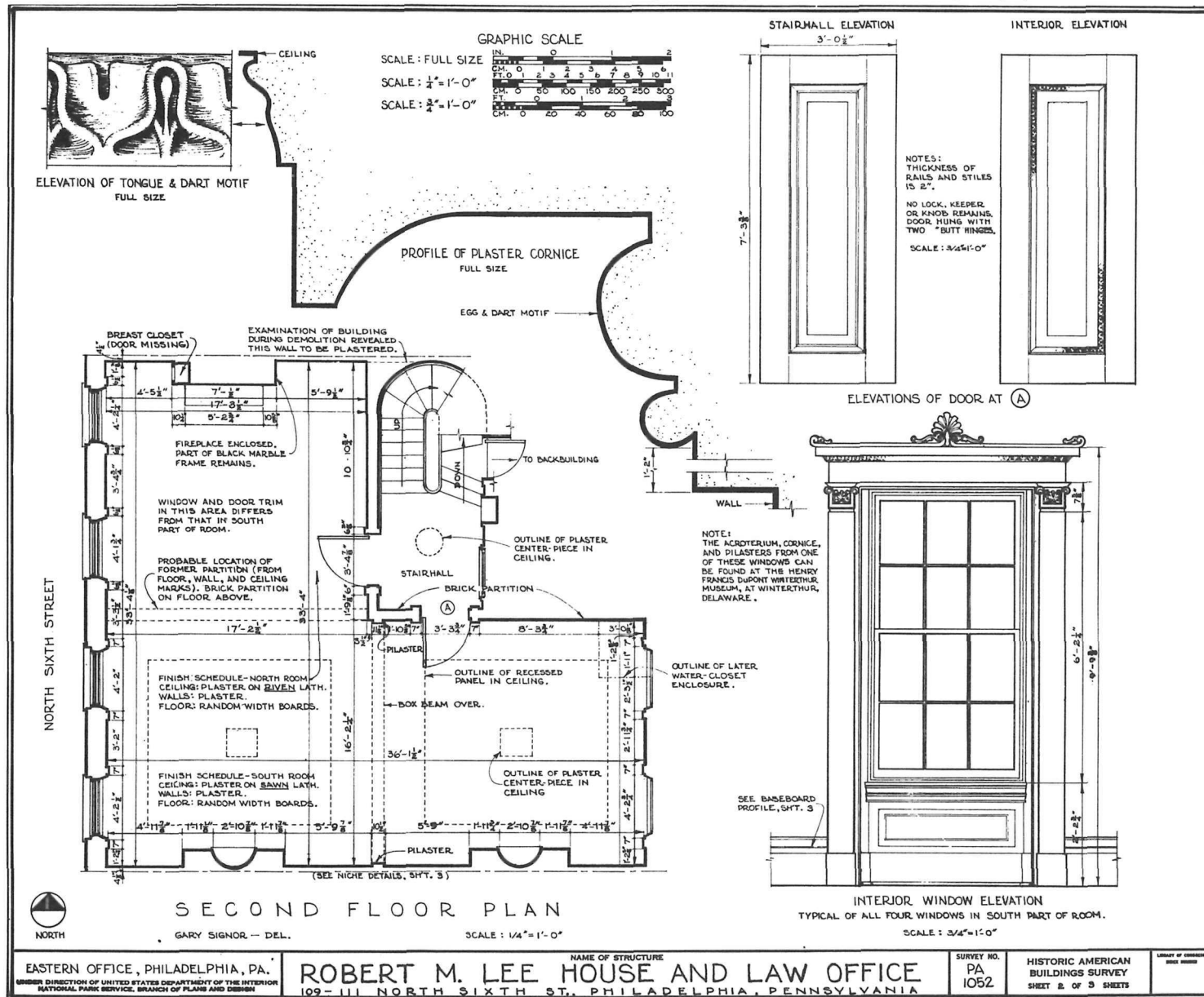
NAME AND LOCATION OF STRUCTURE
BIDWELL MANSION
 RANCHO CHICO, BUTTE COUNTY, CALIFORNIA

SURVEY NO.
 CAL.
 1317

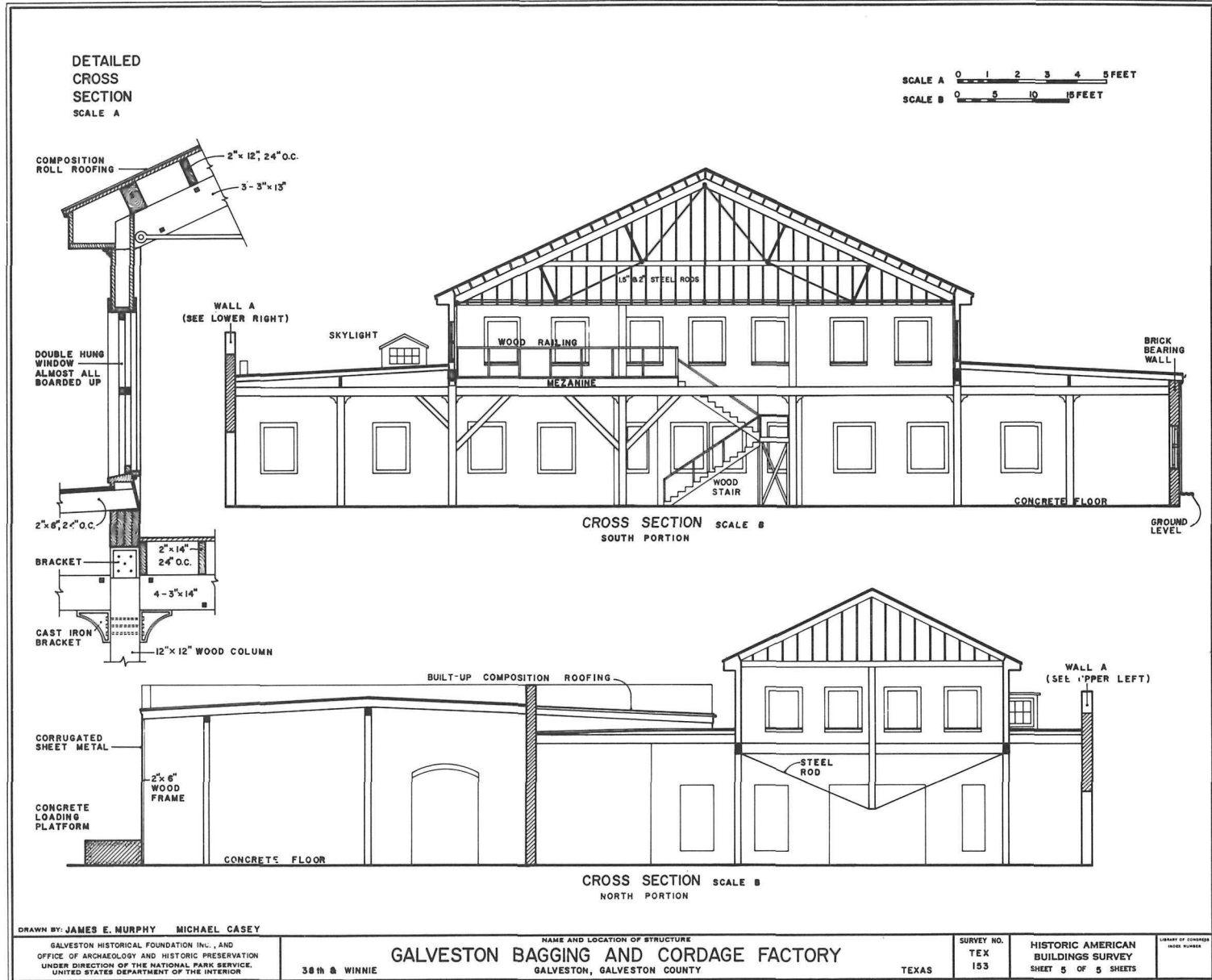
HISTORIC AMERICAN
 BUILDINGS SURVEY
 SHEET 6 OF 10 SHEETS

LIBRARY OF CONGRESS
 PHOTODUPLICATION SERVICE

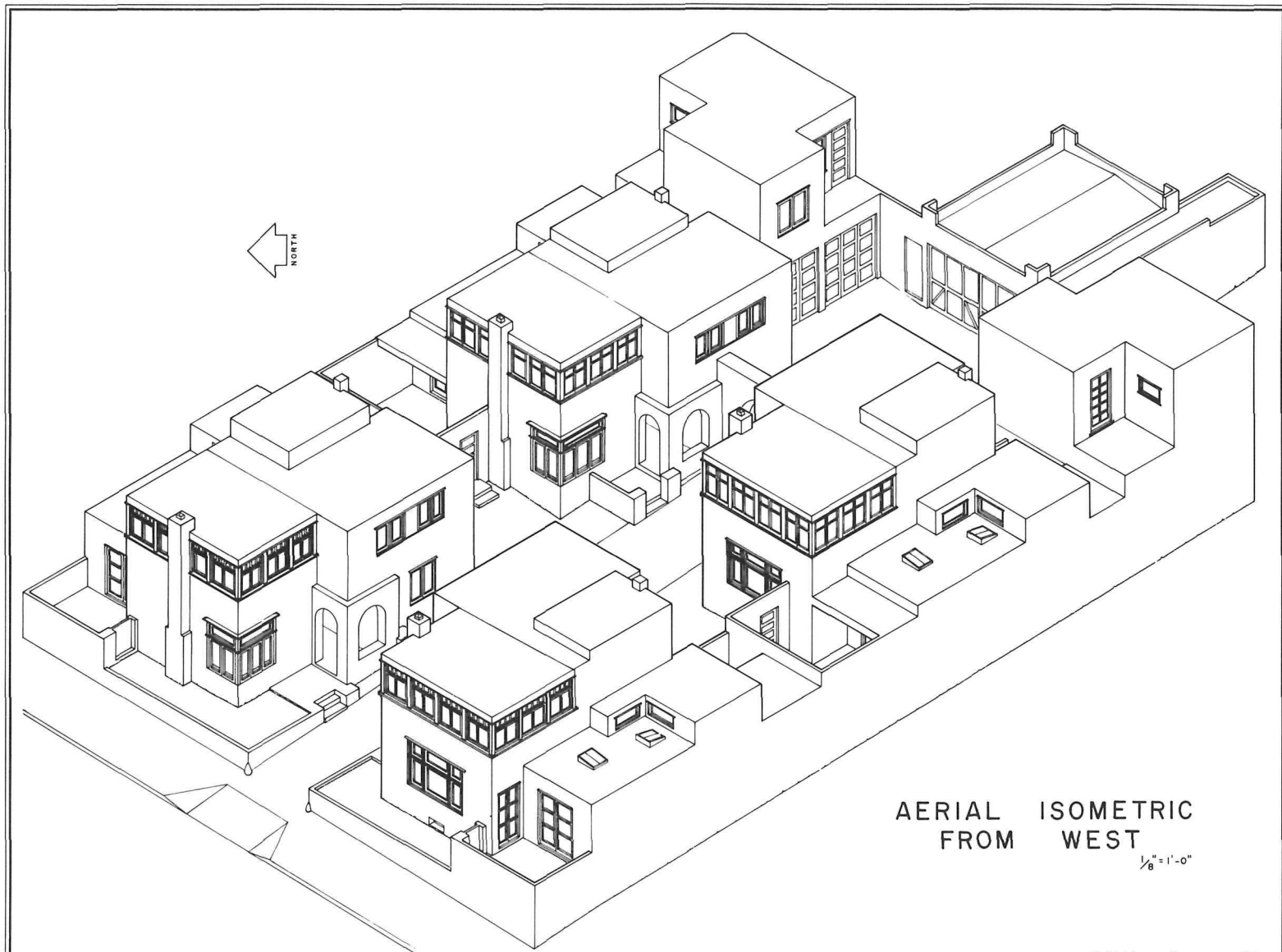
This building, measured just prior to demolition, contained a second-floor room of great interest, unique in character for the region. The whole set consists of three sheets devoted to the most interesting parts; the building was not recorded in its entirety. A number of informative notes were placed on the drawings and the facade was recorded in a photograph.



*Jute bagging was made in this 1888 factory, the only one of its type in Texas.
 Drawn in ink.*



An aerial isometric drawing gives one a clear image of this ensemble of apartment buildings.



AERIAL ISOMETRIC
FROM WEST

$\frac{1}{8}'' = 1'-0''$



DRAWN BY: ROBERT C. GIEBNER, DEL. 1968

SOUTHERN CALIFORNIA PROJECT
OFFICE OF ARCHEOLOGY & HISTORIC PRESERVATION
UNDER DIRECTION OF THE NATIONAL PARK SERVICE,
UNITED STATES DEPARTMENT OF THE INTERIOR

NAME AND LOCATION OF STRUCTURE

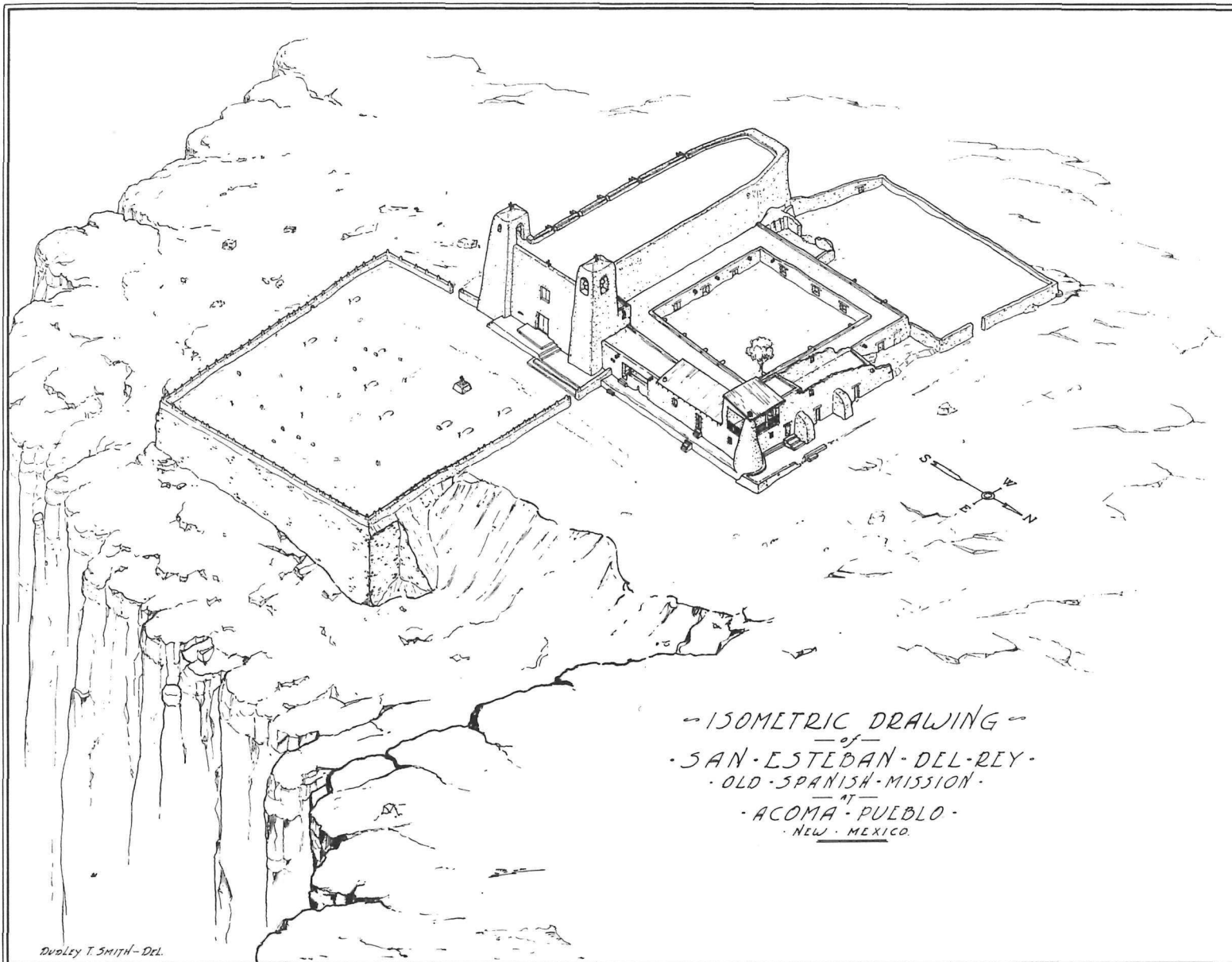
THE HORATIO WEST COURT APARTMENTS
140 HOLLISTER STREET SANTA MONICA LOS ANGELES COUNTY CALIFORNIA

SURVEY NO.
CAL
1930

HISTORIC AMERICAN
BUILDINGS SURVEY
SHEET 2 OF 11 SHEETS

LIBRARY OF CONGRESS
INDEX NUMBER

On this sheet an aerial isometric drawing indicates the relationship of an architectural group to a highly dramatic setting.



- ISOMETRIC DRAWING -
 of
 · SAN · ESTEBAN · DEL · REY ·
 · OLD · SPANISH · MISSION ·
 AT
 · ACOMA · PUEBLO ·
 · NEW · MEXICO ·

Dupley T. Smith - Del.

U.S. DEPARTMENT OF THE INTERIOR OFFICE OF NATIONAL PARKS, BUILDINGS, AND RESERVATIONS BRANCH OF PLANS AND DESIGN	NAME OF STRUCTURE · SAN · ESTEBAN · DEL · REY · MISSION · · OLD · ACOMA · PUEBLO · VALENCIA · COUNTY · NEW · MEXICO ·	SURVEY NO. 56NM5 APR. 12, 1934	HISTORIC AMERICAN BUILDINGS SURVEY SHEET 1 OF 32 SHEETS	INDEX NO. N. M. 31-Acomp 2
--	---	--------------------------------------	---	-------------------------------------



JACK E. BOUCHER

PHOTOGRAPHS AND GRAPHIC MATERIAL

GENERAL

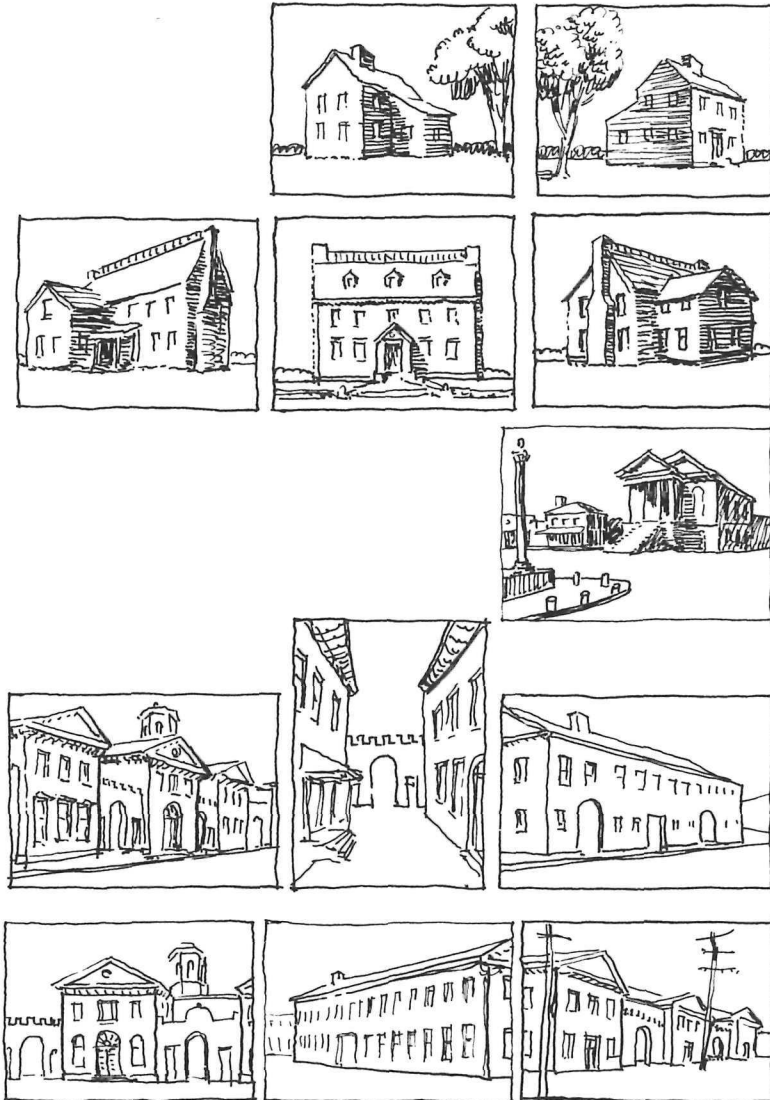
New photographs, and graphic material which can be copied photographically, take an important place in recording historic architecture and other specialized structures of interest to HABS. Photography is a way of seeing which is particularly characteristic of the present era, by which the visual appearance of something is expressed in a sensitive and incisive manner. A photograph provides convincing evidence of form and character by showing variations in texture, tone and weathering of materials, intricate details, and the actual appearance of a structure in its environment. It includes everything within its scope: that which may interest posterity as well as that which seems significant to today's observer.

A photograph necessarily records conditions at the time it is taken, and can often give a strong sense of that particular time. Earlier photographs which can be dated, even approximately, contain evidence of a former state, helpful in establishing the physical history of a structure. Old photographs and other representations of a structure as it was in earlier states should be copied whenever possible, in addition to the taking of new ones. If not photocopied, they should be noted and their location given.

Photographs depict visual appearance in a way which written description, however good, cannot. They can be made quickly when necessary, as when a structure is to be demolished or is only temporarily available for study. Photographs cost much less than measured drawings, often doing things which drawings accomplish only with considerable labor. Records can be made with either but they can be done better by combining

George and John Barber Store, Annapolis, Md. This view places the subject building in its setting and demonstrates its importance to the continuity of the waterfront.

PROPER PHOTOGRAPHIC RECORDING



the two. The importance of having a good professional photographer cannot be overstated. Prints may be made from the original negative at any time.

SELECTION. The number of photographs to be taken of a structure will be proportionate to its complexity, interest, and importance. Analysis of these factors will enable one to estimate what views are necessary for a minimum record when resources are limited, and for the optimum record under better circumstances. For purposes of analysis it is advisable to divide the study of a building into five parts: exterior general views, interior general views, exterior details, interior details, and unusual or special features.

To record all sides of a building, at least two photographs are required; when the main front is interesting enough to call for an "elevation" (i.e., directly from the front), at least three general views are needed to show all sides.

The rear of a building may not be attractive but it is part of the whole and should not arbitrarily be excluded from the record. It is often desirable to show the building in its setting; this may sometimes require an additional photograph but one of the normal exterior views can often accomplish the purpose, if the building can be made a little smaller than usual in the composition without sacrificing essential details.

Large complex buildings require additional general exterior photographs, especially when there are several wings and when there are courts.

Obstructions may also necessitate additional exterior photographs (as a structure or a tree which prevents showing the entire facade in direct elevation).

The interior of a simple building, such as a house, may not contain features of great interest but it is advisable to take at least one photograph of a typical room to give an indication of its character; a stair hall or a living room may serve this purpose. The major emphasis of an architectural survey



being on the interior *architecture*, one should obtain views which illustrate the permanent elements of a room, as distinguished from its furnishings. If furniture obscures significant architectural elements or is obtrusively inharmonious it is best to move it out of the way, after obtaining the owner's permission and judging that it *can* safely be moved. Sometimes furnishings contribute importantly to the architectural character and should, of course, be included in the picture, moving them only to improve the composition.

The number of general interior photographs will depend on the interior design. A single room may sometimes be adequately covered by one view which shows most of two walls, or an end wall with part of the two adjoining sides. Two photographs are required, however, when opposite walls are to be featured. In exceptional cases a single view may show significant portions of more than one room.

It is customary to record rooms which contain the most developed architectural features and those which illustrate some specialized function (as a kitchen), but when taking several general photographs of an interior it is also well to include at least one of the typical unpretentious rooms, to illustrate the whole gamut of interior character.

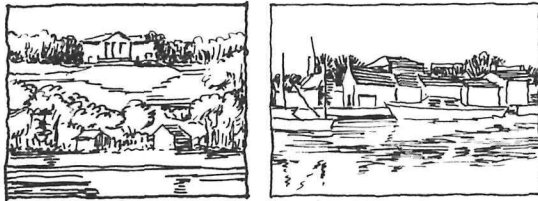
The auditorium of a small townhall, meetinghouse, church, or theater will usually require two general views, to show both ends and at least a portion of the sides. As a rule, the vestibule and a stair can be included in another photograph.

A general photograph, 4" x 5" or larger, contains much informative detail; when the details of a structure are bold, simple, or of a conventional nature it will not usually be necessary to take separate photographs of these items. Likewise, when funds for recording are severely limited, details of common character may receive a low priority. It is important, however, to photograph features which are of particularly good design, execution, or in an exceptional state of preservation. Similarly, those which are rare, unusual, or important to the character of the whole structure should be

recorded. Under optimum conditions it is desirable to include some details which are representative of the building or which typify the region.

Exterior details commonly of interest include entrance doorways, porches, cornices, towers or cupolas, balconies, railings, trim, and a variety of ornamental elements. Interior details include stairs and their constituent parts, fireplaces, room cornices, doorways, paneling, and ornamental features, sometimes varying considerably from room to room.

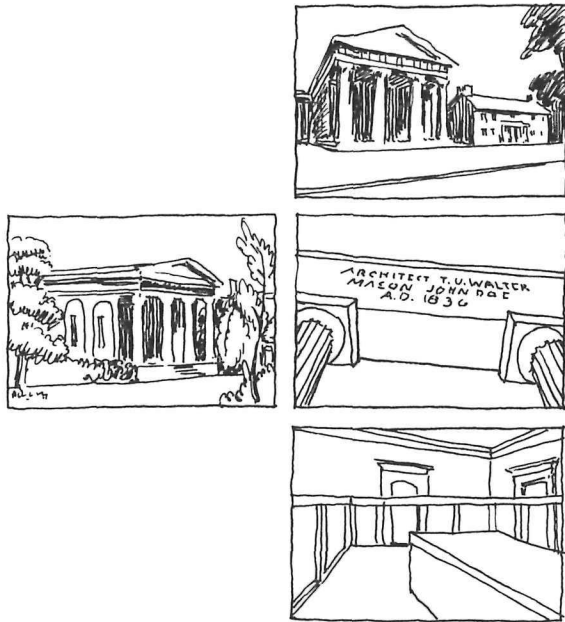
In addition to the photographs described above, whenever items of special interest or significance are encountered they should be recorded. Such features are of many kinds: notable examples of the decorative arts, historic lighting or heating fixtures, uncommon details of construction, accessory buildings, garden accessories, and, generally, any detail of exceptional rarity or quality. The historical interest of details may also be due to association with an important person or event.



When structures are part of a row of buildings or are in association with others of historical or architectural importance, one or more photographs showing this urban scene in part or in its entirety are highly desirable. It is equally useful to photograph a single building in a composition which shows its relationship to the general setting (mountain, wood, lake, river, or street).

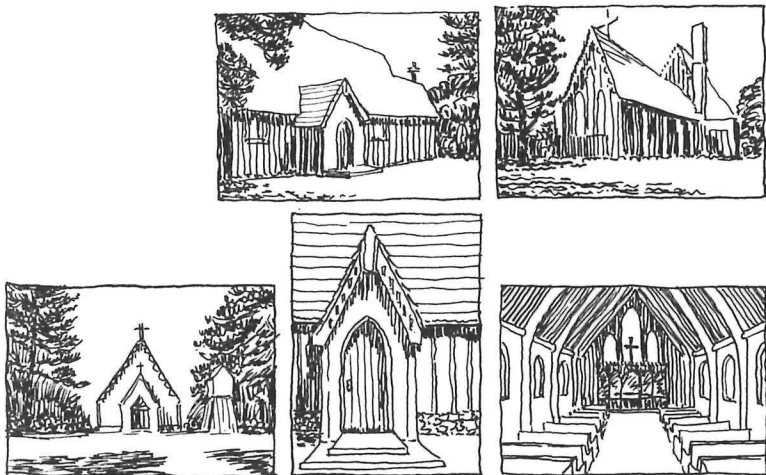
A summary of the considerations given above is shown on the chart (p. 69); this is intended only as a guide to analysis, not to be considered as an invariable set of directions. It is recognized that at some future stage in the study of historic structures, other attitudes may prevail.

The following illustrative cases show how these principles have been applied to select the number and kinds of photographs for recording particular buildings.



THE NATIONAL BANK OF CHESTER COUNTY AND TRUST COMPANY, 17 North High Street, West Chester, Chester County, Pa.: This 1836 bank building has suffered several major alterations but its west front remains virtually in its original state. The west portico is considered outstanding in design, and is of added interest to historians because it was derived from Stuart and Revett's *Antiquities of Athens*. Adjoining the west front of the bank there is a related historic house; this was included in the photograph. The architect of the bank building was Thomas U. Walter, whose watercolor drawing of the proposed design, made in 1836, is in existence. A photocopy was made for the record. On the architrave of the portico, on the inner face, there is an inscription bearing the names of the architect and the marble mason, in addition to the date. This key detail was photographed. To photograph the present interior of the bank would be to show only the latest of several major remodelings; there was, however, an old photograph that depicts an aspect of the building of historical interest, which was copied.

The above case is a rather special one, in which the selection of photographs was governed almost entirely by the scarcity of surviving original features, and the importance of the architect.



ST. JOHN CHRYSOSTOM CHURCH, Delafield, Waukesha County, Wis.: This is a small mid-19th-century wooden church probably built from plans by Richard Upjohn. The front had been altered by the addition of an enclosed entrance porch; the photograph was taken from a little distance to keep the front rather small without ignoring it completely. This allowed the composition to include an original free-standing bell tower, show its relation to the church building, and indicate the open character of the setting planted with trees. Except for the front, this church is virtually unaltered, so the other three sides appear in two photographs. Because trees prevented a direct view of the south side, its doorway, a simple but significant detail, was taken in direct elevation.

The interior form, features of greatest interest, and character could all be recorded by one photograph.

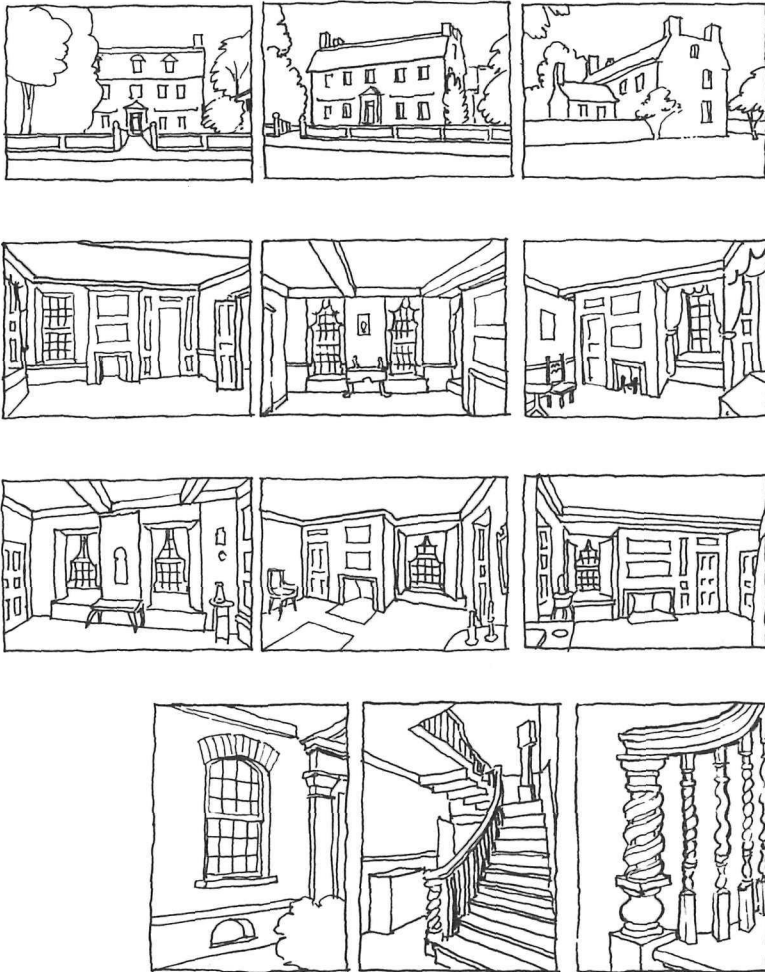
This case illustrates relatively common conditions: dodging trees, showing all exterior sides, selecting a significant detail, and subtly deemphasizing an altered portion.

DERBY HOUSE, 168 Derby Street, Salem, Essex County, Mass. (Salem Maritime National Historic Site): This is an important mid-18th-century house under the care of the National Park Service, maintained as a historic house museum. The exterior is partially hidden, especially on the east. A direct elevation of the south front was desired but trees obstructed the view of the left end; because of this a second view of the south front was taken from an angle. A third general exterior photograph was needed to show the west and north sides of the house.

On the interior there are several fine rooms, of which six general photographs were taken.

The exterior detail being simple, it can adequately be seen on the general photographs, and a detail photograph of one window which also includes the water table, string course, and part of the entrance frontispiece. As to the interior, the fireplaces, paneling and trim show up well in the general views; the stairway, an unusually good example, was photographed and another detail was made of the helical newel, including the handrail and several balusters.

In this case the number and kind of photographs was largely determined by the number of interior features having architectural interest. In addition to the views described above there were three earlier exterior photographs, which show the exterior state prior to restoration. This house is also recorded on 13 sheets of measured drawings, due to its importance.



ANALYTIC GUIDE TO APPROPRIATE PHOTOGRAPHIC RECORDING	EXTERIOR						INTERIOR						SPECIAL				
	Two sides	Front elevation	Side	Rear	Major feature (entrance, etc.)	Minor feature (cornice, etc.)	Typical room	Stair	Fireplace	Doorway	Wall elevation	Other feature	Total (minimum)	Special equipment or fixture	Unusual construction	Notable ornament	Historic accessory
Small accessory building or outbuilding	1						1						2				
Small building or simple house	1	1		1			1	1					5				
Typical house with some good details	2			1	1		1	1	1			1	8				
Large or elaborate house	1	1	2	1	1	1	2	1	2	1		1	14				
Major house or important mansion	1	1	2	1	2-4	2-3	3-5	2	2-3	2-3	2-4	2-6	22+				
Small store or law office	2						1						3				
Small townhall or railroad station	1	1		1	1		2						6				
Typical courthouse or church	1	1	1		2	1	2	1	1			1	11				
Complex public building	1	1	2	1	2-3	1-2	3-4	2	1	1	1	2-6	18+				
Mill or factory with interesting features	1	1	1	1	1		3					2	10				
Coastal fortress	1	1		1	2	1	1					1	8				
Additional photographs when special features are present												X		X	X	X	X

The person who plans or directs a recording project should offer the photographer a clear program with respect to how many exterior and interior views are to be made of each structure. He should also make clear just what is considered architecturally and historically important about the structure: points which are essential, others which are desirable but have lesser priority, and aspects of the architectural character which deserve to be emphasized. He should point out what is to be avoided as having little or no significance, even though it may be pictorially attractive. He should determine when an exterior side or an interior wall is important enough to be photographed in direct elevation.

Once these architectural and historical objectives have been defined, the photographer must decide how the pictures are to be taken: lens, camera position, composition, lighting effects, filters (if any), and emulsion he will apply to each situation. These matters are clearly within his sphere of professional responsibility.

CHARACTER. Photographs of historic structures differ in character according to their purpose. Some are records, pure and simple; they are concerned chiefly with fidelity to form. Others establish a mood, or make a pattern of light and shadow which appeals to the viewer primarily as a creative design—a work of art. Architectural photography seeks to combine the best aspects of both. Fidelity to the subject is essential, of course, but it is a point of departure, not the entire objective. Architectural photography also makes use of a creative approach in order to add to the purely factual aspect of a picture the intangible attributes which elevate “architecture” above “building.” Some subjects are more responsive than others; it is not always possible to obtain more than a pure record but many times it is.

Whenever possible, items unrelated to the character of the building or its setting are to be excluded from the composition (not by retouching or altering the negative, however). Architectural elements are permanent in nature; transitory

Building, 9 North Commerce St., Mobile, Ala. This photograph gives a detailed record of the cast-iron columns and entablature.



ROY THIGPEN



CERVIN ROBINSON

Cedarburg Mill, Cedarburg, Wis. This photograph records two door latches in an attractive pattern of rich light and dark tones; the facts and the vision of them are inseparable.

Lafayette Hotel, Cape May, N. J.



JACK E. BOUCHER

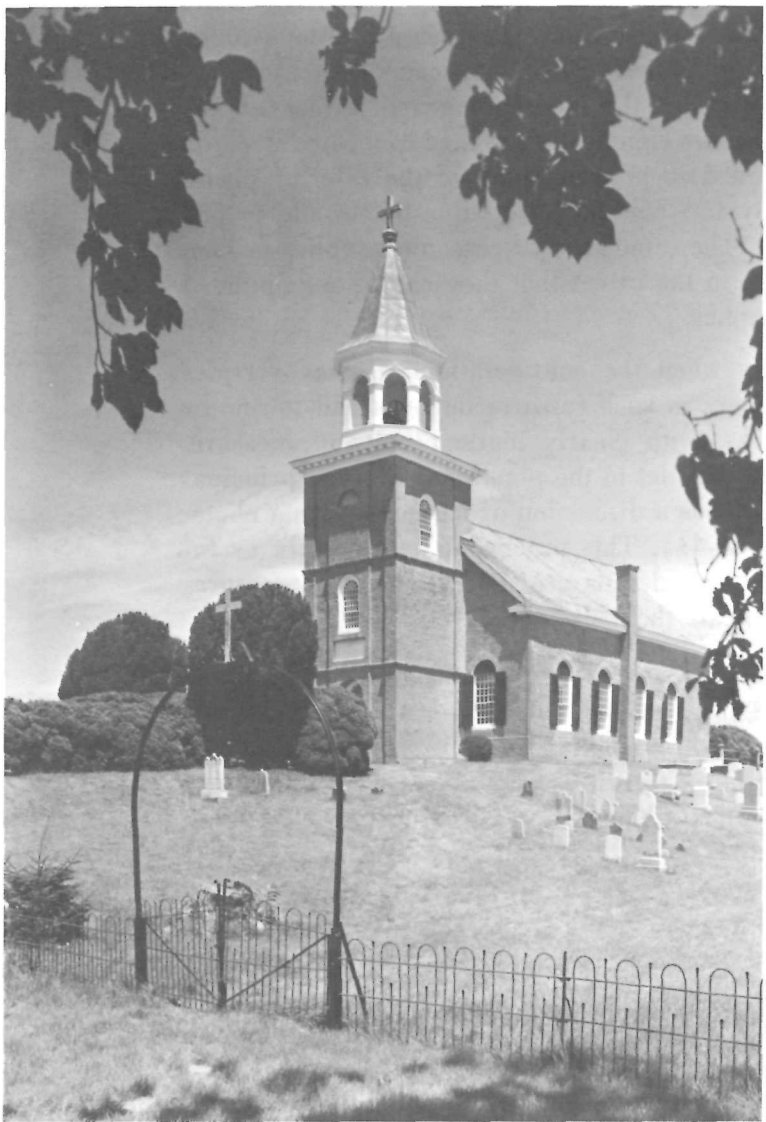
features, therefore, are at best out of character in an architectural photograph and may be offensively obtrusive. People, parked automobiles, traffic signs and trash are to be avoided if possible and minimized when they cannot be excluded. Legitimate elements of the landscaping and setting, on the other hand, which are significantly related to the architecture, should be included in at least some of the exterior photographs, not only for their intrinsic value but to add to pictorial character. The same kind of reasoning applies to interior furnishings, to the extent that they can be manipulated by the photographer.

There are times when the consideration of size overrides pictorial character; in such cases recourse is had to one or more scale sticks, with clearly marked units of measure, placed near and parallel to the plane in which the principal elements lie (also see a discussion of measuring from photographs, on pp. 40-41). This practice is particularly useful when photographing details isolated from other features which might indicate their size.

QUALITY. An experienced professional photographer is needed to take photographs of the quality demanded for serious study, for archival records and for exhibition or publication purposes. Careful camera technique is required to obtain sharpness of focus, clarity, detail in light and dark areas, and to correct linear perspective. Good equipment is also required: to assure accurate alinement and eliminate distortions of line, one must use a view camera with ground-glass focusing, rising front and, frequently, swings and tilts. Film must be exposed and processed for archival permanence (the Library of Congress accepts only negatives with a fire-proof or "safety" base).

For photographing architectural interiors either natural illumination or carefully arranged, balanced electrical lighting is required to render forms satisfactorily and sympathetically. A group of flood lamps (or "slave" flash units) can be so placed or a single flash unit can be fired from several posi-

Saint Francis Xavier Roman Catholic Church, Warwick Vicinity, Md. The rural character of the site is made evident.



JACK E. BOUCHER

tions successively to give the proper illumination, literally "painting with light." Flat direct frontal lighting from a single flash unit near the camera is to be discouraged, however; it is not appropriate for architectural photographs. Excessively diffused lighting rarely is successful for black-and-white photography of architectural elements, although it may be desirable for color photographs of certain subjects.

Patent Office Building, Washington, D.C. Grand stairs, second floor. Effective illumination of a difficult subject.



JACK E. BOUCHER

Amoskeag Mill Complex, Manchester, N.H. A low-level oblique aerial view taken from a helicopter, which shows the buildings being recorded in context with the setting.



SMITHSONIAN INSTITUTION

Horatio West Court, Santa Monica, Calif. Irving J. Gill, architect.



MARVIN RAND

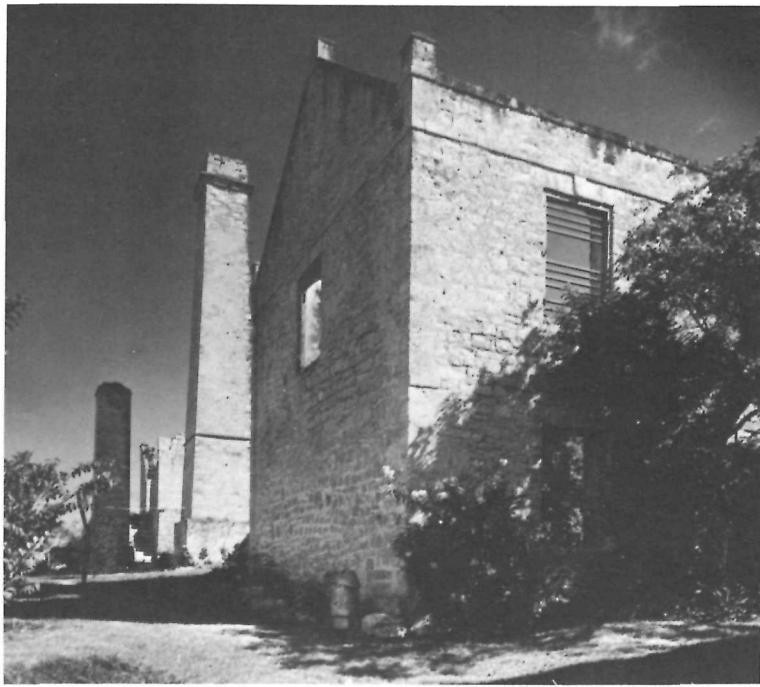


Sears Crescent, Boston, Mass. A high station point brings out the street curvature and gives effective coverage of these facades.

South Carolina State Arsenal ("Old Citadel"), Charleston, S.C. One end of the great courtyard is seen in direct elevation, at just the right time of day to obtain a good balance of sunlight and shadow.

CERVIN ROBINSON

JACK E. BOUCHER



LOUIS SCHWARTZ



Union Station, Washington, D.C. Base of flag pole, south front. A decorative accessory shown in relation to the building.



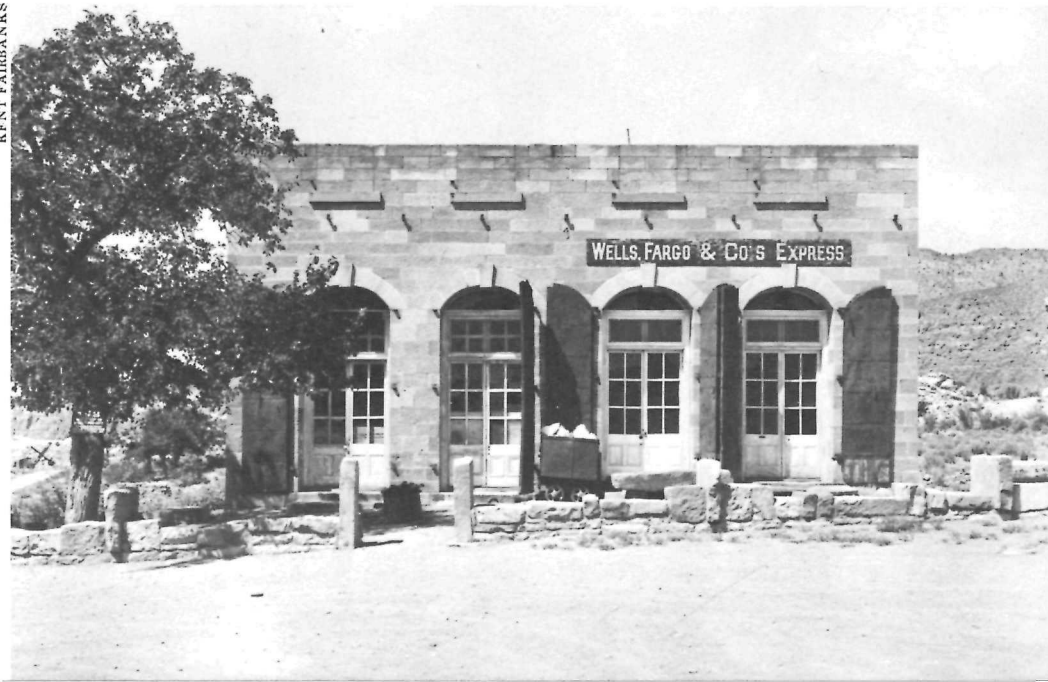
JACK E. BOUCHER

Saint John Chrysostom Church, Delafield, Wis. This photograph illustrates the interior character in a composition which gives strong emphasis to the main axis and to the chancel.

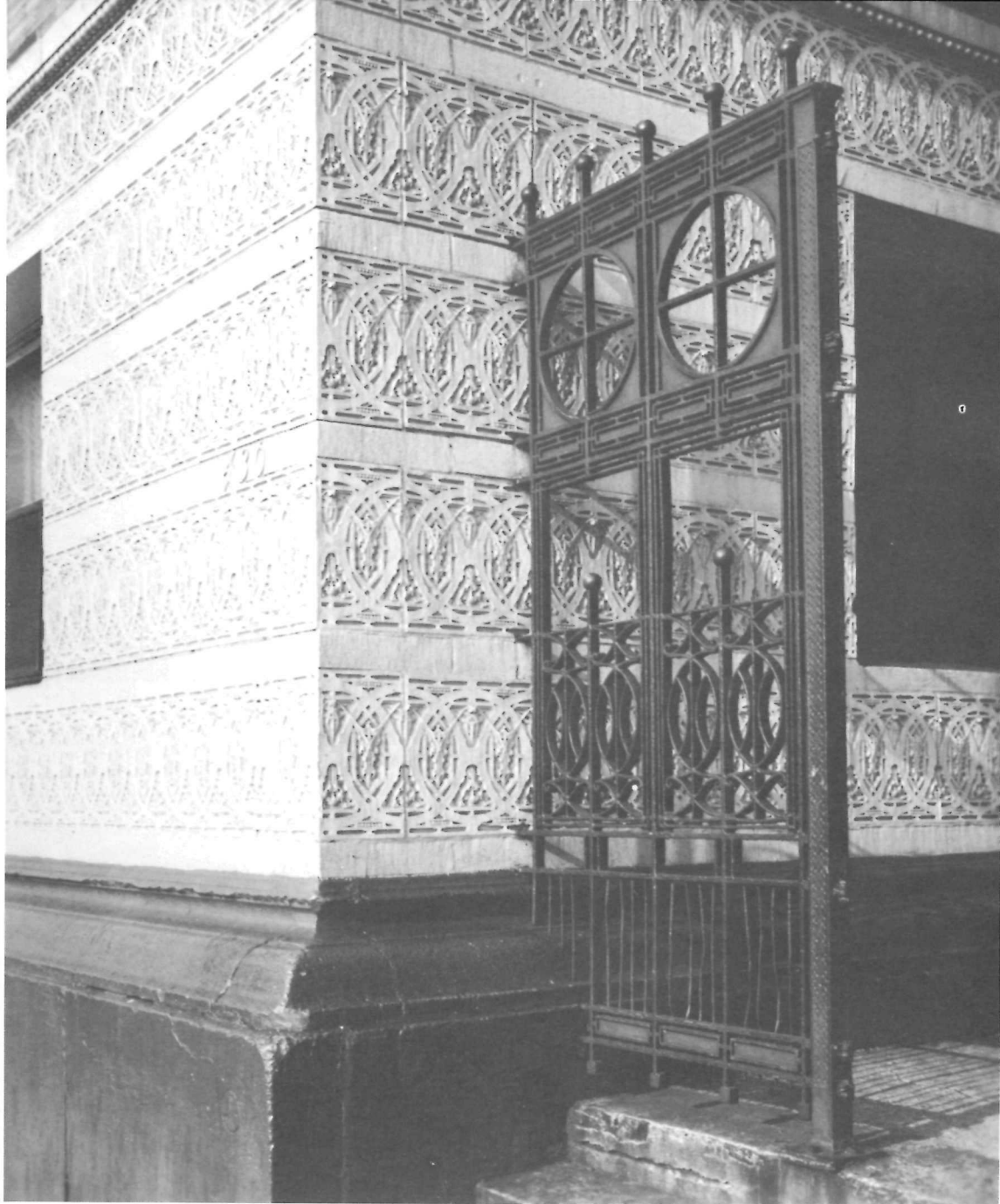


CERVIN ROBINSON

Wells Fargo Building, Silver Reef, Utah. Front elevation.



KENT FAIRBANKS



HAROLD ALLEN

Francis Apartments, Chicago, Ill. Grille at entrance to court. An early design by Frank Lloyd Wright.

"Springside" Cottage, Poughkeepsie, N.Y. Detail of window. Designed by Andrew Jackson Downing in 1850, Springside was the estate of Matthew Vassar, founder of Vassar College.



ROLLIE MCKENNA



First Baptist Peddie Memorial Church, Newark, N.J. Narthex porch. The dark frame draws attention to the curving arcade and suggests its smallness of scale.

City Hall, Grand Rapids, Mich. Taken from an upper story of a nearby building, this view reveals the entire mass of the building, roof lines, and the composition of two major facades.



GEORGE EISENMAN

ALLEN STROSS

At right, Chase-Lloyd House, Annapolis, Md. Detail, ceiling of second-floor stair hall. A notable example of late 18th-century ornamental plasterwork.



ALLEN STROSS

Abner Pratt House ("Honolulu House"), Marshall, Mich. The rich painted ornamental detail of the hall and the form of the stairs are recorded here.

John M. Davies House, New Haven, Conn. Copy of a photograph taken after 1911. This drawing room contains a wealth of ornamental detail; it was designed in 1867 by Henry Austin and David R. Brown, architects.



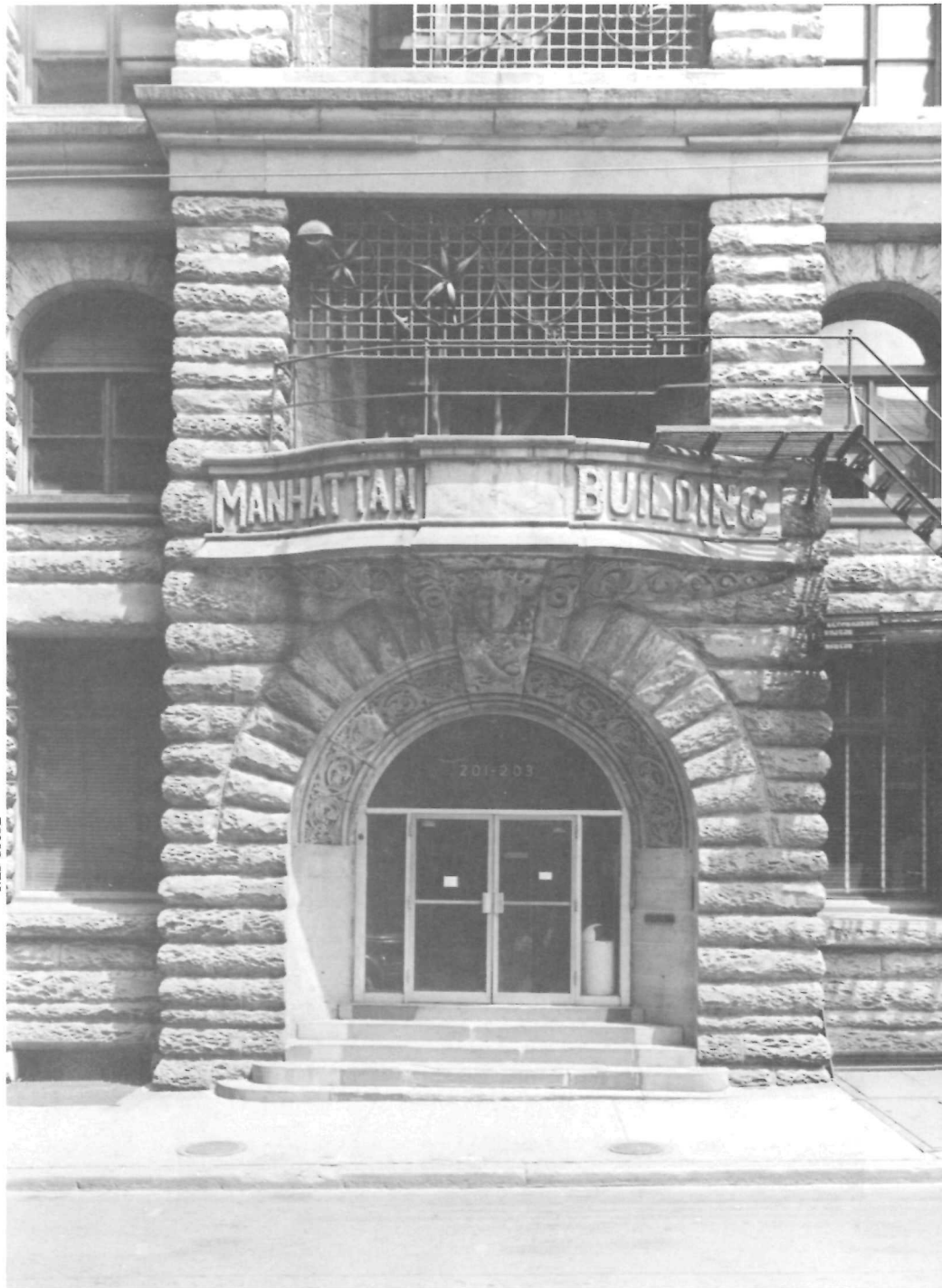
JACK E. BOUCHER





JACK E. BOUCHER

Christ Episcopal Church, Binghamton, N.Y. One interior bay of this church, designed by Richard Upjohn, is seen in direct elevation.



NED GOODE

American Life Insurance Company Building (Manhattan Building), Philadelphia, Pa. The bold stonework of this early skyscraper, now demolished, is strongly rendered by glancing rays of the sun in late afternoon.

Belmont Hall (Thomas Collins House), Smyrna, Del. The full scope of a wide-angle lens is employed here to present the whole stairway in a dynamic composition. In this instance the furnishings help to express the character.

Greene-Meldrim House, Savannah, Ga. Entry hall and north window.



LOUIS SCHWARTZ



CORTLAND VAN DYKE HUBBARD

Robert Pierce House Buttery, Dorchester, Mass. A rare remaining domestic element.



CORTLAND VAN DYKE HUBBARD

HAROLD ALLEN

Edward E. Ayer House, Chicago, Ill. Vestibule. The character of an era is epitomized in the ornamental patterns, woodwork, and lighting fixture.



Wye Farm Corn Crib, Miles River Neck, Talbot County, Md. Photographic insight and structural information.



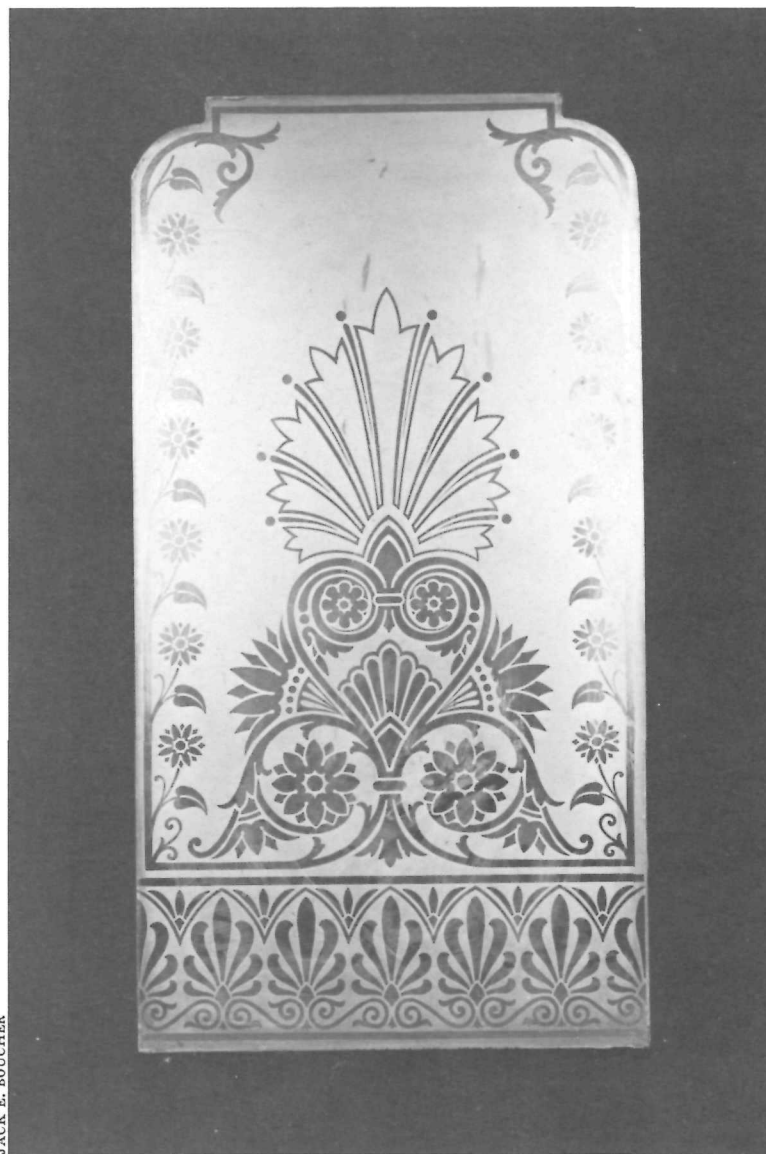
JACK E. BOUCHER

105 Calle San Jose, San Juan, P.R. The entrance grillwork is brought out in silhouette against a simple background. Floor tiling is visible but subordinate.



JACK E. BOUCHER

Patent Office Building, Washington, D.C. Etched glass in door, Model Hall. A good rendering of a difficult subject.



JACK E. BOUCHER

Adams Mansion, Quincy, Mass. Interior of carriage house. An interior of interest both as an accessory and for its own sake.

Trinity Church, Southport, Conn. Detail, altar rail bracket.



JACK E. BOUCHER



CERVIN ROBINSON

John Williams House, Deerfield, Mass. A virtual elevation which shows the paneling in true proportion.



CERVIN ROBINSON



JACK E. BOUCHER

Allis House, Fairfield, Conn. The texture of these weathered shingles is interesting pictorially and factually.

IDENTIFICATION OF PHOTOGRAPHS

NAME OF STRUCTURE. Usually the name of the structure will be given to the photographer (see discussion on naming, pp. 98-99).

IDENTIFICATION OF EACH VIEW. Each view of the given structure requires its distinguishing title. Compass directions are more telling than words like "front" or "back," although it is often desirable to give both [as North (Front) Elevation]. Terms such as "exterior," "interior," and "detail" are included when they are not implied by the rest of the title. Examples are:

South and east sides. Both appear importantly.

Doorway, east front. The title implies that this is a detail. A photograph of part of this doorway would be titled: "Detail of Doorway, East Front."

Southeast corner of north parlor (George Washington Room), first floor.

Detail of wooden latch, door in fireplace wall, south bedroom, second floor. Titles should be brief but sometimes long ones are needed to describe the precise location.

OLD PHOTOGRAPHS

Old prints, negatives, and daguerreotypes which show conditions now changed or features now missing are valuable sources of information, especially if they can be dated. They may show the structure before certain alterations, in its original setting, in better physical condition, or may show that it has *not* been changed. One should make a selection of the best and oldest photographs, or those which are basic to each period in the evolution of the structure, to copy for the record. Copying should be done from the original material whenever possible, rather than from reproductions. If old prints, negatives and daguerreotypes are found in a deteriorating state, a copy is the best way to preserve the evidence they contain.

In theory, a copy should simply reproduce the original as faithfully as possible, but in practice, many variables complicate the process: choice of film and filter, condition of the material, illumination, etc. One must rely on the photogra-



John J. Glessner House, Chicago, Ill. H. H. Richardson, architect. Dining room, copy of an old photograph. This room appears as it was when the house was still occupied by the original owners.

HABS STANDARDS

COLOR PHOTOGRAPHY

pher to do the best he can, in his judgment. Some material cannot be copied as well as desirable, but if its historical value is great a poor copy may be preferable to none.

Negatives 4" x 5", 5" x 7", and 8" x 10" are accepted but 5" x 7" negatives have been the preferred size. As an illustration of the technical factors considered when taking photographs for the HABS collections in the Library of Congress, general requirements are given in the "HABS Guide for Photography," reproduced on pp. 91-93.

While the advantages of color photography for certain purposes are recognized, HABS does not at present use color photographs for its records. For the consideration of others who may wish to use this medium for intensive historic architectural survey purposes, a brief discussion is given herewith; a discussion of historically significant colors is also given on pp. 109, 111.

The first advantage of color photography is the recognition of color as an attribute of value: a quality to be recorded. In a balanced study of historic architecture, color cannot be disregarded even though the medium may be imperfect. It is advantageous to establish at least the primary distinctions (as: between the color of a wall and the ground, or between tile and slate) whether or not secondary characteristics can be accurately rendered. The sense of reality which color in a photograph suggests to a layman is particularly helpful when a scholar or preservationist is trying to explain the character of a historic building or urban district. For this reason 35 mm. color transparencies are useful adjuncts to a black-and-white record for lecturing and for study reference while the color lasts. For expressing the appearance of building materials and ornamented surfaces, for showing the design of open spaces and the effect of a building in its setting, and for indicating the varied ways in which atmospheric conditions modify the apparent character of a structure, color photographs complement the more formal aspects of recording which are implicit in drawings and black-and-white photographs.



Hustings Courthouse, Petersburg, Va. Calvin Pollard, architect. Copy of a photograph taken April 2, 1865, from Francis T. Miller, The Photographic History of the Civil War (New York: The Review of Reviews Co., 1911).

Color photography is at its best when depicting “flat-lighted” surfaces (i.e., those in which all areas are illuminated to nearly the same intensity). It can thus render two-dimensional features and buildings without significant voids or projections with a considerable degree of fidelity. Structures of marked three-dimensional nature, whose character is dependent upon the contrast of light and shadow, with subtle gradations between the two, are subjects which color photography represents less successfully. The “latitude” of color films has been increased over the years, but at present one cannot obtain a picture which renders both the dark areas and the light ones satisfactorily.

The actual “color” of an object varies with the quality (or balance) of the illumination as well as being determined by the nature of its surfaces. A generally accepted convention takes the quality of sunlight near noon as “normal”; the photographer (often employing a color-temperature meter) uses filters to compensate for illumination which differs from the conventional. This practice may be satisfactory for a number of archival purposes (but not for restoration).

The most serious disadvantage from an archival point of view is that the colors in a photograph fade. Prints or duplicate transparencies are more expensive than black-and-white prints and their processing involves more critical stages. The three-negative color separation system (using dye transfers) appears to offer the most enduring color prints available today, and should be used for serious color photographic recording despite its high cost. Transparencies 4" x 5" or larger, if placed in regional (or even local) collections as well as in a national collection, can be valuable for serious study for a number of years even if prints are not made available for distribution to the public.

HABS GUIDE FOR PHOTOGRAPHY

CAMERA. The camera used shall be a view camera having all necessary adjustments to correct perspective distortion. A variety of lenses shall be available at hand.

FILM. All exposures shall be made on fresh, fine-grain, cut-sheet film. A polyester-base film is preferred.

NEGATIVES. Sizes shall be 4" x 5", 5" x 7", or 8" x 10". Each exposure shall be in sharp focus and correctly timed. Original negatives only are acceptable; no copy negatives are acceptable except when copies of old photographs are ordered.

COMPOSITION

General. Each view shall record the architectural subject in the most revealing way. Each shall be composed for attractive and artistic effects with the best lighting possible. Care must be used to eliminate perspective distortion. Corners and edges of the subject photographed shall not be cut off the negative.

Exterior views. Each exposure shall be made with the best use of natural sunlight. Intrusive elements such as parked automobiles, pedestrians, tall weeds, and rubbish shall be excluded. Filters shall be used as needed to render tones naturally and effectively.

Interior views. Particular care should be taken with the lighting of the subject to achieve a natural feeling, eliminate undesirable shadows and reveal detail. Extraneous and undesirable objects, and those which obscure significant portions of the subject, are to be excluded. Desirable period furniture and furnishings, if they are in the room, which enhance the architectural interpretation and improve pictorial quality, are to be included. Artistic judgment is needed in these instances.

DEVELOPING. All film shall be developed with special care according to the manufacturer's recommendations to insure "archival permanence" in the finished negative. Only freshly prepared chemicals shall be used. Each step in the developing process shall be precisely carried to the optimum degree. Negatives shall be treated in a hypo-clearing solution and washed in changing water for such time as proper darkroom practice dictates.

SUBMISSIONS. Each negative, along with two good glossy contact prints, shall be surrendered to HABS in a new standard 8" x 10" negative protector; the name of the building, complete and accurate address or location, the exact view taken, date of exposure and name of the cameraman must be neatly indicated on the protector.

REJECTION. Negatives not considered to meet these standards, not technically competent, or such as are otherwise deficient will be returned to the photographer.

USE NOT EXCLUSIVE. Photographers may make duplicate or copy negatives for the use of others as book illustrations, post cards, photomurals, etc. In such cases, however, a credit line, such as "John Doe for HABS" is required. A duplicate set of negatives for the cooperating local agency may be made.

EXISTING GRAPHIC RECORDS

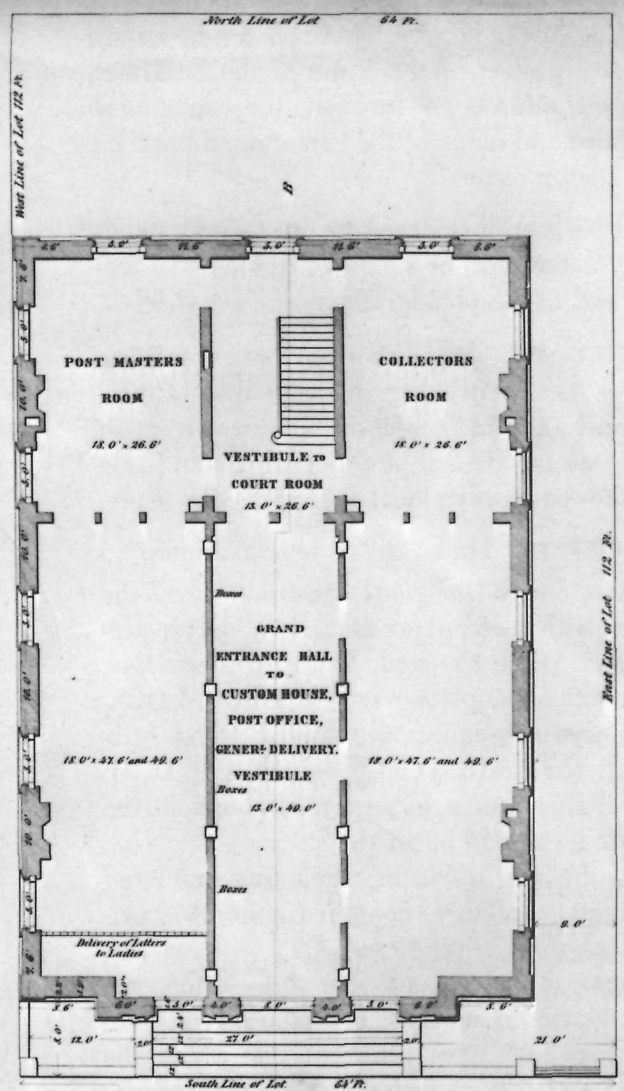
ARCHITECTS' DRAWINGS. These are of several kinds:

Plans by the architect for the original construction. If the structure now agrees with these plans there is a strong presumption that it has not been changed. If the structure now differs substantially, either the plans were not followed faithfully or there have been subsequent alterations. Plans of a structure now demolished are especially valuable. It is not necessary to copy all sheets of a large set, although in the written data the whole set should be cited.

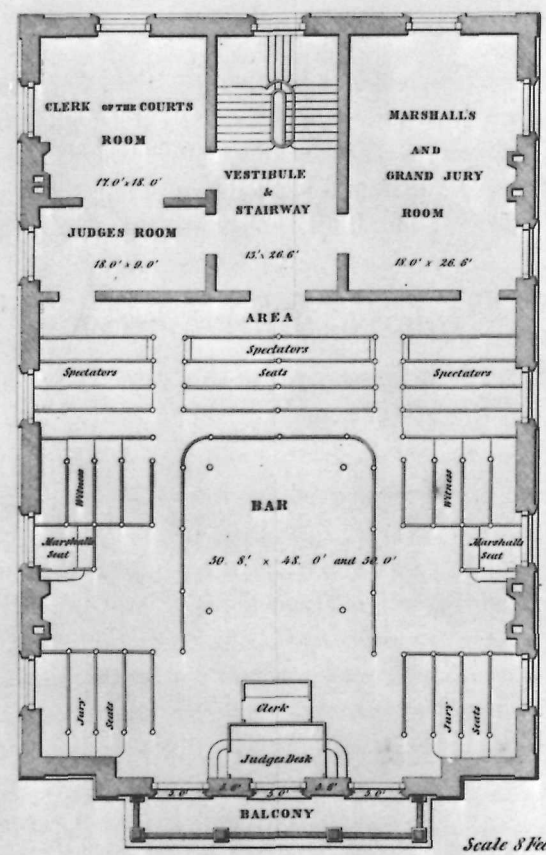
Preliminary designs by the architect, including rendered drawings of the original structure, contain comparable evidence.

Competition drawings for the original structure—either the design which was adopted or designs by unsuccessful competitors. Such drawings may reveal information about the state of architectural practice at that time, the competence of practitioners, development of building types or fashions, radical changes made in construction, and other matters of interest, especially if the building is an important one.

Unexecuted designs of interest, other than those forming part of a competition series. Studies indicating the genesis or development of a design, or method of construction.



PLAN OF ENTRANCE STORY



PLAN OF UPPER STORY

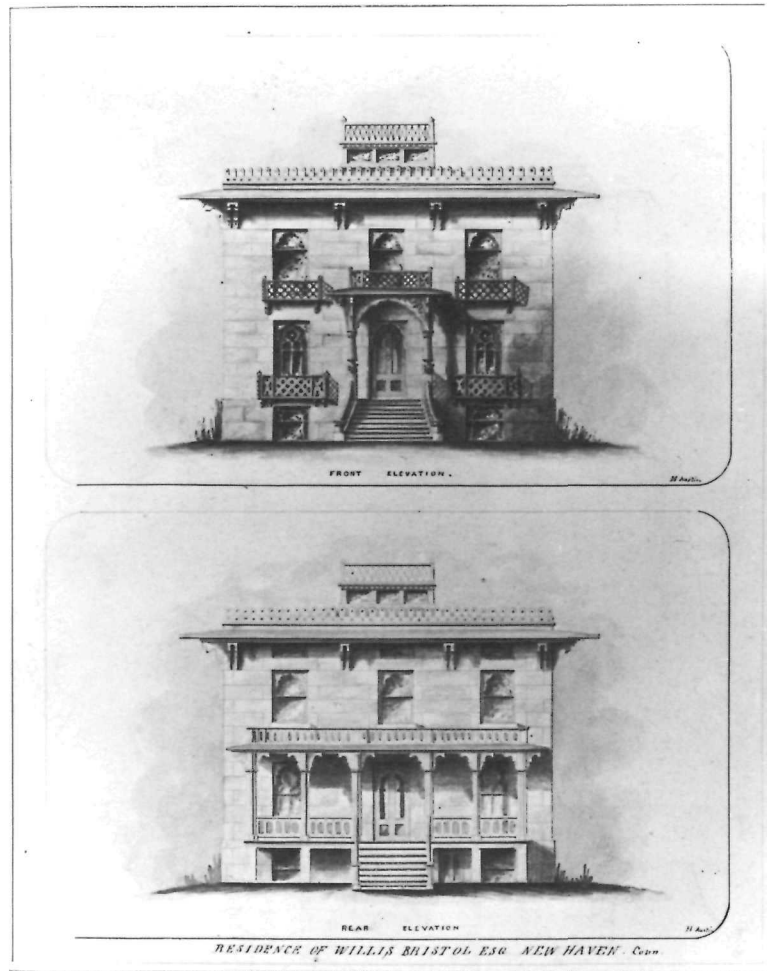
WILMINGTON DEL. CUSTOM HOUSE,
 Post Office & Court House.

Ammi E. Young, Supervising Architect
 Treasury Department, Feb. 12th 1853.



Little & Robinson, Print.

Willis Bristol House, New Haven, Conn.



BEINECKE RARE BOOK AND MANUSCRIPT LIBRARY, YALE UNIVERSITY

Plans for altering a structure or adding to it. These may also contain information about the original building.

Blueprints. These are sometimes from the original plans (of c. 1875 or later) or drawings of alterations. For study purposes they are largely equivalent to the originals but it is not always possible to copy them photographically.

EARLY MEASURED DRAWINGS. A structure may have been measured and drawn some time after it was built, either for contemporary reference or for historic purposes, prior to being recorded in a survey. Such drawings can be very valuable if they are accurate; if the building is in existence care should be taken to ascertain their correctness. (For example, when measuring St. Michael's Episcopal Church, Charleston, S.C., in 1963, it was found that drawings published in *The Georgian Period*, although generally excellent, contained serious mistakes in the transverse section.) The floor plans of some buildings, especially public or institutional, have been recorded by the occupants for their own use; these drawings can be useful to the historian.

MAPS. Old maps are important sources of information about the location of a structure and the layout of groups or areas, at a given date. They are useful for dating buildings and additions. Some city atlases (as: Sanborn's), are at a large enough scale to indicate approximate dimensions. They often show the position of utilities, grade levels, types of construction, and the height of buildings. The accuracy of maps varies, and sometimes they depict proposed improvements which were never built, or which were built in a different manner.

Even recent maps may contain significant facts about historic structures.

PAINTINGS AND SKETCHES. Old paintings and sketches made by professional or amateur artists may depict a structure for its own sake or incidentally. One must judge the value for historic architectural study by the known or ap-

parent competence of the artist and the accuracy with which the picture can be dated. Since each painting is a unique product, it is usually desirable to reproduce them for the record.

OLD PRINTS. Having been produced in quantity, existing prints (woodcuts, copper, steel or wood engravings, etchings, mezzotints, lithographs) depicting a given historic structure may be common or rare. It is often desirable to reproduce them for the record, especially the rare ones, but in any case they should be mentioned.

The known history of printmaking and printmakers can help establish an approximate date when the print itself is not dated. As do maps, prints sometimes include structures designed but not built at the time the print was made. They are also subject to error and fantasy by the artist, so their historical accuracy must be evaluated with discrimination.

ARCHIVES. Various public and private collections of drawings, prints, etc., are available to persons studying historic structures. Some of this material has been listed locally for the convenience of researchers. The *Catalog of American Architectural Drawings*, covering the whole nation, which was initiated by the Philadelphia Chapter of the American Institute of Architects and is being continued by the Smithsonian Institution, as part of its recently established Architectural Records Project, will include papers, prints, photographs, and bibliographical and biographical information eventually. When these are published their value to historians will be incalculable.

PHOTOGRAPHIC COPIES. As in the case of old photographs having historical value for the record, other graphic records of a structure should be considered for photocopying, especially when they are rare and unpublished. Whether they are copied photographically or not, all such records should be mentioned in the written data, usually with a concise description.

When good original drawings or measured drawings of a structure are in existence, and can be copied photographically, there is little point in duplicating them by making new measured drawings, although new drawings may logically be made to supplement existing ones. When old drawings are of sufficient importance, they should be copied full size on the negative. (*See also* Adaptation of Drawings on p. 23, 44-46).

DOCUMENTATION

Two kinds of written records—history based on documentary sources and architectural description made from direct observation—are discussed in this part. Each should be as complete and as accurate as possible. History and architectural description supplement each other; together they supplement drawings and photographs.

Historical data fall into two classifications: (a) information relating to the original structure and changes to it through the years (i.e., physical history), and (b) information relating to human associations and events.

HISTORICAL RECORDS

The historian's search for data ordinarily begins with publications (general books, local books, monographs, and periodicals) and progresses to inventories, files of historical information, records, and manuscripts. Deeds, wills, minutes of official and other bodies, tax records, and other sources known to him are consulted. While looking for textual material one should also be alert for old photographs, prints, and drawings. It is assumed here that the reader knows how to do this.

There are various ways in which historical information may be recorded. The practices followed by HABS were originally adopted after thoughtful consideration; after being tested by experience they have been improved and refined. The objective is to compile data in a logical order, one which is readily understood and used, to avoid omission of significant facts without introducing irrelevant and insignificant material, and to make the records consistent in character and quality. Many of the structures recorded for HABS are "average cases" in which a given method can be followed. Fundamen-

tals are emphasized here, however, rather than methods; the circumstances of each case and the independent judgment of the historian determine how it should be done.

DESIRED INFORMATION. *Basic identification* is needed in all cases:

Name of the structure.

Location and address of the structure.

Ownership, occupancy, and present use.

Physical history, to the extent that it is known or ascertainable, is needed:

Name of the original owner and of subsequent owners (chain of title, in whole if possible).

Date of erection.

Names of architect, designer, builder, suppliers, etc.

Description, in whole or in part, of the original plan and construction of the structure.

Description of known alterations and additions, with dates, name of architect, builder, etc.

Historical events and persons associated with the structure.

Sources of information for the above facts.

Name(s) of the person compiling the history, and *date*.

In case the structure is important enough to have been well published, the physical and associational history may be briefly summarized, and a *bibliography* listed.

SPECIAL PROBLEMS. It is important to use a *historic name*—one which will continue to be meaningful regardless of changes in occupancy or use. Usually the name of the original owner of a house, or of the original use of a public or commercial building, is the correct one for historical purposes. Sometimes there is a recognized historic name which was used by the original owner (as: Mount Vernon).

If the original owner or use is unknown, use only a general designation, qualified by the address (as: Commercial Building, 33 Hayne St.; House, 516 Hogsback Rd.); this is preferable to an undocumented name. Later research may reveal

an original name which can then be added to the designation. Sometimes the earliest ascertainable owner's name (or use) is used, if he was an early owner and the state of the records indicates that the first owner never will become known (as: where all public records before a certain date were destroyed).

If the prominence of a later owner or occupant justifies doing so, his name can be linked to that of the original one by a hyphen (as: Bowler-Vernon House); it is also proper to recognize the name of an owner who made substantial alterations or additions to the structure, which are important to its architectural character. Hyphenated names should be sparingly used, and the practice of adding another name to the chain every time the ownership of the structure changes (as: Jones-Smith-Davis-Ryan-Harris House) is especially to be avoided.

When a structure is widely known by a certain name, which may or may not be correctly applied to it, the common name deserves mention in parentheses [as: Sheldon (Old Indian) House; Abner Pratt House (Honolulu House)]. Sometimes the name of a structure is not self-explanatory, making it advisable to add one which is [as: Clover Fields (Forman House)]. Similarly, when the purpose of a building has been changed, the original one is given in the name and followed by the newer one in parentheses [as: Kershaw County Courthouse (now Masonic Hall)]. The principle involved in these cases is that of recognizability, in addition to historical appropriateness.

Structures in a related group should be named accordingly; the essential is that they have a common designation which is given first, followed by the individual designation.

Example of accessory buildings:

William Blacklock House

William Blacklock Carriage House

William Blacklock Gazebo

Example of an industrial group:

Amoskeag Manufacturing Company, Amoskeag Mill Yard
Amoskeag Manufacturing Company, Mill No. 1
Amoskeag Manufacturing Company, Mill No. 2

Example of a block study:

Block Study—Historic Zone, Isleta de San Juan
Block Study—Historic Zone, Isleta de San Juan,
Calle de la Cruz #104
Block Study—Historic Zone, Isleta de San Juan,
Street Facade, Calle de la Luna

The *general location* and the *particular address* should be given concisely in the heading, but when there are more complex directions of significance, or historical facts of interest related to the location they should be included in the main body of the history. The address should cover everything needed to locate the structure clearly and precisely. It is impossible to overemphasize the necessity for doing so, for a “foolproof” location is not given so easily as one might imagine. In time, street numbers and names change, public ways are relocated, landmarks disappear, hills are leveled, and streams are covered over. How can one describe the location concisely so that it can be found years later?

If the property is in a built-up area, use the name of the city, town, or village as designated by the U.S. Post Office Department; the *National Zip Code Directory* is a convenient guide. (Note: in New England and New York State avoid the word “town,” to eliminate confusion with “town government.”)

If the structure is outside a built-up area add the word “Vicinity” to the nearest (or otherwise most appropriate) place having a post office (as: Shelbyville Vicinity). In rare cases it may be preferable to refer to a prominent natural feature (as: Cooper River, West Branch) when that is the regional custom.

It is rare for problems to arise when naming the State and county, other than making sure in borderline locations that

the structure actually is within the named area. In Louisiana the parish is the unit (not county); in some States where the township assumes great importance (as: Pennsylvania), its name should be given in addition to that of the county.

HABS and the National Register have recently adopted the practice of adding (in the office) a national standard code number to designate the State, city, and county, using General Services Administration *Geographical Location Codes* (as: 01-0350-073 for Birmingham, Ala.). Such code numbers can be used in a computer.

The particular address of a structure can be given with reference to a public way—street, road, etc. Those in areas which have been platted can often be identified by block and lot number; this is excellent practice because the identification is both specific and permanent. Sites not readily related to a system of streets or roads can be fixed by their relation to natural features (as: “on Plum Run near Big Round Top”); such descriptions take advantage of the enduring character of earth forms but seldom can be as precise as one would like.

In mentioning street and road names, it is well to add old or popular names which are currently in use (as: Avenue of the Americas, formerly 6th Avenue; Chestnut Street, informally called Captains’ Row). It is advisable to give both road names and highway numbers, because the latter are more subject to change (as: West Chester Pike, State Hwy. 3). Similarly, popular historical names for a neighborhood or section of a city are a valuable addition to the formal address (as: Beacon Hill).

Numbered street addresses are the normal ones in urban areas. In historical times numbers change, however, making it good practice to include a reference to corners or other special features when they apply (as: 488 Main St. at NE. cor. High St.; 15 Bank Row, on east side of Common). In villages without house numbers one must depend on naming landmarks which seem relatively permanent (as: east side

River St. between Main and Church Sts.). In thinly settled areas either road distances or natural features are cited (as: north end Pinopolis Peninsula; 2.7 mi. west of Pineville Post Office).

The most precise way permanently to locate a site is to give geographical coordinates (latitude and longitude) in addition to the common address. This practice, adopted in 1968 by the National Register, is followed by HABS. It is applied in the following ways by persons making records for HABS:

In areas mapped on quadrangles of 7½ minutes by the U.S. Geological Survey, the position is marked on the quadrangle, or on a larger scale map known to be accurate. When the site involves 1 acre or more of land it is circumscribed by a rectangle whose sides extend N-S and E-W. A site covering less than 1 acre is marked by its central point.

In areas not mapped by the USGS, an alternate kind of map is used, in this order of preference:

- a) A map made by the State, according to its official coordinate system.
- b) An existing plat or survey which can be oriented to known geodetic control points.
- c) Whichever of the following appears to provide the most accurate result. A State-produced road map, oil company or other geological survey map, National Park Service or Forest Service map. These maps all contain grids which provide latitude and longitude values.

The map, marked with sites which have been recorded, properly identified, is forwarded with the other records to the HABS office.

If a structure has been moved from its original site, the original location is usually given first, followed by the present location (as: originally NE. cor. Park and High Sts.; now SE. cor. Main and Pearl Sts.). (Note: In cataloging, the

principal entry is listed under the original address and a cross reference is listed under the present address.) If only fragments of a structure have been preserved, and (later) recorded by HABS, the present address is used. (Note: In cataloging, a cross reference is made for the original site.)

Statement of significance. It is desirable for the historian to give a brief explanation of why the structure was considered important enough to record. Historical reasons may include the importance of its occupants or of events which occurred there. Architectural reasons alone are often sufficient. It is HABS practice to place this statement at the end of basic identifications, immediately preceding the physical history. Samples are:

Wounded British troops were carried to this 1763 Meeting house during the Battle of Brandywine.

This fine Greek Revival bank was designed by the noted architect, Thomas U. Walter, and has a notable Greek Doric portico.

This 1765 building is a typical example of a Friends Meeting House and has remained relatively unchanged though still in use.

Chain of title. The names of owners and dates of ownership, from the time the structure was erected to the present, are to be given in so far as known or ascertainable. In doing this, a form similar to the following one may be useful in making the chain of title clear. If possible, the records listing the actual transfer of property should be preceded by a complete description of the property; when property is indexed by lot and square, indicate, giving original and subsequent lot and square numbers. Changes in the description of the property and the sale prices are useful in determining the date of erection; these should be included, as well as pertinent lawsuits, trustees, etc.

HISTORIC AMERICAN BUILDINGS SURVEY HABS No. ME-137

JOHN CALVIN STEVENS HOUSE

Location: 52 Bowdoin Street (south side of street), Portland,
Cumberland County, Maine.

Present Owner: William W. Alcorn and Mary Elizabeth J. Alcorn.

Present Occupant: William W. Alcorn and family.

Present Use: Dwelling.

Statement of
Significance: House was designed in 1881 in the "shingle style" by
the Portland architect John Calvin Stevens, 1855-
1940, as his own residence and has an early example
of revived use of the gambrel roof.

PART I. HISTORICAL INFORMATION

A. Physical History:

1. Original and subsequent owners: The following is an in-complete chain of title to the land on which the structure stands. Reference is the office of the Recorder of Deeds Cumberland County.
 - 1884 Deed November 15, 1884 recorded November 15, 1884 in Book 512 page 208 (lot - no mention of building)
Ashbel Chaplin and William T. Small
to
John Calvin Stevens
 - 1896 Deed July 23, 1896 recorded July 24, 1896 in Book 639 page 197
John Calvin Stevens
to
Martha Louise Stevens (wife)
 - 1919 Deed April 30, 1919 recorded May 1, 1919 in Book 1021 page 280
Martha Louise Stevens
to
Marion P. Emerson
 - 1963 Deed September 27, 1963 recorded September 27, 1963 in Book 2777 page 365
Trustees of estate of Marion P. Emerson
to
William W. Alcorn and Mary Elizabeth J. Alcorn (wife)

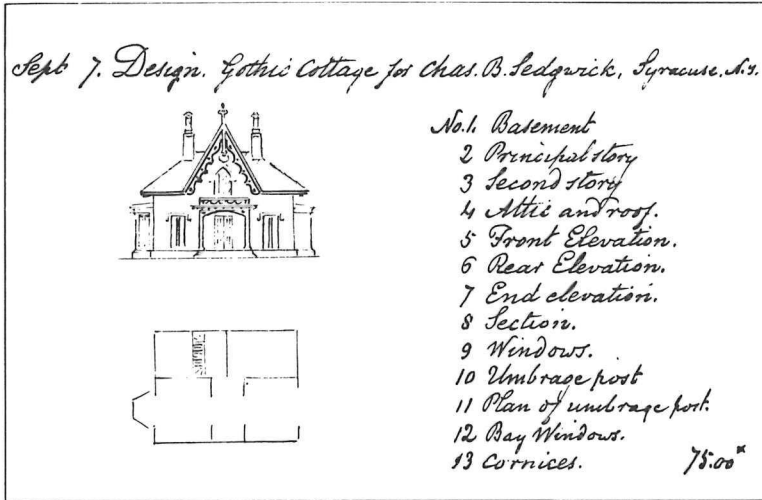
Sometimes local custom or other special circumstances will suggest a different form (as: in New Orleans, where the notary acted in such transactions, and sometimes added notes of special interest as below).

<i>Date of COB</i>	<i>Notary</i>	<i>Transaction</i>
1808 May 18	P. Pedesclaux 26/205	Manuel Prados from Charles Guenard. “A portion of land on Bourbon Street, 34’ front by 120’ depth, bounded on one side by Mme. Perier and on the other side by Mr. J. S. Sapanze.
1806 June 7	S. de Quinones 10/125	Charles Guenard from Marie Louise St. Sire. “. . . bounded on one side by lot of Mme. Perier and on the other by lot of Mr. Peroteau, on which there is a small house measuring 30’, wood and brick with four rooms and a double chimney . . .”

In giving a *date* for a structure one should be as precise as his knowledge permits, telling whether the date refers to the cornerstone-laying, beginning of excavation, date when first occupied, etc. When they are known, give both beginning and completion dates, and also significant dates in between. Dates of alterations and additions are given with the description of those changes.

The *names of the architect or designer, builder, craftsmen, suppliers*, or others intimately connected with the original construction and later alterations are to be given, if they can be ascertained, without ambiguity. A house is “built for” an owner, not “built by” him (unless he is also the actual constructor); an architect does not “build” (unless he combines the function of builder with that of architect). It is preferable to write “Robert Mills, architect”; “Robert Leckie, contractor”; “Samuel Axson, master carpenter”; “Samuel Cardy, architect and builder”; etc.

Entry from the account book of Alexander J. Davis, architect, dated Sept. 7 1845, which verifies his authorship of the design.



Describing the original structure. If accounts of the erection, materials, equipment, and furnishing can be found in letters, newspaper accounts, drawings, specifications, contracts, or other contemporary sources, a worthwhile description of the original structure can be given. Depending on the judgment of the historian, he may wish to summarize the descriptive material or to transcribe (or photocopy) it in whole or in part. When original drawings exist, and are photocopied, the description of them can be minimal.

The same principles apply to the description of *additions and alterations* to the structure.

When an architect is examining a building in order to write a technical description of it, facts known to the historian (as: the general dimensions of the original structure, the date of an addition or alteration, etc.) can usually improve the architectural interpretation. Similarly, observations made on the site by an architect can be of value to the historian. Close collaboration between the two is highly desirable, and when the physical history of a building is complicated, collaboration may be indispensable.

In studying and comparing documentary source material, the historian is often called upon to interpret fragmentary or ambiguous statements, as well as to exercise critical judgment as to the relative usefulness or dependability of certain authorities. The deliberate conclusions he reaches are of course reflected in the history he writes, but it is also meaningful to the reader to have his direct evaluation and description of the sources he decided to use.

Major buildings about which material has been published are a special kind of case, in which the following procedures are logical:

1. A bibliography, at least a basic one, should be made of the publications which are generally widely available.
2. A brief summary of published material should usually be made.



SPECTOR (1959) O'GORMAN (1960) - DEL.

EASTERN OFFICE PHILADELPHIA, PA.
UNDER DIRECTION OF UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE, BRANCH OF PLANS AND DESIGN

CAPT.
268 - 270

JAMES
SOUTH

SECOND
STREET

NAME OF STRUCTURE
ABERCROMBIE
PHILADELPHIA, PA.

HOUSE
PA.

SURVEY NO.

HISTORIC AMERICAN
BUILDINGS SURVEY
SHEET 4 OF 5 SHEETS

LIBRARY OF CONGRESS
BRIDGE NUMBER

3. Material which is difficult to locate should be quoted in full. All newly discovered material should, likewise, be given in the historian's account.

Manuscripts and rare documents should be described briefly as to their nature and their location given (as: Bart Anderson, "Descendants of John and Mary Ignew Miller," manuscripts, Chester County Historical Society, West Chester, Pa.; Clippings and manuscript files in the Chester County Historical Society, West Chester, Pa., under heading: South Coventry Twp. Lands.).

While the general nature of desired information has been given above, the writer of history has always to judge how long his account should be, what details should be included, and other questions. Two general principles are helpful: factuality and relevance. All relevant facts can be included in great detail as long as the text is accurate and meaningful. Verbatim transcripts of pertinent history are preferred to paraphrases because subtle errors can so easily be made both by the paraphraser and by the reader.

Sometimes the historian acquires information relating to the structure or the people associated with it, which is of interest in toto. This is best to quote verbatim and append to the formal write-up as "Supplemental Material." Accounts, inventories, eyewitness descriptions of events, valuable articles which have not been widely circulated, and similar "bundles" are included to advantage in this way.

ARCHITECTURAL DESCRIPTION

EXAMINING THE STRUCTURE. The technical description of an existing structure is primarily based on direct examination by an architect having free access to the exterior and interior. Expert knowledge and understanding of old construction, materials, moldings, finishes, and other significant aspects of historic architecture are needed to make a complete report of this type. One must not only observe the structure as a whole, and its parts, but must recognize the relationships between them and sense obscure or hidden meanings. The

Log cabin No. 2, Spring City, Utah. A rare and interesting structural detail: the use of vines for lath.



KENT FAIRBANKS

architectural investigator observes critically, analyzes, interprets, and finally explains the things seen, discriminating between factors of greater or lesser significance. The importance of having records prepared with the assistance of highly qualified technical observers can hardly be overstated.

HABS STANDARDS. HABS architectural description is intended to supplement and complete the information given by measured drawings, old prints, etc. (if any), and photographs. In a sense the description also repeats in part—in its own way—the graphic data in order to analyze, interpret, and make them more understandable to the non-specialized reader, who may be better attuned to verbal expression than visual. It is expected that description will be clear, orderly, and balanced, that all significant information which it is feasible to obtain will be included—among this mention of condition and color as well as form—and that relative significance will be recognized. Literary style is largely dependent on personal preference; conciseness is desirable. Short statements in the form of phrases are not objectionable here but longer ones are preferably composed in sentence form.

Basic identification—the name, location, and address of the structure—is needed in all cases. This identification should be consistent with that used by the historian, and if possible should be obtained from him.

A *general statement* as to the architectural interest and merit of the structure (i.e., why it was considered worth recording) and the overall condition of its fabric.

Summary description. This gives the number of stories, number of bays (if applicable), over-all dimensions and a concise characterization of the structure's layout or shape.

DETAILED DESCRIPTION OF EXTERIOR, by elements.

Foundations—height, materials, water table, thickness, peculiarities, condition.

Wall construction—finish materials, color, texture, condition, ornamental features (quoins, pilaster, belt courses, etc.).

Structural system—wall type (masonry or frame; bearing or curtain), floor systems, condition, roof framing, notable details, joinery.

Porches, stoops, terraces, bulkheads—location, kind, form, details, condition.

Chimneys—number, location, relative size, materials.

Openings (doorways and doors)—locations, individual descriptions, notable details.

Openings (windows and shutters)—fenestration, type, glazing, trim, shutters, shutter hardware.

Roof (shape, covering)—type (gable, hip, gambrel, mansard, flat), materials, condition.

Roof (cornice, eaves)—form of cornice treatment, materials, notable features, color, condition, gutter system.

Roof (dormers, cupolas, towers)—number, location, individual descriptions.

DETAILED DESCRIPTION OF INTERIOR, by elements.

Floor plans—simple clear analysis of each significant floor plan.

Stairways—location (if not given above), number, individual description (type, railing, balusters, newel, ornamental features), condition.

Flooring—type of flooring, size of materials, finish, condition.

Wall and ceiling finish—materials and their location, condition, cornices, wainscoting, paneling; composition and design of notable walls; ornamental details of note; color schemes.

Doorways and doors—types, description of typical, description of special interest, paneling, trim, color, finish, sizes; location of notable ones; treatment of window openings.

Interior trim—standing woodwork not described above: cabinets, built-in features, fireplace treatments; special ornamental features and their location.

Hardware—original or historical hinges, knobs, locks, latches, window hardware.

Mechanical and electrical equipment—original lighting fixtures or those with historical interest; call-bell systems; orig-



KENT FAIRBANKS

Staines-Jennings Mansion ("Devereaux"), Salt Lake City, Utah. An ornamental piece of original hardware: the ballroom doorknob.

inal and present heating systems, heating devices of historical interest; plumbing and sanitary fixtures of historical interest; locations and condition.

SITE AND SURROUNDINGS

Orientation and general setting—compass directions, immediate environment, topography, approaches.

Historic Landscape Design—traces of original or historic landscape treatment: layout, character, accessories, location of features.

Outbuildings—original and historical accessory structures (if they are not separately recorded): type, materials, features, condition.

The HABS Architect's Work Sheet is a form devised as a convenience to fieldworkers, particularly appropriate to a type of building frequently encountered in HABS projects, an average early American small house. It is used when it can prove helpful; in other cases the architect writes his description in the most appropriate way—including narration when that seems best.

SPECIAL PROBLEMS. *Field notes.* Some persons prefer to complete the writing of technical descriptions on the site, especially when the structure is complex or contains much decorative work. Others depend on taking succinct field notes and writing them up later; this generally works well for common or simple buildings. In no case, however, should one trust to memory.

Length of description. This depends on the importance and interest of the structure, its complexity, and the judgment of the writer. Verbosity is to be discouraged but there is no limit to information of significance. Features and details of conventional character, similar to those described in standard architectural books, need not be described at length, but rare and unique ones, as well as rare surviving examples, should be.

When circumstances do not permit full description, a brief one is preferable to none.

Story count. In giving the number of stories, basements are not normally included, but well lighted attics, especially with dormer windows, are counted as half stories. High basements are mentioned (as: two stories above elevated basement). Habitable stories enclosed by a mansard roof are normally mentioned individually (as: three stories plus mansard). The story count refers especially to the main portion of a structure but if other extensive parts are different, they should be mentioned.

Analysis or interpretation. Physical aspects of the forms, materials, sizes, etc., are basic to technical description, but to satisfy a historical purpose, these observed fragments need to be studied in relation to each other and to the whole structure. Whenever a sound conclusion can be reached, it should be presented as the opinion of the observer on the spot, who is in a strong position to interpret physical evidence.

To ascertain in this way the date or period of some part, or its state (i.e., original, added, modified, replaced, restored), physical evidence is considered (as: marks indicating the removal of a partition, stairs or trim; brick sizes, bond and width of joints). The relative order of parts is important to mention if their dates cannot be learned (as: roof framing may show that a chimney or a dormer was inserted after the original construction; brickwork may reveal a window closed up or later cut in). If certain old features (as: paneling or mantelpieces from another building, installed during "restoration") did not originally belong to a building, it is important to recognize and record the fact. Even if evidence cannot be interpreted at the time, it should be described; otherwise valuable clues may be lost. It is proper to express uncertainty (as: Trim appears original but may date from restoration in 1922) but unfounded speculation is not to be encouraged.

Robert Pierce House, Dorchester, Mass. Cedar clapboarding preserved in attic of lean-to. It is unusual to find remains of clapboarding as old as the 17th century.



CORTLAND VAN DYKE HUBBARD

Documentary evidence should be used to help interpret physical observations; likewise, physical evidence is helpful to supplement documentary study, and can sometimes clarify otherwise ambiguous points.

Individual scholars, studying HABS records, will generally attach greater importance to items which are historically identified than to those which are not. Interpretation also assists those who are studying specialized topics and particular periods; one may be interested only in the original portions (as: hewn timber framing) and another in additions (as: early central heating, late 19th-century ornament).

Condition. Form, size, structural system, and materials are so basic to description that in concentrating on them one may inadvertently neglect to look for and mention condition, when examining a structure. Since this quality applies to every part of the building one must continually be on the alert for deviations from the condition which one noted in the general statement at the beginning of the description.

Color and finish. Color, texture, and finish are generally considered important attributes of architecture; which should be recorded, but their recognition and precise description involve difficulties which do not apply to other aspects. These qualities pertain to *surfaces* which are subject to replacement, refinishing, deterioration, and discoloration; the observer is, therefore, faced with more exacting problems (even insoluble ones) of determining what the historically significant facts are. The very meaning of “historical color” is less precise than attributes of size or form, because building and finish materials are affected by chemical and physical changes which alter their original colors at varying rates (as: fading of pigments, absorption of substances from the atmosphere). Surfaces believed to be original (or as belonging to a certain period) deserve full attention. Hard and unabsorbent materials (as: polished granite, ceramic tile) are the most easily interpreted. When surfaces of wood, plaster, or brick have been renovated, it may be possible to find traces of an earlier

Hancock Shakers' Round Barn, Hancock, Mass. Detail of roof framing.



JACK E. ROUCHER

finish under areas which were covered, difficult of access, or which were not important enough to refinish. Whenever careful research techniques, such as those used by restorationists, can be applied, the resulting information is to be preferred. Data on qualities which are the latest in a series of renovations, often arbitrary (i.e., chosen according to the whim of the occupant) do not merit recording in detail but when more valuable facts are lacking they can be mentioned with qualification (as: Narrow lapped siding, a replacement of undetermined date, is painted white).

If the exact kinds of building materials can be cited, this often helps to define the color characteristics (as: Door trim, birch stained mahogany; New Hampshire pink granite).

Any well-observed description of colors, even when written in common words, is better than none, but greater precision is to be desired. It is best to employ a standard color notation system (as Munsell's). Observation itself is often subjective (i.e., different persons may see colors differently). The apparent color of something is also dependent on its illumination and the color of surrounding areas. For these reasons it is advisable to match the colors in question with samples, making sure that the samples themselves have not faded. Color photographs can be helpful for purposes of reference, although they are not permanent and their colors may not be completely "true" (especially when several colors of different "value" are shown at the same time). To look at a small photograph (or painting) and accurately understand the colors of the original building requires experienced judgment which relatively few persons possess.

As a representative kind of precise color notation, the Munsell system is briefly described here. Three attributes are analyzed: hue, value, and chroma. *Hue* is designated by five principal names (red, yellow, green, blue, and purple) and five intermediate names (yellow-red, green-yellow, blue-green, purple-blue, and red-purple). Lesser divisions are obtained by numbers, including decimals for the smallest dis-

tinctions. Thus, 5Y denotes yellow; 10Y midway between yellow and green-yellow.

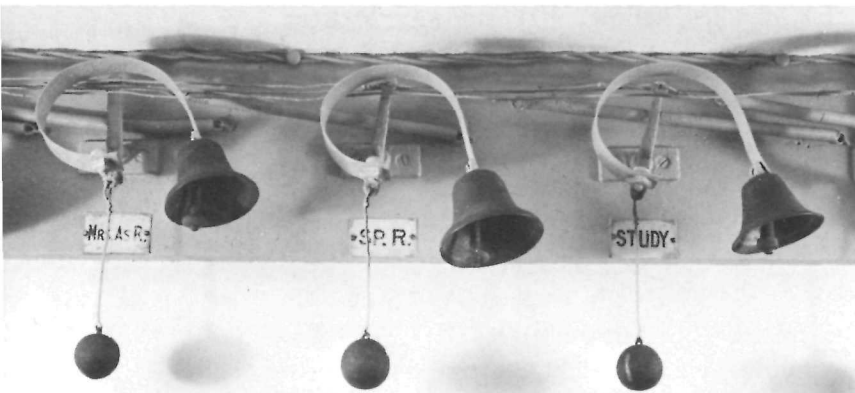
Value, the degree of lightness or darkness, is noted on a scale, black being 0/ and white being 10/. *Chroma*, the strength or degree of color saturation, is placed on a scale on which gray is /0.

The notation for a given color is written in this order: hue, value, and chroma (as: 2.5Y 8/2, a light cream; 5GY 3/2, a medium green; 7.5R 2/2, a dark red; 10YR 7/4, buff). In practice, the sample being described is compared with prepared color chips until the proper match is found, and the description noted.

A number of paints and pigments used during historical periods are identifiable today, and when these colors are observed they can be described by their historical names. Old painters' guides and builders' handbooks are a valuable source for these terms and they sometimes contain illustrative color samples. A knowledge of the paint ingredients used during a given period is helpful to the observer in interpreting colors, as well.

Structural systems. During all historical periods, structural aspects have been important, but after c. 1850, systems of construction employing iron and steel contributed greatly to the evolution of commercial, industrial, and public buildings and, therefore, take a large place in the study of the architecture of late periods. Piers, girders, fireproofing, trusses, and curtain walls are important elements, and when they illustrate bold experiments or imaginative innovations, they may be the most significant features of a given building.

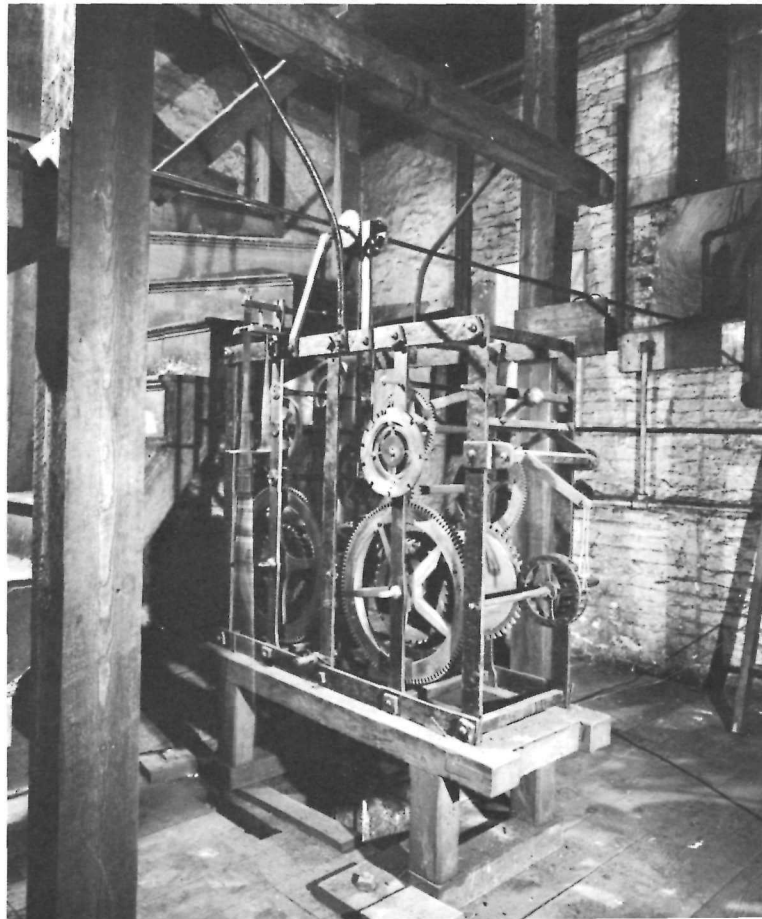
The description of a structural system should begin with a concise characterization (as: Skeleton steel framing with wind bracing, which consists of diagonal rods and lattice girders between the columns) and a statement about the structural bays (as: bays 21 feet 6 inches by 20 feet 2 inches). The major elements can then be taken up individually, in detail,



CERVIN ROBINSON

Adams Mansion, Quincy, Mass. Call bells in the kitchen. Equipment like this helps to illustrate the details of daily living.

Old South Meeting House, Boston, Mass. Clock mechanism, 1766.



CORTLAND VAN DYKE HUBBARD

(foundations, frame, floor and roof systems, walls and partitions) and their component members and materials given (structural shapes, as: joists 7-inch, 15# steel I sections; joints and connections, as: angles riveted to $\frac{3}{8}$ -inch gusset plate; fireproofing, as: columns protected by plaster on metal lath, 3-inch air space; form of trusses, as: triangular Howe truss).

Monumental buildings of masonry combined with metal often incorporate specially designed windows or exposed trusses worthy of detailed description. Other interesting features to observe include coffered stone ceilings suspended from steel members, the anchorage of widely projecting cornices of stone or terra cotta, and Guastavino vaults or domes.

In some cases it may be preferable to describe a structure by grouping its elements according to the building trades concerned (as: masonry, structural iron and steel, carpentry, sheet metal, etc.). When original plans and specifications have been preserved, or contemporary published descriptions can be found in architectural or engineering periodicals, verbatim transcripts can supplement or take the place of a long description by the observer. When such published accounts are readily available, a brief digest will suffice, in addition to noting the sources.

Mechanical, electrical, and sanitary equipment. In buildings of early periods one occasionally finds equipment or mechanical devices such as call bells, speaking tubes, dumbwaiters, wheel-hoists, fans, smokejacks, pumps, hydraulic rams, water tanks, sinks, drains, bathtubs, water closets, and flues for heating or ventilating. As rare items these deserve to be described in detail, even when only portions or traces remain. They are of great interest to the history of architecture and of technology, adding much to the value of a description.

In more recent times (since about 1850) gas and electric lighting systems, central heating and ventilating, passenger and freight elevators, conveyors, sanitary systems, and fire-



JACK E. BOUCHER

Milford (Gov. John L. Manning Plantation), Pine-wood Vicinity, S.C. This original lighting fixture is clearly defined against a light background.

Adams Mansion laundry, Quincy, Mass.



CERVIN ROBINSON

protection devices have become increasingly important parts of our buildings. As such, they demand a proportionate share of attention and, often, the interpretation of a specialist. One should be alert for special or experimental installations, those which illustrate early types or distinct stages in development, and devices once used but later abandoned (as: water-balance elevators). These ought to be described in detail but types commonly found and well described in books can be treated in a summary manner. Comparatively modest items like old shower baths, built-in kitchen ranges, ovens, and hot-water tanks should not be overlooked when describing mechanical equipment.

In general, each system includes fixtures within the “usable” rooms of a building, equipment in accessible “utility” areas, and ductwork which is partially or wholly concealed; these are described in turn. It is very important to distinguish between original equipment or parts, and those which have been replaced or modified. Systems which have not been “modernized” are of exceptional interest, especially when they can be dated and otherwise identified. Manufacturer’s marks or labels, patent dates, type names, model numbers, and power ratings ought to be noted verbatim. Some kinds of equipment (as: elevators or hoists) should be examined to determine what controls and safety devices may be found. Mode of operation of moving apparatus, tracks or guide rails, and kind of power should be included in a description.

Sometimes items or groupings of equipment, such as an early bathroom or kitchen range, when complete and unaltered, give a succinct glimpse of life at that period of history, and have a cultural and pictorial interest beyond their value to the study of technology.

Models of architectural description. Although written style is a personal matter, most of us can learn much by careful study of good models of architectural description, such as those given in the appendix, even though their descriptions are less detailed than most HABS documentation.

Edward E Ayer House, Chicago, Ill. Bathroom.



HAROLD ALLEN



JACK E. BOUCHER

Technical terminology. Descriptions depend greatly on technical terms. Those in common use present little difficulty but the description of rare and unusual features—inadequately treated in dictionaries—may be awkward. It is also difficult to find the right name for a given observed detail, if it is not illustrated.

For descriptive purposes the ideal terms are those having a single meaning (as: anta). Many others are equally precise when properly modified (as: quirked cyma reversa). General terms (as: trim) have their place in description but should not be used as substitutes for more precise ones in particular cases (as: surround, architrave). Regionalisms need not be avoided in detailed description but one should make certain that the context makes the usage clear (as: A two-room plan, with a central chimney, in front of which is the “porch,” containing a stair to the second floor). Similarly, style terminology, which is most appropriate when referring to details, can usually be used effectively when describing them (as: Roman Corinthian entablature, Jacobean strapwork). Some useful references are given in the appendix.

Order. There is no single best order which a technical description must follow; rather, the essential considerations are logic and appropriateness. HABS normally employs the general form illustrated in the “Sample of Written Data” reproduced on p. 116. After the basic identifications and a brief general statement, exterior elements are described one by one, interior elements next, and finally the site. There is no cogent reason, however, why the same building could not have been described equally well in another sequence; a narrative style might also have been used.

The nature of the structure will often suggest an appropriate order of description; this is true of the two illustrative cases, which are given in outline at right.

Examples of Order of Description.

James Brice House, Annapolis, Md.: This is a notable mid-18th-century house composed of a central block and wings. The main block, which contains noteworthy ornamental features, has recently been restored with great care. The order followed in describing this house was:

1. Notes on the restoration.
2. General statement.
3. Exterior of main block.
4. Interior of main block:
 - Plans.
 - Stairways.
 - Flooring.
 - Wall and ceiling finish:
 - General.
 - Paint color schemes.
 - Interior finish, room by room.
5. Wings and connecting links, one by one.
6. Site.

Fort Moultrie, on Sullivan’s Island, S.C.: This fort, the third on the site, was completed in 1811 and subsequently modified. Much of the structure is covered by earth mounds. The order of description was:

1. General statement.
2. Description of plan.
3. Exterior, part by part.
4. Interior, part by part.
5. Gun emplacements.
6. Site.

HISTORIC AMERICAN BUILDINGS SURVEY

TUCKERMAN-PARKMAN HOUSE HABS NO. MASS-965

Location: 33 Beacon Street, Boston, Suffolk County, Massachusetts (Beacon Hill)
Geographic Location Code: 20-0120-025
Latitude: 42°21'26" N. Longitude: 71°03'55" W.

Present Owner: City of Boston

Present Occupant: Boston Park Department

Present Use: Offices of the Boston Park Department

Statement of Significance: This is a large, elegant building, typical of the Beacon Hill houses of the early nineteenth century. It is one of a group of three row houses built at the same time with identical facades, and is important as a harmonious part of the architectural context of Beacon Hill.

PART I. HISTORICAL INFORMATION

A. Physical History:

1. Original and subsequent owners: The house was built on land that was originally part of the Hancock estate; the Hancock house was located a short distance to the east. Israel Thorndike began buying out the Hancock heirs in the summer of 1821, and in turn, sold the land on which this and the adjoining houses stand to John Hubbard in May, 1823. Hubbard, active in developing this area, built the three adjoining houses, 32, 33, and 34 Beacon Street, at the same time. In May, 1823, he was assessed for these three houses, as yet unfinished. The 1825 assessment indicates that the houses were finished, but the stables still unfinished. By the 1826 assessment, they were also completed. In September, 1825, number 33 was purchased by Edward Tuckerman from Hubbard for \$35,000. In 1853, at Tuckerman's death, it was sold to the widow of Dr. George Parkman for \$40,000. Parkman's son George, who died in 1908, bequeathed the house to the City of Boston as part of his very large endowment of the City's parks.
2. Date of erection: 1823-25.
3. Architect: The house was probably designed by Cornelius Coolidge (1778-1843) was a self-made businessman, real-estate developer, builder and architect. He is known to have been closely associated with Hubbard during the years 1824-29, and was probably the architect and builder for this house, as well as Hubbard's other building projects during this period.

TUCKERMAN-PARKMAN HOUSE
HABS NO. MASS-965 (Page 2)

4. Alterations and additions: The east window on the second floor, opening onto the balcony, was widened. Photographic evidence indicates that this occurred before 1860. The window was returned to its original form in the early twentieth century. Evidence of the alteration is apparent on the interior. The interior of the house has been altered for office use.

B. Historical Events and Persons Connected with the Structure:

The Parkmans were descendants of an old and wealthy Boston merchant family. George Parkman's father, Dr. George Parkman, a Harvard professor, was the victim of one of the most sensational murders of the nineteenth century. His colleague, John White Webster, was convicted of the crime on the basis of circumstantial evidence after a highly-publicized trial which has gone down in the annals of American legal history. The son, a Harvard graduate who had been leading a rather carefree life in Europe up to that time, returned and occupied this house from 1853 until his death in 1908, becoming more and more recluse. The house was part of Parkman's \$6,000,000 bequest to the City of Boston for the care of its parks.

C. Sources of Information:

1. Old Views: There are four views of the house in the photographic file of the Boston Athenaeum: 1 and 2) views of Beacon Street, c. 1860, by Hawes. Hawes' negative numbers are 537 and 356; 3) view of 33 Beacon Street probably taken after 1890 and before 1924; 4) view of 32, 33, and 34 Beacon Street taken before 1924. Views 1, 2, and 3 show the east window, second floor as it was altered. View 4 shows the window in its present form.

2. Bibliography:

Bernstein, Allen. "Cornelius Coolidge, Architect of Beacon Hill Row Houses, 1810-1840," Old Time New England, XXXIX (October, 1948), 45-46.

Chamberlain, Allen. Beacon Hill, Its Ancient Pastures and Early Mansions. Boston: Houghton Mifflin Company, 1925, pp. 149-155, 281-284.

Sunday Herald (Boston, February 21, 1915).

PART II. ARCHITECTURAL INFORMATION

A. General Statement:

1. Architectural character: This is a typical example of the large, elegant houses of Beacon Hill in the early nineteenth century.

2. Condition of Fabric: Good.

B. Description of Exterior:

1. Over-all dimensions: This row house, about 30 feet wide (three bays), shares party walls with similar houses on both sides. It is four stories high. There is a four-story, one-bay wing at the east rear which connects with a stable. The whole complex is U-shaped.
2. Foundations: Brick and stone.
3. Wall construction, finish and color: Brick with rusticated, regular ashlar facing on the ground floor.
4. Structural system, framing: Brick party side walls, wood interior framing.
5. Porches: There is a cast-iron balcony across the main facade at the second floor level.
6. Chimneys: There are three chimneys in the party walls.
7. Openings:
 - a. Doorways and doors: The recessed main entrance is in the east bay. The stone surround has two Ionic columns in antis.
 - b. Windows and shutters: Wooden double-hung windows on the ground floor have six-over-six-light sash. French doors on the second floor reach from the floor nearly to the ceiling and give access to the balcony. Double-hung windows on the upper floors have later two-over-two-light sash.
8. Roof:
 - a. Shape, covering: A gable roof with parapet at front.
 - b. Dormers: There are two gabled dormers on the front.

C. Description of Interior:

1. Floor plans:
 - a. Basement: There is a cellar with brick floor under the front part of the house only. It contains furnace room and coal bins.
 - b. First floor: The entrance in the right-hand bay opens into a small vestibule which leads to the main stair hall.

To the left of the stair hall are two large rooms separated by a small office. The front room, probably the original dining room, retains most of its original finish. The kitchen to the rear has been heavily remodelled. An elevator is located behind the main stairway. Behind it, there is a single room in the rear wing at the rear of which is a service stair.

- c. Second floor: The plan is similar to the first floor. The two principal rooms are double parlors connected by a wide doorway with a pair of sliding doors. There is a small room above the first floor entrance vestibule. The lot slopes to the rear, and the stable is approached through the rear wing of the second floor.
 - d. Third and fourth floors: Wide, deep doorways containing cupboards separated the paired rooms on these two floors. These have been removed on the fourth floor and partially removed on the third.
 - e. Attic: The attic is finished over the main block only and contains three small servants' rooms.
2. Stairways: The main stair is an open-well, open-string stair of oval plan with slender tapered balusters. A simple molded handrail, scrolled at the first floor, runs unbroken by newels through four floors. There is a circular skylight with radiating mullions over the open well. A modern metal service stair is in the rear wing.
 3. Flooring: Many areas are now covered with asphalt tile. There is narrow, hardwood flooring in other areas.
 4. Wall and ceiling finish: Painted plaster.
 5. Doorways and doors: Paneled wooden doors have pilaster trim with carved corner blocks. In the south room, second floor, french doors lead to the balcony. The wide doorway between the double parlors has a pair of oversized sliding doors. The opening is framed with Corinthian pilasters. Doorways and doors are now painted white. Principal interior doors are probably of dark, hard wood, such as mahogany.
 6. Trim: Parlor ceilings have modillion cornices. Dining room ceiling is divided into panels by applied plaster moldings.
 7. Hardware: Some simple silver hardware with round knobs survives on the interior doors.
 8. Lighting: There are modern fluorescent ceiling lights throughout the house except in the double parlors where

each room has a chandelier converted to electricity from gas. The chandelier in the front parlor was probably installed soon after the Parkmans acquired the house. The chandelier in the rear parlor is older, perhaps contemporary with the house.

9. Heating: There are fireplaces in most of the principal rooms. Those in the dining room, the double parlors, and the room above the entrance vestibule are most notable and have elaborately carved or paneled marble mantles.

D. Site:

1. General setting and orientation: The house faces south-southeast, the center one of three adjoining row houses which face Boston Common across Beacon Street.
2. Outbuildings:
 - a. Stable: The attached stable, mentioned in the tax assessments of 1825 and 1826, survives with very few apparent alterations. The lot slopes up to the rear of the house. The one-and-a-half story building has brick walls with openings for doors and windows framed in granite. Double wooden doors open to the main level from the alley at the rear. There is a wooden floor and wood and plaster walls. A broad skylight with wooden sides rises through the high attic. Any partitions or stalls have been removed. The attic or hay mow is approached by ladder through the side of the skylight passage. Sliding wooden shutters on the sides of the skylight admit light to the attic. An arched doorway for lifting hay and grain into the attic from the alley is above the doorway to the main level. The attic also contains carefully made wooden bins for storing grain. A wooden ventilating duct with wooden dampers and grills runs across the ceiling of the lower level, up through the attic, and empties at the top of the skylight.
 - b. Privy: A privy opens off the short passageway that connects the stable with the rear wing of the house. It appears to date from the original building of the house and is unaltered. The simple wooden bench with three graduated seats empties into a brick lined well, about 15' to 20' deep. Walls and ceilings are plaster. There is one window.

- c. Walks, enclosures: A small garden is enclosed by the main block, the rear wing, the stable, and the adjoining house to the west. The house is approached directly from the sidewalk at the front. The stable is entered through the alley at the rear.

Prepared by Osmund Overby
Project Director
National Park Service
August 1968

PART III. PROJECT INFORMATION

These records are part of the documentation made during the 1968 Boston Summer Project undertaken by HABS in cooperation with the Old South Meeting House Association, the Town of Barnstable, Massachusetts, and the Society for the Preservation of New England Antiquities. During the summer records were made of eight historic buildings in Boston and vicinity.

The project was under the general supervision of James C. Massey, chief of the Historic American Buildings Survey. Project Director was Dr. Osmund Overby of the University of Missouri. Team Supervisor was Professor Woodrow W. Wilkins of the University of Miami. Student Assistant Architects who prepared the measured drawings for the project were William L. McQueen (University of Illinois), Charles D. Matter (Rhode Island School of Design), Barbara Stokey (Carnegie-Mellon University), and Noré V. Winter (Tuland University). Photographers Cortlandt V. D. Hubbard of Philadelphia and George Cushing of Boston made the documentary photographs.

SPECIALIZED RECORDING TECHNIQUES

GENERAL SURVEYS

Surveys of historical districts, sites, monuments, and structures are made in a number of ways and put to a variety of uses.¹ The dimensions of the area being surveyed, the type of subject material and the amount of information desired for each subject, all affect the techniques to be employed. The previous parts of this book having dealt principally with the recording of buildings, this part will discuss problems of other kinds, and describe methods which differ from or add to those already covered.

The expertise needed for each kind of subject will, of course, differ—from the identification of growing plants to the structural analysis of bridges and familiarity with early steam engines, etc. Each will also have specialized criteria, even though based on the same broad principles.

INVENTORIES

An inventory is essentially the preliminary investigation of a sizable area to find out what it contains of value or interest, of a given nature (i.e., architectural, historical, industrial, etc.). Records made during an inventory are purposely brief; for example, those of the HABS Inventory² devote a single page to each structure. Records made en masse are of value in several ways. They afford a sound basis on which to plan

¹ See James C. Massey, *The Architectural Survey*, in Preservation Leaflet Series, National Trust for Historic Preservation, Washington, D.C.

² The Historic American Buildings Survey Inventory (HABSI) is a nationwide, quasi-governmental inventory of historic buildings, sponsored by the American Institute of Architects, the National Park Service, the Library of Congress, and the National Trust for Historic Preservation. HABSI record forms have been employed for a number of other mass surveys, as well.

The National Register record form is also receiving wide use in preliminary surveys.

Information for the Inventory

Basic identification and location, ownership and use, classification by stories and construction.
Name, date or period, classification as to style, names of architect and builder.
Description of the structure and statement of its historical significance.
Evaluation of the physical condition.
Location map and photograph.
List of publications.
Identification of the person making the record.

LANDSCAPE ARCHITECTURE

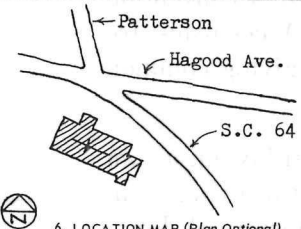

and conduct more intensive surveys of historic architecture, industrial archeology, and the environment in general. They give a good overview of the distribution, number, kinds, and condition of historic structures in the given area, and make well-informed comparisons with other areas possible. The file of inventory records is valuable for purposes of preservation when seeking legal protection for historic properties. Lists based on such files are used to secure official recognition of significant buildings and sites by State governments and by the National Register.

The data which an inventory secures about each structure comprise basic identification and characterization, a brief physical description, a concise history, and, often, an evaluation of its importance. The HABS type of record is quite representative of inventories in general; it is described at left.

The HABS employs a one-page printed form.³ The completed record can be reproduced for public use by any common photoduplication process. It is easy to handle and to index. In addition to mass survey uses this form is readily adaptable by both professionals and nonprofessionals who wish to take a worth-while part in gathering and recording information about historic structures for the archives. It is flexible enough to allow each person to put down what he has found in his own way, and does not require specialized skills nor expensive equipment. One need not make up a formal project in order to record structures for HABS, but he is free to add his records to any project as a supplement, if he wishes.

SPECIAL CRITERIA. As a rule, plant materials are relatively short-lived, making the preservation of a planted area difficult. Erosion and neglect can seriously modify the basic forms of sloping or terraced areas. Properties which retain evidences of the pattern and character of their historic site

³ Forms may be obtained by writing to the American Institute of Architects, 1735 New York Ave. NW., Washington, DC 20006, or to the Chief, Historic American Buildings Survey, Office of Archeology and Historic Preservation, National Park Service, Washington, DC 20240.

1. STATE South Carolina COUNTY Barnwell TOWN Barnwell VICINITY STREET NO. Hagood Ave. & Patterson (on S.C. Rt. 64, SE. of business district) ORIGINAL OWNER Episcopal Church ORIGINAL USE Church PRESENT OWNER Episcopal Church PRESENT USE Church WALL CONSTRUCTION Wd. frame; board & bat- NO. OF STORIES One; gallery ten.		HISTORIC AMERICAN BUILDINGS SURVEY INVENTORY	
2. NAME Church of the Holy Apostles (Episcopal) DATE OR PERIOD 1856; consecrated 1857 STYLE Gothic Revival ARCHITECT Barbot & Seyle of Charleston BUILDER --		3. FOR LIBRARY OF CONGRESS USE	
4. NOTABLE FEATURES, HISTORICAL SIGNIFICANCE AND DESCRIPTION OPEN TO PUBLIC Yes <p>This congregation was established Nov. 18, 1848. In 1856 the Rev. E. A. Wagner set aside 1 1/8 acres of land for the building of this church: a Gothic structure with a nave 25' x 50', vestry 8' x 9', and tower 8' square. It was built at a cost of \$3,500. The building was seriously damaged during the Civil War. Repairs were made and a new organ installed in 1867. The building was vacant in 1883. A new organ was installed in 1925, a new altar and heating plant in 1946. The building was renovated in 1948.</p> <p>This attractive small wooden church, which is oriented in the traditional manner, has a gabled tower projecting from the north side of the second bay, its lower story being the entrance vestibule. The walls are covered with vertical boards and rather heavy closely-spaced battens; bays are marked by wooden buttresses. Windows on the sides are arched (two-centered, pointed) and trimmed with hoodmoulds. A larger single window at each end is ogee-arched and ornamented with a finial. The roof is gabled.</p> <p>The nave consists of five unaisled bays. Over the west end is a gallery; a two-centered pointed arch at the east end opens to the chancel, from the west side of which projects a gabled vestry. The nave has an open-timber roof of scissors trusses; there is a plaster cornice with cove.</p> <p>A cast-iron fence encloses the church yard, in which is a cemetery. The tower is seen to advantage looking south along Patterson St.</p>			
5. PHYSICAL CONDITION OF STRUCTURE Interior Good Exterior Good			
6. LOCATION MAP (Plan Optional) 		7. PHOTOGRAPH 	
8. PUBLISHED SOURCES (Author, Title, Pages) INTERVIEWS, RECORDS, PHOTOS, ETC. Albert Sidney Thomas, <u>A Historical Account of the Protestant Episcopal Church in South Carolina</u> (Columbia, S. C., 1957), pp. 175-178.		9. NAME, ADDRESS AND TITLE OF RECORDER Harley J. McKee, Professor of Architecture, Emeritus, Syracuse University, Syracuse, N. Y. 13210	
DATE OF RECORD May, 1967			

A completed HABS record.

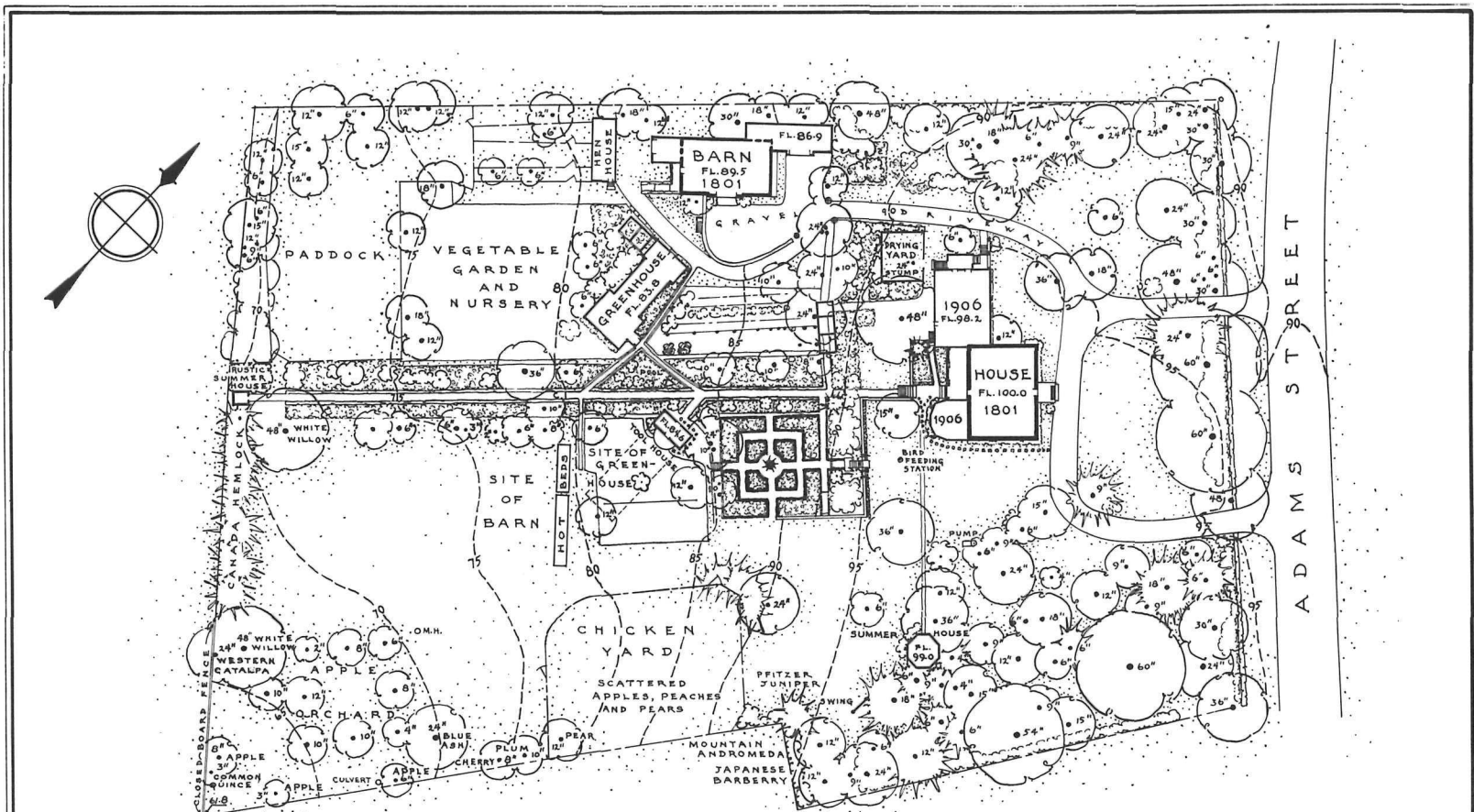
development are rare and should be given high priority for recording.

MEASURED DRAWINGS. To a large extent these are similar to architectural drawings, but the equipment needed to survey larger areas of land and to establish relative elevations, must include a surveyor's level and longer tapes, or accurate range-finders. Greater reliance is placed on plans, both general and detailed, which must show the land form with contour lines; sections are sometimes drawn, too. The elements featured in plan drawings include trees, shrubs, hedges and other planting, fences, driveways, pavements, patios, walks, grass areas, streams and other water features (if present), retaining walls, garden accessories, and accessory buildings. Making measured drawings of accessories, such as trellises, gates, fountains, and shelters, does not differ appreciably from making architectural drawings with plans, elevations, sections, and details.

Landscape plans give few dimensions, depending on accuracy of "scaling" from the drawings to determine those that are desired. They are commonly drawn at "decimal" scales (10 feet to the inch, 20 feet to the inch, etc.). Notations of elevations are given to key points. The locations of trees, shrubs, flowerbeds, etc., are shown, and related to the buildings on the site. Tree sizes are noted and the kinds of plants are identified by name. Ground-covering materials are indicated on plan drawings (grass, gravel, paving) often both by a convention (with a key given on the sheet) and notes. Accessories are identified by notes. A list of plants is made, giving common and botanic names.

When there is sufficient evidence of the original layout, a conjectural restoration may be drawn; a series of drawings can, likewise, illustrate its appearance at various historical dates, or trace its evolution.

Many handsome gardens have been recorded for HABS, especially in Massachusetts, where a specialized landscape architecture project was carried on in the 1930's.



GENERAL NOTES

The garden was laid out in 1801 by Dr. Amos Holbrook. The long path leading from the central axis of the house to the rustic summer house at the end of the property was part of the original layout. This path is bordered on either side with English Ivy which has been trained into a low mat one foot wide to form a neat edging for a wide perennial border containing many trees and shrubs. The formal garden was laid out between 1908-13. Steps lead from it to the terrace above which was completed in 1911.

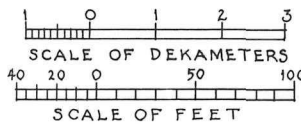
The barn was moved to its present location in 1908.

The old greenhouse which was at the end of the tool house was razed in 1914 and the new one was built.

LEGEND

- [] = OLD STRUCTURE
- [] = NEW STRUCTURE
- = RETAINING WALL
- - - = WIRE FENCE
- = STEPPING STONES
- ▬▬▬▬ = BOX EDGING
- [] = GRASS AREAS
- [] = PERENNIALS
- ⊙ = CATCH BASIN O.M.H. = MAN HOLE

- [] = SHRUBS
- [] = EVERGREEN FOLIAGE
- DATUM ASSUMED. CONTOUR INTERVAL FIVE FEET.
- REFERENCE TO PLANT MATERIAL "STANDARDIZED PLANT NAMES", 1924 RECORDED 1937
- SEE SHEET 2 FOR DETAIL OF FRONT OF HOUSE
- SEE SHEET 3 FOR DETAIL OF GARDEN
- SEE SHEET 4 FOR PLANT LIST.



GENERAL PLAN
HOUSE BUILT 1801, GARDEN LAID OUT 1801

LOUISE ROWELL, DEL.

NAME OF STRUCTURE

DR. AMOS HOLBROOK PLACE, MILTON, NORFOLK CO., MASS.

WORKS PROGRESS ADMINISTRATION
OFFICIAL PROJECT NO. 265-6907
UNDER DIRECTION OF UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE, BRANCH OF PLANS AND DESIGN

SURVEY NO.
MASS.
232

HISTORIC AMERICAN
BUILDINGS SURVEY
SHEET 1 OF 4 SHEETS

LIBRARY OF CONGRESS
INDEX NUMBER



Chester Springs Hotel summerhouse, Chester County, Pa.

PHOTOGRAPHS. Aerial photographs are good supplements to drawings of a site, to show how it is related to the surrounding area; oblique views taken from a low elevation are excellent to show the over-all character. Well chosen compositions from the ground or from buildings are basic, as are photographs of details and accessory structures. Color photographs are useful to supplement the more permanent black-and-white negatives, particularly in rendering distinctions between plant materials which are less distinct in tones of gray. Landscape photography requires the services of a professional with special experience in this kind of subject.

EXISTING GRAPHIC RECORDS. Since existing conditions may differ considerably from the original layout, or that during significant historical periods, it is desirable to make photographic copies of relevant graphic material which can be found. This includes original plans, perspectives, and elevations (as: Thomas Jefferson's drawings for his "Academical Village" and serpentine walls at Charlottesville, Va.), as well as old maps, prints, and photographs.

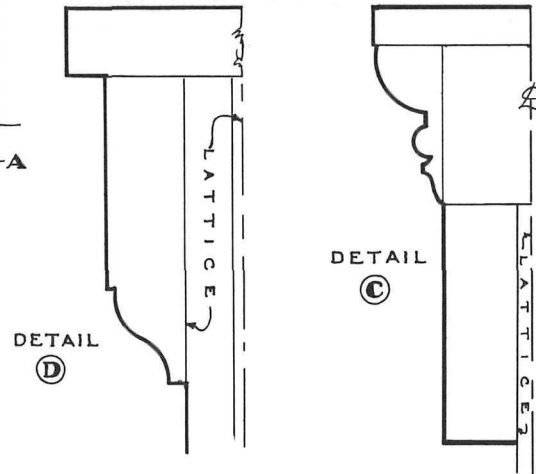
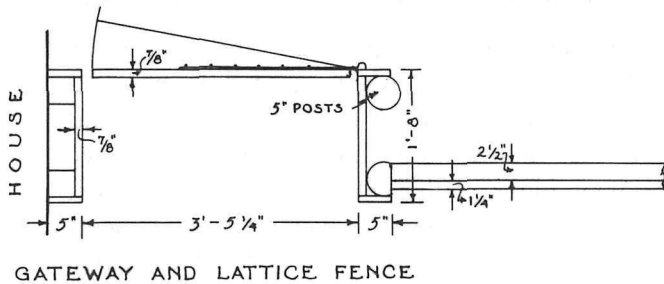
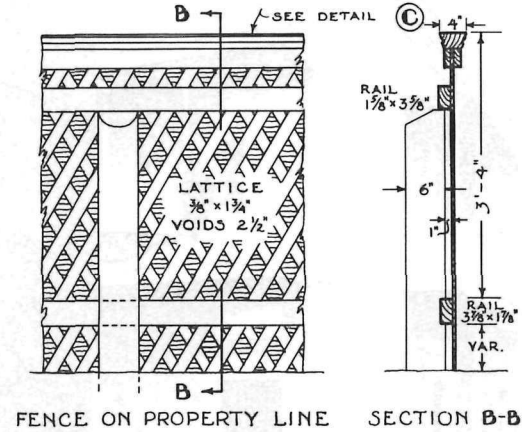
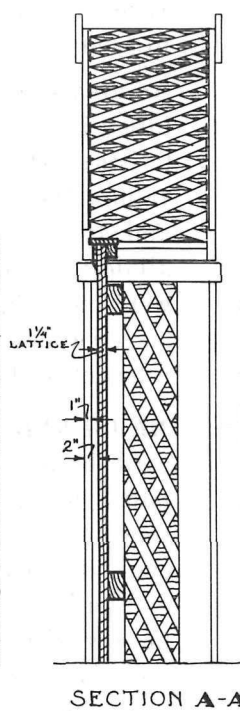
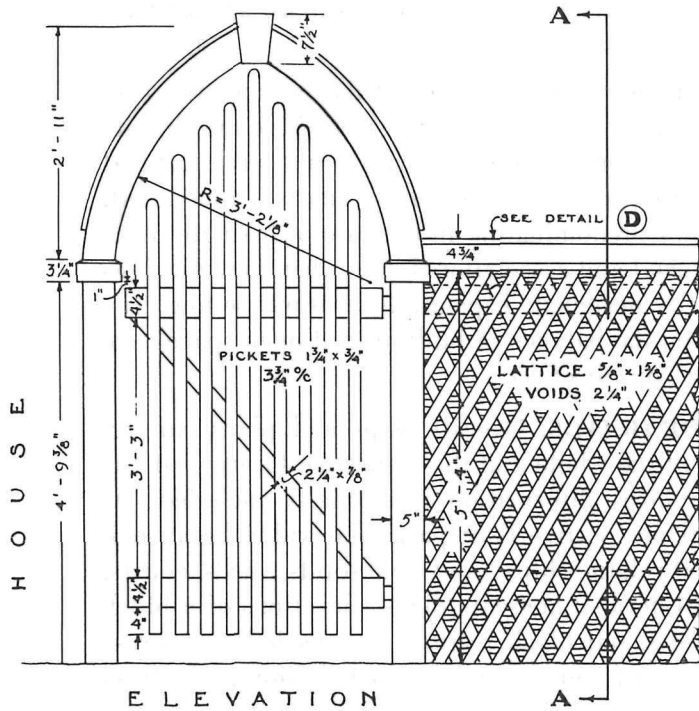
WRITTEN DATA. This history of a garden or a developed site can be written in a manner similar to that of a building, including both the physical aspects and the association with persons and historic events. If possible, it ought to be supplemented by verbatim transcripts of old descriptions, lists of plantings, and copies of old graphic material.

When landscape drawings are well annotated it is unnecessary to repeat this information in written description. Such items as condition and the description of accessory structures may, however, conveniently be given in written form. When doing this it is well to include a brief characterization or summary description of the site.

When several historic structures form a coherent ensemble it can be an advantage to record them in a group. Sometimes unity is due to formal planning, but the buildings around a village green, in a row along a street, or in a block sometimes acquire a harmonious relationship among themselves and

AREA STUDIES

RECORDED 1936



NOTE - ALL PARTS WOOD.
PAINTED WHITE.

FENCE AND GATEWAY WEST OF HOUSE
HOUSE BUILT 1811-12 GARDEN LAID OUT C.1815

MARGARET M. WEBSTER, DEL.

NAME OF STRUCTURE

PIERCE-KNAPP-PERRY PLACE, NEWBURYPORT, ESSEX CO, MASS.

WORKS PROGRESS ADMINISTRATION
OFFICIAL PROJECT NO. 265-6907
UNDER DIRECTION OF UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE, BRANCH OF PLANS AND DESIGN

METRIC SCALE

SCALE OF FEET FOR PLAN, SECTIONS & ELEV.

SCALE OF INCHES FOR DETAILS

SURVEY NO.
MASS.
236

HISTORIC AMERICAN
BUILDINGS SURVEY
SHEET 7 OF 9 SHEETS

LIBRARY OF CONGRESS
INDEX NUMBER



JACK E. BOUCHER

101 Calle San Jose, San Juan, P.R. General view from northwest.

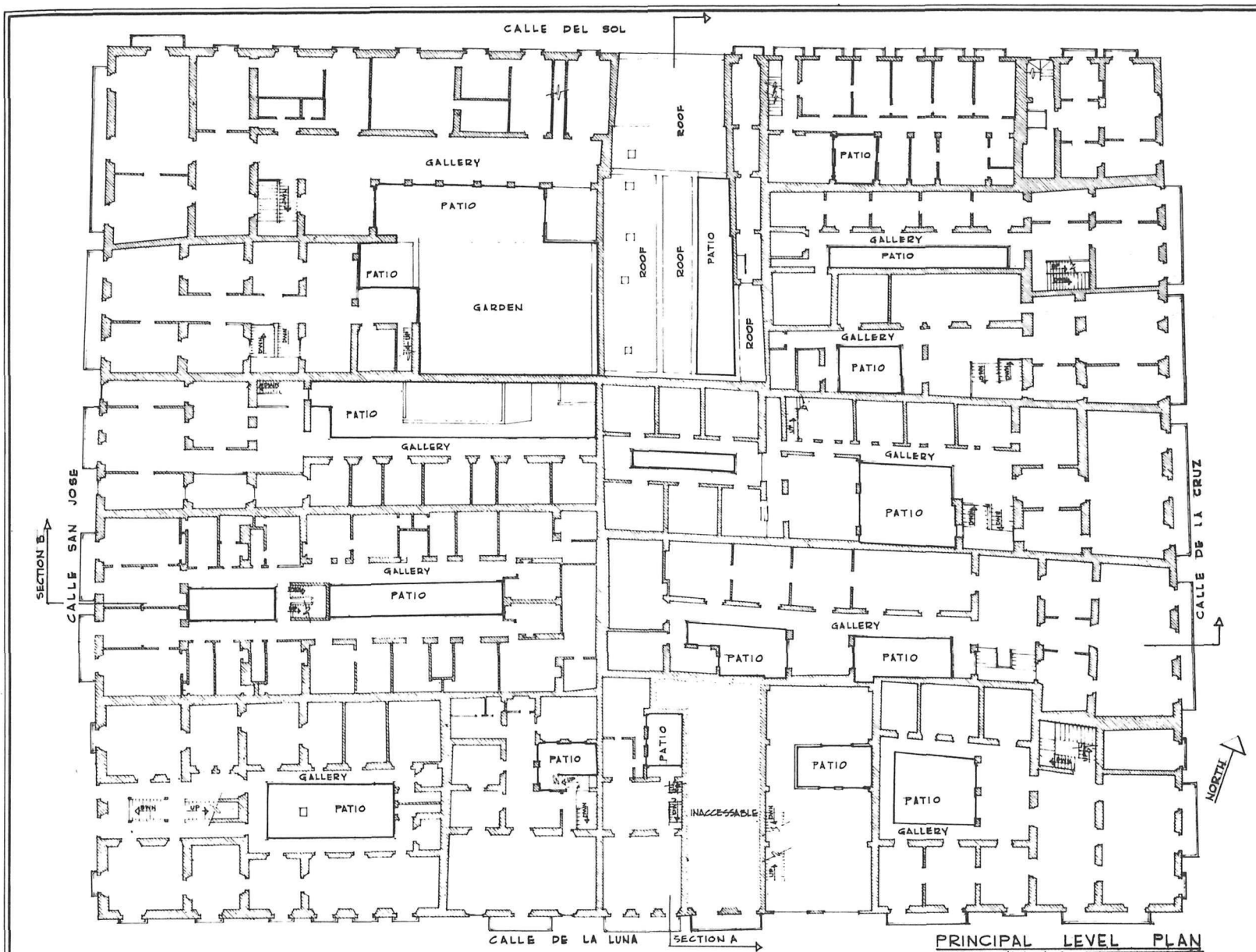
with the spaces around them. In either case the interest is increased by the harmony and by considering them together. When sizable areas are being studied it is more appropriate to treat them as a historic district (see below, pp. 130-137).

An area study is more than a record of the individual structures; in addition to them it is essential to include the characteristics which heighten their historical and architectural value. These are largely relationships: spatial, functional, and stylistic ones predominating in the case of a single overall design, pictorial and associational ones when the buildings were individually designed. Topography, natural setting, vistas, contrasts and the balance of built-up and open spaces are relevant to the over-all effect.

MEASURED DRAWINGS. Overall maps and plans can record the form of the whole and the respective location of the parts; topographical information is normally included. At times an aerial perspective is of particular value because it can show spatial relationships: voids and solids, yards, courts, and buildings. Intermediate-scale plans, elevations of a block or row of facades and block sections are needed to express both the character of a group and the contribution each structure makes to the group. Individual buildings can be drawn.

The block study of the "Isleta de San Juan," the old section of San Juan, P.R., illustrates a typical set of drawings; 12 sheets were made: on one is a map of the historic district and a plan of the "Isleta" and its immediate neighbors; on two sheets there are floor plans of the entire block, at the street level and at the principal floor level, respectively; two sheets give the street elevations of the four sides of the block; two sections through the block are on another sheet, and six sheets are given over to details from five selected buildings (each building was designed and built individually).

"John H. Smith's Row" in Petersburg, Va., which consists of four similar houses, was recorded on nine sheets. The first contains a site plan and the street elevation of the whole row; the remaining sheets deal with one selected house, recording it



PRINCIPAL LEVEL PLAN
SCALE: 1/16" = 1'-0"

DRAWN BY: STEPHEN SWANEY, 1966

SAN JUAN NATIONAL HISTORIC SITE
HABS SAN JUAN, PUERTO RICO, 1966
UNDER DIRECTION OF THE NATIONAL PARK SERVICE,
UNITED STATES DEPARTMENT OF THE INTERIOR

SAN JUAN ANTIGUO

BLOCK STUDY - HISTORIC ZONE

NAME AND LOCATION OF STRUCTURE

ISLETA DE SAN JUAN

PUERTO RICO

SURVEY NO.
PR

HISTORIC AMERICAN
BUILDINGS SURVEY
SHEET 5 OF 12 SHEETS

LIBRARY OF CONGRESS
PHOTODUPLICATION SERVICE



STREET FACADE : CALLE DEL SOL
SCALE : 1/16" = 1'-0"



STREET FACADE : CALLE DE LA LUNA
SCALE : 1/16" = 1'-0"

DRAWN BY: OCTAVIO FIGUEROA, 1966

SCALE : 1/16" = 1'-0"



SAN JUAN NATIONAL HISTORIC SITE
HABS SAN JUAN, PUERTO RICO, 1966
UNDER DIRECTION OF THE NATIONAL PARK SERVICE,
UNITED STATES DEPARTMENT OF THE INTERIOR

SAN JUAN ANTIGUO,

NAME AND LOCATION OF STRUCTURE

BLOCK STUDY - HISTORIC ZONE

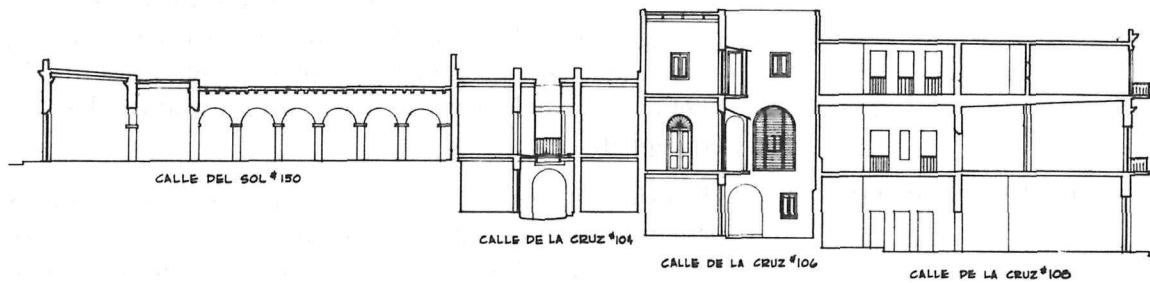
ISLETA DE SAN JUAN

PUERTO RICO

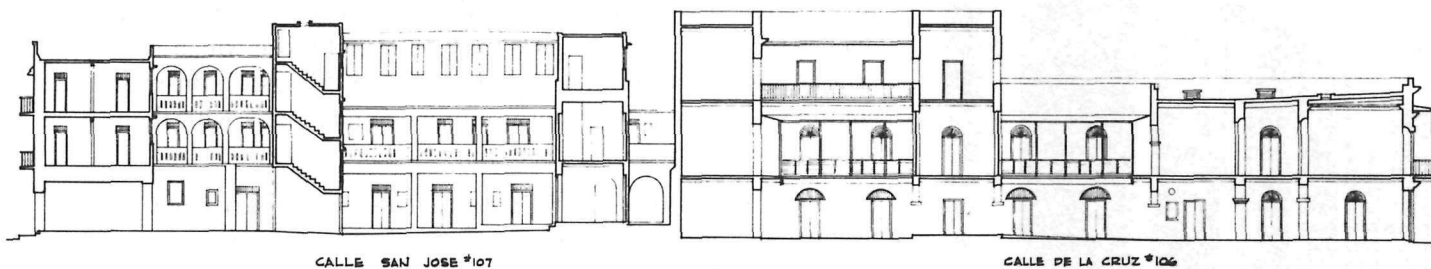
SURVEY NO.
PR

HISTORIC AMERICAN
BUILDINGS SURVEY
SHEET 4 OF 12 SHEETS

LIBRARY OF CONGRESS
PHOTO DUPLICATION



SECTION A
SCALE: 1/16" = 1'-0"



SECTION B
SCALE: 1/16" = 1'-0"

SCALE: 1/16" = 1'-0"



DRAWN BY: JOHN CROSBY, 1966

SAN JUAN NATIONAL HISTORIC SITE
HABS SAN JUAN, PUERTO RICO, 1966
UNDER DIRECTION OF THE NATIONAL PARK SERVICE,
UNITED STATES DEPARTMENT OF THE INTERIOR

SAN JUAN ANTIGUO

NAME AND LOCATION OF STRUCTURE

BLOCK STUDY - HISTORIC ZONE

ISLETA DE SAN JUAN

SURVEY NO.
P.R.

PUERTO RICO

HISTORIC AMERICAN
BUILDINGS SURVEY
SHEET 6 OF 12 SHEETS

LEGACY OF ENDORSE
INDEX NUMBER

with floor plans, elevations, and details in the manner described in the chapter entitled MEASURED DRAWINGS.

PHOTOGRAPHS. Aerial photographs made to scale are indispensable when the area of study has not been mapped; they are also useful to show the environs of the area. "Close-up" oblique aerial photographs taken from a helicopter are especially good for depicting the character of a small area and its structures, as are drawn perspectives. Conventional photographs of the individual buildings, gardens, rows, street scenes, and vistas complete the photographic records. If old photographs and prints of value are available, they should be copied.

HISTORIC DISTRICTS

Historic districts are formally established by a city, State, or nation as units with precise boundaries which are legally defined. Other kinds of areas sometimes have legally defined boundaries and sometimes they do not. In a historic district it is not necessary for all buildings within it to be considered historic. At present there is particular emphasis on recognition of historic districts and their protection; the National Register has shown this unit to be a great new factor in effective preservation in rural areas as well as in urban ones. Among historic districts may be found those which contain a high concentration of historic buildings, industrial complexes, forts, waterfront groupings, and canals with their attendant structures.

Surveys of a historic district (or a comparable area not so designated) may be made for a scholarly purpose (i.e., to study and publish), to fulfill legal requirements (as: to become eligible for grants-in-aid), as a guide to action (preservation or restoration), to record before destruction (as: for flood control), or to gather information needed for prudent management (as: in a park).

HABS makes three types of historic district studies. One is a descriptive analysis of the district as a coherent area; this is similar to an area study as discussed on page 124, although it may deal with a larger space. Another type is the study of

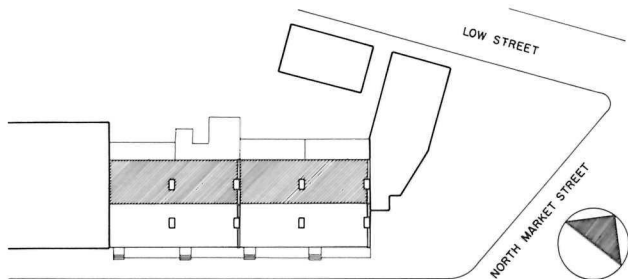
Girard-Peterson House, Philadelphia, Pa.



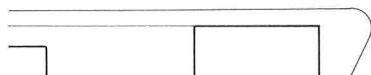
CERVIN ROBINSON

JOHN H. SMITH'S ROW

THESE FOUR FINE FEDERAL ROW HOUSES WERE BUILT C. 1837-1838 AND SHOULD BE NOTED ON THE EXTERIOR FOR THE WOODEN DOOR LIGHT AND IRON FENCE REMAINING ON AND ALONG THE SOUTH FACADE OF THE 209 HOUSE ON THE INTERIOR NOTEWORTHY ARE THE FINE MANTELS AND OTHER WOODWORK. IT SHOULD NOTED THAT THERE WAS ONCE A FIFTH HOUSE OF THIS ROW AT 207 HIGH STREET WHICH WAS DESTROYED C. 1950.



HIGH STREET



SITE PLAN

0 8 16 32 48 FEET
1/32" = 1'-0"

THIS PROJECT WAS JOINTLY SPONSORED BY THE NATIONAL PARK SERVICE, OFFICE OF ARCHEOLOGY AND HISTORIC PRESERVATION, AND THE HISTORIC PETERSBURG FOUNDATION, INC. WITH FINANCIAL ASSISTANCE FROM THE VIRGINIA HISTORIC LANDMARKS COMMISSION. MEASURED AND DRAWN DURING THE SUMMER OF 1968 UNDER THE DIRECTION OF JAMES C. MASSEY, CHIEF OF H.A.B.S., AND BY JOHN M. MCRAE (UNIVERSITY OF FLORIDA), PROJECT SUPERVISOR, RANDALL J. BIALLAS (UNIVERSITY OF ILLINOIS, URBANA), HISTORIAN, AND BY STUDENT ASSISTANT ARCHITECTS MICHAEL HAMILTON (UNIVERSITY OF ARIZONA), THOMAS J. SANFORD (WASHINGTON STATE UNIVERSITY), AND EDWIN S. SMITH, JR. (RHODE ISLAND SCHOOL OF DESIGN) AT THE PETERSBURG NATIONAL BATTLEFIELD.



SOUTH ELEVATION

1/8" = 1'-0"

0 2 4 6 12 FEET
1/8" = 1'-0"

DRAWN BY: THOMAS SANFORD, DEL. 1968

HISTORIC PETERSBURG FOUNDATION INC., AND
OFFICE OF ARCHEOLOGY AND HISTORIC PRESERVATION
UNDER DIRECTION OF THE NATIONAL PARK SERVICE.
UNITED STATES DEPARTMENT OF THE INTERIOR

PETERSBURG

NAME AND LOCATION OF STRUCTURE

JOHN H. SMITH'S ROW
209-215 HIGH STREET

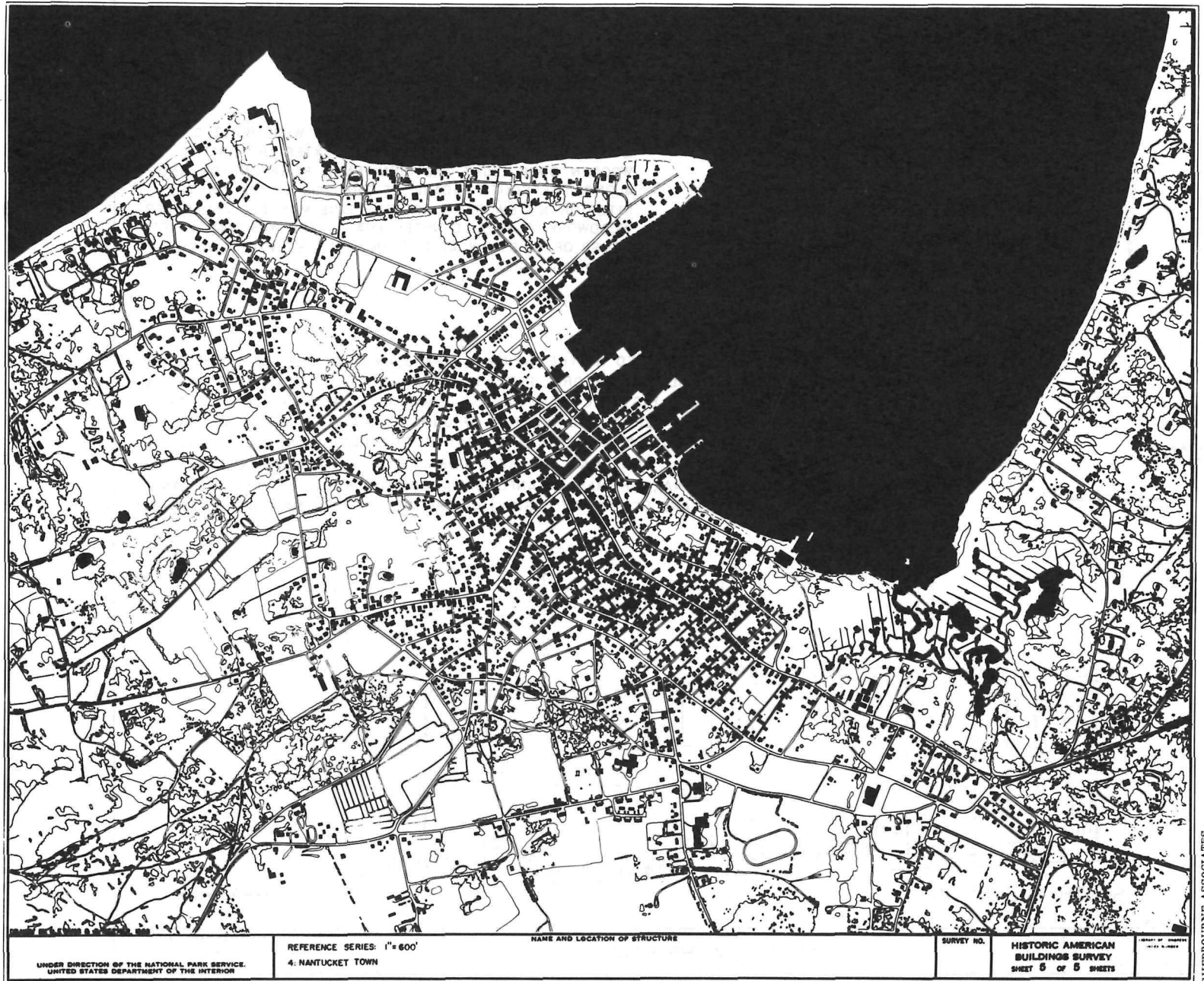
VIRGINIA

SURVEY NO.
VA
646

HISTORIC AMERICAN
BUILDINGS SURVEY
SHEET 1 OF 9 SHEETS

LIBRARY OF CONGRESS
INDEX NUMBER

A basic reference map compiled from an aerial survey photograph of 1965.

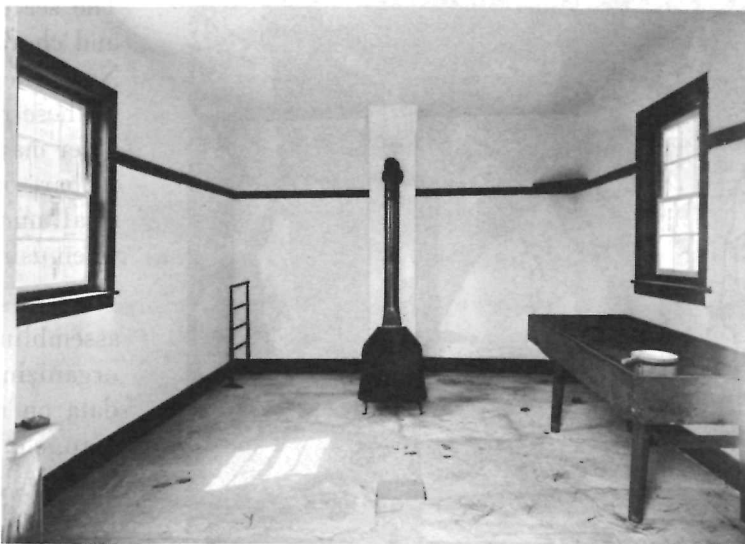


special features (as: the 18th-century buildings, or Shaker community structures), which may or may not be contiguous. The third type of study is the urban planning history which is discussed at length below.

URBAN PLANNING HISTORY. A historic district or a whole city may be the subject of analysis and descriptive interpretation; in doing this, data relevant to the origins, historical states, and the existing state are gathered, studied, compared, and recorded so as to illustrate the form and character of the district during historical periods, and the changes which occurred over those periods. Major attention is given to recording physical aspects and the events connected with them, but economic and social phenomena are considered essential to an understanding of the physical elements. Studies of this kind are undertaken by persons having broad knowledge of and experience in urban history and culture, often drawing upon the resources of a variety of specialists for matters of detail.

As for area studies in general, projects for urban study are selected with due regard for distinctiveness of character, historical significance, and availability of documentation. Threats of destruction or of sweeping changes increase the urgency of attention. In the larger view, one looks for areas which are representative of their kind and also for those which are unique.

The way in which an urban study is approached depends largely upon the size, scale, and character of the chosen area. In general, there are several stages to be undertaken more or less successively. As a preliminary operation, which should be carried out several months before the study proper can effectively be begun, an accurate base map is prepared, normally by aerial survey, to provide a concise contemporary record. This is the necessary instrument to which all documentary data and field observations are referred throughout the entire study; it is also, as the name implies, the point of departure for a number of the illustrative graphic records.



JACK E. BOUCHER

Hancock Shakers' Washhouse, building No. 4, Hancock, Mass.

Houses on Pinkney Street, Annapolis, Md.



JACK E. BOUCHER



Cluis-Rubira House, Mobile, Ala. This photograph includes a corner of the house, its cast-iron gallery, fence, and an original gas street lamp. Street furniture is a valuable element of the urban scene.

The scale of the base map must be appropriate to the size and character of the area being studied (i.e., one made for Nantucket would differ greatly from one made for Chicago, in these respects). The preparation of a base map, and also other mapping operations during the course of study, depend in part on processing by equipment located in a relatively small number of places, and additional time must be allowed when using these services.

The first stage of the study proper is primarily concerned with assembling documentary material, making field observations, organizing this information and correlating it (as: putting data on maps, superimposing a historical map on the base map, etc.). In the next stage judgments can be made, at least tentatively (as: primary areas of historical interest can be identified, growth patterns of a given period may emerge, major changes may be linked with a historic event, etc.). These judgments can in turn justify decisions to investigate particular areas in greater detail (as: to study historic waterfronts, to record the architecture along a particular street, etc.).

By its nature, the study of urban planning history consists in gathering old and new records whenever possible, using field observations mainly for supplemental purposes. The kind of records which are available will differ greatly between localities and between regions. In general, maps of many kinds are to be found, often bearing information about improvements as well as natural features. As a rule, maps, even from early times, have been made by surveyors with high standards of accuracy, and are dated. These may be land surveys, subdivision plats, city street plans, city maps, utility or improvement plans, among others; atlases have been prepared for real estate and insurance purposes, for fire departments, and for historical reference. Most are of great value for urban study. Other graphic material, such as old prints and collections of old photographs, is often found. For recent times, zoning maps and studies made for planning purposes can be obtained in many localities. Information about railroads,



Nantucket, Mass. General view looking east down Main Street.

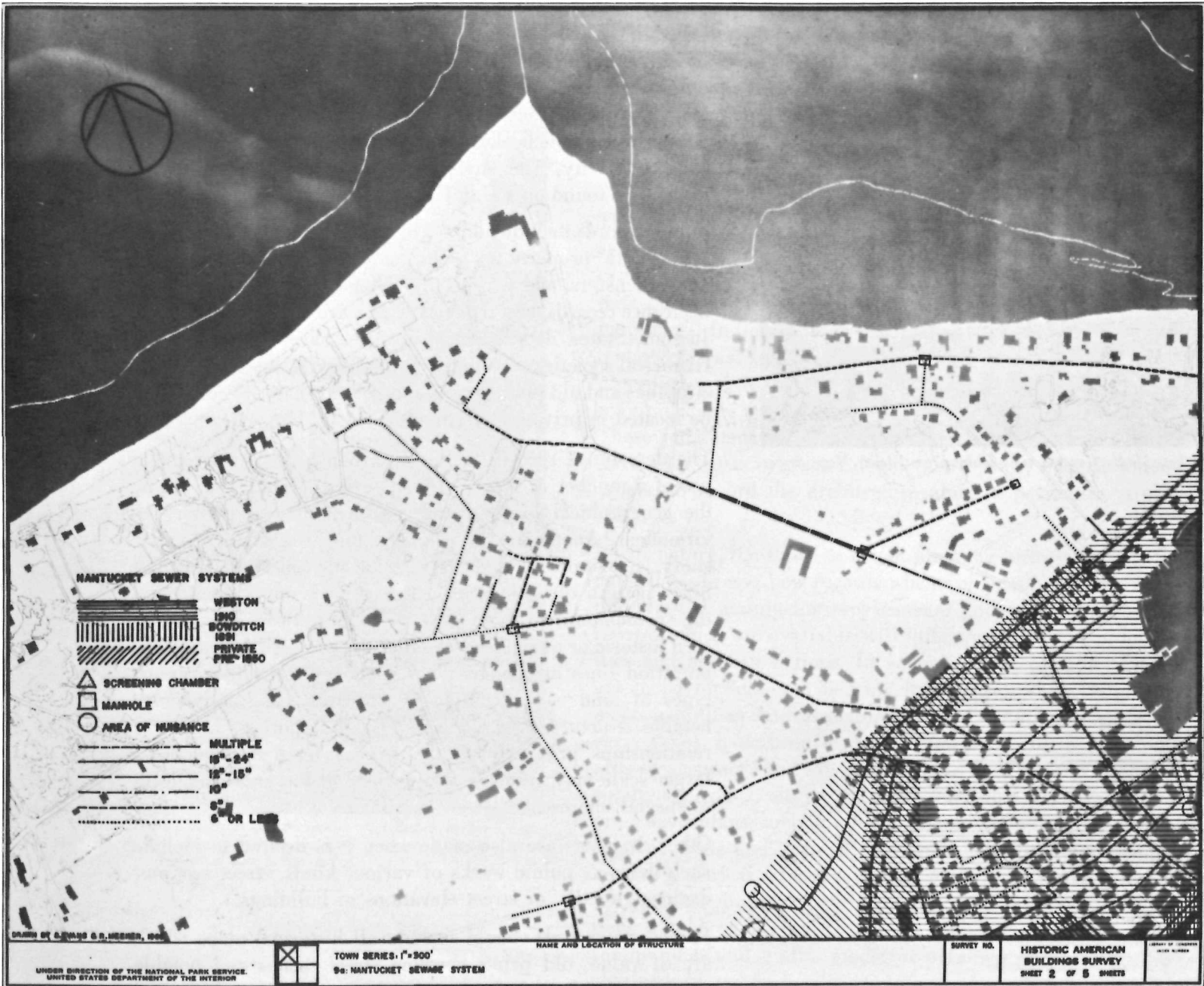
canals, streetcar and bus routes, paving, water supply and sewer lines, and electric and telephone systems is frequently found on maps, but, if not, much of it can be located from other records and noted on a map. Drawings of various kinds of city improvements as a rule are on file in city engineers' offices; they provide data on the more detailed physical aspects of a city. The environment or regional setting may usually be found on a U.S. Geological Survey map.

Public records include minutes of council and board meetings, census data, property tax assessments, deeds, mortgages, real estate transfers, and various other items; city directories, fire insurance records, and real estate data are other good sources. In some States, detailed local histories have been published. Historical societies sometimes maintain extensive files of news clippings and old photographs and similar materials can often be located in private collections.

The descriptive records made for urban history study make use of a number of maps. First, a series at small scale show the geographical location and pertinent data about the environment. Another series showing the area directly under study, at a uniform scale, give data such as the street and block pattern of various historical periods superimposed on the (contemporary) base map, delimitation of areas considered historic or of interest for other reasons, utility and transportation lines at various dates, patterns of built-up areas, types of land use, condition of open spaces, subdivisions, notable structures and, in general, all important facts and relationships produced by the study. Detailed maps at a larger scale may be made for portions of the area which are of special interest.

Other drawings are also made when it is desired to include such items as public works of various kinds, street sections, drainage details, or street elevations of buildings.

Photocopy records should include all historical maps which are of value, old prints showing street scenes and notable events, all old photographs of value and written historical



This map was compiled from information furnished by the Nantucket Public Works Department, surveys from the Nantucket Athenaeum and the Nantucket Town Records, including the Nantucket Proprietors' Books.

ENGINEERING HISTORY

Sand Key Lighthouse, Key West Vicinity, Fla. One of the oldest iron screw pile lighthouses on the coast of the United States. The pyramidal skeleton structure is clearly silhouetted against the sky.



J. F. BROOKS

documents. New photographs from the ground and from the air will illustrate both general aspects and representative elements.

In addition to the graphic material described above, a study in urban planning should include a documented written history, description, and interpretation.

A historical urban study, besides being valuable in itself, can provide a sound basis for subsequent recording projects of a specialized nature. Historic districts can be established and surveyed. Buildings formerly not regarded as historic can be given a more important status. Recording for industrial archeology is a natural follow-up to an urban study, as well.

In recent decades, the contributions made by technology and engineering in the development of civilization, in improving ways of life and standards of living, have become widely appreciated and accepted as major forces to be included among historical studies. Because engineering practice is based upon the most advanced knowledge at any given time, the older works are continually being abandoned and replaced by improved ones. Although a number of early trussed bridges, canal locks, water-supply systems, railways, locomotives, stationary engines, and other machinery are known from contemporary descriptions, many others equally illustrate the ingenuity of engineers and the variety of their achievements. One should be alert to record rare remains which represent the standards of their time and those which reflect special conditions or methods.

HABS has long made a practice of recording those engineering works which are allied to architecture: bridges, docks, lighthouses, canal and railroad structures, fortifications, and the structural elements of buildings in late periods. In addition to these, subjects of major interest to historians of engineering now include machines, materials-handling structures, apparatus of power producing, and many specialized items.

It is outside the scope of this book to describe practices which require competence in some particular branch of engineering.



Edward D. Adams Station Powerplant, Niagara Falls, N.Y. Copy of a 1941 photograph. Built in 1895, this was the first alternating-current powerplant in the United States.

INDUSTRIAL ARCHEOLOGY

What is important, however, is the potential value of collaboration between persons engaged in recording historic architecture and engineers interested in recording the physical and documentary material pertaining to the history of their professions. The study of a single structure or industrial plant may require the expert knowledge of men from several professions, to deal with all aspects which should be included. An early hydro-electric plant, for example, would need a civil engineer to deal with the hydraulic system and hydraulic structures, a mechanical engineer for the turbines, an electrical engineer for the generators and transmission system, and an architect for the buildings. Only by a collaborative effort could the significance of the plant be properly interpreted and every component properly recorded.

A cooperative agreement between the Historic American Buildings Survey, the Library of Congress, and the Committee on History and Heritage of the American Society of Civil Engineers is establishing the Historic American Engineering Record. The HAER is to undertake a broad program of recording significant examples of historic engineering work. Such prospects constitute an exciting new development in the recording field.

A highly significant aspect of modern civilization has been the evolution of an industrial era; the branch of history which deals with this transformation and its technology is called industrial archeology. The name itself is recent in origin but is well established throughout the world. It is quite distinct from archeology as commonly understood: the study of prehistoric and classical times largely through excavations. Industrial archeology studies the physical remains of the early stages of industrialization; the term "early" must be understood as a relative one, because some branches of industry are more recent than others. These physical remains include a wide range of sites, structures, and objects: company towns, gasworks, factories, manufacturing processes and machines, railway facilities, and many related artifacts. Industrial archeology seeks to preserve those which are significant and,

Amoskeag Mill Complex, Manchester, N.H. View from a helicopter.



SMITHSONIAN INSTITUTION



Thomas Mill, Edgemont Vicinity, Chester County, Pa. Basement, toward water wheel.

even more, to record them for study and interpretation before they disappear. In encompassing so many aspects of technology, building, and culture, industrial archeology has frequent need for the specialized services of architects and engineers. The New England Textile Mill Survey, for example, was conducted jointly by the Smithsonian Institution and the Historic American Buildings Survey. HABS concentrated on the structures in an architectural sense and civil engineers recorded the equipment, culverts, and sewers.

A survey demands both breadth of understanding and imagination to succeed in interpreting an industrial system and its place in the social order. Industry is dynamic; its monuments need to be studied with their use constantly in mind. The physical remains can be properly understood only by asking 'how' and 'why' as often as 'what.'

CRITERIA. The danger of demolition or alteration of a large structure, or the danger of loss of a smaller object, greatly increases the need for its recording. At present, when much study needs to be done, the destruction of an early unrecorded remain may leave a permanent vacancy in the known development of its kind.

When the history of an industry is relatively complete the significance of a given structure or object can readily be judged; in other cases it should be estimated. Importance can be manifested as an invention or innovation, an essential link in a series of developments or improvements, a unique experiment or the culmination of a line of progress. Anything which can be identified as the first of its kind (regionally, nationally, or internationally) is of the highest importance, and 'lasts' are often as important as 'firsts.'

Another mark of importance is the known or probable association with a noted industrial company, the inventor of a process, or a prominent individual. Items which typify an industry or a period, or represent a particular region or locality, should not be neglected, especially if few other examples survive. Things which have been instrumental in changing modes



Farley Blacksmith Shop, New Brunswick, N.J. Interior of smithy showing front forge.

JACK E. BOUCHER

of work, altering working conditions, improving living standards and generally affecting the social order, are most important to record. In selecting objects or structures it is essential to choose those of each kind which are in best condition or are nearest to their original state.

If resources permit, it is entirely justifiable in certain cases to record a process while still in current use if it has become evident that it is in a decline and on its way to inevitable extinction. This is far more rational than attempting an abstract reconstruction decades later on the basis of fragmentary remains. The recording of the work in Sweden where wrought iron was last produced in the world, which ran its last heat in 1964, would have been an ideal example of such a survey, had it been carried out.

MEASURED DRAWINGS. When taking field measurements, one needs to record not only the buildings and accessory structures, but machinery and equipment, with notes to explain the mode of use or operation. Evidence of how power was obtained and transmitted, outside as well as inside the structure, is important. In an industrial complex using water-power it is necessary to record its hydraulic works and system: river, dam, canals, raceways, and control structures. Even more than when measuring for strictly architectural recording, field notes must be made intelligible to others as well as to their recorders.

Drawings of industrial buildings should depict power systems and all mechanical equipment (serving the building and for industrial operations) in addition to delineating the buildings themselves. When the mechanical portions are extensive they may require additional plans (and sections) to avoid confusion among the data on the drawings. In some cases special kinds of drawings are necessary (as a reflected ceiling plan to show an overhead system of shafts, pulleys, conveyors, etc., in addition to a normal floor plan showing machinery). Work processes and the movement or flow of products need to be interpreted. Annotations can indicate the general uses

of each space and point out where particular operations were carried out, but supplemental drawings and flow diagrams may be necessary to introduce the element of time and clearly explain the sequential aspects of a process.

Machine drafting is a specialized technique practiced by mechanical draftsmen; others should consult standard books on the subject (see **BIBLIOGRAPHY**). Normally, machines are represented in orthographic projection but when adequate photographs of a given machine or part cannot be secured, perspective drawings may serve a supplemental purpose. Diagrams can also be used to help explain the operation of a machine.

In many other respects drawings for industrial archeology resemble those made for architecture, area studies, and engineering history.

PHOTOGRAPHS. Photographs to represent the interior, exterior, setting, and details of a structure are employed as when recording for purely architectural purposes. Oblique low-level aerial photographs taken from a helicopter afford the best pictorial representation for general views of a group or industrial complex (by itself as well as in its setting), to supplement the normal vertical type of aerial photograph used in mapping.

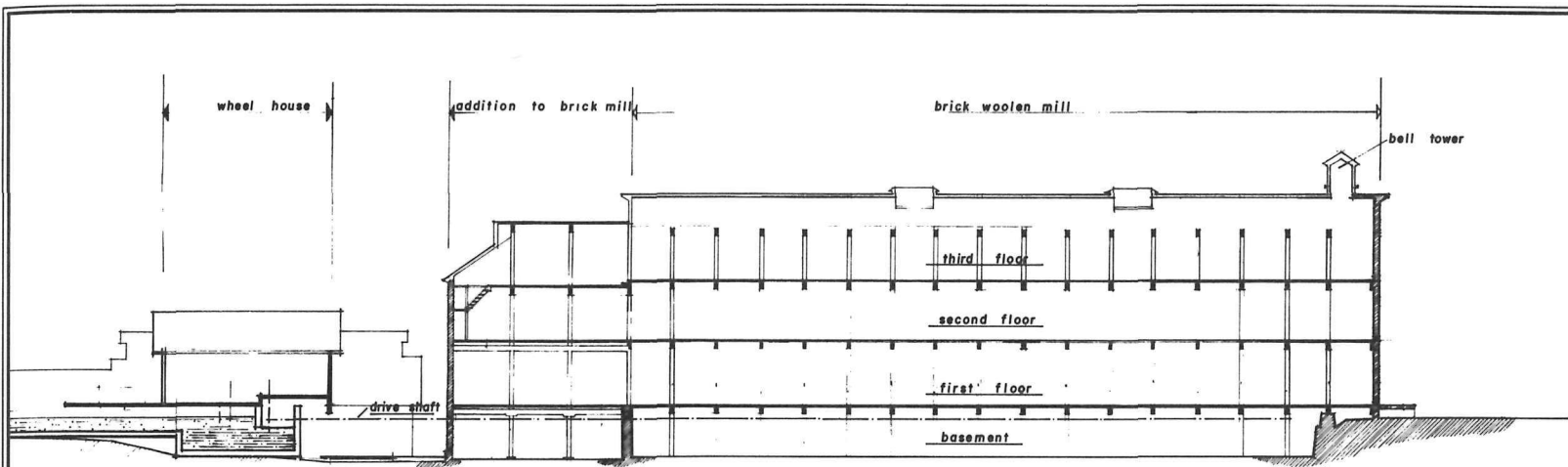
Machinery and mechanical equipment are best photographed by a professional specializing in this type of subject. To demonstrate a process (as the manufacture of a shuttle) a series of photographs are taken to illustrate each step, including the object being processed before and after each operation. Motion pictures are sometimes taken of work processes which feature the machines or their operators (or both in combination).

Old photographs and prints which can be copied are of great value for illustrating the subject at a given period, especially those which show earlier machinery in place, or work being done. The dynamic character of a survey is enhanced whenever different periods of activity can be graphically recorded.

Crown and Eagle Mills, North Uxbridge, Mass. An independent cotton mill in a rural setting, consisting of portions built in 1823, 1827, and 1851. It is a prime exemplar of its kind.

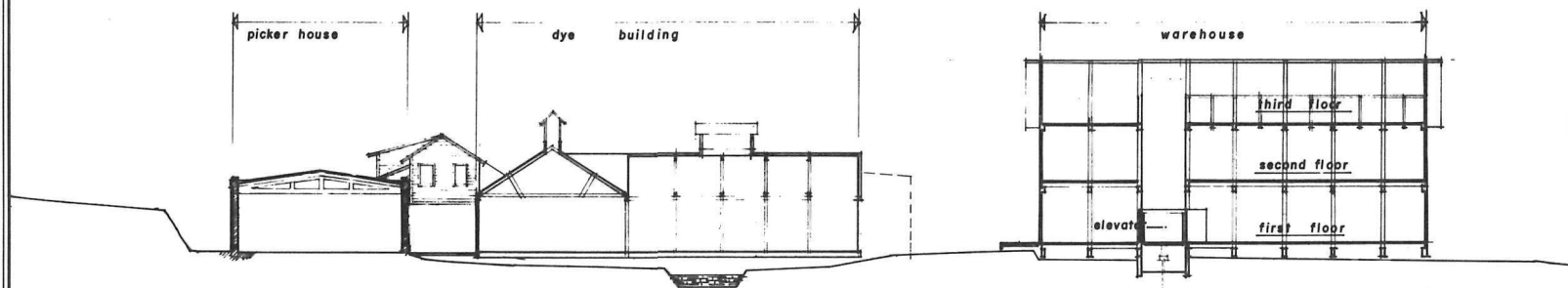
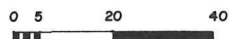


SMITHSONIAN INSTITUTION



general longitudinal section (A)

SCALE 1/16" = 1'-0"



general transverse section (B)

SCALE 1/16" = 1'-0"

SMITHSONIAN INSTITUTION

DRAWN BY: LINDBURG 1908

HANNS and LINDBURG A.I.A.
UNDER DIRECTION OF THE NATIONAL PARK SERVICE,
UNITED STATES DEPARTMENT OF THE INTERIOR

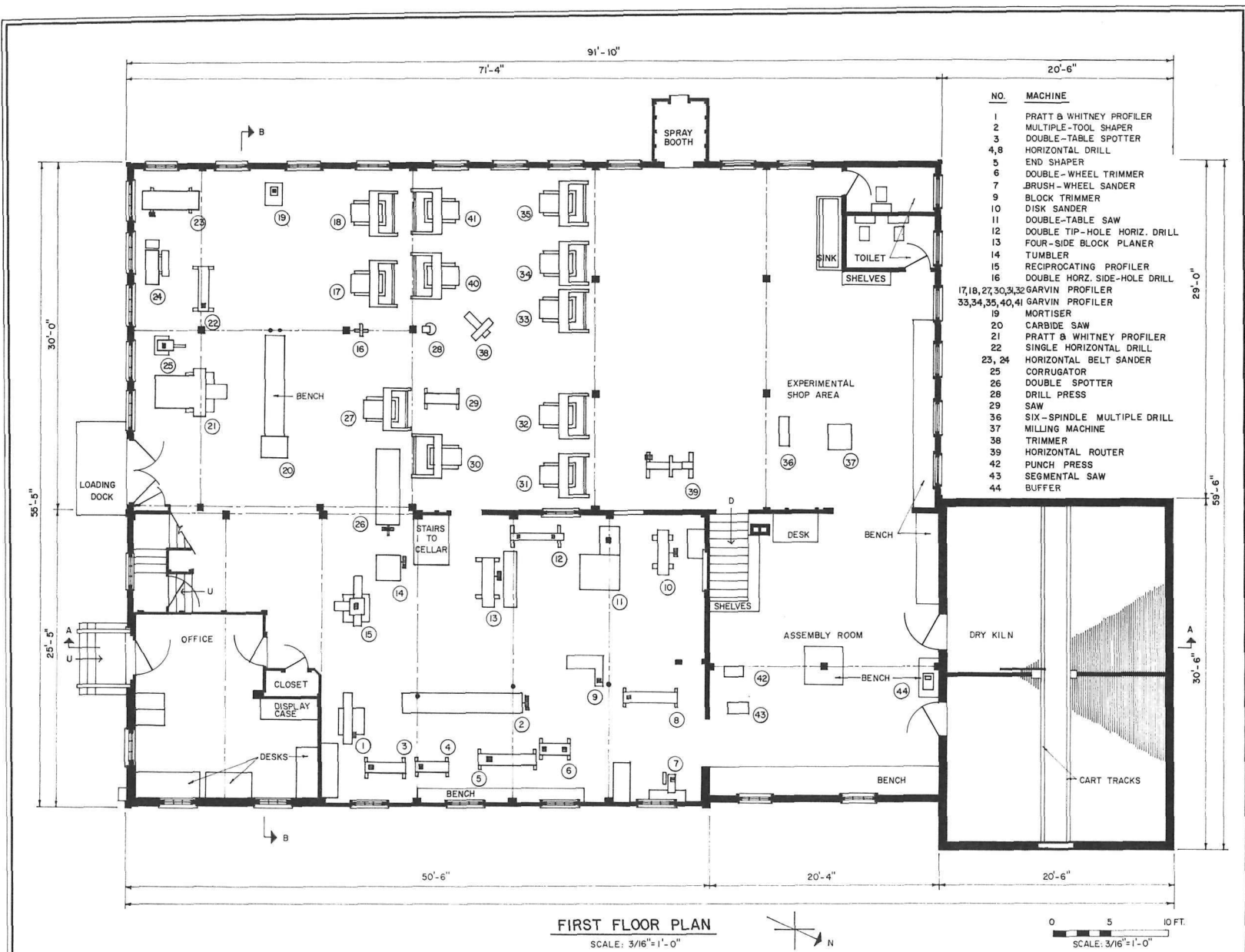
NAME AND LOCATION OF STRUCTURE

THE THOMAS KAY WOOLEN MILL
260 TWELFTH STREET SALEM OREGON

SURVEY NO.
ORE 54

HISTORIC AMERICAN
BUILDINGS SURVEY
SHEET 18 OF 40 SHEETS

UNIVERSITY OF MICHIGAN
ARCHIVE NUMBER



FIRST FLOOR PLAN
SCALE: 3/16"=1'-0"

DRAWN BY: RUSSELL V. KEUNE, 1967

GIFT OF THE SMITHSONIAN INSTITUTION
UNDER DIRECTION OF THE NATIONAL PARK SERVICE,
UNITED STATES DEPARTMENT OF THE INTERIOR

NAME AND LOCATION OF STRUCTURE
THE D.T. DUDLEY & SON COMPANY - MAIN SHOP
PROVIDENCE ROAD - WILKINSONVILLE - WORCESTER COUNTY - MASSACHUSETTS

SURVEY NO.
MASS.

HISTORIC AMERICAN BUILDINGS SURVEY
SHEET 2 OF 5 SHEETS

DATE OF CONSTRUCTION
1925-1930

SMITHSONIAN INSTITUTION

HISTORY. The physical history of a structure largely resembles that described in DOCUMENTATION in relation to buildings, bearing in mind that additions and changes to the original structure are often brought about by technological developments within the industry, and need to be interpreted in that light. The process or system of manufacture carried on is another important aspect of history; the improvement and replacement of machinery, equipment, and power supply, change of ownership or management, or of the kind of industry, all are to be studied.

The history of an object should include the date of its design, name of the designer, date of manufacture, name of the manufacturer, and the facts about its use: name of owner(s), dates and nature of its use, and location(s) where it was used. There should be at least a brief account of its relative place in the industry and a history of important persons with whom it was associated. Early machinery should be treated in this way, and also, according to its importance, recorded on drawings devoted particularly to them (i.e., not merely as incidental parts of a factory group).

TECHNICAL WRITTEN DESCRIPTION. *Inventory information* is of two kinds: that which applies to all subjects (identification, location, historical significance, ownership, date, condition, builder, or maker) and that which depends on the type of subject being recorded. The principal ones are buildings, framed structures, bridges, dams, communication routes (railroads, highways, canals, tunnels, airports, aqueducts, pipelines), machinery, and miscellaneous works (distribution systems, treatment and processing plants, river and harbor improvements, water and hydraulic works, mines, industrial sites). Each of these demands its own kind of concise information.

Detailed description varies with the subject being described but there should be an orderly approach or form to which each case can be adapted, as suggested in the following general outline:

Introductory summary

Process or system

Purpose

Materials or things processed and end product

Sequence of operation or production

Description of each stage

Conveyance

Equipment (by kinds) (Sometimes this will be described at each stage of the sequence of operation, above.)

Form (including sizes)

Materials

Features, parts, or details

Controls and safety devices

Power source

Commercially or "home" built

Housing of the process

Site and environment

Buildings and structures

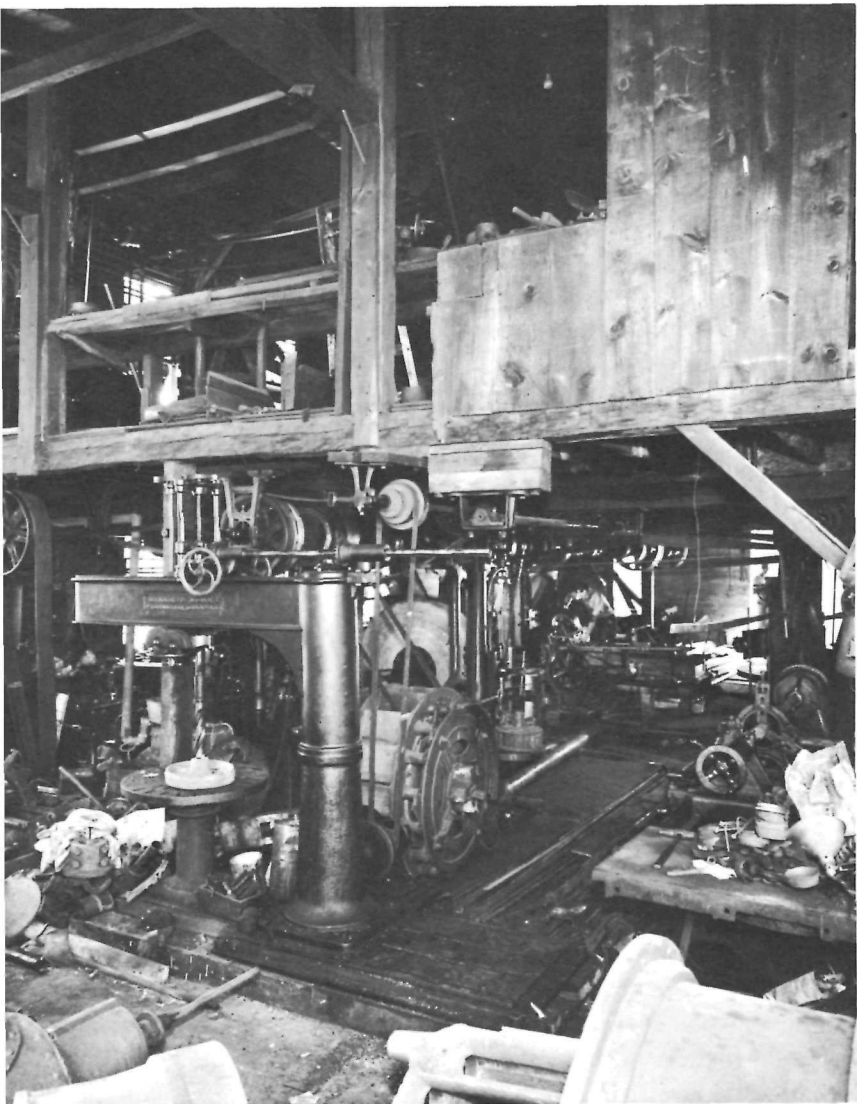
Power supply

Transportation

Other considerations

A description of machines, equipment, shelter and the utilities serving them, from direct observation, should be interpreted insofar as possible by explaining the mode of operation of each part, and the process as a whole. When this particular process has been described in published works, and the equipment in question can readily be understood by reference to the publications, there is no point in repeating the explanation at length. It is well, in any case, to refer to the essential sources, and at times to cite a full bibliography.

A process or the operation of a piece of equipment can sometimes be learned from somebody who remembers it well. A transcribed interview supplemented by photographs makes an excellent explanation, especially when interpreting an obsolete technology.



SMITHSONIAN INSTITUTION

C. P. Bradway Machine Works, West Stafford, Conn. The old machinery is complete and in place.

The following illustrative case outlines the use of various materials in recording for industrial archeology:

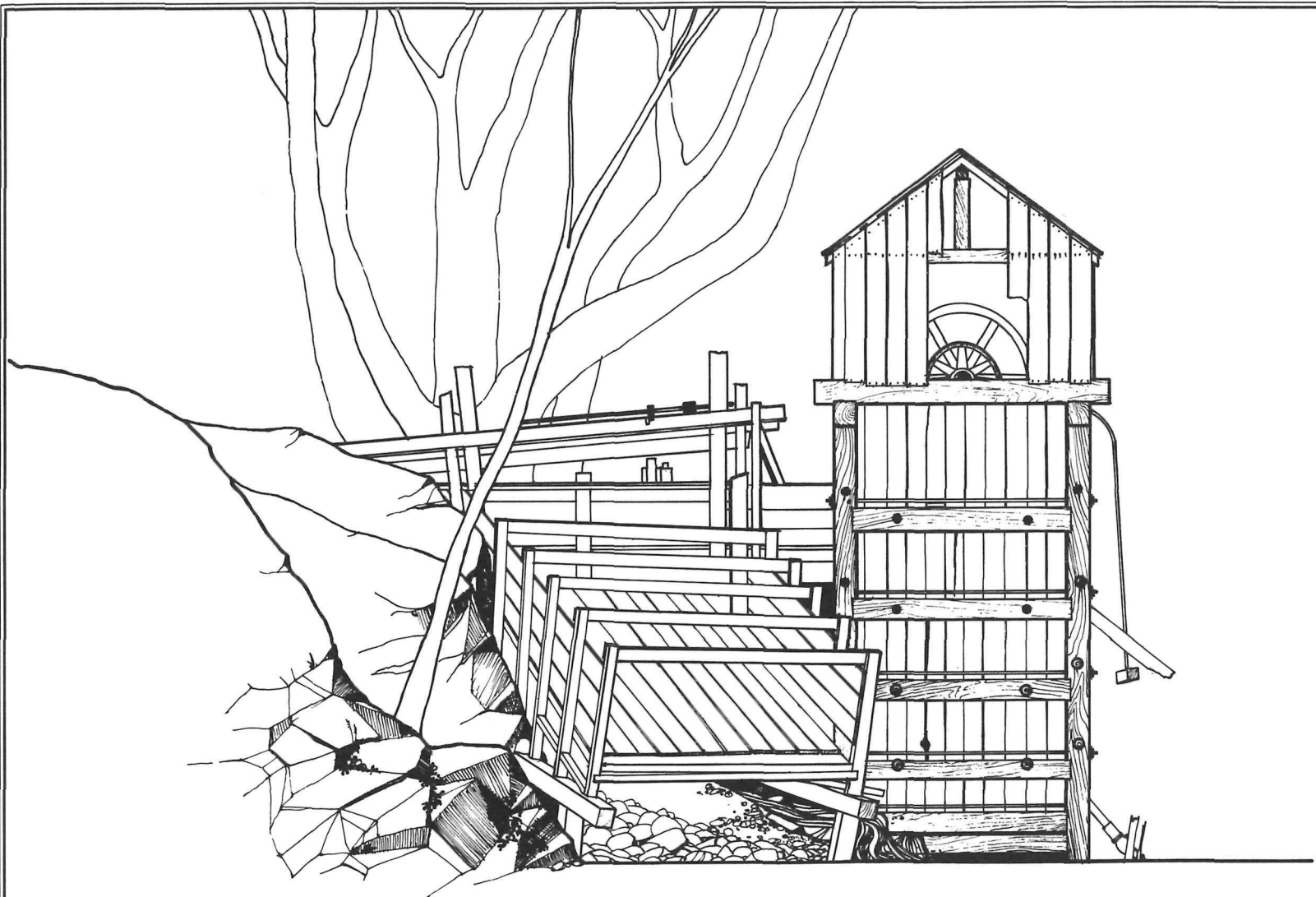
The order followed by Robert T. Clough (see reference in BIBLIOGRAPHY) in recording the Great Octagon Mill in Arkengarthdale, England, was:

1. Environment in the valley.
2. History of the mill.
3. Description of the building.
4. Notes on mill equipment.

The above written information was accompanied by two sheets of measured drawings:

1. Plan, two elevations, notations.
2. Elevation, two general sections, plan of roof framing, detail of roof trusses.

Four photographs were included: general view of valley, exterior of mill before demolition, exterior during demolition, detail of roof trusses.



NORTH ELEVATION



DRAWN BY: KENNETH L. LAMBERT JULY 1967

UTAH PROJECT — OFFICE OF
 ARCHEOLOGY AND HISTORIC PRESERVATION
 UNDER DIRECTION OF THE NATIONAL PARK SERVICE.
 UNITED STATES DEPARTMENT OF THE INTERIOR

PROVO BRICK YARD

NAME AND LOCATION OF STRUCTURE
TURBINE HOUSE

PROVO

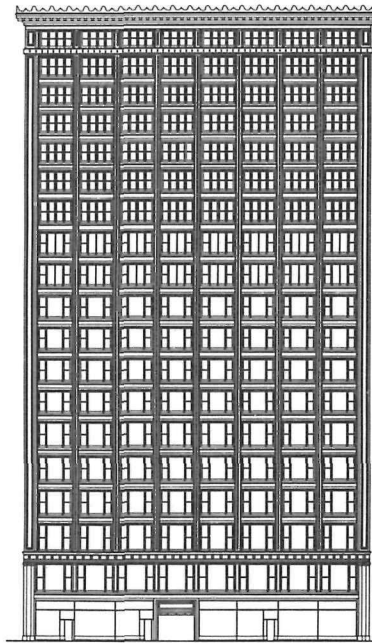
UTAH COUNTY

SURVEY NO.
U-36

HISTORIC AMERICAN
 BUILDINGS SURVEY
 SHEET 5 OF 5 SHEETS

LIBRARY OF CONGRESS
 SERIALS NUMBER

Republic Building (originally Strong Building) (Ill-1004), 209 S. State St. at Adams St. Steel frame with terra cotta, eight bays by five bays, nineteen stories, flat roof. Thirteen stories built 1903-05; Holabird and Roche, architects. Six stories added 1909; Holabird and Roche, architects. Remodeled 1915; demolished 1961. 8 sheets (1960, including plot plan, plans, elevations, details); 26 ext. photos (1960), 47 int. photos (1960), 12 photocopies from booklet illustrating building (c. 1915), 3 photocopies of plans (1940). Records gift of Skidmore, Owings and Merrill, architects.



Republic Building,
Holabird and Roche, 1903-1909

Revell Building, 131 S. Wabash Ave. at Adams St. Cast-iron frame with brick and terra cotta, 171' (nineteen-bay

front) by 116', six stories, flat roof. Built 1882; Adler and Sullivan, architects. First two stories remodeled 1929. HABS form (1960).

Richardson Building (previously known as Kimball Building), NW. corner Wabash Ave. and Congress St. Brick and terra cotta, five equal bays by seven unequal bays, seven stories, flat roof. Built 1886 as a six-story building. HABS form (1961).

Robie, Frederick C., House (Ill-1005), 5757 S. Woodlawn Ave. at 58th St. Brick with limestone trim, 154'-9" by 60'-0", two stories above raised basement, hipped roofs, irregular plan. Built 1908-10; Frank Lloyd Wright, architect. One of Wright's greatest works. Designated a Chicago Architectural Landmark 1957. Designated a National Historic Landmark 1964. 11 sheets (1963, including plot plan, plans, elevations, section, details, furniture); 3 ext. photos (1963), 2 int. photos (1963); 7 data pages (1963); HABS form (1960). (AIC)

Rookery Building (Ill-1030), 209 S. La Salle St. at Adams St. Cast-iron frame with stone and brick, terra-cotta trim, rectangular (around light core), nine bays on front, eleven stories, flat roof. Built 1886-88; Burnham and Root, architects. Lobby remodeled 1905; Frank Lloyd Wright, architect. Designated a Chicago Architectural Landmark 1958. 2 ext. photos (1963), 2 int. photos (1963); 7 data pages (1963); HABS form (1958, 1960). (AIC)

Roosevelt University (Ill-1007). See Auditorium Building NW. corner Michigan Ave. and Congress St., Chicago.

Root, John W., House, 1308 Astor St. Brick with stone trim, rectangular, three-and-a-half stories, gable roofs. Built 1887; Burnham and Root, architects. HABS form (1964).

CATALOGS

From the beginning of the Survey it was recognized that the properties being recorded, and the HABS records of them, should be listed for the benefit of the public to facilitate their use and the distribution of duplicate records. Early catalogs, especially the *Historic American Buildings Survey Catalog of the Measured Drawings and Photographs of the Survey in the Library of Congress, March 1, 1941*, were widely circulated to public libraries and architects, and enjoyed frequent use; a supplement was issued in 1959 to include the additional records which had been placed in the Library of Congress up to that time. In addition to the old national catalogs, a new series of State and regional catalogs containing expanded entries is being published, to make available the latest information concerning areas where recent projects have substantially added to the HABS collection of records.

In making up a State or regional *HABS Catalog*, it is current practice to verify the status of the structures and expand the catalog entries. Each catalog consists of the following sections:

1. Introduction—background and history of HABS.
2. (Optional) In areas not adequately represented in publications, where an essay can contribute to written history of the regional architecture, one may be placed in the catalog.
3. Catalog listings—expanded from earlier listings, index cards in the Library of Congress or from new information.
4. Indexes.

Catalogs are illustrated with selected photographs and measured drawings whenever possible. Generally 50 illustrations

are considered minimal for future catalogs; 100 are desirable.

The following instructions describe HABS standards and practices for staff members doing cataloging, and for others engaged in this work on contract.

ENTRIES

An entry is made for each property for which records exist in the HABS archives and in the Library of Congress, based on the information contained in those records. Each entry is a concise record, as are descriptions in Inventory, the National Register, and various other surveys. To make a good brief record challenges the knowledge, skill, and judgment of even the best architectural historian.

INFORMATION IN ENTRIES

In order for prospective users of HABS material (and purchasers of duplicates) to form a clear idea of the records available, each entry requires identification and location of the property, its description, physical history, mention of any historical associations, and a description of the kind and quantity of HABS records. The length of each entry will tend to be proportionate to the importance of the structure (although the complexity is also a factor). The maximum allowable length is the capacity of an index card (used in the Library of Congress) on which the entry is also type-written; it is 22 lines, 4½ inches in length.

SEQUENCE OF INFORMATION

The order adopted for HABS purposes is given below, and can also be seen in the illustrative examples on p. 148.

City, town, village, or vicinity.

County (parish, in Louisiana).

Historic name and HABS number of the structure.

Description: In general this begins with larger aspects and progresses to smaller ones.

1. Materials of construction.
2. Over-all dimensions (if given).
3. Number of bays (if given).
4. Number of stories.
5. Roof form.

6. Notable exterior features.
7. Plan type.
8. Notable interior features.
9. Style category or features (if given).
10. Accessory buildings of note, if included in the same record. Important accessory buildings are normally now described in a separate record.

Physical history (dates of construction, additions, and remodeling).

Architect(s), builder(s), major craftsmen.

Historical associations and events.

Description of HABS records:

1. Measured drawings: number of sheets, date, type (plans, elevations, sections, details).
2. Photographs: number of exterior photos, date, number of interior photos, date, copies of old photos.
3. Data pages: number, date, mention of unusual or exceptionally valuable information.
4. HABS forms.

SPECIAL PROBLEMS

The cataloger abstracting from HABS records normally uses the location, historic name, story count, and dates given there. When he is obtaining information directly from observation of the property, problems concerning these matters may arise; these are discussed in DOCUMENTATION.

NAME ORDER

In writing personal names *at the head of catalog entries and index cards*, in order that they may be placed in true alphabetical order, put the family name first, followed by a comma, title (if any), and given name (as: Kuehneman, William F., House; Anderson, Col. William O., House). The normal name order is followed in all other cases.

REVISED OR CORRECTED NAMES

Historical research subsequent to the first HABS record sometimes makes it necessary to revise the historic name of a property for the new catalog. The new name is used in the principal entry but the old one is placed in a cross reference. When the historic name is not changed but is given in a

different manner from that of the old catalog (as: Hospital, Old Marine in place of Old Marine Hospital) a cross reference in the old manner is also made. Governmental or institutional buildings should be listed first under the general name.

Any structure once listed in an HABS Catalog should be found either directly or through a cross reference, in a later catalog.

TECHNICAL TERMS

In catalog entries, which should be widely intelligible, words which cannot be found in a good dictionary designed for college-level use should generally be avoided.

STYLE TERMINOLOGY

Sometimes it is appropriate to close the description of a property with a word denoting its “style” (as: Georgian), although in many instances it is better to refer to the style of individual features or details (as: sandstone, stucco on brick, two stories, flat roof, two-story Islamic-arcaded facade, high skylighted banking room with elaborate plaster decoration employing Spanish and Indian Islamic motives. Rear wing has conventional Classic Revival trim).

In general, when a building is consistent in style it may appropriately be characterized, provided that there is a clear, generally accepted term for it (as: “Gothick” cottage, Churrigueresque). Otherwise, the description is clearer when style terms are employed only for details (as: Adam fireplaces, Roman Doric pilasters), although they sometimes *supplement* more meaningful description by narrowing the scope of inference (as: a “Gothic Revival” building would not be expected to contain elements of Classical derivation).

It is advisable to avoid certain usages:

1. Confusion as to whether *period* or *style* is the intended meaning.
2. Words which are ill-defined, have several different meanings, or are not widely accepted.
3. Subjective or personal interpretation of words, or the invention of a word for each new occasion.

REGIONALISMS

One must sometimes decide whether to use a regional term (as: gallery) or a more general one (as: porch); the first describes more exactly but the second may be more widely understood. In detailed written description where context renders it intelligible, regional terminology is certainly to be encouraged. In concise catalog entries it is preferable to use only terms having wide use; if this is true of the regional expression, it is appropriate.

DATES

If possible, give beginning and completion dates (as: built 1797–1800); when they are not given be as explicit as the information allows (as: cornerstone laid 1828).

ARCHITECT, BUILDER, OWNER

Avoid ambiguous phrases. A house is *built for* an owner, not *built by* him (unless he is also the actual constructor); an architect does not *build* (unless he combines the function of a builder with that of architect). It is preferable to write “Robert Mills, architect”; “Robert Leckie, contractor”; “Samuel Axson, master carpenter”; “Samuel Cardy, architect and builder.”

HISTORICAL ASSOCIATIONS

In a catalog entry only events and associations of more than local importance should be included (as: Princeton was the Nation’s capital in 1783 and in “Old Nassau” Congress received official word that the Peace of Paris had ended the Revolution; Fort Mackinac was a focal point of the fur trade in the old Northwest and a stronghold of vital importance).

DESIGNATIONS IN ADDITION TO HISTORIC NAME

Museums and historic building museums are so designated after the name and address in a catalog entry (as: Russell, Nathaniel, House, 51 Meeting St. Museum, Headquarters of Historic Charleston Foundation). Buildings occupied by historical societies and semi-public institutions, not open to the public as museums, can be mentioned as a courtesy.

ABBREVIATIONS

Commonly understood abbreviations are used in catalog entries, especially in the address and the description of HABS records. *The U. S. Government Printing Office Style Manual* may serve as a reference on abbreviations. Numbers and dimensions are given in Arabic numerals.

PUNCTUATION

The entry is normally divided into several sections, each ending in a period. Within each section, commas are used to divide, except where other punctuation is needed.

Historic name, HABS number (in parentheses), street address.

Description.

Physical history.

Architect, builder.

Historical associations.

Description of HABS records.

HABS NUMBER

As a rule, the HABS number of each structure is on the documents used by the cataloger; such numbers are assigned only by the Historic American Buildings Survey, Office of Archeology and Historic Preservation, National Park Service, Washington, DC 20240.

COUNTY NUMBER

Some *HABS Catalogs* include a number (in parenthesis) after each county designation. This is a convenience to persons consulting HABS photographs and documents in the Library of Congress, where these records are filed by county. County numbers can be determined when necessary if one has a complete list of counties in a given State, by numbering them in alphabetical order.

ORDER OF ENTRIES

Except in special cases, entries in a State or regional catalog are placed by cities (towns, villages, vicinities) in alphabetical order. In Virginia, where the county is considered the basic unit but where there are also independent cities, both are listed together in alphabetical order. In the *HABS Catalog* for Chicago and Nearby Illinois Areas, entries for Chicago are placed first, followed by those in other towns (vicinities) in alphabetical order, for convenience.

STRUCTURES MOVED

If a structure has been moved from its original site, the principal entry is listed under the original address and a cross reference is listed under the present address. If only frag-

ments of a structure have been preserved, and (later) recorded for HABS, the principal entry is listed under the present address and a cross reference is listed under the original address.

INDEXES

All HABS catalogs should be indexed to make a variety of significant information easily accessible to the user. They will now be provided with an analytical index like that of a book.

When advisable, other lists of a special nature will be placed in an appendix, as:

A chronological list of buildings, when most of their dates are known, as in late periods, and their order is the subject of particular study and analysis. One was included in the catalog *Chicago and Nearby Illinois Areas*.

Architects, builders and craftsmen.

Buildings in an area having historical identity, now merged with a larger geographical unit (as Georgetown, in Washington, D.C.); those in an area which is a good unit for study but whose name does not normally appear as an address (as Lower Merion Township). If this list is short it should form part of the index, however.

It is recommended that catalog editors refer to a standard work on book indexing, such as Sina Spiker, *Indexing your Book, A Practical Guide for Authors* (Madison: The University of Wisconsin Press, 1964), and Martha Thorne Wheeler, *Indexing Principles, Rules and Examples* (Albany: The New York State Library, fifth ed., 1957).

BIBLIOGRAPHY

SELECTED BIBLIOGRAPHIES

Henry-Russell Hitchcock, Jr., *American Architectural Books* (Minneapolis: University of Minnesota Press, 1962).

Charles E. Peterson, *A List of Published Writings of Special Interest in the Study of Historic Architecture of the Mississippi Valley*, 2d. ed. (St. Louis, Mo.: National Park Service, Historic American Buildings Survey, 1940).

Frederick L. Rath, Jr., *NYSHA Selective Reference Guide to Historic Preservation* (Cooperstown, N.Y.: N.Y. State Historical Association, 1966).

Frank J. Roos, Jr., *Bibliography of Early American Architecture* (Urbana, Ill.; University of Illinois Press, 1968).

The continuing series of papers by the American Association of Architectural Bibliographers (University of Virginia, Charlottesville, Va.).

SELECTED MODELS OF DESCRIPTIVE WRITING

Talbot F. Hamlin, *Greek Revival Architecture in America* (New York: Oxford University Press, 1944.), appendix A.

Talbot F. Hamlin, *Benjamin Henry Latrobe* (New York: Oxford University Press, 1955).

Walter Ison, *The Georgian Buildings of Bath* (New York: Chas. Scribner's Sons, n.d.).

J. Frederick Kelly, *The Early Domestic Architecture of Connecticut* (New Haven: Yale University Press, 1924).

Thomas T. Waterman, *The Mansions of Virginia*, (Chapel Hill: University of North Carolina Press, 1946).

CATALOGS, HABS

Paper-bound reprints of the 1941 national catalog and the 1959 supplement are available at \$3 each from: Clearinghouse for Federal, Scientific, and Technical Information, 5285 Port Royal Road, Springfield, VA 22151. The order numbers are: 1941 catalog, PB 177-632; 1959 supplement, PB 177-633.

Revised and expanded State and regional catalogs:¹

Historical New Hampshire, vol. XVIII, no. 2 John C. Poppeliers, Compiler (Concord, N.H.: New Hampshire Historical Society, 1963).

Historic American Buildings Survey, Massachusetts Catalog John C. Poppeliers, Compiler (Boston: Massachusetts Historical Commission, 1965).

Wisconsin Architecture, Worth Bailey, Compiler with narrative by Richard W. E. Perrin (Washington: Historic American Buildings Survey, 1965).

Historic American Buildings Survey, Chicago and Nearby Illinois Areas J. William Rudd, Compiler (Park Forest, Ill.: Prairie School Press, 1966).

Historic American Buildings Survey, Michigan, with "Glimpses of Architecture in Michigan" Harley J. McKee Compiler (Lansing, Mich.: Historical Society of Michigan and Michigan Society of Architects, 1967).

Historic American Buildings Survey Catalog, District of Columbia Nancy K. Beinke, Compiler (Washington: Historic American Buildings Survey, 1968).

Utah Catalog, Historic American Buildings Survey Paul K. Goeldner, Compiler (Salt Lake City: Utah Heritage Foundation, 1969).

Revised and expanded State and regional catalogs, mimeographed in limited numbers; those wishing for a copy should address the Historic American Buildings Survey, Office of

¹ Catalogs in active preparation in 1970 are: New Jersey, South Carolina, Virginia, Rhode Island, Maine, and Puerto Rico.

Archeology and Historic Preservation, National Park Service,
801 19th St. NW., Washington, DC 20006:

Charleston and the South Carolina Low Country (1963).

Records of Historic Maryland Buildings (1969).

The Virgin Islands (1966).

SELECTED ARCHITECTURAL DICTIONARIES

Henry H. Saylor, *Dictionary of Architecture* (New York: John Wiley and Sons, 1963). Concise; recommended for lay readers.

A. L. Osborne, *A Dictionary of English Architecture* (New York: Philosophical Library, 1956).

John Harris and Jill Lever, *Illustrated Glossary of Architecture* (London: Faber and Faber, 1966). Recommended for lay users.

Norman M. Isham, *Early American Houses and A Glossary of Colonial Architectural Terms*, reprinted (New York: Da Capo Press, 1967).

Russell Sturgis, *A Dictionary of Architecture and Building*, reprinted (Detroit: Gale Research Company, 1966).

Albert Manucy, *The Houses of St. Augustine* (St. Augustine, Fla.: St. Augustine Historical Society, 1962), glossary.

Construction Dictionary (Phoenix, Ariz.: National Association of Women in Construction, chapter 98, 1968).

Martin Pegler, *The Dictionary of Interior Design* (New York: Crown Publishers, 1966).

SELECTED REFERENCES ON ENGINEERING AND INDUSTRIAL ARCHEOLOGY

James Kip Finch, *The Story of Engineering* (Garden City, N.Y.: Doubleday and Company, 1960).

Singer, Holmyard and Hall, eds., *A History of Technology* (New York and London: Oxford University Press, 1954–58).

Kenneth Hudson, *Industrial Archaeology* (Philadelphia: Du-four Editions, 1964).

**SELECTED REFERENCES ON
ARCHITECTURAL PHOTOGRAMMETRY**

Kenneth Hudson and Neil Cossons, *Handbook of Industrial Archaeology* (Newton Abbott, Eng.: David & Charles, 1969).

J. P. M. Pannell, *Techniques of Industrial Archaeology* (Newton Abbott, Eng.: David & Charles, 1966).

Robert T. Clough, *The Lead Smelting Mills of the Yorkshire Dales* (Leeds, Eng.: R. T. Clough, 1962).

The New England Textile Mill Survey, *NETMS I* (Washington, D.C.: The Smithsonian Institution, 1968).

Perry E. Borchers, "Architectural Photogrammetry in Restoration," in *Building Research*, vol. 1, no. 5 (Sept.-Oct. 1964), pp. 18-19, published by the Building Research Institute, Inc., Washington, D.C.

Publications of the Engineering Experiment Station, The Ohio State University, Columbus, Ohio:

"Applications of Architectural Photogrammetry to the Historic American Buildings Survey," March 31, 1958.

"Time and Material Data Relevant to the Application of Architectural Photogrammetry to the Historic American Buildings Survey," December 1, 1958.

"European Projects and Equipment for the Recording of Historic Buildings and Monuments by Architectural Photogrammetry," December 31, 1958.

Perry E. Borchers, "Architectural Photogrammetry at The Ohio State University," *Photogrammetric Engineering*, December 1957.

Perry E. Borchers, "Choice of Station and Control for Efficient Orientation and Plotting in Architectural Photogrammetry," *Photogrammetric Engineering*, December 1960 (Reproduced with major typographical errors in *AIA Journal*, June 1962).

Perry E. Borchers, "Architectural Photogrammetry," *AIA Journal*, June 1962.

Perry E. Borchers, "Stereophotogrammetric Recording and

Interpretation of Works of Art and Architecture," *International Archives of Photogrammetry*, International Congress of Photogrammetry, Lausanne, Switzerland, 1968.

Ministry of Public Works and Reconstruction, Kingdom of Belgium, "Photographic Surveying of Historic Buildings," *International Archives of Photogrammetry*, report to International Congress of Photogrammetry, Stockholm, Sweden, 1956.

"Photogrammétrie au Service de L'Architecture," *Bulletin 19, Société Française de Photogrammétrie*, July 1965.

Jack E. Boucher, *Photography in History and Preservation* (pamphlet in preparation, 1969, to be published by the American Association for State and Local History).

Ramsey and Sleeper, *Architectural Graphic Standards* (New York: John Wiley and Sons).

David D. Polon, Ed., *Dictionary of Architectural Abbreviations, Signs and Symbols* (New York: The Odyssey Press, 1965).

James C. Massey, *The Architectural Survey* (National Trust for Historic Preservation, Washington, D. C. 1969).

Procedures Manual for An Inventory of the Historical Assets of the Commonwealth (Massachusetts Historical Commission, 1966). Listed for information only.

Historic Savannah, with introduction by Carl Feiss (Savannah, Ga.: Historic Savannah Foundation, Inc., 1968). A notable example of a published city-wide survey.

C. Leslie Martin, *Design Graphics* (New York: Macmillan, 1962; 2d ed., 1968). Theory and practice for architects.

Robert Forman, *Over the Drawing Board* (London: Cleaver-Hume Press, 1959). For architects.

Randolph Philip Hoelscher, Clifford H. Springer and Jerry Dobrovolny, *Basic Drawing for Engineering Technology*

PHOTOGRAPHY IN HISTORY AND PRESERVATION

STANDARDS OF GRAPHIC REPRESENTATION

SELECTED REFERENCES ON SURVEYS

SELECTED REFERENCES ON DRAFTING

**SELECTED REFERENCES ON
HISTORIC PERIODS OF ARCHITECTURE**

(New York: Wiley, 1964), *Graphics for Engineers* (New York: Wiley, 1968).

Thomas E. French and C. J. Vierck, *Manual of Engineering Drawing for Students and Draftsmen*, 8th ed. (New York: McGraw-Hill, 1953).

Alan Gowans, *Images of American Living* (Philadelphia and New York: Lippincott, 1964). Architecture from early periods to the present, as related to life and culture; numerous illustrations. Recommended for laymen.

Hugh Morrison, *Early American Architecture* (New York: Oxford University Press, 1952; second printing, 1963). A comprehensive survey by regions and periods during the colonial era. Recommended for laymen.

Wilbur D. Peat, *Indiana Houses of the Nineteenth Century* (Indianapolis: Indiana Historical Society, 1962). Introduction to each period explains its characteristics. Recommended for laymen.

Marcus Whiffen, *American Architecture* (Cambridge, Mass.: M.I.T. Press, 1969). A guide to style categories.

INDEX

Numbers in italics refer to page numbers of illustrations, which are noted here only to call attention to certain selected subjects.

- Adaptation of drawings, 23, 44, 46
- Address, 99–100
- Archeology, industrial, 138 ff., 159–60
- Architecture, landscape, 120, 122, 124
- Area studies, 124, 126, 130
- Catalogs
 - General, 149
 - HABS catalogs available, 158–59
- Cataloging
 - Catalog entries, 150 ff., *148*
 - HABS standards, 149 ff.
 - Special problems, 151 ff.
- Color
 - Describing, 111
 - Historically significant, 109, 111
 - Photography for survey purposes, 89, 91
- Criteria
 - Industrial archeology, 140–41
 - Landscape architecture, 120, 122
 - Planning surveys, 8–9
 - Planning projects, 9–10
 - Selecting structures, 11 ff.
- Date of a structure, 102, 153
- Description, architectural
 - Concise, 150

- Descriptive order, 115
- Equipment, 112–13
- Examination of the structure, 105–6
- General, 105 ff.
- HABS standards, 106–8
- HABS architect's worksheet, 108
- Interpretive analysis, 108–9
- Special problems, 108 ff.
- Structural systems, 111–12
- Description, industrial archeology, 145–46
- Description, landscape design, 124
- Dimensioning, 52
- Districts, historic, 130, 133
- Documentation
 - Architectural description, 105 ff.
 - General, 97 ff.
 - Historical records, 97 ff.
 - Information desired, 98
 - Special problems, 98 ff.
- Drafting, techniques of
 - General, 46 ff., 161–62
 - HABS sheets, 46
 - Indicating materials, 50, 52
 - Indicating restored parts, 53
 - Ink, 50
 - Pencil, 48
 - Quality, 50
 - Reproduction, 46, 48
- Drawings, measured
 - Area studies, 126, 130, *127, 128, 129, 131*
 - Conjectural restorations on, 30, 53, 35, *54*
 - General, 21, 23
 - Graphic scales on, 53
 - Industrial archeology, 141–42, *59, 143, 144, 147*
 - Kinds of, 24, 27, 30, *24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35*
 - Landscape plans, 122, *123*
 - Nature of survey drawings, 46
 - North arrow on, 53
 - Notes on, 52
 - Omissions on, 53
 - Planning for, 24, 27, 30, 34
 - Restored parts on, 53
 - Sheet composition, 30, 34
 - Titles on, 53
- Graphic material
 - Architects' drawings, 93, 95, *94, 95*
 - Archives of, 96
 - Early measured drawings, 95
 - Making copies of, 96
 - Maps, 95
 - Old prints, 96
 - Paintings and sketches, 95–96
- HABS collections, 5–6
- HABS program, 4–5
- Historic districts, 130, 133
- History
 - Civil engineering, 137–38
 - Industrial, 145
 - Physical, 98, 100–3
 - Urban planning, 133–35, 137
- Identification of
 - Photographs, 87
 - Structures, 98–99
- Impressions, 39
- Inventory
 - General, 119–20
 - HABS inventory, 120, *121*
 - Industrial archeology, 145
- Landscape architecture, 120, 122, 124
- Lettering, minimum size of, 48
- Level, surveyor's, 39–40, *40*
- Location, 99–100
- Maps, 95, 126, 130, 134, 135, *132, 136*
- Master negative, 48
- Master positive, 48

Measuring
 General, 21, 23
 By hand, 34, 36, 38–40
 By photogrammetry, 41–42, 44, 43, 45
 Special methods, 38–40
 With aid of photographs, 40–41, 41, 42
 Moldings, profiles of, 38, 39, 38
 Name
 Architect, builder, etc., 102, 153
 Historic name, 98
 Other designations, 153
 Naming a structure, 98
 Number, identifying
 Code, geographical location, 99
 County, 154
 HABS, 154
 Photogrammetry, measuring by, 41–42, 44, 160–61, 43, 45
 Photographs
 Aerial, 124, 130, 137
 Color, 89, 91
 Copies, 87, 89, 96, 88, 90
 Examples of coverage by, 67–68
 General, 63–64, 161
 HABS guide for, 91–93
 HABS standards, 89
 Identification of, 87
 Measuring from, 40–41, 41, 42
 Proper recording by, 64 ff.
 Quality of, 71–72, 87, 89
 Scale sticks in, 41, 71, 41, 42
 Selection of views, 64 ff.
 Projects, planning recording, 9–10
 Records
 Architectural description, 105 ff.
 Area studies, 124, 126, 130
 Civil engineering history, 137–38
 Concise, 150
 Donated, 4
 Historical, 97 ff.
 Historic districts, 130
 Illustrative cases, 17–19
 Industrial archeology, 141 ff.
 Inventory, 119–20
 Kinds of, 16–17
 Landscape architecture, 120, 122, 124
 Photographic, (*See* Photographs.)
 Specialized, 119 ff.
 Urban planning history, 133 ff.
 Written, 97 ff.
 Reference lines and planes, 34, 40
 Rubbings, 39
 Scale sticks, 41, 71
 Significance
 General architectural statement, 106
 Statement of, 100
 Story count, 108
 Surveys, architectural
 General, 7, 119, 161
 HABS inventory, 120
 Planning for, 8 ff.
 Terminology
 Regional, 153
 Style, 152
 Technical, 115, 152, 159
 Title, chain of, 100, 102
 Titles on drawings, 53

